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ANALYSIS

Partnerships for child health: capitalising on links between the sustainable development goals

Yulia Blomstedt and colleagues evaluate the opportunities to improve child health through cross sector collaboration

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In 2015 the UN General Assembly adopted the sustainable development goals (SDGs) as part of a transformative universal framework for global development: the 2030 agenda.¹ Since the goals are interconnected,²⁻⁶ they have to be tackled in an integrated way. As well as ensuring that goals are reached efficiently, integration can avoid adverse effects from action to meet other targets and highlight trade-offs.⁴

Integrated action relies on national and international partnerships with a broad range of organisations—including national governments, local authorities, international institutions, business, civil society organisations, foundations, philanthropists, social impact investors, scientists, and citizens.⁷ However, it is not always clear who should partner with whom and on what grounds. Making these decisions—and developing integrated action plans, strategies, and policies—requires an understanding of the patterns of interaction between SDGs.

We use the example of child health to explore how assessment of the links between SDGs can be used to guide multisectoral partnerships. The importance of partnerships within the health sector is well established for child health, given the role of maternal health and nutrition in stillbirths, newborn health, and survival, as well as early child growth and development. By contrast, partnerships with other sectors have received much less attention. Efforts to include social determinants of health in development of health systems and public health have begun to provide crucial information. For example, the health in all policies (HiAP)⁸ initiative assessed multisectoral public policies, their health implications, synergies, and potential adverse

outcomes. The SDGs offer a new opportunity for collaboration between the health sector and the rest of society and, hopefully, the momentum to move from mostly talk to action.

SDG links as lever for improved child health strategies

The connections between child health (0-18 years old) and development and other priorities in the SDGs are strong and reciprocal. The survival, health, and wellbeing of children are essential to end extreme poverty and promote development and resilience.⁹ At the same time, social, economic, political, environmental, and cultural determinants have important effects on child health.^{10 11} Consequently, interventions beyond the health sector will accelerate progress on child health¹⁰ while investments in child health are crucial to reach multiple SDGs. However, this interdependence is not reflected in the formulation of SDG targets and indicators.

Although many SDGs have overlapping areas of concern, few of the goals directly integrate other sectors and reflect all three dimensions of development (social, economic, and environmental) either in the goals themselves or in the targets. This lack of integration risks reinforcing the current silo approach to development.¹² For example, all too often people with a medical or public health background do not reach beyond the health sector to find effective and efficient solutions to health challenges. This was a problem in the implementation of the millennium development goals.¹³

Highlighting the interdependence between the health goal (SDG3) and targets in the other SDGs has the potential to transform the approach to child health. Once we have identified the connections we need to create bridges between them and develop and facilitate multisectoral interventions.

Although the 2030 agenda is not legally binding, virtually all UN member states have agreed to implement it.¹ Concrete guidance on linking child health with other SDGs in the agenda would provide a lever to push governments to take multisectoral action in this and other areas. It would also provide a substantive basis for creating multistakeholder partnerships on child health.

Identifying suitable partners in other sectors

Sectors outside healthcare that are of crucial importance for child health include education, finance and social protection, labour and trade, agriculture, and transport.⁹ The first step to ensure multisectoral action is to identify key interventions in these non-health sectors that contribute to health outcomes.¹⁰ Besides SDG3 on health, 24 targets specifically mention children (Boxed Text on page 3 box 1) and have the potential to improve child health.

Box 1 Sustainable development goals (besides SDG3) that mention children

SDG 1: No poverty

1.2 By 2030, reduce at least by half the proportion of men, women, and children of all ages living in poverty in all its dimensions according to national definitions

1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable

Indicator 1.3.1 Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed people, older people, people with disabilities, pregnant women, newborns, work injury victims, poor people, and vulnerable groups

SDG 2: Zero hunger

2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious, and sufficient food all year round

2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older people

SDG 4: Quality education

4.1 By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes

4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care, and pre-primary education so that they are ready for primary education

4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs, and entrepreneurship

4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including people with disabilities, indigenous peoples, and children in vulnerable situations

4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

4a Build and upgrade education facilities that are child, disability, and gender sensitive and provide safe, non-violent, inclusive, and effective learning environments for all

SDG 5: Gender equality

5.1 End all forms of discrimination against all women and girls everywhere

5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation

5.3 Eliminate all harmful practices, such as child, early and forced marriage, and female genital mutilation

5c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

SDG 6: Clean water and sanitation

6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations

SDG 8: Decent work and economic growth

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and people with disabilities, and equal pay for work of equal value

8.6 By 2020, substantially reduce the proportion of youth not in employment, education, or training

8.7 Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking, and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms

8b By 2020, develop and operationalise a global strategy for youth employment and implement the global jobs pact of the International Labour Organisation

SDG 11: Sustainable cities and communities

11.2 By 2030, provide access to safe, affordable, accessible, and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, people with disabilities, and older people

11.7 By 2030, provide universal access to safe, inclusive, and accessible green and public spaces, in particular for women and children, older people and people with disabilities

SDG 13: Climate action

13b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth, and local and marginalized communities

SDG 16: Peace, justice, and strong institutions

16.2 End abuse, exploitation, trafficking, and all forms of violence against and torture of children

16.9 By 2030, provide legal identity for all, including birth registration

Indicator 16.9.1 Proportion of children under 5 years of age whose births have been registered with a civil authority, by age

However, the health sector should go beyond being a passive recipient and monitor of health effects generated by action on other SDGs. Health is not merely an outcome but also a driver of change in other sectors and has the potential to help achieve multiple SDGs (1). For example, improved child health removes resource constraints for households and communities (SDG 1), such that parents can spend time on employment (SDG 8) and spend money on non-health needs (eg, SDGs 2 and 4). Actors in sectors traditionally responsible for these SDGs would directly benefit from collaborating with the actors in child health. Boxed Text on page 3 Box 2 gives an example of such synergetic collaboration.

Box 2 Synergistic effects of multisectoral action: case study of conditional cash transfer strategies
Conditional cash transfer (CCT) programmes provide a cash payment to poor families or individuals in exchange for them taking actions intended to improve their wellbeing. The conditions, evidence based interventions, may include such things as consistent school attendance, prenatal health check-ups, and vaccinations for children. Hence, the programmes have potential to diminish poverty (SDG 1) and improve the health outcomes (SDG 3) and socioeconomic status of children and their families (SDGs 4, 5, 8).

The first larger scale CCT programmes was PROGRESA in Mexico. It began in 1997, partly in

response to the large economic downturn in late 1994 that especially threatened Mexico's poorest citizens. The multisectoral focus of PROGRESA recognised the integrated nature of education, health, and nutrition, and therefore the programme encouraged several government ministries, including health, to work together to implement it.

In developing PROGRESA, Mexico relied heavily on expertise from researchers and other professionals in poverty alleviation and human development, including health and education. This helped to decouple programme design from more vested political interests. PROGRESA also adopted transparency and accountability in all programme activities, which were therefore open to scrutiny and evaluation.²³

There has since been a gradual, but steady, increase in CCT programmes across the world and especially in Latin America. Evaluation of these programmes suggests that CCTs are effective in improving child health by tackling determinants such as access to healthcare, child and maternal nutrition, morbidity risk, immunisation coverage, and household poverty in developing countries particularly. Of importance to both policy and practice, it seems that CCTs work to promote child health only if there is an effective healthcare system in place.²⁴

Box 3SDG interactions framework scoring

+3 Indivisible: The target is inextricably linked to the achievement of another target

+2 Reinforcing: The target aids the achievement of another target

+1 Enabling: The target creates conditions that further another target

0 Consistent: No significant positive or negative interactions

-1 Constraining: The target limits options on another target

-2 Counteracting: The target makes it more difficult to reach another target

-3 Cancelling: The target makes it impossible to reach another target

Finding common grounds for multisectoral partnerships

Another approach to establishing multisectoral partnerships is through understanding the patterns of interaction between SDGs. This could be achieved through the following steps:

Mapping interactions between targets—Links between, in this case, child health and targets in other SDGs should be guided by scientifically shown associations between child health and other factors. Such mappings reveal potential partners and areas of overlapping responsibility or interest. Child health targets include SDG 3.1 (maternal mortality), 3.2 (newborn and child mortality), 3.7 (universal access to sexual and reproductive health-care services).

Assessing the direction of the identified interaction is important for establishing the grounds for collaboration. Is child health an outcome or a prerequisite of achieving another target, or is the link reciprocal? Establishing collaboration on targets where the link is reciprocal would have synergetic effects, propelling the achievement of both child health and the linked target.

Assessing the strength of association or identified interaction is important for prioritisation, identifying where multisectoral collaboration is crucial for achieving the target(s). As with any implementation, it is important to clarify the main groups involved as well as their power relations.

The SDG interactions framework developed by Nilsson and colleagues supports such explorative processes and suggests scoring connections on a seven point scale (Boxed Text on page 4box 3).¹⁴ The position and nature of the interaction may vary depending on the context within which the interaction occurs.

We used the framework to assess interactions with child health in other SDGs, informed by analysis of relevant sources.⁴⁻¹⁰ Between us we have expertise in environmental science, law, medicine, paediatrics, health systems research, development economics, and global health. Each author assessed the linkage with the identified targets, and a final score was agreed by discussion.

Our generic (not context specific) analysis suggests that collaboration with those implementing SDGs 1 (no poverty), 2 (zero hunger), 4 (quality education), 5 (gender equality), 8 (decent work and economic growth), and 17 (partnerships for the goals) could be cost effective because of the reciprocal link with child health (↓ and supplement 2 on bmj.com) The last column of ↓ gives examples of such synergistic multisectoral action, taken from the Every Woman Every Child report.⁹

The analysis also suggested that multisectoral collaboration on the following targets is essential for sustainable progress on child health (score +3): 1.1 (eradicate extreme poverty), • 1.2 (reduce at least by half the proportion of men, women, and children of all ages living in poverty in all its dimensions according to national definitions), 2.1 (end hunger), 2.2 (end all forms of malnutrition), 4.1 (ensure that all girls and boys complete free, equitable, and quality primary and secondary education), 6.1 (achieve universal and equitable access to safe and affordable drinking water), 6.2 (achieve access to adequate and equitable sanitation and hygiene), and 11.1 (ensure access for all to adequate, safe, and affordable housing and basic services and upgrade slums).

An example where multisectoral collaboration has large potential is the water, sanitation, and hygiene (WASH) programmes (SDGs 6.1 and 6.2). Despite the large health benefits, these programmes are still often viewed as an infrastructure led issues, the responsibility for which lies outside health system. This perception is reinforced by the often curative focus of the health sector and acts as a barrier to integration of WASH aspects in health strategies and programmes (Boxed Text on page 5box 4). Another difficulty is that the benefits of WASH programmes may accrue over time and so investment may not provide short term health and nutrition benefits. More examples of successful multisectoral interventions on determinants of reproductive, maternal, newborn, child, and adolescent health can be found in the SDG knowledge platform (<https://sustainabledevelopment.un.org/sdinaction>).

Box 4 Water, sanitation and hygiene—how multisectoral action can improve child health
 Creating multisectoral interventions that address water, sanitation, and hygiene (WASH) and health, and integrating WASH into existing frameworks and agendas for health are critical for improving child health through reduced exposure to enteric infections and improved nutrition. The interventions may also improve gender equality (SDG 5) and human rights (SDG 16). Girls are disproportionately affected, missing school because of walking great distances to carry water for household use, as well as lacking adequate sanitation and hygiene facilities in schools to allow them to manage their menstruation. Inadequate WASH facilities are also associated with sexual assault and gender based violence, where toilets are unavailable or unsafe.¹⁵

Integrating programmes to improve WASH into existing health programmes has been shown to be successful. Childhood vaccination has one of the highest coverage rates among child survival interventions. In Kenya hygiene interventions and education were integrated into the vaccination services by nurses or community health workers with good results.¹⁶ The interventions led to an improvement in hygiene indicators such as knowledge and use of household disinfection of water and had high acceptance and uptake in both rural and urban communities.

Another example of multisectoral partnerships is Laos, where WASH and ECCD (Early Childhood Care and Development) programmes worked closely together at district and village level. In this model multiple sectors worked together in planning and monitoring, with implementation largely carried out individually by each sector—sometimes referred to as “think multisectorally, act sectorally.” The experience highlighted the importance of all sectors in multisectoral programmes having a shared understanding of purpose and equitable access to resources to do their work as well as having effective leadership and clear organisational arrangements in place.¹⁷

Our analysis found few negative interactions, and none scored –3. The limited number of trade-offs with health has been noted previously¹⁸ and contrasts with domains such as infrastructure development, export promotion, and ecosystem conservation. However, connections between SDGs are highly context dependent,¹⁹ and conflicts between child health and other targets may still arise during implementation. To be relevant and transferable to any single setting, our analysis therefore needs to be repeated with sensitivity to political, economic, geographical, and social context by a multidisciplinary and multisectoral group of local stakeholders. Although the direction of the associations between child health and other targets in most contexts will remain the same, the strength and nature of the interaction may shift.¹⁸

For example, the link between ensuring access to modern energy (SDG 7.1) and child health is evident and true globally. However, whether the pursuit of modern energy is positive or negative for child health depends on context (↓). In places where basic energy access is already achieved, further efforts may not affect child health. If modern energy meant exclusively renewables, the link could be viewed as positive (+1 or +2). However, if energy access is instead pursued using polluting fossil or solid biomass fuels, they could have negative effect on child health (-2).

New ways of thinking

Our purpose here has been to introduce a way of thinking about interactions and start a debate about how such thinking can contribute to better dialogue and building partnerships. Through an integrated approach, the SDGs offer substantial opportunities to improve child health worldwide.²⁰ The knowledge base for such action requires further development. Collaboration between

the scientific community, decision makers, and implementers is vital²¹ to ensure that policies and action are evidence based and that child health takes its rightful place at the heart of the development agenda.

Understanding and communicating interconnections between SDGs as presented in this article can form a basis for bridging science and decision making. Various analytical and process oriented tools and methods can be used to support the identification and scoring, depending on the stakeholders involved and the exact purpose of the exercise. Academic institutions and think tanks can facilitate this process,²² providing the knowledge and evidence needed to government ministries and their implementing agencies, and supporting the exploration and communication of interactions across disciplines, sectors, and borders for transformative action on child health nationally and globally.

Key messages

Progress on the sustainable development goals (SDGs), including child health, requires integrated multisectoral action

Multisectoral partnerships can be enabled through understanding, highlighting, and acting on links between the various targets and goals

Models to assess connections can be used to prioritise actions and facilitate evidence based decision making in implementing SDGs

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- 1 Transforming our world: the 2030 agenda for sustainable development. UN General Assembly, 2015.
- 2 LeBlanc D. Towards integration at last? The sustainable development goals as a network of targets. UN Department of Economic and Social Affairs, 2015.
- 3 WaageJYapCBellS. Governing the UN sustainable development goals: interactions, infrastructures, and institutions. *Lancet Glob Health*2015;3:e251-2. doi:10.1016/S2214-109X(15)70112-925833663
- 4 International Council of Science. *Review of targets for the sustainable development goals: the science perspective*. ICSU, ISSC, 2015.
- 5 United Nations. A nexus approach for the SDGs: interlinkages between the goals and targets: UN, 2016.
- 6 CutterAOsbornDRomanoJULLahF. Sustainable development goals and integration: achieving a better balance between the economic, social and environmental dimensions. Stakeholder Forum, 2015.
- 7 United Nations. Addis Ababa action agenda of the third international conference on financing for development, 2015. http://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA_Outcome.pdf
- 8 WHO. Health in all policies: Helsinki statement. Framework for country action. 2013. http://apps.who.int/iris/bitstream/10665/112636/1/9789241506908_eng.pdf?ua=1
- 9 Every Woman Every Child. Global strategy for women's, children's and adolescents' health (2016-2030). 2015. <http://www.everywomaneverychild.org/global-strategy/RasanathanKDamjiNAtsbehaT>
- 10 Ensuring multisectoral action on the determinants of reproductive, maternal, newborn, child, and adolescent health in the post-2015 era. *BMJ*2015;351:h4213. doi:10.1136/bmj.h421326371220
- 11 Commission on Social Determinants of Health. Closing the gap in a generation: Health equity through action on the social determinants of health. Final report of the Commission on Social Determinants of Health. World Health Organization, 2008.
- 12 Marmot M, Allen J, Goldblatt P, et al. Fair society, healthy lives. The Marmot review. Commission on Social Determinants of Health, 2010.
- 13 FehlingMNelsonBDVenkatapuramS. Limitations of the millennium development goals: a literature review. *Glob Public Health*2013;8:1109-22. doi:10.1080/17441692.2013.84567624266508
- 14 NilssonMGriggsDVisbeckM. Policy: Map the interactions between sustainable development goals. *Nature*2016;534:320-2. doi:10.1038/534320a27306173

- 15 Partnership for Maternal, Newborn and Child Health. Knowledge summary 30. Water, sanitation and hygiene—the impact on RMNCH. 2014. <http://www.who.int/pmnch/knowledge/publications/summaries/ks30/en/index1.html>
 - 16 RymanTKBriereECCartwrightE. Integration of routine vaccination and hygiene interventions: a comparison of 2 strategies in Kenya. *J Infect Dis*2012;205(Suppl 1):S65-76. doi:10.1093/infdis/jir77722315389
 - 17 Plan. Multisectoral education and WASH programming in the Lao PDR. A case study of Plan's ECCD and WASH programs in Bokeo province. 2014.https://plan-international.org/sites/files/plan/media_wysiwyg/plan-lao-nutrition-multisectoralprogramming-convergence-evaluation-eng-may14.pdf
 - 18 NilssonM. Important interactions among the sustainable development goals under review at the high-level political forum 2017. Stockholm Environment Institute, 2017.
 - 19 StenbergKHanssenOEdejerTT. Financing transformative health systems towards achievement of the health Sustainable Development Goals: a model for projected resource needs in 67 low-income and middle-income countries. *Lancet Glob Health*2017;5:e875-87. doi:10.1016/S2214-109X(17)30263-228728918
 - 20 TaylorSWilliamsBMagnusDGoenkaAModiN. From MDG to SDG: good news for global child health?*Lancet*2015;386:1213-4. doi:10.1016/S0140-6736(15)00300-126460639
 - 21 GhaffarALangloisEVRasanathanKPetersonSAdedokunLTranNT. Strengthening health systems through embedded research. *Bull World Health Organ*2017;95:87. doi:10.2471/BLT.16.18912628250505
 - 22 KickbuschIHanefeldJ. Role for academic institutions and think tanks in speeding progress on sustainable development goals. *BMJ*2017;358:j3519. doi:10.1136/bmj.j351928739591
 - 23 Gantner L. Case study #5-1. PROGRESA: an integrated approach to poverty alleviation in Mexico. 2007. https://ecommons.cornell.edu/xmlui/bitstream/handle/1813/52625/dns_gfs_1200428168.pdf?sequence=2
 - 24 Owusu-AddoECrossR. The impact of conditional cash transfers on child health in low- and middle-income countries: a systematic review. *Int J Public Health*2014;59:609-18. doi:10.1007/s00038-014-0570-x24898173
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Tables

Table 1 | SDG3 targets crucial for the achievement of other SDGs. Summary table based on the scientific analysis presented by the International Council for Science and International Social Science Council⁴

SDG	Relevant SDG3 target*	Motivation/link
SDG 1: No poverty	3.8	Access to free health care is fundamental to eradicating poverty
SDG 2: Zero hunger	3.1, 3.2, 3.3, 3.9, 3.b, 3.c, 3.d	Reduction of maternal, infant, and under 5 deaths and the reduction of disease contributes to SDG2
SDG 5: Gender equality	3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3c	Attention to women and children in health initiatives is vital given their central roles in both social and biological reproduction and their need for access to health related services
SDG 8: Decent work and economic growth	3.2, 3.8, 3.d	Expected longevity at birth can be a measure of quality of life as a main outcome of sustainable and inclusive economic growth

Table 2| Example of interactions between child health and targets under other SDGs (see supplement 2 on bmj.com for a complete list of relevant targets)

Key dimension/target of goal	Score,* description of key interaction	Type of interaction	Policies and interventions to enhance or mitigate interaction ^o
Eradicate extreme poverty (1.1)	+3, Getting out of extreme poverty is inseparable from better child health, as health problems drive people into poverty and poverty leads to—for example, reduced access to health services and increased malnutrition	Reciprocal	Reduce poverty, including through the use of gender and child sensitive cash transfer programmes designed to improve health Implement social protection and assistance measures ensuring access for women, children, and adolescents Strengthen access to health insurance and insurance related to other essential services and goods to decrease the effect of catastrophic out-of-pocket spending
Ensure access to safe, nutritious and sufficient food by all, including infants (2.1)	+3, Sufficient, nutritious food is integral to improved child health	Reciprocal	Protect, promote, and support optimal nutrition, including legislation on marketing of breast milk substitutes and of foods high in saturated fats, trans-fatty acids, sugars, or salt
Ensure quality primary and secondary education for all girls and boys (4.1)	+3, Education, particularly of girls and women would be transformational in all aspects of health, productivity, and development	Reciprocal	Integrate early child development interventions in child health services, childcare services, and preschool education Enable girls and boys to complete quality primary and secondary education, including by removing barriers that suppress demand for education Ensure access to education in humanitarian settings and in marginalised and hard-to-reach areas, including for people with disabilities
Eliminate all forms of violence against all women and girls (5.2), eliminate all harmful practices against children (5.3)	+2, Achieving this SDG aids the achievement of child health	Health is outcome	Enforce legislation to prevent violence against women and girls and ensure an appropriate response when it occurs Enact a legal framework for protection, ensuring universal access to legal services (including to register human rights violations and have recourse to remedial action against them) Implement social protection and assistance measures ensuring access for women, children, and adolescents Provide protection services for women, children, and adolescents that are age and sex appropriate
Universal and equitable access to safe and affordable drinking water for all (6.1)	+3, Indivisible from child health	Health and nutrition are outcomes	Provide universal access to safely managed, affordable, and sustainable drinking water Invest in education on the importance of safely managed water use and infrastructure in households, communities, schools, and health facilities
Ensure access to modern energy for all (7.1)	Depending on which strategies are chosen, the effect on child health can be positive or negative. For example: +1, modern energy replacing traditional solid biomass cook stoves improves children's respiratory health through reducing indoor air pollution and outdoor pollution; -2, for many countries, abundant energy means fossil, nuclear, etc. energy, and might thus be harmful for child health	Health is outcome	Reduce household and ambient air pollution through the increased use of clean energy fuels and technologies in the home (for cooking, heating, lighting)
Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality (10.4)	+2, Equality reinforces health. Universal access to healthcare reinforces greater equality	Health is outcome	Provide entitlements for parental leave and for childcare for working parents and promote incentives for flexible work arrangements for men and women
Access to safe, affordable, accessible, and sustainable transport, including public transport; road safety (11.2)	+1, Road safety and safe transportation reinforces child health in many ways, including access to health and education facilities, prevention of road accidents	Health is outcome	Provide safe transportation to health, education, and work facilities, including during emergencies Improve road safety, including through mandatory wearing of seat-belts and cycle and motorcycle helmets Improve regulation and compliance of drivers, including introduction of a graduated driving licence that restricts driving options for inexperienced drivers
Environmentally sound management of chemicals and all wastes, reduction of their release to air, water, and soil (12.4)	+1, These measures are needed to minimise the adverse effects of chemical and waste on human health and environment. Links to climate	Health is outcome	Eliminate non-essential uses of lead (e.g. in paint) and mercury (e.g. in healthcare and artisanal mining) and ensure the safe recycling of lead- or mercury-containing waste