

**Variation in issue prominence on the global health agenda: a comparative case study**

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## Abstract

Why do some health issues gain prominence but others do not? Diarrhoeal diseases cause hundreds of thousands of child deaths annually, but have struggled in recent decades to attain prominence on the global health agenda. Polio, today has very low morbidity and mortality rates but still cultivates a comparatively high profile in the global health arena.

This thesis looks to identify causative dynamics for agenda ‘status’ for these two health issues drawing on Kingdon’s multiple streams approach to do so. It is not looking to suggest where attention/resources should be targeted, rather it adds to literature which is illuminating important drivers of global health agenda setting and contributing to building a better scaffold for global health decision making. By developing greater awareness of the multi-layered influences involved in agenda formation, improvements can be made for issues falling through the net, learning from those which have shown resilience in a fickle and multifaceted arena.

The thesis finds the key tenets of multiple streams are a largely useful means of understanding the relative agenda ‘position’ of each case. The alignment of three influential streams (*problem, policy and political*), strong advocacy, and policy windows helped both issues to attain prominence historically. However, in recent decades, these elements have failed to coalesce effectively for diarrhoeal diseases. Specifically, the absence of a succinct, well-articulated solution to diarrhoeal diseases *as a whole issue*, weakened advocacy, and failure to resonate with the wider political climate in global health, hampers its capacity to cultivate a higher profile on the global health agenda. In contrast, polio’s sustained prominence on the agenda can be explained through the continued orientation of the streams, in conjunction with the support of strong policy entrepreneurs.

## Abbreviations

bOPV	bivalent oral polio vaccine
CDD	control of diarrhoeal disease
COVID-19	coronavirus disease 2019
cVDPV	circulating vaccine-derived poliovirus
cVDPV2	circulating vaccine-derived poliovirus type 2
DAH	development assistance for health
DD	diarrhoeal diseases
G7 / G8	group of seven / group of eight
GAPPD	The integrated Global Action Plan for Pneumonia and Diarrhoea
GOBI-FFF	growth monitoring, oral rehydration, breast-feeding, immunization, female education, family planning, food supplements
GPEI	Global Polio Eradication Initiative
H1N1	A/H1N1pdm09 / ‘swine flu’
H5N1	avian influenza virus A
HIC	high-income country
HIV/AIDS	human immunodeficiency virus / acquired immunodeficiency syndrome
IHME	Institute for Health Metrics and Evaluation
IHR	international health regulations
IMB	Independent Monitoring Board
LMIC	low- and middle-income countries
MDG	millennium development goals
mOPV2	monovalent polio vaccine type 2
NGO	non-governmental organization
nOPV	novel oral polio vaccine
nOPV2	novel oral polio vaccine type 2
ORS	oral rehydration solution / salts
ORT	oral rehydration therapy
PHC	primary health care
PHEIC	public health emergency of international concern
SARS	severe acute respiratory syndrome



SDG	sustainable development goals
TB	tuberculosis
tOPV	trivalent oral polio vaccine
UHC	universal health coverage
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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## Chapter 1

### Introduction and methodology

#### Introduction

This thesis explores why some health issues are more prominent than others on the global health agenda – what the thesis terms ‘variation in issue prominence’. To do so it uses a comparative case study approach, examining one high burden, low prominence health issue (diarrhoeal diseases) and one low burden, high prominence (polio). The comparative methodology is underpinned by the use of Kingdon’s multiple streams theory. This theory helps us to understand why certain issues emerge on agendas at certain times, focusing on five key elements of relevance to agenda setting. These are three independent streams – *problem*, *policy* and *political* in conjunction with *policy entrepreneurs* and *policy windows* (Kingdon, 2003). The three independent streams will sometimes converge; at this point there is an opportunity for policy entrepreneurs to push for focus on an issue, aided by the presence of a policy window (Kingdon, 2003).

The thesis moves away from a general tendency in similar literature to focus on single issue case studies and adapts the key components of the multiple streams approach (outlined in detail in Chapter 2) to appreciate the global level of analysis of this research. In short, the *political stream* is conceptualized as the overall ‘climate’ in global health – looking to key dynamics and drivers which impact the types of, and the ways in which, health issues come to prominence. The concept of the *policy entrepreneur* is widened to include organizations/initiatives in addition to individual advocates. The *policy stream* comprises selected policy developments for each issue, over the past two decades, where it is examined over an extended period of time. This innovation helps to develop a fuller appreciation of the journeys of these two health challenges following the initial illumination, through the streams approach, of their initial rise to prominent status on the global health agenda historically. Importantly it also enables the thesis to examine the sustainability of issue prominence on the global health agenda over time to better account for the ‘long wave’ nature of health issues. The focus on sustainability allows the thesis to contribute to an important area in the study in variation in agenda prominence.

The research therefore makes several contributions to knowledge, specifically:

- 1) It provides an empirical contribution in its comparative analysis of diarrhoeal diseases and polio. Diarrhoeal diseases have been understudied in this context, and although there is

more literature on polio it has not been examined in this particular manner either. It provides a novel insight into the drivers of how these specific issues found prominence on the agenda initially and then draws out why they have had differing levels of prominence over time, recognizing health issues as ‘long wave’ and not static.

- 2) It contributes to global health literature and specifically to debates in this arena on agenda setting with its comparative analysis of diarrhoeal diseases with polio. This is important in furthering the argument concerning the political nature of global health – that issue prominence in global health is not simply a matter of disease burden; but it also provides a theoretically grounded comparative analysis to suggest how issues rise and are sustained in global health.
- 3) It adds to the body of work that has drawn on Kingdon’s framework. Although the streams approach is widely used it is less often applied with a holistic focus on global level analysis. Furthermore, in global health agenda-setting literature there is a tendency to focus on single issue case studies (see Smith and Shiffman, 2020). Here then, a comparative study is offered, with a focus on the global. All five key components of the approach are used (as opposed to drawing on only parts of the theory, which is sometimes the case in applications). Adaptations (outlined above) are made to better appreciate the level of analysis, and particularly to help analysis of these issues after their initial emergence on the global health agenda.

### **1.1 Research justification**

This research addresses the challenge that agenda setting presents in the context of global health. More precisely, it queries the fact that diarrhoeal diseases continue to present a major burden in many low- and low- middle-income countries (LMICs) despite being ‘easily preventable and treatable’ by access to clean water, sanitation, and rehydration (UNICEF/WHO, 2009: v). Whilst there has been a general decline in deaths from diarrhoeal diseases over the past several decades, there are still more children under five dying each year from diarrhoeal diseases than those who die from HIV/AIDS, malaria, and measles combined (UNICEF/WHO, 2009: 1; see also IHME, a, n.d.). In addition, despite the fall in deaths between the year 2000 and the present day, episodes of diarrhoea in children are not showing a similar decrease in low- and middle-income countries (Wierzbka and Muhib, 2018: e230). Fischer Walker et al. (2012: 1) explored diarrhoeal disease incidence in 1990 and 2010 in LMICs and found in ‘139 countries there were nearly 1.9 billion episodes of childhood diarrhea in 1990 and nearly 1.7 billion episodes in 2010’. This is concerning because as Troeger et al. (2018: e255) note: ‘Mortality and short-term morbidity cause substantial burden

of disease but probably underestimate the true effect of diarrhoea on population health'.<sup>1</sup> Wierzba and Muhib (2018: e230) highlight that studies<sup>2</sup> show the risks associated with 'repeated diarrhoea infections in preschool children in the absence of catch up growth', noting their potential to lead to growth faltering, resulting in stunting, cognitive decline, and increased susceptibility to other infectious diseases. These facts become still more uncomfortable when considered in tandem with the knowledge that through the 1970s and 1980s significant progress was made in terms of reducing deaths from diarrhoeal diseases, as the international community committed to reducing the burden of childhood deaths from preventable diseases, as a central part of what was termed the Child Survival Revolution – these efforts faltered as attention moved to 'other global emergencies' (UNICEF/WHO, 2009: 1). The origins of the Child Survival Revolution can be seen in the 1978 Declaration of Alma Ata, which was signed at the International Conference of Primary Healthcare. This declaration - considered a watershed moment in public health - had at its centre a focus on primary health care which was deemed key to achieving 'the attainment by all peoples of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life' (WHO, 1978: para. 6). Endorsed by 134 countries the declaration marked a key moment in global health by prioritising primary health care (PHC) as the cornerstone to achieving global good health (WHO, 2018a: 13). As Ramírez (2018) notes:

It was a vision ahead of its time. The declaration eschewed overly "hospital-centric" and medicalised systems and favoured a more social approach to medicine, formulating a series of key elements that made sense in the Cold War context of 1978 and are still relevant today:

1. Cooperation and world peace
2. A new international economic order
3. Recognition of the social determinants of health
4. The need to involve other sectors in the promotion of health
5. Community participation in the planning, implementation and regulation of PHC
6. Health equity as the incontrovertible result of this approach.

Following this, the year 1979 was declared by UNICEF (persuaded by child-related-NGOs anxious to keep children in the spotlight on the international agenda) as the International Year of the Child which was claimed a remarkable success (UNICEF, 1996: 57). It was on the back

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<sup>1</sup> Troeger et al.'s (2018: e256) research 'provid[ed] a systematic, global set of estimates of the effect of diarrhoea on childhood growth impairment and the burden of impaired growth, measured in disability-adjusted life-years'. They contemplated how 'diarrhoea affects the risk of subsequent infectious diseases' (Troeger et al., 2018: e256). The 'estimates suggest that the burden of diarrhoea among children under 5 years old is multifaceted, causing increases in acute and long-term disability-adjusted life-years, and was previously under-recognised' (Troeger et al., 2018: e256).

<sup>2</sup> Referencing Guerrant et al. (2013) who explore the concerning 'triple burden of diarrhoea, stunting and chronic disease' and Black et al. (2008) who look at the health consequences of maternal and child undernutrition.

of these accomplishments that James Grant (then executive director of UNICEF), determined to capitalise on the opportunity for a new push on behalf of children, launched the Child Survival Revolution in 1982 (UNICEF, 1996: 59).

[The Child Survival] campaign reversed conventional wisdom. Rates of infant and young child mortality had previously been seen as measurements of a country's development. Now UNICEF suggested a direct attack on infant and child mortality as an instrument of development [...] UNICEF now proposed to vanquish common infections of early childhood using simple medical technologies. From the primary health care package, it singled out four techniques, which collectively were referred to as 'GOBI'. (UNICEF, 1996: 59)

In turn the 'GOBI' acronym refers to *growth monitoring, oral rehydration therapy, breastfeeding; and immunization* (UNICEF, 1996: 59). Despite understandable misgivings from the international public health community, due to its not inconsiderable divergence from the essence of Alma Ata (discussed in Chapter 3, section 3.2), the cause found worldwide resonance and support from a 'wide range of allies—national, international, bilateral, non-governmental—and from all walks of public and professional life' (UNICEF, 1996: 59). Progress was seen in several areas; to name a few: nutritional status improved globally (UNICEF, 1996: 60)<sup>3</sup>; '1.2 billion people gained access to safe water, and about 770 million to adequate sanitation', and '[b]y the end of the decade, the child survival and development revolution was estimated to have saved the lives of 12 million children' (UNICEF, 1996: 62). Most particularly relevant for this research, was the fact that:

In the 1970s and 1980s, the international community committed itself to reducing child mortality from diarrhoea largely by scaling up the use of oral rehydration therapy – a low-cost and highly effective solution [for treating dehydration associated with diarrhoeal diseases] – coupled with programmes to educate caregivers on its appropriate use. The effort met with great success. (UNICEF/WHO, 2009: v)

However, as Bump et al. (2013) have highlighted (after analysing and measuring control of diarrhoeal diseases (CDD) change in priority), there has been an unambiguous fall in prominence in diarrhoeal diseases' position on the global health agenda since the 1980s, despite the fact that they still exact a considerable toll, most particularly on under-fives in LMICs. They noted that:

CDD [Control of diarrhoeal diseases] figured prominently as one of the 'twin engines' of the child survival movement of the 1980s, but now has a low priority on the global health agenda compared with malaria, tuberculosis (TB) and HIV/AIDS' and that: 'global-level priority of DD is about one-sixth to one-third as high as in 1985. (Bump et al., 2013: 799)

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<sup>3</sup> 'nutritional status improved in every region of the world (only marginally in sub-Saharan Africa), and in every category of malnutrition except anaemia' (UNICEF, 1996: 60, 62).

In short, diarrhoeal diseases remain the second leading killer of children under five – claiming approximately 525,000 under-five lives every year (WHO, 2017a), and notwithstanding the strides taken in terms of reducing deaths from diarrhoeal diseases through the 1980s, they remain a major global health challenge. Contrastingly, other health challenges (some examples include: HIV/AIDS, SARS, Ebola, and polio) have accrued much greater political attention in the global health arena as this chapter will illuminate.

In light of such discrepancies this thesis uses this incidence of incongruity as a driver to scrutinise the ways in which priorities are currently being set in global health, and through doing so comes to a greater understanding of why diarrhoeal diseases have cultivated less attention than their ongoing burden would merit and given that there are known and effective treatment and prevention methods available for them. Contrastingly it also explores how and why polio (a disease with a *comparatively* very low disease burden) has managed to accrue a prominent and long-term status as a global health priority. In doing so it unpacks a more nuanced understanding of how global health priorities emerge, a process which - generally speaking - is opaque and multifaceted.

This chapter will begin by providing a contextual background for the problem the thesis is addressing, validating the relevance of the enquiry, and outlining the central research question, before summarising the methodological approach being taken to answer it and describing the structure the ensuing thesis takes.

## **1.2 Clarifying the context**

There has been undeniable development in tackling the world's health challenges in recent decades, demonstrated clearly by the marked reduction in child (under five) mortality - of 58% between 1990 and 2017 (UN IGME Report, 2018: 6); and the increase in global average life expectancy to 72.6 (as estimated by the UN for 2019) which is higher than any countries' life expectancy was in 1950 (Roser et al., 2019). Much of this is attributable to significant advances in medicine, vaccines, improved living conditions, and the reduction in child mortality combined with and propelled by a substantial growth in the amount of money and attention being directed toward improving global health. As has been noted by numerous scholars (see Garrett, 2007; Esser, 2009, amongst many others), attention and resources directed towards improving the health of populations across the world have increased exponentially in recent decades, in particular since the turn of the century – although still falling short of need (see Kates et al., 2006). One of the most obvious measures which demonstrates this has been the growth in funding directed towards global health initiatives.

There has also been a conspicuous proliferation of actors (organisations, individuals, initiatives) working on global health challenges, both those with a broader remit, such as the Bill and Melinda Gates Foundation, and those which have emerged in response to tackling more specific health challenges, for example The President's Emergency Plan for AIDS Relief (PEPFAR), the Global Fund to Fight AIDS, TB and Malaria and GAVI The Vaccine Alliance - to mention but a handful of key players. The diverse group of organisations now working toward improving global health reflects several points. Firstly, that tackling such multifaceted challenges requires scope, commitment, resources, and knowledge from a variety of sources. Secondly, this increase in actors involved can in part be explained by increased global interconnectivity - advancements in technology, travel and the increased economic, political, and social ties between countries has led to an awareness of the greater potential for health issues to spread worldwide (see McInnes and Lee, 2012a; Youde, 2019; amongst others) – evidenced now more than ever in a world reeling from the impact of COVID-19.

In addition to these factors, which are attributable to globalization processes; outbreaks such as the HIV/AIDS pandemic (which ultimately prompted a global response and was effectively framed as a security threat), played a substantial role in the general upsurge in health aid and actors, as well as contributing to the increased association of health issues with a security agenda (see McInnes and Lee, 2006; Elbe, 2010; Rushton, 2011). As Garrett (2007: 18) noted: 'HIV/AIDS assistance has effectively spearheaded a larger global public health agenda'. The response that the epidemic finally elicited was historically unprecedented—as of 2021 the President's Emergency Plan for AIDS Relief (PEPFAR) - launched by President Bush in 2003 – 'is the largest commitment by any nation to address a single disease in the world'; with its funding totalling more than \$110 billion (KFF, 2022). Subsequent infectious diseases outbreaks, for example, SARS (2002-3), Ebola (2014-15 and 2018-20), Zika (2016) - and of course most recently, and conspicuously, COVID-19 (2019-ongoing) - have also risen to positions of prominence on the global health agenda, drawing worldwide attention.

Additionally, a shift has been well described by scholars who delineate the move from what was generally termed *international health* to *global health*. Holst (2020: 3) notes that 'use of Global Health in the English literature began in the 1990s, increased sharply since 2000, and at the beginning of the millennium overtook the hitherto prevailing use of the term "International Health"'. Although differences about the distinction between these terms exist (see Brown et al., 2006; Beaglehole and Bonita, 2010 amongst others), *international health* has been described as 'encompass[ing] the problems of health in underdeveloped countries and the efforts by industrialised countries and international agencies to address these



problems' (Birn, 2009: 63, describing the field of international health during the Cold War). Meanwhile global health can be understood as:

an area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide. Global health emphasises transnational health issues, determinants, and solutions; involves many disciplines within and beyond the health sciences and promotes interdisciplinary collaboration; and is a synthesis of population-based prevention and individual-level clinical care. (Koplan et al., 2009: 1995)

And as Birn (2009: 63) notes: '*Global health* – [...] is meant to transcend past ideological uses of *international health* (as a 'handmaiden' of colonialism or a pawn of Cold War political rivalries), to imply a shared global susceptibility to, experience of, and responsibility for health'.<sup>4</sup>

Concurrently, there has been a distinct growth in interest in the study of global health in academic contexts; Koplan et al. (2009: 1993) described it as 'fashionable' and point to the increase in interest in global health across arenas e.g., educational, philanthropic, and governmental (see also IOM, 2009). Such developments have also seen the academic disciplines of global health and international relations coalesce, finding common ground in the need to address global concerns and questions which spill between the fields (see McInnes and Lee, 2012a). It is within this interdisciplinary area that this thesis finds itself, addressing global health questions and challenges through the lens of international relations and seeking to find answers to global health disparities through contemplation of a wide array of influences.

### **1.3 Problems identified**

Despite the increased interest, study, and laudable progress being made in global health, there remain significant and stark inequalities – a fact which drives this research. Whilst there has been a major reduction in childhood mortality rates over the last 50 years, there is still much to be done to reach a point of global health equity. In 2018 an estimated 5.3 million children died before reaching their fifth birthday, mostly from preventable causes (UNICEF, 2019: 6). The global average improvement in life expectancy, when recited in isolation neatly masks the difference between a startlingly low average life expectancy of 53 years in the Central African Republic, whereas in Japan it is 30 years longer (Roser et al., 2019). The fact that diarrhoeal diseases continue to exact a major burden on so many of the world's children is astonishing, not only because of the ready and affordable availability of measures to prevent

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<sup>4</sup> Indeed Birn (2009: 63) also writes that despite the 'invoked distinctions, there is considerable conflation between *international health* and *global health*, and the [then] 'new' definition of global health bears many similarities to early 20<sup>th</sup> century understandings of international health'.

such deaths, but because of the simultaneous striking progress made in other areas of global health. Furthermore, despite increases in finance and effort directed toward health challenges since the millennium, there remain clear inequities in distribution of aid, raising question marks around efficacy and equitability. For an example, although HIV/AIDS quite rightly prompted a global response, the amount of aid targeted specifically at addressing it became so marked in contrast to other high burden health challenges that it has led some scholars to question it—known as ‘AIDS exceptionalism’<sup>5</sup> (see Smith and Whiteside, 2010; Benton and Sangaramoorthy, 2021). Shiffman et al. (2009) queried whether aid for AIDS has ‘raised all health funding boats’ – the results of their study showing little to support the proposition. Whilst funding for HIV/AIDS has declined since 2013, in 2015 HIV/AIDS spending ‘represented nearly three times the \$16.4 billion (14.6-19.3) spent in 2000’ (IHME, 2018: 70). To iterate, this is not to say that the prioritization of HIV/AIDS is a bad thing – and as Shiffman (2006: 923) noted:

The emergence of HIV/AIDS as a global health priority is reason for celebration, because the tide may be turning against this humanitarian crisis, and because this prioritization may have galvanized commitment to addressing other health problems in the developing world.

Nevertheless, what is a cause for concern is that ‘the extensive focus on one disease may be crowding out resources and policy-maker attention for the many other causes of death and illness of the world’s poor people, a phenomenon which occurred in the past with powerful cause-specific campaigns’ (Shiffman, 2006: 923). As Emanuel (2020: 11) notes:

Many resource allocation decisions within the U.S. government and global health organizations, NGOs, and foundations, as well as by ministries of health in low-income countries, are not driven by data on what would make the greatest impact. The funding decisions are often skewed.

He also highlights the ‘tendency to address health emergencies rather than interventions to build up health systems that are likely to have more sustainable impacts long into the future’ (Emanuel, 2020: 11). Such dynamics are often emphasized in the enduring deliberations regarding vertical (aiming for disease specific results) or horizontal (aiming for improved health systems) approaches to confronting global health challenges (see Ooms et al., 2008, amongst many others).

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<sup>5</sup> Smith and Whiteside (2010: 1) note the meaning of the term has changed over time—initially referring to: ‘a Western response to the originally terrifying and lethal nature of the virus, which disproportionately affected specific groups. The first activists argued that HIV/AIDS required an exceptional response in order to protect the rights of those infected, to generate resources to assist them and to curb a then mysterious epidemic. More recently, AIDS exceptionalism came to refer to the disease-specific global response. This international response was unprecedented, as the commitment of resources exceeded any other health cause’.

Further examples can be identified in the cases of the 2014 Ebola outbreak and the 2016 Zika epidemic. Both were ultimately labelled Public Health Emergencies of International Concern (PHEIC), and made news headlines globally, even though the total lives claimed by Ebola was substantially less than the lives claimed by diarrhoeal diseases over the same period<sup>6</sup>, whilst no one had died from Zika at the time the PHEIC was declared (McInnes, 2016; McInnes and Roemer-Mahler, 2017). Meanwhile, polio stands as the longest running PHEIC, since its declaration as such in 2014, despite exceptionally low case numbers, and being the central focus of a long-term, robust eradication initiative.

Again, this is not to say these diseases are not concerning or do not require attention and focus on the global health agenda - any deaths or suffering from any of these health issues is devastating, and in fact the WHO response to the Ebola outbreak came in for considerable criticism and scrutiny (see Moon et al., 2015; Kamradt-Scott, 2016). However, what these instances reveal is that the burden of a health issue (in terms of morbidity and mortality levels) is not necessarily indicative of the attention/aid/global response it elicits, which encourages questions as to how priorities *are* being set.

Gostin and Mok (2009: 10) suggest that: ‘Current health priorities [...] have been skewed toward popular, disease-focused initiatives and away from basic survival needs. Even in response to high-profile crises, such as HIV/AIDS, the upsurge in actors, funds and initiatives has occurred with little coordination’. Esser (2009: 225, 229) describes global health as a ‘deeply political arena shaped by local and global interests and incentives’ and queries the selective funding of donors and the ‘bandwagon’ effects whereby all donors tend to place emphasis on the same health issues. He suggests that the snowballing levels of funding seen in the first decade of the new millennium is not where the solution to the world’s health challenges lies, rather, ‘many of the problems that plague decision-making in global health assistance lie not in the global South but in the North, where the monetary flows originate and where most policies are conceived’ (Esser, 2009: 225). Ollila (2005: abstract) argued that: ‘[g]lobal health policy has become increasingly fragmented and verticalized. Infectious diseases have gained ground as global health priorities, while non-communicable diseases and broader issues of health systems development have been neglected’. Moreover, the logics behind health issue prioritization processes are not transparent and often directly contravene standard measures such as the global burden of disease<sup>7</sup> (GBD) and disability adjusted life

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<sup>6</sup> The Centre for Diseases Control puts the total deaths from the Ebola crisis 2014-2016 at 11,325 (CDC, 2019a).

<sup>7</sup> ‘The Global Burden of Disease (GBD) ‘provides a tool to quantify health loss from hundreds of diseases, injuries, and risk factors, so that health systems can be improved, and disparities can be eliminated’ (IHME, b, n.d.).

years<sup>8</sup> (DALYs)—measures which, in theory, should support greater efficacy in priority setting processes. In sum, the lack of commensurability between need and committed resources/attention is suggestive of weakness and dysfunction in global health governance and merits scrutiny. It also demonstrates the importance of paying attention to the politics of agenda setting in global health. Accordingly, this project contributes to a growing literature that has begun revealing some of the socio-political dynamics which affect where attention is focused in global health efforts.

#### **1.4 Project outline and methodology**

Initially, the research focused on questioning simply why some health issues are prioritized and others are neglected. Similar queries have been posed by numerous scholars in global health agenda setting literature (see for example Shiffman, 2009; Smith and Shiffman, 2016). The intention then was to direct this same query to particular cases (health issues) and unpack driving forces of agenda status in an empirically rooted investigation. As the research progressed, it became clear that the project was interrogating more than simply incidences of relative priority or neglect and how issues rise (or do not) on the global health agenda. In short, through drawing out influences of improved or diminished profile for the chosen cases in global health over time, the investigation was simultaneously illuminating indicators for agenda *sustainability* as well as factors contributing to *fluctuations* in prominence. Considering this development in terms of specificity of focus, the following central research question structures the subsequent investigation:

*Why do some issues gain prominence in global health while others are neglected – and what explains change in prominence over time?*

Through this question this thesis directly addresses some of the uncomfortable discrepancies between need and attention outlined in this introduction. It seeks to identify factors influencing the prominence or neglect of each case and through doing so assesses pressures and motivations involved in determining the relative status of two health issues on the global health agenda.

In order to do this, a comparative case study methodology is employed, evaluating two cases, each representing a different level of disease burden and resources. For a health issue with a *relatively* low burden and high level of prominence the project looks at poliomyelitis, and for

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<sup>8</sup> ‘One DALY represents the loss of the equivalent one year of full health. DALYs for a disease or health condition are the sum of the years of life lost [...] due to premature mortality (YLLs) and the years lived with a disability (YLDs) due to prevalent cases of the disease or health condition in a population’ (WHO, a, n.d.).

the health issue with a high burden and relatively low level of prominence, the project examines diarrhoeal diseases' trajectory on the global health agenda. The thesis focuses on two distinct time periods – initially for each case it takes time to comprehend how each of these issues achieved a high profile historically, before leaning into the more contemporary focus of 2000 – 2020.

The objective of this research is to interrogate dominant drivers of why health issues emerge on the agenda and how they sustain or lose attention over time, it specifically employs the multiple streams approach to understand:

- 1) Why and how some health issues are characterised as a problem (the problem stream)
- 2) Why some solutions gain traction (the policy stream)
- 3) How the health issue and the solution for it resonate in the general climate in global health (the political stream)
- 4) The role of policy entrepreneurs and policy windows in the alignment of these factors and the sustainability of attention over time.

The following section will outline in greater detail the process behind the choice of methodology and of the case studies.

## **1.5 Comparative case study methodology**

### *1.5.1 Rationale*

The decision to use a comparative case study approach for this research is driven by several factors. After initial reflection as to the best method to employ in terms of answering the research question, it seemed appropriate and necessary to investigate another health issue (in addition to the case of diarrhoeal diseases which drives the research) to understand how different diseases reach/maintain/change in priority on the global health agenda, and through doing so draw on such insights to better understand diarrhoeal diseases' trajectory relative to coexisting issues in the arena. Accordingly, a comparative approach seemed prudent given the nature of the query— *Why do some issues gain prominence in global health while others are neglected – and what explains change in prominence over time?*

As Yin (2014: 2) highlights, case study research is 'the preferred method, compared to the others, in situations when (1) the main research questions are "how" or "why" questions; (2) a researcher has little or no control over behavioural events; and (3) the focus of study is a contemporary (as opposed to entirely historical) phenomenon' - making it a pertinent methodology for this enquiry. In addition, this approach allows for the appreciation and use of

numerous types of sources, which will help in building up a fuller picture of each case; such methods are helpful in terms of understanding more ‘complex social phenomena’ (Yin, 2014: 4, 12). This is precisely what this research does – make inroads into appreciating and grasping some of the multifaceted dynamics surrounding agenda setting processes for two health issue case studies. Additionally, the accessibility that case studies can provide suits the nature of the research question – looking at how priorities develop. The results of various types of analysis (be they statistics, interviews, textual analysis and so on) are held together by an overarching case (or cases), which helps to provide a strong context for those engaging with the results of the research. For example:

Case study designs rely less on comparing cases than on exhaustive analysis of individual cases and then on comparing cases. A distinguishing characteristic of case studies is that contextual information is collected about a case so that we have context within which to understand causal processes. (de Vaus, 2001/2013: 50)

A more abstract approach, for example focused entirely on policymaking processes in global health as a means of better understanding how priorities emerge, without reference to specific case studies, might offer insights into the actions of policymakers, but would not offer an appropriate background through which the results of decision-making can be viewed and better understood. As a specific health issue is the motivator for this thesis, it was important that it was investigated fully, with an appreciation of the potential influence of the specificities of each disease on its agenda status. Accordingly, this methodology seemed the natural way to approach this—offering comparative potential essential to fully tackle this research question.

Furthermore, as evidenced throughout the literature review in Chapter 2, there is a shortage of research taking a comparative case study approach to the analysis of health agenda setting. Smith and Shiffman (2020: 337) point out that ‘[m]ost global health agenda setting studies have been of single cases (Walt et al., 2008; Gilson and Raphaely 2008)’ and that ‘[t]hese studies suggest hypotheses but invite questions about the strength of causal influence and generalizability’. Thus, they rightly point to the need for more comparative analysis to complement existing case studies and to advance understanding in the global health agenda setting process (Smith and Shiffman, 2020: 337). Feasibly, the lack of comparative studies in this topic area may point to the evident discomfort that comes with the thought of comparing health issues in any sense. Thus, it is not the purpose nor intention of this thesis to weigh the cases against each other, or resolve how priorities should be set (although inevitably some ethical confrontations in this area are raised in the case study analyses). The driving force however is to understand how despite a relatively low burden of disease polio has sustained a

high profile and despite a high burden of disease diarrhoeal diseases have not. Simply revealing some of the factors contributing to different health issues' trajectories in this arena is an important stepping stone for future research looking to identify ways in which neglected health challenges profiles might be raised, as well as for reflection in terms of whether existing approaches reflect the best route toward global health equity.

### *1.5.2 Case selection*

Having decided on the methodology, the next step was determining which case (besides diarrhoeal diseases) would be suitable for enquiry, would provide an appropriate level of material through which the research question(s) could be answered, as well as deciding how many cases would be needed and achievable within the time constraints on the project. A small-n approach (i.e., involving the study of two or more cases) seemed appropriate, in being feasible and sufficient to provide the depth of information necessary to answer the research question. Following best practice advice for comparative case study research design, it was also important to bear in mind that in order to provide a strong basis for analytical evaluation and to see if patterns observed in variation are consistent with theoretical explanations posited, it is wise to choose cases which have some similarities and some differences (not those which are totally different or identical) (Halperin and Heath, 2012: 209). Another consideration for each case was its potential ability to reveal how agenda setting dynamics manifest across health issues with varied burdens. Accordingly, case selection was made based on disease burden and prominence (high and low) of each health issue, with a case chosen to represent a low burden/high prominence health issue and a high burden/lower prominence health issue.

The following table lays this out clearly, demonstrating the health issues chosen (and examples of potential alternatives) for analysis in relation to these parameters. A third case study was initially planned to explore the journey of a health issue which has had both a high burden and high level of prominence in global health over the last several decades focusing on HIV/AIDS. The possibility of pursuing a case which looked at coronaviruses, comprising SARS, MERS and COVID-19 was also considered. However, ultimately it was decided that diarrhoeal diseases and polio provided ample material for this research project and the strongest comparative potential given the varied levels of burden and prominence.

**Table 1.1 Examples of health issues with varied burden/prominence for case selection**

	High Prominence	Low Prominence
High Burden	HIV/AIDS Pandemic influenza Coronaviruses (SARS, MERS, COVID-19) Tuberculosis Malaria Non-communicable diseases Antimicrobial resistance	Diarrhoeal diseases Childhood pneumonia Dengue fever Schistosomiasis
Low Burden	Polio	Hansen's disease (Leprosy)

Diarrhoeal diseases are an example of a health issue that has long been a considerable burden (in terms of morbidity and mortality) in LMICs; their specific situation as a clearly solvable (yet still unsolved) health challenge is the driving impetus behind the central research question. Further, their status as a health issue which was once a higher priority through the 1980s but have since fallen in prominence on the global health agenda (see Bump et al., 2013), provides the 'puzzle' that this research aims to go some way toward solving. As such they were evidently going to represent the high burden-low profile case study for this project. Deciding on a further case was achieved by reflecting on the aims of the research question and concluding that it would best be answered by analysis of health issues with varying disease burdens and levels of priority on the global health agenda. Consequently, polio was chosen to represent a health issue with a low burden of disease relative to its high priority on the global health agenda.



Polio provides in many ways an unusual opportunity to analyse a health challenge that now has a remarkably low disease burden relative to the attention it receives. In the 1980s polio was a high burden health issue (circa 350,000 cases annually) but it has seen a 99% fall in case numbers since the Global Polio Eradication Initiative began in the late 1980s (WHO, 2022a). The global commitment to polio eradication has been extraordinary resulting in almost 20 million people being saved from paralysis (WHO, 2022a). Indeed, the GPEI is ‘one of the largest public health programs ever’ (Bristol and Simoneau, 2019: 1).

Another consideration with regards case selection was ensuring that the cases chosen would provide enough material for a proper investigation and comparison. Various prominent global health organisations specifically focused on polio eradication make up the public private partnership that is the Global Polio Eradication Initiative (GPEI) - launched in 1988 in response to the polio eradication resolution - so there was not much apprehension about a lack of material in that regard. As the central focus of a major global health initiative there is no shortage of material delineating the journey of polio eradication efforts.

Diarrhoeal diseases represent a lower priority, but there are still organisations working toward alleviating the burden imposed by them on LMICs, they have been on the WHO’s radar (in varying degrees of prominence) for decades, and there is some academic literature delineating their rise and fall from prominence on the global health agenda over the last 40 years and shifts in the approaches to tackling them (see Bump et al., 2011 and 2013; Wolfheim et al., 2019). So, although it was important to be cognisant of the challenge this might pose, the nature of this methodology, which drew on various different sources for information, meant that although there is undoubtedly less written material available for diarrhoeal diseases (and certainly from a social science perspective) than there is for polio, there was sufficient material available to scrutinise to provide a suitable comparative case. What was revealed over the course of the study is that there is ample room for further research from a social science perspective analysing progress and problems (namely socio-political, ethical) for both health challenges analysed herein. Whilst there is some work in this area for polio (likely because of the existence of the GPEI and the eradication resolution which means there is a concrete endeavour on which to comment), there is scope for much more exploration in the literature in this regard.

### *1.5.3 Time period*

Originally the intention was to restrict focus solely to the 2000-2020 time period, but after initial exploratory research, it became clear that two phases would be relevant for this

particular question – each serving a different purpose. To clarify - previous research has shown that diarrhoeal diseases have fallen in prominence since a high point in the 1980s; meanwhile, polio eradication emerged as a global health priority in 1988. Thus, a foray into the 1970s/1980s when diarrhoeal diseases and polio came to prominence in different guises seemed a sensible move to make to explore *how* each issue came to prominence historically before exploring their journeys over the 2000-2020 period. As the case study chapters show, this also provides a useful stepping-stone of understanding in terms of employing the chosen theoretical approach (multiple streams) as a framework for analysis. As the results of this research demonstrate, the framework effectively establishes how each issue historically achieved a high profile in global health, thus when the analysis moves to 2000-2020, that foundation provides an intuitive mental comparison point in terms of considering what the streams are/are not doing more recently. Consequently, the project becomes comparative at two levels – *between* the different case studies and *within* each case study in terms of their historical and more contemporary statuses in global health and the factors contributing to those.

The later time frame was chosen as it reflects a period of significance in the development of the field of *global* health, and has often been described as something of a ‘golden age’ in the field, mainly due to the increase in finances and the rise in actors working in the area (IHME, 2013: 16). In addition, the year 2000 marked the beginning of the 2000-2015 Millennium Development Goals (MDGs) and thus was a significant period to look at in terms of it being a time when global attention was arguably more focused than ever on tackling global health inequality. Looking forward this also includes the period when the next set of global development goals (the SDGs) were developed and enacted (2015), which offered an interesting backdrop against which the priority status of health issue case studies can be viewed – i.e., in tandem with ongoing, wider global health and development goals. Furthermore, the period has contemporary relevance for each issue, as well as providing the opportunity for this research to contribute by building on previous work on these diseases. Additionally, the different time periods provide the opportunity to contrast two distinctly important phases in health governance – post Alma Ata and into the time of *global* health.

#### *1.5.4 Evidence collection methods*

There are several methods which formed the majority of evidence collection for this enquiry, utilising both primary and secondary source material. The initial steps taken with each case study were to conduct an examination of the history of each case, both in terms of coming to a deeper understanding as to the nature of each health challenge, as well as analysing each

cases' priority trajectory on the global health agenda over the period of time in question (first establishing causative factors for initial agenda ascendance, followed by analysis of their trajectory in recent decades). These initial steps relied on scouring available literature for each case and procuring information accessible online via organisations such as the WHO, the IHME, the GPEI and so on, which offered data on factors relevant to coming to a greater understanding of priority setting in global health, such as the global burden of disease (GBD), disability-adjusted life years (DALYs), health financing flows, and comprehensive annual reports outlining progress and changes across health issues, initiatives etcetera. Examples of key policy documents used include the Global Polio Eradication Initiative strategies, polio's Independent Monitoring Board Reports, WHO resolutions for polio/diarrhoeal diseases, WHO/UNICEF strategies (e.g., the Global Action Plan for Pneumonia and Diarrhoea). These were identified through web searches and through sources such as the polio eradication initiative's website, the World Health Organization website, analysis of literature on both case studies which referred to specific developments/policy documents of importance.

Initial investigations also included drawing information available from organisations working specifically on each health issue to better comprehend how they perceived 'their' health issue's position in global health and how things have developed over the last twenty years or so.

This initial background study of each case built up a picture of the trajectory of each issue on the global health agenda. It was then possible to proceed with analysing dynamics that may have contributed to the changes in priority—evaluating why diarrhoeal diseases have failed to achieve a higher profile in recent decades, and how polio has sustained a position of prominence. It seemed constructive to support the analysis by interviewing personnel with knowledge about each case to ascertain their perspectives on health issue priorities, as well as motivations, pressures and drivers that may influence the trajectory of each disease in global health. As this project was devised and begun prior to the COVID-19 outbreak, there were initially ideas to pursue fieldwork with the hopes of acquiring a greater amount of commentary and discussion from those with knowledge or experience of working on these health issues. Given the significant global constraints that came into force and the fact that the case studies for this project were carried out through the height of the COVID-19 pandemic, there was no possibility of pursuing in-person data collection. Fortunately, however, the research was not contingent on obtaining interviews, but the commentary included from those that were acquired adds a depth and interest to the analysis. Interviews were conducted remotely with six individuals – four responding to questions on polio eradication (David

Heymann, Judith Diment, Oliver Rosenbauer and Melissa Corkum) and two to questions on diarrhoeal diseases (Michael Merson and Hope Randall). Ethical approval for the research was obtained (appendix 4) and informed consent forms were provided for interview participants (appendix 3). Questions were semi-structured – a general list of questions was developed for each case study to broadly guide interviews around the topic of enquiry (see appendices 1 and 2 which show these). There were minor variations made in the questions list depending on the role/organization of the interviewee. These interviews were helpful in terms of obtaining perspective from individuals with knowledge pertinent to the case studies as to their perceptions of progress/challenges for diarrhoeal diseases or polio. For example, perspectives on the utility of the PHEIC for polio; perspectives on progress for diarrhoeal diseases such as developments in rotavirus vaccines, and mention of key events such as the ICORT conferences (see Chapter 3), were some helpful insights from interviews, which contributed to the project. Similarly, perspectives on advocacy (e.g., Rotary’s support for polio) were informative and included in the thesis.

In addition to the specific research for each health issue, attention was also paid to literature which has delineated the wider climate in global health - key forces that might shape the preferences for priority in this field of focus - in order to help identify how such dynamics might be impacting the agenda status of each issue. This assisted forming the political stream for each case study.

#### *1.5.5 Protocol*

In terms of comparing the information gathered for each of the case studies, a structured-focused approach was utilised. This approach requires the same ‘general questions that reflect the research objective [...] are asked of each case under study to guide and standardize data collection, thereby making systematic comparison and culmination of the findings of the cases possible’ (George and Bennett, 2005: 67). As for being ‘focused’, this method only deals with parts of the cases under analysis—a single event/case can be relevant for research on a variety of topics, but it is crucial with this method to ‘focus’ in that the cases should be chosen with a clear research objective and suitable theoretical approach for it (George and Bennett, 2005: 67,70).

In this case the clear research objective has been articulated through the research question. The research was also structured to first query the way in which each case study came to prominence on the global health agenda initially, before examining how each case had fared in the last two decades and what factors were contributing to their trajectories in the global

health arena. The theoretical focus – multiple streams - is elucidated in Chapter 2 and briefly below. The research took a semi-structured approach to its analysis of each case, relying on the multiple streams approach for common comparative framework, that is shaping the approach to each case. Yet, within that deviations in emphasis were inevitable given the intrinsic differences in the nature of these health challenges. Similarly, for example, although broadly similar questions were put to the interviewees, differences in focus were inevitable given the natural progression of conversation and the variations between the cases. Cross case comparison involved observing commonalities and deviations between the cases and assessing how these manifest in terms of the relative profile of each health issue.

As Chapter 2 will discuss in greater detail, the research draws on John Kingdon’s multiple streams approach to agenda setting as a means of better understanding how issues ebb and flow in profile in global health. Through the streams approach Kingdon sets out to better explain why some issues are more focused on than others and how these decisions come about (Kingdon, 2003: 2). He eschews the idea that ‘policymaking is an exercise in rational problem solving’ (Herweg et al., 2018: 18), instead depicting the process of issues reaching a position of prominence on an agenda as often random in character, suggesting that issues can emerge as priorities when three autonomous ‘streams’ (problem, policy, and political) merge at particular times (Kingdon, 2003: 20). Accordingly, analysis of the gathered information across the case studies involves paying attention to agenda setting processes in light of Kingdon’s theory and assessing how well the streams approach is able to illuminate this process.

#### *1.5.6 Literature review*

Developing the literature review to ground the project (Chapter 2) involved establishing a clear understanding of the existing work in similar areas – i.e., that which looks at priority/agenda setting in global health with an international relations/political science lens. Initial reading explored a much wider area, including work that takes a more ‘technical’ approach to agenda/priority analysis in health – e.g., querying various tools for decision-making (e.g., DALYs), developing frameworks to improve priority setting processes and that which explored priority setting for research in health. Ultimately, the review keeps its focus to literature clearly adjacent to the project – that from an IR/political science slant. Brief examples of the wider literature are highlighted to demonstrate the breadth of the field. It made sense to structure the review around key themes which emerged - *the emergence of political priority for health issues*, work on *framing*, that which looked to the role of *power*, and the growing body of research on *global health networks*. This helped to focus the review.

Across these areas the review draws out numerous examples of work to give a clear idea of the existing research, developments in thinking and situates this research project within that.

## 1.6 Conclusion

What makes this research important? Why is it that looking at emergence of priority (or lack thereof) specifically merits interrogation, given the myriad obstacles which face the global health arena? The straightforward answer to this is that it is through setting agendas/priorities appropriately or inappropriately that health initiatives thrive or flounder. Pressing global health challenges are dependent on how health resources and attention are allocated. Thus, investigation into instances of incommensurability (between burden and attention) is crucial to reveal how priorities do develop for different issues, so that decision-making processes can be appropriately critiqued over time. Additionally, lessons can be learnt from those issues that have accrued high profile in this arena, to inform efforts for improving focus on health challenges that have had less attention. In addition, there are some inspiring health-related targets set out in the Sustainable Development Goals (SDGs)<sup>9</sup> which will only be reached with an appropriate dispersal of attention and effort. The health goals set out in the MDGs (notably that of goal 4: reducing child mortality by 2/3 by 2015) were not reached (see Molyneux and Molyneux, 2016), which highlights just how necessary it is to ensure best practice in terms of agenda setting in global health. MDG 4 also related directly to diarrhoeal diseases in terms of the heavy burden they impose on children. Most recently, of course, COVID-19 has thrown the global health arena into greater disarray and highlighted longstanding global health inequities (Gostin, 2020; Reid et al., 2021). Many countries' responses to the crisis repeatedly flouted adherence to any manner of global health equity, underscoring the ongoing need for socio-political research which at its core endeavours to contribute to wider discussions on global health justice.

Whilst this research project is particularly interested in better understanding factors influencing priority (or lack thereof) due to the evident discrepancies at play when looking at diarrhoeal diseases' current situation, the results of the work shine some light on such processes in global health more broadly.

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<sup>9</sup> SDG 3 = 'Ensure healthy lives and promote well-being for all at all ages' (UN SDGs, a, n.d.) A part of this goal (3.2) aspires by 2030 to 'end preventable deaths of newborns and children under 5 years of age' (UN SDGs, b, n.d.). To achieve this addressing the challenge posed by health issues like diarrhoeal diseases will be key. Additionally, SDG 6 = 'Ensure availability and sustainable management of water and sanitation for all' (UN SDGs, a, n.d.)

Another clear motivator for this research is the problem itself – it is unacceptable that in today’s world of scientific advancement and technological innovation, and with existing available and effective treatment and prevention methods, that diarrhoeal diseases still impose such a high burden on so many. In addition, this contradiction that motivates the thesis (high burden/low profile/preventable and treatable health challenge) arguably highlights that global health governance is dysfunctional. Through highlighting some of the ways in which priorities in global health are reached this research pinpoints areas within this arena that would benefit from development and further research.

It is also worth noting the straightforward point that although there was substantial growth in global health financing through the 1990s and particularly through the first decade of 21<sup>st</sup> century, this does not mean there are sufficient finances being funnelled into global health to deal with all the health challenges the global community faces. The IHME (2018: 23) points out that ‘[t]he pursuit of [universal health coverage] and the completion of the unfinished agenda from the MDGs are dependent on adequate financing for health systems around the world’. Furthermore, despite an unprecedented increase in health funding through 2019/2020 due to COVID-19, there remains tangible concern about the impact of that crisis on other health focus areas, as well as uncertainty as to ‘whether the rise in development assistance for health as a result of COVID-19 is a one-time occurrence, or whether it can be sustained and afford long-term improvements in health’ (IHME, 2021: 45). In short, there remains very real pressure in global health to allocate an insufficient pool of resources to best effect. Thus, simply understanding more clearly how we arrive at priorities in this arena, is a crucial part of working towards best practice and informing future decision-making.

To iterate, this research is not purporting to suggest how global health issues should be prioritised or how agendas should be set, rather it seeks to better understand factors contributing to the lack of commensurability between disease burden and profile in global health, in addition to factors which appear to support health issue prominence in this arena. In doing so it adds to a burgeoning literature in this topic area and contributes by focusing the analysis on two global health challenges over two distinct periods of time.

Chapter 2 outlines some of the key areas within priority setting literature that are receiving attention and through doing highlights areas that this thesis will contribute to. But to summarise areas of contribution:

- 1) There is an evident need for greater engagement with how decisions are being made in global health. There are methods available to see the outcomes of such decisions (i.e.,

GBD; health funding data; annual reports on progress from organisations such as the WHO), but there is less information which gives sufficient insight into the implicit processes/drivers/motivations/patterns connected to agenda setting in this area. Yet as the example incongruities drawn out in this introduction demonstrate, it is an area that merits deeper analysis—and crucially action and further research based on what existing analysis has revealed.

- 2) Much of the work being done in this topic area is focused on specific incidences of priority/agenda setting, often emerging from the health policy field where there is less engagement with social/political/ethical questions which warrant consideration. However, the body of literature which approaches the topic through the lens of international relations/political science has indeed delved into asking some of these deeper questions whilst adopting a more holistic form of analysis – it is to this latter body of knowledge that this thesis will contribute.
- 3) Comparative case study analysis in this area is an approach which offers the potential for fascinating insights in terms of assessing agenda setting processes/influences, and yet, as mentioned, has not been utilised to a great extent by scholars looking at agenda setting in global health (see Chapter 2); thus, this project contributes in this regard.
- 4) Analysis of agenda setting in global health which draws on frameworks from the political sciences is in need of further development. Through utilising Kingdon’s multiple streams approach, which has been drawn on by other scholars looking at global health questions, this thesis will support the development of literature in this area, albeit at a global level and over a wide-ranging time period which is something of a departure from much literature looking at similar questions.
- 5) Finally, given the fact that the thesis looks beyond the initial prioritisation of an issue, it contributes to an oft overlooked aspect of health issues’ journeys in global arena – that is agenda *sustainability*. This is particularly relevant for polio as Chapters 4 and 5 explain in more detail. To summarise – given the fact that polio has maintained a prominent status in global health for the last 34 years, the analysis ultimately becomes as much about contemplating how it has achieved this feat, as it is about how it emerged as a priority in the first place. For diarrhoeal diseases then we observe that a continuous lack of critical influences are contributing to the long-term lower profile of the issue.



## 1.7 Organisation of thesis

The thesis is organised in the following manner: this first chapter sets out the aims and parameters of the project and clarifies the methodological approach. Chapter 2 provides a literature review covering key existing commentary on agenda/priority setting in global health. In doing so it serves as an anchoring point in terms of explaining the position of this work in relation to what has already been written. It illustrates the angle of this investigation, particularly in terms of its alignment in approach with literature which analyses global health questions through an international relations or political science lens. It also introduces the multiple streams theory, outlining the explanatory potential of this approach to addressing this topic of enquiry. The subsequent two chapters (3 and 4) are each dedicated to a single case study - diarrhoeal diseases and poliomyelitis respectively. The final chapter (5) provides space for the discussion and conclusion. It reiterates the aims of the thesis, outlines the findings from the case studies, and draws attention to points of contribution. Additionally, it suggests important areas for further research that have shone through as a result of the investigation conducted.

## 1.8 Preliminary conclusions

Rather than delay the research findings until the concluding chapter, aware that doing so may obscure the iterative and developing nature of the research, this section briefly sets out the preliminary conclusions in advance so that the thesis can be assessed with clear knowledge of where it is leading.

Ultimately then, the thesis offers that the key tenets of the multiple streams approach (*problem, policy, political, policy entrepreneurs* and *policy windows*) help explain how both diarrhoeal diseases and polio eradication emerged as global health priorities historically. Moving to the 2000-2020 period, the streams then provide a robust framework for illuminating explanatory dynamics for diarrhoeal diseases' more muted profile in this arena, in contrast to polio's continued resonance as a global health priority.

In short, the research shows that these issues rose on the global health agenda when there was alignment of three core streams of influence – when the issue in question was characterized as a problem, there was a viable solution, and these resonated with the political climate in global health. All these components are crucial, but the role of policy entrepreneurs is pivotal in assisting the alignment of these streams and taking advantage of policy windows.

Furthermore, it is the persistent lack of alignment of the three streams and the lack of strong advocacy (policy entrepreneurs), which helps explain diarrhoeal diseases' lower profile. Meanwhile, the initial and continual orientation of the streams and the presence of dynamic, cause-specific advocacy, provides an explanation for polio's more conspicuous agenda status.

Additionally, the research moves beyond utilising Kingdon's theory to merely understand initial agenda ascendance of each case—although this forms an important part of the preliminary analysis. It also demonstrates that looking for the deficiency or disintegration of these streams can be as informative as identifying where they align. Furthermore, contemplating the case studies over an extended period of time helped establish that the key concepts in the streams approach can support our comprehension of health issue agenda *sustainability*, as seen in the case of polio.

## Chapter 2

### Literature review and introduction to the multiple streams approach

#### Introduction

‘Agendas’ or ‘priorities’ in global health is a diverse and complicated area to investigate. Simply defining what comes under the umbrella is a task—indeed, the most expansive (and perhaps contrary) interpretation could argue that most research in global health is looking at *some* aspect of agenda setting if not explicitly then implicitly. Thus, to avoid getting lost in a morass of divergent research, this review keeps its main focus to a burgeoning branch which can broadly be defined as that coming from an international relations/political sciences perspective to look at the issue. Such literature has focused largely on looking at how priorities emerge (or fail to do so) and emphasized the need to pay attention to contributory socio-political factors and concepts.

This chapter first outlines the importance and some of the impetus for research in this area, before turning its focus to the research which aligns most closely with this thesis, delineating key themes that have emerged in the existing work – *the emergence of political priority for health issues*, work on *framing*, analyses of *power*, and work on *global health networks*. It briefly outlines some relevant research from the wider health policy field to give an indication of the myriad ways in which one can look to explore priorities/agendas in global health. Following this, areas where the thesis endeavours to build and contribute to existing literature are drawn out. The chapter then moves to provide an overview of the multiple streams approach, clearly outlining its key concepts, noting some critiques of the approach, and explaining its relevance for analysis of global health agendas.

For clarity, below are summarised key points drawn out from the literature review:

- much research in this field is motivated by discrepancy in attention to issues – and points to lack of equity, transparency and understanding of global health agenda setting processes.
- although the literature has produced important insights into agenda setting processes in global health, this is a developing area and there is ample room for research which focuses on different cases and angles to deepen our understanding.
- Relatedly, there is a shortage of in-depth comparative analyses of health issues in this area of focus.

- Use of public policy frameworks and concepts in relation to global health agenda analyses is growing and has produced important insights as can be seen across the literature outlined, but the need for more work which explicitly draws on such is clear and has been articulated by scholars.

The thesis is able to contribute across the above points with its comparative analysis of polio and diarrhoeal diseases and through its utilization of the multiple streams approach.

## **2.1 Overview**

Scholars in global health have raised the issue of how priorities emerge in global health, querying the ‘makeup’ of the global health agenda, highlighting the importance of, and need for, more focussed work in this area. They have noted the challenges associated with the lack of transparency and clarity in such processes and the plethora of actors with often competing priorities now involved in establishing the global health agenda. Broadly speaking, much of this literature seems to have emerged from the recognition that development aid and resources are not inevitably distributed in a way that is commensurate with disease burden, nor necessarily in a way that best addresses the challenges faced by the communities receiving the aid. As Smith and Shiffman (2020: 325) note: ‘resource allocations often do not correspond closely with disease burden or the cost-effectiveness of interventions, suggesting that other factors—including political ones—shape the global health agenda’.

To generalize, there seem to be two main sources from which research concerning agenda setting in global health is emerging: scholars in academia addressing the issue, and individuals working in global health/development institutions themselves. Both sources provide valuable insights into such processes in global health. However, it should be noted there are often differences in approach between literature stemming from health/development organisations, which might focus on specific incidences of priority setting and organisational dynamics, or perhaps critiquing/suggesting frameworks for improved practice. Literature emerging from academic sources, (especially those looking at global health through the lens of international relations or political science), have also drawn on theoretical frameworks from other fields to try and help elucidate priority setting processes. Whilst they also use case studies of specific incidences of neglect, and sometimes suggest frameworks for improving priority setting, they also tend to delve more into some of the deeper underlying factors which might be influencing such processes – for example, the social, political, and ethical facilitators of priority emergence.

There are of course also further divisions within this literature, as mentioned, some approaching the study of global health with an eye for the socio-political dynamics at play, and others which come from a biomedical or purely health policy perspective, but all of which engage with, or pay homage to, priority setting ‘processes’ in global health in different ways. This divergence is worth mentioning because whilst this research places itself in area of unpacking socio-political processes which help explain how global health priorities emerge (and so predominantly aligns itself with analogous literature); it is important to appreciate the breadth and complex nature of priority setting processes and challenges in global health, and wider discussions occurring on the topic.

In an ideal world there would be enough resources to appropriately address *all* health challenges, but the finite nature of funding and resources means that hard decisions must be made. However, this is also what makes coming to a clearer understanding of why the global health agenda looks like it does, fundamentally important—because there are not infinite resources, it is crucial to ensure that those that are available are distributed in the most effective manner. Furthermore, in the convoluted arena that is global health, it is imperative we understand, as best we can, processes through which issues emerge as prominent, or, why they might fail to do so—often irrespective of strong indicators for global attention.

Developing a more nuanced, and *crucially* an empirically rooted, understanding of such influences and their impact across global health arena is a fundamentally important part of both improving decision-making and developing a stronger knowledge base from which scholars and practitioners in this arena can reflect and build. As Walt (1994: 207) put it in the 1994 book *Health Policy: An Introduction to Process and Power*: ‘[u]nderstanding the policy environment will allow us to operate more effectively in the promotion of policy change’.

## 2.2 Key literature

Looking to relevant work in this area stemming from a political science/IR angle, Shiffman<sup>10</sup> and colleagues, are some of the key voices whose research has become a source for understanding better how priorities emerge in global health and the factors surrounding this.

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<sup>10</sup> Professor Jeremy Shiffman at Johns Hopkins University works to ‘better understand the politics of health policy-making in low-income countries, as well as the global governance of health and social development. A political scientist by training, he applies political and social science theories to improve analysis of policy-making. Shiffman’s research considers how the political interests of governments, advocates, and organizations affect which issues receive attention, which policies get adopted and how these policies are implemented’ (Johns Hopkins, 2023).

Their work emphasizes the value of understanding the political influences and dimensions present in global health and the necessity of scrutinising them.

As opposed to delineating each and every piece of work in this section, it is more helpful to centre on the key themes that have emerged and developed in this area, with greater detail on some specific pieces. There is overlap in some cases between these sections/themes, but the delineations are helpful to broadly clarify the kinds of research taking place.

### *2.2.1 Emergence of political priority for health issues*

A key focus of across much of this literature has been developing hypotheses for better understanding how political priority has emerged (or failed to emerge) for a range of health issues – (e.g., safe motherhood, the emergence of global attention to health systems strengthening, new-born survival, global surgery, and early childhood development - see Shiffman et al., 2004; Hafner and Shiffman, 2013; Smith et al., 2014; Shawar et al., 2015; Shawar and Shiffman, 2017, to name a few). Across such studies (and throughout the work outlined in these subsections) the scholars have utilised ideas from political science, such as constructivist international relations theory and agenda setting theories and frameworks. In doing so they demonstrate the viability of such concepts in terms of their ability to shine light on complex and often opaque processes in global health, draw out factors affecting priority setting that may not have been immediately obvious, in addition to pushing us to ask improved questions about whether the processes revealed are fit for purpose.

For example, one of Shiffman's earliest published pieces on agenda setting was with Beer and Wu (2002) which sought to understand how global disease priorities emerge. To do so the authors explore the 'post-World War II histories of efforts to control three diseases - polio, malaria, and tuberculosis' (Shiffman et al., 2002: 225). Their research drew from the policy studies literature using three models of priority generation to assess which best explains efforts to control these diseases (Shiffman et al., 2002: 225). These were a rational model, an incremental model, and a punctuated equilibrium model (which comprises 'long periods of stability during which interventions are only available to select populations, punctuated by bursts of attention as these interventions spread across the globe in concentrated periods of time' (Shiffman et al., 2002: 225)). They conclude that the latter model reflects most closely efforts to tackle the three case study diseases they were looking at.

Bursts are associated with the convergence of three conditions: the widespread acceptance of the disease as a threat; a perception that human interventions can control disease transmission; and the formation of a transnational coalition of health actors concerned with fighting the disease. The generation of each condition requires considerable groundwork, the reason for

long periods of stability. Initiatives take off rapidly when the conditions couple, the reasons for bursts. (Shiffman et al., 2002: 225)

This work is meaningful in several ways, firstly because it uses a comparative study of three health issues to produce hypotheses about how health issues gain attention, and secondly because it draws on theoretical frameworks from policy studies to do so. Comparative health issue case studies in the agenda setting literature are less common than might be expected given the potential insights they can offer in terms of deepening understanding surrounding prioritisation. Yet here they are used to good effect to draw out patterns in the priority generation process. In addition, this work demonstrates that (at least in the cases of polio, malaria, and tuberculosis) rational or incremental priority setting processes are not a true indicator of how health issues rise and fall in priority—again providing validation that emergence of priority in global health does not follow a pattern that is necessarily predictable and coherent. This is also where this research project situates itself, that is, analysing why certain health issues are prioritized at certain times whilst others are neglected, and to do so understanding more fully explanatory factors for this. Some additional examples of the use of the ‘punctuated equilibrium’<sup>11</sup> approach include; Amri and Drummond (2021: 33) who applied it to COVID-19, to consider how ‘policy responses to the pandemic, largely in Canada but also globally were shaped by preexisting problems (periods of equilibrium)’; Llamas and Mayhew (2016) touched on insights from punctuated equilibrium after using the multiple streams approach (see below) to help understand how the policy of vertical birth practice<sup>12</sup> made it onto the local policy agenda in Otavalo (Ecuador). This study also demonstrated strengths and weaknesses in the multiple streams approach<sup>13</sup>, finding insights from punctuated equilibrium assisted the explanation.

As mentioned in Chapter 1, John Kingdon’s multiple streams is the approach that this project uses to help elucidate the rise and fall of diarrhoeal diseases, and the rise (and sustenance) of polio eradication on the global health agenda. Smith and Shiffman (2020: 337) described multiple streams as ‘the most widely used model in global and national health agenda setting scholarship’. Described in detail later in this chapter, Kingdon (2003) illustrates the process of an issue reaching prominence as being contingent on the alignment of three separate streams of influence: *problem*, *policy*, and *political*. Occasionally activity within these streams results

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<sup>11</sup> Punctuated equilibrium in political science is a framework developed by Frank Baumgartner and Bryan Jones. It aims to understand ‘why public policies tend to be characterized by long periods of stability punctuated by short periods of radical change’ (Jolicoeur, 2018: 1).

<sup>12</sup> Described as ‘a practical manifestation of intercultural health policy aimed at increasing indigenous women’s access to maternity care’ (Llamas and Mayhew, 2016: 683).

<sup>13</sup> Described in brief below; and in detail later in this chapter.

in their alignment for an issue, open *policy windows* provide an opportunity for *policy entrepreneurs* to advocate for that issue to then be moved onto a decision-making agenda—where it stands a higher chance of being prioritized – action being taken on its behalf.

Examples of existing literature which have utilised this approach are wide-ranging. Reich (1995: 489) used a modified version of the approach to look at *'The politics of agenda setting in international health: child health versus adult health'* – demonstrating how five political streams favoured child over adult health until the early 1990s at which point the World Bank made a concerted effort to shift the focus to adult health. Hafner and Shiffman (2013: 41) explored health systems strengthening and noted that '[a]fter a period of proliferation of disease-specific initiatives, over the past decade and especially since 2005 many organizations involved in global health have come to direct attention and resources to the issue of health systems strengthening'. Accordingly, the authors sought to explain the emergence of such attention finding that '[f]actors shaping the rise of attention to [health systems strengthening] correspond to dynamics in Kingdon's three streams' (Hafner and Shiffman, 2013: 45). Shiffman and Ved (2007: 785) looked at the emergence of political priority for safe motherhood in India noting that: '[a]pproximately one-quarter of all maternal deaths occur[ed] in India, far more than in any other nation on earth. Until 2005, maternal mortality reduction was not a priority in the country. In that year, the cause emerged on the national political agenda in a meaningful way for the first time'. Employing Kingdon's approach the authors found that '[a]n unpredictable confluence of events' commensurate with multiple streams explained the emergence of political priority for the issue (Shiffman and Ved, 2007: 785). Ridde (2008: 1368) used the theory as a part of a methodology to address equity and health policy implementation in Burkina Faso, looking to understand why '[d]uring the implementation of the Bamako Initiative (BI), the actors were drawn to policies solely for their orientation towards efficiency, thereby neglecting equity aspects'. Ridde (2008: 1368) puts forward 'a threefold explanation of why equity was neglected', citing the lack of utilization of "windows of opportunity"; policy entrepreneurs' failure to couple problem and solution streams; and the situation in question not being 'considered a public problem'. Ridde (2009) also used that empirical research to explore extending the streams to examine public policy implementation at the local level in a low-income country. Colombini et al. (2016: 493) drew on aspects of multiple streams in addition to work on framing to 'analyse the historical processes by which [gender-based violence] became legitimized as a health policy issue in Nepal'. They note that:



‘[a]genda-setting for [gender-based violence] policies in Nepal evolved over many years and was characterized by the interplay of political context factors, actors and multiple frames. The way the issue was depicted at different times and by different actors played a key role in the delay in bringing health onto the policy agenda’ (Colombini et al., 2016: 493).

The authors found that: ‘[t]he framing of the policy problem by certain policy actors, affects the development of each of the three policy streams, and may facilitate or constrain their convergence’ (Colombini et al., 2016: 493). Accordingly, the work demonstrates the relevance of utilising the concept of framing in conjunction with multiple streams, giving the model ‘an additional depth’ (Colombini et al., 2016: 493). Mamudu et al. (2014) explain that ‘[i]n 2007, Tennessee, the third largest tobacco producer in the US, enacted the Non-Smoker Protection Act (NSPA)’ the authors effectively used the approach to help understand ‘why and how this policy was developed’ (Mamudu et al., 2014: 633). Finally, Amri and Logan (2021: 1187) looking at Canada and the US, drew on the streams framework to demonstrate that policy responses to COVID-19 offered a ‘window of opportunity to better address the social determinants of health’, arguing that ‘[t]he social, political, and behavioural lessons presented by the COVID-19 pandemic should be drawn on in this pivotal moment for global public health’.

Suffice to say the approach has been used in different ways in global health literature, sometimes with much more rigour than others, but largely demonstrating the utility of the fundamental concepts of Kingdon’s approach in evaluating policy processes in global health across varied contexts and explaining issue ascendance/political priority (or lack thereof). Some of these examples also demonstrate usage of multiple streams in national level health policy analysis. As Smith and Shiffman (2020: 335) note: ‘A growing number of studies also focus on health agenda setting at the *national* and *subnational* levels, many with attention to the influence of global dynamics’. Whilst this projects’ focus is firmly global, touching on examples of work at different levels of analysis here helps highlight the iterative relationship between these different levels in global health agenda setting.

In addition to the punctuated equilibrium and multiple streams approaches, another example which scholars have drawn on is the Advocacy Coalition Framework which ‘deals with policy change over several decades, yet specifically considers the role of policy-oriented learning over shorter periods of time within that broader process (Sabatier, 1988; Jenkins-Smith, 1988)’ (Jenkins Smith and Sabatier, 1994: 175-6).

The advocacy coalition framework has at least four basic premises. First, understanding the process of policy change – and the role of learning therein – requires a time perspective of a decade or more. Second, the most useful way to think about policy change over such a time span is through a focus on policy subsystems, i.e. the interaction of actors from different

institutions who follow, and seek to influence, governmental decisions in the policy area. Third, subsystems must include an intergovernmental dimension, at least for domestic policy. Fourth, public policies or programs can be conceptualized in the same manner as belief systems, i.e. as sets of value priorities and causal assumptions about how to realize them. (Jenkins-Smith and Sabatier, 1994: 178)

Some examples of use of this framework (or aspects of it) in global health literature include Okeke et al.'s (2021) work on looking at how coalition groups form and work to sustain political priority for maternal and child health in Nigeria; Harris' (2019) work looking at nutrition policy in Zambia; and McDougall (2016: 309) looking at the role of advocacy coalitions in the global health landscape and 'how coalitions negotiate among themselves and exercise hidden forms of power to produce policy on the basis of their beliefs and strategic interests'. It can also be seen as '[p]art and parcel of the growing literature on roles of networks in the policy process' (Smith and Shiffman 2020: 338) (outlined below).

Shiffman and Smith (2007: 1370) also proposed a framework for 'analysing the determinants of political priority for global health initiatives'. Four elements make up their framework: *actor power* – '[t]he strength of the individuals and organisations concerned with the issue'; *ideas* – '[t]he ways in which those involved with the issue understand and portray it'; *political contexts* – '[t]he environments in which actors operate', and *issue characteristics* – the '[f]eatures of the problem' (Shiffman and Smith, 2007: 1371). Benzian et al. (2011: 124) for example, used the approach (slightly modified) to explain the lack of political priority for global oral health, drawing out reasons for its international neglect. Benzian et al. (2011: 124) identified a complex array of issues are found to contribute encompassing: the stakeholders, their remit, a lack of coherence and coalescence, in conjunction with a lack of agreement on the problem, portrayal and solutions for it. Similarly, Shawar et al. (2015) used this framework to investigate global political priority for surgery, finding the concepts assisted an explanation as to why the issue has yet to attract political priority. For example, regarding *actor power* they found fragmentation in the global surgery community, a lack of unified leadership and missing guiding institutions; with regards to *ideas*, they noted disagreement 'on how to address and publicly position the problem' (Shawar et al., 2015: e487). Looking to *political contexts* they explain 'the [global surgery] community has made insufficient efforts to capitalise on political opportunities such as the [MDGs]' (Shawar et al., 2015: e487). For the *characteristics of the issue*, they explain that 'data on the burden of surgical diseases are limited and public misperceptions surrounding the cost and complexity of surgery are widespread'. They also point to the fact that the global surgery community has however got 'several strengths that portend well for the acquisition of political support' (Shawar et al., 2015: e487).

Shiffman (2009: 608) followed up the 2007 piece by noting some weaknesses in the original framework – namely its lack of theoretical grounding and lack of specificity of the primary factors of influence. In doing so he draws on social constructivism (Shiffman uses the term ‘social constructionism’ in this piece) and provided a convincing argument to explore the ‘social rather than a material explanation for ascendance and decline of issues in global health’, and highlights many global health analysts have noted ‘that material factors such as mortality and morbidity burden and the availability of cost-effective interventions may not explain the variance in the levels of attention health issues receive’ (Shiffman, 2009: 608). He offers ‘that the rise and fall of a global health issue may have less to do with how “important” it is in any objective sense than with how supporters of the issue come to understand and portray its importance’ (Shiffman, 2009: 608).

This is one area on which this project builds. Having taken on board research which identifies the importance of health issue portrayal in terms of garnering attention and political priority, this project examines the ways in which diarrhoeal diseases and polio meet ‘criteria’ of being seen as a ‘problem’<sup>14</sup> (or fail to do so) – i.e., looking at how they have been portrayed, as one element of understanding factors affecting their broad trajectory in global health over the last twenty years.

Maher and Sridhar (2012: 1) employed Shiffman’s 2009 framework to investigate challenges facing non-communicable disease (NCD) control, querying the lack of funding for NCDs and the lack of a global plan of action to tackle them. They concur with Shiffman’s argument that ‘strategic communication - or ideas in the form of issue portrayals - ought to be a core activity of global health policy communities. But issue portrayals must be the products of a robust and inclusive debate’ (Maher and Sridhar, 2012: 1). In short, they ‘explain the neglect of NCDs on the global stage in terms of a lack of strategic communication’ and argue that in order to raise the political priority of NCDs there is a need to recognise and ‘[engage] with the diverse ways in which actors express concern for the global proliferation of these diseases’ (Maher and Sridhar, 2012: 2, 8). Their paper touches on some important questions with regards to framing and neglected diseases in that it asks the questions: ‘what role has framing played in contributing to the lack of priority for NCDs? What frames have been used to portray this issue, and how can we assess the effectiveness of these frames?’ (Maher and Sridhar, 2012: 4). In addition, the authors make the important points that:

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<sup>14</sup> This sentence refers to how an issue becomes seen as a ‘problem’ as opposed to a ‘condition’ in Kingdon’s multiple streams approach (see section 2.6 for detail on this).

Ultimately, our political interactions amount to struggles for influence, and determining which issues to champion in the midst of these struggles – and which to disregard – is informed by subjectively held notions of the right, the good, and the just. Indeed, the very act of choosing which issues to prioritise in our daily lives forces us to evaluate our values and aspirations as individual agents against the shared values that structure the societies in which we live. (Maher and Sridhar, 2012: 1)

By raising these points, they draw attention to the importance of often implicit drivers that are playing a role in determining which issues become a priority. This also suggests that we really should be asking what values *are* reflected in how global health priorities are currently being set and what this says about *global* health goals as a whole. Such queries are also key drivers for this research - which set out to determine factors influencing the agenda status of two health challenges. In doing so it points to some of those values and biases which are feasibly influencing the process—the results of the research project then invite further reflection on these points.

A paper of particular relevance to this thesis is Bump et al.'s (2013) work which looks to measure and assess the change in priority of control of diarrhoeal diseases (CDD) on the global health agenda. The authors 'build on two conceptual frameworks that have been proposed for understanding political priorities and agenda-setting processes in global health', these are Reich's (1995) political streams<sup>15</sup> and Shiffman and Smith's (2007) aforementioned framework (Bump et al., 2013: 801). Their analysis 'employed multiple indicators to assess the priority of DD [diarrhoeal disease] control on the global health agenda' (Bump et al., 2013: 807). Ultimately they demonstrate that the priority of CDD has altered considerably between the 1980s and their time of writing. They find that 'global-level priority of [diarrhoeal diseases] is about one-sixth to one-third as high as in 1985' (Bump, et al., 2013: 799). They '[present] political reframing strategies that could be used to promote the priority of [diarrhoeal diseases] in the future' (Bump et al., 2013: 799). They noted that '[w]hen perceived as a possible vertical programme, CDD has very low potential for increased support' (Bump et al., 2013: 805). However, they identify reframing strategies that could help improve CDD's priority. Those they deemed the 'most promising' were to: '[f]rame DD as a vaccine-preventable disease and focus on the technology of a new rotavirus vaccine' and: '[f]rame DD within the [health systems strengthening] movement and focus on DD's impact on child or family health' (Bump et al., 2013: 805-807).

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<sup>15</sup> Reich's approach delineates 'five political streams: organizational, symbolic, economic, scientific and politician politics', to look agenda setting in international health of child versus adult health. The approach is described as: 'a modified version of Kingdon's 'garbage can model' of how public policy agendas are set' (Reich, 1995: 489).

Their work demonstrates changes in priority over time and provides a solid foundation on which further research can build. In keeping with literature in this area, their research also reiterates the likely importance of the way in which a health issue is framed with regards to its level of prominence on the global health agenda. Indeed, the notion of issue portrayals and the power of ideas in global health priority setting is one that comes up with some regularity in the literature – examples of which are drawn out below. Relatedly, Bump et al. (2011)<sup>16</sup> also explored how CDD became a priority historically. They cite: Cold war geopolitics; development of ORT; strong leadership and cooperation across global health institutions; the fit of diarrhoeal diseases and ORT with ‘prevailing 1970s views, such as primary health care and the Alma-Ata Declaration’, in addition to ‘more than a decade of work on DD that had yielded results to help change the perception of DD at an opportune time’ (Bump et al., 2011: v-vi). The authors also provide suggestions as to why diarrhoeal diseases fell from prominence in subsequent years (see section 3.2). This thesis builds on such work, drawing out similar dynamics explaining diarrhoeal diseases’ initial rise to prominence, but then moves to analyse their subsequent inability to *maintain* such prominence and views their trajectory through the rubric of multiple streams.

Public policy frameworks and concepts have been a useful means of shining light on opaque processes in global health decision-making. Specifically, the focus on how priority has emerged for different issues has been a helpful entry point for understanding the myriad dynamics involved in the agenda-setting process and provided a solid foundation on which further related research can build.

### 2.2.2 Framing

Relatedly work on framing in global health has been an important development. Focus on understanding the relevance and processes of issue portrayals in conjunction with their material reality has provided fascinating insights into how some issues gain attention and through what means. Although this project does not overtly focus on framing, this work is related in the sense that contemplation as to how issues are best framed to garner attention is very similar in purpose to aspects of the multiple streams framework of analysis. That is contemplating how issues come to be portrayed as problems, and looking to the work of advocacy and the means used therein (ideational and material) to initiate and sustain action around health issues.

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<sup>16</sup> Bump et al. (2011) – this report was produced in 2011, currently unpublished.

McInnes et al. (2012: S83-84) have outlined ‘the framing of global health issues and the manner in which this impacts upon [global health governance]’ and take a ‘constructivist theoretical approach, which allows an examination of the ideational as well as material basis behind contemporary debates and controversies’. They draw out ‘key frames operating in global health: evidence-based medicine, human rights, security, economics and development’ (McInnes et al., 2012: S83). Through a collection of articles, the scholars used these different frames to ‘examine the manner in which health issues are framed, for what purpose and with what effects’ (McInnes et al., 2012: S91). Cases examined included *pandemic influenza* (Kamradt-Scott, 2012; Kamradt-Scott and McInnes, 2012); *tobacco control* (Reubi, 2012); *HIV/AIDS* (Rushton, 2012; Woodling et al., 2012) and *access to medicines* (Williams, 2012). The authors find that these five frames ‘are being concurrently deployed within discussions on global health’ and that ‘multiple frames can operate across more than one issue area’ (McInnes and Lee, 2012b: S193). Crucially, the authors found that ‘different framings not only lead to a variety of narratives, thereby compromising the potential for [global health governance] to possess a coherent underlying logic, but that it can also lead to competing pathways and policy responses’, accordingly they ‘conclude that the presence of these different frames contributes to a confused institutional landscape and policy space where contradictions and competition are rife’ (McInnes and Lee, 2012b: S197).

McInnes and Roemer-Mahler (2017: 1335) have also addressed the framing of health threats as risks noting some of the ways in which this framing seems ‘less politically charged and divisive than the security frame, because it combines an aura of scientific objectivity with a moral call to action over the potentially catastrophic impact of infectious diseases’. However, they explain that ‘the global health risk frame is inherently political’ and that ‘material consequences of its adoption are likely to benefit populations in high-income countries more than those in low-income countries, and therefore privilege the interests of the former over those of the latter’ (McInnes and Roemer-Mahler, 2017: 1336). Such work demonstrates the need to be sensitive to the fact that frames which may appear in some ways less contentious are not free from challenges of their own.

Recently, Shiffman and Shawar (2022: 1977), building on work on framing, ‘examine [its] role in shaping global health priorities’. They put forward ‘evidence of the influence of three framing processes—securitisation, moralisation, and technification. Securitisation refers to an issue’s framing as an existential threat, moralisation as an ethical imperative, and technification as a wise investment that science can solve’ (Shiffman and Shawar, 2022: 1977). Crucially, the authors note that these frames:

concern more than how issues are portrayed publicly. They are socio-political processes, characterised by contestation among actors in civil society, government, international organisations, foundations, and research institutions. These actors deploy various forms of power to advance particular frames as a means of securing attention and resources for the issues that concern them. (Shiffman and Shawar, 2022: 1977)

Another example of work on framing is that of Rushton and Williams (2012: 147) who utilised framing as one of ‘four pillars’ they suggest for ‘a new framework for analysing the processes through which [global health policy] is made’ - the other pillars being ‘paradigms; power; and the “deep core” of neoliberalism’. Their work also offers three ‘normative contentions as to why global health governance is presently failing to address manifest health needs’ (Rushton and Williams, 2012: 167). They note that global health problems are often framed poorly; that ‘the relationship between paradigms of global health changes over time’ and those which dominate (economics and biomedicine) ‘militate against a broad social understanding of the determinants of health’ (Rushton and Williams, 2012: 167). Finally, they point to the damaging impact of ‘the structuring logic of neoliberalism’ in ‘exacerbat[ing] economic and health inequalities and limit[ing] the range of likely responses to global health problems’ (Rushton and Williams, 2012: 167). Similar contentions are seen in the outcomes of this thesis which points to the ways in which health issues can be understood/portrayed as a ‘problem’ as crucial to their journey to global health priority. Additionally, the political stream for each case study, demonstrates the power of particularly dominant dynamics in the ‘climate’ of global health and the impacts that this has in terms of which issues are more likely to achieve/sustain prominence.

Thus, although this research project does not explicitly focus on framing, it is something which it remains cognisant of in terms of trying to understand how each of the chosen case studies has been perceived over time. Additionally, the results of this thesis, particularly reflections on factors illuminated in the ‘problem’ streams for each case could practicably be further developed to draw from and align with work on framing. That is looking at how the factors identified in that stream might be ‘harnessed’ to frame the cases differently for greater policy purchase. As mentioned earlier, Bump et al. (2013) have already posited some options for political reframing strategies for diarrhoeal diseases, but there is much more room for more discussion on that across different health issues/initiatives. Furthermore, it is straightforward to hypothetically envisage how the three frames outlined by Shiffman and Shawar (above) have been utilized by the polio eradication initiative as a means of keeping the issue prominent – further investigation which draws out the specifics of such a connection would be a fruitful next stepping-stone from the work this thesis presents on polio and its journey in global health.

### 2.2.3 Power

As power dynamics in various guises are fundamental element of why global health governance and the agenda looks the way it does, increased consideration of such benefits understanding of agenda setting influences (as outlined below). Whilst these analyses of power may not be explicitly focused on ebbs and flows in prominence of specific health issues, concern with power is obviously a theme that runs deep throughout the work of those looking at agenda setting in global health – explicitly or otherwise. These examples suggest ways in which this might be the case.

Walt (1994: 52) addressed the role of power in the health policy process, noting:

the chance to influence health policy does exist in many societies, although clearly this depends on the nature of the political system. Participation may be weak or even non-existent in the grand issues or high politics – which may be dominated by small groups of elites. But on the ordinary issues of policy – the low politics – the potential for participation often exists.

And goes on to emphasize that ‘public policy making has to be understood as a political process rather than an analytical problem-solving one’ (Walt, 1994: 52).

Shiffman (2014: 297) addressed the role of power in global health, going beyond power such as that derived from financial resources, to discussing the role of epistemic and normative power in global health. He makes the argument that rather than being taken for granted, as they often are, we should be questioning these forms of power and their legitimacy (Shiffman, 2014: 297). Shiffman’s article prompted nine commentaries.

Grépin (2015: 321) offered ‘that the distribution of power in some global health institutions may be limiting the contributions of all researchers in the field’. Lee (2015: 257) emphasized the necessity of ‘recogniz[ing] that global health is shot through with power relationships, that they can take many forms, and that their explicit acknowledgement should be part of, rather than factored out of, any reform of global health governance’. Brown (2015: 111) notes ‘it is equally important to recognize that global health is, and always will be, deeply political and that some form of power is not only necessary for the system to advance, but also to try and control the ways in which that system operates’. Bump (2015: 396) wrote that ‘legitimacy in the exercise of power is conferred by the consent of those subjected to it’ and emphasized the problem of recipient countries having minimal input into decisions purportedly being made for their benefit. In short noting that: ‘[t]he analysis of power and legitimacy is one helpful way of questioning whether decisions made in global health are consistent with the claimed objective of advancing the lives of poor country citizens’ (Bump, 2015: 396). Levine (2015: 316) points to ‘[t]he risks of over-dependence within the global health community on a small



number of private funders, and particularly on the Gates Foundation’ suggesting ways in which this might be mitigated. Rushton (2015: 311) responded by drawing attention to challenges that social scientists must grapple with in terms of more deeply investigating structural and productive power in the global politics of health – ‘be[ing] reflexive about our own exercise of structural and productive power and the fact that researching global health politics is itself a political undertaking’. Hanefeld and Walt (2015: 119) use a framework by Pierre Bourdieu to explain two ways in which actors ‘capture moral authority in global health. One, through power based on scientific knowledge and two, through procedures in the policy process, most commonly associated with the notion of broad consultation and participation’. Engebretsen and Heggen (2015: 115) ‘emphasize the importance of questioning the global validity of significant concepts underpinning global health policy’ – such as ‘global health’ and go on to question ‘‘quality’ and ‘empowerment’ as examples of world-forming concepts. These concepts are exemplary for the gentle and quiet forms of power that underpin our reasoning within global health’. Finally, the editor of the *Lancet*, Richard Horton (2014: 1912) responded by agreeing with Shiffman’s original call for analysis of power, amongst other points noting that ‘how those invested with the power to make decisions are selected and rewarded should all be a much greater subject of scrutiny. Including the (modest) contribution of medical journals’. Together these pieces represent an important recognition of the value of deeper considerations of the role of power in setting health agendas.

A follow-up article from Shiffman (2015: 497) observed that ‘[a] clear understanding of how power operates in this field is necessary to ensure that it is used productively to serve the aims of health equity and improved population health’. Three ideas of how to do so were put forward:

- (1) be skeptical of the global health rationality project—the effort to rescue the field from the alleged indignities of politics through the application of scientific methods;
- (2) analyse global health as a field of power relations, a concept developed by sociologist Pierre Bourdieu; and
- (3) elevate the place of input legitimacy—inclusive deliberation, fair process and transparency—to address legitimacy and knowledge deficits in this field. (Shiffman, 2015: 497)

These points appear vital to the improved study of global health politics. Importantly, Shiffman (2015: 497) also cautions ‘that it is not possible to factor out power from the global health field as a means of ensuring the objectivity of decision making’. Indeed, it is only with analysis, better comprehension, and recognition of the problematic nature of power relationships and expressions in this field that practice in global health can be improved upon.

Other examples of work on power in this context include Abimbola et al. (2021: 8) who underscored the need to address power asymmetries in global health, pointing out that ‘[w]e

need to understand the ways in which the colonial legacies deeply entrenched in national and global health systems impede the achievement of health equity’ and that ‘[t]he current global health landscape is heavily centralised and homogenous’. Topp et al. (2021: 1) describe power as ‘a growing area of study for researchers and practitioners working in the field of health policy and systems research (HPSR).’ Yet the authors note that ‘explicit analyses of power in HPSR remain relatively infrequent, and there are no comprehensive resources that serve as theoretical and methodological start points’ (Topp et al., 2021: 1). They go on to outline ‘methodologies and approaches for conducting power analyses’ emphasizing the need for more research in the area with a view to ‘generat[ing] key insights needed to address underlying drivers of health disparities and strengthen[ing] health systems for all’ (Topp et al., 2021: 1).

The focus of this thesis is not specifically on unpacking power dynamics; however, this is something that sits clearly in the background of the project throughout. Through contemplating how and why decisions are made, and why certain issues are prioritized, and when, we can begin to ascertain where power is located in global health with regards to specific decision-making. Further work in this area which overtly draws out this connection would be an interesting stepping-stone to take from the work outlined in this thesis. For example, such work could look to the role of power in the work of policy entrepreneurs and advocacy and through the ways in which certain issues are portrayed – thus also connecting back to work on framing.

#### *2.2.4 Global health networks*

In the literature exploring agenda-setting in this arena, work on the emergence and effectiveness of global health networks<sup>17</sup> has become a focus for scholars. They have offered suggestions as to ‘why networks crystallize more easily surrounding some issues than others, and once formed, why some are better able than others to shape policy and public health outcomes’ (Shiffman et al., 2016a: i3). Shiffman et al. (2016a: i4) note the varied capacity of networks in terms of their ability to attract attention and resources and persuade governments to certain courses of action, and that ‘[t]his variance may help explain why mortality and morbidity have declined more rapidly for some conditions than others’.

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<sup>17</sup> ‘Global health networks are cross-national webs of individuals and organizations linked by a shared concern to address a particular health problem global in scope. They may consist of and connect multiple types of institutions, including United Nations (UN) agencies, bilateral donors, international financial institutions, private philanthropic foundations, national governments, international and national non-governmental organizations (NGOs), medical associations, research institutions and think tanks’ (Shiffman et al., 2016a: i4).

Shiffman (2017: 183) explains that global health networks ‘have proliferated over the past quarter century. They differ in their effectiveness, a factor that may help explain why resource allocations vary across health conditions and do not correspond closely with disease burden’.

Smith (2014: 951) demonstrated the importance of health policy network characteristics (citing ‘cohesion, composition, status and key actors support’) as a key part of shaping agenda status. Smith (2014) presents an analysis which contemplates over many years the emergence of newborn survival as a political priority in Bolivia during the 1990s/2000s, and its subsequent decline as a political priority in the later 2000s. In doing so the research emphasized the importance of a strong health policy network and commitments to international development goals in this instance as being key part of issue attention and policy impact, and noted that ‘[h]ealth policy networks need to act strategically to ensure health system responsiveness to their issues, thereby sustaining issue attention and increasing the likelihood of policy impact’ (Smith, 2014: 951). Such work also demonstrates the utility of looking at case studies over an extended period – an insight with which this thesis concurs. Indeed Smith (2014: 951) suggests that ‘sustainability of issue attention [...] become a focal point for health policy networks and analyses’. Indeed, global health is not static. Better comprehending the long-term trajectory of successful health initiatives (and those that have been less so) are useful barometers of what factors might be utilised in the future to help ensure sustainability and implementation of health initiatives long-term.

Smith et al. (2014: 551) also compared political priority for newborn survival between three countries (Bolivia, Nepal, and Malawi) finding that ‘[k]nowledge of a problem’s severity, international norms establishing its unacceptability and resource provision facilitate the emergence of issue attention, but domestic advocacy and national political environments are at least as important’. Furthermore, the authors note that whilst policy communities may be unable to impact many aspects of agenda-setting, ‘they may be able to enhance the likelihood of advancing political priority for neglected issues by (1) advancing solutions that have demonstrated efficacy in low-resource settings, (2) building on existing and emerging priorities and (3) developing a strong network of domestic and international allies’ (Smith et al., 2014: 551). Pointing to ways in which policy communities might be able to improve the ‘status’ of neglected issues is an important consideration beyond understanding how and why priorities emerge.

Relatedly, Dalglish et al. (2015: ii13) used an epistemic communities framework ‘which puts forth transnational networks of technical experts as agents of policy change [finding that it] helps describe how [integrated community case management of childhood illness] came to the

fore as the preferred solution for reducing child mortality’. The authors make several key points, amongst which they offer that the ‘formation of epistemic communities and their influence over policy making is not automatic, but requires considerable efforts to resolve conflicts and facilitate consensus on values/normative beliefs, causal beliefs, notions of validity, and policy enterprise’ (Dalglish et al., 2015: ii13).

Shiffman et al.’s (2016a: i3-4) work offered a conceptual framework made up of 10 factors in three categories – those being ‘features of the networks and actors that comprise them, their policy environments and particular characteristics of the issues they address’. This framework was outlined for a 2016 *Health Policy and Planning* project which ‘represent[ed] the first comparative effort to understand the emergence and effectiveness of global health networks’ (Shiffman et al., 2016a: i3). Scholars investigated the formation, role, and impact of global health networks across: *global alcohol and tobacco control* (Schmitz, 2016, Gneiting, 2016 and Gneiting and Schmitz, 2016); *tuberculosis* (Quissell and Walt, 2016); *pneumonia* (Berlan, 2016); *maternal survival* (Smith and Rodriguez, 2016) and *newborn survival* (Shiffman, 2016a).

Importantly then, the key findings from this body of research regarding networks were the recognition that despite being ‘one of many factors influencing priority, [networks] do matter, particularly for shaping the way the problem and solutions are understood, and convincing governments, international organizations and other global actors to address the issue’ (Shiffman et al., 2016b: i110).

Additionally, their research found that ‘[n]etworks are most likely to produce effects’ when the issue is framed in a compelling manner, combining a ‘shared understanding of the problem, a consensus on solutions and convincing reasons to act’. Also, of importance to the effectiveness of networks is that they build coalitions that extend beyond the health sector – this ‘demands engagement in the politics of the issue, not just its technical aspects’. However, the authors note that these dynamics – ‘[m]aintaining a focused frame and sustaining a broad coalition are often in tension’, but that ‘effective networks find ways to balance the two challenges’ (Shiffman, et al., 2016b: i110). They also explain:

The emergence and effectiveness of a network are shaped both by its members’ decisions and by contextual factors, including historical influences (e.g. prior failed attempts to address the problem), features of the policy environment (e.g. global development goals) and characteristics of the issue the network addresses (e.g. its mortality burden). (Shiffman et al., 2016b: i110)

Shiffman (2016b: i1) makes the important point that the proliferation of these networks is indicative of change in global health governance ‘from a system dominated by hierarchical

forms of organization—especially nation-states and intergovernmental organizations—to one characterized by horizontal networking and growing participation of non-state actors’. This observation is corroborated in this thesis by evidence of the rise of non-traditional actors playing a part in the increased prominence of certain health issues (such as polio) accruing prominence in the global health arena.

Building on individual case studies published above, Smith and Shiffman (2016: 86) asked ‘why do comparable issues receive differential levels of attention and resources?’. Looking to maternal and neonatal survival, the authors queried and demonstrated why maternal survival achieved ‘status as a global health priority earlier and to a greater degree than newborn survival’ (Smith and Shiffman, 2016: 86). Paying attention to the power of advocates and ideas, they explain that ‘maternal survival’s grounding as a social justice issue spurred growth of a strong and diverse advocacy network and aligned the issue with powerful international norms’ in contrast:

[n]ewborn survival’s disadvantage stems from its long status as an issue falling under the umbrellas of maternal and child survival but not fully adopted by these networks, and with limited appeal as a public health issue advanced by a small and technically focused network; network expansion and alignment with child survival norms have improved the issue’s status in the past few years. (Smith and Shiffman, 2016: 86)

Amongst its many insights, an important take away from such work is the way in which certain issues (in this case newborn survival, but similar dynamics can be identified in the diarrhoeal disease case study in Chapter 3), struggle with being a ‘hidden issue’ i.e., falling under various ‘umbrellas’ of concern, not easily emerging (or re-emerging) as a priority in their own right (Smith and Shiffman, 2016: 86-87). Furthermore, their explanation for the issue’s improved status provides evidence for reflection in terms of thinking about how to enhance health issue conditions in terms of garnering attention more generally.

Quissell et al.’s (2018: 145) comparative analysis of network formation ‘[sought] to extend knowledge of global network formation by investigating the drastic differences in the historical patterns of network coalescence and issue attention for TB and pneumonia’. Using Kingdon’s three streams framework in addition to work on global health advocacy and networks, the authors found ‘an iterative process of network emergence corresponding to the three streams model’ (Quissell et al., 2018: 144). They explain that the emergence of successful networks:

is based on building shared identities among policy entrepreneurs, agreeing on issue frames, creating institutions, developing relationships, sustaining latent networks during issue neglect, and linking to opportunities in the policy environment. Further, this study reveals that once formed, network structures enable access to political opportunities and more effective

development policymaking and governance. Additionally, for networks struggling to take shape, we identify deliberate efforts that can overcome earlier iterations of failed attempts at network formation. (Quissell et al., 2018: 144)

A particularly interesting aspect to such research has been that not only does analysis of global health networks help explain issue prominence and neglect. It also offers insights into the importance of ‘latent networks’ and their ability to play an important role in terms of being able to ‘mobilize more quickly and effectively when presented with policy windows’ (Quissell et al., 2018: 149) i.e., highlighting the importance of policy entrepreneurs (Kingdon, 2003) being ready to act for when conditions are ‘right’ for an issue. In short, an important area for consideration and development for those interested in looking at ways in which health issue profiles might be improved upon.

The growing literature on global health networks offers important insights as to why attention and interest develop around certain issues and the ways in which this might be cultivated by interested parties. Furthermore, some of the work outlined here has used comparative analyses and looked to the sustainability of attention to issues, which offer deeper insights into global health policy making, and are important angles to take for developing a more holistic understanding of global health agenda setting processes.

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An overview of work in the broad area can be seen in Smith and Shiffman’s (2020) chapter on ‘*The politics of global health agenda setting*’ which provides an insight into the topic by two scholars whose work continues to inform the development of this field. The authors focus their chapter therein on:

four categories of factors that shape global health agenda-setting: actors, ideas, interests, and institutions. *Actors* refers to the decisions and behaviours of individuals and organizations. *Ideas* pertains to knowledge and principle-based concerns. *Interests* concerns individual agendas. *Institutions* pertains to rules and procedures, formal and informal, that structure the process. (Smith and Shiffman, 2020: 326)

These factors can be clearly seen across the literature raised in this review and are a valuable way of refining the trends in thinking and research in this burgeoning and important area of literature investigating global health issue prioritization processes. Crucially, Smith and Shiffman (2020: 334-335) note the research on global health agenda setting:

connect[s] to long-standing social scientific debates about the relative roles of agency and structure in shaping social processes. Global health agenda setting research supports the contentions of some scholars that rather than being separate, agentic, and structural forces are mutually constitutive, and that both influence social processes, including agenda setting.

Both the case studies investigated for this thesis corroborate this assertion.

Finally, Walt et al. (2008) produced an important article which reflected how best to do health policy analysis reflecting on the challenges of doing so and which frameworks, theories, methodologies, and designs can be used effectively to this end. Amongst the points made are the need for greater use of theories of public policy in this kind of research as well as for more comparative studies, and ‘the importance of reflexivity and researcher positionality in the research process’ (Walt et al., 2008: 308).

This section has addressed some of the prominent themes in literature in global health and international relations/political science which has overtly tackled factors contributing to the prominence or invisibility of certain health issues, highlighting some of the key points of interest. However, although there are absolutely scholars producing vital work in this arena, it is still a developing topic of interest, leaving much scope for further study, both that which builds on what has been discussed in this section and that which takes new directions.

### **2.3 Wider health policy literature**

The literature drawn out in this review thus far has focused on that which takes a similar angle to the one adopted in this thesis – examination of the socio-political influences affecting issues’ prominence on the global health agenda stemming from an IR/political science lens. There are however myriad ways to investigate agendas/priorities in global health. Initial background reading for this research project involved developing awareness of the wider health policy literature and some of the ways in which health priority/agenda setting challenges have been addressed there – where often a more ‘technical’ approach is taken. Touching on a few varied examples helps give an idea of the breadth and interrelated, multilayered nature of the field.

Examples include work which critiques tools/methods designed ostensibly to assist decision making in global health, such as DALYs, reminding us that it is important to be cognisant of potential weaknesses in measures used to analyse and make decisions in global health (see Anand and Hansen, 1997; Parks, 2014; Arnesen and Kapiriri, 2004; Millum et al., 2020; Whyte-Laurie, 2015; Solberg et al., 2020). Baltussen and Niessen (2006: abstract) have noted the lack of rationality/transparency in priority setting for health interventions and advocate for a move away from priority setting focused on single criteria (such as cost-effectiveness, equity, evidence-based medicine, and burden of disease) to that which considers multiple criteria simultaneously. Norheim et al.’s (2020) collaborative book highlighted the immense challenge of deciding where to allocate resources in global health and provides considered, specific recommendations for improving future priority setting that move ‘beyond cost-

effectiveness'. Scholars have explored challenges in setting priorities for health research (e.g., Ranson and Bennett, 2009; Tomlinson et al., 2011; Rudan et al., 2017); new methods have been developed such as the CHNRI methodology to help 'decision making and priority setting in health research investments to improve child health and nutrition' (Rudan et al., 2017, 2). Many have pointed to the need for better priority setting to reach articulated health/development goals (MDGs 1, 4, 5, 6 and 7 all targeted improvements in health<sup>18</sup>, as do SDGs 3 and 6<sup>19</sup>) and highlight the need for improved implementation research (see Rudan et al., 2007; Fontaine et al., 2009 who provide interesting work in this regard focused on diarrhoeal diseases and pneumonia – raising implementation challenges as one key aspect of why these health issues continue to exact an unacceptable burden). Indeed, implementation challenges are present across many global health issues – both cases in this thesis struggle with them in different ways.

Although the thesis' alignment is with the literature outlined in section 2.2, it is helpful to be alert to the diverse, interconnected nature of the research in this topic area and the myriad influences, implicit, explicit, at multiple levels and at different stages of the policy cycle affecting health policy making. Critiquing widely used tools such as DALYs is obviously not the focus of this project, but keeping an awareness of potential limitations of such measures (and others) is important. Similarly, challenges that policymakers might face when making decisions, such as limited expertise across criteria of consequence to decision-making (Baltussen and Niessen. 2006: main article para. 11); weaknesses and lack of transparency in priority setting processes more broadly; difficulties in funding downstream/implementation research, and the impacts that incoherent priority setting might have in terms of impeding progress toward articulated global health and development goals, are all examples of areas to keep in mind.

## **2.4 Conclusion**

There are several key areas that have been raised throughout the literature that can be clarified:

- There is a lack of clarity, consistency and in-depth knowledge about agenda setting processes in general.

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<sup>18</sup> MDG 1 = 'eradicate extreme poverty and hunger'; MDG 4 = 'reduce child mortality'; MDG 5 = 'improve maternal health'; MDG 6 = 'combat HIV/AIDS, malaria and other diseases'; MDG 7 = 'ensure environmental sustainability' & 7C specifically targeted 'halv[ing] the proportion of people without sustainable access to safe drinking water and basic sanitation' (WHO, 2018b)

<sup>19</sup> SDG 3 = Good health and wellbeing; SDG 6 = Clean water and sanitation (UN SDGs, a, n.d.).



- Research drawing on frameworks and concepts from IR/political sciences has begun to reveal important insights into factors influencing issue emergence and neglect.
- There has been emphasis on the importance of how health issues are framed and the effect this might have on their visibility and the way in which they are perceived on the global health agenda, and the kind of response such framings might prompt.
- Analyses of the role of power in global health is an important and growing area of the literature. Although not the central focus of this thesis, power dynamics are a constant presence in the background of the project – and future research which explicitly focuses on analysis of the role of power in the agenda setting processes for the case studies chosen here, would be a natural next step from the work outlined over the course of this research.
- The role of global health networks is raised increasingly and their relevance in terms of helping health issues gain political traction and prominence on the global health agenda.
- Examples touched on from the wider health policy literature which have approached analyses of priority setting in global health in different ways, point to the diversity and multilayered nature of the topic area and the need to be cognisant of such.

In order to better identify how this thesis contributes considering what has been covered here, it is helpful to highlight what is missing in the present literature of similar focus.

The use of theoretical frameworks in the literature discussing agenda setting in global health is growing but limited. As touched on, there has been increased engagement in this area, but the explanatory potential of such frameworks in coming to a greater understanding of global health still requires advancement and an increase in use across the board. This point has been made by several scholars working in the area, as has the shortage of comparative applications in this regard (see Walt et al., 2008; Smith and Shiffman, 2020). As a comparative study utilising Kingdon's multiple streams, this research joins studies in the area that have taken an analogous approach but does so for different case studies, and thus responds to both these calls.

Both case studies in this thesis presented the opportunity to draw out both individual and institutional incidences of advocacy on their behalf. Thus, whilst the research does not focus specifically on drawing out the minutiae of the global health networks for each issue, it does pay homage to the work that is being done in that area, that is by demonstrating incidences of effective advocacy for each case (institutional and individual) thus reiterating the important

point that the strength of advocacy for an issue is crucial to its upward trajectory on the global health agenda, and pointing to the not insignificant role of agency in this process.

Much of the literature discussed here has either explicitly (or is evident through the content of what is being written), emphasized the importance of doing more research which helps us to gain a better understanding of the agenda setting environment. This is both the most general, but arguably the most important justification for this project. It is only through better understanding how priorities emerge, why they fail to, and the environments in which these processes take place, that we can begin to see where there might be room for improvement, and begin to comprehend the reasons behind discrepancies between need, attention, and distributed resources.

At heart, this research is driven by a very clear discrepancy in global health governance. Whilst specifically motivated by the problem that is diarrhoeal diseases' neglect relative to disease burden, the research also speaks to a wider set of challenges in global health - the challenge of equitable and transparent governance in an ever more crowded arena; the need for increasingly robust local health infrastructures; the importance of balancing vertical and horizontal approaches to tackling global health issues; and the very real need to come to a better understanding of factors influencing direction of travel in global health. Another important element for this project, is the recognition, as highlighted in some of the literature in this review, of the relative lack of longitudinal studies, despite the fact that outbreaks/diseases are long wave events and accordingly demand longer term evaluation. Recognising this, the project leans into such analysis for both cases, with particular focus on two important periods in international/global health. Finally, a more general aim of the research was to speak to disparities in global health more broadly i.e., by uncovering a little more of the mystery that surrounds divergent health issue status for specific cases, some insights that are applicable more generally and not purely in relation to the case studies chosen for this project can be suggested.

The following section moves to outline the multiple streams approach in detail, clarifying its central dynamics and its relevance to the project. It also reiterates clearly how the approach has been understood for the purposes of this research.

## 2.5 Introduction to Kingdon's multiple streams approach

John Kingdon's multiple streams approach – first published in his 1984 book *Agendas, Alternatives, and Public Policies* - 'remains a key influence on the study of public policy' (Cairney and Jones, 2016: 37). Kingdon's approach offers a useful means through which it will be possible to better grasp some of the processes which effect and influence global health decision making. However, before delving into the minutiae of the approach, and more specifically discussing how it is a relevant way through which to address the question this thesis poses, it is worth briefly touching on how it fits within the wider field of public policy theory.

Described effectively by Weible et al. (2012: 3), '[t]he policy process is the study of change and development of policy and the related actors, events, and contexts'. Over time the field of public policy has established, or drawn on, an array of methodologies in attempts to understand and explain various aspects of this policy change and variation (see Weible et al., 2012, Anyebe, 2018). Some examples include the stages model which focuses on breaking down policy processes into a series of incidences – often including agenda setting, policy formulation, policy adoption, decision making, policy implementation, and policy evaluation (Howlett and Giest, 2013: 17; see also Weible et al., 2012; Sabatier, 2007, John, 2012, Benoit, 2013). 'Rational choice theory posits that individual choice is the foundation of political action and inaction' (John, 1998: 116); institutional theory focuses on the arrangements and functions of government departments and institutions and their role in shaping public policy (Anyebe, 2018: 14). Others have focused on exploring the role and power of ideas in public policy (see John, 2012; Campbell, 2002). The 'synthetic'<sup>20</sup> approaches, (which include Kingdon's multiple streams, but also Sabatier and Jenkins Smith's advocacy coalition framework and Baumgartner and Jones' punctuated equilibrium model) broadly speaking, recognise the policy process as comprising numerous agents, actions and processes interacting (see John, 2018). They propose that it is these very interactions which are an essential part of the policy making process, and through these approaches 'considerations about the nature of decision-making were blended into accounts of the influence of ideas and processes of agenda setting' (John, 2018: 2).

As Weible et al. (2012: 3-4) highlight, different scholars have focused on different elements of the policy process i.e., some focusing on sequential stages, whereas multiple streams' primary focus is on one stage - assessing how the agenda is set. Whilst some approaches have

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<sup>20</sup> John (2003: 487) asserts that '[t]hese frameworks may be called synthetic, largely because they bring together much of the research on institutions, networks, socioeconomic processes, choices, and ideas (John, 1998)'.

been more prominent in usage and discourse than others, the field is marked by a pattern whereby '[t]rends and approaches often fall in and then out of favour with an endless succession of concepts and labels' (John, 1998: 8). But as John (1998: 9) writes:

The lack of unity to the study of public policy reflects the nature of the research topic. Public policy is hard to research as it is a composite of different processes that crosscut most branches of government and involve many decision-makers. The task of investigating decision-making in policy sectors is also highly complex.

Thus, theories or frameworks of the policy making process that allow space and means through which to appropriately analyse such nuanced and complex environments have been developed with mixed success, which is ultimately indicative of the challenging nature of the topic area (see Weible et al., 2012). Noting that: 'Smith and Larimer (2009, p. 18) describe the policy process field as failing to produce a single unifying theory' (Weible et al., 2012: 2), the authors concur but point out:

this is far from a fatal flaw. Instead, the strength of the field lies in the multiple research programs with different analytic traditions and cultures, which speak to the complexity and diversity of the policy process phenomena. Moreover, multiple research programs offer a market of ideas and approaches, thereby encouraging policy process scholars to view the world from multiple perspectives and help them guard against confirmation bias and theory tenacity (Loehle, 1987). (Weible et al., 2012: 2)

With this in mind it is perhaps worth noting that Kingdon's multiple streams approach is one of the more prevalent and extensively used theories of public policy, having been applied with frequency in the years since its first publication, and across diverse fields, making it '[t]he most influential theory of agenda setting' (Shiffman, et al., 2004: 382). Béland and Howlett (2016: 221) highlighted that Kingdon's book (*Agendas, Alternatives, and Public Policies*) 'has been cited in more than three dozen *Journal of Comparative Policy Analysis* articles'. Meanwhile Jones et al. (2016: 13) noted '[a] quick search in Google Scholar identifies 12, 051 citations of Kingdon's 1984 edition alone'.<sup>21</sup> Additionally, prominent public policy scholars such as Nikolaos Zahariadis have used the approach widely in their own research (Sabatier, 2007: 9).

Undoubtedly some of the reason for the popularity of multiple streams has to do with its distance from traditional models of public policy. Marking a departure from traditionalist theories, Kingdon sets the scene with turmoil - that is by seeing the policy process not as linear or stable or progressing in a neatly discernible manner, but as being constantly in flux (see John, 2012: 158). For Kingdon '[a]ll the elements to the policy-making process shift and change, and policy outcomes arise from the continual interplay' (John, 2012: 158). 'Kingdon

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<sup>21</sup> The authors also noted the limitations of Google Scholar – i.e., potential 'duplications of citations', so noted the number was intended to be 'illustrative only'—as it is here (Jones et al., 2016: 32).

takes the very messiness of the policy process, with its complexity and apparent unpredictability as the baseline. Unlike many policy analysts, he does not impose a rigid conceptual scheme' (John, 2012: 158). The following section will shed some light on this as it outlines the key elements of the multiple streams approach to agenda setting.

## **2.6 Outlining the key dynamics of multiple streams**

Simply put, Kingdon's approach puts front and centre questions as to why some issues receive our attention whilst others flounder. He seeks to draw out an explanation for why some issues rise to prominence on governmental agendas at certain times (Kingdon, 2003: 1). As he points out early in *Agendas, Alternatives and Public Policies*, in contrast to later stages of the policy process, it is the development of attention to issues or the 'predecision processes' that we know relatively little about—accordingly, this becomes the main focus of the multiple streams approach (Kingdon, 2003: 1).

Kingdon's attention is directed towards coming to a greater understanding of 'why important people pay attention to one subject rather than another, how their agendas change from one time to another, and how they narrow their choices from a large set of alternatives to a very few' (Kingdon, 2003: 2). He outlines (a simplified version) of the public policy approach as a process comprising 'at least' the following four stages: setting the agenda; specifying alternatives from which a choice is made; an authoritative choice from the alternatives; and decision implementation; and reiterates that '[s]uccess in one process does not necessarily imply success in others' (Kingdon, 2003: 2-3). To iterate, multiple streams theory focuses on the first two processes outlined above – so through developing it, Kingdon sought to 'understand why some subjects become prominent on the policy agenda and others do not, and why some alternatives for choice are seriously considered while others are neglected' (Kingdon, 2003: 3).

Kingdon's multiple streams builds on work such as Cohen, March and Olsen's garbage can theory,<sup>22</sup> which concentrated on explaining how decision-making processes play out in 'organized anarchies' (see Cohen et al., 1972). They focused on 'organizations or decision

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<sup>22</sup> Garbage can theory was developed in the 1970s by Cohen, March, and Olsen. The original theory focuses on organizations which they term 'organized anarchies' and is an attempt to explain how organizations make decisions under challenging conditions (Bendor et al., 2001: 171). It is premised on the understanding that rational choice theory cannot explain intentions of organizational participants and attempts to use such understandings might actually distort what is occurring (Bendor et al., 2001: 171). Thus, it posits that: 'organizational outcomes arise from independent "streams" of problems, solutions, participants, and choice opportunities whose random intersection generates decisions. In this scheme, choice opportunities are the garbage cans. As problems, solutions, and participants move independently about the organization, various combinations find themselves dumped into these cans, and the decisions coming out (if any) depend on whatever mixtures the intersecting streams happen to generate' (Bendor et al., 2001: 171).

situations marked by problematic preferences, unclear technology, and fluid participation’ and the theory ‘is an effort to explain how organizations make choices and solve problems under conditions of ambiguity so troubling they would appear to render decision making extremely difficult or impossible’ (Bendor et al., 2001: 171; see also Cohen et al., 1972).

Kingdon sees the process of agenda setting as comprising three different streams (problem, policy, and political). These streams flow along independently but interact – when a policy window is open and the streams are also in alignment, the opportunity is provided for certain issues to rise to prominence and be considered for priority on a decision-making agenda (Kingdon, 2003). He conceives of the agenda as ‘the list of subjects or problems to which governmental officials, and people outside of government closely associated with those officials, are paying some serious attention at any given time’ (Kingdon, 2003: 3). He notes that whilst there are myriad issues that they could be focusing on, ‘they do in fact seriously attend to some rather than others’ (Kingdon, 2003: 3). Thus, the process of agenda setting narrows down all the possible items vying for attention, to those that will actually be focused on (Kingdon, 2003: 3). Accordingly, Kingdon outlines the need to ‘understand not only why the agenda is composed as it is at any one point in time, but how and why it changes from one time to another’ (Kingdon, 2003: 3).

To expand on what he means by each stream: the *problem* stream ‘consists of the various conditions that policymakers and citizens want addressed’; ‘[p]olicy makers find out about these conditions through indicators, focusing events, and feedback’; but only some conditions will become recognised as problems that require attention (Zahariadis, 2007: 70-71). In terms of how this occurs:

A range of values is normally associated with a particular issue. Changes in specific conditions may violate those values and therefore activate interest and attention. People define conditions as problems by letting their values and beliefs guide their decisions, by placing subjects under one category rather than another, by comparing current to past performance, and by comparing conditions in different countries. (Zahariadis, 2007: 71)

So, for example, in terms of global health, diarrhoeal diseases, pandemic influenza, HIV/AIDS, Ebola and polio, are all identified *conditions* (or potential conditions) facing societies, but only some of them will be deemed *problems* and become prioritized on the decision agenda. In short, ‘[a] condition is a situation in society, but a problem is a condition that commands attention and comes to be perceived as an issue for which government action is possible and appropriate’ - there are innumerable conditions in society but only a small amount evolve to be classed as problems (Shiffman and Ved, 2007: 786).

It is important to clarify how Kingdon understands this move from condition to problem status. He articulates that it is the recognition that we need to act on an issue that shifts its status from condition to problem (Kingdon, 2003: 109). The *indicators*, *focusing events* and *feedback* are essential components of this transition phase of conditions to problems.

*Indicators* are the numerous means by which governments and other non-governmental organizations measure and monitor various activities/incidences; some of the examples he cites include numbers of highway deaths, disease rates, immunization rates and infant mortality rates (Kingdon, 2003: 90). It is through such indicators that decision makers can become aware that there is a problem in society. However, indicators alone are not necessarily sufficient to ensure that problems are recognized (Kingdon, 2003: 94). Sometimes a *focusing event* such as a crisis or disaster gives the extra push that is needed; additionally, powerful symbols that gain traction, or experiences of those involved in policymaking can help in this regard also (Kingdon, 2003: 94-95).

The role of *feedback* in assisting the move from condition to problem status comes through the various channels by which governmental officials, receive information about existing programmes/situations (Kingdon, 2003: 100). Kingdon (2003: 101) explains this can be via organised, ‘systematic’ feedback through known channels of monitoring and evaluation, or it could also be received informally, for example via complaints which draw attention to existing problems, or perhaps via close engagement of high-powered individuals with particular situations/programmes who accordingly become more aware of problems than they may otherwise have been.

The *policy* stream refers to the area where policy solutions are developed by the inputs of policy communities – ‘[p]olicy communities are composed of specialists in a given policy area’ (Kingdon, 2003: 116-117). The leading ideas emerge from what Kingdon terms the ‘policy primeval soup’ (Kingdon, 2003: 116-117). A powerful concept, this ‘primeval soup’ is characterised as encompassing myriad ideas (policy solutions), but continuing the Darwinian metaphor, not all of them survive, and those that do ‘meet some criteria’ (Kingdon, 2003: 117).

In terms of thinking about how this stream would manifest in the context of global health decision making, it reflects the ongoing processes of academics, researchers, scientists, actors in NGOs, and global health organizations (to name but a few areas), all analysing global health problems and proposing solutions to them. Some solutions will rise to the surface, others will languish. As Zahariadis (2007: 72) writes:

While the number of ideas floating around is quite large, only a few ever receive serious consideration. Selection criteria include technical feasibility and value acceptability. Proposals that are or appear to be difficult to implement have a lower chance of surviving this process.

Finally, the *political* stream is made up of ‘factors that influence the body politic, such as swings in national mood, executive or legislative turnover, and interest group advocacy campaigns’ (Béland and Howlett, 2016: 222). Kingdon (2003: 20) explains that items that resonate with things like the national mood, existing administration, and ‘enjoy interest group support or lack organized opposition [...] are more likely to rise to agenda prominence than items that do not meet such conditions’. Kingdon (2003: 162) notes that ‘[p]oliticians and other participants believe they can sense both a national mood and changes in that mood’. ‘National mood’ then is described as ‘not necessarily resid[ing] in the mass public, but instead is perceived in the attitudes of various more active sectors of the public’ (Kingdon, 2003: 162). It is described as important because how this ‘mood’ is perceived ‘affect[s] governmental agendas, both by promoting items that fit with that mood and by inhibiting attention to items that do not’ (Kingdon, 2003: 163).

It is also worth mentioning that within the political stream, turnover can have ‘powerful effects on agendas’ (Kingdon, 2003: 163). By turnover Kingdon (2003: 163) refers to matters such as changes of administration/congressional seats/top personnel and the fact that these factors can impact agendas significantly. In the context of global health this can be reflected in turnover of staff/leaders in key health and development organizations, as well as governmental administration changes which might also impact health agenda preferences. As becomes evident in both the case study chapters, the goals and drives of certain individuals are prominent contributory influences of agendas (examples drawn out include James Grant at UNICEF; Halfdan Mahler at the WHO; and individuals at the CDC and Rotary, to name but a few).

In terms of how the streams coalesce: ‘The separate streams of problems, policies, and politics come together at certain critical times. Solutions become joined to problems, and both of them are joined to favourable political forces’ (Kingdon, 2003: 20). Importantly, only at this juncture ‘does an issue become a recognized problem on the official (or institutional) agenda and the public policy process starts addressing it’ (Beland and Howlett 2016: 222). Kingdon (2003: 20) also points out that ‘[w]hile governmental agendas are set in the problems or political streams, the chances of items rising on a *decision* agenda—a list of items up for actual action—are enhanced if all three streams are coupled together’. In contrast the *governmental* agenda refers to ‘the list of subjects to which people in and around government are paying serious attention at any given point in time’ (Kingdon, 2003: 166).



In addition to the three individual streams, *policy windows* and *policy entrepreneurs* are the two additional features making up the multiple streams approach. *Policy windows* provide the opportunity for advocates to push for action on a preferred issue for a limited time (Kingdon, 2003: 165). These windows can open predictably (e.g., via a change in administration) but can also emerge unexpectedly (e.g., via a crisis or focusing event) (Kingdon, 2003: 165-169) – i.e., these windows tend to open as a result of developments in the problem or political streams (Kingdon, 2003: 168, 174). Kingdon (2003: 166) emphasizes the infrequency and brief duration that such windows remain accessible for, but that despite this, ‘the major changes in public policy result from the appearance of these opportunities’. Furthermore, the need for participants to take advantage of these opportunities is clear, given that if the opportunity is missed, they must wait for another (Kingdon, 2003: 166).

So again, in terms of seeing how policy windows might be triggered by a crisis/focusing event in global health, clear examples are the outbreak of infectious diseases e.g., HIV/AIDS in the 1980s, Ebola in West Africa in 2014, Zika in 2015 or COVID-19 in 2019. In terms of institutionalized events creating a policy window, this could be something like a change in leadership in the World Health Organization.

The final element of the streams approach that needs to be elaborated are the *policy entrepreneurs*. These are ‘people who are willing to invest their resources in pushing their pet proposals or problems, are responsible not only for prompting important people to pay attention, but also for coupling solutions to problems and for coupling both problems and solutions to politics’ (Kingdon, 2003: 20). These entrepreneurs are found in various locations - ‘[n]o single formal position or even informal place in the political system has a monopoly on them’ (Kingdon, 2003: 179). In some ways perhaps echoing the rise to the surface of policy solutions from the primeval soup, the policy entrepreneurs are generally individuals who manage to get their voices to resonate and be heard above the many other voices; they either have the position, the connections or perhaps popularity to gain traction and recognition, and perhaps, most importantly, the sheer resolve to keep working on a particular issue and pushing for its recognition. Still, ‘[p]ersistence alone does not carry the day, but in combination with the other qualities, it is disarmingly important’ (Kingdon, 2003: 181). These entrepreneurs (or advocates) are central to the coupling of the separate streams: ‘Without the presence of an entrepreneur, the linking of the streams may not take place. Good ideas lie fallow for lack of an advocate. Problems are unsolved for lack of a solution. Political events are not capitalized for lack of inventive and developed proposals’ (Kingdon, 2003: 182).

The multiple streams approach is, as John (2003: 488) describes: ‘close to an evolutionary model of public policy. [Kingdon] writes that policymaking is a “complex adaptive system” (1995, p. 224) in which agents react to changing environments and there is “continual Darwinian selection.”’. However, although Kingdon draws on evolutionary ideas as metaphorical devices in his framework (e.g., the primeval soup) ‘[h]e does not say randomness dominates or provides the sole explanation, [for agenda setting], as there is an interaction between randomness and the more recognizable processes of problems, policies, and politics’ (John, 2003: 487-488).

As mentioned, part of the reason for the popularity of Kingdon’s framework is likely attributable to its shift away from traditionalist approaches to public policy theory. Chow (2014: 51-52) describes the traditional rationalist approach to policy making as a ‘linear process that goes from problem identification to the analysis of alternatives to recommending policy solutions’; but rightly notes that ‘this approach tends to overlook the fact that the policy process can have a kind of randomness, and that it can also be affected by external factors, such as timing, national mood, or political ideologies (Black, 2001)’.

In relation to this, Kingdon (2003: 72) notes: ‘Ideas come from anywhere, actually, and the critical factor that explains the prominence of an item on the agenda is not its source, but instead the climate in government or the receptivity to ideas of a given type, regardless of source’. Thus, his research takes a step away from what he calls the ‘infinite regress’ (Kingdon, 2003: 73) of trying to trace origins of ideas and understand where an idea might have come from, to instead trying to comprehend the conditions that made the rise of that ‘idea’ possible or more likely. Another contributing factor to its popularity is its ‘universal’ appeal (Cairney and Jones, 2016: 40). Cairney and Jones (2016: 40) point out, that despite Kingdon’s focus ‘on one country [the US], time period, and two policy areas [health and transport], the concepts and metaphor are “universal” in the sense that they have been shown to be flexible enough to be applied to nearly any place, time, or policy’.

The keen uptake of multiple streams by researchers across the world<sup>23</sup> has also demonstrated its versatility as a framework that transfers into the examination of diverse areas (see also Béland and Howlett, 2016: 223).

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<sup>23</sup> Jones et al. (2016: 13) found that the multiple streams approach has been ‘applied to study 65 different countries, at multiple levels of governance, across 22 different policy areas, and by researchers spanning the globe’.

## 2.7 Critiques

In addition to those who have used the theory to support their work, there have also been a number who have critiqued it, highlighting weaknesses both in the original framework and with the manners in which it has been applied since. For example, Jones et al. (2016: 13) have discussed the relative scope of multiple stream approach research ‘examining the consistency, and coherence with which concepts of the MSA are applied’. They find that ‘while MSA is prolific, consistency across applications—in terms of operationalization of MSA core concepts—is needed to facilitate theoretical development of the approach’ (Jones et al., 2016: 13). Cairney and Jones (2016: 37) have probed the empirical impact of ‘this universal theory’, acknowledging that Kingdon’s multiple streams remains a key influence on the study of public policy. Nonetheless, they critique the excessive use of multiple streams asking whether it actually ‘underpin[s] the development of modern policy theory?’ or whether it is ‘much admired and cited (over 12,000 times) but in a rather superficial way?’ (Cairney and Jones, 2016: 37). They conclude that it makes two contributions to public policy literature – ‘contribut[ing] to the development of “evolutionary” policy theories such as punctuated equilibrium’<sup>[24]</sup> and ‘it has prompted a large, dedicated, and often empirical literature’ (Cairney and Jones, 2016: 37). However, they criticise the lack of proper use of the theory in many of those who have applied it empirically since, citing superficial applications of the framework as a trend in application due to the theory’s ‘intuitive appeal and low “barrier to entry”’ (Cairney and Jones, 2016: 37). A cherry-picking approach to the use of the framework, whereby certain aspects of the framework might be used but others are wholly disregarded, seems relatively common, and the facility of the theory in such contexts might indeed be queried. Béland and Howlett (2016: 224) emphasize that such use is not in line with what Kingdon intended when he developed multiple streams and point out that the original concepts developed may not apply outside of the circumstances in which they were initially intended.

Although these are reasonable points, it is important to note here that some of the weaknesses highlighted criticise the application of the framework rather than the framework itself. The multiple streams approach is undoubtedly an appealing proposition to those working in agenda setting in many fields because it offers a clear, and understandable set of metaphorical

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<sup>24</sup> Punctuated equilibrium in political science is a framework developed by Frank Baumgartner and Bryan Jones. It ‘aims to explain why public policies tend to be characterized by long periods of stability punctuated by short periods of radical change’ (Jolicoeur, 2018: 1). ‘In *Agendas and Instability in American Politics* (1993), their benchmark work, Baumgartner and Jones demonstrate that a variety of public policies - on nuclear energy, tobacco, automobile safety, pesticides, urban planning, etc. - have undergone such cycles’ (Jolicoeur, 2018: 1).

tools which can indeed be easily applied across topics (i.e. ‘open windows’, ‘primeval soup’, ‘streams’); and the descriptions of important participants in the process which are developed (e.g., policy entrepreneurs) really lend themselves to straightforward but selective reapplication without considered reflection on the whole framework. Thus, the responsibility for lack of depth in subsequent applications lies in many ways not with the framework itself but with the ways in which others have reapplied it. Feasibly such critique is more focused on the relative lack of theory development rather than on the facility of the concepts, which have been used to good effect in divergent research projects, albeit sometimes using a partial application of the approach.

Zahariadis (2007: 80) points to Bendor et al.’s (2001: 186) observation of flaws in the garbage can model on which Kingdon’s multiple streams is based, where they bemoan its lack of empirical validation. However, Zahariadis (2007: 80) suggests that lack of empirical verification of the garbage can model cannot really be applied to multiple streams – and notes that despite their critique of the former, Bendor et al. praise Kingdon’s work as ‘distinguished by a careful empiricism tied to theoretical concerns’ (Bendor et al., 2001: 186, note 28; cited in Zahariadis, 2007: 80).

In general, much of the criticism directed at multiple streams seems to point to the lack of development of the theory in subsequent years; Zahariadis (2007: 80) (who has demonstrated the wider potential of multiple streams in his 2003 book *Ambiguity and Choice in Public Policy*) explains that work has shown multiple streams ‘can be profitably used to explain the entire process of policy formation’ but notes that use has largely kept the focus on explaining agendas ‘diminish[ing] its appeal considerably as a more general explanation of policymaking’.

Some scholars have also suggested ways in which the theory could be extended to incorporate additional streams or looked at ways in which other approaches to public policy or concepts might be combined with multiple streams to perhaps provide a more useful tool for understanding public policy, finding limitations in the original model (see Howlett et al., 2014). For example, Howlett et al. (2014: 420) have made suggestions in this regard, including a ‘five stream confluence model’ with the intention of ‘captur[ing] some of the more nuanced features of public policy, including policy strategies and styles as well as multilayered policy-formation processes leading to varieties of different policy outcomes’. However, such critique does not entirely diminish multiple stream’s utility as an agenda setting framework in its original design, but rather demonstrates how it could be modified/refined to be useful in different contexts/stages of policymaking.

## 2.8 Applying multiple streams to global health agenda setting

As seems to be the case with many fields, policy-making and pre-decision processes seem to be areas in global health that are not very well understood. This is likely due to the extremely wide array of actors involved in making decisions and setting priorities, and the plethora of institutions, organizations and actors involved in global health activities which make such studies uniquely challenging. However, there is much to be gained from undertaking such analysis.

Broadly defined, global health ‘places a priority on improving health and achieving equity in health for all people worldwide’ (Koplan et al., 2009: 1995). And yet it is increasingly evident that although there have been many successes in global health efforts over the past several decades, there remain considerable disparities in global good health. As this thesis has already highlighted, despite major progress in improving child mortality rates, hundreds of thousands of children still die from preventable causes every year (WHO, 2017a; WHO, 2021a). Additionally, health care and life expectancies vary markedly between high- and low-income countries (see Roser et al., 2019). Recent high-profile examples of inequity also include the marked vaccine access imbalances through COVID-19 between high- and lower-income countries (see Malpani and Maitland, 2021). Additionally, concerns have been expressed that similar patterns of inequity might characterise global responses to the most recent PHEIC<sup>25</sup> - mpox (see Kozlov, 2022; Cheng, 2022; Zarocostas, 2022).

Historically one of the biggest problems in global health seemed to be generating enough resources to address all the health challenges affecting the world (Garrett, 2007, 14); fast forward and the first decade of the new millennium saw development aid for health grow rapidly (IHME, 2014: 13; Garrett, 2007). Huge increases in both funding for global health and the plethora of actors now involved in global health funding and efforts, from governments to myriad private donors, mean that billions of dollars are now available for health spending, and there are innumerable NGOs and international organizations ‘vying to spend it’ (Garrett, 2007: 14; see also Esser, 2009). It is however important to note that despite general growth in health funding over the last several decades there is still an inadequate sum in relation to the scale of challenges posed by global health issues and inequities—and of course, as we navigate our way through the ongoing shock of the COVID-19 pandemic, pressures and demand for health aid/resources are starker than ever before. Furthermore, development aid for health funding stayed ‘largely flat’ 2010 through 2019, followed by huge increases in

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<sup>25</sup> Declared a PHEIC by the WHO on 23 July 2022 (WHO, 2022c).

direct response to the COVID-19 pandemic (IHME, 2021: 12). As the IHME (2021: 45) muses: ‘whether the rise in development assistance for health as a result of COVID-19 is a one-time occurrence, or whether it can be sustained and afford long-term improvements in health, remains to be seen’.

Accordingly, deciding where best to direct funding and efforts to ensure the most equitable and effective impact in global health is a deeply important question. As many scholars have noted (e.g., Garrett, 2007; Esser, 2009; McCoy et al., 2009; Shiffman et al., 2009) it appears that the efforts in global health that increased resources have allowed, are often uncoordinated and directed at very particular high-profile health issues. Such facts imply that there is more at play in global health agenda setting than simply rational, altruistic responses by international organizations to health issues that are in need. Ambiguous and uncoordinated decision-making processes mean that some health conditions are accorded greater attention than others and it is evident that priority in global health is not inevitably commensurate with the global burden of disease (see also Smith and Shiffman, 2020). With this in mind, achieving greater clarity with regard to decision (or pre-decision) processes which might help one to understand why certain health issues rise in prominence whilst others lie stagnant is an important area of study, most particularly when health issues which are failing to achieve higher profile on the global health agenda are sometimes those responsible for very high rates of morbidity and mortality<sup>26</sup>. Consequently, analysis of the policy processes (specifically agenda setting process) is important so that lessons might be drawn to help inform more equitable decision-making processes. As Walt et al. (2008: 308) put it: ‘[Health policy analysis] is useful both retrospectively and prospectively, to understand past policy failures and successes and to plan for future policy implementation’. This thesis also ventures – especially via analysis of polio’s trajectory in global health – into commentary on agenda sustainability which is an area ripe for further investigation.

Research has demonstrated inequities and complexity in global health priority setting - a key message stemming from the literature is the need to make improvements in this area, and to pursue research which uncovers nuances in agenda setting processes. However, there is less literature looking at the pre-decision processes and influences in global health agenda setting and employing appropriate theoretical frameworks to do so (Walt et al., 2008, Smith and Shiffman, 2020). There are some exceptions to this who have employed approaches such as

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<sup>26</sup> For example, diarrhoeal diseases and pneumonia leading causes of child (under-fives) deaths globally are neglected relative to their burden (see WHO, 2022b; Watkins and Sridhar, 2018; Bump et al., 2013)

multiple streams, the advocacy coalition framework<sup>27</sup> or punctuated equilibrium theory. As Smith and Shiffman (2020: 335) have noted research in this area takes different levels of analysis i.e., as well as looking at global health agenda setting, ‘[a] growing number of studies also focus on health agenda setting at the *national* and *subnational* levels, many with attention to the influence of global dynamics’. Examples of multiple streams use in health analysis noted earlier in the chapter (see section 2.2.1) included analysis of health systems strengthening (Hafner and Shiffman, 2007); the emergence of political priority for safe motherhood in India (Shiffman and Ved, 2007); exploring equity and health policy implementation in Burkina Faso (Ridde, 2008; 2009); agenda-setting and framing of gender-based violence (Colombini et al., 2016); tobacco control policymaking in Tennessee (Mamudu et al., 2014) and policy responses to COVID-19 (Amri and Logan, 2021). These examples give an impression of some of the ways in which multiple streams has been drawn on across various topics in health agenda setting research and demonstrate an important development in terms of how public policy theories can be effectively used to address key questions in the global health arena. However, applications in the context of global health challenges are not the rule, thus, the need for the continued utilisation of such frameworks and analysis of predecision processes in global health, particularly with regard to health issues that are failing to achieve priority despite their need for it, is overdue. It is also worth remarking that these incidences of use, with some exceptions, tend to involve single issue case studies (Walt et al., 2008; Gilson and Raphaely, 2008; Smith and Shiffman, 2020).

Contrastingly, as mentioned, this thesis takes a comparative approach as it seemed practical when asking questions as to the prominence of certain issues and neglect of others that examples of both are investigated to gain a fuller picture of global health decision making. Moreover, it is instructive to see how agenda setting processes have played out for each of these case studies viewed in parallel over a similar time period, and in what manner the different structural elements of Kingdon’s approach manifest in each case.

In relation to this kind of approach to research in global health, Walt et al. (2008: 308) delved specifically into looking at how best to research health policy in the article ‘*Doing’ health policy analysis: methodological and conceptual challenges*, identifying that, whilst the case for doing more health policy analysis is often made, there is less written regarding *how* best to

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<sup>27</sup> The advocacy coalition framework, developed by Paul Sabatier and Hank Jenkins Smith, synthesizes insights from other accounts of public policy in an attempt to improve upon elements of implementation literature with which they were dissatisfied (Jenkins-Smith and Sabatier, 1994, 178). The framework ‘serves as an analytical guide for answering questions principally about advocacy coalitions, policy-oriented learning, and policy change’ (Weible and Nohrstedt, 2013: 125).

do health policy analysis effectively i.e., what theories, methods, research designs best inform policy analysis. Speaking especially to health policy research on low- and middle-income countries, their paper offers insight into how to do health policy analysis and the need for researchers to employ frameworks and theories of public policies process more extensively (Walt et al., 2008: 308)<sup>28</sup>. Crucially, the authors point out that in global health policy analysis literature the question is often ‘what happened’ to the neglect of ‘what explains what happened’ (Walt et al., 2008: 309, a point made in Gilson and Raphaely, 2008: 303). This is precisely the area where employing the multiple streams approach for looking at global health policy processes can come into its own because the focus of the framework is very much looking at offering insight into ‘hidden’ processes which help explain what is happening, rather than simply delineating what has already occurred, or focusing on only the transparent drivers of agenda setting processes.

In terms of applying the approach to try to understand global health agenda setting, there are several reasons why this framework appears well suited to doing so. When Kingdon originally developed and applied it to examine the pre-decision processes of the US federal government in relation to health and transport, he was looking at an incredibly complicated arena. Evidently there is nothing straightforward about analysis of government not least as the plethora of actors, organizations and influences involved (to name but a few factors) make the whole process a very real challenge to comprehend. The same can be said for the policymaking/agenda setting arena in global health which bears abundant similarities, particularly in terms of the profusion of actors and influences involved. In relation to this Walt et al. (2008: 309) noted:

policy processes [have been] changing everywhere. Initially policy analysis focused on the state—on the public or government sector—on politicians, bureaucrats and interest groups (Hogwood and Gunn 1984; Grindle and Thomas, 1991). Over the past 10 years scholars have acknowledged a shift in the nature of policy-making, which points to the involvement of a much larger array of actors in the policy process.

The authors point to examples of such partnerships between public and private sectors as well as to forces such as globalization as changing the health policy environment (Walt et al., 2008: 309). In short, policy arenas generally (as well as in global health) are increasingly convoluted and globally interconnected, with complicated networks of actors and relationships (Walt et al., 2008: 309). Thus, it is imperative for policy analysis to consider these factors and environments that are increasingly influencing decision-making (Walt et al.,

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<sup>28</sup> This 2008 paper builds on conclusions drawn in Gilson and Raphaely’s (2008) literature review (Walt et al., 2008: 309).



2008). With this in mind, an important strength of multiple streams is that it allows space for the appreciation of and respect for the wide range of actors and influences within the policy making process.

Another key element of relevance for global health policy research and multiple streams is that the framework places considerable weight on the role and importance of policy entrepreneurs (or advocates) and their purpose in terms of getting issues onto the priority agenda. Béland and Howlett (2016: 223) emphasize the significance of the policy entrepreneur's role in terms of 'shaping the course of the three streams and their intersection by linking or "coupling" policy problems and policy solutions together with political opportunities'. This 'point[s] to the central role of agency' in the multiple streams approach (Béland and Howlett, 2016: 223). It is evident that the role of advocacy has been a key factor for both the case studies analysed in this thesis in terms of accruing attention at different times, and with regards to whether they have been able to sustain such attention and priority. To briefly expand on this point and to touch on some key examples of successful advocacy in each case study drawn out further in chapters 3 and 4: Jim Grant (executive director of UNICEF 1980-1995) played a significant role in diarrhoeal diseases' emergence as a higher priority through the 1980s, advocating keenly for the cause of child survival - in which the Control for Diarrhoeal Diseases programme played a central role. Similarly, the GPEI, (and within that especially Rotary International's longstanding commitment to advocating for global polio eradication) has been a vital part of its prioritization on health agendas and the ensuing vast reduction in polio incidences worldwide.

To quote Kingdon: 'entrepreneurs do more than push, push, and push for their proposals or for their conception of problems. They also lie in wait—for a window to open. In the process of leaping at their opportunity, they play a central role in coupling the streams at the window' (Kingdon, 2003: 181). For example:

These are the people - such as elected politicians or leaders of interest groups - with the knowledge, power, tenacity, and luck to be able to exploit windows of opportunity and heightened levels of attention to policy problems to promote their 'pet solutions' to policymakers. (Cairney and Zahariadis, 2016: 91)

As such, viewing the role of advocacy efforts in global health through this lens and deciphering what factors or conditions have influenced or helped successful advocacy efforts, is also helpful in coming to an understanding of why certain such efforts have been less successful. In addition, the framework thus offers potential in terms of guiding actors in global health towards an understanding of how they might be able to effectively work with agenda setting processes, which are often frustratingly opaque, to help their causes gain more

traction. i.e., in terms of utilising policy windows or framing problems for greater chance of purchase. Work building on the findings of this thesis could profitably direct attention to contemplating how to work with the evidenced dynamics at play, to best position issues for greater policy traction.

In relation to this, a strength and relatively unexplored aspect (in subsequent applications) of Kingdon's approach - which shows potential to be fascinating to explore in the context of global health - is the connection between ideas and public policy (Béland and Howlett, 2016: 224-225). That is examining the power of ideas in shaping public policy.

Ideas refer to “knowledge or beliefs about what is (e.g., research knowledge), views about what ought to be (e.g., values), or combinations of the two” (Pomey et al., 2010, p. 709). Ideas can influence how different societal actors define a problem, but also how they perceive different policy options to be effective, feasible, and acceptable. (Gauvin, 2014: 2)

Béland and Howlett (2016: 225) note that Kingdon's book is ‘devoted in large part to the study of policy ideas’ and they suggest that ‘[r]eading *Agendas, Alternatives and Public Policies* through an ideational lens provides invaluable insights into the policy making process that too many comparative policy scholars have ignored’. In relation to looking at how the processes might help actors better gauge their efforts; an appreciation for the power of ideas shaping public policy is also something that can be interrogated in terms of looking at how ideas about health issues (e.g., diarrhoeal diseases) might be affecting their trajectory on the global health agenda and how policy entrepreneurs use them. Similarly looking at ideas in relation to perception of polio eradication provides a useful means of comprehending the way in which this long-term initiative to eradicate has sustained a position of prominence in this arena. For future research, looking at how negative ideas in terms of stigmas attached to the each of these (and other) health issues and how such problematic perceptions of health issues, and indeed treatments for them, might inhibit and affect prioritization (and/or implementation) would be an avenue of value to explore.

In this sense the framework Kingdon has developed very much speaks to processes that seem to be at play in global health agenda setting and it provides appropriate concepts to cover the kinds of actors and procedures involved. The aforementioned examples of applications of the framework have shown its capacity and versatility in terms of addressing a wide range of topics. The utilization of the approach thus far in global (and national/regional) health analyses has demonstrated its potential and relevance in this environment also.

A point worth noting with regard to an aspect of global health analysis which is often overlooked (and which this approach may help alleviate) is that of the role of individual

agents in global health and their potential to affect change. Harman and Rushton (2013: 5) have highlighted this tendency for literature to focus on the major institutions in global health ‘as the principle (sic) agents of global health governance’ and in doing overlooking ‘the agency of individuals working both within and outside of these institutions’.

They point to the importance of ‘[a] focus on individuals and their exercise of leadership’ noting that ‘[a] focus which privileges institutions and their outputs, therefore, risks undervaluing the processes through which those outputs are produced – as a consequence missing some important determinants of how things ‘get done’ in global health governance’ (Harman and Rushton, 2013: 5).

Consequently, this thesis sets out to consider and balance both the actions and relevance of major institutions in global health, but also pays attention to the roles of less conspicuous actors/advocates for each case study, recognising that they might also be playing a significant role in the rise and fall of health issues on the global health agenda. In doing so, a more inclusive analysis of the policy process can take place, as well, as far as possible, avoiding major oversimplification of the process across these case studies. Multiple streams creates the space to clearly incorporate this kind of analysis of the myriad actors at work across global health, arguably encouraging recognition and evaluation of the influences of those who might otherwise be missed in public policy research. Granted there are limits to the scope of a PhD project to identify *all* the influential individuals relating to these diseases and their trajectory on the global health agenda (and indeed research could delve much further in this regard). However, identifying and paying homage to the role of individual as well as institutional agency is a step in the right direction in any research that is trying to unpack to less obvious influences of agenda make up/priority emergence.

When Kingdon completed the research on which the theory is based he employed two key methods to gather information. The first was interviewing many individuals across policy communities as opposed to just *parts* of policy communities to gain a clear picture – i.e., he spoke to people both inside and outside of government (Kingdon, 2003: 4-5). In addition, the second method used was developing ‘case studies of policy initiation and noninitiation, drawing from [...] interviews, and from such publicly available sources as government documents, popular and specialised accounts, and academic writings’, as well as gathering information on subjects that were currently prominent (Kingdon, 2003: 5).

This thesis took a similar approach, albeit on a much smaller scale. That is, speaking to some individuals involved with each case across different organizations in global health – from

larger organizations such as the WHO, to smaller advocacy groups for specific health issues such as DefeatDD (although as noted in Chapter 1, the research did not rely on interviews). Whilst those obtained added interest to the research, the main form of data collection was via analysis of the academic and wider literature available on each case, policy documents, reports and so on. Similarly, the case studies, offered the opportunity to look at periods when these health issues were higher priority (policy initiation) and lower priority (noninitiation). In this sense, the methods employed were akin to Kingdon's and having comparable research methods made applying the framework to the research more coherent, as well as endeavouring to avoid some of the missteps identified by those who have critiqued the fragmented/superficial applications of parts of the approach to different topic areas.

One point of clarification worth bearing in mind in terms of employing the framework outside of its original remit, is identifying what precisely the 'agenda' means in global health, and at what point it is reasonable to deem a health issue a high priority. Taking a straightforward approach to this challenge, this project deems diarrhoeal diseases a lower priority, based on funding flows and existing research completed e.g., by Bump et al. (2013), which demonstrated diarrhoeal diseases fall in prominence on the global health agenda since a high point circa the 1980s, in conjunction with its ongoing high morbidity and mortality rates. Similarly, polio is deemed here as a higher priority issue by virtue of the existence of the robust eradication initiative (the GPEI) as well as the long term financial and political commitments that can be identified for it e.g., the World Health Assembly resolution for eradication, in addition to its status as the longest running PHEIC at the WHO.

In terms of defining the agenda, it was helpful to understand it like Kingdon (2003: 3): 'the list of subjects or problems to which governmental officials, and people outside of government closely associated with those officials, are paying some serious attention at any given time'. But instead of solely focusing on government, incorporating key actors in global health, such as the WHO, and what issues they are paying attention to. In addition, the aforementioned work in global health which has already utilised this approach provides informative guidance in this regard.

Whilst utilising all five key elements of the multiple streams approach, it should be emphasized that this research is empirically as opposed to theoretically weighted, and though recognising the ability for these concepts to be useful beyond their original demarcations has no aspirations toward theory development. In short, given that the project employs Kingdon's approach in an area outside its traditional comfort zone, it was predictable that it would require reinterpretation in the context of this thesis. Whilst this may come under the critique

(some outlined above) of not being a rigorous application of the traditional framework, the emphasis throughout has been on contemplating how these broad concepts can help us draw out and understand often ambiguous influences in global health – specifically here in the context of two very specific health challenges. The case study chapters reiterate how certain concepts from this approach have been construed in the context of this thesis. However, it is worth describing and grouping them here for clear reference together.

- The concept of a *policy entrepreneur* is expanded to include organisations/ initiatives (e.g., the Global Polio Eradication Initiative) as well as a focus on individual advocates. This was deemed necessary given the global level emphasis of the research.
- The *policy stream* is taken as comprising selected policy developments for each issue over the past two decades, which gives a flavour of what has been occurring for each case study over time and pays homage to the traditional rationale of the stream whilst recognising the need to consolidate the policy stream to allow sensible analysis at the global level.
- The *political stream* is realized through an analysis of the overall ‘climate’ in global health i.e., identifying key elements/changes that have affected the kinds of, or the ways in which, health issues come to prominence. Evidently this environment is same for both case studies, although how they ‘cope’ within it is what this thesis is interested in contemplating. The key dynamics drawn out as central to this environment are *the power of vertical foci in global health; the proliferation of actors and shifts in power and influence in global health; fragmentation of global health efforts and the alignment of health with security rubric and foreign policy concerns.*

## 2.9 Conclusion

Cairney and Zahariadis (2016: 87) point out that multiple streams demonstrates ‘that the exciting world of short-term, unstable, high-profile agenda setting is tempered by long-term, continuous processes going on behind the scenes’. This is a very apposite description of the framework which at first glance seems a relatively straightforward metaphorical device for agenda setting, but ultimately establishes that the world of agenda setting is anything but the direct process that might sometimes appear to be the case on the surface, and is in fact a perpetual torrent of processes, ideas, events, and actors.

This is a framework that offers those analysing or trying to come to a better understanding of the agenda setting process the ability to make sense of an arena that is inherently multifaceted.

Sabatier (2007: 3) accurately describes the agenda setting process as involving ‘an extremely complex set of elements that interact overtime’. Indeed, the individuals, organizations, governments; processes and unpredictable elements involved are innumerable; but through multiple streams Kingdon offers a way of clarifying some of the key threads or processes, so that a deeper and more profound analysis can subsequently take place. By employing this framework, it was possible to draw out some of the key drivers informing diarrhoeal diseases’ historical prominence on the global health agenda – a status achieved via the streams brief confluence for the issue and effective advocacy. An explanation for their more recent low profile can then be understood via the streams now long-term division for the issue. Polio’s initial ascendance to a global priority can also be understood through demonstrating a clear alignment of these streams and the presence of effective policy entrepreneurs. Furthermore, branching from multiple streams’ traditional boundaries, the thesis posits that polio’s sustainability on the agenda can in large part be seen as a by-product of the continued configuration of these streams in lockstep with the ongoing work of effective advocacy.

## Chapter 3

### Diarrhoeal diseases

#### Introduction

Diarrhoeal diseases<sup>29</sup> remain a leading cause of death in low and low-middle income countries (LMICs) (WHO, 2017a). In 2017 almost 1.6 million lives were claimed by diarrhoea (Dadonaite et al., 2019). A significant proportion of this mortality burden is borne by those aged under five; for example, in 2017, every tenth child death was caused by diarrhoeal diseases (Dadonaite et al., 2019). As discussed in the introduction to Chapter 1, these high figures are particularly troubling because these diseases are also preventable and treatable by simple methods, such as by access to clean water, adequate sanitation, rehydration and in some cases vaccination (WHO, 2017a). Unsurprisingly, there is a relationship between incidences and deaths from diarrhoeal diseases and a country's average income, with the poorest countries shouldering the majority burden. As Dadonaite et al. (2019) underscore:

[t]he death rate from diarrheal diseases in many of the poorest countries is higher than 100 annual deaths per 100,000 children. In those countries with the worst health – including Madagascar, Chad and the Central African Republic – the rate is higher than 300 per 100,000.

Whilst the rate of deaths from diarrhoea has dropped markedly in the past 20 years (and even more since the 1980s – a period when some key initiatives/actors began to recognise and address the issue), the enduring high rate of deaths, given the availability of prevention and treatment methods, is unequivocally distressing. Additionally, it is important to recognise that despite falls in mortality rates (e.g., from approximately 4.6 million under-five deaths in the early 1980s<sup>30</sup> (Snyder and Merson, 1982) to approximately 525,000 in 2017 (WHO, 2017a)), there has not been a concurrent decline in morbidity rates – that is *incidences* of diarrhoeal diseases remain high.<sup>31</sup> As emphasized in Chapter 1 this is a real cause for concern due to associated long term risk factors (physical and cognitive), particularly in children, of repeated diarrhoeal infections (Wierzba and Muhib, 2018). Focus and attention on this ongoing global

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<sup>29</sup> See Box 3.3 (end of this chapter) for World Health Organization information on diarrhoeal diseases. Whilst the phrase 'diarrhoeal diseases' is most often used, it is worth bearing in mind that diarrhoea is not itself a disease, but rather a symptom of many different bacterial, viral or parasitic organisms, spread by contaminated food/water sources or from person-to-person from poor hygiene (WHO, 2017a; Ruxin, 1994: 365). This thesis is focused largely on the burden of childhood diarrhoeal diseases.

<sup>30</sup> Snyder and Merson's 1982 article 'estimated total yearly morbidity and mortality from diarrhoeal diseases for children under 5 years of age in Africa, Asia (excluding China), and Latin America' (Snyder and Merson, 1982: 605).

<sup>31</sup> Randall (2020) also pointed to the fact that whilst mortality has decreased, there are subnational inequities i.e., hard to reach areas where vaccines are not getting, where WASH access/education/health care access is still low; noting that: 'This broader success story definitely has this kind of patchwork quilt of differing outcomes'.

challenge is also important in terms of working towards achieving the sustainable development goals (SDGs) 3 and 6 which target good health and wellbeing, and clean water and sanitation for all respectively (UN SDGs, a, n.d.). Furthermore, it has long been evident that a solid basic health care infrastructure, including the provision of adequate sanitation and clean water are fundamental to achieving wider health related goals.

In short, despite the availability of both knowledge and methods to prevent and treat diarrhoeal diseases they continue to have a detrimental, and often fatal, impact on the lives of many living in LMICs, and the burden they pose does not seem indicative of the attention and energies directed towards them by the global health community broadly speaking. Building on these points this chapter will begin by setting out a brief history of diarrhoeal diseases and drawing out an explanation for their rise to prominence on the international health agenda in the 1970s/80s through the rubric of the multiple streams approach. Doing so helps identify factors which have contributed to periods when diarrhoeal diseases, either as an issue in their own right, in conjunction with other health issues (e.g., child survival), or when specific elements of the solutions to diarrhoeal diseases have been more visible on the international health agenda. Offering a discussion of factors contributing to the historical prominence of this issue is a means of providing a helpful point of comparison within the chapter for the subsequent section which then focuses on using the streams approach to facilitate an explanation for diarrhoeal diseases more muted trajectory on the global health agenda<sup>32</sup> 2000 through 2020.

It is perhaps necessary to state here that this thesis acknowledges and is aware of the marked progress made at country levels with regard this disease burden (e.g., Bangladesh, see Billah et al., 2019). However, the principal focus of this study is looking at diarrhoeal diseases' position *globally*, taking the global morbidity and mortality figures as its starting point (with particular emphasis on under 5 mortality). The comparative angle it then employs, with the case of polio (Chapter 4), allows for consideration of how myriad dynamics and global health actors/developments have played into shifting priorities at a global level. A regional approach would have allowed a different kind of analysis, equally valuable, but is not the path taken here.

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<sup>32</sup> Global health agenda – it is necessary to explain what I understand as the global health agenda, as it can be an ambiguous concept that is challenging to define (see Smith et al., 2021). When referred to throughout this thesis, the understanding of the global health agenda is those issues which prominent organizations working in global health are prioritizing; or perhaps to put it more simply, where money and resources are being directed as ascertained for this project by reviewing data such as that on health funding flows and the global burden of disease.



### 3.1 Diarrhoeal diseases in international health 1970-2000

The history of diarrhoeal diseases is inextricably bound up with the history and development of international health cooperation more broadly. Diarrhoeal diseases (specifically cholera and the repeated epidemics through the 1800s) were an instigating factor for the International Sanitary Conferences (of which there were fourteen, the first held in 1851 and the last in 1938) (see Howard-Jones and World Health Organization, 1975). Huber (2006: 454) describes these conferences as ‘mark[ing] the first attempt to tackle the problem of the propagation of disease through international co-operation and the standardization of procedures’. These conferences are widely seen as an instrumental precursor to the development of the World Health Organization (WHO) in 1948. Indeed, the eventual creation of the WHO was the product of many years work, ‘represent[ing] the culmination of efforts at international health cooperation that started almost a century before when the first International Sanitary Conference opened in Paris on 23 July 1851’ (Howard-Jones and World Health Organization, 1975: 9). Then, as we continue to see today, the threat of diseases spreading across borders was an inevitable by-product of increased international interconnectivity, and consequently efforts to find a cooperative approach to tackle the challenge posed by infectious diseases such as cholera and plague, was in part motivated by the desire to avoid having to quarantine countries and to continue with cross border activities (Bynum, 1993). As Bynum (1993: 421) states: ‘[q]uarantine was seen as a central feature of disease control, but it remained a controversial measure, since it disrupted trade and inhibited freedom of movement’.

Without diverging into the minutiae of the conferences, simply drawing attention to them here serves as an essential reminder of the early perception of diarrhoeal diseases in *global* public consciousness - as both *life* and *economy* threatening health issues - but also shows their part in the development of greater global debate on public health issues as the world grappled to balance the challenges posed by virulent infectious diseases with ever greater interconnectivity between countries.

It is worth delving a little into the historical approach to diarrhoeal disease management here in order to fully understand the difference between perception of such diseases then in contrast to priorities and fears surrounding diseases in more recent decades, which will be illuminated further in the analysis throughout this chapter. Blaise and Dovie (2007, 159) describe diarrhoeal diseases as: ‘An Old Scourge Long Considered as a Reflection of Poor Socioeconomic and Hygiene Conditions’. Indeed, mention of diarrhoeal diseases have been noted in Sanskrit and Hippocratic literature (Ruxin, 1994: 365; Blaise and Dovie, 2007: 159;

McMahan and Dupont, 2007). However, understanding of their aetiology and modes of transmission did not come until much later, as McMahan and Dupont (2007: 759-760) highlight, '[t]he early theories on the causes of diarrhoea bare (sic) little resemblance to modern concepts of pathogenesis of enteric infectious diseases' and that '[t]he importance of fluid and salt administration and principles of its administration were largely undeveloped until the middle of the 20<sup>th</sup> century' (McMahan and Dupont, 2007: 762). Indeed, Ruxin (1994: 366) notes:

it was not until the mid 1920s that a relatively effective and safe treatment emerged. This entailed rehydration with expensive, hospital-administered intravenous solutions. Although efficacious, it was essentially unavailable to the people most plagued by diarrhoea, those in the developing world.

Ruxin (1994: 366) also highlights in his comprehensive analysis on the development and history of oral rehydration therapy (ORT)<sup>33</sup>, that the extent of the problem of cholera in LMICs 'inspired many scientists to search for a therapy that could be utilized in the field, far away from hospitals and the technologically advanced intravenous treatment'. However, the first successful trials of ORT as a method to successfully treat diarrhoeal diseases did not come until the late 1960s (icddr,b, n.d.).<sup>34</sup> Further, despite evidence of its efficacy and ease of use, ORT did not move into mainstream use until some years later, and it was in 1978 that the Advisory Group for the WHO's diarrhoeal disease control programme 'created a global oral rehydration programme seven years after sufficient evidence for the efficacy of ORT had been published' (Ruxin, 1994: 392).

Aside from the development of ORT (unquestionably a critical intervention for diarrhoeal diseases treatment), many key moments in diarrhoeal diseases' story as part of a global health agenda can be seen as being condensed into a period predominantly (but not entirely) traversing the 1980s and into the 1990s. These were decades when diarrhoeal diseases, and child health more broadly, found themselves at the forefront of international health awareness, arguably in a way that has not been replicated since. In attempting to understand why this period represented a time of such focus for diarrhoeal diseases, it is worth briefly illuminating some of context within which they ascended the agenda and resonated with political and

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<sup>33</sup> As noted by Dadonaite (2019, footnote 2) '[t]he term ORT is often used interchangeably with ORS (oral rehydration salts or solution), though the World Health Organization (WHO) generally refers to the treatment itself as ORT and the exact combination of water, salt and sugar as the ORS'.

<sup>34</sup> Oral rehydration therapy is a simple and inexpensive treatment (essentially a mix of water, salt, and sugar) for treating dehydration which is a life-threatening side-effect of diarrhoeal diseases (Dadonaite, 2019). Cited in the *Lancet* as "the most important medical advance of the 20<sup>th</sup> century", the eventual proliferation of ORT into more widespread usage in the later 1970s onwards, has saved millions of lives (Dadonaite, 2019; see also Santosham, et al., 2010).

public consciousness at this time. It is important to note that whilst the time period of particular focus for this research project is 2000 – 2020, it is helpful to have a general understanding of diarrhoeal diseases' history and the Control of Diarrhoeal Disease (CDD) programme (which was initiated in the late 1970s) as part of understanding the progress which has been made thus far in terms of efforts to prevent deaths from diarrhoeal diseases.

Any discussion of efforts to address diarrhoeal diseases and child survival in modern history often refers to the late 1970s as a significant moment, namely because in 1978 the International Conference on Primary Health Care was held, resulting in the Declaration of Alma-Ata.<sup>35</sup> This represented 'a major milestone of the twentieth century in the field of public health, and it identified primary health care<sup>[36]</sup> as the key to attainment of the goal of Health for All' (WHO, 2020a; see also WHO, 1978). The conference came toward the end of a decade that was already seeing a shift in thinking and approach toward development more broadly.

The idea that transfers of capital and technical know-how would quickly dispense with gross poverty had proved misconceived. During the previous decade, many developing countries had achieved high rates of economic growth—increases of 5 per cent or more in GNP—but little of this had 'trickled down' to the poor. On the contrary their numbers had swollen—as had the gap between rich and poor people, and between rich and poor nations. The rates of population growth were partly to blame; but equally important were policies based on simplistic assumptions. (UNICEF, 1996: 53)

As Black (1998: 5) notes: 'By the early 1970s, the failure of current development models to meet the 'basic needs' of much of humanity had become a refrain in international circles'. Resulting shifts in thinking regarding new approaches to development focused on the need to specifically target the unmet basic needs of the poor – food, water, housing, health, and education (UNICEF, 1996: 53). Alongside this shift in focus, UNICEF (1996: 53) highlights two events which were significant for international development in the early 1970s – 'the OPEC oil shock, which sent prices soaring and ended the era of cheap energy and cheap industrialization' in addition to 'the global food shortage brought about by two disastrous world harvests in 1972 and 1974'. These events had myriad effects, but significantly for health and development the implications of a serious food shortage were stark: 'It was believed that even before the crisis struck some 10 million children worldwide suffered severe

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<sup>35</sup> 'The declaration of Alma Ata helped to entrench the idea of health care as a human right' (Gillam, 2008: 536).

<sup>36</sup> Primary health care (PHC) – 'is a whole-of-society approach to health that aims to ensure the highest possible level of health and well-being and their equitable distribution by focusing on people's needs and preferences (as individuals, families, and communities) as early as possible along the continuum from health promotion and disease prevention to treatment, rehabilitation and palliative care, and as close as feasible to people's everyday environment' (WHO/UNICEF, 2018a: 2).

dietary shortage. As the price of food continued to rise, child hunger and malnutrition were bound to increase' (UNICEF, 1996: 54). In short, these events led to development organizations such as UNICEF focussing on making sure that children were reached most effectively by development programmes, as well as to UNICEF and the WHO looking to a new approach to healthcare – one which recognized the lack of basic services in LMICs (UNICEF, 1996: 54). They recognized that 'development was failing to reach large segments of the poor because existing services for health, education and agricultural extension were modelled along industrialized-country lines' (UNICEF, 1996: 54), and accordingly, by 1976, UNICEF had committed to a basic services approach which would more effectively respond to community needs (UNICEF, 1996: 57). At the same time UNICEF with the WHO had begun putting together an alternative approach to healthcare -

They had seen that health care structures in developing countries had evolved mainly into pale facsimiles of the high-tech delivery systems familiar in the industrialized world. Given the lack of resources, this had distorted priorities and led to a disregard of the basic principles of public health. Up to 90 per cent of a developing country's health budget could be absorbed by a handful of city hospitals serving the elite, while out in the countryside villagers were obliged to walk miles to the most rudimentary dispensary. The poor might occasionally receive visits from mobile teams of smallpox eradicators or water engineers, but services they urgently needed—notably those for maternal and child health—were rarely available. (UNICEF, 1996: 57)

This period has been described as a period of flux in terms of health governance. Indeed, Kirton and Mannell (2007: 115) describe how 'the dominant conception for global health governance and its prevailing policy paradigm has moved from the medical absence of disease to socioeconomic well-being, resource availability, poverty reduction, and ecological integrity (Pannenberg, 1979)'. Furthermore, they highlight that:

This shift was driven by the World Health Organization (WHO), at the apex of its strength in the 1970s, through its ambitious human rights initiative of Health for All. The WHO also drove the world from a concept of health as a national issue, which had prevailed during previous centuries, toward a more internationally focussed global approach to health governance. (Kirton and Mannell, 2007: 115)

An influential part of this process was the Director General of the WHO, Halfdan Mahler. Mahler was the helm of the WHO from 1973-1988 and favoured shifting the WHO from its traditionally strong focus on single diseases to an approach which emphasized primary health care (Snyder, 2017: 30). He advocated strongly for primary health care and for 'Health for All by the Year 2000' playing a key role as Director-General of the WHO in pushing for a strategy rooted in social justice and 'criticized the biomedical public health paradigm that reduced humans to medical consumers' (Hanrieder, 2017: 4).

It was in this environment of shifting approaches in development circles that the International Conference on Primary Health Care was held. In short, the conference at Alma Ata ‘put health equity on the international political agenda for the first time, and PHC<sup>[37]</sup> [primary health care] became a core concept of the World Health Organization’s (WHO) goal of *Health for all*’ (Litsios, 2015: 1). It was in this climate that the WHO’s Program for the Control for Diarrhoeal Diseases (CDD)<sup>38</sup> was launched:

As one of the pillars of the Health for All strategy launched at the Alma Ata Conference in 1978, the CDD Program’s primary goal was to reduce diarrhoea-associated mortality among infants and young children in developing countries. It departed from the standard WHO operational model at that time, first by expanding the former cholera-focused unit into a Program that addressed all diarrheal diseases, and second by combining research with significant support to country implementation activities. (Wolfheim et al., 2019, 2)

Shortly thereafter, ‘in 1979 [...] the United Nations Educational, Scientific and Cultural Organization (UNESCO) proclaimed the International Year of the Child to draw attention to problems that affected children throughout the world’ (Wolfheim et al., 2019: 1; see also UN General Assembly, 1976). It was in this climate of focus on the underlying determinants of global good health and the awareness that so many of the world’s children’s lives were being cut short by preventable diseases that the cause for tackling death from diarrhoeal diseases and also childhood pneumonia accrued some key advocates and the space and context within which it was able to rise in prominence on the international health agenda. Concurrently, the extent of the problem that diarrhoea posed in LMICs had become increasingly clear as a result of numerous studies demonstrating the significant human costs associated with such diseases (Bump et al., 2011 and 2013).

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<sup>37</sup> Litsios (2015: 1) explains:

‘The PHC concept was proposed in a paper submitted to the Executive Board of the WHO in January 1975 in the form of seven principles to be followed by governments wishing to improve their health services. These principles stressed the need for shaping PHC around the life patterns of the population; for their involvement; for maximum reliance on available community resources while remaining within cost limitations; for an integrated approach of preventive, curative and promotive services for both the community and the individual; for interventions to be undertaken at the most peripheral practicable level of the health services by the workers most simply trained for this activity; for other echelons of services to be designed in support of the needs of the peripheral level; and for PHC services to be fully integrated with the services of the other sectors involved in community development’.

Litsios (2015: 1,4) who was involved in the team who put forward the PHC paper in 1975, lays out an account of the interconnections and personalities that coalesced and played a part in the formation of the declaration of primary health care, emphasizing ‘that PHC did not emerge fully formed in an easy manner; there were many influences’.

<sup>38</sup> WHO Program for Control of Diarrhoeal Diseases – was launched in 1978 (Wolfheim et al., 2019). This program was a key part of the successes with regard to reducing deaths from diarrhoeal diseases, predominantly, but not exclusively through the distribution of oral rehydration therapy. The Program underwent a drastic alteration in the mid-1990s, moving from being focused on diarrhoeal diseases to merging with other health causes (firstly childhood pneumonia, then child health more broadly) (see Wolfheim et al., 2019).

Following the initiation of the WHO's oral rehydration therapy programme, papers such as Snyder and Merson's (1982) put the global child (under five) death toll from diarrhoeal diseases at 4.6 million annually. Boschi-Pinto et al. (2008: 710) note that Snyder and Merson's survey was 'one of the earliest attempts to estimate the worldwide burden of diarrhoeal diseases', and '[i]n the following decades, subsequent reviews updated these initial estimates'<sup>39</sup> (see also Bump et al., 2011 and 2013). It is important to recognise the significance of this ability to place a number and talk in terms of statistics regarding disease burden. For example, Preston (2006: xv) points to the opacity of the global disease landscape pre 1990 noting that '[m]ortality conditions by cause of death were known with some precision only for a relatively small minority of the world's population residing in countries with adequate vital statistics'. In 1990 the Global Burden of Disease was published: 'a watershed event in the assessment of health and disease. Through careful synthesis of disease conditions revealed in thousands of piecemeal studies and data systems, it constructed a comprehensive portrait of diseases, injuries, and causes of death' (Preston, 2006: xv).

Importantly of course one of the instigating concerns for this thesis is that high levels of disease burden are not necessarily indicative of where priority will be focused in global health, as evidenced by the relative lack of focus on this issue over the last few decades. However, historically it seems that illumination regarding the extent of the burden of diarrhoeal diseases in LMICs helped prompt action.

Increased consciousness then as to the burden posed by such diseases and the impetus provided by events such as the International Conference on Primary Health Care, coincided with the appointment in 1980 of James Grant as the executive-director of UNICEF (1980 through 1995). An aspect of global health priority setting which this thesis focuses on throughout is the role of advocacy in health. This can be recognised in the efforts of individuals whose cause-specific advocacy can be the difference between prominence and absence of an issue on the global health agenda. In terms of identifying particular individuals (or policy entrepreneurs to take Kingdon's term) whose efforts have been noted for improving focus on issues such as diarrhoeal diseases, James (Jim) Grant is an example of someone who played an important part in such promotion for neglected childhood diseases, through the 1980s until his death in 1995 (Adamson, 2001).

Jim Grant, a man of prodigious energies and missionary zeal, came to UNICEF at a time when the challenges seemed more daunting than ever. It was a time when 15 million young children were dying every year of readily preventable causes; when 300 million children were

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<sup>39</sup> Bump et al. (2013: 800) also highlight key papers in subsequent years that have provided updated estimates.

malnourished; when a billion people, half of them children, lacked access to safe water, and when a quarter of the world's children never saw the inside of a classroom, and half never finished elementary school.

The staggering scale and utter needlessness of these numbers made a deep impression on Jim, and he had no qualms in describing the situation for what it was: a scandal. Incremental progress was no longer acceptable. What was needed, he realized, was a quantum leap – the launch of nothing less than a revolution in child survival and development, based on the principle that the well-being of children, starting with dramatic gains in survival rates of the youngest, is a basic precondition of healthy development. (Bellamy, 2001: 15)

Adamson (2001: 21-22) explains that reading Dr Jon Eliot Rohde's 1982 paper<sup>40</sup>, had an impact on Grant and the direction that UNICEF took in the subsequent decade or so. The lecture laid out the fact that a significant amount of child deaths were completely unnecessary as the majority were caused by common illnesses – measles, tetanus, whooping cough, pneumonia, diarrhoeal diseases, and poor nutrition often a contributing factor (Adamson, 2001: 21; Rohde, 1982). Accordingly, Grant proposed that 'UNICEF [...] launch a worldwide child survival revolution. He wanted UNICEF to lead a campaign to halve child deaths across the developing world' (Adamson, 2001: 22).

Rohde (1982: 2-3) had set out four dimensions to child mortality with a stress on factors which were at the time inhibiting progress (and often still do so). They were:

- the **epidemiologic dimension** – he noted that, the bulk of mortality rates in young children were attributable 'to a small handful of conditions. This is where our resources must be concentrated' (Rohde, 1982: 2).
- the **technologic dimension** – Rohde noted that whilst experts were decrying the lack of precise medical interventions, citing the example of one Dr John Bryant saying "the dismal fact is that these great killers of children, diarrhea, pneumonia and malnutrition, are beyond the reach of the great weapons of modern medicine" (Rohde, 1982: 3). However, Rohde (1982: 3) argued that 'effective and affordable technologies do in fact exist to reduce deaths caused by these major killers'.
- Thirdly he emphasized the **organizational dimension**, pointing to the then oft-repeated critique that health systems in developing countries could not reach sufficient people and that resource limitations were a major impediment to achieving wider health goals (Rohde, 1982: 3). Contrastingly he argued '[w]here responsibility for health has been shifted to the consumer, accompanied by the appropriate technology and the understanding to use it, dramatic reduction in deaths and extensive changes in health-related behaviour have occurred' (Rohde, 1982: 3).

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<sup>40</sup> The paper was given at an academic conference in Birmingham, England (Adamson, 2001: 21). It was entitled 'Why the other half dies – the Science and Politics of Child Mortality in the Third World' (see Rohde, 1982).

- Finally, he referred to the **political dimension** which ‘underlies all these’ –

Refusal of decision-makers to recognize that child death is due to a few causes, reluctance to accept and use appropriate technologies, unwillingness to demedicalise health and involve the consumer in a meaningful way are all major impediments to improved life expectancy.

Professionalism, international health bureaucracies and social power structures, all combine in a strange political melange to ignore or even impede progress toward child survival. These political forces are strong, and hard to steer. Yet I contend that if we do our job, we can turn these political forces toward our goal, by identifying and defining more clearly the problem and its solutions. By speaking the language of decision-makers we can show them that investment in child health is a valid economic policy and that, indeed, the health of the world’s children is at once the goal and measure of developmental progress. (Rohde, 1982: 3)

Interestingly, within the preceding quote, one can distinguish ways in which Rohde’s proposed approach to improving the prospects of neglected childhood diseases echoes some of the tenets of Kingdon’s streams approach to priority setting. Rohde suggests better identifying the *problem* (in this case neglected childhood diseases), the *solutions* (vaccines, water, sanitation etc – solutions here can be seen as the policy stream) and presenting them in such a way that the *decision-makers* (the political stream) can see them as a viable paths to prioritize. This will become even more evident when looking back over the progress made through this period, as such streams ultimately coalesced to assist diarrhoeal diseases’ prioritization.

Having read Rohde’s lecture, Grant spent time travelling with him in China and Haiti, seeing first-hand evidence of what Rohde had been outlining (Adamson, 2001: 22). Shortly thereafter, in 1982, in the State of the World’s Children Report, Grant launched an initiative known as the child survival revolution (UNICEF, 1996: 59). It was a campaign that ‘reversed conventional wisdom. Rates of infant and young child mortality had previously been seen as measurements of a country’s development. Now UNICEF suggested a direct attack on infant and child mortality as an instrument of development’ (UNICEF, 1996: 59). The child survival revolution (or child survival and development revolution) ultimately found ‘an extraordinary degree of worldwide resonance, gathering a wide range of allies—national, international, bilateral, non-governmental—and from all walks of public and professional life’ (UNICEF, 1996: 59).

Whilst the PHC movement had been lauded on the whole and can in some ways be seen as being a launchpad along with the Alma Ata Conference for particular emphasis on diarrhoeal diseases and other preventable childhood diseases, there had been criticism levelled at the realizability of the Declaration of Alma Ata’s aims and its over-idealism (see Cueto 2004:



1868, amongst others). In short this resulted in a pared down approach to PHC – selective primary healthcare. As Thomas and Weber (2004: 193) explain:

Importantly, the PHC strategy was modified/derailed almost before it got going. Selective primary health care (SPHC) became the mantra. In terms of policy response, this meant a focus on specific interventions, such as immunization and oral rehydration therapy, rather than an integrated approach to social transformation and community empowerment.

Selective primary healthcare as a concept was mooted in a 1979 paper by Julia Walsh and Kenneth S. Warren (see Cueto, 2004).

The term meant a package of low-cost technical interventions to tackle the main disease problems of poor countries. At first the content of the package was not completely clear [...] However in the following years, these interventions were reduced to 4 and were best known as GOBI, which stood for growth monitoring, oral rehydration techniques, breastfeeding, and immunization. (Cueto, 2004: 1868-1869)

Additionally, ‘[i]n the next few years, some agencies added FFF (food supplementation, female literacy, and family planning) to the acronym GOBI, creating GOBI-FFF’ (Cueto, 2004: 1869).

(See box 3.4 end of this chapter for an outline of the key elements of this programme). GOBI became the core approach of the child survival movement (Cueto, 2015; UNICEF, 1996) and control of diarrhoeal diseases became one of the movement’s ‘twin engines’ (Bump et al., 2013: 799).

Further indications of focus on solutions to diarrhoeal diseases (and other childhood diseases) which emphasize the changing dynamics in the development discourse at the time also include the 1977 UN Water conference at Mar-del-Plata which declared 1981-1990 ‘as the “International Drinking Water Supply and Sanitation Decade”’ (WHO, 1983: 1; see also UN General Assembly, 1980). ‘Its objective [was] to adopt programmes, with realistic standards for quality and quantity, to provide water and adequate sanitation to all people by 1990, if possible’ (WHA, 1980: para.1).

Another example of the position which diarrhoeal diseases had reached in health circles by the 1980s can be evidenced by the series of conferences specifically focused on oral rehydration therapy - ICORT (International Conference on Oral Rehydration Therapy) which took place in the 1980s. Merson<sup>41</sup> (2020) underscored the scale of these conferences (mentioning ICORT I and II) and the fact that they would not happen now, this emphasizes

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<sup>41</sup> Professor Michael Merson ‘served as Director [of the Diarrheal Diseases Control Program] from January 1980 until May 1990. In August 1987, he was also appointed Director of the WHO Acute Respiratory Infections Control Program. In May 1990, he was appointed as Director of the WHO Global Program on AIDS’ (Duke University Faculty Profile, n.d.).

the prominence that the issue of diarrhoeal diseases and particularly oral rehydration therapy had in health and development circles at this time (see also Wolfheim et al., 2019).

The 1989 adoption by the UN General Assembly of the Convention on the Rights of the Child is an example of the level to which the plight of the world's children had reached in global politics (see UNICEF, 1989; UNICEF, 1996: 63). The Convention has become the 'most widely ratified human rights treaty in history' (UNICEF, a, n.d.). In 1990 'the largest gathering of world leaders ever assembled at United Nations Headquarters in New York to attend the World Summit for Children', and this was 'the first time in history when a Summit-level meeting was held exclusively to address children's issues' (UNICEF, b, (n.d.)); see also UNICEF, 1990). Pebley (1993: 170) notes '[t]he underlying objective of the summit was to focus the attention of international political leaders on the problems of children, particularly children's health, at a time when international political alignments and priorities were changing rapidly'.

### **3.2 Interpreting this period through multiple streams**

In short, this period was one of cumulatively increased focus for child survival broadly, but also for combatting diarrhoeal diseases as a major, specific goal within that. We can see ample evidence for this not only through ground-breaking programs directly related to tackling diarrhoeal diseases (such as the CDD program) but also by the collection of related milestones and initiatives whose goals aligned with those required for tackling them. Drawing on the key elements of the multiple streams approach is helpful here in terms of understanding how attention gathered and strengthened around the challenge posed by diarrhoeal diseases throughout that period and is helpful to reflect on at this point before delving into how these elements which so effectively coalesced in the 1970s and 1980s have evolved and diverged in more recent decades.

#### *Problem*

The *problem* of diarrhoeal diseases was, in the late 1970s – 1980s, more well-defined than it had been before, i.e., research/data/statistics being produced highlighted the extent of mortality and morbidity rates due to them (Bump et al., 2011; 2013). Whilst cholera had historically been the key diarrhoeal disease point of focus for public health efforts, by the 1970s/1980s, they were, for the most part, being referred to collectively as a group of infections which ultimately result in the same potentially deadly symptoms. Additionally, the public health developments in higher income countries - advanced sanitation systems and abundant access to clean water - meant that diarrhoeal diseases and the past threats of cholera

were now relegated to very specific areas of the world – the poorest which lack(ed) these basic amenities. The treatability of diarrhoeal diseases in high-income countries and their disappearance as a health challenge therein emphasized uncomfortably the gap in access to health care between richer and poorer areas of the world. Taylor and Greenough (1989: 221-222) point out that:

[t]he world’s attention focused on diarrhea and an unprecedented public response crystallized action for the control of diarrheal diseases when it was demonstrated that many of these deaths could be prevented. Great publicity was given to a quotation in the *Lancet* in 1978 that elucidation of the biological mechanisms behind oral rehydration is “potentially the most important medical advance of this century”.

Kingdon cites three key elements to an issue moving from condition to problem status (an essential part of its journey to greater agenda prominence). As outlined in Chapter 2, they are *indicators*, *focusing events* and *feedback*. Indicators as to diarrhoeal diseases’ suitability for being deemed a ‘problem’ can be seen in the above-mentioned data being produced which emphasized the extent of the burden. Dissemination of information as to the unprecedented levels of preventable child deaths occurring in LMICs at the time (whether by lectures like Rohde’s or published articles like Snyder and Merson’s longitudinal study of deaths from diarrhoeal diseases) provided the uncomfortable statistics which advocates could use to their advantage—being amongst the first offerings of concrete estimates of worldwide disease burden from diarrhoeal diseases (Boschi-Pinto et al., 2008: 710). Focusing events can be seen in terms of the economic recession through the 1970s, resulting global food shortages which threw a spotlight on the plight of the world’s poorest and stressed the global health gap. Feedback mechanisms are perhaps less obvious in terms of initial attention being drawn to diarrhoeal diseases’ cause in the 1970s, other than the growing awareness of case numbers. Overall, however, there appears to have been sufficient activity within the problem stream via these elements to effectively shift diarrhoeal diseases from ‘condition’ to ‘problem’ status.

### *Policy*

Furthermore, persuasive, and well thought out *policies* directed toward tackling diarrhoeal diseases were clear. Significantly, the development and beginnings of the dissemination of oral rehydration therapy in LMICs demonstrated a viable and affordable solution to diarrhoeal diseases. As Ruxin (1994: 363) highlighted – ‘[b]efore its promotion worldwide in the late 1970s, the majority of people with diarrhoeal dehydration had *no access to effective treatment*’ (emphasis added). Bump et al. (2011: 26-27) elaborate: ‘The development of ORT provided an effective solution, which facilitated the rise in CDD’s priority versus that of other

problems for which the interventions may have been more complicated, harder to implement, or less desirable for other reasons’.

This simple and effective treatment was unquestionably an appealing proposition to those looking at improving mortality in LMICs and reducing the burden of another set of infectious diseases - a tangible solution to an increasingly well documented health challenge.<sup>42</sup>

Interestingly, the history of the development of oral rehydration therapy adds credence to Kingdon’s assertion that the three streams need to align in order for an issue to rise in priority/for a solution to find traction. To expound, as we touched on earlier, oral rehydration therapy had been developed years prior to its wider rollout with WHO support, suggesting that when it was initially developed, the problem stream (in this case perception of diarrhoeal diseases/portrayal of diarrhoeal diseases as a health challenge) and the politics (the political climate surrounding this kind of health issue) did not lend themselves globally to a push on oral rehydration therapy’s behalf. By the 1970s this had changed as the health community found common ground around the issue of child health and within that diarrhoeal diseases, within which oral rehydration therapy became a fundamentally important part of the solution to the issues of the day. Furthermore, numerous effective policy solutions were coming out of research being done by the Program for the Control of Diarrhoeal Diseases Program (CDD) throughout this period which arguably helped to keep diarrhoeal diseases on the priority agenda.

Wolfheim et al. (2019: 3-4) highlight key interventions developed by CDD research for implementation, examples from those they cite include:

- development of lower osmolarity oral rehydration solution;
- studies into treating persistent diarrhoea successfully;
- a review on widespread use of common antidiarrheal drugs – which pointed to their lack of efficacy;
- research on WASH which found quantity of water to be more important than quality and found water-related hygiene behaviours which were ‘significantly affecting incidence of diarrhea’;
- in-depth reviews into which preventive measures were the most effective and feasible (promotion of breastfeeding, improving complementary feeding and measles immunization were found to be among those with potential for high effectiveness/feasibility)

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<sup>42</sup> In a collection of essays remembering Jim Grant, those who knew him variously recall him pulling an ORS packet out of his pocket as part of advocating for child survival to world leaders (Savio, 2016).

- studies into benefits of breastfeeding and resultant recommendation of breastfeeding by CDD Program;
- Studies on improving complementary feeding
- vitamin A and zinc supplementation – studies found they reduced the severity/incidence of diarrhoeal diseases

(Wolfheim et al., 2019: 3-4).

They underscore how such ‘research findings provided a strong foundation on which the CDD Program was able to base its support to governments in implementing innovative and comprehensive national CDD programs’ (Wolfheim et al., 2019: 4). Whilst the CDD’s research took place over the years that the program was active, and was thus not necessarily the key to diarrhoeal diseases finding greater agenda prominence in the first place; it is worth mentioning here as this combination of thorough research to support country implementation activities was a key part of successes attributable to the CDD program and arguably a vital part of how diarrhoeal diseases *maintained* a position on the international health agenda throughout the 1980s into the 1990s.<sup>43</sup>

To return to how priority manifested at this time, policy entrepreneurs in positions of significance such as James Grant, (and UNICEF more broadly), Halfdan Mahler at the WHO and other major actors in global health including Robert McNamara<sup>44</sup> (World Bank), USAID, and the Rockefeller Foundation, were key with regard to pushing for focus on childhood survival and providing the necessary impetus that the cause needed – albeit in different ways. Bump et al. (2011: 22) note ‘[t]he importance of positive political leadership for CDD is difficult to overstate’ – pointing to actors like Mahler, McNamara, and Grant. Merson (2020) explained that around the mid-80s ‘the heads of some of the main UN agencies’ (e.g., Grant and UNICEF; Robert McNamara at the World Bank, as well as the UNDP, the Rockefeller Foundation and the WHO formed the Taskforce for Child Survival.

[T]hat Taskforce really led a movement among all the agencies to do something about child survival; part of that was diarrhoeal disease, [in particular] oral rehydration therapy, so that gave a big boost and that was a major major force in the UN agencies and that affected USAID and DFID to do more. I raised money from at least 10 bilateral (inaudible) countries; I got our budget up... I hired 50 staff, that was pretty big at the time; it was the moment really, the things I told you started it and then you had this whole child survival priority and that

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<sup>43</sup> Kingdon’s framework focus is more on how priority materializes. Nevertheless, understanding sustainability (or lack thereof) of priority once attained is an essential area for further research; conceivably a key part of future solutions to achieving better practice for neglected health issues going forward and arguably these areas overlap.

<sup>44</sup> Bump et al. (2011: 22) note: ‘[a]t the World Bank, Robert McNamara (President 1968-1981) was eagerly expanding his portfolio with grants through the International Development Association and just starting to appreciate the importance of health to development. In ORT, McNamara saw a cost-effective solution to just the type of humanitarian and economic problem he wanted to address’.

ended around in the early nineties [well not] exactly ended but AIDS took over. (Merson, 2020)

It is worth noting also that UNICEF (1996: 59-60) emphasizes that the resonance which the cause for child survival found worldwide:

was not accidental. It was the result of a sophisticated use of communications, taking advantage of two fundamental developments over the previous decades. First, there had been a dramatic expansion worldwide of basic education. Second, a media revolution had brought millions more people within reach of radio and television. Previous strategies had been hampered by the difficulty of ‘imposing’ health on unreceptive populations. But at this point, the new communications channels opened up a different option—persuasion.

They stress the importance of what was a ‘fine-tuned strategy of social mobilization’ and that not only were the help of the media and advertising sought, but partners from across all facets of society—from religious leaders and Goodwill Ambassadors, to Heads of State, parliamentarians, and trade unions (to use just a few examples cited), to join and promote the child survival and development movement (UNICEF, 1996: 60). This adds weight to the crucial role of effective and sustained advocacy by policy entrepreneurs for the exceptional resonance of this issue at the time. And whilst Jim Grant, for example, is often referred to as a key player in UNICEF and as an advocate for this movement, it is vital to recognise the scale of support that the movement had at the time, through resolute efforts to make it so.

At the international level, a Task Force for Child Survival and Development, including all the big-league players [at the time] in international health—the Rockefeller Foundation, UNDP, UNICEF, the World Bank and WHO—was established to resolve technical issues associated with the campaign and help build its momentum. The campaign thus became far broader than UNICEF itself, which explains the use of the vivid phrase, ‘a grand alliance for children. (UNICEF, 1996: 60)

Bump et al. (2011: 27) explain: ‘CDD was successfully implemented because a new intervention was available and because the global health institutions had strong leadership, committed sufficient resources, and cooperated in support of this objective’. They also note that: ‘Surveillance studies revealed the magnitude of the [diarrhoeal disease] problem, and research and subsequent trials provided a practical solution in ORT. The newness of both research streams was an additional advantage’ (Bump et al., 2011: 27).

In sum, clear solutions to the problem of diarrhoeal diseases were apparent (although it should be noted that oral rehydration therapy was the main focus at this point) and were bolstered through the coordinated efforts of an effective advocacy group; the unification and backing of such actors as those listed above helped to solidify the status of child survival and diarrhoeal diseases within that as prominent issue.

## *Politics*

Lastly, the political climate through this period became very much more aligned with the move to focus on child survival and allowed the space for the development of the aforementioned solutions. To highlight a few key points: this period immediately followed the eradication of smallpox (1979) but initially preceded the emergence of HIV/AIDS, and the momentum and belief that infectious diseases could be eradicated was at an all-time high. Henderson (1990: S56-7) outlines smallpox eradication's role on the advent of the child survival revolution, pointing to the relatively short period of time it took to eradicate smallpox (10 years, 9 months, and 26 days). The elimination of a once feared disease, which when the eradication program began was claiming 2 million lives a year, was incentive for the development of further vaccination programs, and vaccination was a key part of the child survival revolution.

It seemed only logical to us that other vaccines might similarly be applied with good effect and, in the course of doing so, might serve to strengthen national health systems. Thus, as the smallpox eradication programme was concluding, an Expanded Program of Immunization was launched. At that time, 1974, less than 5% of all children in developing countries were receiving any of the vaccines that were in common use in the industrialized countries. (Henderson, 1990: S57)

Granted the predominant solution to diarrhoeal diseases at this time was oral rehydration therapy, vaccinations would come later, but the principle remained the same – a implementable solution that had the potential for high impact.

In relation to this, Merson (2020) pointed to the Declaration of Alma Ata and the commitment to primary healthcare as 'shift[ing] the focus of the WHO and UNICEF to interventions that could be delivered through primary healthcare', noting that there were not many of these, but that oral rehydration therapy was one. He also outlined three elements that 'came together' at the time – a 'commitment to primary healthcare'; 'demonstration that oral rehydration therapy could be used in the community' (referencing Dilip Mahalanabis' famous paper)<sup>45</sup>; and money from the British government given to the WHO to begin the programme (Merson, 2020; see also Bump, 2011: 20). Bump et al. (2011: 27) also explain that:

[b]oth diarrheal diseases and ORT fit well with the vision of Alma Ata. DD was a complex problem of poverty, the number one cause of child mortality, and had been ignored previously. ORS was simple could be mixed at home, and was highly cost-effective.

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<sup>45</sup> Mahalanabis et al.'s (2012/1973) paper demonstrates the results of the use of ORT for Bangladesh refugees in 1971 during a severe cholera outbreak. Mahalanabis 'began giving oral rehydration fluids to all patients deemed not to be in urgent need of intravenous therapy' (Fontaine and Newton, 2001: 471). 'Remarkably, the case-fatality rate in Mahalanabis' camp was about 3% compared with 20-30% rates in the camps that used only intravenous fluids. This was the first, most brilliant demonstration that oral rehydration therapy was more than simply a treatment to replace intravenous fluid treatment in hospitals' (Fontaine and Newton, 2001: 471).

Implementing ORT involved community-level outreach and training. All of these aspects were compatible with prevailing trends in global health.

Additionally, as previously discussed, the economic recession and resulting exacerbation of the divide between rich and poor countries, underscored the need to address the plight of the world's children. It galvanised world leaders and NGOs around the issue of child survival and some very tangible solutions, (ORT and vaccinations, but also the GOBI framework), all of which had the palpable potential to reduce the burden in relatively straightforward ways.

### *Conclusion*

A conglomeration of factors led up to the Declaration at Alma-Ata and the WHO's launching of the CDD programme and UNICEF's Child Survival Revolution, providing policy windows (attention to PHC and then selective PHC) which helped diarrhoeal diseases to rise to prominence on the international health agenda at this time, remaining a key focus for the following decade.

To sum up, the CDD program saw substantial progress made for diarrhoeal diseases. The most obvious way this can be evidenced is through the reduction in mortality over this period. The '[w]idespread introduction of oral rehydration therapy largely contributed to reducing the number of deaths due to diarrhoea from 4.6 million per year in the 1970s to 3.3 million per year in the 1980s to 1.8 million in 2000' (WHO, 2005: 104). However, despite the laudable progress scholars have pointed to the point when attention to CDD began to diminish. Bump et al. (2011: 35) explain that: 'by the early 1990s, many of the forces that had supported CDD were weakening or had already disappeared' – the authors cite reduction in severity of the problem, limitations in ORT in terms of effectiveness against all types of diarrhoeal diseases, the emergence of the HIV/AIDS pandemic, and leadership changes as some of the factors contributing to the fall in prominence of the CDD program in the 1990s.

Wolfheim et al. (2019: 2) track the development of the CDD program, citing its metamorphosis from being 'technically focused and programmatically broad' to 'technically broader and programmatically narrow, and the subsequent impact of this evolution on diarrheal control activities globally and in countries'. To explicate, between 1990 and 2000 the program altered dramatically – in 1990 came a merger with the Acute Respiratory Infections (ARI) program to create the WHO Division of Diarrheal and Acute Respiratory Disease Control (CDR) – the goal being to reduce mortality for under-fives from both these causes (Wolfheim et al. 2019: 7). By 1996 this:

metamorphosed into the WHO Department of Child Health and Development (CHD), with an expanded mandate that included the main causes of child mortality plus child development. In



1998, adolescent health was included, and the Department was renamed Child and Adolescent Health (CAH). In 2010, maternal health and new-born health were added and department renamed again as Maternal, Newborn, Child and Adolescent Health (MCA). (Wolfheim et al., 2019: 7)

Crucially they highlight that ‘although the responsibility for CDD remained largely within the same WHO programmatic structure, it gradually evolved from being the principal focus of a single program to being one focus of a much broader program’ (Wolfheim et al., 2019: 7). The reason cited for the changes ‘was the observation that sick children often had a set of symptoms and signs that could indicate a number of conditions, and thus it was more effective and logical to provide health workers with the skills to assess and treat the child as a whole rather than for a single specific disease’ (Wolfheim et al., 2019: 7). Accordingly, they explain that the WHO with UNICEF developed what was termed the Integrated Management of Childhood Illness (IMCI) – launched in the late 1990s the IMCI ‘aimed to increase coverage of a selected set of evidence-based, high-impact interventions, taking an integrated approach to promoting, preventing and treating pneumonia, diarrhea, malaria, measles and malnutrition’ (Wolfheim et al., 2019: 7). Wolfheim et al. (2019: 8-9), describe these changes in the CDD structure and its incorporation within the IMCI strategy as a ‘paradigm shift’ where ‘very specific global and country-level objectives and targets of CDD were either done away with or became less important to monitor’. Crucially they note that:

CDD’s encouragement, programmatic guidance and accountability for results were replaced by a culture of “keeping child health on the agenda” and “waving the flag”. Lacking the regular monitoring of a few crucial indicators as had been done by CDD, as well as of the quality and level of implementation and coverage, IMCI is not likely to result in the mortality reductions called for in the SDGs. (Wolfheim et al., 2019: 9)

Furthermore, Bump et al. (2013: 803) note that from 1988 ‘James Grant directed UNICEF away from CDD to focus more on immunizations. By the time of his death in 1995, UNICEF had essentially abandoned direct support for CDD programming’. Bump et al. (2011: 25) explain that: ‘The combination of introducing IMCI, broadening the mission of diarrhea specialists, and weak leadership at the global health institutions undercut the momentum of CDD in the early 1990s’.

On that note, it is pertinent to conclude this introduction to diarrhoeal diseases’ history by noting that whilst the Child Survival Movement, CDD, ORT, and aspects of GOBI-FFF<sup>46</sup>, were successful in steadily drawing greater attention to diarrhoeal diseases and to child health

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<sup>46</sup> Bump et al. (2011: 21) explain that not all the interventions in GOBI-FFF received commensurate attention – ‘apart from oral rehydration and immunization, the other five targets in GOBI-FFF all depended fundamentally on broad social change, which could not be implemented or even planned by UNICEF and other global health institutions. That was the vision of Alma-Ata, and even in the stripped-down version of [Selective primary healthcare], it was extremely challenging to implement’.

and making headway in terms of addressing their burden, the approaches taken were by no means without criticism. Despite being considered the halcyon days of the cause of child survival, some critics reeled, in particular at UNICEF's interpretation and deviation from the holistic primary health care approach set out at Alma Ata in 1979. Rather than pursue the system wide, health strengthening approaches embodied by primary health care's goals, the divergence to a limited selection of technological methods to address issues like diarrhoeal diseases, embodied by the GOBI approach meant that the key aspects of primary health care were left by the wayside. Inevitably this added fuel to the long running debate in global health circles between the relative merits of horizontal and vertical approaches to health issues.<sup>47</sup> Furthermore, scholars such as Bump et al. (2013: 800) highlight that despite the additional benefits which infrastructural (e.g., water and sanitation) and nutritional improvements could have had for diarrhoeal diseases, in fact, ORT was the only intervention which the CDD programme delivered at scale. Meanwhile, emphasizing the limitations of oral rehydration therapy, Ruxin (1994: 397) explains:

ORT is not a solution to the global epidemic of diarrhoea: it is only a treatment that prevents diarrhoeal deaths. ORT can buy time for nations and international development organizations to marshal their resources for clean water, sanitation, and other projects that constitute long-term solutions to diarrhoeal disease.

These perspectives are worth bearing in mind as it is easy to be blindsided by the (laudable) progress made, and to disregard any weaknesses evident in methods taken even through this period of more intense focus. In many ways these relegated aspects of the primary health care approach can be identified in broader health goals articulated by the WHO at the time and also in more recent decades in newer approaches to diarrhoeal diseases reduction as the following section will outline (see also Wisner, 1988; Schuftan, 1990 for critiques of the GOBI approach).

### **3.3 Diarrhoeal diseases in global health 2000 – 2020**

Armed with a picture of the relatively recent history of diarrhoeal diseases, we can now move to an analysis of the 2000 – 2020 period. To begin with it is helpful to have a clear picture of where diarrhoeal diseases are situated relatively in global health in terms of diseases burden and resources attached. Estimates of disease burden are straightforward to obtain and data from the Institute of Health Metrics Evaluation (IHME) clearly shows them as within the top ten causes of death globally every year between 2000 and 2017, falling from 6<sup>th</sup> place in 2000

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<sup>47</sup> Regarding the focus at the time on CDD, it is worth noting that despite debate over PHC and selective PHC 'there was little if any dissent about the primacy of DD and the opportunity presented by ORT. Both camps were highly favourable toward CDD' (Bump et al., 2011: 19).

to 9<sup>th</sup> place by 2019 (Ritchie et al., 2019<sup>48</sup>), whilst data on causes of death for under-fives shows diarrhoeal diseases consistently in the top four causes every year from 2000 to 2019 – albeit with a pleasing downward trend in mortality (Ritchie et al., 2019)<sup>49</sup>. Tracking the specific funding directly targeting diarrhoeal diseases is less easy. Although the IHME provides data on development assistance for health<sup>50</sup> (DAH) annually (see figure 3.1 below), it does not show diarrhoeal diseases as a specific category, rather it is open to interpretation as to where investments for them are situated with myriad other issues under the wider areas such as ‘newborn and child health’ or ‘other infectious diseases’. The IHME 2020 Financing Global Health Report states that: ‘[f]unds to support newborn and child health have originated from a few sources including the US, the UK, the Bill and Melinda Gates Foundation, and corporations [...]. Immunization (\$3.4 billion in 2020) and nutrition (\$2.0 billion in 2020) are the key program areas that these funds have supported’ (IHME 2021: 104). Funding for newborn and child health has largely increased since 2000 – however this area incorporates myriad health issues. This is nevertheless a helpful introductory visualisation as to where major priorities in global health lie. Funding for ‘other infectious diseases’ has been one of the lower funded areas (until the last couple of years with huge increases in response to COVID-19, see IHME, 2021: 102). Whilst funding for HIV/AIDS has been the majority recipient of DAH for many years, it has begun to see a slight decline in total DAH in the last few years. This is consistent with a general plateauing of growth<sup>51</sup> seen in DAH levels since a peak in 2013, following the ‘golden age’ of growth since 1990 (Moon and Omole, 2017: 207). Promisingly, newborn and child health broadly have in recent years been one of the higher recipient areas of DAH funding, for example in 2019 receiving approximately \$9 billion with HIV/AIDS next at \$8.5 billion (IHME, 2023a). Yet, HIV/AIDS, malaria, and TB are the only individually categorised health issues which are broadly accessible in DAH funding visualisations which speaks to their status on the global health agenda both as recipients of DAH and within the broader realm of neglected diseases. It is crucial to note here that these figures should not be misconstrued as evidence that these health issues are receiving sufficient

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<sup>48</sup> See ‘Numbers of death by cause’ chart when accessing this reference.

<sup>49</sup> See ‘Causes of death in children under 5’ chart when accessing this reference.

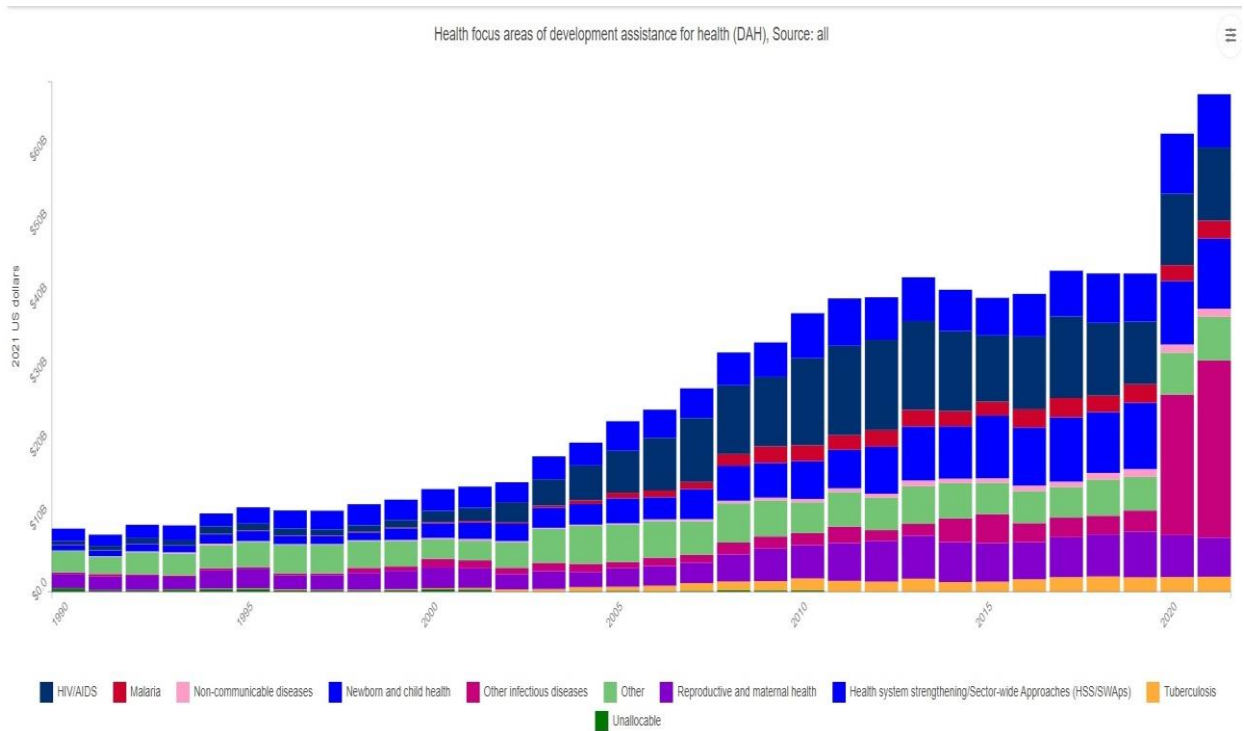
<sup>50</sup> Development assistance for health defined by the IHME (2016: 16) as: ‘financial and in-kind contributions provided by global health channels to improve health in developing countries’. DAH provides a good insight as to prominent priorities in global health, but does not include all health funding, and the IHME (2016: 16) noted that: ‘because [DAH] includes only funds with the primary intent to improve health, funding for humanitarian assistance, water and sanitation, and other allied sectors that do not primarily focus on health are not included in these estimates. Global health research funded by global health institutions whose primary purpose is not development assistance is also not captured’.

<sup>51</sup> Obviously bar the unprecedented growth in 2020 as a result of additional financing directed toward the COVID-19 pandemic. Whether this increase in DAH will sustain, and how it might impact different health focus areas in the longer term remains to be seen.

resources. Furthermore, there has been considerable discussion as to the relative merits and drawbacks of funding and mechanisms in this arena. For example, see Moon and Omole (2017: 211-212) who outline 8 critiques of aspects of the DAH system: *inadequate total volume of financing; volatility and uncertainty of financing; additionality of financing; proportion transferred to recipient countries; priority setting; coordination; accountability and rationale*. However, it is still worth drawing on for the purposes of this thesis as it provides a straightforward indicator of broad preference areas in global health financing.

**Figure 3.1. Health focus areas of development assistance for health (DAH) 1990 – 2021<sup>52</sup>**  
- IHME (2023a)

(For clarity the upper group of bars represent 'Health system strengthening/Sector-wide Approaches (HSS/SWAs)' and the fourth group down from the top represents 'newborn and child health').



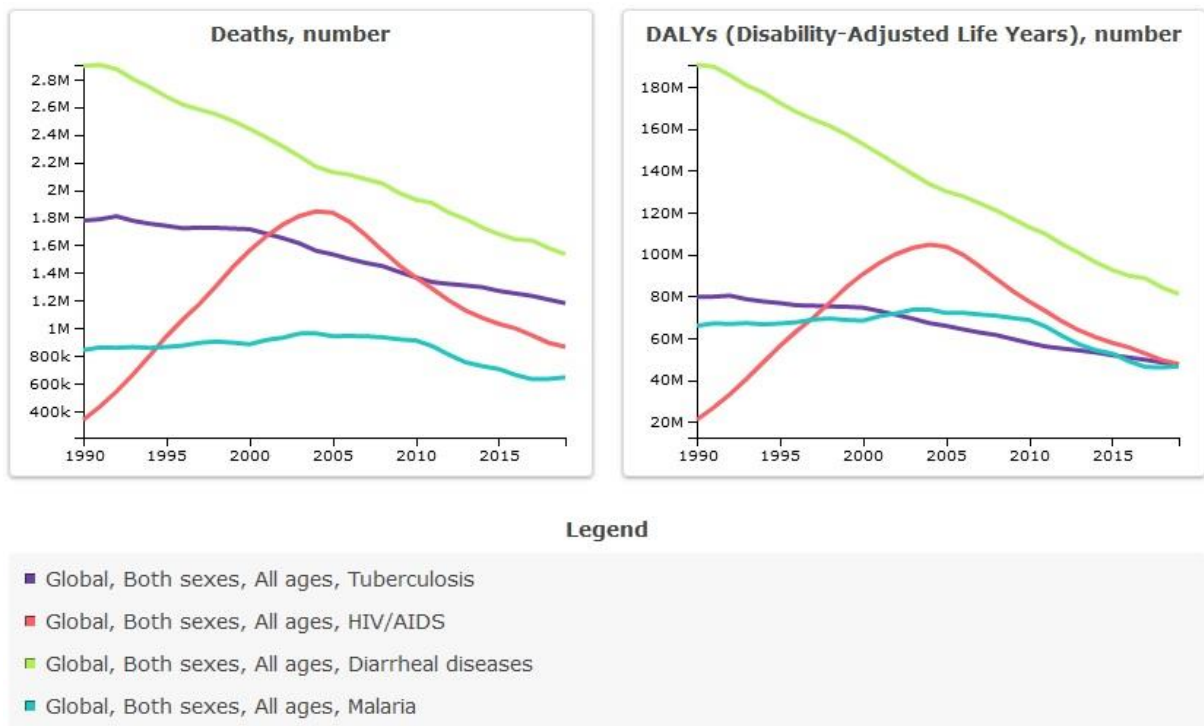
Source: Institute for Health Metrics and Evaluation. Used with permission. All rights reserved.

In relation to the earlier point regarding DAH distribution and specific health issues, Figure 3.2 below was generated using the IHME's global health data exchange, global burden of disease tool. To help understand diarrhoeal diseases' burden relative to some of the major

<sup>52</sup> Horizontal axis shows health focus areas: HIV/AIDS; Malaria; Non-communicable diseases; Newborn and child health; Other infectious diseases; Other; Reproductive and maternal health; Health system strengthening/Sector-wide Approaches (HSS/SWAs); Tuberculosis; Unallocable (left to right). The vertical axis shows 2021 US dollars, beginning at \$0 and increasing in \$10 billion increments.

recipients of DAH outlined in Figure 3.1, it shows both deaths and DALYs from diarrhoeal diseases, HIV/AIDS, TB, and malaria from the year 2000 onwards. It demonstrates diarrhoeal diseases as having the majority burden of deaths and DALYs, despite, as described above, not being included in an individual category in accessible DAH funding data.

**Figure 3.2: Deaths and DALYs from HIV/AIDS, TB, malaria, and diarrhoeal diseases (all ages) – IHME, c (n.d.)**



Source: Institute for Health Metrics and Evaluation. Used with permission. All rights reserved.

The G-Finder project, which is ‘conducted by Policy Cures Research, a not-for-profit global health think tank based in Sydney, and funded by the Bill and Melinda Gates Foundation’, ‘tracks annual investment into R&D [research and development]; for new products and technologies that are designed to address the persistent challenges that disproportionately affect the world’s most disadvantaged people’ (Policy Cures Research, 2022). It should be noted that it is referencing funding in terms of research and development (R&D) specifically. Nevertheless, it is helpful to include and to discuss briefly here to visualise some funding for diarrhoeal diseases in comparison to other challenges on the global health agenda. In 2020 ‘[d]iarrhoeal diseases received \$151m in funding for basic research and product development [...] a 13% (\$22m) reduction from 2019 and a second consecutive year of declining funding, taking it to its lowest level in the last decade’ (Chapman et al., 2021: 20). The top three funders are the US NIH, Aggregate industry, and the Gates Foundation (Chapman, 2021: 21).

To put this into perspective, funding for HIV/AIDS R&D in the same year came to \$1368m (Chapman et al., 2021: 14) while R&D funding for all neglected diseases that year was \$3937m (Chapman et al., 2021: 12). In 2020 HIV/AIDS share of the total is the largest at 35%, followed by TB at 17% and malaria at 16% - diarrhoeal diseases are next with 3.8% (Chapman et al., 2021: 13). These results show a similar pattern to that outlined in Figure 3.1 in terms of priority targets, n.b. this is not to say any of these issues are receiving sufficient funding.

Having discussed diarrhoeal diseases' position in terms of global burden of disease, DALYs and DAH and R&D funding to provide a sharper picture of their situation in global health relative to burden and comparatively with other neglected diseases, the following sections will each take an aspect of Kingdon's approach identifying how diarrhoeal diseases have fared in each stream over the past 20 years. It will identify moments of progress and various approaches to diarrhoeal disease problem-solving from key actors in global health through this time, and through doing so assess the viability of Kingdon's streams' framework in explaining peaks and troughs in their trajectory on the global health agenda.

### **3.4 The problem stream**

As we have discussed in the earlier sections of this chapter, perception and understanding of the problem of diarrhoeal diseases has shifted over time. Historically, cholera was arguably the diarrhoeal disease of most global concern and accordingly drew the most fear and efforts to alleviate incidences - given the repeated cholera pandemics throughout the 1800s this is unsurprising (see Martinez et al., 1988). As understandings of diarrhoeal diseases and treatments improved, in addition to greater awareness of burden in LMICs, there was impetus to target all diarrhoeal diseases – as seen through the CDD programme emerging in 1978. As Black et al. (2019: 2) explain:

Diarrhea was recognized in the 1970s to be a major cause of child death in low-and middle-income countries (LMIC). This recognition and the demonstration that an oral rehydration solution (ORS) could prevent mortality through treatment of dehydrating diarrhea led the World Health Organization to launch a Programme for the Control of Diarrhoeal Diseases in 1978.

Aside from differentiations in terms of vaccine developments, *many* (but certainly not all) of the efforts and programmes that have highlighted diarrhoeal diseases in recent years have continued to underline ways in which all diarrhoeal diseases can be tackled together and the benefits of a comprehensive approach. This is reminiscent of the way in which they were portrayed through the 80s and 90s and can be evidenced in the subsequent section which elucidates policy approaches/developments regarding diarrhoeal diseases in the last 20 years.

Nevertheless, despite this now relatively long-term consistency in a basic understanding of the issue in terms of the best means of prevention, we have seen this relative fall in prominence. Kingdon's conception of the *problem* stream and the way in which an issue becomes recognised as problem (as opposed to just one of many conditions facing society) is helpful here in terms of piecing together how the status of diarrhoeal diseases has shifted, so that in contrast to its status as a prominent *problem* on the decision agenda in the 1980s and 1990s, it now has perhaps faded somewhat into the background, flanked by myriad other health challenges. As discussed, Kingdon (2003) points to the importance of a range *indicators*, *focusing events* and *feedback* as key to policymakers finding out about a condition and then potentially deeming it a problem.

So, in terms of *indicators* that would suggest diarrhoeal diseases be deemed a problem 2000 through 2020, we have data such as the global burden of disease which, as discussed, unambiguously (via morbidity and mortality statistics) emphasizes their 'status' as a high burden health issue over the entire 2000-2020 period. Furthermore, the DALY measures similarly offer data which puts diarrhoeal diseases high on the list of global health challenges facing many societies. However, their position has shifted since their 'heyday' on the global health agenda in the 1980s. That is whilst there has been an impressive reduction in mortality, the morbidity is a major ongoing issue that has been addressed less effectively than the mortality which arguably changes the way in which the challenge is perceived.

Kingdon (2003) has stressed, *indicators* may not in and of themselves be sufficient to ensure that a condition is elevated to problem status – sometimes a focusing event or feedback may be necessary also. With regards *focusing events*, this is arguably an area where diarrhoeal diseases fall down between 2000 and 2020. We can look to the wider patterns in global health through this time to see events which pulled focus in specific directions and none of these have been especially conducive to elevating the status of diarrhoeal diseases. Interestingly, it is not just an absence of focusing events to draw specific focus to diarrhoeal diseases that may help explain their neglect, rather, in global health, focusing events for other issues can be identified which unequivocally drew the spotlight in very different directions pushing diarrhoeal diseases lower down the agenda. These events are outlined in the political stream (see section 3.6 of this chapter) as they had a direct effect on the politics of global health and the climate in which priority setting has been taking place.

Kingdon (2003) describes *feedback* as that which government officials receive in the normal course of events regarding existing operations of programs.

They monitor expenditures, have experience with administering programs, evaluate and oversee implementation, and receive complaints. This feedback often brings problems to their attention: programs that are not working as planned, implementation that does not square with their interpretation of the legislative mandate, new problems that have arisen as a result of a program's enactment, or unanticipated consequences that must be remedied. (Kingdon, 2003: 100-101)

In thinking about the feedback process for the problem of diarrhoeal diseases over this period, it is helpful to reflect on the programs for their control to think about how they are faring and what results they are providing for policymakers in terms of progress against diarrhoeal disease and needs. Bump et al.'s (2013) study on the fall in prominence of CDD is helpful here in terms of demonstrating the shift in availability of data concerning diarrhoeal diseases. They explain that:

All sources we consulted support the conclusion that CDD programming has reduced DD mortality since the early 1980s. But data collection efforts were systematic for little more than a decade, from the early 1980s into the mid-1990s. Both before and since that time investigators have confronted significant obstacles. (Bump et al., 2013: 800)

This presents some problems both in terms of grasping the progress fully, but also demonstrates the reduced level of focus in the area and thus reduced sources of feedback available.

For instance, in 1982, Snyder and Merson could identify 24 suitable studies, but only 10 of these defined diarrhoea and of these 10, 8 used different definitions (Snyder and Merson, 1982). In contrast, global estimates of DD treatment rates in 1993 could draw on 276 surveys in 60 countries. But a decade later in 2003, only 31 surveys in 20 countries were available 'reflecting diminished support for the systematic collection of incidence data' (Keusch *et al.* 2006). (Bump et al., 2013: 800)

They provide further indication of a reduction in feedback sources by drawing attention to the considerably reduced number of individuals working directly on diarrhoeal diseases in the WHO. They explain: 'At WHO, one respondent recalled that in 1985, there were 20-25 full time staff members working exclusively on DD' (Bump et al., 2013: 803), however:

In mid-2008, there was only one full-time staff member at WHO headquarters who worked exclusively on DD. There was one person assigned full-time to cholera, and around five other people who worked on DD ~20% of the time. In all, there were about three full-time equivalent staff assigned to DD at WHO-Geneva. Although the overall size of the DDCP [Diarrhoeal Disease Control Programme also abbreviated to CDD] remains about the same, it was charged with all aspects of child health, resulting in a major reduction of staff for CDD. (Bump et al., 2013: 803)

Another example of reduced feedback can be seen with the monitoring of ORS production – Wolfheim et al. (2019: 5) point out that:

The first guidelines for producing ORS were issued in 1980. The CDD Program devoted considerable attention to the development or strengthening of pharmaceutical facilities mostly in low and middle income countries to produce ORS of acceptable quality, and ensuring adequate availability of ORS packets. Production guidelines were revised and re-issued in



1985, and again in 2005 when the lower osmolality ORS became the WHO recommended formula.

They emphasize how carefully ORS production and quality was initially monitored, but crucially point out that, ‘no information on ORS production (aside from UNICEF production) was collected after 1993’ (Wolfheim et al., 2019: 5).

Another point worth considering in this regard is the readily available data estimating mortality trends which is often used and cited in global health activities. Such data has of course shown a pleasing downward trend for mortality rates associated with diarrhoeal diseases. Conceivably this feedback detracts from the urgency of the cause because it demonstrates marked progress, and one could infer from such data that current interventions are fit for purpose. The weakness however in such feedback is that it does not always provide good information on whether and where progress could be accelerated. Thus, it is feasible that it may contribute to a weakening in the problem status of the issue in question.

Looking at examples of feedback which have been produced in the last two decades does also provide us with some further evidence that should have helped diarrhoeal diseases’ cause in the problem stream. Examples of the work coming out of UNICEF and the WHO which emphasized the remaining challenges in terms of defeating diarrhoeal diseases, include their publication in 2009 *Diarrhoea: Why children are still dying and what can be done*. This emphasized the weak spots in existing measures as well as pointing out the international commitment to reducing child mortality from diarrhoea in the 1970s and 1980s by scaling up use of ORT and the success with which these efforts were met (UNICEF/WHO, 2009). In doing so they underscored the drop in status of diarrhoeal diseases on the global health agenda, by declaring that: ‘today, [2009] only about 39 per cent of children with diarrhoea in the developing world receive oral rehydration therapy and continued feeding, a figure that has changed little since 2000’ (UNICEF/WHO, 2009: v). They also highlight the stability of incidences of diarrhoeal diseases over the prior two decades (UNICEF/WHO, 2009: 5). This shows evidence of feedback in terms of how dissemination of ORS was progressing (or not) through the first decade of the millennium, and feedback in terms of incidences of diarrhoeal diseases which speaks volumes to weaknesses in existing interventions, but also it underlines both the WHO and UNICEF’s lack of satisfaction with the slowing of progress on the issue. Also, in 2009, the WHO published *Identifying priorities for child health to achieve Millennium Development Goal 4*, which summarized the proceedings of a meeting called by the Department of Child and Adolescent Health and Development (CAH), which emphasized that the three main causes of child mortality – pneumonia, diarrhoea, and new-born problems – which represent 70% of child mortality, receive very minimal research funding (WHO,

2009a: 1). A further example comes from the International Vaccine Access Center at the Johns Hopkins Bloomberg School of Public Health which produces a yearly progress report on pneumonia and diarrhoea ‘exam[in]g annual progress toward a subset of key GAPPD interventions in 15 countries with the highest total number of pneumonia and diarrhea deaths among children under five’ (IVAC/Johns Hopkins, 2022: 5).

However, such publications should not be seen as evidence that ample research, data, and feedback mechanisms are in place in terms of diarrhoeal diseases, yet they do demonstrate examples of publicly available feedback which shows a clear awareness in health and development circles of the ongoing gravity of diarrhoeal diseases and weak spots in terms of implementation of known interventions.

Whilst by any normative measure the burden posed by diarrhoeal diseases justifies clear focus until the burden is eliminated, it is arguable that in fact a key part of their de-prioritization over the past decades has been due to the fact that despite having key indicators denoting their ongoing burden, there have been a lack of focusing events working in their favour, as well as a decrease in consistent feedback on specific progress areas which has damaged the wider resonance (beyond health and development circles) of their ‘problem’ status, thus inhibiting their ability to rise onto a decision making agenda. Furthermore, the notable progress in mortality reduction may eclipse the remaining challenge diarrhoeal diseases present. However, these points only partially explain the situation, because, as the discussion section will draw out, there are aspects of addressing diarrhoeal diseases which have received more attention than others and thus a wholesale interpretation of diarrhoeal diseases as a de-prioritized issue misses the nuance.

### **3.5 The policy stream**

Kingdon’s description of the policy stream as something of a ‘primeval soup’ of ideas floating around in policy communities is a vivid metaphor for the activity in the policy stream - ‘[m]any ideas are possible, much as many molecules would be possible. Ideas become prominent and then fade’ (Kingdon, 2003: 117). Whilst Kingdon’s development and use of multiple streams was a national level analysis, this project applies the framework at a global level. This presents something of a challenge in terms of identifying specific trajectories of policy developments for such a multifaceted challenge as diarrhoeal diseases, given the substantial conglomeration of actors working across *global* health. Accordingly, for the purposes of this analysis, this stream is taken as encompassing the central policy approaches/suggestions of prominent actors in global health who have cultivated such to

tackle diarrhoeal diseases over the past two decades. Through outlining key developments it will give a flavour of the diarrhoeal diseases policy solutions moving around in this stream. Box 3.1 outlines chronologically some key developments which will be discussed in more detail below (see also DefeatDD, 2020a for ‘Ten years of progress to defeat diarrheal diseases’ which helped in terms of sourcing some of the developments outlined).

Box 3.1: Selected diarrhoeal diseases related policy developments 2000-2020

2004 – UNICEF and WHO recommend use of ORS and zinc (WHO/UNICEF, 2004)

2006 – GAVI adds rotavirus vaccine to those it gives financial support to (see WHO, 2009b)

2008 – WHO prequalifies rotavirus vaccine – RotaTeq (Merck & Co. Inc., Whitehouse Station, NJ, USA) (WHO, 2021b)

2009 – WHO prequalifies rotavirus vaccine – Rotarix (GlaxoSmithKline Biologicals, Rixensart, Belgium) (WHO, 2021b)

2009 – WHO recommends rotavirus vaccine in all national immunization programmes (WHO, 2009b)

2009 – UNICEF/WHO report published: Diarrhoea: Why children are still dying and what can be done (UNICEF/WHO, 2009)

2012 – Child Survival Call to Action (Ethiopia, India, the United States of America, and UNICEF) (UNICEF, 2012)

2013 – WHO/UNICEF Integrated Global Action Plan for the Prevention & Control of Pneumonia & Diarrhoeal Diseases (WHO/UNICEF, 2013)

*2014 – Global Taskforce on Cholera Control is revitalized (GTFCC, 2021a)*

2016 – UNICEF Strategy for Water, Sanitation & Hygiene (2016-2030) (UNICEF, 2016)

*2017 – Global Taskforce on Cholera Control – Ending Cholera: A Roadmap to 2030 (GTFCC, 2017)*

*2018 – World Health Assembly commitments to cholera prevention and control (WHA, 2018)*

2018 – WHO prequalified two new rotavirus vaccines – Rotasiil (Serum Institute of India) and Rotavac (Bharat Biotech International Ltd, India) (WHO, 2021b)

2018 – Declaration of Astana endorsed by all WHO member states at the Global Conference on Primary Health Care (WHO, 2018c; WHO/UNICEF, 2018b)

2019 – WHO adds co-packaged ORS and Zinc to its essential medicines list (WHO, 2019a; PATH, 2019)

2019 – UN Political Declaration on Universal Health Coverage (WHO, 2019b)

2019 – World Health Assembly commitments to universal WASH in health care facilities (WHA, 2019)

To begin with the WHO, as we have touched on earlier in this chapter, played a role, not just as a central organization in this field in general, but as an instigator of work on diarrhoeal diseases with the CDD program which subsequently morphed into an integrated approach with other child health efforts. Looking into DAH financing flows directed through the WHO over the past two decades reveals focus areas *within* child health. Data available between 2002 and 2021, breaking down funding they directed toward child health, showed the focus area within that receiving the largest share has, by and large, been vaccines (IHME, 2023b). However, this is not to say that work from the organization has exclusively focused on one type of intervention but is worth being aware of for the purposes of better understanding this landscape. Furthermore, it was not possible to disaggregate child health funding into specific diseases, so the weight on vaccines is applicable across all child health and diarrhoeal diseases is one of many issues within that rubric.

Diarrhoeal disease specific solutions which have been endorsed by the organization include the 2004 recommendation from the WHO and UNICEF for use of ‘a new lower osmolarity oral rehydration salts (ORS) formulation and zinc supplementation for diarrhoea management’ (Fischer Walker et al., 2009: 780). This recommendation followed ‘scientific consensus and recognition that zinc and low osmolarity ORS were critical for the reduction of diarrhoea mortality’ and evidence that considerable reductions in mortality could be achieved with full coverage of this combination (Fischer Walker et al., 2009: 780). Although as Fischer-Walker et al. (2009: 780) noted (in 2009) ‘there has been little progress on widespread introduction’. Another recommendation in 2009 suggested that rotavirus vaccine be included in all national immunization programmes. This followed the prequalification of two rotavirus vaccines in 2008 and 2009 respectively. In 2006 GAVI had already added rotavirus vaccines to its portfolio, meaning it would provide financial support to LMICs to help them acquire the vaccine; the 2009 WHO recommendation then ‘[paved] the way for low-income countries in Africa and Asia to apply to GAVI for introduction of rotavirus vaccines—just three years after new rotavirus vaccines became available in the United States of America, Europe and Latin America’ (WHO, 2009b). More recently, in 2018, the WHO prequalified two new rotavirus vaccines: Rotasiil and Rotavac (WHO, 2021b: 306). The former being: ‘the first Rotavirus vaccine with heat stable characteristics, which makes it particularly suitable for use in low-income countries where weak infrastructure and frequent lack of electricity make refrigeration very difficult’ (WHO, 2019c: 23). WHO prequalification means that these vaccines would then be available for UN agencies and the GAVI Alliance to purchase for LMICs (GlaxoSmithKline, 2009). ‘When WHO prequalifies a medical product,

it often opens the door to affordable access for low- and middle-income countries' (WHO, 2019c: 22). Given that rotavirus is the leading cause of diarrhoeal diseases in children under five, and that a previous rotavirus vaccine developed in the late 1990s, had then been withdrawn due to association with intussusception (CDC, 1999), the development of the effective vaccines (and more recently the thermostable vaccine) and their endorsement by the WHO at a global level represent important steps toward reducing the burden from rotavirus. Where rotavirus vaccines have been introduced in national immunization programmes, studies have indicated a significant impact on reducing hospitalizations of children under five with acute gastroenteritis due to rotavirus (Aliabadi et al., 2019: e893). As of 2022, looking at data from the International Vaccine Access Center relaying 'universal vaccine introduction over time' with data reflecting the 'actual start date of vaccine availability and administration to children' (IVAC, a, n.d.), 116 countries have introduced rotavirus vaccines (IVAC, a, n.d.). However, it is important to note that vaccine coverage and access within those countries varies and could be much improved (see IVAC, b, n.d. and IVAC, c, n.d.; Deen et al., 2018). Further developments include the 2009 publication of the UNICEF/WHO report '*Diarrhoea: Why children are still dying and what can be done*' which aimed 'to focus attention on the prevention and management of diarrhoeal diseases as central to improving child survival' (UNICEF/WHO, 2009: 1). This report outlined the ongoing challenge of diarrhoeal diseases, developments in intervention recommendations and, where available, data on how interventions were being implemented (often indicating a lack of available data, or a lack of sufficient coverage e.g., at the time '[o]nly one third (33 per cent) of children with diarrhoea in developing countries receive ORS to treat their illness' (UNICEF/WHO, 2009: 24). The report concluded with a 7-point plan for diarrhoea control with treatment and prevention measures, focusing on 2 key treatment elements and 5 key prevention elements (see Box 3.2).

**Box 3.2****Summarised 7-point plan for comprehensive diarrhoea control**

## Treatment:

- ‘1. Fluid replacement to prevent dehydration
2. Zinc treatment’.

## Prevention:

- ‘3. Rotavirus and measles vaccinations
4. Promotion of early and exclusive breastfeeding and vitamin A supplementation
5. Promotion of handwashing with soap
6. Improved water supply quantity and quality, including treatment and safe storage of household water
7. Community-wide sanitation promotion’.

(UNICEF/WHO, 2009: 31)

That same year the WHO published the *Global Action Plan for the Prevention and Control of Pneumonia (GAPP)* (see WHO/UNICEF, 2009). They then noted in the updated *GAPPD* published in 2013 that:

Since these strategies [the publications on diarrhoea and pneumonia just outlined] were launched, it has been recognized that pneumonia and diarrhoea are most effectively addressed in a coordinated manner. They share the same determinants, and thus also share control strategies as well as delivery systems. Both are caused by multiple pathogens and no single intervention will manage either problem. (WHO/UNICEF, 2013: 11)

Thus, the *GAPPD* in 2013 ‘propose[d] a cohesive approach to ending preventable pneumonia and diarrhoea deaths’ (WHO/UNICEF, 2013: 5). It emphasizes crossovers in causation and solutions for the issues and accordingly describes ‘an innovative approach for integrating the planning, delivery and monitoring of health interventions for these two diseases’ (WHO/UNICEF, 2013: 10). This action plan ‘represent[ed] the first-ever simultaneous effort to protect children from pneumonia and diarrhoea, the two leading killer diseases of children less than five years old’ (DefeatDD, 2013). This was an important move in laying out clearly what country level measures need to be taken to prevent these two health issues and how they can be integrated to scale up efforts, the *GAPPD* was step in the right direction. Of course, it should be noted that whilst the *GAPPD* provided the strategy/guidance, the political will and commitment is not guaranteed and needs to be encouraged. The goals set out ‘to see a drop in

deaths from pneumonia to fewer than 3 children in 1000 live births, and from diarrhoea to less than 1 in 1000 by 2025' (WHO, 2013a). Yet this 'can only be achieved by engaging a wide range of actors, sectors and by attaining political will' (WHO, 2013a).

At the time of writing the most recent diarrhoeal diseases related policy development came in 2019 with the addition of co-packaged ORS and zinc to its essential medicines list. As DefeatDD (2019) notes:

Countries look to WHO to set global standards for national policies. While WHO and UNICEF have long recommended both ORS and zinc as the gold standard for managing childhood diarrhea, adding these co-packaged medicines to the EMLc signals national essential medicine lists to follow suit.

Again, despite the long-term advice from the WHO and UNICEF with regard the inclusion of these interventions, the coverage has been in general low – with less than 10% of child diarrhoea cases being treated by both ORS and zinc (Berry and Choy, 2020). As a relatively recent step, it remains to be seen how this development will play out in terms of country level implementation in the coming years.

An example of a development for WASH specifically came in 2016 with UNICEF's Strategy for Water Sanitation & Hygiene 2016 - 2030. Articulating a commitment to a vision of 'the realization of the human rights to water and sanitation for all' (UNICEF, 2016: iii), the strategy sets out how the organization plans to fulfil the vision of achieving SDG 6 and the broader SDG agenda (UNICEF, 2016: iii). Like many of the developments in this stream, this strategy is motivated by the targets set for the 2030 deadline.

Merson (2020) noted cholera as slightly different from other diarrhoeal diseases (i.e., from the focus of this thesis which is primarily on diarrhoeal diseases affecting under-fives); pointing to cholera's occurrence in large outbreaks<sup>53</sup>, and also in adults, its low mortality if treated in time, and the availability of a vaccine (see also WHO, 2022d). Moreover, cholera is not one of the leading causes of childhood deaths from diarrhoeal diseases (see Liu et al., 2016 – though this is not to be interpreted as no burden). As mentioned the focus of this thesis has not been on developments regarding cholera, rather on the childhood diarrhoeal disease burden, but given the earlier discussion of cholera's role it felt relevant to point to some of the advances targeting it to demonstrate the work continues in that domain also.

A cholera specific development can be seen in 2014 when the Global Taskforce for Cholera Control (GTFCC) 'was revitalised to create new momentum around cholera control and play a

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<sup>53</sup> Epidemics of cholera require a specific response (see WHO, 2022d).



critical role in coordinating partners and activities’ (GTFCC, 2021a). In 2017 the GTFCC launched a new strategy ‘Ending Cholera: A Roadmap to 2030’ (GTFCC, 2021a). This roadmap called on ‘countries, technical partners, and donors to step up their efforts and pool their resources to eliminate cholera by focusing on 3 key areas’ – ‘early detection and response’, ‘a targeted prevention strategy’, and ‘support, resources and partnership’ (GTFCC, 2021b). The strategy aims ‘to achieve 90% reduction in cholera deaths’ and to stop transmission of cholera in up to 20 countries by 2030 (GTFCC, 2021b). Following this in 2018 ‘WHO member states passed a resolution at the 71<sup>st</sup> World Health Assembly committing to the Global Roadmap. That same year, at the WHO Regional Committee for Africa, 47 African countries adopted a regional framework in alignment with the Roadmap’ (GTFCC, 2021a, see WHA, 2018a).

Moving from diarrhoeal disease specific solutions to discuss those listed which target child health (but thereby incorporate diarrhoeal diseases) are also relevant developments in the policy stream. For example, in 2012 the governments of Ethiopia, India and the US in collaboration with UNICEF convened the Child Survival Call to Action (UNICEF, 2012: 5). ‘This high-level forum brought together over 700 representatives from government, civil society and the private sector to rejuvenate the global child survival movement’ (UNICEF, 2015, 5). This resulted in ‘178 governments – as well as hundreds of civil society, private sector and faith-based organizations – sign[ing] a pledge vowing to do everything possible to stop women and children from dying of causes that are easily avoidable’ (UNICEF, 2015: 5). Much of the focus was on maintaining momentum to try and achieve the then upcoming deadline for the MDGs and toward the future SDGs (UNICEF, 2015). It demonstrates an incidence of global commitment to the child survival cause and its continued presence in the policy arena. More recently, in 2018 all member states of the WHO endorsed the Declaration of Astana (WHO, 2018c). Forty years on from Alma Ata, the new Declaration aims to refocus efforts on PHC, recognizing that it is ‘the most inclusive, effective and efficient approach to enhance people’s physical and mental health, as well as social well-being, and that PHC is a cornerstone of a sustainable health system for universal health coverage (UHC) and health-related Sustainable Development Goals’ (WHO/UNICEF, 2018b: section II; see also WHO, 2018a). The aim of the new Declaration was to ‘renew political commitment from member states and global organisations to developing people-centred primary health care, building on the principles of the Alma-Ata Declaration’ (The Lancet, 2018: 1369). Additional recent commitments to child health came in 2019 as ‘world leaders adopted a high-level United Nations Political Declaration on universal health coverage (UHC), the most comprehensive

set of health commitments ever adopted at this level' (WHO, 2019b). 'In adopting the declaration, U.N. Member States have committed to advance towards UHC by investing in four major areas around primary health care' (WHO, 2019b). In May 2019 at the 72<sup>nd</sup> World Health Assembly, 'the [water, sanitation and hygiene] in health care facilities resolution was unanimously approved' (UN Water, 2019), evidencing a recognition amongst member states of the challenge of achieving the WASH goals set out in the SDGs by the 2030 deadline (see WHA, 2019).

Activity evidenced in this policy stream shines a spotlight on a few key points: firstly, the obvious, that diarrhoeal diseases are a multidimensional issue, but also that attention to aspects of the solution have been divergent in emphasis. Rotavirus vaccines have cultivated a stronger position in the policy arena than some of the other interventions for diarrhoeal diseases with significant developments in terms of new vaccines, prequalification by the WHO, and accruing attention and resources from some key actors in global health – notably the Gates Foundation. Randall (2020) raised the point that '...it is very helpful that donors have this concrete solution in vaccines' also highlighting the key point that WASH faces operational and implementation research challenges that are 'difficult for donors'; and that 'actually getting those programmes off the ground [water and sanitation programmes] is just more complicated and difficult than vaccines, so I think the vaccine in terms of the awareness and the rallying have been a helpful lynchpin'.

Relatedly, a similar perspective was echoed by Merson (2020) regarding WASH having had its 'moments of fame and [its] moments of disappointment' noting that this was 'not surprising'. He also noted the ongoing issue with malnutrition in terms of it not getting the necessary attention or strategies, despite being a 'major risk' for mortality (Merson, 2020). Indeed, lack of focus on nutrition related challenges is concerning given their relationship with the ongoing mortality and morbidity burden attributable to diarrhoeal diseases (see also WHO, 2017a; Persson, 2005; Troeger et al., 2018; Wierzba and Muhib, 2018). (n.b. back in 1990 Henderson (1990: S58) noted: 'Nutritional research in the developing countries is almost non-existent').

These sentiments echo developments in this stream because whilst we see strategies/guidelines/roadmaps for addressing diarrhoeal diseases/WASH emerging intermittently - particularly throughout the second decade of the 2000s - rotavirus development and implementation has arguably had the most impact and clear commitments from donors with regards to tackling diarrhoeal diseases. However, whilst vaccine developments have had a greater success in terms of seeing material advances, there is

consensus developed over this period around the benefit of an integrated/comprehensive approach. The strategies presented by the WHO and UNICEF demonstrate research and production of solutions into best practice in that regard whether through the 7-point plan and then more recently in the GAPPD. Their approaches highlight the necessity of both *prevention* and *treatment* interventions and offer countries strategies for best practice. However, despite this relative harmony around solutions, their implementation remains below target - Satheesh and Unnikrishnan (2022: 1) write: '[oral rehydration therapy] remains an unsung public health hero, underutilised to this day'. Weins et al. (2020: e1039) in a study looking at 'geographical inequalities in oral rehydration therapy coverage in low-income and middle-income countries, 2000-2017' demonstrate that: 'Despite progress, coverage of ORS (ie, the proportion of children with diarrhoea who received ORS) remained below 50% in many locations where diarrhoea prevalence and mortality rates remain high'. They also note that 'within-country inequalities in ORS coverage persist in many LMICs' and that '[o]ur results illustrate that scaling up of ORS coverage has been insufficient, and that new efforts to improve access are desperately needed' (Weins et al., 2020: e1049). Such work crucially reminding us that the development of policy frameworks unfortunately does not guarantee political/national will and resources which are necessary for implementation, underscoring the need for continued attention to such challenges.

Interestingly though, what these developments do appear to indicate, particularly throughout the second decade of the 2000s, is an increased interest from the global health community towards addressing some of the underlying determinants of diarrhoeal diseases. From 2012's Child Survival Call to Action, to the emphasis on integration espoused in the GAPPD, the Declaration at Astana renewing focus on PHC, and recent commitments to UHC and WASH, a shift in the global health climate might be emerging whereby more attention is being paid by the global health community to underlying determinants of good health and an appetite for more horizontal approaches. Indeed, Kraef and Kallestrup (2019: 2) discussing the Astana Declaration of 2018 suggest that:

[i]n parts it is based on the reoccurring realisation that the pendulum had swung too far towards a focus on individual diseases and vertical programme, resulting in siloed approaches. Thus, the three pillars of PHC endorsed in the Astana declaration are community empowerment, multisectoral policies and actions, and integrated delivery of quality primary care and public services.

To summarise, there has been activity for diarrhoeal diseases within the 'policy stream', generally not as a standalone issue, but aspects of the issue have variously seen attention. However, for a truer understanding of what this activity means, one needs to appreciate the multidimensional nature of the challenge and why certain interventions for the issue have

found less traction than others. Looking to the political stream and policy entrepreneurs (or lack thereof) helps shed some further light in this regard. Additionally, assessing the progress for diarrhoeal diseases in conjunction with the subsequent case study on poliomyelitis conveys a useful comparative angle as to how these developments compare to those occurring for an alternative health issue.

### 3.6 The political stream

[T]he decision maker must either see the problem as a felt need, as a politically attractive issue, or be willing to make it one. (Rohde, 1982: 18)

In an area as broad and convoluted as *global health*, identifying specific causative political dynamics can be challenging to say the least. Thus, to better understand how the political arm of global health has affected diarrhoeal diseases' status, it makes sense to take an approach which analyses the wider climate in global health and evaluate how these undercurrents may have affected the issue.

The turn of the century correlates broadly with a significant shift in the political climate of global health. Much as Alma Ata had represented a shift to focus on PHC and an awareness of the social determinants of health in a way that had not been achieved previously, the year 2000 saw, in many ways, what can be described as a move toward a more security-oriented climate in this arena reflecting both the impacts of accelerated globalization processes on the global health environment combined with the potent threat of infectious diseases<sup>54</sup>. The emergence of HIV/AIDS as a health emergency should not be underestimated in terms of its impact and reverberations on this environment. Merson (2020) pointed to the early nineties as a time when the focus on child survival as a global health priority was changing as 'AIDS took over', whilst HIV had been around for a while at this point, 'deaths really started to occur in the 90s' (noting the incubation period between infections and deaths) and that 'the 1990s [...] was a period dominated by AIDS funding'.

Merson (2020) explained that the CDD programme, for example, was shut down and integrated into the broader child health agenda. He highlighted lack of money as one of the reasons for this, but also that there was an operational/delivery reason - 'the healthcare worker who saw diarrhoeal disease also saw pneumonia, I mean it wasn't different - or gave immunizations, so there was an operational reason' (Merson, 2020). However, he also explained that 'the problem was it [the integration] took the big focus off these diseases', and

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<sup>54</sup> For clarity here 'the threat of infectious diseases' refers to those with epidemic, or pandemic potential.

noted a tendency in development for ‘you know every seven years, every ten years, what’s the new flavour... and so diarrhoea has suffered from that’ (Merson, 2020).

The G8 summit at Okinawa in July 2000 provides a sensible point of contrast to Alma-Ata over 20 years prior (see also Thomas and Weber, 2004). The inclusion of global health on the agenda was a welcome step for efforts in this field. However, the outcomes of this attention were chiefly centred around reducing the burden from HIV/AIDS, TB, and malaria by:

working in strengthened partnerships with governments, the World Health Organisation (WHO) and other international organisations, industry (notably pharmaceutical companies), academic institutions, NGOs and other relevant actors in civil society to deliver three critical UN targets:

- Reduce the number of HIV/AIDS-infected young people by 25% (UN Secretary-General Report to the General Assembly on 27/3/2000);
- Reduce TB deaths and prevalence of the disease by 50% by 2010 (WHO Stop TB initiative);
- Reduce the burden of disease associated with malaria by 50% by 2010 (WHO Roll Back Malaria). (G8 Communiqué Okinawa, 2000: 6)

Ultimately, this led to the creation of the Global Fund to Fight Aids, TB, and Malaria (Kurokawa et al., 2009: 526). As Thomas and Weber (2004: 187) note, the declarations made at Okinawa in 2000 mark a departure from those made at Alma Ata in 1978 in terms of very different trends in global health governance. Reflecting on the state of global health in the early 2000s, Thomas and Weber (2004: 192) summed up this shift:

When considering the current global health situation, it is not only obvious that health for all was not achieved by the year 2000, but also that the prospects for significant progress have not improved. At the international level, health goals have been revised and are defined much more narrowly now around specific diseases and specific goals of quantifiable scope, precluding any comprehensive engagement with the issues of universal human rights and socioeconomic transformation, which had previously been identified as crucial to integrated approaches.

Similar indications of political influence and focus in global health in the early 2000s can be seen in the unprecedented US President’s Emergency Plan for AIDS Relief (PEPFAR) initiative instigated in 2003. This plan has become ‘the largest commitment by any nation to address a single disease in the world; to date its funding has totaled more than \$110 billion’ (KFF, 2022). Additionally, by 2000 HIV/AIDS was being aligned with the security agenda as the Security Council Resolution 1308 deemed it a potential ‘risk to stability and security’ (see UN Security Council Resolution 1308, 2000). Suffice to say the pandemic of HIV/AIDS was a major focusing event in global health in and of itself (and quite rightly so), but the declaration from the Security Council neatly accentuates the political climate within which diarrhoeal diseases found themselves from the early 2000s onwards – as a health issue

without the specific characteristics to be positioned as a threat to international security, thus inadvertently ‘competing’ with those conditions which could. Much has been written about HIV/AIDS, and its focusing power (e.g., Shiffman, 2006); however, it was not only HIV/AIDS as a focusing event through this period which arguably distracted focus from ongoing challenges like diarrhoeal diseases. Additionally, what might in fact be better termed (de)focusing events (for diarrhoeal diseases) came again with the outbreak of SARS (Severe Acute Respiratory Syndrome). In February 2003 SARS was reported in Asia, then quickly spread further afield to North America, South America, and Europe before it was contained (CDC, 2004). Its unknown nature and rapid mode of transmission preyed on global anxieties surrounding infectious diseases and instigated a global response. Whilst not on the scale of HIV/AIDS in terms of its global impact<sup>55</sup>, SARS added to the climate of uncertainty surrounding unknown infectious diseases and their potential to damage livelihoods and economies, further feeding the push in global health for health issues deemed security concerns to be the health concerns top of the political agenda (Moon, 2018, see also Davies et al., 2015). The economic losses attributable to SARS (see Heymann and Rodier, 2004), likely acted as further fuel to such anxieties. Packard (2016: 273) cited a TIME magazine article of the outbreak of SARS in 2003 which neatly sums up these feelings:

“It is becoming clear that what is taking place in Asia threatens the entire world. Epidemiologists have long worried about a highly contagious, fatal disease that could spread quickly around the globe, and SARS might end up confirming their worst fears. Microbes can go wherever jet airliners do these days, so it is a very real possibility that the disease has not yet shown its full fury”.

Relatedly, Kirton and Mannell (2007: 128) noted that: ‘The shock of SARS thus drove home a further recognition of the reality: the vulnerability of the global health system itself in an age when national defence at the border by sovereign territorial Westphalian powers was virtually irrelevant’.

Also, of relevance are both the speed at which diseases could spread, but also the near-instantaneous speed at which information about such occurrences could now traverse the globe, heightening the fear around these kinds of diseases (Packard, 2016: 273-274).

Recent outbreak events such as the H1N1 ‘swine flu’ influenza pandemic (2009), the Ebola epidemic in West Africa<sup>56</sup> (2013 through 2016 with over 28,000 cases and over 11,000 deaths

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<sup>55</sup> SARS - 8098 people in 29 countries were identified as contracting SARS, and there were 774 deaths (CDC, 2004).

<sup>56</sup> This Ebola outbreak was ‘the largest [...] since the virus was first discovered in 1976. This was the seventh outbreak of Ebola Virus Disease since its discovery. There were more cases and deaths in this outbreak than all others combined’ (WHO, b, n.d.).

(CDC, 2019a)), the Zika epidemic (2015-2016), the Kivu Ebola epidemic (2018-2020) and of course the COVID-19 pandemic, can be seen as some further examples of infectious diseases<sup>57</sup> which fit similar (although not identical) criteria, all of these five ultimately being declared Public Health Emergencies of International Concern (PHEICs)<sup>58</sup> by the WHO (see also Wilder-Smith and Osman, 2020). Whilst these health issues merit attention and resources (and this thesis does not automatically equate health issues which have achieved a higher profile as evidence that responses and funding for them are therefore adequate and fit for purpose) they provide evidence of the types of health issues which have emerged as the higher priority in terms of global health funding and focus - those which had the ability to be deemed a threat to the economic and national security interests of HICs, had the potential for high mortality and the ability to spread across borders (see McInnes, 2016 for example of how Ebola *did* resonate with similar concerns).

Such anxieties were also reflected in expanding focus on pandemic influenza through the first decade of the millennium – as outlined by Kamradt-Scott and McInnes (2012: S95):

Pandemic influenza has long been recognised as a threat to human health. Despite this, for much of the twentieth century it was not recognised as a security threat. In the decade surrounding the new millennium, however, the disease was successfully securitised with profound implications for public policy.

Kamradt-Scott (2020: 535) points to the 1997 H5N1 outbreak as ‘prov[ing] a timely wake-up call about the threat of pandemic influenza’ and that ‘[t]he ‘securitisation’ of pandemic influenza commenced in earnest following the 1997 H5N1 outbreak in Hong Kong, eventually culminating in the WHO officially declaring pandemic influenza to be the ‘most feared security threat’ just ten years later (Kamradt-Scott and McInnes, 2012)’ (Kamradt-Scott, 2020: 543).

A related but slightly divergent development in this space which further fuelled anxieties surrounding the potential spread of infectious disease came with threats of bioterrorism. Indeed, looking specifically at the (then) G8 and global health governance, Kirton and Mannell (2007: 115) describe the G8’s ‘new attention and institutions to combat bioterrorism following the shock [of] the September 11 and subsequent American anthrax attacks’. Additionally, they explain that ‘following the 2003 Iraq war’s focus on weapons inspections

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<sup>57</sup> Those with epidemic, or pandemic potential.

<sup>58</sup> WHO (2019d) provides a definition for a PHEIC as follows: ‘A PHEIC is defined in the IHR (2005) as, “an extraordinary event which is determined, to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response”. This definition implies a situation that is: serious, unusual or unexpected; carries implications for public health beyond the affected State’s national border; and may require immediate international action’.

and terrorism, bioweapons once again [<sup>59</sup>] became a major component of the health-related agenda' (Kirton and Mannell, 2007: 121).

Scholars have long discussed the push-pull situation between vertical and horizontal approaches/leanings in global health and their relative merits (for some (amongst myriad) examples: Msuya, (2004); De Maeseneer et al. (2008); Ooms et al. (2008)). Throughout the past several decades the weight has, for the most part, been with vertical approaches. HIV/AIDS is the clearest example of this, and whilst the development of effective treatments for HIV/AIDS and the emergence (awareness) of other global health threats (antimicrobial resistance; non-communicable diseases; Zika, Ebola, SARS and so on) and the development of anti-retrovirals have perhaps contributed to a levelling of funding toward HIV, the issue has sustained prominence in global health for the best part of two decades. Whilst these health issue examples demonstrate the primacy of vertical approaches to global health challenges, they also demonstrate the development of health issues being increasingly aligned with a security<sup>60</sup> rubric. This environment is not one which is conducive to health issues such as diarrhoeal diseases (and other examples abound – e.g., childhood pneumonia) emerging as a specific priority within this arena. That is, diarrhoeal diseases, as known conditions, with existing prevention and treatment methods, lack the ability to 'shock the system'.

It should however be noted that whilst vertical approaches have usually found more traction and practical support than horizontal initiatives, there have been periods where a recommitment to more system wide approaches has been evident. Sridhar (2010: 464) notes that '[s]ince the Declaration of Alma-Ata, attention to health systems has waxed and waned', pointing out that whilst (around 2010 when she was writing) there was a shift in the global health community back to horizontal interventions, 'there are pragmatic difficulties with realizing the rhetoric and financing horizontal interventions'. This a key point to keep in mind as various solutions and declarations regarding global health will champion commitment to more horizontal approaches, but it is less than straightforward to measure and realize such targets, particularly when they are more challenging to garner donor support for than specific, measurable solutions.

Relatedly, another frequently highlighted dynamic (particularly through the first decade of the millennium) was the unprecedented increase in funding toward global health alongside the

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<sup>59</sup> They also explained there was an 'emphasis on bioweapons' in the early 1990s within the G8— 'The threat of disease outbreaks from bioterrorism was highlighted as a result of the war with Iraq and concerns over Iraq's biological weapons programme. Another driver was the review of the Biological Weapons Convention in September 1991' (Kirton and Mannell, 2007: 120).

<sup>60</sup> Security here referring to national security.



emergence of myriad new actors in the arena - with aims to contribute to the improvement of global health in some capacity. The IHME (2016: 11) explains:

Corresponding with the launch of the Millennium Development Goals, a “golden age” of global health prevailed from 2000 to 2010. DAH [Development assistance for health] grew 11.4% annually during this time. Not only did every major global health partner expand, a number of new entities and initiatives were created.

It is also important to consider the fluctuating dynamics in influential actors and institutional arrangements in health over this period as a key contributor to changing political environment in global health. In this regard, one dynamic particularly stands out and that is:

The traditional actors on the global health stage—most notably national health ministries and the World Health Organization (WHO)—are now being joined (and sometimes challenged) by an ever-greater variety of civil society and nongovernmental organizations, private firms, and private philanthropists. (Szlezák et al., 2010: 1)

Whilst this growth in actors in the field has been occurring for a long time, it is evident that there was considerable proliferation of activity in this regard through the first decade of the new millennium which continued apace. Looking back now we can see that some of the leading actors in global health today, emerged in the early 2000s – the Gates Foundation in 2000, GAVI, the Vaccine Alliance, GFATM and PEPFAR amongst others. Sridhar (2010: 461) draws out 5 groups in the ‘patchwork of donors, UN agencies, governments, civil society organizations and the private sector’ that make up the global health system, summarised from her article as follows:

- 1) *multilateral institutions*, citing examples such as the WHO, UNICEF, UNDP, World Bank;
- 2) *national aid agencies* (bilaterals) such as UKDFID [which has more recently merged with the foreign office] and the USAID;
- 3) *non-governmental organizations and networks* citing examples such as the People’s Health Movement and Oxfam, stating that ‘[t]his kind of governance has been grouped under the broad category of civil society organizations’;
- 4) *private foundations* e.g., the Rockefeller and Gates Foundations; and
- 5) the *private sector* engaging ‘through public-private partnerships e.g. Medicines for Malaria, Stop TB Alliance and the Global Fund to Fight Aids, Tuberculosis and Malaria’ (Sridhar, 2010: 461; see also McInnes and Lee, 2012a: 123).

Rightly deeming today’s global health landscape ‘far too complicated’ Spicer et al. (2020: 1) lay out its increased complexity and point to ‘five distinct yet interconnected sets of factors causing fragmentation: proliferation of global health actors; problems of global leadership; divergent interests; problems of accountability; [and] problems of power relations’.

Furthermore, as drawn out in Chapter 2, McInnes et al. (2012: S84) highlighted the role of the

ideational in this arena, exploring how ‘responses to global health crises are shaped by a contested space of competing ideas and worldviews of health’. They explain that health issues have been framed in varied ways ‘(as a biomedical, human rights, security or economic issue), in an attempt to generate or legitimise specific pathways of response’ (McInnes et al., 2012: S85). They identified ‘that the presence of these different frames contributes to a confused institutional landscape and policy space where contradictions and competition are rife’ (McInnes and Lee, 2012b: S197). In this sense it might be fair to infer that diarrhoeal diseases struggle to find purchase and place in a divided environment.

Spicer et al. (2020: 4) point to the emergence of many global health partnerships and initiatives through the 1990s and early 2000s – citing the Global Fund, GAVI and PEPFAR as some of the best known. Another key point highlighted is that: ‘A Lancet article published in 2009 listed no fewer than one hundred global health initiatives, almost all were vertical in that they focussed on specific health issues’ (Spicer et al., 2020: 4). A point of note here, in relation to actors, is not just to be aware of the increased actors in the arena, but to be aware of the new *types* of actors. Ollila (2005: para. 1) highlighted: ‘The major actors in global health policy are changing. New actors are entering and old ones are losing power; the overall change has seen a shift from global nation-based health-policy making structures towards more diversity that puts emphasis on private sector actors’, and also points to the different forums in which global health was being discussed in the early 2000s:

In 2000 and 2001, HIV/AIDS, tuberculosis and malaria came to be discussed in a variety of forums at the UN as well as outside the UN, and commitments to address the three diseases were made, for example, by the G8, the World Bank, the World Economic Forum and the European Commission. (Ollila, 2005: para. 6)

What these patterns also demonstrate is a shift toward disease specific interventions and political priority accorded toward infectious diseases – notably ‘the big three’ of HIV/AIDS, TB and malaria which were the focus of the global fund. Further Packard (2016: 267) points to the growing influence of the new actors in global health around this time. For example, discussing a 2007 meeting on malaria, held in Seattle, and attended by ‘African ministers of health, representatives of major nongovernmental organizations, and the heads of private foundations, UNICEF, WHO, and the World Bank’ he explains:

The location of the Malaria Forum in Seattle symbolized not only the growing influence of the Gates Foundation in international health, but, more broadly, to a shift in the nexus of international-health leadership, away from WHO and toward a new group of powerful institutional actors, including the Gates Foundation, the World Bank, and the newly formed Global Fund to Fight AIDS, Tuberculosis and Malaria. (Packard, 2016: 267)

He goes on to outline that:

The absence [in Seattle] of any such discussion [on the broader structural determinants of health] was also characteristic of global health more broadly in the first decade of the twenty-first century. The need to address the structural determinants of health, so prominent at the Alma-Ata conference, remained part of the *discourse* of global health. But it received very little serious attention or funding. (Packard, 2016: 269-270)

Summing up this stream into the main elements covered helps to illuminate the situation.

*Infectious disease outbreaks (de-focusing events)* contributed to a sharp shift in global health focus from one which was more aligned with PHC, structural determinants of health (and crucially for this topic, more aligned with the interventions required to alleviate diarrhoeal diseases) to an approach which increasingly reverted to more vertical interventions and points of focus, centred around several highly prominent health issues (notably HIV/AIDS, TB, and malaria). The emergence of HIV/AIDS as an acute global health crisis spurred *alignment of health with the security rubric/foreign policy concerns*, additional infectious disease outbreaks and their portrayal as security concerns contributed to this also (see also Elbe, 2010). This dynamic established the primacy of a health security framework in this arena. *The proliferation & increased variety of global health actors* spurred by outbreaks such as HIV/AIDS has led to an increasingly opaque arena with an explosion of varied actors all often understood as working toward global health goals, but amongst whom coordination and disaggregation of effort has become increasingly challenging to identify - an ever more overcrowded and disorganised field. Related to this have been *shifts in power and influence* from an international health arena in which actors such the WHO and various UN agencies were front and centre in terms of influence, to a global health arena where the emergence of new actors/organizations/initiatives have seen the expansion of influence from such traditional actors in global health to include a wider pool of key players (see also Ruger and Yach, 2009). In some ways reflective of weaknesses in the WHO, the first decade of the 2000s 'saw the establishment of multi-sectoral (public-private) operative partnerships and a shift from a system-focused toward a problem-focused approach to health challenges emphasizing demand driven funding (Buse and Walt, 2000a, b; Buse 2004; West et al. 2017)' (Lisk & Šehović, 2020: 51). *The power of vertical foci* is an element in this stream which ties in with the other shifts, where Alma Ata and PHC in many regards represented a move away from disease-specific dynamics, and the siloed approaches to health challenges, the early twenty-first century swivelled back toward them as actors in this arena sought to address single, high profile health issues which burst onto the scene threatening and disrupting both health and economies. *Fragmentation* then describes both the state of the field as an increasingly uncoordinated arena and in many ways also describes how the state of the field has affected diarrhoeal diseases. All these factors have helped create and entrench an

increasingly politicized global health arena and crucially a progressively fragmented global health arena, in which diarrhoeal diseases arguably struggle to find their place, this is reflected in the piecemeal developments in the policy stream.

Looking to the dynamics in this final stream also helps to illuminate why certain diarrhoeal diseases interventions have found more traction than others. The most notable and commendable area of progress for diarrhoeal diseases throughout this period seems to have been in the area of vaccines. In the sense that targeted approaches for health issues have found more purchase in this environment, this is not entirely surprising. Whilst diarrhoeal diseases have evidently not been front and centre in global health for the last twenty years, there have been periods within that time frame when the political climate perhaps leant itself more to their cause and developments which have been of benefit to the continued reduction of their burden. The significant increases in funding for global health certainly for the first decade of the new millennium were a positive development for generating greater general interest in global health efforts broadly. Esser (2009: 225) describes the attention to health through early 2000s: 'The past decade will likely come to viewed in the history of international affairs as a period characterized by unprecedented activism for global health by national governments, multilateral agencies, corporations, nongovernmental organizations (NGOs), and private foundations'. Political commitments to the MDGs and the SDGs have both incorporated global goals which espouse targets touching on aspects of the solutions to diarrhoeal diseases e.g., WASH, under five mortality reductions, commitments to good health and wellbeing and UHC. Whilst progress against these targets has not always matched the rhetoric, the consistent background commitment to such global goals has arguably helped keep some level of attention on aspects of diarrhoeal diseases, although in a more splintered and subdued way than was previously the case. More recent global commitments to PHC, UHC and WASH through the Declaration of Astana, the UN Political Declaration on UHC and resolutions signed on WASH respectively, are indicative of what seemed to be a recent growing shift in the political climate of global health to one steadily more aligned with addressing underlying determinants of good health, health systems strengthening and in short, an environment which would ostensibly be more resonant with many of the interventions necessary for addressing diarrhoeal diseases. In sum, underlying the dominant political dynamics and influences which have not overtly aligned with diarrhoeal diseases' cause over the past two decades, there remains an undercurrent in this stream more commensurate with the wider interventions required for addressing them.

### 3.7 Policy entrepreneurs

An item's chances for moving up on an agenda are enhanced considerably by the presence of a skillful entrepreneur, and dampened considerably if no entrepreneur takes on the cause, pushes it, and makes the critical couplings when policy windows open. (Kingdon, 2003: 205)

Regarding policy entrepreneurs, Kingdon (2003: 204) posits that '[t]hese entrepreneurs are found at many locations; they might be elected officials, career civil servants, lobbyists, academics, or journalists. No one type of participant dominates the pool of entrepreneurs'. However, it is less than straightforward to identify specific individuals whose advocacy has driven efforts to address diarrhoeal diseases 2000 through 2020 in the way that Grant's advocacy with UNICEF was so prominent and powerful some 40 years ago encouraging a focus on ORT, or Mahler's drive to advance PHC in his time at the WHO. Indeed, this is arguably the key component missing in terms of diarrhoeal diseases' ability to ascend to a priority position over the last twenty years – a lack of specific advocates and obvious leadership around the issue *as a whole*. As noted in Chapter 2, some scholars working on agenda setting in global health have emphasized the role of networks<sup>61</sup> around health issues as being a vital component of issues gaining ground in terms of prioritization. In this regard, organisations and initiatives directed toward the cause of diarrhoeal diseases demonstrate incidences of institutional if not individual advocacy. For example, the Gates Foundation, now one of the leading players in global health, has labelled diarrhoeal diseases as one of its areas of focus. Whilst this may not have yet brought the equivalent limelight to the issue as UNICEF's focus on diarrhoeal diseases did in the 1980s, it is certainly an encouraging development for their cause, with the foundation having become one of the leading voices in global health. Indeed, Gates recalls an article on diarrhoeal diseases 'inspired us to get involved in global health' (Gates, 2013). The Foundation's predominant focus when it comes to addressing diarrhoeal diseases has been on vaccines. As outlined on their webpage regarding 'Enteric and Diarrheal Diseases', they write: 'We focus on advancing the development and delivery of safe, affordable, and effective vaccines for the leading causes of enteric and diarrheal diseases in low-and lower-middle-income countries' (gatesfoundation.org, a, n.d.).

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<sup>61</sup> As a reminder, global health networks described by Shiffman et al. (2016a: i3) as 'webs of individuals and organizations linked by a shared concern for a health condition—now exist for most high-burden health problems that low- and middle- income countries face. However, scholars have paid them scant attention, so we know little about their origins and the influence they have in global health'. They also explain that: '[t]hese networks vary in their capacities to attract attention, generate funding, develop interventions and convince national governments to adopt policies and carry out programmes. This variance may explain why mortality and morbidity have declined more rapidly for some conditions than others' (Shiffman et al., 2016a: i4).

Investigating a breakdown of funding flows for the Gates Foundation available through the IHME, confirms their commitment to these areas, especially vaccines within the broader area of child health (see IHME (2023c) where it was possible to explore the flows of DAH from the Gates Foundation over the years, through various channels and toward different health challenges). In addition to funding vaccine developments in this area, the foundation has supported a study which explored which diarrhoeal disease pathogens cause the most deaths (Gates, 2013). The aforementioned development of rotavirus vaccines and their subsequent introduction in many countries is cause for celebration, but mixed levels of coverage and access remain cause for concern, demonstrating the ongoing challenge of implementation (see IVAC, a, n.d., IVAC, b, n.d., and IVAC, c, n.d.). Additionally, the challenge with being one of many areas of focus even in a major organization, is again, ‘competing’ for focus with other health issues. They also support the goals of the GAPPD outlined in section 3.5 (gatesfoundation.org, a, n.d.). WASH is listed as one of their program strategies with a particular emphasis on technological developments in the area: ‘[a]ccelerating the development of safe, non-sewered sanitation systems and technologies is our top priority within the [WASH] continuum because it is where we believe we can catalyze the biggest change by making investments other partners are unlikely to make’ (gatesfoundation.org, b (n.d.)).

Regarding the WHO, diarrhoeal diseases are evidently a health issue on their radar, and it has been possible to find frameworks that they have developed to tackle the issue in recent years (e.g., 2013 – GAPPD) as well as other important developments relating to vaccine prequalification and treatment recommendations. However, with the dilution of the CDD (as comprehensively outlined by Wolfheim et al. (2019)) and as a technical and advisory organization with a self-described focus on improving ‘world’ health, the WHO has a vast remit and limited influence (see Gostin et al., 2015; Reddy et al., 2018). UNICEF has recognised the challenge of targeting diarrhoeal diseases (GAPPD), and lists goals including strengthening PHC, nutrition in early childhood, early detection/treatment of malnutrition and access to WASH in its latest strategic plan (UNICEF, 2022a), but advocacy for the challenge commensurate with that seen historically is hard to identify. PATH has developed an advocacy initiative called ‘DefeatDD’ a ‘a convener of diverse stakeholders who work to raise awareness about the burden of diarrheal disease and the power of simple, cost-effective, and proven treatment and solutions’ (DefeatDD, 2020b). This fills an important (and otherwise lacking) space in the global ‘toolkit’ toward eliminating child deaths from diarrhoeal diseases, representing an advocacy initiative specifically focused on diarrhoeal

diseases. Like many NGOs, Save the Children has range of focus areas, but the inclusion of Save the Children here is to recognise their Stop Diarrhoea Initiative (SDI): ‘a four-year programme, funded by Rickett Benckiser (RB) in partnership with the government of India, [which] target[ed] a reduction in cases of diarrhoea in four states in India, Delhi, Uttar Pradesh, Uttarakhand and Kolkata’ (Farrow, 2019). The initiative sought ‘to understand the challenges in implementing a prevention and treatment package developed by WHO, the 7 Point Plan for Diarrhoea’ - since developed further into the GAPPD, which as discussed addresses pneumonia and diarrhoea together (Save the Children (2019)). Finally, WaterAid provides a slight anomaly as an example of an NGO focused entirely on WASH. In short, these examples all emphasize that the work continues for diarrhoeal diseases, even though it has less streamlined focus, coordination, and *global* attention than it has in the past and has morphed into integration with wider child health efforts, in which it is often a challenge to distinguish as a specific issue.

The following chapter will outline some particularly effective widespread advocacy for polio during this same period. This will help with coming to a better understanding as to why diarrhoeal diseases’ lack of robust advocacy through these decades has perhaps been somewhat disadvantageous to its position. This is not to say that advocacy alone is the solution to prioritization – as we have outlined there are numerous elements that have been missing for this cause in recent years, but it is an important aspect. Indeed, as Kingdon (2003: 182) puts it: ‘[w]ithout the presence of an entrepreneur, the linking of the streams may not take place. Good ideas lie fallow for lack of an advocate. Problems are unsolved for lack of a solution. Political events are not capitalized for lack of inventive and developed proposals’.

The challenge to identify especially powerful advocates for diarrhoeal diseases as a standalone issue through this period speaks to their more muted status on the global health agenda. It might be fair to say that they have morphed into something of a constant background challenge to be dealt with but have in recent years been unable to make their way sustainably to the forefront of the agenda, by virtue of their specific disease characteristics, in addition to noticeable shifts in the discourse and focus of wider global health efforts and the nature of ‘competing’ health challenges. Such dynamics have been further entrenched by the disintegration of the CDD programme. In some ways this not entirely a negative position (given the boundaries of the prevailing global health structures they exist within). There is awareness of the problem (certainly in development circles) and organisations working toward eliminating the burden posed by diarrhoeal diseases. Additionally, many of the more recent (up until COVID-19) shifts in discourse in global health can be seen as having the

potential to benefit this issue e.g., SDG goals focused on working toward UHC and goals for WASH, in addition to an increasing emphasis on the very real threat of climate change in terms of its potential to exacerbate the impact of diarrhoeal diseases. These are all areas that might provide policy windows (or at least more amenable environments) for diarrhoeal diseases advocates to increase the visibility of the issue going forward and encourage more effective intervention implementation and sustainability. However, this is by no means a foregone conclusion. History has shown us repeatedly that long-term global health endeavours can rapidly be disrupted by sudden events such as epidemics. Evidently such incidents are hugely concerning and in need of a very specific type of response, but the risk for issues such as diarrhoeal diseases, but many others also, is the sudden redirection of already limited attention, resources and funding which is detrimental to efforts to prevent them.

The political climate over the last twenty years with regards global health endeavours has chiefly not lent itself to the issue's cause and the lack of powerful leadership and *widespread* resonant advocacy in this area has perhaps inhibited their progress as a single issue, despite notable progress on certain aspects of the issue such as vaccine development for rotavirus in particular. However, it is also worth raising the point that framing/cultivating attention as a single issue might not be the answer for diarrhoeal diseases, as health challenges go, they are inherently multifaceted; however, generating sufficient attention for all the necessary interventions so that the issue is addressed comprehensively will be a challenge. As discussed McInnes et al. (2012: S83) focused on the different ways in which health issues are framed and the ways this impacts on global health governance - 'Whilst not denying the importance of material factors [they identified] how issues can be framed in different ways, thereby creating particular pathways of response which in turn affect the potential and nature of [global health governance]'. McInnes and Lee (2012b: S191) argue '*both* that the world of ideas matters by shaping the way we see, accept and understand health issues; *and* that the ideational and material interact with each other (that they are mutually constitutive)'. Relatedly, material realities such as disease burden may not be enough to increase the profile of diarrhoeal diseases, but given their many dimensions in terms of necessary response, ascertaining under what rubric they might be effectively 'framed' may also be a challenge (see Bump et al. (2013) for some potential reframing strategies in this regard).

An optimistic view might be to look at the effects of COVID-19 and hope that a much-needed silver lining to this global crisis would be a subsequent 'paradigm shift' to a concerted focus on improving global health infrastructure and basic healthcare and resilience which would



have knock-on benefits for diarrhoeal diseases and other neglected health issues as well as renewed focus on global health more broadly after several years of levelling off and decreased funding. A pessimistic one might see the crisis as further embedding attention in global health elsewhere and diverting valuable attention and resources in an increasingly verticalized manner. As Holst (2020: 1) notes:

Beyond resilience and epidemiological preparedness for preventing cross-border disease threats, Global Health must focus on the social, economic and political determinants of health. Biomedical and technocratic reductionism might be justified in times of acute health crises but entails the risk of selective access to health care.

The longer-term effects of this global pandemic on ongoing health challenges remains to be seen. Whilst much progress has been made and should certainly be recognised, the decelerated and increasingly splintered progress for diarrhoeal diseases is indicative of shifts in global health more broadly and needs to be addressed if global goals like the SDGs and those outlined in the GAPPD are to be met.

### **3.8 Policy windows**

In looking at policy windows for diarrhoeal diseases over this period, it is sometimes a case of identifying where opportunities may have been missed as much as they were utilized. The two most obvious over the 2000-2020 period being the MDGs and the SDGs—the latter a part of the UN Agenda 2030. The MDGs target of reducing child mortality by two-thirds by 2015 presented an opportunity for focus on diarrhoea as a key contributor to that burden, and whilst significant progress was made toward this goal with a global reduction in under-five mortality by more than half between 1990 and 2015 (UN, 2015: 5), it was not achieved globally. As noted in the 2015 MDG Report:

Although significant achievements have been made on many MDG targets worldwide, progress has been uneven across regions and countries, leaving significant gaps. Millions of people are being left behind, especially the poorest and those disadvantaged because of their sex, age, disability, ethnicity or geographic location. (UN, 2015: 8)

The SDGs provide evidence of a similar window with goals that target ‘health for all’ and ‘clean water and sanitation’. These goals are often mentioned in relation to diarrhoeal disease related solutions such as WASH and child mortality efforts as NGOs, public health advocates, scholars etc have highlighted the need for ongoing efforts in the arena to be aware of the challenge of achieving the targets set out by the 2030 deadline. Research into progress toward SDG targets shows that many of these goals may not be achieved with the current rate of progress which is an observation commensurate with the faded resonance of many diarrhoeal disease interventions (see Moyer and Hedden, 2020; Leal Filho et al., 2020). Indeed, Moyer and Hedden (2020: 1):

[highlight] special difficulty in achieving targets on some SDG indicators (access to safe sanitation, upper secondary school completion, and underweight children) representing persistent development issues that will not be solved without a significant shift in domestic and international aid policies and prioritization.

Nevertheless, the SDGs also demonstrate an ongoing background commitment in the development arena toward sustainable, system wide, approaches rooted in social justice and echoing key elements emphasized historically in PHC articulations. Similarly, the 2012 Child Survival Call to Action and the more recent resolutions committed to by global leaders on PHC at Astana and then more recently on WASH and UHC (2019) represent steps in the right direction.

The absence of strong advocacy (or a strong network for diarrhoeal diseases), outlined above, may help explain why such potential policy windows were not fully capitalized on for the issue. However, it is worth noting that the global development goals have provided a clear focusing power for work in the area – looking to developments in the policy stream we can see that many of the recent strategies/reports/initiatives outlined were motivated by the impending target deadlines delineated in the MDGs and SDGs – whether the policy suggestions accrue the political and financial capital to be successful and rolled out at the required levels remains to be seen.

Relatedly, Bump et al. (2011: 26) pointed to a missed opportunity with regard to reinvigorating the child survival movement, explaining that ‘[a] promising chance for child health professionals to re-launch the child survival movement came in negotiations over the Global Fund’s mandate. There was considerable wrangling over what should be included beyond HIV/AIDS’. The authors describe differing opinions between key agencies meant that ‘the child health movement lost the chance to revive itself behind one of the most successful health funding mechanisms yet devised’ (Bump et al., 2011: 26).

As touched on, there have been indications that the global health climate has more recently shown developments commensurate with being more receptive to horizontal approaches, which may provide the environment that diarrhoeal diseases (likely as part of the wider child health rubric) need to gain more traction. Although credibly the impacts of COVID-19 may throw off course some of the apparent movement in this direction.

### **3.9 Discussion and preliminary conclusions**

The initial section of this chapter demonstrated how the multiple streams approach facilitates understanding how diarrhoeal diseases came to a position of prominence on the global health agenda historically. However, the approach is less effective at demonstrating much more

subtle shifts in priority and focus on specific aspects of an issue, which has been more the case for diarrhoeal diseases over the previous two decades. Nevertheless, it is feasible to contend that a contributory factor for the lack of prioritization of diarrhoeal diseases as a single issue in recent years has been due to a lack of these three streams wholly aligning. Kingdon argues that to be deemed a problem, an issue has to be recognised as such by way of certain indicators demonstrating that it is worthy of interest and resolution. In global health these indicators can be understood most easily in measures such as global burden of disease, morbidity/mortality rates, DALYs, and life expectancy. For diarrhoeal diseases, they still have a prominent position in terms of GBD, ranking within the top ten health issues that account for the majority global mortality rates for decades (see Ritchie et al., 2019). The ongoing mortality rates due to diarrhoeal diseases outlined earlier in this chapter demonstrated due reason for increased focus. Furthermore, these readily available morbidity and mortality statistics demonstrate the awareness (at least in development circles) of this issue as a problem. However, as Kingdon (2003: 114) notes, being identified as a problem is not necessarily in and of itself sufficient to be moved onto the agenda. The other two streams need to come into play at the right moment. As we have identified throughout the section delineating policies directed toward diarrhoeal diseases, the developments in this stream have been somewhat more muted than in previous decades when diarrhoeal diseases were front and centre of the global health agenda. There have been important developments. For example, prequalification of the rotavirus vaccines<sup>62</sup> and the goals set out by the WHO/UNICEF, but progress has been patchy and inconsistent across all the interventions needed to address diarrhoeal diseases. It is this kind of progress which the multiple streams approach is less effective at helping to elucidate being ostensibly more suited to identifying distinct moments of prioritization.

Finally, the political stream whilst including some ground-breaking moments (decades) for global health broadly (from which aspects of diarrhoeal diseases may have benefited in ways), has for the most part been focused elsewhere and often aligned more visibly and easily with other global health problems. The central takeaway from this analysis, however, is not that there has been zero attention to this issue, rather that the attention has been engaged better with specific aspects of it – what might helpfully be deemed a *splintered* approach. As is often the case the challenge seems to be less about accruing the recognition that the problem exists

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<sup>62</sup> Merson (2020) pointed to the rotavirus vaccine as an area of real progress in terms of incidence. Indeed, this is a major step in the right direction considering the ongoing high morbidity rates.

and more about producing the political will and financial resources to match the rhetoric sustainably across all interventions.

This interpretation of diarrhoeal diseases' situation leads to some preliminary reflections as to how this situation might be altered to better address this global challenge. Whilst this thesis works towards offering an explanation as to why particular health issues receive more or less focus irrespective of their burden and is not setting out to 'solve' the issue or posit the 'right' way to approach priority setting or improving diarrhoeal diseases' cause, it is nevertheless helpful to emphasize some such areas which have emerged through this research:

- *Implementation challenges* – this is a rather obvious point, but one that should not be forgotten and is possibly the most noticeable challenge for addressing diarrhoeal diseases. In Chapter 2 attention was briefly drawn to scholars who have emphasized the necessity of greater research regarding implementation of measures to reduce diarrhoeal diseases. Rudan et al. (2007: 56) note: 'Our failure in delivering the interventions is caused by our lack of understanding of how to do it efficiently and creatively in low resource settings, and it is a challenge for research to generate the required knowledge'. They also point out that:

[t]he development and proof of effective interventions has been seen in the past as the legitimate endpoint of research. Implementation research that needs to follow (including health policy and systems research, and delivery research) is methodologically challenging and might require long term studies. It has not been ranked as highly by the scientific community or by most funding agencies as new work in basic science or intervention development. (Rudan et al., 2007: 56-57)

This a salient point, which touches on weaknesses not just for diarrhoeal diseases and childhood pneumonia (which were the topic of Rudan et al.'s paper); but for all health issues - as a lack of interest in implementation research is a major weakness across the board. Merson (2020) also pointed out that implementation was 'a challenge in public health in general' pointing to weaknesses in programme management in public health as a factor in this, and also noting that relevant research (e.g., on programme outcome/implementation) is often hard to publish/promote, noting that whilst it is better than it was, it needs to be better still.

Implementation challenges are also restated by WHO and UNICEF in the 2013 GAPPD. Specific examples of implementation challenges can be evidenced in recent studies such as that of Weins et al. (2020) who analysed ORT coverage in LMICs between 2000 and 2017. They note that 'advancement in ORS coverage was slow

from 2000 to 2017, and that within-country inequalities in ORS coverage persist in many LMICs' (Weins et al., 2020: e1049). Crucially they highlight that 'scaling up of ORS coverage has been insufficient, and that new efforts to improve access are desperately needed' (Weins et al., 2020: e1049).

- *Reframing* – Bump et al. (2013) have hypothesized several ways in which diarrhoeal diseases could be reframed to resonate more effectively with the global health agenda. Going forward, more attention to framing with regards diarrhoeal diseases might be desirable. This goes hand in hand with improving weakened advocacy efforts and/or networks for diarrhoeal diseases. There are commitments in many global health organizations/initiatives to diarrhoeal diseases and more broadly WASH – some of which have been drawn out in this chapter. What seems to be lacking is strength in advocacy and obvious networking between them. Consistent, identifiable high-level advocates for these issues are conspicuous by their absence. In relation to this, as mentioned, scholars have begun to underscore the importance of studying networks in global health as a key element for effectively drawing attention and resources (see for example: Shiffman et al., 2016a). Weak networks for diarrhoeal diseases are likely not helping their cause (although further research is needed on this topic). It is worth noting that as part of 'newborn and child health' more broadly they may find stronger networks/advocacy as the funding for newborn and child health has increased significantly over the past two decades from approximately \$2 billion in DAH allocated toward child health in 2000 rising to \$9 billion in 2019 (IHME, 2023a). Much of the work on diarrhoeal diseases – whether by groups such as PATH's DefeatDD, or even the publications coming out of the WHO which directly address the problem, often do so in terms of its need to regain momentum which speaks to its weakened state as a lower prominence issue; improved networks and stronger advocacy could be key to this. Furthermore, increasingly prominent PHC and UHC frameworks align with the challenge posed by diarrhoeal diseases. At DefeatDD Randall (2020) also pointed to UHC and PHC spaces noting that '...diarrhoeal disease lends itself well to that framework...'. Indeed, greater advocacy building on such connections might also offer potential for further steps towards addressing the final stretches of this burden. A similar point was also made by Bump et al. (2013: 805-807) who, as mentioned, suggested various political reframing strategies for diarrhoeal diseases – one of which was framing the issue within the PHC movement and focusing on the disease.

They also noted that: ‘our research suggests that successfully controlling DD ultimately will rest more on effective co-operation among major players, rather than on the particular frame under which it is promoted’ (Bump et al., 2013: 807). Since then, countries have made a greater commitment to PHC as seen in the aforementioned Declaration of Astana in 2018. However, given the chaotic years of COVID-19 for the global health arena, it remains to be seen whether this commitment to PHC will have a significant impact on remaining diarrhoeal disease burden.

- *A combination of practical elements* are vital to the solving diarrhoeal diseases’ burden: WASH, oral rehydration therapy *and* immunizations as well as more widely beneficial measures such as improved nutrition, breastfeeding and improved basic healthcare infrastructures in areas which do not have satisfactory facilities in this regard (see also DefeatDD, 2020b). This fact arguably makes it more challenging to measure progress and coordinate efforts to tackle them. As mentioned, the WHO has gone some way toward addressing this – the GAPPD proposes a ‘Protect, Treat, Prevent’ framework as optimal, emphasizing the benefits of tackling diarrhoea in tandem with childhood pneumonia given the overlap in determinants (WHO/UNICEF, 2013: 6). As well as providing a framework for tackling diarrhoeal diseases, it also provides a ‘roadmap for national governments and their partners to plan and implement integrated approaches for the prevention and control of pneumonia and diarrhoea. It recognizes that for successful implementation, the effective engagement of all relevant stakeholders is key’ (WHO/UNICEF, 2013: 6). Without reiterating the minutiae of the plan, it is evident that ample evidence has been produced which demonstrates best practice for addressing these diseases. What seems to be missing is sufficient implementation.
- *The integration of the CDD program* with other child, maternal, adolescent health challenges, has both merits and drawbacks. This has been expounded succinctly by Wolfheim et al. (2019) in their paper tracking the evolution of the CDD program. Having spent time accentuating how diarrhoeal diseases’ situation could be improved, it is worth taking a moment to consider that to a certain extent the shift in priority can also be seen as a fairly natural process. Bump et al.’s (2013: 803) research also raises the point that:
 

[s]ome [of their] interviewees felt that this decline in global-level CDD priority was partially appropriate because countries themselves should now play a larger role in ORT implementation. However, almost all interviewees expressed frustration that the

transition away from internationally funded CDD had been poorly executed and that recent country experiences have been heterogenous.

The lack of a strong programme directly addressing these diseases has undoubtedly decreased focus on the issue. Merson (2020) pointed out, the integration of diarrhoea with other child health issues is ‘understandable now’ but noted:

...one of the things I am pushing on WHO now is to go back a little bit and get countries to think of programmes, a diarrhoeal disease control programme, yes it needn't be out there as a vertical programme it can be integrated, but to think more comprehensively of what it's going to take not just integrating it for the sake of integrating it, but what does it mean from a programme standpoint... what indicators are you going to use for measuring impact...giving it more focus and attention...'. Also noting that ‘...although I think an integrated approach is going to stay and it's inevitable... how can within that integrated approach you give more focus and priority to things like diarrhoeal disease.

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As mentioned, in 2018, forty years on from the Declaration of Alma Ata, global leaders ratified the Declaration of Astana at the Global Conference on Primary Healthcare that took place in Astana, Kazakhstan. Countries ‘vow[ed] to strengthen their primary health care systems as an essential step toward achieving universal health coverage’ (WHO, 2018c). Long term solutions to diarrhoeal diseases are inextricably linked to wider improvements in living conditions for the world's poorest and a continued emphasis on improvement in such areas will lead to a reduction in deaths from diarrhoeal diseases. Indeed, with global health having been thrown into chaos with COVID-19, there is a need now more than ever to ensure that already neglected health issues are not subsumed still further into the general morass of health issues requiring greater attention.

In 2020 estimating the potential indirect effects of the COVID-19 pandemic on maternal and child mortality in LMICs, Robertson et al. (2020) showed various scenarios by which disruptions to health systems/food access as a result of the pandemic might significantly increase child deaths. The results of their ‘least severe scenario [...] over 6 months would result in 253 500 additional child deaths and 12 200 additional maternal deaths’, and their ‘most severe scenario [...] over 6 months would result in 1 157 000 additional child deaths and 56 700 additional maternal deaths’ (Robertson et al., 2020: e901). With regards diarrhoeal diseases, increase in wasting prevalence and a reduction in coverage of ORT were some of the factors contributing to these hypothesized scenarios (Robertson, et al., 2020: e901). Cardona et al. (2022: 6) estimated ‘the economic downturns of 2020 significantly increased loss of life among children younger than five years old in LMICs’.

It would not be reasonable to conclude this chapter without reiterating progress that *has* been made for diarrhoeal diseases in the past two decades. Whilst approximately 500,663 under-fives tragically lost their lives to diarrhoeal diseases in 2019 (IHME, d, n.d.) this is a significantly lower number than under-fives dying from diarrhoeal diseases in 2000 which has been estimated around 1.24million (IHME, e, n.d.).

Randall (2020) noted the ‘line we try to walk always’ between reminding people to celebrate the ‘global health success story’ of child health in terms of mortality reduction, but not being ‘so positive that we generate complacency’. This sums up the challenging balancing act that characterizes the discourse around such health issues, especially those which have seen considerable progress over time but still desperately need sustained attention.

Not being a priority on the global health agenda, has not meant no progress, but less clear progress for diarrhoeal diseases. The efforts have in many ways splintered so that certain parts of the solution (e.g., vaccines) receive more attention than others (e.g., WASH and nutrition) (this observation is reflected in the wider literature and such points were made by both Randall (2020) and Merson (2020) in terms of the differing levels of progress across interventions necessary for tackling diarrhoeal diseases).

These patterns match wider patterns in global health and are indicative of broader priority areas, nevertheless, studies have shown the potential of sustained integration in approaches, papers have highlighted the most effective means of prevention and treatment; country-level examples (e.g., Bangladesh) provide affirming indicators of what can be achieved in reducing this disease burden. The emphasis in this sense needs to be on increasing and maintaining momentum in this area, collaboration across sectors and cultivating greater priority for research and best practice into implementation challenges, particularly considering current events in global health which have understandably dominated global attention. The following chapter then draws out how a different health challenge has fared over a similar period, providing a comparative angle from which a deeper response to the central research question can emerge.



**Box 3.3 Diarrhoea: Key Facts.**

Source: WHO (2017a) World Health Organization. Diarrhoeal disease. Available at: <https://www.who.int/news-room/fact-sheets/detail/diarrhoeal-disease>

‘Diarrhoea is defined as the passage of three or more liquid stools per day, (or more frequent passage than is normal for the individual) [...] Diarrhoea is usually a symptom of an infection of the intestinal tract, which can be caused by a variety of bacterial, viral, and parasitic organisms. Infection is spread through contaminated food or drinking water, or from person-to-person as a result of poor hygiene’.

‘Interventions to prevent diarrhoea, including safe drinking-water, use of improved sanitation and hand washing with soap can reduce disease risk. Diarrhoea should be treated with oral rehydration solution (ORS), a solution of clean water, sugar and salt. In addition, a 10-14 day supplemental treatment course of dispersible 20 mg zinc tablets shortens diarrhoea duration and improves outcomes’.

‘There are three clinical types of diarrhoea:

- acute watery diarrhoea – lasts several hours or days, and includes cholera;
- acute bloody diarrhoea – also called dysentery; and,
- persistent diarrhoea – lasts 14 days or longer’

**‘Scope of diarrhoeal disease**

‘Diarrhoeal disease is a leading cause of child mortality and morbidity in the world, and mostly results from contaminated food and water sources. Worldwide, 780 million individuals lack access to improved drinking-water and 2.5 billion lack improved sanitation. Diarrhoea due to infection is widespread throughout developing countries’.

‘In low-income countries, children under three years old experience on average three episodes of diarrhoea every year. Each episode deprives the child of the nutrition necessary for growth. As a result, diarrhoea is a major cause of malnutrition, and malnourished children are more likely to fall ill from diarrhoea’.

**‘Dehydration**

The most severe threat posed by diarrhoea is dehydration. During a diarrhoeal episode, water and electrolytes (sodium, chloride, potassium and bicarbonate) are lost through liquid stools, vomit, sweat, urine and breathing. Dehydration occurs when these losses are not replaced’.

*(Box continued below)*

**Box 3.3 (continued)**

Source: WHO (2017a)

**‘Causes**

**Infection:** Diarrhoea is a symptom of infections caused by a host of bacterial, viral and parasitic organisms, most of which are spread by faeces-contaminated water. Infection is more common when there is a shortage of adequate sanitation and hygiene and safe water for drinking, cooking and cleaning. Rotavirus and *Escherichia coli*, are the two most common etiological agents of moderate-to-severe diarrhoea in low-income countries’.

**‘Malnutrition:** Children who die from diarrhoea often suffer from underlying malnutrition, which makes them more vulnerable to diarrhoea. Each diarrhoeal episode, in turn, makes their malnutrition even worse. Diarrhoea is a leading cause of malnutrition in children under five years old’.

**‘Source:** Water contaminated with human faeces, for example from sewage, septic tanks and latrines, is of particular concern. Animal faeces also contain microorganisms that can cause diarrhoea’.

**‘Other causes:** Diarrhoeal diseases can also spread from person-to-person, aggravated by poor personal hygiene. Food is another major cause of diarrhoea when it is prepared or stored in unhygienic conditions. Unsafe domestic water storage and handling is also an important risk factor. Fish and seafood from polluted water may also contribute to the disease’.

### Box 3.4 Summarized UNICEF GOBI-FFF programs

Source: Rehydration Project (n.d.) Available at: <https://rehydrate.org/facts/gobi-fff.htm>

#### ‘Growth Monitoring

- which could help mothers to prevent most childhood malnutrition before it begins. With the help of a U.S. 10-cent growth chart, and basic advice on weaning, most mothers could maintain their child’s healthy growth – even within their limited resources...’

#### ‘Oral Rehydration

- [...] Previously, the only effective treatment for dehydration was the intravenous feeding of a saline solution – a cure beyond the physical and financial reach of most of those who need it. Now a child can be rehydrated by drinking a solution of salts, sugar and water administered by the mother in the child’s own home...’

#### ‘Breast-feeding

- which can ensure that infants have the best possible food and a considerable degree of immunity from common infections during the first six month (sic) of life. For infants, breast-milk is more nutritious, more hygienic, and provides a degree of immunity from infection. For the mother, breast-feeding is economical – but it also makes heavy demands on her energy, time, and freedom of movement’.

#### ‘Immunization

- which can protect a child against measles, diphtheria, whooping cough, tetanus, tuberculosis, and polio...’

*Later additions to this list were FFF (denoting female education, family spacing, and food supplements)*

#### ‘Female education:

- Even within low-income communities, a child born to a mother with no education has been shown to be twice as likely to die in infancy as a child born to a mother with even four years of schooling’.

#### ‘Family spacing:

- Infant and child deaths have been found to be, on average, twice as high when the interval between births is less than two years’.

#### ‘Food supplements:

- A handful of extra food each day for at risk pregnant women has been shown to reduce the risk of low birth-weight – a risk which carries with it a two or three times greater likelihood of death in infancy’.

## Chapter 4

### Poliomyelitis

#### Introduction

The second case study which this project will examine is poliomyelitis (hereafter polio). As discussed in the beginning of this thesis, this case makes a particularly interesting point of investigation due to its now very low burden<sup>63</sup> (morbidity and mortality) in combination with its relatively high level of prominence on the global health agenda – making it a natural choice for comparison with diarrhoeal diseases in light of the research question, and as this chapter reveals, it offers a case with a very different journey in global health.

Box 4.1 outlines the key features of polio.

#### Box 4.1

##### Extracts from World Health Organization Fact Sheet on Poliomyelitis (WHO, 2022a)

‘Polio (poliomyelitis) mainly affects children under five years of age.

One in 200 infections leads to irreversible paralysis. Among those paralysed, 5% -10% die when their breathing muscles become immobilized.

Cases due to wild poliovirus have decreased by over 99% since 1988, from an estimated 350 000 cases then, to 6 reported cases in 2021’.

‘Polio is a highly infectious disease caused by a virus. It invades the nervous system and can cause total paralysis in a matter of hours’.

‘There is no cure for polio, it can only be prevented. Polio vaccine, given multiple times can protect a child for life’.

The marked decrease in polio infections over the last thirty plus years is the result of the disease being subject to a long-term initiative (resulting from a resolution by the World Health Assembly in 1988) which has as its goal the global eradication of polio (WHO, 2022a). To simplify what is meant by *eradication* as opposed to elimination, control, or extinction the following definitions developed at the Dahlem Workshop in 1997 provide some clarity and are those utilised throughout this thesis.

*Control:* The reduction of disease incidence, prevalence, morbidity or mortality to a locally acceptable level as a result of deliberate efforts; continued intervention measures are required to maintain the reduction Example: diarrhoeal diseases.

<sup>63</sup> Clearly, low burden here is meant *relatively*, as in low burden in terms of the global burden of disease, and *comparatively* with other higher burden health issues in terms of morbidity and mortality and is not a statement with any bearing on the individual burden of the potentially devastating effects of polio infection.

*Elimination of disease:* Reduction to zero of the incidence of a specified disease in a defined geographical area as a result of deliberate efforts. continued intervention measures are required. Example: neonatal tetanus.

*Elimination of infections:* Reduction to zero of the incidence of infection caused by a specific agent in a defined geographical area as a result of deliberate efforts; continued measure to prevent re-establishment of transmission are required. Example: measles, poliomyelitis.

*Eradication:* Permanent reduction to zero of the worldwide incidence of infection caused by a specific agent as a result of deliberate efforts; intervention measures are no longer needed. Example: smallpox.

*Extinction:* The specific infectious agent no longer exists in nature or in the laboratory. Example: none. (Dowdle, 1998: 23)

In terms of the approach of the polio eradication programme, Wassilak and Orenstein (2014: 447), outline four key polio eradication strategies that have been used to interrupt wild polio virus in most countries of the world:

- Strengthening routine childhood immunization with the oral poliovirus vaccine (OPV);
- Conducting supplementary immunization activities (SIAs), mass campaigns to provide additional doses of OPV to all children under 5 years of age;
- Conducting surveillance for [wild poliovirus] through investigation of acute flaccid paralysis (AFP) cases among children under 15 years of age, and laboratory characterization of polioviruses isolated from stool specimens;
- Conducting intensive house-to-house targeted ‘mop-up’ campaigns in focal areas surrounding recently identified polio cases.

Despite the herculean effort - 34 years and counting - afforded to pursuing global eradication of this virus, resulting in inspiring reductions in polio’s disease burden, achieving the target continues to be an unmet challenge; albeit one that often appears close to being realised. Today, poliovirus is endemic in just two countries – Pakistan and Afghanistan (polioeradication.org, a, n.d.).

There are three strains of poliovirus (type 1, 2 and 3). Type 2 was declared eradicated in 2015, after the last case was identified in 1999; type 3 was declared eradicated in 2019 with the last identified case in 2012 (polioeradication.org, b, n.d.). Thus, all cases of wild polio infections are now due to wild poliovirus type 1 (polioeradication.org, b, n.d.; Patel and Cochi, 2017). However, alongside wild polioviruses another issue of note is circulating vaccine derived poliovirus (cVDPV) – summarized below.

## **4.1 Vaccines**

This thesis is centred on the socio-political dynamics that influence the prioritization (or lack thereof) of global health issues. Nevertheless, it is important to have an explanation here of some of the key features of the polio vaccines, because ultimately they provide a key part of the ongoing ‘solution’ (as per Kingdon’s construal in multiple streams) for polio. Their continued viability is an important dynamic contributing to the sustained prominence of polio on the global health agenda, and therefore the continued feasibility of the eradication goal as a going concern. Box 4.2 provides an outline of the key features of the polio vaccines.

**Box 4.2: Polio vaccines: Key Features**

The main vaccine used for the Global Polio Eradication Initiative has been the oral polio vaccine (OPV) (polioeradication.org, c, n.d.). There are several reasons for this. Firstly, as an oral vaccine it is easier to administer than the inactivated polio vaccine (IPV); secondly it can help prevent viral spread as well as paralysis (unlike IPV which only prevents paralysis) and thus it can help with preventing the spread of polio virus within communities (Cunningham, 2021; polioeradication.org, c, n.d.). However, the potentially ‘fatal flaw’ in this vaccine is that in very rare cases the vaccine can cause paralysis (see polioeradication.org, c, n.d.); additionally, ‘[v]ery rarely, when there is insufficient coverage in a community the vaccine-virus may be able to circulate, mutate and, over the course of 12-18 months, reacquire neurovirulence. This is known as a circulating vaccine-derived poliovirus’ (polioeradication.org, c, n.d.).

Today cases of vaccine derived polio outnumber those of wild polio – 691 cVDPV cases to 6 wild cases recorded in 2021 (WHO, 2022e). ‘Vaccines against each of the three types of polio have given rise to emergent strains of cVDPV, with cVDPV2 being most prominent’ (Wilder-Smith and Osman, 2020: 7).

The inactivated polio vaccine (or IPV) developed in 1955 by Jonas Salk ‘consists of inactivated (killed) poliovirus strains of all three poliovirus types. IPV is given by intramuscular or intradermal injection and needs to be administered by a trained health worker. [IPV] produces antibodies in the blood to all three types of poliovirus. In the event of infection, these antibodies prevent the spread of the virus to the central nervous system and protect against paralysis’ (polioeradication.org, d, n.d.).

The benefits to the IPV include that it is ‘not a ‘live’ vaccine and thus carries no risk of [vaccine associated paralysis]’; further it ‘triggers an excellent protective immune response in most people’. (polioeradication.org, d, n.d.). However, disadvantages include that it ‘induces very low levels of immunity in the intestine’ meaning that ‘when a person immunized with IPV is infected with wild poliovirus, the virus can still multiply inside the intestines and be shed in the faeces, risking continued circulation’ (polioeradication.org, d, n.d.). Additionally, IPV is considerably more expensive than the oral vaccine (polioeradication.org, d, n.d.).

In November 2020 a new vaccine, the novel oral polio vaccine type 2 (nOPV) was listed by the WHO for Emergency Use (WHO, 2020b). This vaccine was developed in response to the challenge posed by type 2 circulating vaccine-derived poliovirus (cVDPV2) (WHO, 2020b). A modified version of the type 2 monovalent oral polio vaccine, trials have shown that the new vaccine provides comparable protection against poliovirus, but is more genetically stable and less likely to be associated with the emergence of cVDPV2 / cause paralysis (polioeradication.org, 2020a).

Having offered an overview of the key features of this virus and its vaccines, section 4.2 illuminates a little of the history of efforts to tackle polio and explores how the cause for its eradication gained traction, resulting in a global commitment to that end in the late 1980s. This provides context before the chapter proceeds to a deeper analysis and a more contemporary focus - the trajectory of polio on the global health agenda over the past twenty years. Through outlining some key moments and analysing developments in polio eradication efforts over this period, it assesses whether the multiple streams approach is able to help us to comprehend how this issue has fared on the global health agenda over the last two decades.

Ultimately, it becomes clear that whilst the collision of these streams in the 1980s can be one helpful way to understand how polio eradication (and thus polio) ‘made it’ onto the *global* health agenda, beyond that point polio has in fact sustained a high profile at a global level, which goes somewhat beyond the original remit of Kingdon’s theory - (a framework which in essence explains how some things make it onto the agenda whilst others do not). Whilst this chapter utilises the approach outside of its traditional boundaries (following scholars who have suggested that multiple streams can be used to describe the wider policy process (see for examples Zahariadis and Exadaktylos, 2016; Fowler, 2022, proposing its applicability to policy implementation) it is not aspiring to theory development. Rather it takes an uncomplicated approach to continuing examination of the streams and concepts beyond issue ascendance, to better understand polio’s *sustainability* in this arena. However, it recognises several points made by such scholars including the importance of the continued work of policy entrepreneurs beyond initial issue ascendance onto an agenda.

Paying attention then to the activity in each of the streams *beyond* the point at which they initially aligned, and the eradication programme took off provides us with interesting material for contemplation. That is with regards to identifying and understanding dynamics which help explain *why* and *how* polio has maintained its prominent status, and been a global health priority for over three decades. Thus, it makes inroads into tackling the central research question<sup>64</sup>.

The elements this chapter draws out to help explain polio’s sustained prominence in this arena include its continued status as well-defined *problem*, achieved via factors including the presentation of the eradication target as close – bolstered by evidence of progress against

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<sup>64</sup> Research question: Why do some issues gain prominence in global health while others are neglected – and what explains change in prominence over time?



polio cases (see section 4.6). The *policy solution* (vaccine plus eradication goal) remains resonant and viable over time, proving a powerful tool for ongoing policy purchase—section 4.7 offers examples of how much work has gone into honing and supporting this policy solution. The *political climate* has remained largely receptive to the eradication initiative – demonstrated here by focusing on commonly raised features in the ‘climate’ of global health (see section 4.8). The chapter suggests that the initial and continued alignment of the problem, policy and political streams and the strength of the support for polio eradication goes a fair way toward explaining the initial prioritization and continued prominence of this disease. It also details that this continued status is not a given and there are many elements in play which threaten the resonance of this issue across the streams and thus its position on the global health agenda. Consequently, the presence and activities of strong advocates for polio eradication are an invaluable part of maintaining its status as a priority global health concern. This provides a robust point of contrast with the preceding chapter. There we found that whilst the alignment of the streams and effective advocacy explained diarrhoeal diseases historical rise to prominence in global health, it was the streams’ lack of alignment in recent decades and muted advocacy for the issue which explained its lower prominence.

## 4.2 The emergence of the polio eradication agenda

Polio is an old health challenge. In similarity with diarrhoeal diseases, ancient records have suggested diseases compatible with polio; however, it was not until 1789 that the disease was described by Michael Underwood as ‘a debility of the lower extremities in children’ (Estivariz et al., 2021: 275; Underwood, 1789: 53-57). An oft cited possible early representation of polio is that of an Egyptian carving dating circa 1403-1365BC (BBC News, 2012; see also, Oshinsky, 2005: 10; Dattani et al., 2022, Pearce, 2005, amongst others). As Dattani et al. (2022) note, ‘[u]p to the 19<sup>th</sup> century, populations experienced only relatively small outbreaks. This changed around the beginning of the 20<sup>th</sup> century. Major epidemics occurred in Norway and Sweden around 1905 and later also in the United States’. Estivariz et al. (2021: 275) explain that ‘[d]uring the first half of the 20th century, developed countries in the Northern Hemisphere suffered epidemics each summer and fall that became increasingly severe’. Smallman-Raynor et al. (2006: 61) describe the history of polio as understood in three epidemiological phases –

The *endemic phase* of poliomyelitis activity extended from antiquity to the nineteenth century AD, and was associated with sporadic and low-level occurrence of clinical disease. The endemic phase was superseded by the *epidemic phase*, which continued into the mid-twentieth century and was associated with the emergence of poliomyelitis outbreaks of ever-increasing magnitude and geographical reach. Finally, the introduction and mass administration of

poliovirus vaccines from the mid-1950s ushered in the *vaccine phase* of epidemic control, local elimination, and global retreat (Melnick, 1997).

Somewhat conversely, improvements in sanitation have been linked to the epidemic phase. Historically,

almost all children were exposed to poliovirus during infancy largely due to poor sanitation conditions [...] Due to the low case:infection ratio of infants, and due to protection from transplacentally acquired maternal antibodies, paralysis was rare amongst young children, although the disease itself was endemic. Because of their exposure to polio at an early age, infected infants acquired immunity to the disease thereby protecting them in later life. (Bunimovich-Mendrazitsky and Stone, 2005: 303)

Subsequent improvements in hygiene standards reduced the transmissibility of the virus meaning fewer children were exposed to it at such an early age –

the increase in average age of infection led to a large and growing pool of older unprotected susceptible individuals—the perfect setting for epidemics to ignite. As the case:infection ratio is larger in higher age brackets of the population (no longer protected by maternal antibodies), this further increased incidences of paralytic polio. (Bunimovich-Mendrazitsky and Stone, 2005: 303)

It was during the *epidemic* phase of polio that scientists began to focus their efforts on finding a vaccine for the virus. The areas that were increasingly being affected by the disease and particularly powerful individuals associated with the virus had a bearing on these efforts. US President Franklin D. Roosevelt is especially associated with supporting efforts to find treatments and preventative measures for polio (Goldman et al., 2003). Having suffered from what has been diagnosed as polio<sup>65</sup>, Roosevelt became a strong advocate for addressing the disease, founding what was initially known as the National Foundation for Infantile Paralysis (NFIP, now the March of Dimes) (Rose, 2010). Abraham (2018: xxv) notes that Roosevelt: ‘put his considerable political clout into helping frame polio as a disease that could be defeated, and into raising funds for polio that would lead to the creation of two vaccines’. Oshinsky (2005: 5) reflects on the attention that polio received in its ‘peak’ and offers that:

In truth, polio was never the raging epidemic portrayed in the media, not even at its height in the 1940s and 1950s. Ten times as many children would be killed in accidents in these years, and three times as many would die of cancer. Polio’s special status was due, in large part, to the efforts of a remarkable group, the National Foundation for Infantile Paralysis, which employed the latest techniques in advertising, fund raising, and motivational research to turn a horrific but relatively uncommon disease into the most feared affliction of its time.

This ‘framing’ (see McInnes et al., 2012) and presentation of polio was arguably a key element in its success in terms of accruing attention and resources. In Roosevelt’s time polio’s

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<sup>65</sup> In 1921 Franklin D Roosevelt contracted an illness resulting in paralysis of the lower extremities; it was diagnosed as poliomyelitis, although some studies since have suggested it may have been Guillain Barre syndrome (Goldman et al., 2003) although this has not been confirmed and others have rejected the assertion (see Ditunno Jr. et al., 2016). Nevertheless, Roosevelt became a strong and powerful advocate for the cause of tackling polio.

presentation as a major health challenge stemmed from the need/motivation to advocate for developing measures for treatment and prevention. Now the prevention methods exist in the form of vaccines, the perception and framing of polio as a challenge has shifted to efforts predominantly focused on sustaining energy around the goal of achieving global eradication and maintaining political and financial capital to meet that target.

Despite polio not being a leading cause of death or disease, this did not mean that it was not (is not) a frightening disease. One in 200 polio infections leads to irreversible paralysis, and of those paralysed 5 -10% die with the immobilization of their breathing muscles (WHO, 2017b). Before the invention of the iron lung device which temporarily, or in some cases long-term, helped paralyzed polio patients to breathe, the death rate from polio outbreaks in the US during the epidemic period was much higher (Dattani et al., 2022).

The development of vaccines marked a major turning point in polio's trajectory in public health. 1955, saw the arrival of the inactivated polio vaccine developed by Jonas Salk, followed shortly by Alfred Sabin's live attenuated oral polio vaccine (Dattani et al., 2022). These had a transformative effect on the spread of the disease in the ensuing years, markedly reducing incidences of polio and allowing most countries worldwide now being able to consider polio eliminated within their borders.

However, in similarity to the lack of wider dissemination of oral rehydration therapy between its discovery and the emergence of the Control for Diarrhoeal Diseases programme in the 1980s, there was a lag between the discovery of the polio vaccine and the pursuit of *worldwide* eradication of the disease through its global dispersion/birth of the eradication initiative. Shiffman et al. (2002: 226) write:

[i]t was not until more than a decade later, however, [after the development of Sabin's vaccine], that the disease received serious attention in developing countries. In 1974 the World Health Organization (WHO) launched the Expanded Programme on Immunization to combat a number of vaccine-preventable diseases that affected children, including polio.

Over the ensuing decades (1970s and 1980s) the cause of *eradicating* polio began to find more support and traction. It is important to iterate here that the attention that polio was beginning to see at the time (and continues to), is very much wrapped up in the prospect of its eradication. Scholars such as Shiffman et al. (2002) have outlined key factors that contributed to the interest being shown in polio eradication at the time. Mass polio immunization campaigns launched in countries including Cuba, Brazil and Mexico and the subsequent reduction in the disease incidence therein demonstrated the possibility for less industrialised countries to fight the disease effectively (Shiffman et al., 2002: 226). They also note that 'a

series of lameness surveys in developing countries indicated that the disease was widespread in tropical and semi-tropical areas’, which ‘challenged long-standing presumptions that polio was a ‘disease of civilization’ unlikely to become endemic in less developed settings’ (Shiffman et al., 2002: 226). Additionally, the aftermath of smallpox eradication is noted as significant in that health communities were looking for the next diseases to target in terms of eradication and had confidence in the possibility of doing so (Shiffman et al., 2002: 226). They describe how the 1980 National Institutes for Health Conference in the US following smallpox eradication focused on six diseases – schistosomiasis, leprosy, tuberculosis, measles, polio, and yaws – with the latter three being seen as the more ‘promising candidates’ in terms of potential eradication (Shiffman, et al., 2002: 226).

Whilst it was not until 1988 that the Global Polio Eradication Initiative (GPEI) was launched, there were already clear signs of interest in the possibility of polio eradication. Shiffman et al. (2002: 227) explain that global fundraising efforts in 1985 by Rotary International<sup>66</sup> in support of polio immunization, and commitment by member countries of the Pan American Health Organization (PAHO)<sup>67</sup> to ‘eliminate indigenous transmission of the disease from the Americas region by the year 1990 (WHO, 1985: 394; Daniel and Robbins, 1997: 19)’ helped increase ‘confidence in the possibility of eradication’. Further, the considerable progress being made by PAHO in the Americas ‘inspired delegates at an international WHO meeting in November 1987 to declare that global poliomyelitis eradication could now be envisioned (WHO 1988a: 10)’ (Shiffman, et al., 2002: 227).

However, support for another disease eradication effort had by no means been universally supported. For example, Abraham (2018: 79) points to then WHO Director General Halfdan Mahler’s resistance to ‘expensive new disease eradication campaigns’ and preference for spending money on primary health care, seeing the latter as a ‘far better way to improve health globally’. Further he highlights that ‘[e]ven after the success of smallpox eradication, Mahler was clear that the WHO was not going to change course and look for fresh diseases to eradicate’ (Abraham, 2018: 79).

Currently smallpox is the only human disease to have been eradicated (Ochmann and Roser, 2018). Despite this huge achievement and the excitement which it produced in terms of those

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<sup>66</sup> Rotary International - ‘a global civil society organization, headquartered in the United States, that brings together a global network of volunteers who dedicate their time and talent to tackle the world’s most pressing humanitarian challenges. Rotary connects 1.4 million member from more than 200 countries and geographical areas’ (UNICEF, 2022b).

<sup>67</sup> Pan American Health Organization – ‘specialized international health agency for the Americas’... ‘wears two institutional hats: it is the specialized health agency of the Inter-American System and also serves as Regional Office for the Americas of the World Health Organization’ (paho.org, a, n.d.)

keen to target other diseases for eradication, individuals such as D. A. Henderson (who led the smallpox eradication campaign) noted that the success of the programme was contingent on some *very specific* factors and expressed reservation about the replicability of the campaign to other diseases (see Henderson and Klepac, 2013). These specific factors included the fact that the smallpox vaccine was ‘so heat stable that teams travelled in the field without refrigeration devices’; it ‘provided long term protection with one dose’, and ‘[o]ne could ascertain whether vaccination was successful by determining whether or not a pustule had developed at the vaccination site. There were no patients with subclinical infections. Thus, we could readily identify infected areas and contain the outbreaks. Cases were so typical and so readily identified that special diagnostic laboratories were unnecessary’ (Henderson and Klepac, 2013: 6). Henderson explained that: ‘[s]mallpox eradication proved to be infinitely more difficult than I or anyone else imagined it would be. Indeed, it is all but a certainty that any of a number of obstacles could have blocked its completion at various points in the programme but fortunately, in each case, unexpected events or special measures intervened to resolve problems’ (Henderson and Klepac 2013: 6).

Whilst smallpox eradication and the development of demonstrated effective vaccines had buoyed many into the idea of pursuing eradication, a series of failed eradication campaigns in previous decades meant that there were also those who saw these efforts as costly and by no means guaranteed in success. Before the smallpox eradication campaign, for example, unsuccessful eradication initiatives had included those for hookworm, yellow fever, yaws, and malaria (Henderson and Klepac, 2013).

Enthusiasm for disease eradication had waxed and waned over the twentieth century. Each attempt to eradicate a disease had been preceded by great enthusiasm, followed by disappointment when the effort failed (as invariably happened). This would be followed a short while later by a fresh wave of excitement over another disease that some in the world of public health felt could be eradicated. (Abraham, 2018: 80)

Moreover, whilst the ultimate success of smallpox eradication had generated an enthusiasm in some quarters to pursue eradication of other diseases, this period (see Chapter 3) was also not long after the Declaration of Alma Ata and the strong feeling, at the WHO in particular, that primary health care should be front and centre.

In very much the same way that two leading figures (Mahler at the WHO and Grant at UNICEF) diverged on their approach to the Declaration of Alma Ata (the former supporting the original essence of the declaration and its holistic, horizontal approach to health improvement; the latter pursuing the selective primary health care approach – see section 3.1), polio eradication represented a real-world example of this division. Pursuing eradication of a

single disease was (initially) to Mahler at the WHO a regression to the failed eradication campaigns of years gone by. To Grant and those of a similar outlook, single issue programmes with the promise of results were the way forward and had more likelihood of accruing support and resources, as well as, in theory, being more straightforward to implement.

Ultimately however, Halfdan Mahler and thus the WHO were persuaded to support the effort. Interviewed for the Global Polio Eradication Initiative History Project, Steve Cochi muses on some of the personality dynamics at the time, describing Mahler as:

almost dragged, kicking and screaming, into supporting polio eradication at the World Health Assembly in 1988. His opinion was changed at a key advocacy meeting in the French city of Talloires [...] in March of 1988, just a few months before the World Health Assembly. Dr Foege<sup>68</sup> and a few other notables including Dr. Ciro [C.A.] de Quadros [MD, MPH] from the Pan American Health Organization, changed Dr. Mahler's mind, and lo and behold, polio eradication became an official target in 1988. (Cochi, 2017; see also Walgate, 1988).

Abraham (2018: 103, 105) notes that in one of his last speeches as Director-General of the WHO Mahler 'called on the WHO's member countries to launch a campaign to eradicate polio' and that '[t]he inclusion of polio eradication in the final declaration [at Talloires] is regarded as a key moment in building support for a global campaign against polio'.

Cochi (2017) describing the key figures involved in bringing about the eradication initiative at the time, explains 'there was a collection of different personalities and figures that came together, first in 1985 [when Rotary committed to polio eradication in the Americas], then in 1988 that spawned or gave birth to polio eradication'.

Rotary got into this game in 1985, because it was looking for a global target, a global initiative over the ensuing twenty years, a twenty-year commitment through the year 2005, which would be the hundredth anniversary of the creation of Rotary International. Rotary decided to jump in with both feet in 1985, and it began a fundraising effort to raise \$120 million dollars. Over the next two years, they raised \$247 million dollars. (Cochi, 2017)

He also comments on an interesting dynamic from a 'personality standpoint' of the friendship between then Rotary president Dr Carlos Canseco [Gonzalez, MD] and Dr Alfred Sabin (who developed the oral polio vaccine) and mentions the influence of Sabin in advocating to Canseco that polio eradication would be a good goal (Cochi, 2017). Indeed, Schulz and

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<sup>68</sup> Dr William H. Foege – *Emeritus Presidential Distinguished Professor of International Health* - epidemiologist who worked on the smallpox eradication campaign in the 1970s, was appointed director of the CDC in 1977 (Emory University, Faculty Profile, n.d.). Co-founded the Task Force for Child Survival and Development Program in 1984; 'He is strong proponent of disease eradication and control, and has taken an active role in the eradication of guinea worm, polio and measles and the elimination of river blindness' (Emory University Faculty Profile, n.d.).

Larson (2018: 293) note that Sabin ‘believed passionately in the potential of his live-attenuated oral polio vaccine (OPV), and wanted to see it used as widely as possible’.

To summarise, Rotary was already on board in terms of committing to eradication of polio several years before the World Health Assembly Resolution to eradicate, and the fundraising and advocacy of Rotary helped create momentum and support for the global eradication resolution that was to come. Heymann<sup>69</sup> (2021) explained:

...the reason that the polio resolution finally passed was because of Rotary International...Rotary was the lobbyist that really pushed for this in the US and other countries, and it was then adopted by many countries and the resolution was passed.

In 1988 the World Health Assembly resolution committed to the worldwide eradication of polio (WHO, 2022a). The Global Polio Eradication Initiative (GPEI) was ‘spearheaded by national governments, WHO, Rotary International, the US Centers for Disease Control and Prevention (CDC) and UNICEF, and later joined by the Bill and Melinda Gates Foundation and [GAVI], the Vaccine Alliance’ (WHO, 2022a). A dazzling array of many of the most prominent actors in global health. As Schulz and Larson (2018: 293) explain: ‘[h]ealth and humanitarian ideals aside, this resolution was a significant political milestone, since it required many countries – each with different national priorities – to collectively fight a single disease’.

### **4.3 Analysis of the history of polio eradication efforts**

There are several aspects to polio and its vaccines which made (and continue to make) it a target for eradication and help the issue of polio be elevated to ‘problem’ status. As it only occurs in humans, polio is, in theory, eradicable with the ready availability of effective vaccines. Furthermore, whilst polio was still endemic in 125 countries in 1988 (Dattani et al., 2022), the impact that the vaccine had already demonstrated its potential in terms of eradicating the disease. Indeed, Shiffman et al. (2002: 227) cite ‘the demonstration effect of the PAHO experience’ as a decisive element in why polio as opposed to other health issues was singled out for eradication. Likewise, Aylward et al. (2003: 909) offer that: ‘[t]he most important factor in overcoming scientific concerns [with regards eradication potential] was the interruption of poliovirus transmission in large areas of the Americas by use of a four-pronged strategy’.

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<sup>69</sup> Professor of Infectious Disease Epidemiology at LSHTM; among many positions held at the WHO, Heymann was previously the Director General’s Representative for Polio Eradication (LSHTM Profile, n.d.)

Additionally, (and as will be discussed further in section 4.6), the potential for the virus to be reimported to areas that were now polio-free has arguably been an influence in its continued problem status and prominence on the global health agenda. Shiffman et al. (2002: 227) explained that a 1980 conference at the National Institute of Health ‘narrowed the focus of attention of the scientific and health community to measles, polio and yaws’, but that ‘[y]aws may have received less subsequent attention as it did not pose a serious threat to the populations of advanced industrial states, nor was there an available vaccine’. Furthermore, they explain that:

Epidemiological considerations and the experiences of advanced industrial states with measles and polio may have favoured the latter disease. Measles, but not polio, re-appeared in the United States after mass vaccination campaigns for both, suggesting that measles was the more easily transmittable of the two and the harder disease to fight (Nathanson, 1984). Beyond this, multiple developing world states in the 1970s and 1980s managed to eliminate polio but not measles from their borders, spurring momentum for the PAHO initiative and the attention given to the disease by Rotary. (Shiffman et al., 2002: 227)

In short, there were several possible candidates that those pursuing the idea of further eradication initiatives were considering. However, the ultimate selection of polio relied on epidemiological evidence that it was possible to eradicate, that it was an easier target than some of the other candidates and that perhaps because it posed a threat to the populations of HICs (in terms of reimportation to countries which had already successfully eliminated the virus). Also, importantly, the impact that Rotary’s focus on polio had, even before the WHO committed to pursuing eradication, is relevant when thinking about why polio was chosen as priority as well as demonstrating the power of non-traditional actors in the public health arena.

Rosenbauer (2021) noted factors other than ‘public health considerations’ playing into the eradication commitment in 1988, noting for example the then recent eradication of smallpox - ‘so the concept of eradication was on people’s minds, so many people were talking about [...] ‘Which diseases could we now go after?’’. Additionally, Rosenbauer (2021) pointed to Rotary’s impact in terms of conducting immunization against polio in the Philippines ‘as part of their own network’ and their wish to expand on this. Rosenbauer (2021) explained that Rotary conducted ‘a fundraising activity in 1985’, which raised a significant amount of money for polio – ‘so there was this pool of money available and the World Health Assembly said: ‘Look, polio can be, we have you know the budget already let’s...’ and that’s not a public health decision’.

Similar points have been articulated by scholars such as Muraskin (2012: 1) who queries why polio eradication was chosen as a global goal with its low burden, in contrast to other higher



burden health issues at the time. Muraskin (2012: 1) explains that ‘[i]t had little to do with the priorities of most developing countries where polio was endemic’, rather it reflected the interests of a small group of powerful players who were wedded to the idea of eradication. Schulz and Larson (2018: 293) reiterate that ‘[r]ather than agreeing to eradicate polio in an international forum, the decision was mainly driven by a relatively small cadre of doctors and epidemiologists who believed that eradication was a global good, despite the prevailing preference for Primary Health Care over disease-specific vertical programmes’.

They note the importance of the 1988 meeting at Talloires (ostensibly a meeting to decide the Task Force for Child Survival’s agenda for the 1990s) as being a key point for seeding the notion of scaling up PAHO’s regional elimination effort to a global one, noting the many key global figures in attendance (Schulz and Larson, 2018: 294). Crucially, William (Bill) Foege (see footnote 68) and Jim Grant needed to persuade D.A. Henderson to support the eradication idea, ‘who, as the acting rapporteur, was the ultimate gatekeeper as to how the [Declaration of Talloires] was portrayed in the meeting report (Muraskin, 2012; Brookes and Khan, 2007; The Task Force for Child Survival, 1988)’ (Schulz and Larson, 2018: 294).

Henderson, already a noted eradication sceptic, found their proposal unrealistic. Meeting privately with Grant and Foege, he exhorted them ‘not [to] make fools of ourselves’ (Muraskin, 2012, p.49) by publicly proposing to globally eradicate tetanus [...] and measles [...]. Grant and Foege relented on both counts, but they would not be dissuaded from polio. Grudgingly, Henderson agreed to include this revised ‘Declaration of Talloires’ in the meeting report. This document was then strategically deployed to mobilise support for the official WHA resolution to eradicate polio, which passed with unanimous support just a few months after Talloires (Muraskin, 2012). In this way, a relatively small group of people managed to put polio on the global agenda. (Schulz and Larson, 2018: 294)

Touching on examples like these of the individual advocacy of high-profile actors in the propagation of wide support for polio eradication draws out evidence of powerful policy entrepreneurship – which was and continues to be a crucial element in polio’s prioritization. The following section will sum up this period and demonstrate how we can understand the ways in which the polio eradication resolution came to fruition through the rubric of multiple streams.

#### **4.4 Explaining the emergence of the polio eradication resolution through multiple streams**

In much the same way that the multiple streams helped to explain the increased prominence of diarrhoeal diseases in the late 1970s/1980s, the approach lends itself to shining light on some of the key undercurrents that resulted in the resolution to eradicate in 1988. Shiffman et al.

(2002) used punctuated equilibrium theory<sup>70</sup> to explain polio's trajectory in public health post WWII drawing attention to many of the same factors as those highlighted in this section. Whilst inevitably there is overlap in the identification of causative factors – this approach gives weight to slightly different dynamics affecting the situation presenting an interesting lens through which to view the events at the time. Whilst polio was not plucked entirely out of obscurity onto the agenda in 1988 (it had been targeted for eradication in the Americas and was an objective of the Expanded Programme on Immunization), this analysis specifically looks at the dynamics which led to the 1988 resolution to *globally* eradicate the virus, which continues to the present day.

As a reminder, multiple streams identifies that there are many 'conditions' in society but only some will be deemed 'problems'. Identification as a 'problem' increases an issue's chance of agenda ascendance when united with a viable policy solution and a resonant political climate. Committed policy entrepreneurs then aid the alignment of these streams. Finally, policy windows provide opportunities for advocates to push for focus on their issue.

The perception of polio had evolved over the 20<sup>th</sup> century so that by the late 1980s polio was no longer a disease of significant concern in HICs, (although there was recent memory of how much of challenge it had posed). In this sense cultivating attention for the issue had moved from developing vaccines and encouraging widespread vaccination against polio, to a rising awareness that this was not a health issue that had just affected richer countries and that there was an opportunity to make a *global* impact on the virus (see Shiffman et al., 2002). As highlighted by Modlin (2010), Shiffman et al. (2002), amongst others, the identification of the challenge of polio in LMICs through 'lameness surveys' was revealing in that regard. Furthermore, whilst it was by no means a leading cause of mortality at the time, when the resolution was agreed in 1988, approximately 350,000 new cases were occurring annually – a strong indicator for valid problem status. Additionally, a moral argument is often levied in defence of eradication - that if we can *technically* eradicate a disease, it is *morally incumbent* on humanity to do so – polio meets the criteria of technically eradicable which, crucially, not many diseases do. In this sense then we can see that it moves from being a condition (one of

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<sup>70</sup> Punctuated equilibrium theory – 'postulates periods of stability with minimal or incremental change, disrupted by bursts of rapid transformation. Central to their model are the concepts of the *policy image* and the *policy venue*', 'When a particular policy venue and image hold sway over an extended period of time, the policy process will be stable and incremental. When new actors and images emerge, rapid bursts of change are possible. Thus, the policy process is constituted by both *stability* and *change*, rather than one or the other alone, and cannot be characterized exclusively in terms of incrementalism or rationality' (Shiffman et al., 2002: 226).

many health issues in need of attention) to a *problem* where we can see perception of the issue as one which requires action.

The *policy* solution in the shape of the vaccine had long been available, but the technical feasibility of the vaccine on a wider scale was being exhibited by the successes with the PAHO initiative in the Americas. Furthermore, it is worth noting that the 1988 World Health Assembly Resolution ultimately stated that ‘...eradication efforts should be pursued in ways which strengthen the development of the Expanded Programme on Immunization as a whole, fostering its contribution, in turn, to the development of health infrastructure and of primary health care’ (WHA, 1988, p.1)’ (Schulz and Larson, 2018: 294). This reveals how the eradication endeavour was initially articulated in a way that might seem to alleviate some of the prevailing concerns in global health in terms of pursuing vertical initiatives at the expense of wider health system strengthening.

The *political climate* in public health whilst at the time not universally amenable to eradication programmes, did have key players who were keen to see the next disease tackled, and for whom polio was seen as the natural next step in terms of an eradication target post smallpox. A powerful conglomeration of actors played a role in pushing for focus on polio as an issue – notably from Rotary International, but also UNICEF, PAHO and others – working as dynamic and effective policy entrepreneurs for the propagation of support. Specific individuals (and conspicuously influential actors in global health) included Bill Foege at the CDC, Jim Grant (UNICEF), Ciro de Quadros at PAHO, Alfred Sabin (who created OPV), Carlos Canseco (then President of Rotary International) (and, eventually, reluctantly Halfdan Mahler DG at the WHO and D.A. Henderson who had led the smallpox eradication programme), to name but a few.<sup>71</sup> Their support of (or eventual acquiescence to) the idea became fundamental to the birth of the World Health Assembly` Resolution. Commensurate with Kingdon’s contention - that policy entrepreneurs have specific characteristics, position, and persistence – the above-mentioned individuals certainly display(ed) such traits.

Scores of people might be floating around who would like to be heard; of that set of people, only those who have a claim to a hearing are actually heard. This claim has one of three sources: expertise; an ability to speak for others, as in the case of the leader of a powerful interest group; or an authoritative decision-making position [...] Second, the person is known for his political connections or negotiating skill [...] Third, and probably most important, successful entrepreneurs are persistent. (Kingdon, 2003: 180-181)

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<sup>71</sup> Detailed descriptions of these events and individuals have been covered in various forms by scholars such as Abraham (2018); Muraskin (2017); as well as by the Global Health Chronicles through comprehensive interviews with key actors involved in polio eradication.

Interestingly, some of the factors that lent themselves to creating an environment more amenable to focus on diarrhoeal diseases also facilitated the advancement of polio eradication as a goal – which is indicative of overlap between health issues, or at least of the ability for issues to be presented in particular ways to utilise the existing climate. That is, as discussed in section 3.1, the selective primary health care approach stemming from the Declaration of Alma Ata was critical at the time in terms of directing focus in global health towards very specific efforts. And Dasgupta (2009: 10) notes: ‘selective primary health care with its technocentric focus dislodged the original vision [of primary health care] at least to some extent. It is at this juncture that the idea of polio eradication appeared on the horizon’ – a policy window.

The concerted effort by PAHO to stop polio transmission in the Americas provided crucial real-world confirmation of the potential impact that the vaccination could have more widely. In this sense the existence of a solution (vaccines), the amenability (or acquiescence) of leading figures in global health (and other powerful actors) to pursuing the cause (political climate) and the identification of polio as a disease that could (and strong argument that it should) be eradicated (problem) came together at the right time. Furthermore, as noted, the advocacy and commitment by high profile actors was vital to the prioritization of this issue in the 1980s, to its emergence as eradication goal and continues to be so today (see also Muraskin, 2012; 2017; Schulz and Larson, 2018).

This overview of the history of polio leading up to 2000 is therefore helpful for reflection before contemplating the more recent developments with polio on the global health agenda. Abraham (2018: xxv) (amongst others) has queried how this virus - ‘a relatively minor cause of illness and death in children [has] become the focus of major global health programme’. He suggests that the experience of the disease in US provides some of the answer to this, stating that ‘[t]his had a strong impact on globally framing polio as a disease that was particularly dreadful, and could and should be stamped out’ (Abraham, 2018: xxv). Although that provides part of the answer, evidently a conglomeration of mutually constitutive factors influenced the birth of the eradication resolution – arguably none more so than the strong personalities advocating for this pathway, but in lock step with a well-articulated problem, a viable solution – and, ultimately, a receptive political climate.

Whilst the history of polio has been abundantly covered in literature, keeping in mind these subtleties shaping polio’s rise to prominence in global health is an important tool for understanding how eradication efforts and attention have developed and – through good times and bad - sustained over the last several decades.

These elements that helped drive the eradication resolution into fruition in 1988 continue to be relevant, as the following section will outline—albeit whilst having to fend off the threat of erosion<sup>72</sup> of their legitimacy and purchase in an ever more crowded health and development arena.

#### 4.5 The polio eradication agenda 2000-2020

the reality of the programme is best rendered in chiaroscuro. Shadows of failure mingle and give relief to bright areas of achievement. (Abraham, 2018: xiii)

Whilst the planned goal of eradicating polio by the year 2000 - ‘an appropriate gift, together with the eradication of smallpox, from the twentieth to the twenty-first century’<sup>73</sup> (WHA, 1988: 1) - had not been achieved, the period between 1988 and 2000 was a time of substantial progress in terms of addressing the challenge it presented. The creation of the GPEI and the impact this began to have on a reduction in incidences was marked. In 1988 there were an estimated 350,000 cases of polio in the world, but by the year 2000 that had fallen to just 719 cases of wild polio (WHO, 2022a; WHO, 2022e). At the time of writing, wild polio remains endemic in just two countries – Pakistan and Afghanistan. Further, of the three types of wild polioviruses, two have been eradicated. This is all evidence of incredible progress, and for most of the world, polio has moved from a health challenge that engendered considerable fear, to a vaccine-preventable health issue, ostensibly relegated to history. Of the six WHO regions five have now been certified wild polio-free ‘representing over 90% of the world’s population’ (WHO, 2020c).

Today, focus on polio is a balancing act between maintaining momentum (funding, optimism, political support) around the ‘last mile’ of the (ultra)marathon effort to eradicate this virus, in addition to putting in place suitable planning for the transition process / post eradication era, as well as dealing with the challenge presented by circulating vaccine derived polioviruses. Recently of course the outbreak of COVID-19 and its impact on polio eradication activities (mass immunization campaigns were paused in March 2020 in response to the COVID-19 outbreak, although they have since resumed) was a ‘move [which] further imperiled the troubled 3-decade drive to wipe out polio’ (Roberts, 2020: 360).<sup>74</sup>

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<sup>72</sup> See also Howlett et al. (2014: 430) who note ‘we should not see streams flowing inevitably towards an outcome’ and offer ways ‘in which the flow of streams may be disrupted/altered/halted/reconfigured’ – *slow evaporation/gradual erosion/blockage/unexpected flooding and deliberate charting of a new course*.

<sup>73</sup> The World Health Assembly Resolution 42.28 in 1988 (Global Eradication of Poliomyelitis by the Year 2000) identified poliomyelitis as ‘the target disease most amenable to global eradication’, and declared that eradication of the virus by the year 2000 would be ‘an appropriate gift, together with the eradication of smallpox, from the twentieth to the twenty-first century’ (WHO, 1988: 1).

<sup>74</sup> (n.b., although interestingly and unexpectedly, 2021 saw an incredibly low number of wild polio virus cases).

The following timeline (box 4.3) from Rotary International helps give an understanding of some of the progress made with regards polio eradication over the last twenty years, the scale of the immunization efforts, as well as giving an insight into the commitment that Rotary, in particular, has made to this endeavour.

**Box 4.3**

**Milestones for polio eradication efforts 2000 – 2020**

**2000** – A record 550 million children – almost 10% of the world’s population – receive the oral polio vaccine. The Western Pacific region, spanning from Australia to China, declared polio-free.

**2003** – The Rotary Foundation raises \$119 million in a 12-month campaign. Rotary’s total contribution to polio eradication exceeds \$500 million. Six countries remain polio endemic: Afghanistan, Egypt, India, Niger, Nigeria, Pakistan.

**2004** – In Africa, synchronized National Immunization Days in 23 countries targeting 80 million children, the largest coordinated polio immunization effort on the continent.

**2006** – The number of polio-endemic countries drops to 4 – Afghanistan, India, Nigeria, Pakistan.

**2009** – Rotary’s overall contribution to eradication effort nears \$800 million. In January, the [Gates Foundation] pledges \$355 million and issues Rotary a challenge grant of \$200 million. This announcement will result in a combined \$555 million in support of the Global Polio Eradication Initiative.

**2011** – Rotary welcomes celebrities and other major public figures into a new public awareness campaign and ambassador program called “This Close” to ending polio. Program ambassadors include Nobel Peace Laureate Desmond Tutu, violinist Itzhak Perlman, co-founder of the [Gates Foundation] Bill Gates, Grammy Award-winning singers Angelique Kidjo and Ziggy Marley, and environmentalist Dr. Jane Goodall. Rotary’s funding for polio exceeds \$1 billion.

**2012** – India surpasses 1 year without a recorded case of polio and is removed from list of countries where polio is endemic. Polio remains endemic in just 3 countries. Rotary surpasses its \$200 Million Challenge fundraising goal more than 5 months earlier than expected.

**2014** – India goes 3 full years without a new case caused by wild poliovirus, and the [WHO] certifies the South-East Asia region polio-free. Polio cases are down over 99% since 1988.

**2019** – Nigeria goes 3 full years without a new case caused by the wild poliovirus.

**2020** – [WHO] certifies the African region wild polio-free’.

**(Source: endpolio.org, n.d.)**

Whilst this displays the scale and impact of activity that continued for polio through the 2000s, the first decade of the new millennium is often seen as a time when progress for the eradication initiative lagged (in comparison to 1988 through 2000, when we saw a dramatic fall in cases). As section 4.7 will demonstrate, this did not however mean that no progress was being made in other areas that would inevitably benefit the cause – i.e., technical progress.

This becomes an important piece of the puzzle when unpacking why and how this global health challenge has sustained a high profile. There has been a robust and ongoing commitment to the goal and to developments for its benefit that continue to make eradication seem tangible, even when the initiative has faced anticipated and novel setbacks – technical and socio-political.

In terms of polio disease burden the following table (4.1) lists numbers of cases of wild polio and cVDPVs over the last twenty years.

TABLE 4.1: Polio cases (wild and circulating vaccine derived) 2000 – 2020

(Data sourced from: WHO, 2022e)

YEAR	WILD POLIO CASES	cVDPV CASES
2000	719	12
2001	483	13
2002	1918	4
2003	784	0
2004	1255	2
2005	1979	51
2006	1997	25
2007	1315	72
2008	1651	85
2009	1604	184
2010	1352	60
2011	650	66
2012	223	71
2013	416	65
2014	359	56
2015	74	32
2016	37	5
2017	22	96
2018	33	104
2019	176	378
2020	140	1113

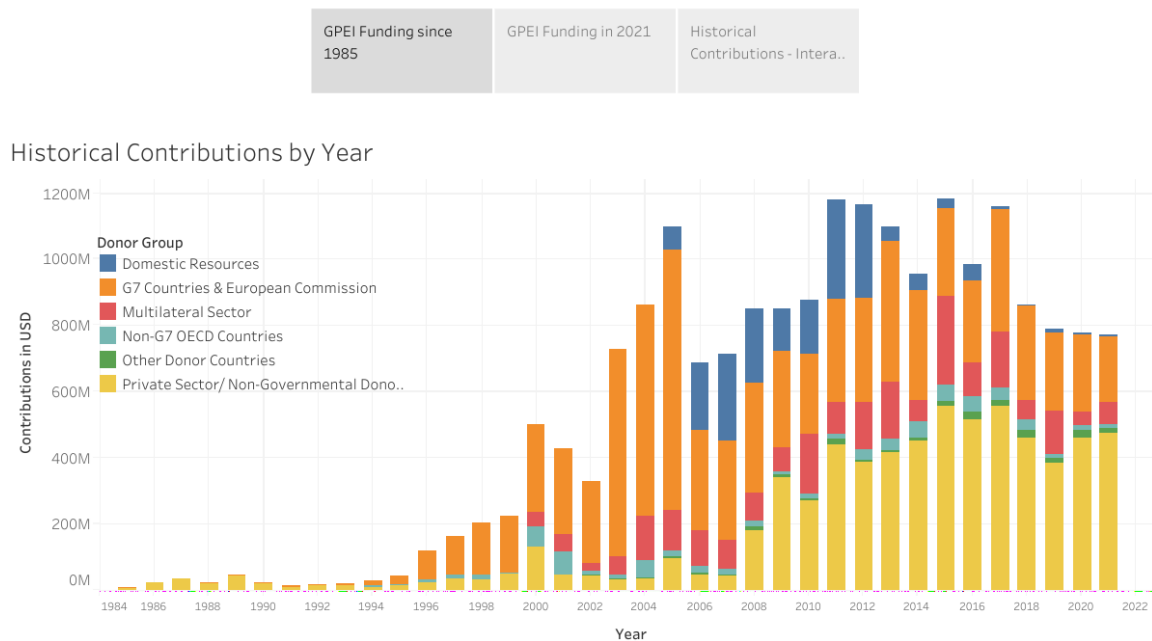
Whilst in terms of wider global disease burden, and in comparison with the previous chapter these numbers are incredibly low, they give an indication of the struggles that the polio

programme has faced in the last two decades in terms of attempting to reach zero cases, given the considerable fall in cases in the 12 years before this point – approximately 350,000 in 1988 to just 719 wild cases in 2000. In short, it gives insight into the difficulty posed in terms of reaching the last strongholds of polio, as well as demonstrating the increasing challenge of cVDPVs which have, since 2017, exceeded wild polio virus cases.

Specific data in terms of financing for polio is not available directly from same source that was cited in the previous chapter for diarrhoeal diseases, however, there is comprehensive breakdown of funding for the Global Polio Eradication Initiative available on their website, which provides an overview of the amount of funding directed toward polio over the years and the prime sources from which that funding stems. Below Figure 4.1 sourced from the GPEI demonstrates this.



## GPEI Historical Contributions (as at 31 December 2021)



### GPEI Contributions Summary by Donor Sector, 1985 - 2021

Donor Group	Contributions total (%)	Contributions total (in B\$)
G7 Countries & European Commission	38%	\$7.08B
Non-G7 OECD Countries	4%	\$0.67B
Other Donor Countries	1%	\$0.20B
Private Sector/ Non-Governmental Donors	36%	\$6.80B
Multilateral Sector	12%	\$2.28B
Domestic Resources	10%	\$1.83B
<b>Grand Total</b>	<b>100%</b>	<b>\$18.87B</b>

### Note:

The Total figures do not reflect any carry-forward from the previous year(s).

Follow this link to the Non-FRR reports: <http://polioeradication.org/financing/donors/other-contributions/>

The contribution information on this site is general in nature. While we have taken every precaution to insure that the content of the site is both current and accurate, the GPEI assumes no liability for any errors. Please contact us if you require any clarifications.

Figure 4.1. Source: polioeradication.org, e, n.d.

As Figure 4.1 reveals, there has been a degree of fluctuation in funding sources and quantity over the past two decades. Whilst overall across this entire period the highest percentage of contributions comes from G7 countries and the European Commission, that sector is followed closely by the Private Sector/Non-Governmental Donors, with total contributions over this whole period reaching \$18.87 billion. Between 2000 and 2002 there appears to have been a decline in overall funding before it picks up again and then ebbs 2006 through 2010. High points can be seen in the second decade of the millennium, with moderate fluctuation and a

fall 2018 onwards. Interestingly, it is clear from looking at the ebbs and flows of contributions to the GPEI and the sources of those contributions that over the years countries have ‘dropped out’ of supporting the programme. Heymann (2021) explained:

Most countries at 2000 said ‘Look we’ve put a lot of money in this we want to continue to its end’ but then over the next ten years a lot of them dropped out and said: ‘we’re going to invest in something else, it’s a vertical programme, it’s not really what we want’, and so they dropped out, but then Gates came in and has kept it going and Rotary which is a constant.

Examining the funding for this initiative also reveals that there has been a shift in the main type of donor the GPEI has relied on, with most funds now stemming from non-governmental/private sources. The tension between the need to continue the initiative due to the funds and energies that have already been committed over decades, versus, losing momentum and stakeholders due to the changing climate in global health, and unforeseen time commitment the programme has demanded, is something that the programme has had to face continually in recent decades. But, despite not yet meeting the eradication target, the GPEI effort to address polio has been significant. The 2017 Report of the Transition Independent Monitoring Board of the Polio Programme laid out the scale of the programme.

Polio eradication is the largest global health initiative ever undertaken. Currently spending US\$1 billion annually, the Global Polio Eradication Initiative (GPEI) vaccinates some 430 million children every year, using 2.2 billion doses of oral polio vaccine. It supports an extensive field and laboratory surveillance system. It investigates 100,000 acute flaccid paralysis (AFP) cases a year in a network of 145 laboratories spread across 92 countries. It has 30,000 personnel on substantive contracts, and a much larger workforce within the communities served (who are volunteers or paid on a daily basis). (TIMB, 2017: 4)

What is notable about the polio eradication endeavour is its sustainability. Polio has maintained a position as a global health priority despite setbacks and despite being well beyond its original 2000 target. Furthermore, the data demonstrates that the funding required for continuing the programme is inversely proportional to cases of polio (see also Holzscheiter, 2017: 777), with significantly more financing being directed toward the programme over the 2000s, than before that point – revealing the challenges posed by the remaining polio strongholds – ‘the last mile’.

Critically, the programme has also faced incidences which have threatened to de-rail progress – these range from vaccine hesitancy/bans, banning of door-to-door vaccination in areas controlled by the Taliban, misinformation/disinformation, the emergence of circulating vaccine derived polio viruses, conflict, difficulties of maintaining funding, and the unavoidable ticking clock that looms over a programme now decades beyond its initially projected endpoint. Outlined below are four prominent examples of such obstacles. They reveal some of the challenges that polio eradication advocates have had to face and negotiate

in order to keep polio eradication viable and present as a goal in global health. In short, they exhibit characteristics that have potential to erode the orientation of the streams<sup>75</sup> and thus the high profile of polio on the global health agenda.

*(a) Vaccine boycott*

In 2003 there was a huge stumbling block with a boycott of polio immunization in Northern Nigeria. Jegede (2007: 0418) describes:

the political and religious leaders of Kano, Zamfara, and Kaduna states brought the immunization campaign to a halt by calling on parents not to allow their children to be immunized. These leaders argued that the vaccine could be contaminated with anti-fertility agents (estradiol hormone), HIV, and cancerous agents.

Five Nigerian states banned the use of the vaccine on children (Obadare, 2005: 265). The impact of this included significant increases in polio infections and paralysis in Nigeria and spread of the virus across Nigeria and into other countries which had previously been polio-free (Heymann and Aylward, 2004). Whilst ultimately resolved and Nigeria was recently declared wild polio-free, this situation is a very good example of the fragility of the gains made by the GPEI should there not be universal commitment to the eradication goal, as well as demonstrating some of the difficulties and tensions in the relationship between the ‘global’ and the ‘local’ in terms of support and implementation of the programme (see also Obadare, 2005).

*(b) Emergence of cVDPVs*

Another notable issue continues to be that presented by circulating vaccine derived poliovirus (cVDPV). One of the first recorded outbreaks of this was in 2000/2001 in Haiti and the Dominican Republic<sup>76</sup> (Lai et al., 2022: 2). As Chumakov et al. (2021: e1172) explain:

As the circulation of wild polioviruses dwindled, the importance of cVDPVs increased, and they now cause the majority of paralytic polio cases in the world. The distinction between cVDPVs and wild polioviruses is purely academic because they both transmit readily in poorly immunised communities, cause outbreaks of paralytic disease, and their presence requires the same programmatic response. The inevitable emergence of cVDPVs means that polio eradication must also include elimination of OPV itself at least in its present form, which substantially complicates the original task.

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<sup>75</sup> This chapter argues that the concept in these streams have remained in alignment for polio consistently since the 1988 eradication resolution – i.e., polio has not ‘fallen off’ the agenda since its initial ascendance. However, this status is not unthreatened and requires strong support/advocacy to maintain and does not mean that polio eradication has not suffered from ebbs and flows in relative prominence.

<sup>76</sup> Although as Kew et al. (2004: 16) note ‘[r]etrospective studies have also detected the circulation of endemic cVDPV in Egypt (1988-93) and the likely localized spread of oral poliovirus vaccine (OPV)-derived virus in Belarus (1965-66)’.

Ming et al. (2020: 1) note: ‘cVDPV remains a menace to the end game of polio eradication as it is one of the main causes of re-emerging polio apart from vaccine refusal’. They also outline some of the shifts in vaccination recommendations that have taken place in attempts to address this problem – the use of inactivated polio vaccine where possible instead of oral polio vaccine, ‘utiliz[ing] bivalent OPV that contains Sabin serotypes 1 and 3 strains, instead of trivalent OPV that contains Sabin strains of all three poliovirus serotypes’<sup>77</sup> (Ming et al., 2020: 2-3). Various interventions have been /are being pursued with the goal of tackling the cVDPV problem. More recently, the emergency use listing of a modified vaccine (nOPV2) has been a step towards addressing the issue. This vaccine is shown to have comparable protection but is less likely to cause paralysis or cVDPV2 (polioeradication.org, 2020a). Nevertheless, until dealt with vaccine derived polio viruses remain an ongoing roadblock on the journey to eradication and wear at the perceived viability of the eradication target.

*(c) CIA false vaccination drive / Vaccination bans*

In 2011, the programme was thrown a curveball. As part of their operations to locate and kill Osama Bin Laden, the CIA organised a false vaccination drive for hepatitis in Pakistan. The goal was to:

obtain DNA from the children of Bin Laden, to confirm the presence of the family in a compound and sanction the rollout of a risky and extensive operation. Release of this information has had a disastrous effect on worldwide eradication of infectious diseases, especially polio. (The Lancet, 2014: 1862)

Notably, there were ‘a series of militant attacks on polio vaccination workers in Pakistan, with legitimate health-care workers targeted as being US spies’ (The Lancet, 2014: 1862). This occurrence was especially shocking given the obvious perils of mixing military/conflict strategies with public health efforts. As Gostin (2014: 414) noted:

The CIA’s ploy created political cover for militants seeking to exploit preexisting fears. Disinformation campaigns, for example, have linked polio vaccination campaigns to Western plots to sterilize Muslims. Rumors also have circulated asserting the vaccines contained porcine contaminants, which violate the Muslim faith. Indeed, the interconnection of immunization, ideology, and religion has created a toxic mix, for which poor children are most likely to suffer.

Gostin (2014: 414) pointed to the ‘palpable’ harms stemming from this incidence, including the majority of polio cases that year being reported in Pakistan; and that

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<sup>77</sup> Most cases of vaccine derived polio virus are caused by type 2 poliovirus (Lai et al., 2022).

cases in Afghanistan, Iraq and Syria being ‘genetically linked to Waziristan, demonstrating the deep connections among terrorism, political instability, and public health.’ Also noted were similar challenges being seen in Nigeria (a polio endemic country at the time) where in February 2014, ‘Boko Haram shot dead at least 9 women administering polio vaccinations in Northern Nigeria’ (Gostin, 2014, 414; see also Arie, 2013). These are just some examples of such incidences over the years – recently killings of health care workers occurred in Afghanistan in February 2022 (UN, 2022).

The challenge of health workers being targeted is obviously devastating and is demonstrative of the mistrust, in some quarters, of the vaccination programme, as well as of the challenging contexts in which the GPEI operates. Additionally, such developments add a tough ethical question mark to the polio initiative in terms of balancing potential risks to life taken by those working for the programme with the lives they would save by administering vaccines.

In fact, operating in conflict affected countries has produced innumerable challenges for this eradication initiative. Over the years, various bans from the Taliban over polio vaccination in certain areas of Afghanistan and Pakistan have meant delivering immunisation has been challenging. For example: ‘Shortly after bin Laden’s assassination, senior Taliban commanders banned polio eradication in the most troubled areas of Pakistan—South and North Waziristan—until US drone strikes ended’ (Gostin, 2014: 413). Vaccinations were also banned from 2018 in Taliban controlled areas of Afghanistan – although in late 2021 the Taliban agreed to house-to-house polio vaccination to resume (Roberts, 2021: 382). Suffice to say, the geopolitical environment in terms of implementing the immunization programme is one of the biggest, ongoing hurdles to be overcome.

*(d) Fatigue and slowed progress*

Indeed, whilst much progress was made between 1988 and 2000, the first decade of the millennium saw a stagnation in progress – at least in terms of eradication goals. For example, cases in 2010 exceeded those in 2000 with 20 countries still reporting polio (Toole, 2016: 2). Other health issues emerged that captured global attention, and support for the programme ebbed in some quarters. In relation to this, given the length of time that this endeavour has been in progress, it is unsurprising that the subject of fatigue would rear its head. Several interviewees raised the issue of fatigue and yet

emphasized the remaining incentive to continue given the considerable input and the proximity of the goal.

In relation to a question on whether awareness or perception of polio as a challenge had changed over the last few decades (at a global level), Corkum<sup>78</sup> (2021) noted:

...I feel kind of that attention and interest in it is waning and that becomes a challenge when you're at the last stretch and you're tired, everybody's tired... you know donors are tired of funding, eradicators are tired [...] and that's hard and especially now with these other new and emerging things like COVID where you know 'polio hasn't it been finished, isn't it finished?!' [...] and when there have been announcements you know that the region has been certified polio free, which is great and let's celebrate and rightly so, but for all of those vaccinators and frontline workers that have delivered that's what we need to celebrate and appreciate. But I do think that unfortunately [it's] the victim of a success in many ways [...] we have incredible donors and partners with us and have stood with us all these years including Rotary, but it is becoming, with everything else and broader interests... there's so many competing priorities now that it's difficult, it's a challenge.

Rosenbauer (2021) explained: 'I think... one of the main challenges that we have is people are really tired of this...' also noting that:

You know the communities are tired, you know you come with polio drops every six weeks and don't do anything else for other more pressing interventions [...] Everybody is really, really, really tired of this and wants it done...but then on the other, on the flipside there's kind of the sense that [we] really are, we're so tantalisingly close and now actually more than ever... (Rosenbauer, 2021).

These highlighted incidences cover several of the more conspicuous tests the programme faces, drawing attention to two points. Firstly, the unanticipated setbacks that can face such an initiative and the precarity of the endeavour in such varied contexts. Secondly, the resilience of the eradication agenda (and thus polio's prominence in global health) can be evidenced by its ability to continue, and indeed to rally, from such setbacks, demonstrating an extraordinary commitment to the eradication goal by those engaged in the venture, as well as to the sustainability of this programme in global health writ large.

Additionally, such trials demonstrate that achieving the goal of global eradication is as much (if not more) a socio-political challenge as it is a technical one. Finally, but importantly, these kinds of challenging developments serve as facilitators of erosion to the continued alignment of the three streams for polio. Thus (as the following sections will illuminate) the programme and its advocates are, in effect, in a constant process of justifying the viability of the polio endeavour by balancing the perception of the issue as a worthy and pressing *problem*,

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<sup>78</sup> Senior Outbreak Manager/Polio Outbreak Response, UNICEF HQ - speaking from personal experience and reflections from working in the programme, and not from an organizational position.

extolling the continued feasibility of the *policy solution* (vaccines plus eradication), and nurturing the resonance of the issue with the broad *political climate/ 'mood'* in global health.

The following sections (4.6, 4.7 and 4.8) contemplate how each of the three streams have looked for polio over the last few decades, drawing out dynamics that have facilitated the continued resonance of this issue as a global health priority in addition to drawing attention to dynamics within the streams that threaten that status.

#### 4.6 Maintaining the 'problem status' of polio

For a condition to be a problem, people must become convinced that something should be done to change it (Kingdon, 2003: 114)

By the year 2000 the perception and 'problem' of polio globally had moved substantially since the beginning of the eradication programme in 1988, and even more so since the repeated epidemics of polio leading up to the development of effective vaccines. What had previously been seen as a very real seasonal threat had been consigned to very specific areas of the world. Looking to the elements in Kingdon's problem stream which looks to *indicators*, *focusing events* and *feedback* as dynamics which help explain how an issue can become deemed a 'problem' (raised outside the morass of many issues needing attention and being singled out as particularly pressing) as opposed to a 'condition' (just one of many issues which needs attention) is interesting when mulling over the problem status of polio over this period.

##### 4.6.1 Indicators

To begin with indicators, the statistics surrounding the morbidity and mortality of the disease had been reduced by such an extent since the 1980s that the problematization of polio can no longer be driven by existing high morbidity (or mortality) – which is what makes polio such an important case to look at alongside higher burden<sup>79</sup> health issues. Moreover, what makes this an especially thought-provoking case to contemplate is the fact that the infection figures have been driven so low and the whole effort surrounding addressing polio is framed in terms of *eradication*, which arguably negates the need for levels of morbidity (or mortality) to be high for attention and resources to be garnered.

To expand, the low numbers are indicators of the real *potential* of the efforts already at play and have been so tantalisingly low over recent decades that the goal of eradication seems

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<sup>79</sup> The phrase 'higher burden health issues' here in no way means to take away from the potentially devastating burden of individual cases/ effects that polio can have, and is simply referring to burden in terms of quantity of morbidity and mortality relative to other health issues e.g., diarrhoeal diseases.

almost within grasp. Thus, the low numbers themselves are a crucial part of the strong incentive for sustained focus and the continued status of the issue as an eradicable disease – and a pressing problem.

This dynamic is well articulated by the GPEI referring to their preferability for an eradication as opposed to a control approach (pointing also to the incentive that the goal of eradication provides):

In fact, any control scenario would be difficult to execute. Without the motivation of eradicating polio, countries would struggle to recruit the large numbers of health workers and volunteers who have been crucial to polio eradication to date. They would also likely face tremendous challenges in sustaining the required spending and political will. (GPEI, n.d., 5)

These low case numbers can therefore be seen as indicators which demonstrate the continued need for attention to the issue *because* we are so close to eradication. This is something of a departure from the notion that prevailing morbidity or mortality status may be obvious gauges of where attention might be focused. This dynamic of a ‘low burden’ health issue cultivating a strong position in the global health arena is indicative of the fact that *potential* morbidity (and mortality) can be as strong (or stronger) an influence of prominence, as active cases of morbidity and mortality are.

In relation to this, the influence of morbidity and mortality data in this case can also be seen by the projections of potential polio cases should the programme be abandoned. Recent research has suggested that: ‘if we abandon eradication efforts, we would have to brace for high numbers of outbreaks and children with permanent disabilities’ (Sutter and Zaffran, 2019: 1).

Similarly, the WHO (2018d) points out that ‘[f]ailure to eradicate polio could result in as many as 200 000 new cases every year, within 10 years, all over the world’. Further studies have investigated the economic costs of eradication versus moving to a control scenario and noted that in an economic sense it is likely still viable to pursue a programme of eradication although they noted there was limitation to the analysis undertaken (assumption based) (see Zimmerman et al., 2020 amongst others). These projections (both economic and philanthropic) of the potential epidemiological impact that polio would have if the focus on eradication as a goal is eased, are a key part of why the issue can be continuously effectively deemed a ‘problem’ as opposed to a ‘condition’ to return to Kingdon’s terminology.

Furthermore, the continuous work of polio eradication advocates has undoubtedly helped maintain the framing of polio as an eradicable disease, which is of course crucial to the maintenance of this ‘problem’ status. Importantly, this ties in with the powerful principle that



‘elimination and eradication are the ultimate goals of public health’ (Dowdle, 1998) and thus if it is possible to eradicate a disease then there is something of a moral duty to do so (see also Emerson and Singer, 2010; Caplan, 2009).

Presented as an *attainable* goal, complete eradication of a disease has a logical draw. As Closser (2012: 385) notes it ‘is a powerful ideal’. This ideal is the guiding force of the GPEI. Whilst Kingdon suggests that indicators alone may not be enough to ensure a problem status – arguably these indicators (projected disease burden, progress against cases and intrinsic nature of the virus as eradicable) are the main component contributing to the consistent problem status of polio over this period. However, that status has been bolstered by focusing events and feedback—the other two components that can help an issue accrue problem as opposed to condition status.

#### 4.6.2 *Focusing events*

In terms of *focusing events*, perhaps the most noticeable event which may have helped renew the focus on polio was in the second decade of the new millennium, when the increased spread of the disease led to the WHO declaring polio a Public Health Emergency of International Concern (PHEIC)<sup>80</sup> in 2014. Instigated by the increased international spread of polio cases, the statement on the day the PHEIC was declared outlined that:

The current situation stands in stark contrast to the near-cessation of international spread of wild poliovirus from January 2012 through the 2013 low transmission season for this disease (i.e. January to April). If unchecked, this situation could result in failure to eradicate globally one of the world’s most serious vaccine preventable diseases. It was the unanimous view of the Committee that the conditions for a Public Health Emergency of International Concern (PHEIC) have been met.

At end-2013, 60% of polio cases were the result of international spread of wild poliovirus, and there was increasing evidence that adult travellers contributed to this spread. During the 2014 low transmission season there has already been international spread of wild poliovirus from 3 of the 10 states that are currently infected. (WHO, 2014)

Whilst the increase in international spread of cases resulting in a PHEIC for polio can be seen as a ‘focusing event’ that perhaps augmented attention toward the unfinished agenda of eradication, and its continued active status is at the very least a reminder of the urgency and standing placed by the WHO on polio eradication, clearly it does not contribute to polio being deemed a ‘problem’ as opposed to a ‘condition’ over the first decade or so of the 2000s. However, it is fair to suggest that polio has consistently maintained its problem status via

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<sup>80</sup> PHEIC – ‘defined in the IHR (2005) as “an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response”’ (WHO, 2019d).

other elements in this stream – eradication potential, predicted negative impact of not reaching the goal, and through effective feedback – outlined below.

Further developments that have feasibly served as sorts of focusing events have been the accomplishments evidenced in terms of certifying eradicated two of three types of poliovirus. In September 2015 the Global Commission for the Certification of Poliomyelitis Eradication (GCC) ‘concluded that wild poliovirus type 2 (WPV2) has been eradicated worldwide’ (polioeradication.org, 2015). More recently in October 2019 wild poliovirus type 3 (WPV3) was declared eradicated - as Dr Tedros Adhanom Ghebreyesus put it at the time:

“The achievement of polio eradication will be a milestone for global health. Commitment from partners and countries, coupled with innovation, means of the three wild polio serotypes, only one type remains”, “We remain fully committed to ensuring that all necessary resources are made available to eradicate all poliovirus strains. We urge all our other stakeholders and partners to also stay the course until final success is achieved”. (WHO, 2019e)

Such achievements can be seen as providing vital reassurance to stakeholders and the wider public that eradication is both feasible and that progress is ongoing. The achievements in terms of eradication from WHO regions can be understood similarly, with, as mentioned, five of the six regions now being certified polio free – most recently the WHO declared the Africa Region free of wild poliovirus in 2020.

The impact of successes in terms of elimination in places like India (2014) and Nigeria (2020) have been noted. For example, Bahl et al. (2018: 125-6) explain that achievement in India:

brought new energy, focus, political commitment, and finally, for the first time, adequate resources to the initiative. Furthermore, real optimism was palpable, India had proved that the almost insurmountable biological challenges (immunity threshold close to 100%) could be overcome, and with it the final proof of feasibility of eradication was provided.

Vashisht and Puliye (2012: 114) also note that: ‘Internationally, supporters of eradication desperately needed a victory in India to drum up enthusiasm, at a time when commitment to the programme had been flagging, and funding was rapidly drying up’. They take a critical view of the initiative and of vertical programmes in general, explaining that when the polio programme was begun in India it was not a top priority for the country (Vashisht and Puliye, 2012). They also note that initial funding/grants from abroad distort local priorities (citing the vast sums that India has had to contribute to achieve eradication) and that ‘synthetic polio makes eradication impossible’ (Vashisht and Puliye, 2012: 115).<sup>81</sup>

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<sup>81</sup> Despite the continuous prominence of polio on the *global* health agenda, this is not a status that is purely happenstance but in large part results from the specific nature of this virus in conjunction with its framing as a practicable target for eradication. Furthermore, the status of the issue as a global priority is not necessarily commensurate with priority (or lack thereof) afforded to it by individual countries - an important point to remember that has impact on the implementation of the initiative.

In many ways it is unsurprising that these successes would serve as one element helping this issue stay the course in terms of maintaining its status as a priority ‘problem’ by providing much needed evidence of the viability of the goal in especially challenging regions.

Nevertheless, the polio eradication initiative has a very fine line to tread between balancing attention to such successes alongside the need for its continued successful framing as a pressing ‘problem’ to maintain political priority and funding. To a certain extent these can be threatened by evidence of success – i.e., in terms of the potential erosion of its problem status by partial achievement of its goals and the reduced lived/visible impact of the disease.

It should be noted that Kingdon’s description of *focusing events* depicts crises, powerful symbols, or personal experiences of policy makers – which is something of a departure from what is described above. However, it seems there is an interesting balance to strike with polio eradication between milestones being met which keep momentum going, *crises* which focus attention, and awareness that demonstration of ‘too much’ progress may, conversely, impede completion of the initiative by encouraging a reduction in energies directed toward it. More in keeping with the crisis understanding of focusing events could be Nigeria’s vaccine boycott in the early 2000s – which, as mentioned, highlighted the fragility of gains and hazard of any decline in immunization, as evidenced by the resulting spread of the virus to previously polio-free areas.

#### 4.6.3 Feedback

In addition to *focusing events* (and the *indicators* which by and large are the mainstay of polio’s ‘problem’ status), abundant available *feedback* as to the continued need for prioritization of the issue can be seen coming from many quarters. Kingdon (2003: 100-101) conceptualises *feedback* as that stemming from existing programmes which draws attention to the need for action – citing ‘systematic monitoring, complaints and casework, and bureaucratic experience’ as potential channels from which feedback stems.

Polio is notable for having a strong network of organizations working as the public private partnership the Global Polio Eradication Initiative (GPEI) (see section 4.9). The GPEI then provides continuous feedback on the progress of eradication efforts; detailed weekly case numbers are readily available; reports describing the state of progress/the programme are accessible and regularly produced. Furthermore, the powerful network of actors who make up the GPEI have been instrumental in keeping focus on the ongoing challenge that polio presents and emphasizing the need for continued attention and energy around the issue, particularly as it has moved closer to being eradicated.

Additionally in 2010 the GPEI's Independent Monitoring Board was established in response to flagging progress of the polio programme (Rutter and Donaldson, 2014: S16). It provides a report after its meetings which is often very critical and does not hold back in pointing out the weaknesses in the programme, as well as impediments to progress/realisation of the target, and what must be done to address these. Rutter and Donaldson (2014: S18-19) highlight some areas where the IMB has raised issues and there has been change, examples include: recommending emergency status for polio eradication and recommending taking a longer-term view in programme planning that goes beyond eradication. They also explain that:

as well as providing an external perspective, the IMB has helped surface issues that are already known to the program but not easily confronted. Its reports have attempted to distill such issues and challenge accepted thinking. Its existence has required partners and countries to account for themselves on a regular basis. (Rutter and Donaldson, 2014: S21)

The authors also note that an evaluation of the IMB's influence would be useful (Rutter and Donaldson, 2014: S21).

Another example of monitoring and feedback mechanisms include Polio's Transition Independent Monitoring Board (TIMB). In 2016 the TIMB was created by the GPEI to monitor and guide polio transition planning<sup>82</sup> (TIMB, 2017: 2; polioeradication.org, f (n.d.)).

Without listing every source of feedback, the main point here is that the strength and breadth of data available undoubtedly helps keep focus and clear understanding of the problem in the minds of those working in this arena and provides a rich source of data on the disease and progress against it – a contrast to the preceding case.

Again, the 'elephant in the room' should also be mentioned - that is some of the types of 'feedback' being received also have the potential to erode the 'problem' status of the issue. For example, evidence of incredibly low case numbers can alternately be framed to detract from the prioritization of this health challenge. That which raises questions as to the prospect of eradication and problems within the programme (e.g., vaccines/cVDPVs, vaccine associated paralysis, implementation challenges, funding), and the reduced belief in the likelihood of the goal given missed deadlines can all (and do) wear at the 'problem' status of polio and raise important ethical questions about the pursuit of eradication.

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<sup>82</sup> Polio Transition Planning – '[t]he polio transition process aims to secure the infrastructure set up to eradicate polio and use it to support stronger, more resilient health systems. Over many years, the GPEI has built a significant infrastructure for disease surveillance, social mobilization, and vaccine delivery; developed in-depth knowledge and expertise; and learned valuable lessons about reaching the most vulnerable and hard-to-reach populations on earth'. As part of this process 'GPEI resources are being redirected away from polio-free countries to focus on achieving the two core goals of the Polio Eradication Strategy 2022-2026 – eradicating wild polio and responding to polio outbreaks' – (polioeradication.org, g, n.d.).

For the most part, it appears this erosion has been held just about at bay by the strong backing for the ongoing pursuit of eradication by the GPEI (as understood via ongoing funding<sup>83</sup>, activity, and commitment of significant actors), indubitably bolstered by data demonstrating the low case numbers and the potential for eradication by success in especially challenging areas (e.g., India and Nigeria) which show promise for victory writ large.

#### 4.6.4 Summary

In sum, whilst there are certainly factors which threaten perception of polio as a ‘problem’, we can see dynamics across the three elements outlined above which have helped mitigate polio moving to a ‘condition’ status over the last several decades.

As noted at beginning of this chapter, there are specific characteristics to polio which make it a prime target for proponents of eradication and, for the most part, these characteristics have been unaffected over time and place, and thus support the ongoing ‘problem status’ of the disease over the 2000-2020 period.

In sum, polio only occurs in humans; thus, it is one of the very few diseases that (in principle) it would be possible to eradicate given the absence of an animal reservoir. The existence of affordable and effective vaccines adds to this status.<sup>84</sup> The long-term goal of eradication and the progress that has been made means that there is a fear that any drop in commitment and momentum would result in a surge of cases and the decimation of decades of work, investment and headway in terms working toward zero cases. Such messages are well articulated and widespread, both from academic sources and in the data, publications, and messaging stemming especially from those organizations who make up the GPEI.

Whilst there have been (and continue to be) questions raised around the viability and ethics of an eradication programme that has passed myriad projected targets, the momentum for the continuation of the efforts, and accordingly for the perception of this ongoing health challenge as a ‘problem’, has been effectively navigated by the GPEI for the last several decades.

Nevertheless, it does appear as though the coming years will be a difficult time for the initiative in terms of its continued longevity if the next eradication target is not met. In

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<sup>83</sup> Whilst the polio programme certainly appears to command a considerable amount of funding annually, the effort required to accrue this should not be underestimated. Lien and Heymann (2013: 172) noted that ‘[f]inancing of the eradication effort remains a huge challenge’.

<sup>84</sup> Whilst challenges have been presented by cVDPVs, which feasibly could weaken the belief of there being an ‘effective’ vaccine (effective here meaning simply in terms of global *eradication* potential as both vaccines are very effective by any standard measure), there has been ongoing work to address this challenge. Most notably the development of novel oral polio vaccine 2. Thus, the threat of erosion of the ‘policy solution’ is being, negotiated by investment in, and development of improved vaccines to meet challenges exhibited by the old.

relation to this Corkum (2021) mentioned the difficulty of persistently getting attention for the issue amongst competing priorities.

...I think I see it now more in my role at the global level you see the challenge in getting interest among so many competing priorities, at the government level meaning where you may have an outbreak, or even among donors when there are so many other things, humanitarian emergencies and disasters and earthquakes and floods and other disease outbreaks... there's so many things that are competing for attention in the development and humanitarian space, it is becoming more difficult, I think, this is my own opinion, that it is a challenge for polio; and now to me it is a tough one... keeping it alive and at the fore is not easy.

This touches on a critical challenge that in many ways polio has thus far transcended (especially over the last two decades). That is, the ability to sustain a high profile (and characterization as a problem) *despite* missing targets. Inevitably at some point unless the eradication target is met there is a lack of practicability in the indefinite continuation of that pursuit. Additionally, the emergence of the COVID-19 pandemic has shaken the foundations of global health and it remains to be seen whether the initiative will be able to endure for many more years if eradication is not achieved imminently. Ultimately there is a tension discernible in the problem status of polio which is relevant to this section and the inevitable challenge which progress poses to the painstaking last stretch of this initiative. This dynamic was neatly highlighted in the Independent Monitoring Board's (IMB) first report in 2011:

By vastly suppressing the number of polio cases in the world, the GPEI is in some sense a victim of its own success. Global levels of polio are so low that the disease is not widely visible. In the richer countries of the world, it is a distant memory. This has led some to believe that polio eradication need not be a priority – that polio can simply continue at its current low levels. This is incorrect. Pulling back from polio eradication would offer two choices – continue to spend large amounts to maintain a low level of infections, or spend smaller amounts, and see the disease take hold widely once more. Neither choice is a good one when the option of eradication exists. (IMB, 2011: 15)

As Kingdon (2003: 104) notes, 'A corollary of addressing a problem is that growth inevitably levels off' and that '[f]ailure to solve or even address a problem, as well as success, may result in its demise as a prominent agenda item'. Given the significant reduction in cases of polio, combined with the complicated and long-running 'last mile' of this initiative, it is precisely these kinds of dynamics that those attempting to keep polio firmly on the agenda struggle against. However, given the enduring status of the eradication resolution, the strength and high-level support of the polio programme and its ongoing funding, it appears that, this challenge has, 2000 through 2020, been met.

#### **4.7 Policy developments**

In keeping with the previous chapter, the policy stream here is interpreted as comprising selected policy developments for polio over the past two decades. This approach gives the

flavour of what has been occurring for the issue over this time and pays homage to the traditional rationale of the stream, whilst conceding the necessity to consolidate the stream for transparent analysis at the global level (and in this instance beyond initial agenda ascendance). Sourced in part from the GPEI's available declarations and resolutions with additions, the list delivers an indication of kinds of activity taking place for polio and provides a helpful source for assessment - although does not purport to be exhaustive given the scale of the polio programme.

It is worth noting the obvious, that in contrast to the previous case, there have been absolutely no shortage of developments for polio (for key policy developments see box 4.4 below). Inevitably, this is because it is the sole issue of an eradication initiative and thus there is a clear focus and motivation surrounding that effort, resulting in many unambiguous reports, resolutions, strategies, as well as technical developments with regard vaccines. To better comprehend the assortment of activity here, this section draws out key themes that have emerged through the multitude of developments.

**Box 4.4: Selected polio related policy developments 2000-2020**

**2000 – Global Polio Eradication Initiative Strategic Plan 2001-2005** – responding to the fact that the 2000 goal of eradication had not been achieved, this plan emphasized ways in which the certification of eradication for 2005 could still be achieved with appropriate efforts and commitments, and identified the quality of supplementary immunization activities and surveillance as ‘the single greatest factor determining when polio will be eradicated’ (WHO, 2000: vii).

**2003 – Global Polio Eradication Initiative Strategic Plan 2004-2008** – ‘outlines activities required to interrupt poliovirus transmission (2004-2005), achieve global certification and mainstream the [GPEI] (2006-2008), and prepares for the Global OPV Cessation Phase (2009 & beyond). This Plan reflects major tactical revisions that were introduced in 2003 to interrupt the final chains of polio transmission, the revised timeframe for certification for eradication, and the decision to stop immunization with oral polio vaccine (OPV) globally as soon as possible after global certification’ (WHO, 2003: 4).

**2003 – Global Cooperation in Polio Eradication Programme among Organization of Islamic Cooperation (OIC) Member States** – affirmed the commitment to the eradication of polio from all OIC Member States and urged those states to allocate resources to protect children from polio (10<sup>th</sup> Session of the Islamic Summit Conference, 2003).

**2004 – Geneva Declaration on polio signed** – (see Geneva Declaration, 2004).

**2004 – Global Cooperation in Polio Eradication Programme Among OIC Member States** – resolution (NO.14/31-S&T) again ‘strongly affirmed its commitment to the eradication of polio from all OIC Member States so that they can contribute effectively to the goal of Global Polio Eradication’ (31<sup>st</sup> Session of the Islamic Conference on Foreign Ministers, 2004: 1).

**2006 – World Health Assembly Resolution: Eradication of Poliomyelitis** – this resolution ‘URGES Member States in which poliomyelitis is endemic to act on their commitment to interrupting transmission of wild-type poliovirus through the administration of appropriate monovalent oral poliomyelitis vaccines;’ and ‘URGES all poliomyelitis-free Member States to respond rapidly to the detection of circulating polioviruses’ (WHA, 2006: 1-2).

**2007 - World Health Assembly Resolution: Poliomyelitis: mechanism for management of potential risks to eradication** – this resolution reiterates the need for enhanced political commitment/engagement for polio eradication activities at all levels, and the need to intensify efforts to interrupt wild polio. It also urges members states to guard against the international spread of polio, to strengthen surveillance, and prepare for long term biocontainment (WHA, 2007: 66-67).

**2008 – World Health Assembly Resolution: Poliomyelitis: mechanism for management of potential risks to eradication** – urged action from polio affected Member States. Amongst other points it encouraged them to ‘engage all levels of political and civil society’ in order to reach all children and to help interrupt wild poliovirus rapidly; to strengthen surveillance and to make financial resources needed to eradicate polio rapidly available (WHA, 2008: 1-2).

**2009 – GPEI Programme of Work 2009 and Financial Resource Requirements 2009 -2013** – ‘2009 marks the end of the Global Polio Eradication Initiative (GPEI) Strategic Plan (2004-2008). It is characterised by the continuation of the *intensified polio eradication effort*, clinical trials on new eradication tools (eg bivalent OPV), assessments of new strategic approaches for endemic areas, additional activities to limit international spread, and – most importantly – a major independent evaluation of the *intensified polio eradication effort* at its 24-month mark. As these activities will have major implications for the finalization of the new multi-year Strategic Plan, 2009 constitutes a ‘bridge’ year, during which the GPEI’s one-year Programme of Work will be used to guide the work of the GPEI partnership and provide a reporting platform for stakeholders’ (WHO, 2009c: 2).

(box continued below)



**2009 – Abuja Commitments to Polio Eradication Nigeria** – included acknowledging ‘eradication of polio as an urgent health priority’ and noted ‘eradication in Nigeria will enhance the Government’s capacity and support for delivering other vital health services’ (Abuja Commitments, 2009) ‘Nigerian federal and local government officials committed in 2009 to have at least 90 percent of children immunized against polio toward its eradication’ (de los Reyes, 2011; The Commitments have been reaffirmed periodically since (see for e.g., Abuja Commitments, 2011).

**2010 – GPEI Independent Monitoring Board established**

**2010 – Global Polio Eradication Initiative Strategic Plan 2010-2012** – WHA had called for a new strategy to complete polio eradication given concerns about polio remaining entrenched in specific countries (WHO, 2010, 3). This plan built on the 2009 Programme of Work, incorporating lessons learnt since the start of the GPEI, into the new approaches in this plan for achieving its major objectives, as follows: interrupting wild poliovirus transmission in Africa and Asia, enhancing global surveillance/outbreak response, strengthening immunization systems (WHO, 2010: 3).

**2012 – World Health Assembly Resolution: Poliomyelitis: intensification of the global eradication initiative** – included declaring the ‘completion of poliovirus eradication a programmatic emergency for global public health’ and urged action from member states with polio transmission, encouraging them to ‘declare such transmission to be a “national public health emergency”’ (WHA, 2012: 2).

**2013 – Polio Eradication and Endgame Strategic Plan (2013-2018)** – the four main objectives of this plan were: detect and interrupt all poliovirus transmission; strengthen immunization systems and withdraw oral polio vaccine; contain poliovirus and certify interruption of transmission and to plan polio’s legacy (WHO, 2013b).

**2014 – Polio declared a Public Health Emergency of International Concern** (WHO, 2014).

**2015 – World Health Assembly Resolution: Poliomyelitis** points included urging continued action toward polio eradication from member states with poliovirus transmission; ‘to ensure that all necessary measures are in place for the safe access of health workers to all communities’; to implement fully the temporary recommendations under the International Health Regulations (2005) in order to reduce risk of international spread of wild poliovirus’ and ‘[urged] all Member States that currently use oral poliovirus vaccine to prepare for the global withdrawal of the type 2 component’ (WHA, 2015: 2).

**2016 – Switch from Trivalent Oral Polio Vaccine to Bivalent Oral Polio Vaccine**

**2017 – World Health Assembly: Poliomyelitis: polio transition planning** – Agenda Item 12.3 made several key points on the need to maintain eradication efforts and surveillance, raised concerns regarding ramp-down of the GPEI and its impact on the WHO post certification. For example, concerns around the reliance of the WHO on GPEI funding at global, regional, and country levels; requested the development of a strategic plan on polio transition (WHA, 2017).

**2017 – 140<sup>th</sup> Session Executive Board WHO, Agenda Item 7.3 - Poliomyelitis** – encouraged Member States to ensure full implementation of WHA68.3 on poliomyelitis and goes on to recall points relating to human resources aspects of GPEI, endgame, transition planning and systemic challenges that the WHO would face from the winding down of the GPEI (WHO, 2017c).

**2018 – World Health Assembly Resolution: Poliomyelitis – containment of polioviruses** – focusing on containment and certification stressed the ‘urgent need to accelerate globally activities to implement and certify containment of polioviruses’ (WHA, 2018b).

**2018 – World Health Assembly: Polio transition and post-certification. Draft strategic action plan on polio transition** – has three key objectives:

‘(a) sustaining a polio-free world after eradication of poliovirus; (b) strengthening immunization systems, including surveillance for vaccine-preventable diseases, in order to achieve the goals of WHO’s Global Vaccine Action Plan; (c) strengthening emergency preparedness, detection and response capacity in countries in order to fully implement the International Health Regulations (2005)’ (WHO, 2018e: 2).

*(box continued below)*

**2019 – Polio Endgame Strategy 2019-2023 Eradication, integration, certification, and containment** – the strategy ‘addresses three key risks towards achieving global WPV eradication:’ insecurity and conflict; weak or fragile health systems; operational, management and resource risks (WHO, 2019f: 1).

**2019 – GPEI Gender Equality Strategy 2019 – 2023** – ‘provides direction and scope for advancing gender equality and strengthening gender mainstreaming in our programmatic activities as well as organizational policies and practices as we continue our determined efforts to eradicate polio’ – Dr Tedros Adhanom Ghebreyesus (WHO, 2019g: IV).

**2020 - WHO lists novel oral polio vaccine 2 (nOPV2) (Bio Farma, Indonesia) for emergency use** (WHO, 2020b).

Much of the activity in this stream is centred around sustaining attention to an issue that is close to achieving a long-term ambition and yet has missed numerous deadlines that have been set for doing so. Thus, there is a mixture of policy relating to endgame and transition planning and that which demonstrates the strong, ongoing commitment to working toward eradication – evidenced especially through the updated GPEI strategies. Furthermore, these strategies are developed with the consultation and input of a wide range of stakeholders which adds to their rigour and is demonstrative of the ongoing profile of polio in global health.

Additionally, there are several developments here that demonstrate the high level of support generated for the initiative across numerous different sectors. Given that this is a WHO led programme, the WHO related developments in terms of reports, resolutions and strategies are to be expected. However, the wider array of developments is suggestive of the strength of advocacy for polio and of successful efforts to generate widespread support for the initiative, particularly in areas which are (or have historically been) difficult to achieve eradication goals in.

This can be evidenced for example in the Abuja Commitments. After the 2003 vaccination boycott in Nigeria and ebbs and flows in support of polio immunization in the country, a greater state level commitment to the cause was demonstrated as state governors signed the Abuja Commitments to Polio Eradication in 2009 (Cooke and Tahir, 2012). The commitments pledged to vaccinate all under-fives in their states, to commit more funding to eradication efforts and to provide updates on progress to the government (Cooke and Tahir, 2012: 10). Cooke and Tahir (2012: 10) noted that ‘[t]hough initially successful, the governors’ focus began to drift in 2010, particularly as campaigning and political manoeuvring in the run-up to the 2011 elections got underway’. They go on to explain that Bill Gates:

travelled to Abuja to regalanise state-level commitment by announcing the creation of the Governors’ Immunization Leadership Challenge. Aimed at incentivizing continued

commitment, the initiative promises a \$500,000 grant from the foundation in recognition of “those Executive Governors whose states pass a pre-defined threshold to improve routine immunization coverage and end polio”. The grant must be used toward key health priorities, but it can also be supplemented with matching funds up to \$250,000 for additional health projects in the recipient’s state. (Cooke and Tahir, 2012: 10)

Such actions are also illustrative of the role and importance of high-profile advocates for the issue of eradication in generating continued support for the initiative.

The resilience of the GPEI and the commitment of its advocates can be seen through the revision of the programme to face novel challenges which the initiative has presented over the years – in fact, resiliency and adaptation look to be vital to the continued high profile of this initiative. In addition to the regularly updated programme strategies, good examples of this can be found in examples of the vaccine developments we see in the above list. As mentioned, cVDPVs present one of the central challenges for this programme – the 2016 ‘switch’<sup>85</sup> from trivalent to bivalent oral polio vaccine demonstrated a major attempt to address this issue (although has not been problem-free). The switch was a response to the challenge presented by cVDPVs and the fact that ‘[t]he vast majority of these cases are caused by just one of the three components contained in tOPV (Sabin type-2 virus), so switching to a bivalent form that doesn’t contain this component was an attempt to significantly minimize the risk of further cVDPV2 cases’ (Sutter, 2018).

However, as Bandyopadhyay and Macklin (2020: 406) note: ‘Multiple cVDPV2 outbreaks in the post- switch period have presented a major challenge and have been designated as a Public Health Emergency of International Concern’ and that: ‘[t]he cVDPV2 outbreaks since removal of [trivalent oral polio vaccine] have been particularly difficult to control because of rapidly waning intestinal immunity of the global population against type 2 poliovirus’. Referring to the challenge of the greater than expected numbers of vaccine-derived outbreaks post the vaccine switch, a 2019 IMB report noted:

As these outbreaks continue, the Polio Programme faces obvious reputational risks about how it will finish the job. Also, communities that are already rejecting the oral polio vaccine because of fatigue will be asked to accept more intensive vaccine rounds. These are big problems. (IMB, 2019: 27)

Whilst these challenges add to the difficulty of the whole endeavour and arguably provide fuel which supports an erosion of the viability of the ‘solution’ (vaccines plus eradication); adaptations to the vaccine in response to the weaknesses it has presented are evidence of the

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<sup>85</sup> The GPEI ‘embarked on a massive, coordinated effort to withdraw Sabin type-2 from routine use, through a synchronized switch from the trivalent formulation of the oral poliovirus vaccine (tOPV) to the bivalent form (bOPV). Over a two-week period, 155 countries and territories successfully made this change, marking the largest and fastest vaccine rollout in history’ (Sutter, 2018).

commitment to the eradication goal. A more recent example of this came with the emergency introduction of nOPV2<sup>86</sup> as a means of tackling the cVDPV problem. Whilst not a ‘silver bullet’ - continued strengthening of routine immunization systems remains key also (see Shuaib quoted in: Irwin, 2020: 16) - it is testimony to the programmes’ capacity to identify, adapt and respond to obstacles to eradication. Dr Bandyopadhyay from the Gates Foundation echoed these sentiments, describing the nOPV2 vaccine as ‘a shining example of how the GPEI responds to challenges’ (polioeradication.org, 2021).

Rosenbauer (2021) touched on the importance of the Gates Foundation’s input regarding addressing vaccine derived polio and their awareness that it needed to be focused on, explaining that: ‘[The Gates Foundation] they probably have a vision that [the] WHO and other partners do not have, including with foreseeing the problems with vaccine derived polio in the long run and developing this novel polio vaccine that is now being launched...’. Indeed, the development and clinical trials of nOPV2 has been entirely funded by the Gates Foundation (polioeradication.org, 2020b) which is indicative of the relevance of non-traditional actors in the field of global health, as well as the importance of their advocacy and input into this initiative.

Another key element here are the references to polio needing to receive a higher level of priority if the programme is to succeed as noted by the Independent Monitoring Board (WHA, 2012: 1). Given that in general terms this health issue can by any measure be considered a successfully high-profile issue in this arena, such concerns are demonstrative of the fact that being objectively high profile in and of itself is not enough, there needs to be continuous active prioritization of the initiative at both global, national, and regional levels for it to meet its target. In relation to this, another theme that emerges, especially in the second decade of the 2000s, is the need for an increased sense of emergency response to polio. Having had a first decade of the millennium with slowed progress, there was an urgent need to inject more energy and tempo into the programme.

In this regard, the creation of the Independent Monitoring Board in 2010 was a significant development. Rutter and Donaldson (2014: S16) describe it as ‘innovative, with no clear analogue in the history of the GPEI or in another global health program’ and that its ‘true independence from the agencies and countries delivering the program has enabled it to raise

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<sup>86</sup> The nOPV2 vaccine ‘is a modified version of the existing type 2 monovalent OPV (mOPV2), that clinical trials have shown provides comparable protection against poliovirus while being more genetically stable and less likely to revert into a form which can cause paralysis. The vaccine’s increased genetic stability means there is a reduced risk of seeding new cVDPV2 emergencies compared to mOPV2’ (polioeradication.org, 2020b).

difficult issues that others cannot'. The board meets with senior program officials regularly, provides reports with 'analysis and recommendations about individual polio-affected countries', and 'also examines issues affecting the global program as a whole (Rutter and Donaldson, 2014: S16).

The creation of the IMB came in response to what the authors describe as a 'difficult decade' for polio, and that 'the program resolved to break the deadlock' and that '[e]stablishing the IMB was part of its plan to do so' (Rutter and Donaldson, 2014: S16). Interestingly, some of the key critiques of the polio programme by the IMB, have been on the programme's slowness in terms of innovation, its need for greater integration and the complexity of its partnership arrangement (despite many benefits of the partnership) (see Rutter and Donaldson, 2014). Importantly:

the IMB has helped to surface issues that are already known to the program but not easily confronted. Its reports have attempted to distil such issues and challenge accepted thinking. Its existence has required partners and countries to account for themselves on a regular basis. (Rutter and Donaldson, 2014: S21)

Whilst the point is being made throughout this chapter that polio has managed to maintain a high profile on the global health agenda, this should not be mistaken as suggesting that the eradication initiative is without flaw and has not had to work to maintain that status, nor that a high profile is necessarily indicative of successful or unproblematic implementation of the programme. However, the focus of the thesis is more on the general position and trend of polio on the global health agenda, its continued high profile, and how this has come about, and less to do with the internal weaknesses that the polio partnership has displayed – nevertheless it is important to note they exist.

Recent developments such as the 2019 Gender Equality Strategy point to the recognition by the GPEI that:

gender related barriers to immunization operate at multiple levels, from the individual and the household to the community, hindering access to immunization services. Gender roles and unequal gender relations interact with other social and economic variables, resulting in different and sometimes inequitable patterns of exposure to health risks, and in differential access to and use of vaccination and information services. (WHO, 2019g: 1-2)

The Gender Equality strategy intends to address these kinds of challenges and barriers and ultimately 'create a more gender-equitable institutional culture and environments' (WHO, 2019g: 4), an important step given the 'important role that gender power relations play in determining the success of health programs' (Kalbarczyk et al., 2021: 7). Such developments are also evidence of the adaptation of the programme to meet the various challenges presented

in terms of vaccination coverage and implementation and modifying the initiative to be more effective.

Another point to raise here is that of the normative pressure that the numerous declarations and resolutions help exert. Whilst the WHO cannot compel countries to meet the targets set, the articulated commitments, resolutions, agreements, and strategies are evidence of continuing pressure and encouragement on countries and WHO regions to invest time, resources and focus on polio eradication.

Ultimately, the thread that weaves its way through this entire stream and without which the programme would not exist is the fact that effective vaccines exist for polio. They continue to provide the foundational building block for the eradication programme and thus an operational ‘policy solution’ to interact with the two other streams.

the most important point that Kingdon and others make about solutions is the need to have one: problems that have no solutions attached to them are less likely to make it onto governmental and decision agendas. The public is also less likely to worry about problems when they feel there is nothing to be done about them (Abbasi 2006, p.146). (Pralle, 2009: 786)

In this sense the *eradication programme* plays its part as the ideal ‘vehicle’ for the vaccine and together the ultimate ‘solution’ to the problem of polio.

In short, viable vaccines plus the goal of eradication continue to be the offered ‘solution’ to the ‘problem’ of polio - as outlined when discussing the alignment of these streams in the 1980s. Evidently this solution has not changed (although the vaccine has itself offered trials along the way, as has the tangibility of the eradication goal). These myriad policy developments then provide evidence of the continued activity in strengthening that ‘solution’ for polio (vaccine improvements, political commitments, strategy, and advocacy) as well as demonstrating a somewhat indefatigable faith in the ability of this initiative to succeed in its goal.

Béland and Howlett (2016: 222) characterize Kingdon’s policy stream as ‘filled with the output of experts and analysts who examine problems and propose solutions. In this stream, the myriad possibilities for policy action and inaction are identified, assessed, and narrowed down to a subset of ostensibly feasible options’. This characterization of the policy stream aligns well with what we can see occurring for polio here – a process of recurrent identification of weaknesses in programme implementation, solutions and areas for action/attention being honed and repurposed for its improved performance by analysts and specialists working on the issue.

Given that many concerns with regard the viability of the eradication goal have created tensions for the continuation of the programme and its resonance with the broader climate in global health, the ability of the GPEI (and other partners to the programme) to constantly attest to its feasibility is *fundamental* to its continued presence on the global health agenda. In short, the ‘solution’ by itself is not enough to keep polio eradication high profile – the viability of the solution needs to be continually defended and proven, particularly as time passes and the space for doubt and criticism expands.

Unlike the policy section in Chapter 3, the developments noted in this chapter are entirely polio specific, this is logically a result of the existence of a robust programme in which polio is the central focus. It also demonstrates that it is easier (relatively speaking) for organizations in global health to focus on a singular health issue with available vaccines than it is to drum up clarity and breadth of support for a health challenge like diarrhoeal diseases which therapeutically and epidemiologically do not lend themselves to this style of response.

The prioritization of polio in global health and its ability to generate the kinds of activity outlined above is not a given, but rather is demonstrative of the consistent and unrelenting promotion and energies of those involved in this cause and the high-level status of the issue, given its standing post 1988 resolution. Above all, the developments outlined here confirm the continued presence and prominence of polio on the *global* health agenda over the last two decades and the determination of those working on the issue to succeed irrespective of considerable obstacles, both technical and socio-political.

#### **4.8 The political climate**

Chapter 3 explained that a global level analysis makes for an incredibly broad arena in which to identify the specific contributory political dynamics affecting health issues’ status. Accordingly, it approached this stream by engaging in an analysis of the ‘climate’ in global health since the turn of the century, identifying key undercurrents which have affected the types of health issues which are prioritized. This ‘climate’ will evidently be the same here and consequently this section will take a more condensed approach than Chapter 3, building on the main points that were drawn out previously.

To recall the elements discussed in the previous case, contributing to an environment that was overall not conducive to diarrhoeal diseases’ resonance as a single issue, they were: *infectious disease outbreaks; the power of vertical foci; proliferation of actors in global health and shifts in power and influence; the fragmentation of global health efforts; and the alignment of health with security rubric and foreign policy concerns.* The difference that needs to be

emphasised then is how these general dynamics identified have interacted with the issue of polio, and how polio as a global health challenge has fared in this environment. Ultimately it becomes clear that polio/eradication largely resonates with the dynamics outlined in this stream.

#### *4.8.1 Infectious disease outbreaks*

As highlighted in Chapter 3, the potential for health issues to impact the interests of HICs – i.e., ability to spread across borders, have high morbidity/mortality rates, has been a factor influencing focus for many a global health endeavour and reflects an arena impacted by the forces of increased globalization and a palpable awareness of the international threat of the spread of novel diseases at speed – a dynamic seen increasingly since the turn of the century (see McInnes and Lee, 2012a; McInnes, 2016, amongst others). This can be seen in intensified focus on infectious diseases such as HIV/AIDS, TB, and malaria, as demonstrated by their inclusion on the agenda at the G8 summit in Okinawa (see G8 Communiqué, Okinawa 2000) and their omnipresence on the global health agenda in the subsequent years.

Aylward et al. (2003: 909) wrote how ‘[h]eightened international awareness of the burden and threat of many infectious diseases has spawned partnerships and alliances to coordinate additional resources for their control’. Although the GPEI was formed pre-2000, it is one of the best examples of such a partnership. Whilst the initial motivations for polio eradication were not entirely driven by the international threat of this disease, this has indeed become more of a concern as time has gone on. As more countries have been declared polio-free, there is more pressure to resist the re-emergence of the virus in such areas and protect the hard-earned gains.

Furthermore, whilst it is now a low incidence health issue, the high transmissibility of polio makes it resonate strongly with this element. This is perhaps most effectively demonstrated by polio’s ongoing status as a public health emergency of international concern (PHEIC). As discussed, the company that polio keeps/has kept here – Ebola, Zika, COVID-19 and most recently mpox – is indicative of the perceived international threat of the virus. Irrespective of the impact that the PHEIC has (or has not had) on the execution of the initiative, the existence and decision to implement this declaration for polio also points to an urgency accorded to the issue in the upper echelons of the global health community. Additionally, it is reflective of the fear that progress was stalling and the emphasis on the need for the success of the eradication programme by the WHO and partners. Moreover, as it was ostensibly instigated because of an increased spread in polio cases, this does marry with the wider concern accorded to infectious



diseases and their ability to pose a global threat. Emerson and Singer (2010: 1341) explain: ‘Although polio has been absent from the developed world for over 30 years, the threat of re-emergence looms in a world where people and viruses easily cross international borders’.

Interestingly, a point that has become even more relevant with the outbreak of COVID-19 has been a ‘hierarchy’ of different infectious disease threats. As touched on earlier in the chapter, polio immunization campaigns were halted for months in response to the COVID threat, stressing the very real test of tackling numerous infectious disease threats concurrently. Additionally, the understandable pivot of the programme to focus on COVID (as a novel pathogen with, at that time, no vaccine, or proven treatments) demonstrates that not all PHEICs are created equal, and the pursuit of polio eradication is ever vulnerable to the emergence of concurrent disease outbreaks which may force breaks in the programmes’ execution. Such interruptions also raise questions as to the viability of long-term eradication endeavours, given their vulnerability in this regard. Overall, however, the threat of re-infection in polio-free areas is a key concern and has been an influence in the continued resonance of this virus with the broad climate in global health.

#### 4.8.2 *The power of vertical foci*

This element whereby vertical health initiatives have arguably found more traction and sustained attention than horizontal approaches over the 2000-2020 period, is demonstrated by the successes and scale of the GPEI in global health. Representing the largest single health programme in the WHO and the longest running initiative for eradication, polio is one of the foremost examples of a vertical approach to addressing a global health challenge, indeed it somewhat sets a bar in terms of what can be achieved through such initiatives (as well as demonstrating many of the challenges of these kinds of approaches to global health). Its broad sustainability on the agenda is demonstrative of the purchase that such methods can have and their capacity in terms of accruing widespread, *long term*, powerful support.

That said, there have been periods over the last twenty years when more horizontal approaches to health have found traction. Indeed, both the MDGs and particularly the SDGs, have shown signals of preference for more integrative approaches to health care, and yet these have arguably found less clear buy in than vertical programmes continue to do. There have been some indications in recent years of the beginnings of a swing back toward a general preference for focus on more horizontal approaches (see Sridhar, 2010), as evidenced by the commitments to Universal Health Coverage and health systems strengthening. Indeed, whilst polio has undoubtedly maintained a broadly high profile in global health, it has also come

under pressure from other health and development issues. Indeed, Lien and Heymann (2013: 169) explain ‘delays in the global implementation of eradication strategies, in part due to lack of political commitment, funding and competing development and health priorities meant that the initial target for eradication by the year 2000 was missed’.

Whilst polio eradication is fundamentally a single-issue programme and has come under criticism for being so, there have also been contributions to other global health sectors and diseases through the apparatus of the GPEI. For example Judith Diment MBE (Rotary International’s Volunteer National Advocacy Advisor for Polio Eradication), explained that ‘...when Rotary started the programme we called it PolioPlus because we knew if we were going to have all these...you know 30,000 health workers and what have you working on polio they could be doing other things as well...’, and outlined some of the areas which have also been positively impacted by the programme, such as giving out tens of millions of measles vaccinations at the same time as polio ones (Diment, 2021). The GPEI has emphasized that ‘GPEI-funded personnel and its infrastructure have served as a vehicle for the distribution of other priority health interventions including measles vaccines, vitamin A supplements, anti-malarial bednets and anthelmintics (deworming pills)’ (WHO, 2013b: 9). Furthermore, they stress spill over benefits of the initiative in terms of providing ‘a foundation for the surveillance of epidemic-prone diseases such as yellow fever and avian influenza in areas with fragile health systems and for humanitarian response to natural disasters and other crises’ (WHO, 2013b: 9). Most recently, the assets were utilised to help address the COVID-19 pandemic (see WHO, 2020d).

However, this should not be mistaken as meaning that this is not a truly vertical programme. Whilst the initial declaration offered the intention of a slightly more rounded approach to incorporating polio eradication with other immunization efforts, the programme has come under criticism for its single-issue focus. Gebre (2021: 217) expands:

From the perspective of strengthening health systems, much more could have been achieved with the same amount of investment if the polio vaccination had remained an integral part of the [Expanded Programme for Immunization] and primary healthcare platform rather than making it a vertical, single-disease focused eradication program. Concerning major child-killer diseases like measles, this approach could have provided huge benefits by saving millions of lives as well as building sustainable health delivery systems, especially in Africa.

In terms of clear evidence of polio’s profile and a point that perhaps most effectively demonstrates the power of vertical foci, Rosenbauer (2021) noted: ‘...I think underlying everything is that we have a global mandate by the governments of the world...’ —the resolution adopted in 1988 by the WHA to eradicate polio. In this sense the continuation of this mandate has itself given polio eradication a special place in global health, that is an

ability to be raised outside of the normal conglomeration of health conditions. Further, and quite simply, this resolution is telling of the traction that single issue programmes can incite in global health politics. The setbacks and challenges that the initiative has then faced provide ample evidence as to why any future eradication endeavours should only be embarked upon with a healthy dose of caution and a comprehensive consideration of potential challenges (see Aylward et al., 2003). Additionally, that this resolution was enacted at a time when there was resistance at the WHO to vertical initiatives, and that it has endured through numerous other major disease outbreaks (notably HIV/AIDS) is proof positive of the traction of single focus health endeavours.

Many scholars (for example Cairncross et al., 1997; Marchal et al., 2009; De Maeseneer et al., 2008 amongst others) have alluded to the exhibited preference in global health circles for vertical initiatives which have ‘tangible’ targets and are ‘easier’ to implement than more horizontally oriented approaches (e.g., primary health care, universal health coverage, and health systems strengthening). Ollila (2005: abstract) noted that ‘[g]lobal health policy has become increasingly fragmented and verticalized’, and that ‘global public health policies are concentrated on selected conditions around infectious diseases and the technological solutions for them’ (Ollila, 2005: conclusion). In every sense polio fits into this category of vertical health initiative – an infectious disease with the quantifiable target of eradication and the existence of a proven solution in the form of the vaccine. Moreover, (and vitally) it aligns with a powerful undercurrent in global health which goes far beyond a mere preference for vertical health initiatives – but that ‘[e]limination and eradication are the ultimate goals of public health evolving naturally from disease control’ (Dowdle, 1998: 22) and thus can elicit a robust moral justification for the continued efforts to attain this objective. Furthermore, polio is one of very few diseases which fits the criteria of *technically possible to eradicate*, setting it apart from other infectious diseases.

Caplan (2009: 2192) notes:

Eradication may well be public health’s greatest rhetorical weapon in the battle against dread diseases. Indeed, the ability to command funding, popular support, the attention of politicians, and positive media coverage by talk of disease eradication is unparalleled.

The polio programme provides continuous evidence of this dynamic. Additionally, a key dimension that was touched upon in the problem stream is also that of the ethical justification for eradication - the deep-seated belief that if we can eradicate a disease, it is morally incumbent upon us to do so (see also Caplan, 2009 - who asks: ‘Is disease eradication

ethical?’ debating some of the challenges of such pursuits; and Emerson and Singer, 2010 – who ask: ‘Is there an ethical obligation to complete polio eradication?’).

Tying in with this are the not insignificant implications of failure. Ruszel and Nieradko-Iwanicka (2020: 69) also note that: ‘failing to meet the polio goal would have a profound detrimental effect on other global health initiatives, including the elimination of measles and rubella’. The latter point echoes some of the concerns which spurred the programme into existence in the first place – i.e., post-smallpox eradication and with the focus on primary health care, there were many who were keen to see that vertical disease eradication attempts did not fall out of favour. Similar concerns have been mooted with regard the polio programme, with Gates, for example, concerned about the impact that failure could have for other global health initiatives, Heymann (2021) noted: ‘...if polio fails, [Gates] feels that international health programmes in general will be set back’.

#### *4.8.3 Alignment of health with security rubric/foreign policy concerns.*

Chapter 3 outlined the increased alignment of health issues with a security<sup>87</sup> rubric post 2000 as evidenced by HIV/AIDS being deemed a potential ‘risk to stability and security’ (UN Security Council Resolution 1308, 2000). SARS (2002-03/4), H1N1 (swine flu 2009), Ebola (2013 through 2016), Zika (2015-16), the Kivu Ebola outbreak (2018-2020) and now COVID-19 have all arguably reinforced this association, with, as mentioned, all (bar SARS) being declared PHEICs by the WHO and thus arguably raised into an ‘extraordinary category’ in global health (see also McInnes and Roemer-Mahler, 2017; Wenham, 2019). As discussed, these incidences provide tangible evidence of the kinds of health issues that can be more easily prioritised and given a special status in terms of funding and or focus.

Polio both resonates and jars with this dynamic. Predominantly it resonates, but in a slightly different manner to the above-mentioned health issues. Unlike polio, the other PHEICs (at least initially) did not have any vaccines<sup>88</sup>, in this sense they resonate with an *emergency* style response much more readily than polio can. However, the driving force behind the framing of polio as a security threat comes from the long-term goals attached to it by major global health actors – the pursuit of eradication. Thus, despite the existence of effective vaccines and the extremely low case numbers (in comparison to other health issues over these decades) it can

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<sup>87</sup> As in Chapter 3, security here referring to a national security threat.

<sup>88</sup> H1N1 which emerged in spring 2009, did however have a vaccine by Autumn that year (see CDC, 2009; CDC, 2019b).

be presented as a security concern and a PHEIC because of the threat posed to the protracted eradication goal by any increased spread in the virus or risk of importation.

Giesecke (2019: 1) explains that the 2003 outbreak of SARS and then avian influenza (H5N1) highlighted the need for the revision to the International Health Regulations (IHR) that had been requested in a 1995 WHA resolution. The IHR was then revised in 2005, a key change being ‘requirements for states to notify WHO of any event (infectious or not) with the potential to cause a public health emergency of international concern (PHEIC)’ (The Lancet, 2022: e927). As Wilder-Smith and Osman (2020: 1) note: ‘Declaring public health emergencies of international concern (PHEIC) is a cornerstone of the IHR’ and whilst there have been six events declared as PHEICs between 2007 and 2020, poliomyelitis is [by far] the longest running PHEIC.

The Emergency Committee has met around every three months since the initial declaration, approving the continuation of that status (see [polioeradication.org](http://polioeradication.org), h, n.d.). The company that polio keeps in terms of other health issues declared PHEICs is instructive as to the gravity placed on polio eradication by the World Health Assembly (Wilder-Smith et al., 2015: 2). Furthermore, as Wilder-Smith and Osman (2020: 2) highlight ‘[i]t may be perceived as odd that polio was declared a PHEIC at a time when there were only 68 recorded cases of wild poliovirus in 2014, compared to the previous year when there were 417 cases’. However, noting that the reason for the PHEIC was:

the risk that the goal of polio eradication may not be achieved, unless more international coordinated efforts occur. Although polio at the time was limited to a handful of countries, there were more than 26 exportation events, and spread through international spread was considered the main threat to eradicating polio. (Wilder-Smith and Osman, 2020: 2,7)

Regarding whether the ongoing PHEIC had helped in terms of encouraging more momentum around the issue, Rosenbauer (2021) was uncertain, noting that:

[the] Emergency Committee of the International Health Regulations who makes this declaration, every meeting, they meet every three months, there’s kind of this argument... ‘well you know, we’re now seven years into this, it’s supposed to be a one-year measure but because it’s an eradication effort you know it’s an extraordinary situation and we consider that it continues to be such an international concern’.

And commenting:

[I]s it operationally valuable? I don’t know but at this point probably every single thing helps and there was kind of this sense of we’ve invested so much, we’ve done so much, we’ve got to throw the kitchen sink at this thing and just try absolutely everything even if it has a political impact then that’s good as well, so I think that’s probably part of the rationale behind it.

Diment (2021) thought the PHEIC declaration definitely helped, and noted that: ‘...sitting in the World Health Assembly polio section, I’ve always been very surprised at the uniform

support for the programme from all countries... and I think that is because it is a global health emergency; and also because they can see the benefit of it...’

Meanwhile Heymann (2021) explained that whilst he was not involved with polio at the time of the PHEIC:

...I didn’t myself agree that the IHR should be calling it a [PHEIC], because that continues ‘til today; and it set a precedent that really in my view weakened the IHR which are supposed to be looking at acute events and dealing with acute events and then calling an end to the Public Health Emergency. Polio continues to call it a Public Health Emergency and to me it’s lost meaning.

Notwithstanding the practical utility of polio being a PHEIC, there is certainly a palpable tension in the utilisation of the PHEIC status (*emergency*) for a long-term health challenge for the very reason that Heymann highlights. There is an argument to be made that PHEICs (as employed in this instance) are more of a political instrument than purely a tool for crisis response, and this tension points to broader challenges in global health regarding clarity as to what is/is not and should/should not be considered an international health emergency (see also Eccleston-Turner and Wenham, 2022).

Another dimension of note regarding security dynamics is the threat of bioterrorism. In many ways this factor detracts from the goal of eradication and is in some ways a justification for a move to control rather than achieving zero cases – which to an extent could impede polio’s ability to be framed as a threat. For example, Caplan (2009: 2193) notes that ‘[b]ioterrorism continues to be an all too real possibility. This fact may mean that for some diseases no trust ought to be placed in claims of eradication’. Furthermore, ‘[a]dded to this is the threat of the emergence of synthetic biology that permits the creation of the genomes of various viruses and microbes. The polio and smallpox genomes have both been mapped and information about them is readily available to anyone seeking it’ (Caplan, 2009: 2193). In sum arguing that this fact makes the prospect of eradication for some diseases (such as polio) misplaced and a dream that cannot be relied upon – instead suggesting elimination or control (Caplan 2009: 2193; see also Razum et al., 2019). In many ways these kinds of challenges can be seen as intractable impediments to eradication progress, and thus one might argue that polio’s resonance with this dynamic is eroded. However, given its ongoing status as a PHEIC, it appears that as things stand, there is more concern afforded to the fear of a missed opportunity of reaching zero cases, than to the highlighted concerns.

#### 4.8.4 Fragmentation in global health, proliferation of actors/shifts in power and influence

The shift in the makeup of the main actors in global health has arguably benefited polio's cause. This is often described as being seen from the turn of the century when global health saw an explosion of actors and funding (see Garrett, 2007). However, since its emergence as a *global* health priority in the late 1980s, polio has amassed an assortment of support from quarters outside the 'traditional' actors in global health. It continues to do so, as well as being a priority focus for traditional actors like the WHO. The combination of the variety of actors in the public private partnership working towards polio eradication has undoubtedly benefited its cause (see section 4.9).

Ruckert and Labonté (2014: 1601) writing on 'the good, the bad and the ugly' of public private partnerships, note:

a relative decline in importance and financial support for traditional global health actors, and large increases in international support for novel partnerships and initiatives which have been emphasized, including by the WHO itself, as the most promising way forward in global health.

Furthermore, that '[t]he rise of new actors has also meant new challenges for the effective coordination of global health efforts' noting how powerful global health partnerships 'operate in parallel to many multilateral organisations and directly compete for donor attention and resources. Global health governance has thus become more fragmented, uncoordinated and donor driven' (Ruckert and Labonté, 2014: 1601). Echoes of such dynamics can be seen in the changes in funding being directed toward the polio campaign (the largest sector is now non-governmental/private sector donors).

Reich (2000: 617) explains that one of the reasons for the prominence of public private partnerships on the international policy agenda was that 'new public health problems [were] being pushed onto the international policy agenda, by [NGOs] that [had] gained influence over the past two decades'. However, 'these problems often involve issues of health equity between the rich and the poor of the world' and '[n]either public nor private organizations are capable of resolving such problems on their own. Traditional public health groups are confronted by limited financial resources, complex social and behavioral problems, rapid disease transmission across national boundaries and reduced state responsibilities' (Reich, 2000: 617). This can be seen in the unique partnership that is the GPEI, as well as in the events and influences that initially pushed the programme into existence.

Section 3.6 described the fragmentation of global health not just in terms of the increase in actors with divergent targets often working across each other, but also noted shifts in *types* of

actors. Scholars have pointed to this shift in the ‘nexus of international-health leadership away from WHO and toward a new group of powerful institutional actors, including the Gates Foundation, the World Bank, and [...] [GAVI]’ (Packard, 2016: 267; see also Sridhar, 2012). Arguably polio eradication has benefited from this shift. Having the WHO as a leader of the polio initiative enables the endeavour to maintain political credibility as enshrined in the 1988 eradication resolution and through normative influence that the organization (arguably) still generates. Meanwhile having secured the participation of the ‘new guard’ in global health, the eradication endeavour protected its longer-term sustenance (e.g., through Gates and GAVI), thus benefiting from the resonance of the ‘Gates approach’<sup>89</sup> (Storeng, 2014) and bridging and utilizing a divide between the new and the old.

For diarrhoeal diseases, fragmentation (i.e., an increasingly uncoordinated global health arena) was reflected in the piecemeal developments in the policy stream, not many of which were diarrhoeal disease specific. For polio, the opposite is true, where there is very clear programme and a clarity of purpose, in the face of the challenges the GPEI has undoubtedly faced. The GPEI has managed to negotiate some very tricky terrain with regards to a difficult first decade of the millennium – progress was patchy, donors were becoming impatient, and yet the programme persisted. Much of this can be attributed to the addition of new powerful partners (Gates Foundation) as commitments from countries waned. In this sense the growth of the non-traditional actors in global health has been invaluable to the long-term sustenance of the GPEI. Without the continued presence, advocacy, and funding from Rotary, and in more recent years the high-profile support and significant financial input of the Gates Foundation, for example, the programme would likely not still be in motion.

#### 4.8.5 Summary

There is a delicate and continuous balancing act going on between the poliovirus naturally resonating with the elements described here, and there being a constant process of negotiation in terms of threats to that resonance, i.e., the resonance is actively encouraged through the actions of effective policy entrepreneurs, pointing firmly to the co-existence of agency (through GPEI work and advocacy) and the intrinsic attributes of this virus (eradicable) as co-authors of polio’s prominence in global health. This is also evidenced by the effective *utilization* of the PHEIC for polio which is divergent from its application for other infectious diseases. In short (and in contrast to diarrhoeal diseases) the dominant dynamics in this stream

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<sup>89</sup> ‘an increasingly powerful business-oriented, technology-focused public health ideology propagated by Bill Gates and his foundation (see, e.g., Birn, 2005)’ (Storeng, 2014: 871).



largely align with polio eradication's cause, despite there being undercurrents which signify an enduring interest in more holistic/horizontal approaches to global health decision making.

Whilst overall the components in this stream strongly support polio's prominence on the agenda; what is less effectively revealed by these dynamics are some of the challenges faced by those advocating for polio eradication – such as sustaining political commitment to the issue at regional/national levels. The eradication campaign's story is replete with examples of challenges on the ground. In short, whilst the continuous, broad alignment of the dynamics in each 'stream' illuminates the sustained prominence of this issue; they are less able, at a global level, to provide nuanced insights into the more 'zoomed in' detail and challenges that face those working to keep polio a priority. Nevertheless, this in itself reveals the fact that global level prioritization does not necessarily translate into straightforward implementation.

#### **4.9 Policy entrepreneurs**

As I travelled through the last battlefields of the war against polio in northern Nigeria and Pakistan, talking to government officials, it was apparent that these countries would have paid no attention to polio eradication without international pressure. Polio was not a priority for their governments or for the public. It was the WHO, UNICEF, the Gates Foundation, the US Centers for Disease Control and Prevention (CDC) and Rotary International—the organisations leading the global polio eradication campaign—that were pushing these countries to act. (Abraham, 2018: xxiii)

As discussed Chapter 2 this thesis expands the conceptualisation of policy entrepreneur to include organizations/initiatives. For polio then, the obvious point of focus for this section is the public-private partnership that is the GPEI, consisting of the WHO, Rotary International, UNICEF, the Gates Foundation, GAVI and the CDC – 'the largest private-public partnership for health' (WHO, 2017b) launched with the resolution to eradicate polio in 1988 (Aylward and Tangermann, 2011). Together, '[t]his partnership, its organisational structure, its operating procedures, and its impressive infrastructure on the ground, has driven polio almost to extinction' (IMB, 2020a: 58).

This section touches on the role of each partner. Each brings with it different strengths. Whilst Rotary is, by and large, the key advocate for this initiative, the other partners make vital contributions, making up a powerful group of support for polio eradication—strong advocacy is bolstered by technical, political, and financial support.

As the leader of the endeavour, the WHO then provides a point of focus, and provides regular normative pressure and encouragement in working toward eradication - reiterating, and recommitting to the 1988 declaration (see section 4.7). As described by the GPEI '[the WHO] coordinates the major strategic planning, management and administration processes of the

[GPEI]’ (polioeradication.org, i, n.d.). Additionally, it is ‘responsible for the systematic collection, collation, and dissemination of standardized information on strategy implementation and impact, particularly in the areas of surveillance and supplementary immunization activities’ (polioeradication.org, i, n.d.). It ‘coordinates operational and basic research, provides technical and operational support to ministries of health, and coordinates the training and deployment of human resources for supplementary technical assistance’ (polioeradication.org, i, n.d.). Furthermore,

WHO has a lead role in establishing certification-standard surveillance of acute flaccid paralysis (AFP), resource mobilization, donor coordination, advocacy and communications. WHO serves as secretariat to the certification process and facilitates implementation and monitoring of biocontainment activities. (polioeradication.org, i, n.d.)

The broad commitment of the WHO to the endeavour can also be seen in the statements of Director General’s over the 2000-2020 period. In 2001 Gro Harlem Brundtland noted that: “‘Victory over the poliovirus is within sight’” and that “‘We must now close in on the remaining strongholds of the disease and use all possible resources to extinguish polio’”, ‘We ask everyone involved maintain the focus on achieving this historical milestone in international public health’” (BBC News, 2001). Lee Jong-wook ‘in his first media encounter as Director-General’ stated: “‘I am immediately upgrading WHO’s capacity to support India, Nigeria, Pakistan, and Egypt in their efforts to immunise every child against polio’” (Sharma, 2003: 454). Rehwagen (2006) notes ‘In his report to the assembly, written the day before his death, WHO’s director general, Lee Jong-wook, had said: “The world has invested \$4billion [£2.1bn; €3.1bn] <sup>[90]</sup> so far in polio eradication. I appeal to you all to continue your support - both political and financial- until the job is finished’”. Subsequently Anders Nordstrom (in a brief stint as acting Director-General) ‘[i]n his closing remarks to the assembly’s plenary session [...] referred to Dr Lee’s determination to see polio eradicated. He said, “In his memory, in honour of all that he stood for, let us commit with absolute dedication to see that goal quickly accomplished’” (Rehwagen, 2006).

Dr Margaret Chan ‘made it clear that polio eradication would be one of her main priorities. Indeed, under her leadership the effort would become WHO’s number 1 operational priority’ (polioeradication.org, 2017a). The GPEI described Dr. Chan as ‘a driving force in the progress toward eradication’ and note that ‘[i]n her last address as Director-General at the World Health Assembly, Dr Chan named polio eradication as one of the initiatives she most wants to succeed, “...the world has never been so close. We must keep up our efforts to make

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<sup>90</sup> Lee Jong-wook was writing in 2004. At the time of writing investments in polio now stand at over \$18 billion, which in itself shows just how hard the final stretch of the initiative is proving to be.

eradication a reality” (polioeradication.org, 2017b). Dr Tedros Adhanom Ghebreyesus has variously emphasized a commitment to the endeavour, for example in 2019:

This year I have taken over as chair of the Polio Oversight Board. That’s why my first trip of the New Year was to Afghanistan and Pakistan. These are the two countries that are the last frontier of wild poliovirus. We are so close to ridding humanity of this disease, and I am personally committed to ensuring that we do. (WHO, 2019h)

The commitment from the WHO to the effort has been consistently articulated over this period. Whilst there have certainly been ebbs and flows in progress and numerous people have highlighted the tiredness and fatigue of those working on the programme over such a long period; in general, we can see that polio eradication has continued to be pushed by the WHO as an important and priority goal.

Rotary International has been an indispensable part of the endeavour from the beginning. Keen to have a cause to focus on<sup>91</sup>; Rotary pushed for attention to the issue. Without Rotary’s advocacy the eradication initiative would not have been as likely to take off and would certainly have struggled to sustain as long-term high-profile concern for the 34 years that it has thus far. The organization’s key responsibilities are listed as ‘fundraising, advocacy and volunteer recruitment’ (polioeradication.org, i, n.d.). Diment (2021) (Rotary International’s Volunteer National Advocacy Advisor for Polio Eradication) noted ‘...you just have to keep up the advocacy you know all the time’, and described the GPEI as: ‘...an amazing public private partnership and a model really for future health programmes...’. Diment (2021) explained that the national advocacy advisors ‘...[liase] very closely with the 20 key governments to keep it in front of them...’ also mentioning that: ‘...we try to do two pretty big events in Brussels a couple of times a year to keep it on the agenda’.

Rotary’s role in advocating for support of the eradication initiative fits with the concept of policy entrepreneurs in several ways. Kingdon (2003: 179) describes ‘advocates who are willing to invest their resources—time, energy, reputation, money—to promote a position in return for anticipated future gain in the form of material, purposive, or solidary benefits’ and notes ‘[t]hey bring several key resources into the fray: their claims to a hearing, their political connections and negotiating skills, and their sheer persistence’ (Kingdon, 2003: 205). Indeed, several interviewees raised Rotary/Rotarian’s ability to persuade in ways that other actors may have found more limitation. Rosenbauer (2021) explained:

[Rotary are] incredible at mobilising their own network to donate money, this same network can mobilise communities and political leaders you know on the ground... the block medical

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<sup>91</sup> As mentioned, Rotary’s initial interest in polio eradication was in part driven by looking for a project to focus on leading up to their centenary.

officer in Karachi ‘who cares if WHO or UNICEF knock on his door?’, but if Rotary, if the local Rotarian comes who’s a business leader, who’s a community leader they have an influence...

Rosenbauer (2021) also noted Rotary’s ability to solicit donations: ‘...they have an influence with donor governments, you know the reason why the G7 gives so much money is all the advocacy work that Rotary does with them...’. Heymann (2021) in relation to noting the importance of political engagement in the polio programme explained:

...Rotary was a group that tried to get political engagement at the very top level through its clubs, because the businessmen in Rotary are very important in most countries and they have access to high level of leaders including Heads of State, so they’ve been extremely valuable the whole way through and still are and keep Heads of State sensitised.

Corkum (2021) in response to a question on advocates for the issue (of polio eradication) that stand out noted that ‘I think the GPEI as a whole has been incredible...’ and also that:

...Rotary really stands out and it’s not just about the funding but even in countries in getting Rotarians involved and mobilisation and local mobilisation, social mobilisation and advocacy and you know with governments including donor governments it’s incredible so... you can’t have a discussion about polio and not mention them as a star, a gold star in terms of partners and have stood by despite the challenges, and have remained a strong partner.

As Aylward et al. (2000: 291) note:

The poliomyelitis initiative has been particularly fortunate in having had from the outset a global private sector partner, Rotary International, whose role has gone far beyond the provision of funding to include a substantial advocacy and public information component.

The Gates Foundation has been indispensable to the continuation of the programme – whilst they have been contributing financially to the programme since 2000, in 2007 ‘it became the largest single funder of the [GPEI]’ (Abraham, 2018: 127). Furthermore, the support of powerful actors in global health such as Gates, goes beyond the benefits of the obvious financial contributions; they are also able to provide an increased platform and profile for the issue. Gates has long expressed his support for the eradication goal – which is cited as a ‘top priority of the foundation’ (gatesfoundation.org, c, n.d). Another example of this support and advocacy can be seen in his 2011 Annual Letter where he stresses the financial benefits of achieving eradication: ‘The long-term benefits of the last couple of billion dollars spent on eradication will be truly phenomenal’ and ‘[e]radication could save the world up to \$50 billion over the next 25 years’ (Gates, 2011). He emphasizes that:

success will energize the field of global health by showing that investments in health lead to amazing victories. The eradication effort illustrates so well how a major advance in the human condition requires resolve and courageous leadership. To win these big important fights, partnerships, money, science, politics, and delivery in developing countries have to come together on a global scale. (Gates, 2011)

In short, utilising and amplifying the purported benefits that eradication will bring to keep donors funding the initiative. Such remarks also subtly hint at another contributor to the sustenance of the programme; that is the concern that given the abundant investments both financial and timewise into the initiative, there is real concern that should the programme fail, it would be difficult to drum up support for such an effort again.

Additionally, the Foundation's focus on vaccines and funding the development of the recently emergency approved nOPV2 is further evidence of their invaluable contribution to the polio endeavour and their position as an effective partner in the GPEI. Indeed, whilst relating the financial and technical resource support of the Gates Foundation to the partnership, the GPEI reiterates the Foundation's 'unique ability to contribute by taking big risks and making non-traditional investments' – vaccines, funding GIS maps, and emergency operations being examples cited (polioeradication.org, i, n.d.). Diment (2021) noted technological innovations as some of the key developments for tackling polio, mentioning the use of mobile phones by health workers, and the introduction of GPS mapping.

Moreover, Bill Gates has a unique position in being able 'personally [urge] government officials and donors to maintain their commitments [to polio eradication]' and the Gates Foundation has an ability to 'identify and respond immediately to program gaps that the frequently cash-strapped WHO, CDC, and UNICEF would have been hard-pressed to address' (Bristol and Simoneau, 2019: 6). One example of this would be his advocacy in terms of the Abuja Commitments as outlined in section 4.7. In this sense displaying some of the more traditional qualities outlined by Kingdon in his characterization of policy entrepreneurship.

UNICEF then 'procures and distributes polio vaccines' and with the WHO 'supports countries in the implementation of intensified National Immunization Days (NIDs) and Sub-National Immunization Days (SNIDs) as well as mop-up campaigns in countries' (polioeradication.org, i, n.d.). UNICEF also takes a role in helping countries with communication strategies which are 'vital to local acceptance of the vaccine' (polioeradication.org, i, n.d.). These are essential elements to the successful operation of such an initiative and point to the need for effective advocacy, communication, and strategy at all levels – global, national, and local. The GPEI also points to UNICEF's role in helping access to hard-to-reach places such as in countries that are affected by conflict, as well as noting their contribution to eradication policies/action plans/training materials/public information and crucially, being 'an active partner in advocacy and resource mobilization' (polioeradication.org, i, n.d.).

The Centers for Disease Control offers ‘scientific and technical expertise to the GPEI’ (polioeradication.org, i, n.d.). Aylward (2011: 18) explained that:

given that an eradication initiative can take decades to complete, an active research agenda is key to ensuring major developments are exploited in areas such as diagnostics, vaccinology, and cold-chain technology to enhance program effectiveness and reduce cost.

He also notes that the initiatives’ capacity to do so was ‘greatly facilitated by the [CDC] [...] which brought its epidemiologic and virological expertise to the program’ (Aylward, 2011: 18).

Finally, GAVI ‘supports the inclusion of inactivated polio vaccine (IPV) in routine immunisation programmes and the strengthening of health systems in GAVI-supported countries’ (polioeradication.org, i, n.d.). GAVI is the newest main partner of the GPEI, joining in 2019 (polioeradication.org, i, n.d.). This development is also reflective of recommendation from the Independent Monitoring Board for the GPEI to make their efforts more integrative. Bristol and Simoneau (2019: 7) explain: ‘The IMB recommended as early as October 2014 that the GPEI make GAVI part of the partnership as a way to boost broader immunization systems’. This steadily increasing interest in integration<sup>92</sup> with other health/immunization goals that we can see emerging from the GPEI was suggested in the 1988 resolution—that the goal of eradication should be pursued in conjunction with strengthening other immunization efforts. Whilst the initiative has been criticised for its lack of integration in the intervening years, more closely adhering to the recommendation for integration will be a necessary step for the polio partnership to work toward finally achieving its target – weak immunization systems being one of the remaining challenges to be overcome<sup>93</sup> (see also Bristol, 2019).

A general trait of the partnership relevant to this section has been outlined by Closser (2012: 386) who observes that initiative’s ‘culture of optimism ensures the continuation of the project by obscuring existing problems and convincing donors and officials alike that eradication is imminent’ but that this also ‘makes polio eradication more difficult by preventing open, objective analysis of the problems the project faces’. Closser (2012: 386) argues that:

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<sup>92</sup> The most recent GPEI strategy 2022-2026 also ‘centres on integrating polio activities into routine immunisation and primary health care, and strengthening engagement with local leaders to build trust’ (Cousins, 2022: 2004).

<sup>93</sup> The IMB has also raised concerns about the commitment to integration, in a 2020 report stating: ‘For now, integration seems to be at best “If it’s feasible, you should do integration”, and at worst mere rhetoric’ (IMB, 2020b: 10).

Part of the reason for optimism in polio eradication [...] is strategic. Because eradication is so high-risk, its proponents must defend their project against those who argue that limited funding would be better spent elsewhere. However, optimism in global health goes beyond simple strategy: it is a *cultural* characteristic of the Polio Eradication Initiative.

Indeed, this optimistic approach by organisations that eradication is ‘just around the corner’ is a hallmark of the initiative and is commensurate with the glass half full slant that can be evidenced in much of the rhetoric (bar that from the Independent Monitoring Board) stemming from initiative and advocacy for it.

Despite its flaws it is precisely this kind of advocacy and unrelenting optimism that has assisted the sustainability of the programme. As Abraham (2018: xxv) put it: ‘Perhaps this determination to succeed no matter what is an essential ingredient for any endeavour this large and ambitious’. Indeed, Kingdon’s (2003: 181) description of traits of policy entrepreneurs reiterate this point: ‘probably most important, successful entrepreneurs are persistent. Many potentially influential people might have expertise and political skill, but sheer tenacity pays off’.

Lahariya (2007: 488) also outlines that:

In the history of public health activities, it is likely that no effort has ever been organized on such a wide scale as that of polio eradication. Political advocacy targeted towards the participation of developing countries has been instrumental in sustaining the programme, involving volunteers, and keeping vaccination coverage high.

The importance of advocacy can also be seen in incidences such as the vaccine boycott in Nigeria - Lahariya (2007: 488) credits high-level advocacy as crucial to the resumption of activities there. In sum, multiple policy entrepreneurs have been a key feature in polio eradication.

Relatedly, Corkum (2021) noted that: ‘...I think one has to be optimistic you know otherwise it’s difficult to get up and do the job...’, also pointing to the fact that: ‘...the tools, the principles, and the strategies work and it’s very clear from the fact that there’s only two countries globally that still have endemic polio. So it’s very clear the possibility is there and I think that’s what gives hope is it is possible, it is feasible and it’s worked in every other geography including really challenging places...’.

Indeed, the elimination of polio across much of the globe is powerful evidence to help bolster the advocacy messaging, and belief in the potential of the initiative.

#### *4.9.1 Summary*

The necessity of the advocacy, work, and adaptation of the GPEI to keep polio on the agenda, has been touched on throughout the streams.

In the problem stream, we can observe an imperative for the issue to be framed as one requiring constant focus and support from donors, whilst demonstrating the continued viability of the endeavour despite its prolonged existence and missed targets – no mean feat.

In the policy stream the partnership works to strengthen and improve the implementation of the solution. Examples of such activity can be seen across the glut of policy developments outlined in section 4.7 i.e., the updated programme strategies, vaccine developments and resolutions.

Whilst the dynamics discussed in the political stream naturally mesh with many of polioviruses' intrinsic characteristics, this resonance has been nurtured by the presence and work of advocates for polio eradication.

Across the streams, these dynamics have been reinforced through efforts of these actors who disseminate how close the goal is, how important of an opportunity this is - striving to ensure the viability of the solution, working to ensure support at all levels, as well as persuading governments and other stakeholders to continue financing – keeping key actors aware of the issue.

Overall, what we can take away from this is that the eradication programme relies on the continued existence of this partnership and the novel contributions – technical, financial, normative, and political. There are certainly arguments to be made regarding the strengths and weaknesses of the GPEI, and whether the continuation of the programme, despite concerns regarding the viability of the goal, is sensible. However, in terms of purely contemplating how polio has cultivated an ongoing high profile on the global health agenda (the goal of this chapter) – the existence, activities, and strengths of the GPEI is a big part of the answer.

#### **4.10 Policy windows**

Kingdon's multiple streams approach predominantly sets out to explain how issues move onto the agenda in the first place. This chapter has demonstrated that polio has sustained a position of prominence in global health since the resolution to eradicate it in 1988. Accordingly, the need for policy windows to project polio onto an agenda is thus for all intents and purposes obsolete post 1988 and over the 2000-2020 period - at a global level. However, there are identifiable developments over this period which can be seen as having leant themselves to



rather buoying polio's cause/fuelling sustained focus on the issue. Whilst polio was already 'on the agenda', events such as increases in cases and the resulting 2014 PHEIC conceivably acted as an iteration of a policy window - perhaps in this sense more opportunities to reaffirm focus and emergency tempo on the issue. The continuation of polio's status as a PHEIC is evidence of the gravity accorded to achieving polio eradication by the upper echelons of the global health community (certainly in this instance by the World Health Assembly) – although opinions on the actual impact that the PHEIC has had for polio (and whether there should even be one) are, as discussed, not uniform. Additionally, moments of clear success for the programme – e.g., wild poliovirus eradication in Africa and India have feasibly acted as fuel to the viability of the whole endeavour.

#### **4.11 Discussion and conclusion**

As with the previous case this chapter began by demonstrating how the multiple streams approach provides a means through which we can better understand some of the dynamics shaping polio's rise to prominence in global health. Whilst the profile of diarrhoeal diseases (and the Control for Diarrhoeal Diseases programme) steadily disintegrated and merged with other health endeavours as the years went by, the polio programme has managed to foster its prominent status long term, sailing past numerous projected deadlines, and drawing an assemblage of high-profile actors under the umbrella of its partnership.

The utility of multiple streams framework in this case could strand us in 1988 with achievement of the eradication resolution, when polio 'made it' onto the agenda following the confluence of a well-articulated 'problem', a viable 'policy solution' and an amenable political environment in conjunction with the work of high-profile policy entrepreneurs. However, branching from the traditional demarcations of the approach, but keeping focus on the same key concepts shows that, in this case, the continued viability of these 'streams' after that period, offers insight into why polio eradication has (despite fluctuations in progress, and many an unanticipated challenge) become something of a behemoth in the global health arena, cultivating some of the most prominent actors in long term commitment to a now 34-year-old objective.

The maintenance of these elements by means of policy entrepreneurs and their ability to withstand and adapt to challenges appears to have been crucial to this issue maintaining its place on the global health agenda. Inevitably there is the constant threat of erosion of these dynamics – for example the capacity for this issue to be elevated to 'problem' status fundamentally relies on the dominance of a view that this disease *is* eradicable (not just

theoretically). The longer the process of eradication takes the more challenging it becomes for advocates to sustain the ‘problem’ status of polio as opposed to it reverting to a ‘condition’ status – particularly in the face of so many competing health issues. This threat inevitably applies to the other streams also.

The policy stream, as outlined, demonstrates a relative profusion of advancements and encouragement for the issue in terms of advocacy, commitment at global (and country) levels, and a refining and streamlining of the programme and tools (e.g., amended vaccines and updated strategies). However, the ability to maintain the levels of activity we can see over the last two decades, again, relies on a conglomeration of high-profile actors continually working on the issue with an extraordinary level of commitment and support (financial and normative) and not abandoning the initiative in favour of other global health or development goals.

Indeed, by and large, the sustainability of polio eradication on the global health agenda is a testament to the resilience of its advocates and their ability to withstand, respond, and adapt to pressure to capitulate from eradication as a goal.

Finally, the responsiveness of the political stream over this period to the issue of polio is again demonstrative of the extensive advocacy work for polio eradication (in addition to the general alignment of eradication with what has for a long time been resilient energy in global health – a partiality for vertical programmes and for palpable targets (see also Cairncross et al., 1997; Marchal et al., 2009; De Maeseeneer et al., 2008). Concurrently there is clear resonance of the issue with other dominant dynamics in the political stream, and support for the programme at elevated levels in global health as evidenced by the ongoing WHO commitment to the programme/1988 resolution/2014 ongoing PHEIC.

In terms of erosion of legitimacy all three streams are threatened and indeed suffering. The factors outlined which help polio maintain its ‘problem’ status are especially vulnerable to the passing of time (missed targets) and to the erosion of the belief in the possibility of eradication, or indeed the ethics of it, given the presence of other pressing health and development challenges. The glut of activity in the policy stream is a real testament to the energies of the GPEI. However, the perceived viability of the central policy solution (vaccines plus eradication) is endangered by factors such as the presence and increase of cVDPVs, in addition to very real socio-political implementation challenges – conflict, vaccine hesitancy/bans, maintaining financing, difficult to reach areas and competition with other pressing health challenges, to name but a few.

The politics stream then faces potential shifts in mood and climate – COVID-19 is possibly the greatest harbinger of transformation in this. Can a 34-year-old mission survive in this new ground? Many of these difficulties have been repeatedly outlined in reports by the Independent Monitoring Board as well as being covered in wider literature, pointing to the not inconsiderable pressure that the programme is now under to deliver on its goal as soon as it possibly can. As such, just how long these dynamics will remain broadly in sync for polio eradication remains to be seen.

Multiple streams as interpreted and utilised here, has demonstrated application beyond the initial emergence of an issue onto an agenda, albeit whilst branching from the traditional distinctions of the approach. Some of the dynamics lose their potency in this unfamiliar environment – despite the ability for continued analysis of the key elements: problem status, policy developments, and political climate, permitting us to recognise subtleties contributing to the long-term prominence of polio. Doing so also helps to observe the evident push-pull within each stream in terms of keeping polio eradication resonant.

In sum, the streams came together for this issue in the 1980s because of polio being technically eradicable, evidence of the successes of polio immunization in LMICs (alongside lameness surveys demonstrating an awareness of the problem therein), a certain hubris following the vanquishing of smallpox, and, without doubt, via the lobbying of powerful parties (see Muraskin, 2017, Abraham, 2018, Shiffman et al., 2002 amongst others). Some of these dynamics continue to drive its high profile in global health circles. Furthermore, it is a logical next step, having considered the developments in these streams up to the point of initial convergence in the 1980s, to explore whether dynamics which influenced the original elevation of this disease to global level, held beyond that point. It seems that they have, irrespective of inevitable activity and movement in these streams as the programme has progressed and as the parameters of the initiative have shifted (i.e., countries being declared polio free, falling numbers of cases, challenges with vaccines).

Manifesting through all the streams in different guises has been the fact that polio is *technically eradicable*. That has not changed, and if the other elements/actors outlined throughout this chapter continue to believe in, prioritise, and support that goal, polio holds onto its high-profile status. If eradication were not an option, it is unlikely this disease would have attained such a high profile and long-term traction on the global health agenda. In this sense then it represents something of a ‘special case’ but is also an unavoidably important case for this research given the magnitude of attention it has received by its advocates. In short, the determination across agencies to meet this goal tells us something about implicit

drivers in global health - the sheer power of the beguiling promise of disease eradication and a robust will to not abandon something which has warranted so much investment—political, financial, and timewise.

Despite enduring trials in the homestretch of this initiative, the numbers we can now recite in terms of polio infections averted are remarkable. They are a testament to the efforts of those involved in the program – notably the front-line workers without whose dedication we would not be witnessing such low case numbers. As highlighted, global incidences of polio have decreased by over 99% since the GPEI was founded, and ‘[a]lmost 20 million people are able to walk today who would otherwise have been paralysed’, such statistics are hard to grasp (WHO, 2022a).

However, as Abraham (2018: xv) notes: ‘Success in an eradication campaign is measured not by a dramatic reduction of the disease to a minor public health problem in a few pockets of the world, but by the complete extinction of the pathogen causing the disease’. This has meant that the incredible successes in terms of polio incidence reduction are quite often overshadowed by the ongoing unmet goal of complete eradication, raising questions both as to the feasibility of eradication as an objective and the intrinsic challenges that come with setting such goals (see also Razum et al., 2019). Furthermore, Abraham (2018: xxvi) identifies ‘this clash between health initiatives decided and conceived in the world’s centres of power, and the needs and aspirations of those in developing countries’.

This issue has been highlighted by numerous scholars who question the eradication initiative considering other global/local health goals – making a strong case for other more holistic, locally owned objectives. Additionally, given the myriad missed deadlines in terms of years set for when eradication would be achieved, it is unsurprising and understandable that questions have been raised around the viability of *complete eradication* as a goal. Proposals for alternative, ostensibly more prudent goals being set (such as control); and opinions being expressed that the energies/resources directed toward eradication could more effectively/equitably be targeted elsewhere have been raised and have gained momentum (see Razum et al., 2019). Arita et al. (2006: 852) expressed a lack of belief in the likelihood of eradication being achieved and argued ‘[e]fforts should shift from global eradication to a goal of bringing the disease under control’. Razum et al. (2019: 3) made the case for moving to a control programme as opposed to indefinitely pursuing ‘the presently unattainable goal of eradication’. Chumakov et al. (2021: e1175) have proposed a shift of the programme’s approach, to one focused on ‘preventing disease rather than getting rid of the virus’.

The Statement of the Thirty-second Polio IHR Emergency Committee in June 2022 ‘unanimously agreed that the risk of international spread of poliovirus remains a Public Health Emergency of International Concern (PHEIC) and recommended the extension of Temporary Recommendations for a further three months’ (WHO, 2022f). In 2021 the GPEI launched its Polio Eradication Strategy for 2022-2026 ‘to place GPEI back on the path to eradication, we must operate with an emergency tempo’ (WHO/GPEI, 2021: foreword). The strategy is characterised as being ‘more holistic’ which ‘will bring the partnership beyond a strictly epidemiological and “vertical” approach to eradication through transformational and sustainable solutions’ (WHO/GPEI, 2021: 1).

The new strategy sets 2023 as its goal for interrupting wild poliovirus, followed by certification in 2026 (WHO/GPEI, 2021: 7). It is likely more challenging than ever for the programme to maintain the necessary momentum to achieve this target given shifts in global health landscape: COVID-19, vaccine hesitancy (for polio and in general), instability in target countries with limits on ability to vaccinate, innumerable competing global health and development priorities, and national level challenges relating to momentum and commitment.

There is no shortage of literature on the history of polio and the GPEI outlining progress, setbacks and how close (or not) we may be to the goal of eradication. Whilst this chapter has inevitably reiterated many similar points whilst coming to one understanding of polio’s course, the main output here was not to lay out every single event that has transpired over the last few decades for polio in global health, but to shed light and offer a perspective regarding *why* polio has stayed on the agenda – what factors have contributed to its high profile. It concludes by reaffirming that the innate characteristics of this virus (eradicable) fastened to a powerful policy solution (vaccine plus eradication) alongside resonance with the broad political climate in global health provide an explanation. But the other element that has been critical to maintaining the resonance of polio through these three streams has been the efforts and qualities of its supporters – the GPEI.

Drawing the threads of this thesis together, the following chapter will offer a discussion of the different journeys these two case studies have taken. In doing so it will more clearly unpack the implications of the analysis in both chapters, contemplate what the results of the enquiry mean in the context of the central research question and reiterate how these cases have helped to answer it.

## Chapter 5

### Conclusion

#### Introduction

This thesis has drawn out subtleties which help us to better understand why diarrhoeal diseases and polio have had such different trajectories on the global health agenda over the last several decades. It has developed a robust response to the research question which queried variation in profile of health issues, and sought to better understand fluctuations and sustainability in prominence in this arena over time. In doing so, it has also emphasized the facility of drawing on the multiple streams approach in this context. It speaks to a body of literature which has utilised that, and other, public policy theories (or aspects of them) to shine light on implicit and explicit drivers of prioritization for varied issues in global health. This concluding chapter summarises the specificities of the findings, draws out challenges that have occurred in the adaptation of the theory for this analysis, as well as the ways in which this approach has been beneficial. In wrapping up it also highlights areas identified over the course of the project as particularly disposed for further study.

#### 5.1 Aims of the thesis and summarising findings

This project was initiated based on the existing knowledge that diarrhoeal diseases have fallen in prominence on the global health agenda despite a continued high burden (morbidity and mortality) (see Bump et al., 2013) and was thus driven to take the natural next step and query observable incommensurability between disease burden and profile of issues on the global health agenda. To do so the thesis drew on Kingdon's multiple streams theory which offers a means of understanding why some issues emerge on agendas whilst other might flounder (Kingdon, 2003). Kingdon presents three facilitatory streams (*problem*, *policy* and *political*) in addition to *policy windows* and *policy entrepreneurs* as five factors of importance in the agenda setting process. The thesis adapted the theory slightly for use at the global level (see section 2.8) expanding the conception of policy entrepreneurs to encompass a wider array of influences (i.e., organisations/initiatives) as opposed to solely focusing on individuals. The policy stream was interpreted as selected policy developments for each case over the past two decades to maintain the facility of the stream but recognising the need to consolidate it for this 'zoomed out' level of analysis. The political stream was understood as the 'climate' in global health, looking to key dynamics which appear to have affected how (and which) health issues have accrued greater prominence.

The thesis speaks to a body of literature that has begun to identify some of the important dynamics in agenda setting, which provides a scaffold for this project. The elements drawn out that appear important to the prominence (or lack thereof) of a health issue correlate with the kinds of causative fundamentals already identified by scholars – i.e., actors, ideas, interests, and institutions (Smith and Shiffman, 2020). However, the specific choice of case studies and the distinct time periods chosen gives the thesis the opportunity to make a key contribution to an expanding arena of study which seeks to deepen our understanding of the many drivers at play in global health agenda setting. The decision to approach this question with a comparative methodology is a response to existing literature which has noted the lack of comparative work in this area (see Smith and Shiffman, 2020) as well as a necessary step given the premise of the research question.

Despite taking a comparative angle, the purpose of this project is not to hypothesize how health issues *should* be prioritised or how agenda setting in this field should work, or to weigh up whether polio or diarrhoeal diseases should have more/less prominence, rather it is to look at cases which highlight incommensurability between disease burden and profile and can offer us insight into factors and processes which help determine agenda status (and in polio's case go some way to helping us understand agenda sustainability). Through doing so it draws attention to numerous areas for further investigation and highlights some of the ethical dilemmas that come with global health agenda setting for these two cases – many of which are feasibly more widely applicable in this arena.

As outlined in Chapter 1, though the thesis' most obvious point of comparison is *between* the two cases, there is also a comparative angle taken *within* each case study. That is, the project focuses on two distinct phases in international/global health governance. Firstly, it analyses the emergence of each issue to a prominent status in a period that can be identified as post-Alma Ata. This is followed by consideration of the journey of each health issue in the time of *global* health. Doing so allows analysis of each issue over an extended period, but with particular emphasis on two significant phases in health governance. Approaching the project this way allowed for a deeper analysis of each case.

Much research focuses on the emergence of an issue to prominence or indeed fall from prominence, but there is less that considers the need to understand the longer-term trajectory of issues' in this arena<sup>94</sup>. Such an approach was deemed important for this research in terms of understanding each case more fully, and was propelled by recognition that health issues are

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<sup>94</sup> Smith's (2014) work made suggestions in this regard and demonstrated the utility of looking at health issue case studies over the longer term.

largely ‘long-wave’ issues. They require research which takes this into account because, in many ways, the most important ‘work’ for a global health challenge happens after it has reached a prominent status on the agenda. Analysis which considers this can accrue a more comprehensive understanding of responses to the health issues in question, seeing what has worked and what has not over time, developing more of a nuanced sense for the contexts within which these issues are struggling to gain, or to sustain, attention. Furthermore, such analysis facilitates contemplation of factors such as the emergence of fatigue for issues and loss of prominence – which are of considerable relevance to the success or failure of efforts to address ongoing health challenges. Both cases in the thesis then demonstrate the importance of observing issues over an extended period – recognising that neither health issues nor the socio-political environments which they inhabit are static.

## **5.2 Diarrhoeal diseases**

Although the initial aims of the project were to focus on the last two decades, given the interesting period that it presents (including when global health enjoyed something of a ‘golden’ era – circa 2000-2011), it became clear it would make sense to investigate a period before this first. In short, given that this research was prompted by the knowledge that diarrhoeal diseases have fallen in prominence on the global health agenda (see Bump et al., 2013), it seemed pertinent to understand *how* they had, in the past, achieved a position of greater prominence from which they could then fall. This meant initially focusing on the 1970s/80s and contemplating diarrhoeal diseases’ trajectory in terms of ascertaining how the multiple streams approach might help us to frame and understand how they came to achieve a comparatively high profile historically.

Providing a fruitful framework for analysis, employing the central tenets of the streams methodology helped clarify that the coalition of these three streams (problem, policy, and political) in addition to policy entrepreneurs and a policy window supported explaining how diarrhoeal diseases came onto the global health agenda in a specific way at this time. Specifically, the ‘problem’ of diarrhoeal diseases was more well defined at this point than it had been prior – available estimates as to the extent of the disease burden in LMICs, dissemination of such data, and an economic recession threw a spotlight on the world’s poorest and emphasized the global health gap. Meanwhile, viable policy solutions to the problem of diarrhoeal diseases – specifically the development and beginnings of dissemination of oral rehydration therapy in LMICs was an affordable solution to diarrhoeal diseases. Concurrently, the political climate became much more aligned with the move to focus on child survival, and space for the implementation of straightforward solutions that had



high impact was clear – namely oral rehydration therapy. Importantly, tied to this was the presence of powerful and effective policy entrepreneurs.

This period stands in stark contrast to the current landscape for diarrhoeal diseases as an issue in global health. Work by Wolfheim et al. (2019) was particularly enlightening in terms of illuminating the evolution of the specific Control of Diarrhoeal Diseases programme in the intervening years and Bump et al.'s (2013; also 2011) analysis has demonstrated that diarrhoeal diseases have fallen in prominence since the 1980s. Such literature provided an important backdrop to the subsequent investigation, which contemplated, through an adaptation of the streams framework to the global level, how distinct dynamics might be 'working' to foster diarrhoeal diseases' position as relatively low priority in global health over the last two decades.

Rather than identifying the streams coming together at any point for diarrhoeal diseases in the last two decades and providing an opportunity for advocates to push for focus on the issue, what we observed is their lack of ability to align, which goes a fair way to explaining diarrhoeal diseases' diminished agenda status, and provides a clear contrast to the situation seen for polio over the same period.

Although the problem stream demonstrated elements of diarrhoeal diseases as a health challenge that give ample cause for elevation from 'condition' to 'problem' status (morbidity and mortality figures to say the least), the diminished levels of feedback and lack of explicit focusing events work against the issue in terms of ensuring a strong problem status. However, it can be reasoned that the problem status should be secured by way of the devastating morbidity and mortality costs alone. Yet, as discussed, this is not enough to ensure an issue moves onto a decision-making agenda, along the way to being prioritised. In short, the other streams need to come into play at the same time, and in this regard diarrhoeal diseases suffer.

Although the policy stream showed some evidence of work for diarrhoeal diseases' cause, activity in this arena appears more muted than it has been historically (see also Wolfheim et al., 2019). Important developments have occurred – namely vaccine advancements and goals set out by UNICEF and the WHO demonstrating awareness for a need for greater focus and work on the issue, but developments across all the interventions required to address diarrhoeal diseases holistically appear sporadic and unpredictable. Feasibly, this also points to the fact that diarrhoeal diseases are not a health challenge with a solution that is as pithily articulated as polio's—vaccines plus eradication. Rather, they require a conglomeration of infrastructural improvements, focus on improved nutrition, in addition to vaccines and oral rehydration

therapy to ensure reduction in burden – pointing to one crucial difference between these health challenges in terms of their ability to cultivate a clear response.

The ‘political’ stream demonstrated a global health climate which by and large diarrhoeal diseases do not resonate with *as a whole issue*. Whilst the first decade of the millennium showed considerable advancement for global health writ large – huge increases in funding, interest, and actors participating, this did not translate into a clear alignment with diarrhoeal diseases as an issue for straightforward prioritization or high-profile agenda status. For example, dynamics such as the increased association of certain health issues with a security rubric was not a development beneficial to a health issue that fails to possess the innate characteristics to meet criteria necessary for consideration in this manner (see section 3.6). Similarly, the general preference in this arena for vertical approaches to health initiatives was not something that the challenge of diarrhoeal diseases speaks to if approached holistically. Furthermore, outbreaks of infectious diseases over this period (e.g., H1N1, Ebola, Zika and COVID 19 – all declared PHEICs), in addition to focus on diseases such as HIV/AIDS, TB and malaria pushed focus away from primary healthcare and structural determinants of health to an environment increasingly aligned with vertical interventions and points of focus.

The other components that were considered were the presence or absence of policy entrepreneurs and policy windows. Regarding policy entrepreneurs, taking this analysis at a global level meant that how they were interpreted differed slightly from how Kingdon initially outlined, widening the understanding to incorporate organizations/initiatives, as well as individual advocates. Whilst instances of advocacy/support can be seen through entity’s such as Save The Children, WaterAid and PATH’s DefeatDD, for some examples, there is not the scale or potency, or crucially the coordination of activism for diarrhoeal diseases as a single issue<sup>95</sup> that we can see occurring for polio.

The other element in the streams approach – that of a policy window - was less significant when looking at diarrhoeal diseases 2000-2020. Given the lack of alignment of the streams and high-profile entrepreneurs for the issue in general, any policy windows that could have been used for diarrhoeal diseases’ cause, were arguably not truly capitalised upon.

In sum then what became clear is that these streams have not obviously united for this issue over the last few decades. Although there is evidence of activity within each individual stream, their ability to coalesce has been hampered by the lack of strong advocacy, in addition to

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<sup>95</sup> Undoubtedly this is because diarrhoeal diseases do not lend themselves to the same singularity of focus that polio does epidemiologically, or practically in terms of solution implementation.

absence of a succinctly articulated solution to diarrhoeal diseases as a whole<sup>96</sup>. The latter pointing to the intrinsic nature of the health issue/available solutions for it as playing a part in its ability (or lack thereof) to gain prominence, in conjunction with the weakened agency of strong supporters, and the lack of resonance with dominant preferences in the global health climate.

However, taking this interpretation wholesale misses some important nuance of the situation – it would not be fair to say that there has been no attention to diarrhoeal diseases, nor that it does not resonate with *any* element of the climate in global health, but as emphasized previously (see section 3.6), it is more the case that attention has engaged better with specific aspects of it – what might helpfully be termed a ‘splintered’ approach. A more holistic approach fails to gain substantial traction, with vaccines accruing more attention than other elements such as WASH.

### 5.3 Polio

Similar to the diarrhoeal diseases case study, the polio case began with the recognition that to better understand polio’s current prominence in global health, it would help to understand some of the influences that contributed to its ascendance to global health priority initially. Again, this meant taking time to outline some of polio’s history and draw on multiple streams to identify whether this could help explain the success of those pushing for polio eradication to get it onto the agenda<sup>97</sup>. Though a different goal and set of circumstances to the preceding case, key dynamics explaining polio’s elevation to *international health priority* in 1988 can be observed through the rubric of multiple streams. In sum, there was an awareness that polio impacted populations outside richer countries (Shiffman et al., 2002: 226 amongst others). Arguably, in the 1980s, the morbidity of the disease contributed to the problem status of polio, with circa 350,000 cases annually. The potential threat of reimportation of the virus to polio free areas was also raised. The proven efficacy of the vaccines in terms of reducing cases to zero in other countries gave the suggested ‘policy solution’ of *global eradication* feasibility. This was all connected to a time in international health where there was an appetite (in some quarters) to find a new disease to focus on in terms of eradication post-smallpox eradication success. Although Alma-Ata had indicated a move and preference toward primary health care, the emergence of *selective* primary health care and a preference for technological,

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<sup>96</sup> As noted in Chapter 3, specific elements of addressing diarrhoeal diseases have seen progress. Further, Bump et al. (2013) offered suggestions for increasing focus by framing specific parts of the issue effectively.

<sup>97</sup> Identified in this thesis as being when the 1988 Resolution to eradicate polio was declared by the World Health Assembly.

straightforwardly implementable solutions, resonated with the ‘simplicity’ of the polio eradication goal. Furthermore, support and advocacy by key policy entrepreneurs, and their work in persuading figures such as the director general of the WHO to their cause, appears to have been vital to aiding the emergence of the polio resolution.

In terms of understanding polio’s broad trajectory over the last twenty years, it becomes clear that although there have certainly been ebbs and flows in progress (and no doubt attention), the issue can be understood to have maintained a broadly prominent status across this period. This can be evidenced by the ongoing standing of the resolution to eradicate, continued funding (albeit often hard earned), in conjunction with the participation in the Global Polio Eradication Initiative of a group of influential global health actors.

Identified factors contributing to this maintenance of prominence include the way in which polio has come to be characterized as a ‘problem’. These include the morbidity rates for polio being so low that they work both for and against the case for continuing the eradication initiative (but given the ongoing existence of the GPEI and pursuit of eradication, it is clear that the ‘for’ has *thus far* prevailed in this push-pull). The high projected case numbers if the pursuit of eradication were to be abandoned assists the problem status of polio, and the fact that polio is one amongst very few diseases that can, in theory, be eradicated plays in its favour in terms of maintaining its characterization as a pressing problem. This point leads into the moral imperative that is often articulated that if it is possible to eradicate then it is the right thing to do in terms of global health equity. Finally, the substantial sunken time and financial investments are a strong motivator to keep working to achieve the goal so the project can be deemed a success.<sup>98</sup>

In many ways the policy solution remains the same as it has always been bar developments in the vaccines and shifts in implementation strategies. As discussed in Chapter 4, the fact that a viable vaccine and the goal of eradication exist is a powerful policy solution to the challenge presented by polio. Examples of the kinds of policy developments occurring in this stream that bolster that solution include, updated GPEI strategies, global commitments to achieving eradication, creation of a monitoring board to ensure best practice for the initiative (pre- and

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<sup>98</sup> The WHO (2022a) cites that today almost 20 million people have averted paralysis from polio. Objectively then polio initiative has seen huge success. But because the goal has been set as *eradication*, ‘success’ is tied to that specific goal. This shows the challenge that comes with balancing setting a target which is incredibly difficult, against not setting it and not having a target which itself is a key part of fostering focus, attention, and drive for keeping polio on the agenda.

post-eradication). In sum, what we can see is a continued commitment to ‘honing’ the policy solution to polio and the vehicle carrying it (the GPEI), to ensure that it remains viable.

Finally, the political stream demonstrated that polio eradication resonates with many of the components drawn out as comprising the dominant ‘environment’ in global health politics. To begin with, as an infectious disease that has been eliminated from much of the planet, potential for reimportation to polio-free areas has been raised as a concern. Thus, despite low case numbers, and existence of effective vaccines, the potential for outbreak events and the high transmissibility of polio means that it is accorded a level of attention that health issues such as diarrhoeal diseases are generally unable to do. This is reflected in its long-term status as a public health emergency of international concern (PHEIC). Tying in with this is polio’s ability to resonate with the security narrative in global health. Given the existence of the eradication goal, any case of wild polio is cause for alarm, giving polio’s relatively low disease burden a purchasing power (in terms of grabbing attention) that diarrhoeal diseases are unable to replicate, despite having a much higher burden. As a health issue with the single largest programme at the WHO, polio is one of the most prominent vertical initiatives in the global health arena. Although there have been spill over benefits from the programme, this is for the most part a single-issue initiative which intrinsically resonates (both in terms of goal (eradication) and approach (vaccination/single issue)) with the oft cited preference for vertical initiatives across the global health landscape (see Msuya, 2004; Cairncross et al., 1997, amongst others). Finally, fragmentation and a multiplicity of novel actors joining global health efforts in various guises, has had a mixed impact for global health initiatives. Whilst diarrhoeal diseases struggled in some ways with this new landscape, polio has fared differently. Although the first decade of the 2000s was not the easiest time for the endeavour, the GPEI has accumulated a pool of actors who bridge the spectrum between new and old guard. In an era when public private partnerships seem to be the order of the day in global health endeavours (see also Brown et al., 2006; Ruckert and Labonté, 2014, amongst others) polio’s GPEI is one of the foremost examples of a largely strong and effective public private partnership. Its strength is reflected in the developments outlined for polio in the policy stream (section 4.7) and quite simply through its longevity these last three decades. Ultimately, polio eradication naturally resonates with many of the overarching threads outlined in the political climate, whilst relying on the presence of its advocates to strengthen and focus that resonance.

However, the observable threat of the erosion of these dynamics is clear. *All* the streams show vulnerability to diminished resonance / alignment with regards polio eradication (see

section 4.11). Those dynamics which support polio's 'problem' status i.e., predicted numbers of cases should eradication efforts be abandoned, closeness of the target, health equity arguments, investments of time and resources, the fact that the disease is eradicable, are all threatened in terms of their ability to support comprehension of polio as a 'problem' as opposed to just one amongst many 'conditions'. That is, as time passes, and projected targets are missed, the belief in the possibility of eradication and the initiative wanes (in some quarters) – as seen in numerous articles which have queried the viability of the now over three-decade old programme.

In terms of the policy solution (section 4.7), the glut of activity in the policy stream is a testament to the commitment of those involved in polio eradication – in terms of ensuring the perceived viability of the solution (vaccines plus eradication goal). However, as time passes and eradication is not achieved, the viability of the espoused policy solution is threatened. Examples of particular factors contributing to this threat include the presence of circulating vaccine derived polio viruses, in addition to socio-political implementation challenges – conflict, vaccine hesitancy/bans, maintaining financing, difficult to reach areas, and 'competition' with other pressing health and development issues.

Potential shifts in mood and climate are vulnerabilities for polio and the political stream. Polio's ability to navigate a prolonged period of prominence is impressive and speaks to the general resonance of this particular type of health challenge with deep-seated inclinations in the political climate of global health, yet the potential for transformation of this environment is ever present. Indications of more horizontal approaches to health challenges are one of the ways in which polio's current form of prominence could be eroded, but the emergence and impact of COVID-19 as a global health crisis is also likely to be a 'threatening' indicator of change in this environment with regards the eradication initiative's sustenance.

#### **5.4 Summarising the central argument**

From the findings of the case studies, it seems fair to argue that the key tenets of Kingdon's streams theory help explain why diarrhoeal diseases fail to accrue greater prominence in this arena and polio has maintained its higher profile in global health. Accordingly, a response to the overarching research question is possible.

*Why do some issues gain prominence in global health while others are neglected – and what explains change in prominence over time?*

The journeys of these two particular cases indicate that key drivers of agenda ascendance comprise: a recognition of the health issue as a *problem* (as opposed to one of many ‘conditions’), an identified viable solution to it (*policy*), in conjunction with a receptive climate (*political*). Crucially these factors are honed, and their alignment is supported by the actions of effective advocates (*policy entrepreneurs*). *Policy windows* then provide an opportunity for action in terms of initial agenda ascendance. Such dynamics have been articulated by scholars for other cases. Applying these concepts to diarrhoeal diseases and polio reiterates their efficacy for analysing global health issues, and, crucially, helped draw out specificities of the dynamics for these particular cases.

To iterate, whilst these dynamics help explain the initial ascendance of both these issues to a high profile in global health, it is the persistent lack of alignment of these factors (outlined above) which help illuminate diarrhoeal diseases’ lower profile over the last two decades. In turn, for polio, the initial and indeed continued alignment of the three streams, aided by strong advocacy, provides a workable answer to its conspicuous agenda position.

Indicators such as the disease burden of a health issue are not straightforward gauges of agenda status. Furthermore, the results of the research reveal that a conglomeration of often unpredictable influences are shaping prioritization of issues in this arena. The results are also interesting to contemplate with regard to the ways in which the traction and appeal of the solution to a health issue (e.g., polio has a ‘silver bullet’ solution in being eradicable) can be as powerful an indicator of viability for focus as high disease burden. Such findings push for us to ask difficult questions such as how we should approach agenda-setting in global health, and to press for greater research into the drivers of global health efforts. Ethical questions over whether to pursue something because it appears relatively easy should be raised, as well as consideration of the ways in which we measure success. The latter applies to polio eradication and diarrhoeal disease control endeavours. i.e., the reduction in burden of polio is a remarkable accomplishment in itself, but not always fully appreciated given the existence of the as yet unmet eradication goal. Meanwhile, although diarrhoeal disease burden has steadily fallen since the 1980s, their ongoing high morbidity and mortality, given availability of prevention and treatment measures, should be a real cause for concern. Given that many neglected health issues cannot offer a policy solution like polio’s to focus attention, questions as to how to improve agenda profile of neglected issues/approaches becomes increasingly important – i.e., thinking about how issues under the radar might be framed to generate greater focus, and how to cultivate political will and sufficient financial commitments for issues or approaches which do not resonate with the elements outlined is a key challenge

going forward. Relatedly, contemplating whether the ways in which issues are prioritised and whether these priorities are aligned with the wider pursuit of global health equity are valid and valuable queries.

### **5.5 Use of multiple streams in this project**

The decision to draw from multiple streams theory to provide a theoretical basis this project was not capricious. In terms of the work that has already employed public policy theories to address agenda setting in global health, multiple streams is amongst the most used (Smith and Shiffman, 2020). As discussed in Chapter 2, the approach offered a means of structuring the analysis without too much artificial limitation as to the avenues that were investigated.

Whilst the choice of this approach reflected an understanding both of its broad utility (it has been drawn on innumerable since its inception and outside its initial area of focus), it was also a response to ongoing work in the area that had utilised public policy theories and had demonstrated their efficacy. The challenge has been adapting the theory to fully appreciate the global level of focus whilst remaining *broadly* faithful to its key principles. Granted there was always going to be a deviation from the original theory in that the field and level of analysis diverge from the multiple streams approach's original remit. It is helpful then to point to some of the strengths and limitations of the approach as used which will undoubtedly have shone through to an extent in the case study chapters.

#### *5.5.1 Strengths and limitations*

Given the fact that this research situates itself firmly in empirical territory, it does not seem reasonable or within the scope of this project to critique the theory underpinning this approach. Rather the cause for any 'weakness' here may be largely apportioned to the application outside of its original remit, although feasibly there is crossover with some of the generally noted critiques of the approach (see Chapter 2).

The three streams are a helpful tool for organising and refining focus on what could otherwise be an incredibly 'messy' project. Its flexibility allows room to explore a multiplicity of dynamics at the global level without being constrained. This is crucial in an area that has so many influences<sup>99</sup> – it is impossible to contain them all, thus the ability to effectively capture some of the overriding drivers is important, and what this thesis endeavoured to do. The idea

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<sup>99</sup> Kingdon (2003) sets the scene for multiple streams approach as one of turmoil (see John, 2012: 158) it is not hard to see similarities in the global health arena.



of a ‘synthetic’<sup>100</sup> approach to decision-making is especially applicable for a field like global health because it allows space for consideration of a wide range of influences and processes (see John, 2003: 487) and crucially puts front and centre the point that it is the interplay of such elements that forms the agenda-setting process (John, 2012: 158).

The problem stream provides tools which are strongly relevant across both these cases and concepts which are inherently widely applicable. The understanding of ‘conditions’ in societies moving to become ‘problems’ demanding a response by virtue of their specific characteristics, coalescing events to focus attention on the issue, and feedback as to the relevance and shape of the potential problem, aptly captures the dynamics of move to ‘problem status’ of both these health issues. It is straightforward to see how such conceptualisations could be more widely applied to other health issues, and the space within this stream for interpretation of how specific issues are being understood, presented, analysed and so on, is particularly valuable for global health analysis. Challenges encountered in interpreting this stream for this project included understanding what a focusing event might mean for each case. At the global level it can be difficult to gauge the impact of events. In addition, it became clear with the polio case study that positive developments (progress) may also have an impact on agenda status, and the way in which the problem is perceived. Though a deviation from the traditional boundaries of the theory, taking progress into account helped with understanding how polio has sustained its prominence on the agenda, without losing too much of the original power of the approach (as will be outlined shortly, the adaptation of the approach to help explain polio’s sustained higher profile was an interesting strength).

The policy stream was more of a challenge to employ at a global level. Kingdon’s analysis comprised case studies at the US federal government. Evidently looking at global health agenda setting is a departure from that. Nevertheless, the theory had already been shown to be a useful tool in global health analysis albeit largely used at a regional, or national level. Thus, it required consideration to decide how best to interpret this stream for this project. Given the scale of the level of analysis it appeared sensible to focus on some key developments for each issue, be that through identifying strategic plans (particularly evident for polio, although also seen in the Global Action Plan for the Prevention & Control of Pneumonia and Diarrhoea (GAPPD) or through notable vaccine developments). Identification of some such for each case helped demonstrate what kinds of progress and efforts in terms of policy goals and implementation have been occurring and was a useful source for analysis in terms of getting a

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<sup>100</sup> John (2003: 487) asserts that ‘[t]hese frameworks may be called synthetic, largely because they bring together much of the research on institutions, networks, socioeconomic processes, choices, and ideas (John, 1998)’.

sense of the kinds of activity occurring for each case over time. This enabled the broad purpose of the stream to remain without getting lost in a dizzying array of policy activity at the global level, and a process of infinite regression in terms of analysis of policy development.

The political stream then was analysed as the wider climate in global health over this period, considering undercurrents that might be affecting agenda resonance for health issues. This stream was evidently the same for each case, however the divergence came in terms of how each case resonates with the prevailing environment described. Many of the elements highlighted have long been discussed in the wider global health literature in diverse ways e.g., global health and security, impacts of globalization on the arena, fragmentation of efforts in global health, and the impact of public-private partnerships. Interpreted thus, this stream enabled the capture of some of these dominant drivers and became an interesting way of looking at how the other facets of this methodology (problem and policy) fared in the overarching climate in global health. Suffice to say the strengths of the streams approach lay in its ability to be fairly malleable without losing the conceptual driving force of the approach.

The realisation that the general concepts Kingdon developed to explain issue ascendance continue to carry weight in terms of understanding agenda sustenance in polio's case, was an interesting strength of the elements of this method, although obviously a deviation from what Kingdon outlines. He notes that the streams do not stay aligned for long and thus when they are in sync, policy entrepreneurs must seize the opportunity to push for their issues onto decision making agenda. The way in which polio has been analysed as a case here shows that, whilst such dynamics can explain the early ascendance of the issue of polio eradication to the 1988 resolution, many of the concepts still hold water beyond that point. It is indeed stretching the boundaries of the approach, yet the concepts that we are unpacking do not cease to be relevant at the point at which they help an issue reach prominence. In short, this foray from issue ascendance to sustenance, revealed, that in polio's case agenda sustainability appears to rely on the maintenance of some of these dynamics. The three streams were useful at demonstrating reasons for longevity for polio eradication's cause over time, and indeed, there was plenty of room in the streams to contemplate some (of the many) important factors that the initiative must meet to keep polio eradication on the agenda. Additionally, (and unsurprisingly) the policy entrepreneurs importance remained clear in terms of keeping polio on the agenda. The concept that became largely moot when contemplating an issue that has *maintained* agenda status, was that of the policy window – although feasibly this could be understood as becoming an opening for fuelling an existing endeavour if utilised effectively.

Contemplating agenda sustenance in this way reiterates the importance of analysing attention to health issues over the longer term to ascertain and assess the viability of initially achieved prominence for an issue over time.

Finally, a global level of analysis inevitably means that the streams approach (already critiqued by some as excessively metaphorically adaptable) becomes less nuanced. This may in large part be due to the fact that analysis for an arena as convoluted and ‘messy’ as *global health* is difficult, and it would be impossible to capture every subtlety for each case. Still, as discussed in section 3.9, whilst using this approach helpfully indicates why diarrhoeal diseases have broadly failed to accrue significant prominence on the global health agenda, it was less effective at drawing out the fact that certain aspects of the issue have seen more attention than others.

## **5.6 Avenues for further analysis**

The points below, highlight some areas for development which have emerged from reflection on the results of this research project (the tip of an iceberg). Most of the following have been the subject of analyses, some of which was touched on in Chapter 2 in the literature review, but there is room for further work across all these areas, particularly in the context of agenda-setting/priorities in global health.

### *5.6.1 Global health networks*

This project has not specifically focused on analysing the networks for each case, but there is work within the wider literature that has pointed to the value of doing so and of the importance of strong networks for health issues in terms of their ability to accrue greater attention and resources (see: Shiffman 2016b and 2017; Shiffman et al., 2016a; 2016b; Smith and Rodriguez, 2016 amongst others). Whilst this research emphasizes the fundamental importance of policy entrepreneurs in the agenda setting/maintenance process, there has been less space within the project to focus intently on the specific manoeuvres and makeup of wider networks for each case. A singular focus on the formation and trajectories of networks for each case (and others) could be an interesting area for further contemplation, with the potential to offer valuable insights into determinants of effective network formation and sustenance. For example, zooming in on the Global Polio Eradication Initiative and looking in more depth at the ‘network’ of actors involved would be an informative and fascinating area to begin. Relevant work in this general direction can be seen coming from those involved with polio such as Cochi et al’s (2014) work on the ‘Lessons Learned and Legacy’ of the GPEI, and through the legacy planning of the initiative which aims ‘both to protect a polio-free

world and to ensure that the investments made, designed to eradicate polio, contribute to broader health goals after the completion of polio eradication' (Cochi et al., 2014: S541).

### *5.6.2 Power disparities*

This thesis' stated level of analysis is global. However, there is also appreciation throughout of some of the local level challenges that the cases under discussion face, and the iterative relationship that these different levels of analysis have (e.g., implementation challenges with polio have the potential to erode its status as a global health priority). This mirrors some of the global/local challenges which global health projects and priorities face – the discomfort and lack of commensurability between some global goals and local needs. For example, the polio case shows us that whilst there have been momentous achievements with regards reduction in disease burden of polio in the pursuit of eradication, the initiative is by no means a straightforward endeavour, nor without critique. Regarding the initial move to pursue eradication, scholars have noted the prioritization of polio in the 1980s as having 'little to do with the priorities of most developing countries where polio was endemic' (Muraskin, 2012: 1). Abraham (2018: 136) points to the:

democratic deficit that exists in global public health programmes. Large global health campaigns are launched with great hope and fanfare in the global centres of power, backed by governments and philanthropists. But at the end of the day poor countries need to implement these campaigns.

These kinds of concerns speak to a wider discomfort in global health governance regarding power disparities and the need for attention to deeper structural inequities in global health governance, which run deeper than any single issue. Increased acknowledgement of power dynamics in any decision making and the disparity between 'local' and 'global' need to be constantly under the microscope in terms of consideration of whose agenda is pursued and whether it is representative of country level/ health initiative recipients' preferences/needs. This means consideration of not only which health issues are deemed global priorities, but how they are, when they are, and whose voices are being heard in decision making (see Chapter 2 for examples of such work which explores power in global health).

### *5.6.3 Advocacy*

Kingdon's theory emphasizes the importance of policy entrepreneurs. The results of these case studies support that the existence (or not) of effective advocates for health issues is a crucial factor in determining the relative success and prominence of these issues on the global health agenda. Indeed, for polio the support of the cause by powerful advocates has been an irreplaceable part of its ascendance and sustenance as a global health priority, as it was for

diarrhoeal diseases' higher profile in the 1980s. Accordingly, research which focused entirely on incidences of effective advocacy for these cases and others (or where advocacy could be improved or encouraged) would be valuable in terms of better understanding the role of agency in very specific circumstances and coming to a more detailed understanding of what has worked, what has not, and why. Such research could help inform future efforts by interested parties in terms of encouraging attention to other causes.

A focused point for analysis could be looking specifically at Rotary International's advocacy work for polio, identifying specific policy entrepreneurs (in the more traditional sense)<sup>101</sup> within the organization and better understanding the processes that have helped the organisation sustain such an incredible level of attention to the issue in the long-term would be useful and fascinating in this regard, given Rotary's extraordinary advocacy for this issue over the years. Again, this would be a viable area to explore in terms of better comprehending how issues stay on the agenda/cultivate attention long-term, as opposed to just getting on the agenda in the first place and help contribute to much-needed work in this regard – that is more focus on the long-wave nature of health challenges.

#### *5.6.4 Social science research*

The need for more (or more consideration of) social science research in the global health arena is a point often raised (see also Pickersgill et al., 2018). Unsurprisingly then, this project adds to the literature which makes calls for this. The thesis has approached unpacking the driving forces for agenda status for these issues through a framework which creates space for the raising of ethical, socio-economic, political drivers and concerns and invites follow-up questions that speak to these areas.

A prominent example of the need for such inclusion can be seen over the last few years with the COVID-19 pandemic. Responses initially (and understandably) focused heavily on the epidemiological and medical side/threat of the issue. Inevitably, as the pandemic progressed it became clear there were innumerable coexisting challenges which demanded a different approach – one to which such research can make a significant contribution. Unfortunately, health issues, although largely discussed in isolation from each other, do not exist in vacuums, and in spite of the laser focus on COVID-19, the need for attention to be paid to other trials did not abate. Oft-cited examples include other health issues (locally and globally), the impacts of social isolation, economic downturn and missed education, as some amongst *many*

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<sup>101</sup> Kingdon's definition of policy entrepreneurs focused on individuals – this thesis widened the understanding to also include organizations to support the global level of focus.

issues that should point to the need for more resilient approach to pandemic preparedness in the future – crucially one that incorporates wider global/societal health needs in unison with the response to novel and emerging health crises (see Xiong et al., 2020; Richards et al., 2020; Yeyati and Filippini, 2021 for examples). In relation to this, a case ripe for analysis through similar approach to the one taken in this thesis would be coronaviruses. Given the devastating toll of COVID-19, the relative lack of attention to coronaviruses up until this pandemic would be important avenue for consideration. Where issues like pandemic influenza have long cultivated concern due to fears of potential outbreaks, coronaviruses have less so, notwithstanding the emergence of two others in recent history – SARS-COV 1 and MERS, in 2002 and 2012 respectively. Taking multiple streams to analyse the journey of coronaviruses on the global health agenda – looking at SARS, MERS and COVID-19 would be a timely and insightful point for future application of this approach. Moreover, the impact that COVID-19 and its sudden dominance in this arena has had on the wider global health environment and on attention to historic health challenges such as the two focused on in this work, is a vital area for further consideration.

#### *5.6.5 Loss of health issue prominence*

The streams theory provides a very good framework to guide analysis of a huge and unruly area of focus (*global health*); contemplating what dynamics may be eroding the prominence of a health issue and what advocates must contend with to keep focus on it offers a fascinating and likely very practically informative area for future focus. In this area, Bump et al. (2011 and 2013) also explored how CDD became a priority historically and then crucially, demonstrated the fall from prominence of diarrhoeal diseases on the global health agenda; this project picked up on this and also explains causative factors for the continued lower profile of diarrhoeal diseases. The polio case study in this thesis also makes steps in this direction because contemplation of polio eradication's journey necessitates reflection on erosive dynamics at play in terms of risks to the sustainability of the endeavour. It gives us some indication of both sheer resilience of the eradication initiative in the face of an immensely crowded and insufficiently funded arena; as well as providing insights into the kind of dynamics, ideas, and shifts in influence which threaten to undermine a historically formulated goal. Further research identifying similar processes for other cases would provide useful material in terms of better understanding how to improve health initiatives' sustainability on the global health agenda. It would also be beneficial in terms of improved understanding of the sorts of challenges health initiatives are likely to meet and need to overcome over the longer term.

### 5.6.6 Questioning the status quo

The study of differentiation in focus in global health is to all intents and purposes a normatively driven endeavour. Thus, unpacking what drivers might be influencing the makeup of global health agendas is consciously or otherwise driven by the recognised need to improve upon a status quo which often misses the mark. This thesis is driven by the recognition that agenda setting is not an interest-free or inherently logical process, yet steers very clear of suggesting how a global health agenda should be arranged. It was simply motivated by the belief that through better understanding some of the implicit drivers of agenda setting processes for different health issues we can equip ourselves with better questions to put to decision-making processes in this arena. The results of the research then push us to ask deeper questions about agenda-setting and health priorities. Both cases present ethical confrontations that beg increased reflection. For examples: the tension between global targets and methods of approach to health challenges and local health realities, priorities, and preferences; continued debate on the merits and drawbacks of eradication programmes; deeper discussion on how to incorporate more explicitly into decision-making processes socio-political and ethical challenges that present themselves when addressing most global health challenges; and thinking about sustainability of health initiatives from the outset, to name but a few.

The following provide examples of questions that could helpfully be pursued in this regard:

*Are the most prominent pursuits/initiatives/approaches in the field the best route to global health equity?*

*Whose priorities are being represented?*

*How can we ensure that ethical considerations which inevitably come with agenda setting take a more prominent role in global health decision-making?*

*How can we cultivate agenda sustainability for global health initiatives?*

Ultimately, agenda-setting research has the potential to contribute to improving the knowledge base from which those involved in global health decision making can draw. A better understanding of what is occurring for different cases can emerge and, over time, offer tools for improving decision making.

## 5.7 Concluding remarks

At heart, this thesis is intended as a point of empirical reflection on a fault line that runs through global health writ large – discrepancies between disease burden and attention. Numerous scholars have reflected on this and the persistent and often incomprehensible

make-up of the global health system, its governance, priorities, agenda setting, and resource allocation (as discussed in Chapter 2). This thesis then joins a conversation in process, drawing as its points of focus two cases which provide powerful comparative potential, and adapts the key tenets of an applicable public policy theory to structure the exploration.

It has reaffirmed that the process of agenda setting in global health is embedded with diverse incentives and drivers not necessarily connected to disease burden in ways one might anticipate. In polio's case this can be seen in the potential to eradicate and a remarkable commitment to that goal long-term – buoyed by the presence of powerful policy entrepreneurs. These factors have enabled polio to transcend some of the more typical agenda stimuli (such as those which threaten to diminish its status) and to maintain a prominent position in the arena.

In contrast, despite diarrhoeal diseases 'ticking many boxes' that one may assume would push the issue into a higher level of priority for attention (with its high morbidity and mortality in under 5s; and being easy to treat/prevent) the general trend for this issue over the last few decades has been one of a more muted status in global health. Agenda setting in global health is difficult to understand *because* clear drivers like disease burden are not the only motivators for action and it is crucial to delve more deeply into varied cases to reveal some of the less obvious drivers at play for different health issues.

The research has demonstrated how each health issue displays a clear blend between generating activity (or not) due to the intrinsic nature of the disease together with an agential dimension – the encouragement of activity and resonance in each stream through the advocacy work of policy entrepreneurs (see also Shiffman and Shawar, 2022<sup>102</sup>). The way in which the theory has been utilised in this thesis departs from its traditional lines given the wider dimensions of the analyses here. Nevertheless, observation of both agential and intrinsic forces at work in the agenda status of each issue is commensurate with the heart of what multiple streams supposes – agenda setting is neither wholly serendipitous nor prescribed, rather, it is an amalgamation of both. Although this observation seems relatively predictable – it is unpacking the specific elements within the outlined dynamics for each of the case studies that is critical to deepening our comprehension of agenda setting processes in this field, and where this thesis contributes.

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<sup>102</sup> Shiffman and Shawar (2022: 1977) in discussing framings (securitisation, moralisation, and technification) that may shape health issue priority, similarly note that '[a] health issue's inherent characteristics—such as the lethality of the pathogen that causes it—also shape these ascriptions, but do not fully determine them'.



To close it seems fitting to meditate on the current situation with each of these health challenges. The latest available global burden of disease data on the IHME shows over 500,000 under-fives died from diarrhoeal diseases in 2019 (IHME, d, n.d.). Despite the progress that has occurred in the last three decades, there is considerable concern in the ongoing burden seen in such figures, as well as the impact that COVID-19 might have on efforts to address enduring health challenges like this (see also DefeatDD, 2021). Last year's Pneumonia and Diarrhoea progress report from the International Vaccine Access Centre at the Johns Hopkins School of Public Health presents the sobering fact that:

[w]hile vaccines to prevent COVID-19 were developed with cutting-edge technology and distributed at record speeds, highly preventable and treatable infectious diseases like pneumonia and diarrhea continue to kill the equivalent of over 141 children per hour, or 3,400 deaths per day. (IVAC/Johns Hopkins, 2021: 3)

Meanwhile polio eradication continues to present a complex task. Recording the lowest wild cases on record in 2021 prompted tentative optimism regarding advancement toward eradication. However, recent reports on a wild case in Malawi (wild polio-free for 30 years) triggered a mass vaccination effort of 23 million children across 5 African countries in an attempt to ensure the disease does not regain a foothold in wild polio-free areas (Rigby, 2022). Additionally in 2022, samples of cVDPV2 were detected in the UK and the US (as well as a case of paralysis in the US) (see WHO, 2022g). Such examples (there are others) underscore the fragility of gains made, nod to the enormity of what the GPEI is trying to achieve – *global eradication* of a disease is incredibly challenging - and emphasize the dependence of the polio programme on sustained and coordinated attention and efforts.

What the future holds in terms of addressing diarrhoeal diseases and polio is not transparent. Given the incredibly convoluted landscape of what we so often simply term 'global health', this project endeavoured to define *some* of the influences that are shaping their journeys. It speaks to the growing literature exploring global health agenda setting and, as others have done, to urge further research that probes comparable questions for different health issues, and building on evidence unearthed, to raise and debate the ethical confrontations that emerge through doing so—the latter being the natural next point for enquiry following this research. Building up a progressively greater understanding of what explains what is happening<sup>103</sup> for different cases is vital for future decision-making. Indeed, creating space that allows for proper contemplation of elusive influences in global health agenda setting, and reflection on

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<sup>103</sup> Walt et al. (2008: 309; also Gilson and Raphaely, 2008) outline that health policy analysis often focuses on 'what happened' neglecting 'what explains what happened'. As outlined in Chapter 1, this thesis concurs and accordingly strives to align its focus with the latter.

the ethics or merits of agenda-setting processes (or encouragement of further research that does so), is critical in the pursuit of global health equity.

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## Appendices

### Appendix 1 – Diarrhoeal diseases interview questions

- Could you speak a little to how you see diarrhoeal diseases as an issue on the global health agenda at the moment in terms of priority?
- How do you view the progress being made with diarrhoeal diseases currently?
- For you do any developments/incentives for tackling diarrhoeal diseases stand out over the last 2 decades?
- How do you think your organization became involved in tackling this issue?
- How do diarrhoeal diseases compare to other health issues that your organization focuses/focused on?
- How does/did your organization decide which health issues/initiatives to prioritize?
- In either (or both) global health circles & public perception...do you think awareness/perception of diarrhoeal diseases has altered much in the last 20 years? Or since circa 1980s?
- Would you have anticipated to see more progress by this point?
- Do you think the integration of diarrhoeal diseases with other child health concerns has impeded progress for diarrhoeal diseases specifically? Or is this a positive development?
- Despite the impressive progress in terms of reduction in mortality, this is still a major health challenge, what are your thoughts on any impediments to progress when it comes to pushing toward further reducing the burden that diarrhoeal diseases poses in LMICs and achieving SDGs? What do you think needs to be improved?
- Besides your own organization, do you think of any individuals or organizations that have been particularly strong advocates for diarrhoeal diseases over the past 20 years?
- Do you think the specific characteristics of these health issues i.e. potential stigma/embarrassment people may feel talking about it might affect its prioritization or lack thereof in global health?
- Do you think issue fatigue perhaps plays into diarrhoeal diseases shifting in priority in global health?
- What kind of impact do you think COVID-19 may have on addressing ongoing global health issues like diarrhoeal diseases?

## Appendix 2 – Polio interview questions

- Could you speak a little to how you see polio as an issue on the global health agenda over the last few decades in terms of prominence?
- How do you view the progress being made with polio eradication currently?
- For you, do any developments/incentives for tackling polio stand out over the last two decades?
- Over the past two decades do you think there have there been any particularly challenging times for keeping focus on this issue?
- In either (or both) global health circles & public perception...do you think awareness/perception of polio has altered much in the last twenty years? Or since the late 1980s when the eradication programme was launched?
- What do you see as the main impediments in progress/challenges to be overcome in working toward the goal of eradication?
- Do you feel that the declaration of polio as a Public Health Emergency of International Concern has been effective at drawing greater focus/efforts toward the issue?
- Which individuals or organizations stand out to you as being especially strong advocates for polio over the last two decades?
- Can you reflect on what you feel might be/have been the key ingredients to successful advocacy for this issue, given the success and scale of the GPEI?
- Efforts to address polio worldwide have been remarkable, but maintaining momentum around an issue can be challenging, in your opinion what have been the challenges with sustaining momentum for this health challenge over the last two decades?
- Do you think setting eradication as the goal has been key to helping cultivate the strong support for polio?
- Do you think the missed eradication targets have presented a challenge in terms of keeping momentum on this goal?
- What kind of impact do you think COVID-19 may be having on addressing this ongoing challenge?

## Appendix 3 – Informed consent form

### *Informed consent form for interviews*

If you decide to participate in this interview, please fill in your name, role & organization. Then complete the following sections A, B, C & D before reading through & checking all the points in section E and signing & dating the form.

Interviewee name:

Interviewee Role/Organization:

A) Do you consent to have your interview recorded? YES/NO (delete as appropriate)

B) Do you wish to receive a written summary of interview notes? YES/NO (delete as appropriate)

C) Do you wish to receive a copy of the finished thesis? YES/NO (delete as appropriate)

(if you answer yes to C you will need to provide a valid long-term email address here):

D) Confidentiality –

Please select from the numerical options below by indicating the number corresponding to your choice, either: **1**, **2A**, **2B**, **3** or **4 HERE**:

- 1. Named source** – your name, role and organization may be used in research outputs and the interview data may be publicly available
- 2. Anonymous** – your name will be anonymised and instead a title to anonymise you may be used (e.g. senior health policy official). Material can either be *open access* (**2 A**) or stored in a *confidential encrypted archive* (**2 B**), at your wish. If open access is selected any metadata will be amended and your name will be stored in a separate encrypted archive.
- 3. Confidential** – Your name and role description will not be used in research outputs, but the material may be used and referred to anonymously (e.g. ‘confidential source’). Material will be stored in a separate encrypted archive.
- 4. Sensitive** – Material will only be used to broadly inform research findings. It will not be quoted or directly referred to in research outputs. Material will be stored confidentially in a separate encrypted archive.

<b>E) Please read carefully through the following points indicating with an X in every box that you have understood &amp; then sign &amp; date the form on page 3 to give your consent</b>	<b>X</b>
I have read the participant information form for this research project & the purpose of my interview is clear	
I understand that the interview is likely to last for between 30 mins and 1hour, and will be conducted remotely, either online or via phone call	
I understand that my participation in this interview is voluntary & there will be no remuneration for my participation	
I understand that this interview will be conducted by Hannah Parry a PhD researcher at the Department of International Politics at Aberystwyth University as part of her PhD research for the project outlined in the participant information form	
I understand that quotes or information from my interview might be used in Hannah's PhD thesis which may be publicly accessible on completion, as well as in spoken presentations, and in other publications directly arising from the described project (whilst respecting the level of confidentiality I selected in section D).	
I understand that I may alter my confidentiality (section D) up until <b>1 week after my interview</b>	
I understand that Hannah may take notes during the interview, and if I have agreed in section A of this form, she may also take an audio recording of the interview to assist her with writing up notes post interview	
I have read through the options in sections A, B, C and D and clearly indicated my choices	
I understand that summaries of my interview may be shared with Hannah's supervisors and examiners where necessary	
I understand that I may refuse to answer any questions with no requirement for explanation & I may opt out of the interview at any time <b>up until 2 weeks after my interview date</b>	
I understand that <b>over 2 weeks post interview</b> my data may have already been used in research outputs/publications (in the format agreed to) which cannot be changed	
I understand that unless I have selected 'named source' in section D, any stored data collected which would personally identify me will be destroyed/erased at the latest by <b>30 September 2025</b>	
I understand that this project has been assessed for ethical considerations at Aberystwyth University and has been approved & there is no anticipated risk in my participation	
I understand that whilst my interview will be conducted under informed consent respecting my confidentiality choices; in the event of the disclosure of a crime or if it is apparent there is a serious risk of harm to myself or others, then Hannah will have to inform an appropriate person	

Name of participant:

Signature of participant:

Date:

Name of researcher: Hannah Parry

Signature of researcher:

Date:

Date of interview:

Please return the completed form to Hannah Parry via email: [hjp4@aber.ac.uk](mailto:hjp4@aber.ac.uk)

If you have any further questions, please email:

Hannah Parry, Email: [hjp4@aber.ac.uk](mailto:hjp4@aber.ac.uk)

Alternatively, you may contact Hannah's PhD supervisor: Professor Colin McInnes, *Vice Chancellor's Office, Visualisation Centre, Aberystwyth University, Aberystwyth, Ceredigion, SY23 3BF*  
Email: [cjm@aber.ac.uk](mailto:cjm@aber.ac.uk) , Phone: +44 (0) 1970 622030

#### Data Privacy Notice

The data controller for this project will be Aberystwyth University (AU). The AU Data Protection Manager provides oversight of AU activities involving the processing of personal data and can be contacted at [infocompliance@aber.ac.uk](mailto:infocompliance@aber.ac.uk). Your personal data will be processed for the purposes outlined in this notice. The legal basis that would be used to process your personal data will be 'a task in the public interest'. If you are concerned about how your personal data is being processed, please contact AU in the first instance at [infocompliance@aber.ac.uk](mailto:infocompliance@aber.ac.uk). If you remain dissatisfied, you may wish to contact the Information Commissioner's Office (ICO). Contact details, and details of data subject rights, are available on the ICO website at: <https://ico.org.uk/for-organisations/data-protectionreform/overview-of-the-gdpr/individuals-rights/>

**Appendix 4 – Ethical approval**

Ethical approval was obtained for this project from Aberystwyth University Department of International Politics– ethics reference no.: 19108