THE UNIVERSITY OF QUEENSLAND

AUSTRALIA

Integrating psychosocial Early Childhood Development into Reproductive, Maternal, Newborn, and Child Health services in Uganda: perceptions of governance stakeholders and primary healthcare providers

Nakazinga Ndugwa

Bachelor of Health Sciences (Honours) - Health Service Management

A thesis submitted for the degree of Doctor of Philosophy at

The University of Queensland in 2019

School of Public Health, Faculty of Medicine

Abstract

Uganda has one of the youngest populations in the world. In 2014 it was estimated that 56.7% of the population was 18 years and younger, and 35% of that population was less than 5 years old. That population distribution represents great potential, but also demands investment for its realisation. Psychosocial Early Childhood Development (ECD) is gaining global momentum in the effort to build the mental, social and emotional wellbeing of children aged 0 to 3 years, optimising their growth and development.

Research shows children in Low and Middle Income Countries (LMICs) are exposed to psychosocial risk factors such as poor stimulation, lack of learning opportunities, parent unresponsiveness, and parental inability to understand infant behaviour. Identified strategies that address these include responsive and stimulating parenting programmes that encourage brain stimulation, language development and secure attachment between parents and their infants. These have been shown to promote mental, social and emotional capacity in infants, and positive lifecourse outcomes in school readiness, employment and mental wellbeing – critical to Uganda's growing population.

Uganda's National Integrated ECD policy has reinforced the importance of ensuring positive psychosocial ECD, but recognises that there are gaps in systems and in implementation, with limited public services available for children aged 0 to 3 years. These gaps can be tackled by scaling up proven interventions through existing health services.

For the thesis, I developed a conceptual framework focusing on national governance and the service delivery planning and implementation considerations needed to scale up psychosocial ECD in the Ugandan health context. The framework is used to identify the health system components needed to effectively integrate psychosocial ECD interventions across frontline Reproductive, Maternal, Newborn, and Child Health (RMNCH) services. It is used to show how Uganda's RMNCH services can be employed to strengthen care for psychosocial ECD, by integrating and scaling up the WHO and UNICEF Care for Child Development (CCD) package at frontline health services.

A qualitative Health Policy and Systems Research design and health systems thinking analysis were used to explore local perceptions of ECD health governance and service delivery factors in detail. I triangulated data from ECD government documents, key informant interviews, focus group discussions and observations. A government document review was

used to explore Uganda's national ECD governance environment. Additionally, 22 key informant interviews and seven focus group discussions with 61 government staff, multilateral staff and Non-Government Organisation (NGO) staff and health workers, were conducted in Uganda to explore the governance and service delivery capacities. Furthermore, to explore the service delivery environment, observation of RMNCH services at selected health facilities was used to examine how and where CCD can be integrated. A thematic analysis was employed to identify codes, categories and emerging governance and service delivery themes.

Governance themes relating to greater ECD government commitment and increased ECD prioritisation were identified. Participants described important governance considerations relating to national government ECD commitment and leadership, partnership and collaboration, and multisectoral engagement. However, effectively achieving the multisectoral ECD approach was an identified challenge as issues around leadership, authority and implementation capacity were raised. Additionally the lack of ECD services and limited health sector involvement in psychosocial ECD was a reoccurring theme and limitation.

Perceptions of psychosocial ECD varied across health workers and 'sensitisation' on the importance of psychosocial ECD to improve their knowledge and practices was frequently raised. At selected RMNCH services, frontline health workers were informally promoting psychosocial ECD, however there were no strong concepts that defined formal psychosocial ECD milestones. Additionally there are no systems and structures to support them to systematically address psychosocial ECD. Furthermore heavy workload, limited empowerment and limited resources were key health systems challenges, impacting their capacity to deliver routine child services.

In conclusion, in Uganda there is national government endorsement of ECD with a multisectoral approach, however there are limited service delivery structures addressing psychosocial ECD in children aged 0 to 3 years. Uganda has established psychosocial ECD on the national agenda and recognised the need for a multisectoral approach. To achieve equitable access to quality psychosocial ECD, RMNCH models of care and service delivery need to be reorientated to proactively encourage positive psychosocial ECD and CCD. At a systems level, this requires an integrated multisector approach that extends the whole-of-government ECD approach to include psychosocial ECD in health. For effective integration

3

into health, psychosocial ECD needs to be prioritised alongside other child health concerns by all governance actors. Additionally it requires reorienting health service delivery and workforce to make a space for psychosocial ECD in their new and expanded roles. However, the introduction of new ECD governance actors creates tensions with established ECD players over available resources, and differing sectoral approaches and priorities. Additionally, if RMNCH services are to promote CCD, they are unable to do this with the current health worker vocational orientation and resource base.

Declaration by author

This thesis is composed of my original work, and contains no material previously published or written by another person except where due reference has been made in the text. I have clearly stated the contribution by others to jointly-authored works that I have included in my thesis.

I have clearly stated the contribution of others to my thesis as a whole, including statistical assistance, survey design, data analysis, significant technical procedures, professional editorial advice, financial support and any other original research work used or reported in my thesis. The content of my thesis is the result of work I have carried out since the commencement of my higher degree by research candidature and does not include a substantial part of work that has been submitted to qualify for the award of any other degree or diploma in any university or other tertiary institution. I have clearly stated which parts of my thesis, if any, have been submitted to qualify for another award.

I acknowledge that an electronic copy of my thesis must be lodged with the University Library and, subject to the policy and procedures of The University of Queensland, the thesis be made available for research and study in accordance with the Copyright Act 1968 unless a period of embargo has been approved by the Dean of the Graduate School.

I acknowledge that copyright of all material contained in my thesis resides with the copyright holder(s) of that material. Where appropriate I have obtained copyright permission from the copyright holder to reproduce material in this thesis and have sought permission from co-authors for any jointly authored works included in the thesis.

Publications included in this thesis

No publications included.

Submitted manuscripts included in this thesis

No manuscripts submitted for publication

Other publications during candidature

Conference abstracts.

1. ***Nakazinga Ndugwa***. *How to strengthen psychosocial Early Childhood Development in Uganda's public health systems.* Oral presentation at UQAPS Pitching Research Competition, University of Queensland Business School, 4th November 2015.

2. ***Nakazinga Ndugwa***. *Psychosocial Early Childhood Development and public health: a health systems approach for Low and Middle Income Countries.* Oral presentation at the School of Public Health, Research Higher Degree Conference, University of Queensland, 4th November 2015.

3. **Nakazinga Ndugwa, Chi-Wai Lui, Peter S. Hill, Maxine Whittaker, Grace Ndeezi, Hebe Gouda.** *Exploring the health systems requirement for Scaling up Care for Psychosocial Early Childhood Development in Uganda.* Poster presentation at the World Health Summit, Berlin, 15th - 17th October 2017

Contributions by others to the thesis

Professor Maxine Whittaker and Dr Hebe Gouda contributed to the conceptualisation and design of this research. Associate Professor Peter S Hill, Dr Hebe Gouda, Dr Chi-Wai Lui, Professor Maxine Whittaker, and Associate Professor Fran Boyle contributed to this thesis by reviewing and commenting on the research analysis, thesis structure and content. Professor Grace Ndeezi co-ordinated the fieldwork and networks for data collection in Uganda.

Statement of parts of the thesis submitted to qualify for the award of another degree

No works submitted towards another degree have been included in this thesis

Research Involving Human or Animal Subjects

Ugandan government permission to conduct research was obtained from the Ministry of Health, Ministry of Gender Labour and Social Development and Ministry of Education and Sports. Copies of the permission are provided in Appendix 7.

Ethics approvals were obtained from the School of Public Health Research Ethics (University of Queensland, Australia), Mulago Research Ethics Committee, and the Uganda National Council for Science and Technology. Copies of the ethics approval letters are provided in Appendix 8 and include:

- School of Public Health Research Ethics Committee NN16022016
- Mulago Research Ethics Committee MREC 979
- Uganda National Council for Science and Technology Ref SS 5009.

Acknowledgements

This PhD has been a challenging and rewarding professional journey and I am eternally grateful for those who have supported me academically, professionally and personally. This thesis is a reflection of my journey as I have unpacked the concepts of psychosocial Early Childhood Development and health systems, a difficult path to navigate which was made manageable and easier by those who mentored and encouraged me in my academic, professional, and personal life.

I would like to extend my sincere thanks and gratitude to my supervisory team, Associate Professor Peter S. Hill, Dr Hebe Gouda, Professor Maxine Whittaker, Dr Chi-Wai Lui, Associate Professor Fran Boyle and Professor Grace Ndeezi. Thank you for your guidance, support and input throughout this evolving PhD journey. Your advice and insight kept me grounded and focused.

The thesis would not have been possible without the Research Training Program scholarship. I am grateful for the financial assistance provide throughout the years. I am also grateful for the Faculty of Medicine Research Higher Degree Travel Scholarship, for funding my fieldwork and conference attendance and for the School of Public Health, University of Queensland for providing resources to support me throughout the PhD.

I'd like to express my gratitude to all research participants. I am very grateful for the time you took to speak with me and share your experience. This thesis would have not been possible without your insight and willingness to participate.

To my family, your support and encouragement throughout this journey has been a blessing. To my parents, Joyce Namuddu Mukasa, Professor Christopher M. Ndugwa, Robinah Ndugwa, Dr. Semu Musoke, Helen Musoke and Margaret Nakibuuka thank you for believing in me and encouraging me throughout this journey. To my siblings, Ssagala Ndugwa, Joel Ndugwa, Magala Ndugwa, Irene Bukirwa, Emily Ndugwa, Jemimah Ndugwa, Nancy Musoke, Lewis Musoke, Ssubi Kiwanuka and Nakasi Kiwanuka. Thank you for checking in, encouraging me and reminding me of my strength and perseverance. You showed me a love and patience that I will forever be grateful for.

To my colleagues that became friends, Dr. Claire Runciman, Eleanor J Jackson and Janice Finlayson, working with you on the Australian Nurse Family Partnership Program is the

reason I began this journey. Your work ethic, dedication, professionalism and genuine concern for others was and continues to be an inspiration. Kelly Thistleton, you are a gem and I am forever thankful for you. You each showed me invaluable kindness and support and I am glad to call you friends. Thank you for mentoring me professionally and personally and encouraging me to grow and come into my own.

To my fellow PhD colleagues Uranchimeg (Urna) Tsevelvaanchig, Sarah Blondell, Anar Ulikpan, Gabbi Fernando, Liz Barber, Dwan Vilcins and Danielle Currie we have gone through this journey together and having your support and encouragement was invaluable. Thank you for the company, insight, feedback, encouragement and conversations.

Finally I would like to extend my deepest and heartfelt gratitude to my friends. You have remained a constant in an evolving and challenging journey. Thank you for being my encourager, allowing me to quit but knowing I wasn't done, picking me up at my lowest, and celebrating my small gains. Ethel Ndombi, Rachel Chingwena, Sophie Banner-Martin, Ana M. Ramirez, Rowesa Mpundu, and Lillian Mazara I will forever be grateful for the moments you reached out, checked in and allowed me to remain present in everyday life. You were lifesavers.

Maama, Joyce Namuddu Mukasa, this is for you. You are my heart and inspiration. During the good times you have been there to cheer me on and during the challenging times your concern and comfort was a pillar. The way you live your life which such, grace, determination, humility and generosity is an inspiration. All you have done for your children and family is why I kept pushing. Thank you for gently encouraging me. I love you and I am thankful for having you as an example of how to be a strong, resilient and determined woman. This is as much your journey as it is mine.

My strength lies in God who has and continues to be a comforter and provider.

Financial support

Keywords

Psychosocial early childhood development, early childhood development, health policy and systems research, health systems thinking, health systems strengthening, scale up, public healthcare, governance, health service delivery, reproductive maternal newborn and child health, maternal and child health

Australian and New Zealand Standard Research Classifications (ANZSRC)

ANZSRC code: 160508 Health Policy 60%

ANZSRC code: 111799 Public Health and Health Services 40%

Fields of Research (FoR) Classification

FoR code: 1605 Policy and Administration 60%

FoR code: 1117 Public Health and Health Services 40%

Table of contents

List of figures

List of tables

List of photos

List of abbreviations

ANC	Antenatal care
CCD	Care for Child Development
CHW	Community Health Worker
DHS	Demographic Health Survey
ECD	Early Childhood Development
ECCE	Early Childhood Care and Education
HIS	Health Information System
HIV	Human Immunodeficiency Virus
HOME	Home Observation for Measurement of Environment
HMIS	Health Management Information System
IEC	Information Education and Communication
IMCI	Integrated Management of Childhood Illness
IQ	Intelligence Quotient
LIC	Low Income Country
LMIC	Low and Middle Income Country
MCH	Maternal and Child Health
MDG	Millennium Development Goal
M&E	Monitoring and Evaluation
MoES	Ministry of Education and Sports
MoH	Ministry of Health
MoGLSD	Ministry of Gender Labour and Social Development
NIECD	National Integrated Early Childhood Development
NHS	National Health System
NGO	Non-Government Organisation
PEDS	Pakistan Early Development and Stimulation
PMTCT	Prevention of Mother-to-Child Transmission
PNC	Postnatal care
PSFU	Private Sector Foundation Uganda
RMNCH	Reproductive, Maternal, Newborn, and Child Health
SES	Socio-economic status
SDG	Sustainable Development Goal
TT	Tetanus
VHT	Village Health Team
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Chapter 1: Introduction to thesis

The last 20 to 30 years have seen major improvement in child survival across the globe (1) (refer to **Figure 1-1**). Along with ongoing efforts to continue this progress, there is increasing attention drawn to ensuring that children also have the opportunity to thrive across physical, mental, social and emotional and development (2, 3). While the global health commitments to end all preventable deaths of children under five years remain a significant part of child health priorities in Low and Middle Income Countries (LMICs) (1, 4), the improvements made over the years have encouraged a dialogue that is focusing on ways to ensure children are meeting their developmental potential (2, 5, 6). Thus, a key part of the global public health dialogue is the importance of providing access to key services that encourage good physical, cognitive, emotional, and social development during the early years of life part of which involves promoting positive psychosocial Early Childhood Development (ECD) in children aged 0-8 years (2, 6, 7).

Under-five mortality rate, 1990 and 2015
(deaths per 1,000 live births)

Sub-Saharan Africa — 179 / 86 — ↓ 52%

Oceania — 74 / 51 — ↓ 31%

Southern Asia — 126 / 50 — ↓ 60%

Caucasus and Central Asia — 73 / 33 — ↓ 55%

South-Eastern Asia — 71 / 27 — ↓ 62%

Northern Africa — 73 / 24 — ↓ 67%

Western Asia — 65 / 23 — ↓ 65%

Latin America and the Caribbean — 54 / 17 — ↓ 69%

Eastern Asia — 53 / 11 — ↓ 78%

Developed regions — 15 / 6 — ↓ 61%

Developing regions — 100 / 47 — ↓ 53%

World — 90 / 43 — ↓ 53%

0 — 50 — 100 — 150 — 200

■ 1990   ■ 2015 projection | 2015 target

↓ Percentage change between 1990 and 2015

Figure 1-1: Reducing child mortality: improvements made from 1990-2015 (8 p 32)

The early 2000s saw an increasing push to prevent child and neonatal deaths which globally accounted for 40% of deaths in children aged five years and under (9). With the dawn of the Millennium Development Goals (MDGs), efforts were made to ensure children under five years of age were given all possible means of survival through interventions and health services targeted at children, mother's and communities (5, 9, 10). This new era of child survival (particularly in Low Income Countries (LICs)) created a dynamic set of integrated health care initiatives, which focused on preventing child mortality by using a variety of preventative and curative health strategies targeting mothers and children. These included access to clean water; improving maternal and child nutrition; access to essential maternal and child health services; health promotion and preventative health programmes and interventions (e.g. vaccinations, bed net distribution) (10-12). The integrated child survival initiatives employed multisectoral, collaborative commitments and partnerships between governments, multilateral organisation and non-government organisations (NGOs), which focused on systematic changes and accountability, each of which have been identified as important contributions to the global reductions in child mortality (10-13).

Current developments in child health have attempted to move the focus from child survival to child potential. This prioritises both child survival and child development, the latter of which recognises children's mental, emotional and social development as an important part of child health and development (2, 3, 14). The Sustainable Development Goals (SDGs) acknowledges these two agendas by including both child survival and child development as key global child health and education goals and encourages a multisectoral approach to achieve these (3). SDG 3.2 aims to continue efforts to end all preventable deaths in children under five years old. The target is to reduce neonatal mortality to 12 per 1,000 live births and under five mortality to 25 per 1,000 live births by 2030 through continued efforts that prevent communicable diseases and ensure universal health coverage and access to child health services (4). Additionally, SDG 4 focuses on ensuring children have access to quality education and ECD care (4). During early years of life, this specifically involves promoting positive early childhood learning and development, and ensuring positive child development through "*access to quality early childhood development care and pre-primary education*" *(15 p 21).* Acknowledging both child survival and child development ensures global action for children is holistic and includes the physical, social and mental health of a child. However there is still a separation between the health and education sectors responsibilities, with the health sector primarily responsible for preventing child morbidity and mortality and the education sector responsible for psychosocial development. For the public health sector to

holistically achieve the child health and development SDGs, it requires psychosocial ECD to be reinforced alongside child survival interventions by extending the health sectors responsibility to actively promoting and supporting positive psychosocial ECD across population health services (2, 16).

1.1 Early Childhood Development and the significance of the first 1000 days of life

ECD is the term used to define cognitive, physical, social and mental development and growth experienced between 0- 8 years of age (17-21). This is characterised by key patterns of human development that occur biologically and as well as through physical, social and environmental stimulation. ECD consists of sensory, fine and gross motor skills, cognitive and intellectual development, speech and language development, and emotional and social development (21-23). During the first eight years of life, children undergo: cognitive development, which involves the development of the brain and its functions; physical or physiological development and; psychosocial development, referring to the mental, social and emotional development and wellbeing of children (23, 24).

The World Health Organization (WHO) identifies ECD as the period in which the most significant phase of physical, social and psychological learning and development occurs (17). These years are marked by rapid development of the brain and central nervous system, with as much as 80% of the brain development occurring between 0-2 years, 25% of which occurs during prenatal stages of development (17, 25). Because of the rapid development that occurs during the early years of life, ECD has been recognised as a pivotal part of physical, mental, social and economic lifecourse development trajectories, outcomes and wellbeing (17, 18, 26).

The first 1000 days of life, from conception to 2 years, has been identified as an exceptionally critical part of human development (3). The fastest and largest rate of brain development occurs from in-utero up to two years of age, the latter of which is influenced by breast feeding, nutrition and the stimulations had through caregiving experiences (25, 27-30). Additionally important foundations for cognitive, social and emotional life course development are formed through, genetic, biological, physical, social and environmental stimulus (18, 23, 30, 31). Early intervention studies by Engle et, Walker, Cabral, Ekerndode Yousafzaib showed interventions during the 0-3 year age bracket have positive and greater intellectual, social, emotional and economic outcomes and benefits (32-38). For example, early interventions targeting child nutrition and social emotional development have showed

improved and positive development outcomes across numeracy, literacy, school readiness, mental health, violent behaviour and adult income (32-38). During 0-3 years is when the public health sector has the most frequent contact with children as they attend routine child health services. This has been identified as an important pathway for ECD services (6, 39). Because of the significant development potential that occurs during 0-3 years and the reach the public health sector has to these children, I pay special attention to 0-3 year age range and explores how the public health sector can support positive psychosocial ECD.

1.2   The multisectorality of Early Childhood Development

ECD is a diverse, complicated and multisectoral part of human development. It consists of multiple components and different levels of influence that occur at an individual, community and national level[1] and in a multisectoral context. Developed from the ECD literature, a conceptual representation of ECD is presented in **Figure 1-2** which provides a simple framework of what ECD is, and the factors that influence it (17, 22, 24, 40, 41). This demonstrates the multisectoral ECD influences and shows how health, education and social development systems can indirectly impact societal, community and family level factors which directly influence ECD (6, 17, 39). While families are key influencers of child development patterns and outcomes, the ECD priorities, agendas and levels of influence at the national and global context, will filter down and affect the family, residential and relational environment and communities (6, 17). Furthermore while global agendas and priorities guide the ECD movement they rely on regional and national resources to deliver the services to families and their children (17). As a result there is a relationship between the family, residential, regional, national and global community which are interconnected through a complex ECD environment (17). What is important to note is while families and communities present the downstream factors that are directly in touch with the child; the national and international priorities and resources have a significant influence on dictating and developing a conducive and supportive environments (6).

---

[1] National level ECD refers to nationwide government initiatives

Figure 1-2: Conceptual framework of ECD: key aspects of a nurturing environment in early childhood care and wellbeing (17, 22, 24, 40, 41).

The following notes appear within the figure:
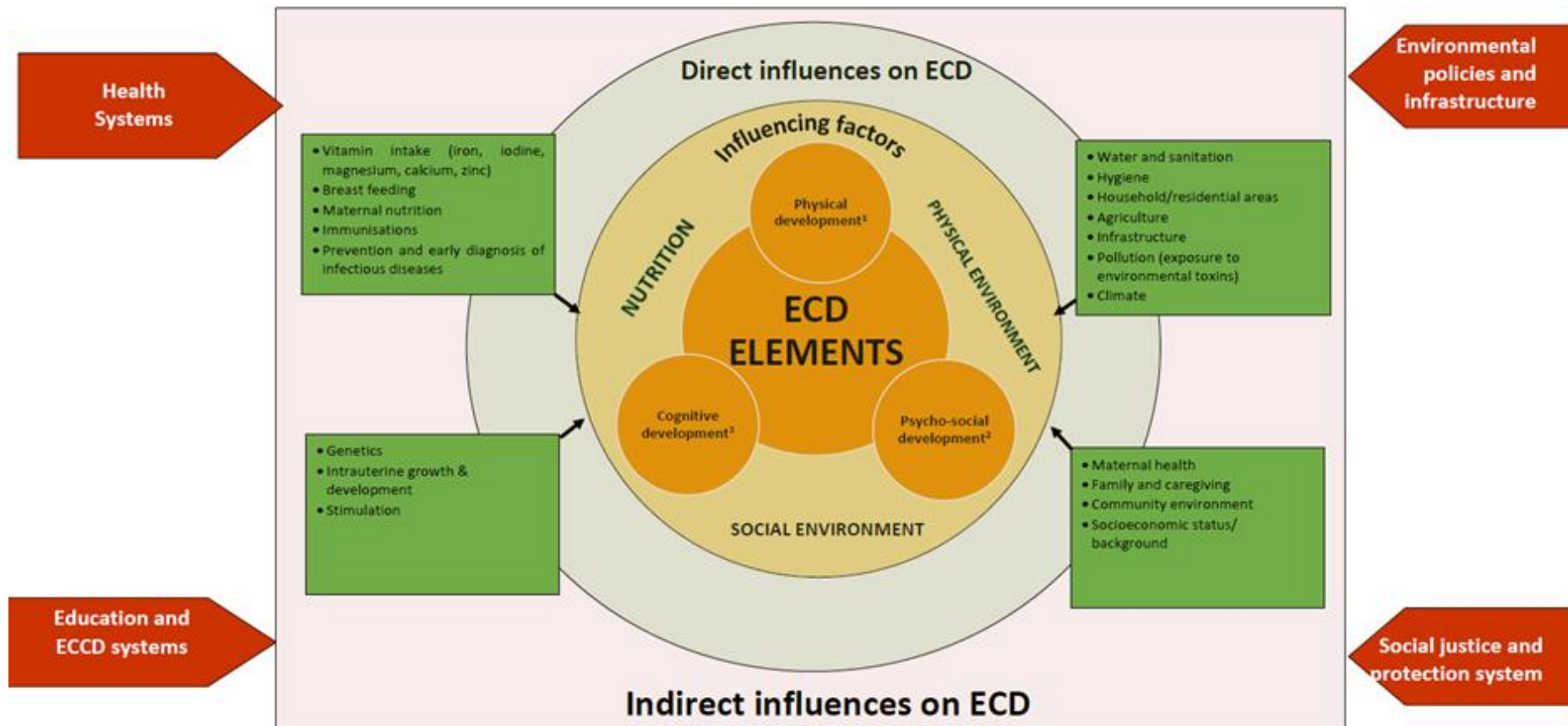
1. Physiological development including fine and gross motor skills, sensory skills (vision and hearing), weight, rate of growth.
2. Emotional wellbeing, behavioural characteristics including, temperament, socialisation, secure attachment with caregivers, trust and security with others, behaviour management, self-regulatory skills on behavioural and emotional control
3. Brain development including problem solving skills, cognitive/intellectual skills, language development, thinking process.

Ensuring that a child can develop in all the ways that ECD entails relies heavily on their early life experiences (26). Over the last 50 years, there has been an increasing realisation of the influence that psychological, sociological and environmental factors have on our health, wellbeing and development trajectories (17, 23, 25). Research has shown links between adult outcomes and childhood experiences across, nutrition, family and social interactions, environmental conditions and socio-economic circumstances (17, 35, 40-42). Depending on the nature of the exposure, the experiences had during the early years of life can present both positive and negative effects on physical, psychological and socioeconomic lifecourse outcomes; and have be shown to influence outcomes on education, income and Socio-economic status (SES) and the likelihood of intergenerational poverty (18, 35, 36, 43). Negative experiences, or the lack of stimulation during the early years can present adverse outcomes on cognitive, emotional, social and motor skills that can be felt across a lifetime (18, 25). Accordingly, it is important and timely to address physical, social, and psychological development during the early years of life and understand how external factors can positively influence these development outcomes across individuals and generations (17, 18, 40, 44). This has reinforced the importance of having early interventions that reduce and prevent adverse outcomes across physical, emotional and social child development during the early years of life.

1.3 Psychosocial Early Childhood Development

The interrelated nature of ECD makes it crucial to locate and define psychosocial ECD, and to clearly explain what it involves, why it is important and how it can be supported. Psychosocial ECD is the term used to describe the cognitive, social and emotional development and wellbeing of children aged 0-8 years (23, 24). It involves the social and emotional development and wellbeing of children and includes the development of key behavioural characteristics associated with socialisation, temperament (personality), secure attachment with caregivers, behaviour management, and self-regulatory skills (22). For children aged 0-3 years, psychosocial ECD can be characterised by three key development areas which include (45, 46):

- Cognitive development
- Social development and skills
- Emotional development.

Cognitive development includes an infant or toddler's learning, thinking and problem-solving skills. It involves the development of the, key executive functions such as sight, hearing,

28

identifying sound, and muscle movement, and self-regulatory skills which allows infants to do basic functions like, control their emotions and actions and regulate their bodies and social interactions (23, 45-47). Social development and skills include the ability for infants and toddlers to express themselves through verbal and non-verbal skills or cues and communicate their needs and interests (45, 46). Emotional development focuses on the child's ability to have appropriate emotional reactions to their own efforts and other people, and how they receive and express appropriate affection (e.g. laughing, smiling, crying) (45, 46).This is central to how infants and toddlers socialise with people around them. **Table 1-1** (below) provides a brief summary of the key elements under each of the different development domains in children aged 0-3 years and the caregiving practices used to promote these (refer to Appendix 1 for further details).

Responsive and stimulating caregiving that positively reinforces good psychosocial ECD plays a crucial part in lifecourse development and are recognised as protective factors of psychosocial development (30). During the early years of life this can involve encouraging positive caregiver-infant interactions by using age appropriate play and talk to stimulate cognitive, social and emotional development and responding appropriately to a child cues and needs (32). Programs that educate caregivers on how to positively interact with children using age appropriate play, talk, learning and stimulation, have been used to improve psychosocial ECD in children aged 0-3 years with positive outcomes across school readiness, mental health and socio-economic wellbeing (22, 38). Given the benefits, there is now a global focus to scale up proven interventions through existing child health services (6).

Table 1-1: Overview of psychosocial ECD and Care for Child Development (CCD) positive parenting practices (23, 45-47)

Elements of psychosocial ECD	Key examples in infants and toddlers	Positive parenting practices to promote development
Cognitive development	• Using touch to stimulate senses, explore and learn • Recognising people, things, and sounds • Comparing sizes and shapes • Problem solving skills (e.g. uncovering hidden items)	• Engage in age appropriate play and talk • Give simple instructions for things • Play with infant or toddler- peek a boo • Describe things to infant or toddler • Provide age-appropriate toys for play e.g. rattle • Read books
Social development and skills	• Understanding their name • Understanding who their primary caregiver/mother • Language and talking skills, e.g. making sounds or communicating with their mother/caregiver.	• Cuddle, talk, and play with infant when feeding, dressing or bathing infant or toddler • Teach infant or toddler to self soothe-e.g. sucking thumb • Understand infant and toddler cues (e.g. hunger cry or angry cry) and respond to it accordingly. • Provide safe areas to play and explore • Provide toys to play with
Emotional development	• Socialising with caregiver, how they play and communicate with their caregiver, • Understanding and reading cues properly • Looking to caregiver for assistance or learning by doing things e.g. copying actions like pick up and throwing things	• Understand infant and toddler's mood, what makes them happy or unhappy and encourage or soothe accordingly • Encourage behaviour by example • Praise good behaviour • Gently correct wrong or harmful behaviour

1.4 Psychosocial Early Childhood Development in Low and Middle Income Countries

While there is compelling evidence to show the importance of health based psychosocial ECD interventions, little has been done to institutionalise, implement and scale up evidence based practices in LMICs (3). For psychosocial ECD there are many interventions that address improved caregiving and psychosocial ECD but there are limited systems wide approaches that focus on delivering these initiatives across the health sector (7). Globally public health efforts to support ECD are beginning to advocate for the importance of nurturing caregiving programs that address physical, psychosocial and cognitive development (6, 7). This is specifically focusing on services that provide effective and practical ECD parenting initiatives targeting caregivers and their children (3, 6, 45). In a population health context, this has mainly been happening at an intervention level, where specific services or health workers are used to deliver and promote positive parenting programs. However, these have not been comprehensively scaled up, integrated and implemented across all maternal and child health (MCH) services (37, 48). The latest global dialogue on ECD, emphasises the need for research that examines how to scale up proven and effective interventions in LMICs, with a particular focus on using health systems and MCH services to deliver important ECD services (3, 14, 49). This should include making national and government level initiatives that make the public health sector more actively involved in promoting psychosocial ECD.

1.5 Aims and objectives

For this thesis, I examine how population healthcare services can support positive parenting and psychosocial ECD in a LMIC context. Public health care systems have the potential to reach thousands of children between the ages of 0-5 years through the provision of essential child health services, (17, 32, 45, 50). These are recognised as one of the few systems that can access children during the early years of life (6, 43). As children and their caregivers access child health services (e.g. antenatal care (ANC), postnatal care (PNC) immunisation, nutrition and disease prevention), Reproductive, Maternal, Newborn, and Child Health (RMNCH) services have been identified as a key platform and access point to provide caregivers with knowledge and skills to positively support their child's psychosocial development (6, 45). To scale up psychosocial ECD services at RMNCH services, it is important to understand the system wide requirements that will enable it to be delivered across all relevant services.

The question posed is: how can Uganda's population health services strengthen psychosocial ECD, through the scale up of interventions to improve stimulating and responsive caregiving practices at its frontline RMNCH services?

This looks at exploring whether there is an enabling environment for psychosocial ECD, if there is a health systems based approach to psychosocial ECD and whether psychosocial ECD was being addressed at RMNCH frontline services. Each of these will rely on exploring the governance and service delivery aspects of psychosocial ECD and health. To achieve this, the following research aims and objectives were explored:

AIM 1: Explore how care for psychosocial ECD and Care for Child Development (CCD) can be scaled up in Uganda's health services.

- Objective 1a: Develop a conceptual health systems framework for CCD planning, implementing and scale up at frontline RMNCH services.
- Objective 1b: Use the conceptual framework to plan CCD scale up in Uganda.

To explore how care for psychosocial ECD can be integrated in health, this research aims to identify the population healthcare requirements for implementing and scaling up care for psychosocial ECD and CCD in RMNCH care services. I develop a conceptual framework for CCD scale up, a first of its kind to explore and unpack the different health systems requirements for scale up. I then uses this framework to explore and discuss how Uganda's frontline RMNCH services can scale up and provide CCD services. To achieve this, a narrative review on psychosocial ECD and the influence of positive caregiving was done. This was used to understand the current evidence on positive caregiving and psychosocial ECD outcomes and the best practice principles being used to promote this in primary health settings. From this, the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) CCD package, was identified as a globally endorsed guiding principle for delivering care for psychosocial ECD in healthcare setting. The CCD package, was then used to develop a care for psychosocial ECD health systems conceptual framework using a health systems thinking analysis approach and the Health System Building Blocks framework. The health systems thinking analysis involved evaluating health system components, as presented by the Health System Building Blocks framework, to explore their interactions and identify opportunities to improve health service delivery of psychosocial ECD care (51-53).

AIM 2: Examine perceptions of psychosocial ECD integration into RMNCH services in Uganda

- Objective 1: Explore the national ECD governance and framing of psychosocial ECD and health in Uganda.
- Objective 2: Explore frontline health worker perceptions of CCD and care for psychosocial ECD in RMNCH services

To explore the environment in which psychosocial ECD is to be implemented, I look at Uganda's national ECD governance arrangement and the perceptions of psychosocial ECD among key governance stakeholder and frontline health workers. I used this to gain insight on the framing and existing context of ECD and psychosocial ECD in health. A document review of Uganda's ECD government documents; key informant interviews; focus group discussions and; health facility observations where used to explore the framing and perceptions of psychosocial ECD and, to consider ways to integrate CCD into Uganda's RMNCH services.

1.6   Thesis structure

The thesis begins by establishing the importance of psychosocial ECD to child development and health. I presents research and evidence on the connections between positive caregiving and psychosocial ECD outcomes. I then explore how psychosocial ECD can be addressed through population health services by developing a conceptual framework for scaling up the WHO/UNICEF CCD package. I used health systems thinking analysis and a health systems strengthening approach to present the pathways to scaling up CCD at frontline RMNCH Services. Based on the literature on positive psychosocial ECD, health governance and health service delivery, I develop a conceptual health systems framework for CCD, planning, implementation and scale up and applies this to Uganda, a LMIC context. Having conceptualised the key healthcare components required to scale up CCD and psychosocial ECD care across population health services, a qualitative Health Policy and Systems Research design was used to explore how Uganda's health governance and service delivery can consolidate, strengthen CCD and psychosocial ECD across frontline MCH services.

Chapter 1 - Introduction to thesis: This chapter provides a contextual introduction on ECD and its multisectoral context. It briefly defines psychosocial ECD, discusses its importance, introduces how positive psychosocial ECD is currently promoted, and how the health sector can be used to advance this. It also introduces the thesis aims and objectives.

Chapter 2 - Literature review: This introduces how responsive and stimulating parenting is used to promote positive psychosocial ECD. It presents the key parenting concepts and themes relevant to the thesis. It discusses the importance of promoting psychosocial ECD and presents the evidence-based practices being used to support positive psychosocial ECD in LMICs. The chapter also introduces the WHO/UNICEF CCD health systems intervention. It presents how positive parenting programs are being used to promote psychosocial ECD in LMICs, specifically focusing on the health based interventions and considerations for system wide delivery and scale up.

Chapter 3 - Research context: a situational analysis of psychosocial Early Childhood Development and Maternal and Child Health in Uganda: The chapter presents the thesis research context and setting. It discusses Uganda's national ECD governance arrangement as per the National Integrated Early Childhood Development (NIECD) policy and briefly introduces how psychosocial ECD is being addressed nationally and in health. It presents Uganda's health governance and service delivery structure specifically focusing on the national MCH status and service delivery environment.

Chapter 4 - Methodology: This chapter presents the qualitative research methods and phases used to develop the conceptual framework and explore the governance and service delivery context and feasibility in Uganda. Key informant interviews, focus group discussions and observations were used to collect data on ECD governance and service delivery, and an inductive and deductive thematic analysis was used to explore the key themes and concepts. A total of 61 participants were involved in the research. These included national government, multilateral, and NGOs staff and doctors, nurses, midwives and Village Health Team (VHT) located at the highest level of public healthcare facilities in an urban, semi-urban and rural locations.

Chapter 5 - Developing a conceptual framework for Care for Child Development scale up and implementation: In this chapter I develop a health systems conceptual framework for public health policy and planning**.** Specifically, I use the WHO Health Systems Building

Blocks Framework to develop a conceptual framework which identifies the minimum health system requirements needed to implement, reinforce and scale up CCD and care for psychosocial ECD at frontline health services. Using the WHO/UNICEF CCD intervention as an evidence-based reference for LMICs, I identify the health building blocks for CCD scale up, focusing on the national governance and service delivery inputs. A health system thinking analysis was used to identify pathways and develop the conceptual health systems framework. The framework identifies the main health systems components for scaling up CCD and care for psychosocial ECD in health.

Chapter 6 - Applying the conceptual health systems framework for CCD, scale up in Uganda: This chapter applies the conceptual health systems framework from chapter five to Uganda's context. I use a normative analysis to explore at how Uganda's frontline RMNCH services, can be used to strengthen and scale up care for psychosocial ECD in children aged 0-3 years and identifies pathways for implementation across these services.

Chapter 7 - Results chapter: framing the governance support for Care for Child Development scale up: stakeholder perceptions in Uganda: The prioritisation of ECD and psychosocial ECD are crucial elements to scaling up CCD and care for psychosocial ECD. The purpose of this results chapter is to explore the national framing and perception of ECD and psychosocial ECD in health. The chapter explores Uganda's ECD governance arrangements and how key senior government officials, senior clinicians, multilateral, NGO and private sector informants perceive psychosocial ECD. I then use these to explore ways to provide an enabling environment for CCD and care for psychosocial ECD and inform the governance considerations for CCD scale up in Uganda.

Chapter 8 - Results chapter: health worker perceptions of care for psychosocial Early Childhood Development and Care for Child Development: To understand how psychosocial ECD and care for psychosocial ECD is placed in the healthcare setting, this results chapter showcases the current frontline health worker perceptions around psychosocial ECD in Uganda. These included, VHTs, nurses, midwives and doctors located at Mulago National Referral Hospital (urban location), Luweero Health Centre IV (semi-urban location) and Kalangala Health Centre IV (rural location). The chapter presents how frontline health workers describe or conceptualise psychosocial ECD; what they perceive care for psychosocial ECD to involve; how they informally encourage mothers to engage in

play and talk; and the health systems challenges they face. I discuss how these perceptions may influence care for psychosocial ECD and CCD scale up.

Chapter 9 - Integrating psychosocial ECD in health: opportunities, strengths and challenges. This chapter concludes the research thesis by providing final comments and considerations for scaling up CCD in Uganda and other LMIC context. It discusses the whole-of-government approach to psychosocial ECD highlighting the importance of political commitment across all levels of government, and the multisectoral challenges associated with leadership authority and implementing capacity. To achieve psychosocial ECD in health it discusses the importance of changing the RMNCH care environment to include CCD and acknowledges the health workforce structural challenges (e.g. heavy workload, limited resources) that will make this difficult to fully achieve.

Chapter 2: Literature review

2.1 Overview

This chapter provides contextual background on psychosocial ECD and positive caregiving. It presents the types of caregiving used to support psychosocial ECD with particular reference to the concepts of responsive caregiving. It introduces the five Care for Child Development (CCD) intervention and its implementation evidence. It uses a narrative review to explore how psychosocial ECD has been addressed in Low and Middle Income Countries (LMICs), specifically focusing on responsive and stimulating caregiving interventions and psychosocial ECD outcomes in heath. I supplement the narrative analysis with a critical examination of five CCD studies to explore the study design, quality, rigor and effectiveness of CCD programs in a LMIC context. The methodology for the narrative review has been outlined in section 4.4.1. The chapter concludes by presenting how LMICs are integrating and scaling up care for psychosocial ECD in health, specifically looking at the opportunities, challenges and gaps.

2.2 Background: importance of promoting positive psychosocial Early Childhood Development

Investments in positive psychosocial ECD are important to human development as well as community, national and economic development (18, 25, 54). For example, ensuring a positive and equitable start to life (at the individual level) has the potential to break intergenerational cycles of poverty ultimately benefiting individuals, their immediate families and their socio-economic engagement (17, 40, 45). Investments in the early years have a greater economic and health return than investments made during later (specifically adult) years of life (21). Children aged 0 - 3 years benefit more from early interventions than older children and the earlier the intervention the better the child development outcomes across numeracy, literacy, school readiness, school dropout, and mental health (32, 33). Additionally, cost estimates suggest for every dollar spent on early interventions, there is at least a three to nine dollar return across employment, economic engagement and use of social services (55-57). For these reasons, ECD experiences have been recognised as playing an important role in human development outcomes and lifecourse trajectories. The case for psychosocial ECD and health systems scale up—based on the importance of the early childhood experiences and caregiving to lifecourse development—can be justified from neuroscience, behavioural and economic perspectives (24, 58).

The neuroscience context looks at how the brain develops biologically, and is shaped through social and environmental influences. While a significant amount of brain development (25%) occurs during the prenatal stages of pregnancy, humans are born with a limited amount of executive and self-regulating function and skills—these develop over time and through social interactions (25). After birth and during the early years of life, humans have the potential to enhance these skills through social interaction with their caregiver, families, communities and their environment. This is primarily stimulated through the learned experience and social interactions within a family and community environment (18, 23, 30, 31). The ability to learn is innate. However, the context of what is learned during these early years is crucial to lifecourse development and is dependent on the social environment. Encouraging responsive and stimulating caregiving that positively reinforces good development during the early years of life plays a crucial part in brain development, psychosocial ECD and human development during the later years of life (30). Caregiving during the early years presents important opportunities to: 1) form the initial foundations for executive and social skills; and 2) create the momentum for further growth and development (26, 30).

The social and behavioural context of psychosocial ECD focuses on how the social environment that children are exposed to during their early years is a key influencer and determinant of brain development, physical growth, language skills and patterns of socialisation (17, 40). This primarily acknowledges how social environments affect a child's development and behaviour, and considers children to be social actors affected by their environment (17, 31). The ECD environment consists of family (intimate), residential and relational communities (broader level), which co-exist within a regional, national and international context (17, 40). Within the family unit, the types and level of caregiving are identified as key social environmental conditioning for ECD and positive psychosocial ECD (17, 40). During the early years, this conditioning is a result of nurturing caregiving, and home environments that encourage a child's development through showing love, positive reaffirmations and positive social interactions.

The economic and cost benefits context focuses on the view that supporting positive and healthy ECD allows individuals to have greater social and economic productivity during their lifetime (14, 25, 54, 59). Positive psychosocial ECD has a fundamental role in an individual's socio-economic engagement and welfare. Research by Graham et al. (18) and WHO and UNICEF (45) show's ECD experiences play a key role in long-term human development with

estimates suggesting a 20% adult-income loss, in children who are not provided with the relevant learning opportunities to meet their full potential during the early years of life. Positive psychosocial ECD can have beneficial outcomes on education, employment, socio-economic status (SES) and community engagement (60). For example, investments in ECD and early childhood stimulation have shown positive returns in literacy and numeracy during the adolescent and young adult years, with higher Intelligence Quotient (IQ), mathematic scores and grade attainment in young adults who have received stimulation and nutrition interventions (18, 34). These can support greater education, employment and socio-economic engagement and outcomes. Additionally, interventions during the early years present important economic, social and health investments that show positive returns on an individual's welfare, socio-economic engagement and socio-economic outcomes (17, 22, 40, 45). ECD interventions in health and education have shown as much as a 60% higher return rate on investments made, and reduced government spending on welfare and benefits during the later years of a child's life (30, 61, 62). For these reasons, promoting good ECD and psychosocial ECD present important health, economic and cost benefits throughout life.

There is strong scientific evidence to show that cognitive and psychosocial development of children relies on the relationships, experience and interventions that occur during the first years of life (19, 26, 41). Primary caregivers and families play an important role in child health and development and during the early years it is important to equip them with relevant knowledge and skills to promote positive ECD (30, 40, 63). Recognising that cognitive, motor, social and emotional determinants of development are linked to parental education, care and home environments, the global community has seen the necessity of empowering caregivers with the right tools and skills to support ECD through responsive, stimulating and positive caregiving (18, 29, 30, 35).

2.3 The concepts of positive, responsive and stimulating caregiving for psychosocial Early Childhood Development

For psychosocial ECD, early year interventions to avoid adverse outcomes include responsive and stimulating parenting programmes that encourage language development, learning, secure attachment between parents and their infants and, brain stimulation through appropriate infant-caregiver interactions (32, 63). These essentially focus on ensuring children thrive and meet their development potential through appropriate caregiving and parenting practices.

ECD interventions that have demonstrated successful outcomes for child psychosocial development have focused on empowering caregivers with the knowledge and skills on how to support their child's physical, social and psychological development. This ensures children are living in a loving and caring environment that promotes the physical health as well as brain development, language skills, problem solving capabilities and social interactions (22-24, 40). These interventions focused on responsive and stimulating parenting programs which aim to improve the caregivers' competencies by increasing their understanding of their child's psychosocial development capabilities and providing them with knowledge and skills to provide responsive and stimulating caregiving that promotes good child development.

2.3.1 The types of caregiving and how they support positive psychosocial Early Childhood Development

Caregiving that supports psychosocial ECD involves educational, socialisation and emotional activities that encourage infants and toddlers to develop cognitive, communicative, social and emotional capacities including executive functions, language development, problem solving skills, and emotional skills (3, 60, 64). It significantly relies on positive infant-caregiving interactions.

The literature on positive caregiving for psychosocial ECD includes two types of caregiving interactions: cognitive and social. Both cognitive and social emotional interactions between the caregiver and infant are needed to develop an infant's intellectual, interpersonal, emotional and mental competencies (7, 64). The cognitive interactions involve teaching infants and children about the world through play and communication, and the social emotional interactions involve nurturing positive social interactions and emotional development between infants and their caregivers (16, 64). During the 0-3 year age range, cognitive caregiving primarily uses age appropriate play, talk and learning to stimulate infants and toddlers to engage with, and learn about their environment (45, 64). Socioemotional caregiving focuses on the emotional connection, bonding and secure attachment between a caregiver and their infant. It encourages caregivers to show affection by listening to their infant, responding accordingly and making their child feel valued and loved (7, 16, 64). Each are seen as universal concepts that can be culturally adapted, and together they form the foundations of responsive and stimulating caregiving and positive psychosocial ECD (64).

2.3.2 Responsive and stimulating caregiving

Responsive and stimulating caregiving, which incorporates both cognitive and social emotional caregiving, is one approach being used to encourage positive psychosocial ECD by promoting good cognitive and socioemotional development during the early years of life (3, 30, 42, 65). This primarily involves progressively building a child's brain, mental, language, socialisation, and self-regulation capacity and skills (21, 30, 45). It involves promoting nurturing care that is sensitive to child cues, signals and needs, showing love and affection and ensuring stimulating caregiving (16, 35, 60, 66). Age appropriate learning opportunities are provided through playing, talking, singing and reading with children to develop their psychosocial capabilities (16, 17, 40, 60, 66). By observing their child's development, and responding to their physical and psychosocial needs, caregivers can interpret the best ways to provide for their child, and act accordingly (3, 16, 30, 35). At the core of this is a loving and nurturing environment that promotes an infant's intellectual development, language skills, problem solving capabilities and social interactions (3, 22-24, 40).

2.3.3 The impact of responsive and stimulating caregiving interventions on psychosocial Early Childhood Development

Evidence from responsive and stimulating parenting programs provided through community and health services have shown positive child development outcomes with examples of less child behavioural problems, better or improved child educational outcomes and improved mental health and self-worth among caregivers and their children who participated in relevant programs (35, 42, 67). These interventions have also shown higher levels of cognitive functioning and improved social behaviour, self-confidence, child task, and positive affect amongst children who received increased or greater amounts of cognitive stimulation from their caregiver (19, 30, 35, 42). For example, research shows early childhood programs have demonstrated improvements in language development, school readiness, mental health outcomes and socio-economic adult outcomes among children who received exposure to positive and stimulating caregiving environments (18, 19, 34, 68). Additionally, a follow up study of an ECD stimulation and nutrition program in Jamaica showed better benefits to IQ, mathematics and reading scores among intervention participants at the age of 22 years, with the stimulation participants having higher grades and examination passes than the control group participants (34). Participants in the stimulation group intervention also had reduced depression symptoms and were less likely to be involved in serious violent behaviour and fights (34). These outcomes show promising influences on mental and socio-

economic outcomes in children, adolescents and adults, and reinforces the importance of promoting responsive and stimulating caregiving during the early years of life. There is now a strong global momentum to scale up programs across child health and development services (6, 63, 69). Accordingly, global and national organisations are focusing on ways to make these resources readily available to caregivers in high, middle and low income countries through national ECD initiatives, interventions, programs and services. In health, one of these initiatives is the WHO and UNICEF Care for Child Development (CCD): Improving Care for Young Children health systems package (16).

2.3.4 Care for Child Development: a health system intervention package for responsive and stimulating caregiving and psychosocial Early Childhood Development

Parenting interventions implemented at health facilities have successfully shown the influence that health services and workers have on empowering caregivers with responsive caregiving skills. These programs have shown positive outcomes to behavioural, educational, mental health and self-worth among primary caregivers (35, 42, 67). For these reasons, health systems interventions are being used as an avenue to promote, delivery and to scale up responsive and stimulating caregiving practices.

Over the last 10-20 years WHO and UNICEF have been developing key evidence and research on the best way to support child development through responsive and stimulating caregiving (17, 29, 40, 70). In 2012, they released the WHO and UNICEF CCD package, a health system based intervention for health workers in LMICs, to support and encourage responsive and stimulating caregiving among primary caregivers (43, 45). Recognising the potential and capacity that health systems have to reach thousands of children during those important first 1000 days of life, WHO and UNICEF developed CCD as a health system resource to ensure children and caregivers who are accessing health services are made aware of the best ways to ensure positive development (6, 32, 33, 45, 71). Based on ECD best practice research and evidence, the CCD package has been developed as a public health tool to support and provide caregivers with key information and skills on responsive caregiving using health workers and community health services (43, 45, 71, 72). Given the existing success of Integrated Management of Childhood Illness (IMCI), the CCD Package was initially developed as a module and component of IMCI (16, 32, 43, 49, 71). In efforts to target those at most need (and not just children presenting with illness), it was developed

into a separate health package which would be implemented alongside routine MCH services[2] (33, 73).

The CCD package focuses on the development of cognitive, socio-emotional and language skills amongst children age 0-5 years. Using health workers, it aims to encourage sensitive and responsive care by advocating, educating and empowering caregivers with knowledge and skills on age appropriate play and communication, which can provide their children with a positive, stimulating learning environment (16). It also uses this to enhance parent sensitivity and responsiveness and has been used as a means for ensuring that parents understand their infants behaviour and development potential (45, 74). **Figure 2-1** (below) illustrates the key caregiving activities the CCD package promotes to encourage positive psychosocial ECD.

To implement the CCD intervention, a suite of training tools have been created to train health workers on psychosocial child growth and development. These aim to equip health workers with the relevant information and skills to counsel caregivers on psychosocial ECD, using simple caregiving techniques and tools that are sensitive and responsive to a child's cues and development needs. They primarily focus on showing caregivers how to respond to their child's psychosocial development and ensuring they are attentive and responsive to a child's survival requirements (particularly with nutrition) and their learning stimulations. The CCD package provides health workers with knowledge, skills and tools to promote and monitor a child's psychosocial development and milestones; and screening development delays (33, 45). While the package focuses on the psychosocial development, it encourages the CCD health worker counsellor to be mindful of the child's physical health, and immediately refer mothers to MCH services for sick infants, hence ensuring a holistic approach to child health and wellbeing. The CCD Package has been developed in seven key components (45):

1. Participant manual
2. Counselling cards
3. Facilitator's notes
4. Guide for clinical practice
5. Monitoring and Evaluation (M&E) Framework
6. Poster
7. CD Rom – with course materials, presentations, reviews and videos.

---

[2] For example maternal and newborn health care, infant young child feeding and childhood survival and development programs.

Figure 2-1: WHO and UNICEF Recommendations for Care for Child Development Poster (45)

Each component of the package has been developed as a step by step guide for health professionals to identify what care for development requires during the early years of life; understand how to positively reinforce and support it; and develop skills to guide caregivers and families on ways to enhance their child's development (45). It has been made to be suitable for people from different cultures, SES and backgrounds accounting for people living in poverty, challenging or non-conventional caregiving[3] situations. The package has been developed to provide evidence based materials to guide governments and health professionals on what is required to promote and achieve holistic ECD.

Care for Child Development trials in Low and Middle Income Countries

The effectiveness and feasibility of CCD in LMIC health context has been trialled and tested with positive outcomes on health worker competencies, maternal caregiving and psychosocial ECD outcomes. CCD trials done in Brazil, China, Kazakhstan, Kyrgyzstan, Malawi, Pakistan, South Africa, Turkey, Tajikistan, showed its efficacy and relevance to LMIC context with positive outcomes in CCD health worker competencies, improved maternal behaviour and attitudes towards CCD, and increases in responsive and stimulating caregiving practices and home environments (33, 43, 71, 73, 74). Each demonstrated the feasibility and appropriateness of CCD in LMICs and in a community, clinical and integrated health setting (66). The following sections provide examples of CCD provision in a community, clinical and integrated child health service setting.

A 6 month prospective follow up CCD trial with 100 mothers and their children aged 2 years and under, was used to test CCD program efficacy, appropriateness (through family attitude knowledge and caregiving practices) and its impact on ECD outcomes on children in rural China (73). The study aimed to use play, communication and stimulating caregiving to improve gross and fine motor skills, adaptive skills, social skills and language (73). It focused on using simple and clear language on child play and communication and materials available in the home environment. It showed improvements to ECD outcomes across gross and fine motor skills, social skills and language skills among children in the intervention cohort. The intervention children had higher development outcomes across language, social behaviour and cognitive development and adaptation (73). Additionally the intervention mothers had increased understanding of play communication and learning aspects in care for child development concepts (33). There were positive changes in to their knowledge and attitudes

---

[3] Where the primary caregiver is not a parent.

and the study showed the feasibility of play, communication and stimulating caregiving increased, with mothers finding it easy to do (73). The trial showed that receiving counselling through health workers helped improve parental knowledge and skills. Improvement to caregiver-child interactions led to responsive and rich interactions which correlated with improvements in motor, adaptive, language and social skills (73). It is important to note the active engagement between the health worker and mother. The health workers asked about concerns, listened to mothers, praised them and acknowledged their concerns (73). They also identified obstacles to delivering positive care and provided solutions so mothers could address the difficulties they faced. From a health delivery perspective, this was an intensive interaction taking 30-60 minutes long with heavy involvement of health worker. This is an important consideration when accounting for LMIC with low resources setting. Additionally the study was for a short duration, taking place for only 6 months and making it difficult to prove its long term sustainability.

In Turkey a sequential control trial was used to test the effect of the CCD program on the home environment of young children (43). This occurred in a healthcare setting with the control group receiving healthcare with a non-trained paediatrician and the intervention group receiving healthcare with a CCD trained paediatrician (43). The CCD trained paediatrician used the CCD package during healthcare visit to help increase home stimulation by the caregiver. An adapted Home Observation for Measurement of Environment (HOME) was used to measure the quality and quantity of stimulation and child development support (43). The intervention showed improvements to the caregiving environment, play and stimulation with the intervention group showing higher optimal HOME scores (17.5% vs 6.2%), increased reports of reading at home to child (20% vs 3.5%) and increased observation of homemade toys (42% vs 10.6%) (43). This showed using the CCD package during healthcare visits increased home stimulation by caregivers (43). It also indicates that it can be easily delivered by doctors once relevant training is received and incorporated into routine MCH care appointments. However the study took place over a short duration of 4 months and was limited by the absence of long-term outcomes.

In Malawi CCD was implemented using Health Surveillance Assistants (paid health workers who provide generic routine healthcare) in an urban and rural setting (49). The study showed that with appropriate health worker and caregiver consultation, CCD could be culturally adapted effectively. The study used group setting (45 minutes) and individual home visits (30 minutes) to deliver CCD over a 6 month period (49). During each of these sessions,

discussion on play, hygiene and feeding were used to foster positive parenting of child development (49). The intervention improved language and social child development scores, and changes in family care indictors, specifically availability of toys and improved interaction with infants (49). The CCD training and upskilling also gave health workers important counselling skills as they adequately assessed and praised mothers. Evaluation of the program feasibility and acceptability showed that mothers felt the program changed how they interacted and stimulated with their infant (49). They valued both group and individual session (49). However given the health worker availability only 14% of the population catchment area was included in the study showing a small sample size and representation (49). This also resulted in wide confidence intervals. Additionally only 60% of the expected group and home visits were achieved, due to health worker availability, work load and doing other jobs, demonstrating some health worker barriers that would be evident in a LMIC real world setting.

In Pakistan, CCD was delivered as part of an integrated packaged of child health services. The Pakistan Early Development and Stimulation (PEDS) pilot trial used the CCD package to improve maternal caregiving and psychosocial ECD outcomes in Pakistan (74). CCD was adapted to local and cultural context and used Lady Health Workers (Community Health Workers (CHWs)) to deliver CCD to mother by using a mixture of home visits that occurred once a month and group sessions (72). The pilot showed improved caregiving and home environments, increased quality of mother-child interaction, improved psychosocial maternal support and improved outcome in cognitive, social emotional, motor and language development at 12 and 24 months (74). The visits had a dual purpose where CHW assessed and advised mothers on appropriate CCD and mothers were able to discuss their concerns and receive solutions from health workers. The pilot was followed up by a community-based cluster-randomised trial that scaled up and tested the impact of CCD on 1489 mother and 4 year follow up of 1302 mothers and their children (37, 66, 72).

The subsequent trial randomly assigned 1489 mother-child dyads to: 1) enhanced nutrition; 2) responsive stimulation (CCD); 3) enhanced nutrition and responsive stimulation (CCD); and 4) routine nutrition and health services (control group) interventions (66). A CHW delivered enhanced nutrition, CCD stimulation or combined enhance nutrition and stimulation intervention. For the stimulation group a CHW delivered CCD during routine home visits and at group sessions once a month for 2 years (66). Results showed the stimulation group, who received CCD advice, had higher language, motor, cognitive scores

at both 12 and 24 months and higher and social emotional scores months at 12 months than the control group, although the stimulation group cognitive scores declined between 12-24 months (66). Suggested reasons for the decline was associated with low socioeconomic status and the adverse risk factors associated with this, however the stimulation intervention still offered some protection from these (66). Overall the stimulation intervention alone had better effect on cognitive, language and motor development than the combined nutrition and stimulation intervention (66). A follow up study of the children at four years old, also showed those who received the stimulation intervention had better IQ, executive function and pro-social behaviour, indicating the possibility of sustained benefits over time (37).

Across LMICs, CCD has been integrated into child survival, nutrition, early education and infant care and family services and delivered using existing workers such as CHW, paediatricians, social workers and day centre workers (16, 66, 71). The CCD trials and interventions have shown that you can effectively deliver CCD in both clinical and community settings, and that delivering it alongside existing routing MCH services is an effective mode of delivery (66, 73). All the CCD studies showed that with adequate training, support and supervision healthcare, workers can adapt CCD practices into their routine services (33, 43, 49, 66, 71). They also showed that different types of health workers can learn to deliver CCD, making it adaptable to different health roles and contexts (66, 73). The CCD intervention evaluations also showed that caregivers and mothers found the messaging and activities easy, indicating feasibility to deliver at the household level (73). Facility and community based MCH services were effective avenues to deliver CCD. However, the health worker capacity challenges raised in the Malawi study indicate the importance of feasibility studies that look at how to scale up CCD within health systems resources and taking into consideration the health system challenges across limited health worker capacity and resources.

While the evidence for integrating CCD interventions into existing MCH services is strong, a critical analysis of its LMIC health interventions is used to appraise the quality and reliability of its evidence. This assess the methodological strengths of the studies to demonstrate the quality of evidence surrounding their impact on positive caregiving and improved psychosocial ECD outcomes in children Table 2-1 present the peer reviewed evidence for each of the CCD trials, this is followed by a critique of the study methods and results.

Table 2-1: CCD health interventions

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
Care for development intervention in rural China: A prospective follow up study (73).	China	Prospective follow up study Intervention and control group received CCD reference card and intervention group also received two CCD sessions (30-60mins) with counsellor (one at begin and within 6 months)	100 mothers and their children aged 0-2 years (N 50 intervention group vs N50 control group)	Gross and fine motor skills, social skills and language development. Responsive and stimulating caregiving skills	Six months	96% of intervention mothers had increased understanding of play communication and learning aspects of CCD in comparison to 2% of control group	Intervention children had higher mean development quotients outcomes than control group across language (7.78 vs 1.49), social behaviour (8.88 vs 7.26) adaptive (9.83 vs 1.05) and motor (8.22 vs 2.22) skills.
Promoting child development at sick child visits: a controlled trial to test the effect of the intervention on the home environment of young children (43)	Turkey	Sequential controlled trial: 1) Control received standard healthcare with a non CCD trained paediatrician vs intervention received standard healthcare plus CCD with	Mothers with children age 0-24 month (N 120 intervention group vs N 113 control group)	Home stimulation for child development (1 month follow up) Responsive caregiving for child development Paediatrician CCD	1 month	The intervention group had higher HOME scores (17.5% vs 6.2%), increased reports of reading (20 % vs 3.5 %) and increased observation of homemade	N/A

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
		CCD trained paediatrician.		counselling skills Compliance with medical advice Paediatrician CCD counselling skills		toys (42% vs 10.6%)	
Care for Child Development in rural Malawi: a model feasibility and pilot study (49)	Malawi	6 month pre and post intervention 2 CCD group information sessions 2 CCD visits per month over 6 months	60 participant (30 rural and urban) Parent-child dyad aged 0-2 years	Fine motor, gross motor, language, Social and cognitive development.	Six months	Increased availability of toys (1.52) and reported interaction with children (0.53) Z scores	Significant improvements in language (1.86) and social (0.94) development Z scores. Improvements ins fine (0.89) and gross (0.53) motor development Z scores.
Promoting Care for Child Development in community health services - a summary of the Pakistan Early Childhood Development Scale up	Pakistan	Cluster randomised control trial Enhanced nutrition intervention – infant and young feeding practices and	Families and infants aged – 0 – 2.5 months 1489 children (N383 CCD intervention; N 364 enhanced nutrition; N374 combined	Bayles Scale of infant and Toddler development – cognitive, communication motor and social emotional scale	Two years	Improved HOME scores for all 3 intervention groups between 6 and 18 months Improved and better	Improved cognitive, motor and language and socioemotional development outcomes at 12 months Improved cognitive, motor and language development

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
(PEDS) trial (72)		responsive feeding practices CCD intervention- play and communication guide 12 group meetings CHW home visits once a month	intervention; N368 control)	Home Observation for Measurement of Environment (HOME)		caregiving and home environment Increased quality of mother-child interaction Improved psychosocial maternal support	outcome at 24 months CCD and combined intervention group significantly better cognitive scores than enhanced nutrition intervention and control group
Effect of integrated responsive stimulation and nutrition interventions in the Lady Health Worker programme in Pakistan on child development, growth, and health outcomes: a cluster-randomised factorial	Pakistan	Cluster randomised effectiveness trial Enhanced nutrition and/or stimulation interventions delivered by Lady Health worker CCD provided once a month and during routine home visits	1489 mother–infant dyads aged 0 - 2.5 months N 368 control group – routine health and nutrition service N 383 enhanced nutrition - education and supplement	Bayley Scales of Infant and Toddler Development, Cognition Language Motor Social emotional development	Two years	N/A	Stimulation intervention group had higher cognitive, motor, language, socioemotional scores at 12 months and higher cognitive, motor and language scores at 24 months. Enhanced nutrition had better language scores at 12 and 24 months and better cognitive and socioemotional scores at 12 months than children who did

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
effectiveness trial (66)			N 383 CCD stimulation group N374 combined enhance nutrition and CCD stimulation				not receive enhanced nutrition. From 12 – 24 months, motor, socioemotional and language scores increased in all intervention groups, but cognitive scores decreased Responsive stimulation had better benefits on cognitive motor and language development over time and had high treatment effect over time than combined intervention

The quality of the CCD studies listed above is examined in the following section which critiques the methodological strengths of the studies. Overall the CCD trails were well presented with main concerns arising from the sample size, and representativeness of the sample and resultant generalisability. Even in those circumstances CCD was effective with improving maternal knowledge, skill and caregiving practices and improved psychosocial child development outcomes where assessed.

Jin et al (73) CCD trial in China tested the appropriateness and efficacy of CCD counselling guides in low SES communities. It achieved this by assessing changes to family attitude knowledge and caregiving skills and assessing child development outcomes using a validated child development tool and comparing the outcome to China's national child development scores (73). The participant inclusion and recruitment approach used was appropriate to the study aims as seven villages were randomly assigned from 143 potential villages. From those villages, households were randomly assigned to recruit mothers into the intervention or control group. This randomisation ensured any selection and systematic bias was accounted for at the beginning. Validated tools were used to assess the child development and caregiving outcomes. Child development scores were assessed at baseline and six months after the intervention using the validated Gessel child development tool referenced to the Chinese population (73). The outcomes measured were changes in standardised child development between the intervention and control. The changes in family child development knowledge were also measured as a secondary outcome and looked at the frequency and duration of play, how mothers communicated with their children and their responsive to their child request (73). These are all globally accepted and validated measures for psychosocial care and have been used in Demographic Health Surveys (DHS). However the child development assessor was not blinded and could have presented researcher bias to the outcomes, which was acknowledged in the study (73). The loss to follow up was small and fairly balanced among the intervention group (5) and control group (8), showing little impact on the results. Relevant statistical analysis was used to measure child development outcomes. A T test analysis was used to compare child development at baseline and 6 months post intervention (73). Additionally logistic multiple regression analysis was used to compare child development outcomes across intervention and control groups (73). To assess the mother's knowledge, a chi square test was used to measure their understanding of child development and their caregiving practices (73). At the baseline there were no significant differences in child-development scores, family situation or reported care practice between the intervention and control group, indicating similar group

composition. There were statistically significant changes to motor, adaptable, language and social development at the six month follow up in both groups but the intervention group had higher development outcomes than the control group with an average of 8.7 development point gains. However parental education and increased household space were seen to have an impact on development outcomes and it was not clear how these confounding factors were accounted for. Additionally the presence of extended family caregivers was discussed and it was also unclear whether the impact of these cofounding factors were accounted for in the final analysis. Overall the quality and reliability of the study was good as its randomisation accounted for systematic bias and majority of confounding factors were adjusted during the baseline.

The CCD study in Turkey aimed to investigate the efficacy of implementing CCD healthcare during paediatric hospital visits for acute illness. To do this a sequentially control trial was used that involved providing standard paediatric healthcare to the control group and providing standard paediatric healthcare and the CCD intervention to the study group. This was an unusual method to use however it was deemed important for the same paediatrician to provide standard care and the CCD intervention (43). The intention was to complete the control group first with paediatricians, train them in CCD then complete the intervention. Given the desire to eliminate variation in the quality of care offered, this appears a feasible and relevant approach to address the study aims and purposes. Additionally for these reasons participant randomisation was not the best approach. To account for systematic bias, the paediatricians recruited to deliver the standard care and subsequent CCD intervention had similar training and experience and were blinded to the study aims before the CCD training and subsequent intervention.

The study had 113 infants in the control group and 120 infants in the intervention group, making a total of 233 participants. This was a small sample size with limited generalisability, however children were from low-middle income backgrounds and while this presented a lower risk of poor development outcomes in the country context, their average HOME scores were similar to high risk children from high income countries (43). Infants aged 24 months and younger who had minor illness or were attending a well child clinic were recruited to participate. This meant both sick and healthy infants with different ages were included in the study presenting a varied study group with potential biological and social confounding factors. However because the study was looking at improvements to responsive caregiving, confounding factors linked to different ages and potential health illness would not impact the

study and were not necessary to account for. Additionally moderately to severally ill children and children living outside of Ankara were excluded. Infants were observed for illness and eligibility while at the clinic and alternatively assigned to one of the two doctors recruited to participate in the study.

Validated tools were used to measure the study outcomes. The study used Acute Illness Observation Scale to measures severity of illness; Physician Counselling Skills Scale to measure counselling competence; Satisfaction with Physician Scale to measure caregiver satisfaction with healthcare, HOME Infant Toddler Scale to measure caregiver stimulation at home (43). These were selected based on previously reviewed and validated instruments. Additionally to further validate the tools, there was 90% interobserver agreement on the instruments (43). The HOME scale was also reviewed by five child development experts who found it culturally appropriate and found 26 items relevant to measure CCD caregiving outcomes (43). This was also adapted to include play – an important element to psychosocial development. All the HOME scale items were used to enable comparison with other studies.

Researchers with CCD experience were used to collect observation and interview data (43). Counselling skills were observed by a researcher, who was blinded to the study aims, during the healthcare visit. They also assessed healthcare satisfaction with the caregiver after the clinical consult. Compliance with standard healthcare treatment (control group) and CCD (intervention group) was measured during a 1 week follow up visit to see whether caregivers fully complied with the paediatricians treatment plan and applied the CCD recommendations (43). One month after a new blinded researcher measured caregiving and home stimulation during a home visit with the caregiver-infant dyad. Having the same researcher observer the clinical counselling and caregiver satisfaction could present researcher bias and it was unclear how this was accounted for. However using a different researcher, who had not been in contact with the family, to measure home stimulation ensured any potential researcher bias was addressed during the follow up visit. Loss to follow up in the control group was 12% and 7.7% in the intervention group indicating low attrition rates (43).

The study used a variety of analysis to measure its outcomes. Statistically significant comparisons between the groups was assessed using x^2 test, Relative Risk and Mann Whitey U test (43). Logistic regression analysis was used to measure stimulation provided to the child. Relevant independent variable were accounted which included age, gender,

presence of siblings, parent education, nuclear versus extended family, housing type, insurance and maternal reports of depression. The statistical analysis found there were no significant differences in the sociodemographic variables between both study groups, majority of the infants had mother and fathers with high school education and most infants were aged 12 months and younger.

The results indicated that 95% of caregivers received CCD information in comparison to 13% in the control group, but increases to HOME scores of greater or equal to 38, (the score used for optimal development outcomes) were only noted in 17.5% of the intervention group (43). This was however significantly greater than the control group who only had 6.2% and demonstrated the provision of CCD during paediatric healthcare can significantly increase responsive parenting to improve psychosocial ECD (43). It was interesting to note there was no statistically significant differences in the caregivers communication with child, but the intervention group showed differences in daily stimulation, learning materials and provision of toys for stimulation with more families reading to their child and providing toys (43). There were however important independent variables that were predictors of optimal home scores, these included having high school education, the child being older than 6 months and the CCD intervention (43). It was unclear how the first two were accounted for in the final analysis, given the majority pf caregivers had a high school education and infants were aged 12 months or less. However overall the study used good methodological process and demonstrated CCD training can improve how clinical healthcare workers promote responsive parenting and subsequently increase responsive and stimulating parenting at home. This can be effectively delivered during sick child healthcare visits, adding as little as 10 minutes to consult with little effect on compliance to other medical advice (43). This can also result in caregivers engaging in positive parenting practices including promoting learning and stimulation through play and reading.

The trial in Malawi aimed to investigate the feasibility and implementation of CCD into routine health services to understand how CCD can be implemented in real life settings (49). It used a multiphase complex intervention to explore existing caregiving practices, test implementation feasibility and evaluate acceptability among caregivers and health workers. To achieve this a mixed method approach was used which consisted of questionnaires to measure demographic, anthropometric, ECD and caregiving outcomes and focus groups and interviews were used to assess CCD adaptability and acceptability. These were effective ways of addressing the study aims. Urban and rural study sites were used to involve

mothers from varying demographic backgrounds. The rural participants came from a mixed fishing and agricultural lifestyle and the urban participant were described as mobile which was not clearly explained (49). The trial used effective approaches to recruit participants. A census was used to identify potential families with children under 2 years old and from these computer assisted randomisation was used to select 60 families (30 rural and 30 urban) (49). This number was a small sample size however it was considered feasible for study implementation and in aiding power calculation for larger studies (49). To identify as many children as possible, there was no exclusion criteria apart from parental refusal or a child being ill (49). To assess its impact the study used a pre and post CCD intervention to measure its outcomes on caregiving practices and child development. It used validated and relevant tools to assess demographic characteristics and child development outcomes. Baseline demographic data was collected and the DHS and standardised anthropometric techniques were used to measure infant weight, length middle and upper arm circumference (49). Additionally, to assess psychosocial ECD outcomes a Malawi development assessment tools was used to measure gross and fine motors skills and language, social and cognitive development (49). This was a culturally sensitive and contextual tool that had previously been validated (49). Family care indicators, a globally endorsed tool to measure home stimulation, were used to assess key parts of responsive caregiving which included availability of household toys and books and reported children interaction.

Descriptive analysis were used to assess the demographic data and Wilcoxon rank sum and T test were used to measure psychosocial ECD outcomes. Results showed significant changes in language (1.86) and social (0.94) development Z scores, and changes to gross motor (0.53) and fine motor skills (0.89) development Z scores, but there were wide confidence intervals (49).

While the Malawi trial adequately investigated the feasibility and impact of CCD there were some questions on the methodological quality. Given the capacity of the health workers the participants recruited accounted for only 14% of the total population, although the demographic data collected showed the sample size had a similar demographic profile to the DHS which uses nationally representative household samples (49). This would suggest the trial had a representative sample (49). However the participant group had higher number of mothers with secondary level education and fewer working mothers presenting important social confounding factors that would influence maternal knowledge and skills and present systematic bias to the caregiving and psychosocial ECD outcomes.

While the exclusion criteria aimed to capture as many children as possible it was unclear how the participant variations were accounted for throughout the trial and whether these difference were accounted for during the analysis. Both urban and rural settings were included in the study, however the influence and impact of the varying demographic characteristics was not clearly explained or accounted for in the analysis. The participant variance could have presented external influences to the study and it was unclear how the variance and social cofounding factor were accounted for during the statistical analysis. Additionally focus groups and interviews with 180 health workers and caregivers were used to measure the effectiveness and suitability of CCD. While this an extensive effort, it was unclear who the participants were, how they were selected and if there was appropriate representative of the target population (primary health care workers and caregivers). It was proposed that 12 group studies and 120 individual visit would occur among the study group over 6 months, however only 86% of group and 30% of individual sessions were completed (49) indicating feasibility problems for individual sessions. It was unclear whether this was accounted for during the final analysis and if difference in attendance impacted the caregiving practices and development outcomes. However the study showed important improvements to psychosocial ECD outcomes and caregiving practices.

The PEDS trial in Pakistan investigated the scale up of CCD using Pakistan's Lady Health Workers, CHWs, who provide key family planning and primary healthcare services for women and children and (66, 72). It aimed to measure treatment effect of a CHW based, responsive and stimulating parenting intervention on child health and development outcomes, specifically focussing on the impacts of responsive parenting, enhanced nutrition and a combined responsive parenting and enhanced nutrition interventions (66). The trial used an appropriate study design to investigate its aims. A cluster randomised control trial was used totest the different interventions between June 2009 and March 2012. 1489 children aged 0-2.5 months were randomly enrolled to a control group (n=368), the CCD intervention group (n= 383), the enhanced nutrition intervention group (n= 364) and the combined CCD and enhanced nutrition intervention group (n=374) (72). This accounted for approximately 42% of the 3550 children in the catchment area demonstrating strong numbers for generalisation (66). Standard care packages were received by all groups with additionally services provided to the intervention groups (66). For the CCD intervention group monthly home and group visit were used to deliver the CCD intervention to participants. These were each used to deliver key messages on play and communication

and how caregivers can improve quality of interactions with their children. The enhanced nutrition intervention focussed on improving child growth and assessing the impact that enhanced nutrition supplements had on child development. This involved monthly visits and micronutrient supplements from the Lady Health Workers (66). Whereas the combined intervention used CCD and enhanced nutrition supplement to promote child development and growth. The interventions were integrated into existing routine health care and home visits to ensure and reinforce feasibility (66).

The pilot and subsequent trial showed strong and rigorous methodological practices demonstrating high quality research. Although the pilot summary had little information on the participant selection, statistical analysis and accounts of confounding variables, this was confirmed in follow up peer reviewed paper of the trial.

Two study districts were reported as randomly chosen, though details of this randomised selection was not provided and the authors make reference to selecting the districts based on transport and travel time feasibility. To avoid intervention contamination a two staged stratified random sampling approach was used (66). An independent surveillance team was employed to identify births (66). From these, participants were randomly selected and assigned to control or intervention group (66). Each of these randomisation strategies reduced the chance of systematic bias. Children diagnosed with impaired development were excluded from analysis.

The study achieved high levels of individual contact and fidelity during the 2 year duration. However the intensity of the CCD intervention was lower than other studies that had weekly or fortnightly visits as this was not feasible in the study setting (66). All intervention participants received the same intervention continuously with a 93% follow up rate demonstrating low attrition rates (66). 31% of caregivers attended monthly group visits whereas 75% of household received monthly individual visits ensuring the interventions were being adequately delivered (66). Data collected on the last visits showed 62% of CCD intervention group reported receiving CCD advice, 55% reported receiving enhanced nutrition and CCD and an average of 75% intervention groups reported receiving nutrition advice with only 12% of the control group receiving nutrition advice (66). Additionally 60% of enhanced nutrition group received the micronutrients (66). These indicate high levels of intervention fidelity. The low percentage of nutrition advice received in the control group also account for confounding factors that could influence the results. Furthermore, to account for

potential external factors the authors note the intervention was the only nutrition intervention being delivered at the time, and no government nutrition service were provided during the intervention period (66).

Continuous data collection using validated tools were employed to measure the intervention effects and outcomes. The study used validated child growth, child development and caregiving measures to collect data at baseline and throughout the 2 year duration recorded by trained data collectors. It used the Bayley Scales of Infant and Toddler development to assess cognitive communication motor and social development, the Behaviour Observation Inventory and the Macarthur Bate Communicative Development Inventories for vocab at 12 and 24 months (72). Child growth was assessed using globally endorsed anthropometric measures at baseline and when children were 6, 12, 18 and 24 months(66). All aged based data was collected during a 7 day window period to ensure it was collected as close to follow up age as possible (66). Caregiving was assessed using HOME – a validated tool to assess levels of stimulation provided at home – at 6 and 18 months. This was also assessed through mother-child interaction at 12 and 24 months and caregiver knowledge was periodically tested(72). However there was limited information on how this data was collected and it was unclear if mother-child interactions and caregiving knowledge was measured using validated tools. To reduce the chance of systematic bias, the data collectors were blinded and rotated to different families every 3 months, they did not work with CHW and did not ask any questions about the intervention during data collection (66).

Valid and relevant statistical analysis were used to measure child growth and development outcomes. The child development data showed good internal consistency and reliability measures. Cultural bias was accounted for with child development comparisons among intervention groups (66). Differences in child outcomes between the interventions and their associations were analysed and confounding factors including gender, maternal education, number of siblings, household food security, SES and baseline differences were accounted for during the analysis (66). Effect size was also analysed at 24 months. At baseline, there were no statistical differences between the groups across nutrition SES, weight and stunting. The authors noted statistical differences between maternal educations with those in the enhanced nutrition group having higher maternal education levels than those in non-enhanced nutrition group(66). Additionally children in the enhanced nutrition and CCD group were older. It was not clear how these social confounding factors were accounted for and if

they had an impact on the outcomes. But overall there was little differential at recruitment and baseline (66).

Comparison between the intervention and control groups were used to validate results. This showed the CCD intervention and combined intervention had statistically significant and positive outcomes on cognitive, social emotional and language development than the nutrition intervention and control group(66). At 12 months, all intervention group children had greater (moderate to large) motor, cognitive, social emotional and language development scores but at 24 months there were no difference in social-emotional development between the intervention groups (66). Higher cognitive scores were recorded in the CCD and combined intervention group than the enhanced nutrition intervention and control group (72). However cognitive scores reduced between 12-24 months, for all groups although the children in CCD intervention had less of a decline indicating some sort of protection (66). The CCD intervention also had higher language scores than the nutrition intervention (72). Between 12 and 24 months, language mean composition scores increased from 75 to 86 whereas the combine intervention scores increased from 79 to 85 (66).The nutrition and combined intervention group improved length and weight for age, with significant difference observed at 6 months (66). CCD intervention group showed decline in diarrhoeal disease which was linked to family responsiveness to illness and the needs of sick children (72). There were improvements in HOME scores at 6 and 18 month for all intervention groups with higher scores for CCD and combine intervention group (66). The CCD intervention groups had significantly higher mother-infant interactions than control and nutrition group. There was a positive association between child growth and development and mother-child interactions with development outcomes increasing with the greater quality of care (72). Overall statistically significant comparatives analysis were used to measure the intervention effects further validating the results and intervention outcomes.

In conclusion, the studies applied appropriate methods and globally accepted and validated tools to evaluate child health development and caregiving outcomes, with minor compromises with sample size and fidelity challenges. However, their results showed it was feasible to implement CCD in health with effective outcomes to psychosocial ECD. Specifically they demonstrate how CCD can be implemented in clinical and community health settings and through integrated MCH services. Additionally trials done in Africa (43), Latin America (6, 43) and South East Asia (71) have also demonstrated strong evidence that shows CCD can improve responsive caregiving and psychosocial ECD. However these

have not been published in peer reviewed journals and have been excluded from the critical analysis.

Having established and critiqued the CCD evidence, the following section discusses the LMIC psychosocial ECD challenges and presents LMIC positive parenting and psychosocial ECD health intervention against the health systems building blocks to identify the health system requirements for scale up. .

2.4 Psychosocial Early Childhood Development in Low and Middle Income Countries

It has been estimated that 200 million children under 5 years, living in Sub Sahara Africa and South Asia, are not meeting their development potential (18, 63). Additionally, estimates suggest that 25% of children in LMICs were exposed to psychosocial risk factors linked to caregiving and stimulation (19, 63) – a concerning statistic. The substandard ECD conditions experienced by these children was predicted to lead to a 20% loss in their adult income and a subsequent impact on national development (18). Indicators on childhood stunting and poverty[4] show that children facing adverse outcomes across poverty, health, nutrition and caregiving are showing lower levels of cognitive development than children not exposed to these factors (18, 41, 63). Additionally school readiness outcomes in LMICs have been linked to poor early childhood psychosocial and cognitive experiences with negative development outcomes across health, education, and income (18). Poverty is also a key determinant of poor cognitive and psychosocial development with negative influences on parenting care and home stimulation (18, 19, 41). These factors place a significant number of LMIC children at a higher risk of poor psychosocial ECD outcomes.

Poor stimulation at home, lack of learning opportunities, parent unresponsiveness, and parental inability to understand infant behaviour (also known as parental sensitivity) have each been identified as key risk factors to psychosocial ECD in LMICs (19, 20, 22, 41). However research and evidence shows that these can be prevented through well placed and timely resources and early interventions that encourage sensitive, responsive, and stimulating caregiving (19, 32, 63).

---

[4] Stunting caused by lack of nutrition and infection and poverty measured according to deprivation of basic needs, access and availability of services and infrastructure. Maternal education responsivity and also linked to poverty, care and nutrition.

There have been many crucial parenting research studies that have focused on improving caregiving responsiveness, stimulation and parental sensitivity in efforts to improve psychosocial ECD in LMICs. These have specifically focussed on equipping parents with knowledge skills and tools to provide positive parenting, as listed in section 1.3 and **Table 1-1**. For example, studies has shown that interventions that improve the caregiving sensitivity of mothers in LMICs (by informing and educating them on their child's psychosocial capacity), provide longer term improvements to child caregiving, development and welfare (19, 75, 76). Furthermore improvements to cognitive and psychosocial child development has been linked to parenting training and structured education experiences which were used to reverse the adverse impact of poverty and other social factors such as violence and war on children and their families (19, 33). Parenting programs have also been shown to mitigate social risks associated with maternal stress and depression as interventions program reduce maternal depression, which improves parental responsiveness (19, 32, 67, 76). While the provision of direct services to children can show better outcomes (e.g. formalised day care services), improving caregiving skills has been recognised as an important avenue to boost cognitive and non-cognitive child development outcomes in LMICs (19, 32). In these circumstances, caregivers are recognised as a key resource in creating a positive impact on early childhood mental, psychological and social development. ECD home visiting and community based studies to promote responsive and stimulating care have successfully changed parenting practices and improved psychosocial ECD outcomes (30, 32, 35). These are currently being used as an avenue to improve caregiving in LMICs and government, multilaterals and NGOs are beginning to deliver caregiving programs in line with currently established MCH services and resources (32, 40, 50). Section 2.5 discusses key interventions using health services to promote psychosocial ECD in LMICs.

2.5 Psychosocial Early Childhood Development programs in Low and Middle Income Countries: what the evidence shows about health system based interventions

The following section briefly reviews the existing evidence on responsive and stimulating parenting interventions and their outcomes to psychosocial ECD in a LMIC context, specifically looking at the health system considerations. It presents the psychosocial ECD outcomes of health based parenting programs, their strengths and challenges and their implications to system-wide scale up.

2.5.1 The evidence

Looking beyond CCD, there are a number of ECD parenting programs that have been used to deliver key interventions through existing MCH services and workers in LMICs. These have shown improvements to the delivery of psychosocial ECD services, caregiving practices and psychosocial ECD outcomes and their quality and outcomes is assessed elsewhere in reviews done by Engle et al. (63) Hill et al. (30) and Mejia et al. (77). The content of the programs follows the existing best practice principles on positive caregiving and psychosocial ECD (listed earlier), however what is significant to the thesis is the points of contact and delivery using RMNCH services and workers and how the interventions were able to improve psychosocial ECD outcomes and caregiving practice among mother-infant dyad.

Evidence on the effects on psychosocial ECD outcomes: Psychosocial ECD interventions delivered in health settings have successfully improved cognitive, language and socio-emotional development in children aged 0-3 years. Health-based psychosocial ECD parenting interventions implemented in Bangladesh, Jamaica, Uganda and Pakistan have shown statistically significant improvements to cognitive development (i.e. infant problem solving), language development and emotional tone (i.e. happiness, cooperation) among infants aged 0-4 years old (28, 37, 38, 78-80). Additionally, for some studies sustained effects were seen during later years of life (37, 81). For example, a follow up study of the Jamaican nutritional supplementation and psychosocial stimulation randomised control study was done at 7, 11 and 17/18 years (38). Results showed participants who received psychosocial stimulation had better outcomes in full scale IQ (complete cognitive capacity), vocabulary, verbal analogies test and reading test and lower scores in verbal IQ test and verbal analogies (38). Demonstrating sustained improvements to psychosocial development across adolescents and early adult years. However while positive psychosocial ECD outcomes were achieved, sustained emotional development during and after the interventions was limited and at times difficult to prove. In many studies the impact on emotional development was minimal, indicating more continuous support throughout the early years may be required to enhance this aspect of psychosocial ECD. Also for most studies sustained benefits to psychosocial ECD outcomes and caregiving, could only be accounted for a short duration of five months to four years (78).

Evidence on the changes to parenting practices: Psychosocial ECD parenting interventions were also effective in changing parenting practices and increasing responsive

and stimulating caregiving among primary caregivers (mainly mothers). Studies in Bangladesh, Brazil, Jamaica, South Africa, Uganda and Pakistan demonstrated significant improvements to stimulation at home, mother to infant engagement, responsive and sensitive caregiving (66, 67, 75, 82). When evaluated, the mothers found that the positive and responsive parenting practices were easy to understand and do, and their knowledge in responsive and stimulating parenting increased (67, 75, 76, 80, 83). For example, in South Africa, a CHW based pilot study measuring the impact of a mother–infant caregiving intervention in a peri-urban location found improvements to the quality of caregiving given to infants aged 0–6 months (76). This used a home visiting parenting programme delivered to mothers and their children by CHWs with limited qualification and schooling. The intervention was delivered during the first six months after birth and showed improvements in the quality of mother-infant engagement and in the mother's understanding of their child's needs, specifically improvement in play interactions and maternal sensitivity (76).

Evidence of integration into healthcare services: A variety of settings and health workers were used to deliver the psychosocial ECD programs. These range from community, facility and integrated child service settings and used either community or clinical workers to deliver positive caregiving interventions (28, 38, 66, 75, 76, 78, 79, 83). In these settings, psychosocial ECD interventions were delivered by various health workers, primarily CHWs and paediatricians. Health worker training on average took two to four weeks with some taking as little as two days (66, 67, 79, 80). Interventions provided in community normally used CHWs and those provided at health facilities usually occurred with clinicians (mainly paediatricians) and CHWs (75). CHWs have been the main health workers used to provide psychosocial ECD interventions. For example, in Bangladesh, Jamaica, Pakistan and Uganda, CHW were used to deliver psychosocial stimulation programs during home visitations and community based group sessions (48, 66, 79, 83). However, CHW challenges associated with high workload, motivation, monetary compensation and departures were experienced with some of the interventions that used these workers (37, 49, 67). This impacted how well the interventions were delivered, at times CHWs did not have the capacity or time to deliver additional services to the target population and in some cases wanted additional compensation for the extra work (37, 49). The volunteer nature of CHWs and monetary compensation is a challenge that will need to be addressed when considering options for scale up (37, 49). Also in LMICs there were limited studies that used nurses or other health workers to deliver psychosocial ECD service. Further scope or research should explore how other health workers can assist in delivering psychosocial ECD

through a continuum of care. To address some of the compensation issues that maybe faced when using CHWs, research should explore how paid health workers can provide psychosocial ECD services as part of their clinical mandate and work responsibilities.

Depending on the study nature and duration, a range of eight to 50 health worker supervised play and stimulation sessions were conducted with mother-child dyad during neonatal and infancy and toddler stages (16, 67, 78, 82, 84, 85). The duration of time to deliver the psychosocial ECD interventions to mother and their infants ranged from 15 to 90 minute home visits, group information sessions or facility-based consultation (66, 76, 82, 83). The psychosocial ECD health worker sessions general occurred either weekly, every two weeks, once a month or once every two months depending on the intervention (28, 43, 66, 76). During these consultations, health workers observed the mother-infant interaction (and advised the mother accordingly); they demonstrated how to provide responsive and stimulating caregiving; and they listened to the mother's concerns and provided solutions (66, 76). Even with the varying times and contact durations, the interventions all showed positive and effective outcomes on caregiving practices, maternal knowledge and psychosocial ECD outcomes. Results showed mothers were able to understand the core concepts of positive parenting, engage in more responsive parenting, remember key messages and practices and improve psychosocial development.

Combined stimulation and nutrition interventions have showed statistically significant outcomes to psychosocial ECD and other child development outcomes (28, 66, 78, 79). These positive effects demonstrates the importance of integrating the two services, particularly in setting where malnutrition is still a child health problem. As such many interventions and programs have looked at providing integrated services that address psychosocial ECD along other child health services (mainly nutrition and routine child health services). Integrated services in India, Pakistan and Chile have shown the feasibility of delivering psychosocial ECD services alongside other child health services, mainly nutrition (16, 66, 86). In all these settings, existing health workers would consult and advise mothers on positive caregiving and psychosocial ECD as they received child health services either through home visits, community outreach or clinical settings (16, 66, 86). These all showed efficacy and improvements in positive psychosocial ECD as health workers were able to assist mothers with improving their caregiving practices and their responses to their child's psychosocial development while addressing other routine services. The ability to effectively integrating psychosocial ECD services is an important requirement for LMIC that may face

resource limitations, however the impact on the quality of psychosocial ECD care – and whether the complete or comprehensive package of services will be fully provided – will need to be considered.

While the evidence shows positive outcomes to psychosocial ECD and demonstrates the feasibility of effectively implementing interventions in health, there were also a number of challenges and barriers. Majority of the interventions had small sample sizes. For some intervention, stimulation had the greatest impact on development outcomes during the first year and the effects of stimulation on psychosocial ECD reduced over time (28, 38), which indicates the need for sustained and long-term services that provide age appropriate and continuous psychosocial ECD services. The nature of the studies means the interventions occurred over a limited period of time and were short term interventions that can only account for the time specific changes and improvement. Few studies have been longitudinal and in most cases follow up studies have focused on measuring the intervention impact later on in life and did not provide additional interventions after the study. Further efforts are required to scale up and integrate these into routine and continuous child health services. Chile and India have each shown this is possible with their integrated child health services that address ECD using various child health and development services working together (86). For psychosocial ECD and health there is an extended need to push its agenda forwards so that it can be integrated into routine health services. Appendix 2 provides an overview of psychosocial studies conducted in LMICs

2.5.2 The health systems considerations

From a health systems perspective, the studies demonstrate a clear formula to psychosocial ECD services that involves either a CHW or clinician advising mothers on play, stimulation and nurturing care and showing mothers how to positively support their child psychosocial ECD during routine MCH services. On most occasions, services were either exclusively focused on psychosocial ECD or integrating it with other key child health service such as nutrition. These often involved one-on-one consultations with a caregiver at home or during routine child health services and/or group information sessions. Demonstrations of play and stimulation were provided and would often use homemade toys or resources that were easily accessible to mothers in their home setting (78). Community and facility based settings were used as platforms to deliver psychosocial ECD services.

The research studies discussed earlier, demonstrate it is feasible to implement psychosocial ECD programs and initiatives through existing community and clinical health services. MCH services were regularly used to deliver the interventions (66, 73). The studies showed health workers can pragmatically be trained to deliver psychosocial ECD services and upskilling can ensure they are able to effectively address and counsel mothers on psychosocial ECD during routine MCH services (76), demonstrating that it is feasible and reasonable to upskill health workers. The simplicity of the messaging, context and delivery are advantageous to global and systems wide implementation. The studies shows psychosocial ECD caregiving messaging and practices are relatable and feasible to mothers and health workers (49, 73). Also the intervention evaluations showed both caregivers and health workers could easily relate, understand and deliver the core caregiving concepts and practices for positive psychosocial ECD (49, 66). Additionally they were adaptable to different settings and cultures (73, 76). Making them feasible to implement globally.

Responsive and positive parenting programs have shown CHWs can be a good initial point of contact for promoting care or psychosocial ECD and providing home based intervention (37, 66, 81). The advantage is they can deliver services within the home environment giving them a critical opportunity to advise and assess caregiving practices and environments. However, countries that use voluntary health workers may face challenges with motivation, performance and being paid for the extra work (49, 66). Both long and short term CHW based interventions were shown to improve caregiving practices and psychosocial ECD outcomes, but to achieve sustained ECD benefits psychosocial ECD needs to be continuously supported during follow up MCH services, enlisting the assistance of additional health workers such as nurses and doctors.

Global action for scale up requires moving from time-limited studies to system wide implementation and exploring the factors required to provide an enabling environment to deliver psychosocial ECD initiatives alongside child health initiative (6). Although research shows integrating positive and responsive parenting programs into existing health services is possible, system wide scale up and implementation through existing RMNCH is rare with only three instances occurring in Chile, India and Brazil- and in most of the cases psychosocial ECD is still linked to education or social services, which has limited access to children during the important first 1000 days of life (21, 41). This calls for systems based health considerations that account for leadership, governance, and service delivery initiatives that scale up psychosocial ECD services in health (6, 58, 87).

2.6 Conclusion

There is an increasing recognition of the importance of care for psychosocial ECD with more efforts focusing on encouraging and improving stimulating, responsive and nurturing caregiving through health services (32, 41, 63). The benefits that psychosocial ECD parenting programs bring to psychosocial development outcomes in LMICs have encouraged dialogue and action that looks at ways to effectively and practically implement and scale up evidence based parenting interventions in health for LMICs (3, 14). With the promising evidence on responsive and positive caregiving and psychosocial ECD in health, there is currently a need for implementation research which investigates how to deliver feasible and effective ECD programs to scale across population health services (32, 48).

The 2016 Lancet ECD series on *"Advances in ECD from science to scale"* highlights the importance of nurturing caregiving and effectively scaling up proven interventions through existing health services (6, 7). It discusses the need for research that examines how to effectively scale up and maintain the fidelity of ECD programs (69). It also identifies supporting caregivers to provide nurturing caregiving as critical element to achieving development potential (7). This involves a dynamic set of requirements that incorporates international, national, community and individual levels of awareness, priorities and engagement (40, 45, 50, 59, 88). Within population health services, this has mainly focused on the studies presented in Section 2.3.4 with limited system wide initiatives (48). This gap in the research highlights the need to explore how to systematically scale care for psychosocial ECD across existing MCH services.

Chapter 3: Research context: psychosocial Early Childhood Development and Maternal and Child Health in Uganda

In the last 30 years Uganda has shown remarkable economic improvement having progressed from a failed state to a gradually growing economy (89-91). Although there has been significant economic achievement it still faces many challenges including poor health systems and indicators and high rates of youth unemployment – a significant issue in a country with the second youngest population in the world (92). In 2010 Uganda had one of the youngest populations in the world with 48.7 % of the population below the age of 15 years and 19.3% of the population aged between 15-24 years (92, 93). With an average life expectancy of 54 years, there is a continuing skew towards a young population (94). These trends have remained, and in 2014 the census estimated Uganda's total population to be 34.8 million. Of this 56.7% of the population (19 million people) was 18 years and younger, and 35% of that population (approximately 6 million people) was less than 5 years old (95). Furthermore, the census estimated 7.3 million women were within the reproductive age group (15-49 years) and with an average fertility rate of 6.2 children per women, 1.5 million births were projected for 2015 and an estimated population growth of 3% over the last 10 years (95). With the current fertility rate, a growing birth rate, and a reduction in infant and child mortality, it is anticipated the current demographic patterns will continue to for the next 10 years (93, 95, 96). Youth have the potential for advancing the nation socially and economically - a significant and integral aspect of health, wellbeing and economic sustainability. As a result, ECD and Maternal and Child Health (MCH) remain key priorities to the government commitments across health, education and social development.

3.1   Early Childhood Development governance in Uganda

In the last five to 10 years, Uganda has demonstrated a good track record in ECD governance with emerging developments across policy, systems and implementation. In 2007 the Ministry of Education and Sports (MoES) developed the ECD Policy, which provided multisector guidance on pro ECD activities (97). Recognising the need for a holistic and community approach to ECD, the policy allowed the education sector to lead ECD effort across access to ECD child care; pre-primary education services; the development of an ECD teacher training, curriculum and assessments; nursery schools and ECD centres supervision; multisector government engagement; and public-private partnerships (97). This momentum was picked up by the Ministry of Gender Labour and Social Development (MoGLSD) and in 2016 Uganda launched the National Integrated ECD (NIECD) policy, which is spearheading a multisector approach to all ECD activities. The policy vision is for

"*All children in Uganda from conception to 8 years of age to grow and develop to their full potential*" (98 p 13). Its mission focuses on ensuring "*equitable access to quality and relevant ECD services for holistic development of all children from conception to 8 years.*" (98 p 11). The NIECD policy integrates ECD services and action across education, health, agriculture and child protection in efforts to provide holistic ECD services (97, 99). Understanding the diversity of ECD, Uganda acknowledges key components of ECD to include maternal and child health and nutrition; social and child protection; early childhood education and care; and water and sanitation (99, 100).

3.1.1 The National Integrated Early Childhood Development policy institutional arrangements

In the institutional arrangements for the NIECD policy implementation, the governance stakeholders listed include: Ministries of Gender, Labour and Social Development, Education and Sports, Health, Finance, Planning and Economic Development, Water and Environment, Justice and Constitutional Affairs, Local Government, Agriculture, Animal Industry and Fisheries, Internal Affairs, Disaster Preparedness, Works and Transport, Trade, Industry and cooperatives, Public Service Information, Communication and Technology, Lands, Housing and Urban Development; the Office of the Prime Minister; Lower Local Governments; Private Sector; and Bilateral and Multilateral Development Partners, International and National Civil Service Organisations (98-100). Their roles and responsibilities include:

- Mainstreaming ECD into their policies, plans and budget and ensuring they are in line with the NIECD framework
- Mobilising funds for the provision of relevant ECD sector requirements
- Strengthening partnerships, coordination and monitoring of NIECD services
- Designating an ECD officer to support the NIECD implementation

Under the NIECD policy arrangement, the MoGLSD is the leading and coordinating government agency (98-100). The key actor within this ministry is the Children and Youth Affairs department that manages and coordinates the NIECD policy and strategic framework (98). There are two other leading ministries, the Ministry of Health (MoH) and MoES.

Under the NIECD policy mandate, the MoH is responsible for child health and wellbeing, specifically looking at preventing common childhood illness and death, nutrition, immunisation and sanitation. For this task, the Child Health department is the leading MoH agency and the coordinating governance actors in health. The role of the MoH specifically relates to MCH and includes strengthening the delivery of MCH services; implementing maternal and child survival programs; ensuring sufficient resources and funding for MCH services; providing guidelines for quality integrated ECD Service delivery; providing Information Education and Communication (IEC) materials on ECD; and early detection of disabilities in children (5, 6).

The MoES, the third leading government agency, has the core responsibility of providing pre-primary services (including nurseries and ECD centres) to support early learning and development in children. Under the NIECD policy and framework mandate, the MoES is responsible for monitoring and regulating all pre-primary ECD services and ensuring children are learning and being stimulated. This task specifically falls under the Pre-Primary Department in MoES.

Additional government agencies who are indirectly involved in ECD include the Ministry of Agriculture for the supply of nutritious food, the Ministry of Infrastructure for the provision of key infrastructure including schools, hospitals and roads, and the Ministry of Finance for the allocation of funding resources and budgets (98). Each of these ministries are subordinates to the three leading ministries and work to ensure key services such as food, infrastructure and funding are available to support ECD.

Additional supporting sectors include multilateral agencies, Non-government Organisations (NGOs) and the private sector, engaged in both the planning and delivery of ECD services. The multilateral agencies, including WHO and UNICEF, have been extensively engaged in NIECD Policy planning as they provide globally driven technical inputs and advice to the government. The NGOs Plan Uganda, Save the Children and the Private Sector Foundation Uganda, have also engaged in the planning and service delivery components as they provide locally based technical inputs and ECD service delivery experience and capacity. **Figure 3-1** provides an illustration of the government implementation structure from the NIECD policy.
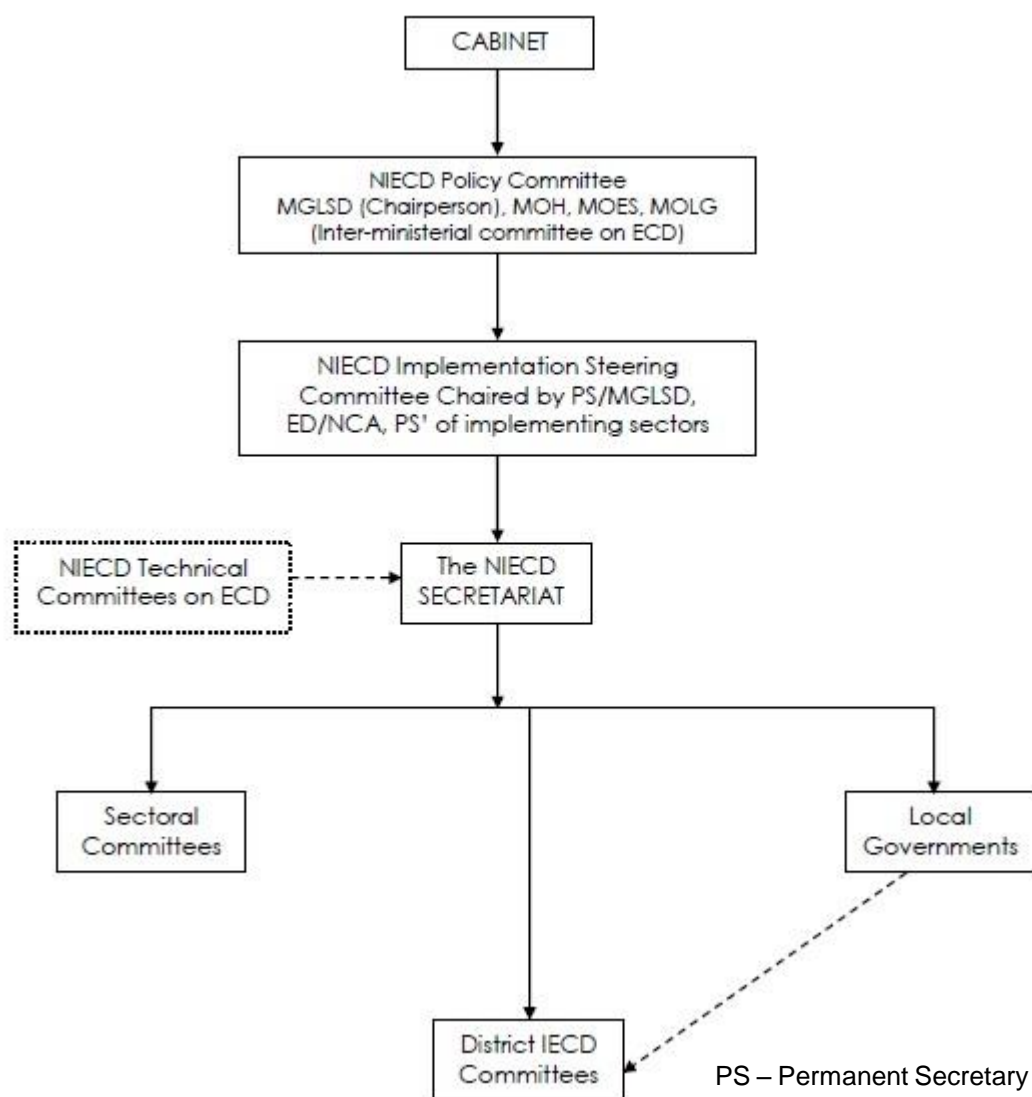
Figure 3-1: Implementation structure for the NIECD policy (100 p 15)

3.1.2 Psychosocial Early Childhood Development in Uganda

Under the NIECD policy, the national psychosocial ECD mandate is located in the MoES's Early Childhood Care and Education (ECCE) core program area. (99, 100). The key programme objective is *"to increase access to equitable, quality, integrated and inclusive early learning and stimulation opportunities and programs for all children below eight years in Uganda"* (100 p. 34)**.** Under this objective the MoES is responsible for ensuring age appropriate development skills by (100):

- Establishing an Early Child Education department
- Professionally training ECD service providers and actor to deliver ECD services.
- Establishing operational standards and ensuring they are met
- Establishing ECD centres at every government primary school
- Supervising and inspecting ECD services.

During the early years, the core services addressing psychosocial ECD in Uganda are preschool services (i.e. day/childcare services, home based childcare centres, community centres and nursery schools) for children aged 0-3 years and nursery schools for children aged 3-6 years (97). These provide formalised ECD services that address ECD learning, stimulation, play and social development (101). The preschool services form the backbone of psychosocial support services for children aged 0-3 years, however they face the challenge of poor government funding (102). As a result, the available services are often provided through private and non-state providers, and are accessible only to limited parts of the population. It is estimated that 80% of ECD services are in the private sector (98). The 2014 census estimated that only 28% of the population were enrolled in pre-primary school; of these 42% were enrolled in urban areas and only 24% enrolled in rural centres (102). The highest enrolment percentage was in Kampala, the capital city (102). This indicates that accessing ECD services remains difficult and unattainable for a large majority of the Ugandan population and ultimately hinders the potential and impact of the ECCE program. It also brings to question what more can be done to ensure psychosocial ECD services are made accessible through other universal public services, specifically MCH services.

3.1.3 Psychosocial ECD and the public health in Uganda

ECD in health strongly focuses on physical child development, with limited emphasis on interventions that focus on psychosocial ECD. The key role of the MoH and health sector is to ensure children have access to good nutrition, preventing and treating illnesses, achieving 100% immunisation coverage for children aged 0-5 years, and promoting child health and development (90, 103). This is extended in the NIECD policy where the MoH's main mandate is to strengthen and provide quality MCH services, mainly focusing on maternal and child survival programs, RMNCH primary and preventative healthcare services and safe water and sanitation (98, 100). One of the NIECD policy requirements for the MoH is to integrate ECD into service delivery (98). For psychosocial ECD the MoH has begun this process by including the UNICEF/WHO CCD mandate in their national health worker IMCI upskilling training[5], and the new Maternal and Child Health Passports, includes reference to care for child development and stimulation (refer to **Figure 3-2**) (104). However beyond those two key activities CCD and care for psychosocial ECD has not been fully systematised or integrated into MCH services, presenting a gap in psychosocial ECD care and an

---

[5]Observed and shown during field trip and data collection

opportunity to explore how Uganda's MCH governance and service delivery can fully address the new NIECD approach.
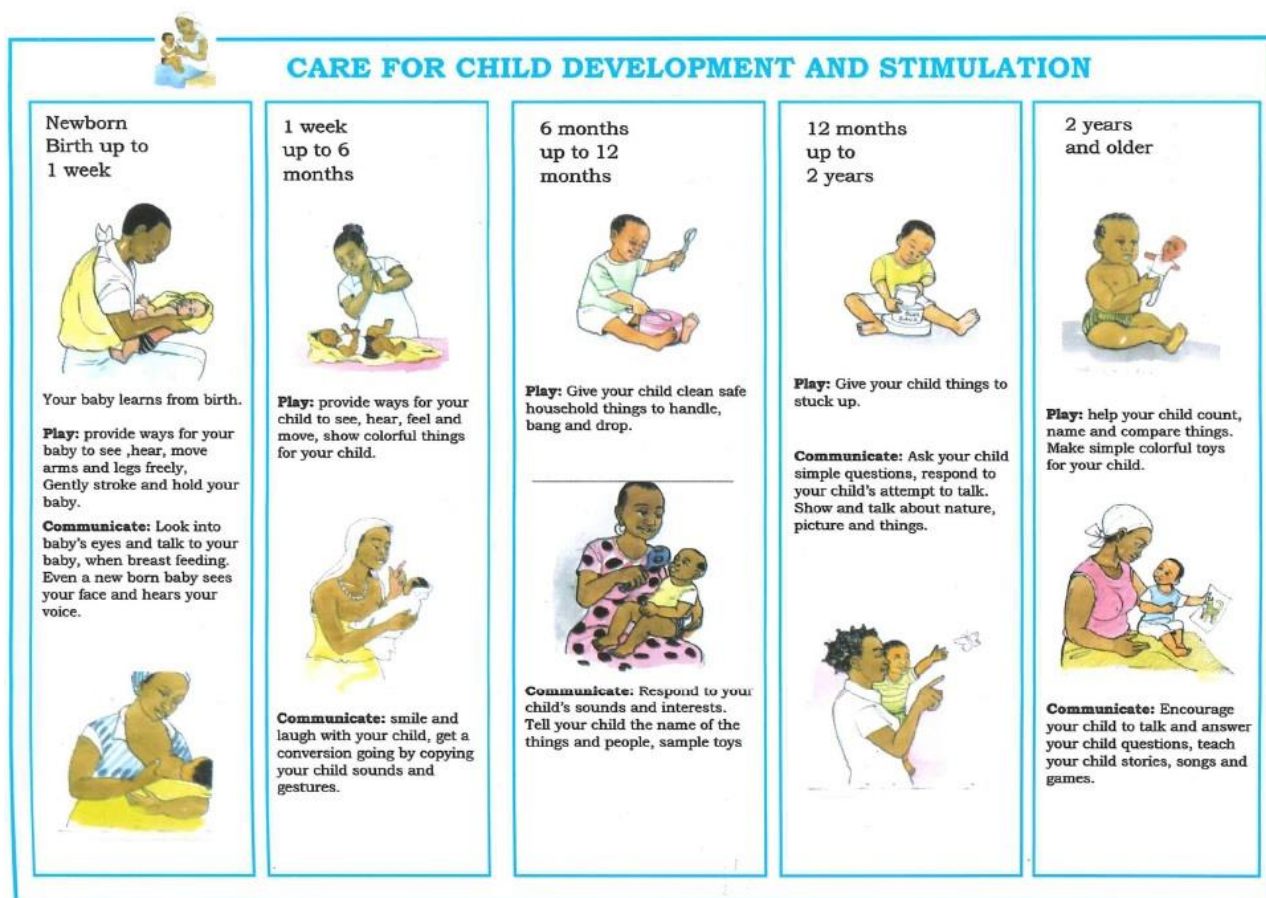
Figure 3-2: Maternal and Child Health Passport: Care for Child Development and stimulation section (104 p 20)

3.2 Uganda's health system and Maternal and Child Health status

3.2.1 Health governance structure

Uganda's health system governance structure is primarily responsible for developing strategic policies and guidelines that support the access and provision to appropriate health care and services. They develop key policies, legislation and strategies that direct and govern the healthcare system. In the 1980's Uganda made key commitments to develop a decentralised system of governance and service delivery, establishing local government committees and giving them power and control over district and sub county health management, financing, legislation, functions and service delivery (105). Under the Local Government (Decentralisation) Act, Uganda's health services are provided through decentralised structures that are run by local district level governments, while the national (central) government is responsible for developing policies, legislations, standards, technical

support and Monitoring and Evaluation (M&E) (93, 106, 107). This system was developed to allow local level autonomy and improve community level health service performance. For the MCH governance, the key structures of particular interest to the thesis is the MoH MCH governance stakeholders and health facilities management staff.

3.2.2 Health service delivery structure

Uganda's healthcare system is made up of a public and private health sector. Together they account for the National Health System (NHS) which aims to sustain a healthy population through the provision of key health services and initiatives (107). In the public sector the MoH is the leading governance body for health service delivery. This requires them to provide policy, legislation, funding, and resources to ensure public services are equipped with the right resources to delivery key services. The MoH's primary responsibility is to support the delivery of preventative, curative, promotional, rehabilitative and palliative health service. To achieve this, services within the MoH as well as services across the Ministry of Defence, Finance, Internal Affairs, Planning and Economic Development, and Local Government work together to ensure key health care services and initiatives are available to the public (94, 106). Accordingly health initiatives are planned and provided using cross sectoral approaches and engagement.

Uganda's government healthcare services are provided at a national, district, sub county, parish and rural level and include hospitals and health centres. Healthcare can be provided through National Referral Hospitals, Regional Referral Hospitals, General Hospitals and Health Centres (HC) IVs, III and II (107). Additionally, VHTS[6] located in rural outposts provide the first point of contact for people living in rural and remote areas, staffed by a team of six CHW involved with preventative care and community health services (108). **Figure 3-3** provides a brief summary of the healthcare services under each facility. Across these services, healthcare is provided through a decentralised system of management and funding which devolves service delivery responsibility to Local District Governments. Under these arrangements, it is the responsibility of each district to provide all health structures and services. Local level governments across the different districts are expected to provide healthcare services through the general hospitals, health centres and VHTS. National and regional referral hospitals are supported by the MoH (107). While the argument for decentralisation acknowledges the importance of community level ownership, the limited

---

[6] Also known as community health workers.

access to management resources and funding creates key inefficiencies across district service delivery and systems, management are often unable to deliver services due to inequitable resources (109).
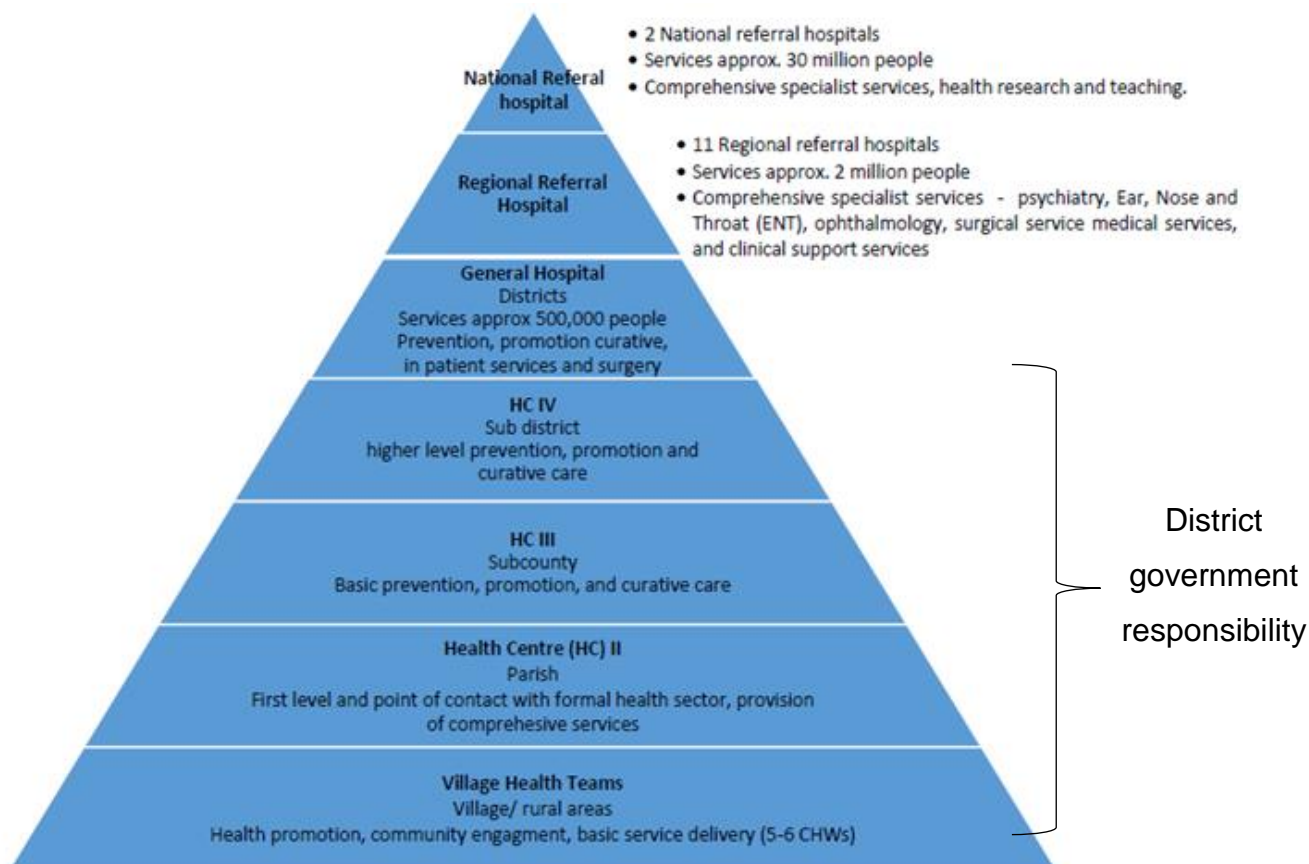
Figure 3-3: Delivery of health care (107)

Image text content:

National Referal hospital
- 2 National referral hospitals
- Services approx. 30 million people
- Comprehensive specialist services, health research and teaching.

Regional Referral Hospital
- 11 Regional referral hospitals
- Services approx. 2 million people
- Comprehensive specialist services - psychiatry, Ear, Nose and Throat (ENT), ophthalmology, surgical service medical services, and clinical support services

General Hospital
Districts
Services approx 500,000 people
Prevention, promotion curative, in patient services and surgery

HC IV
Sub district
higher level prevention, promotion and curative care

HC III
Subcounty
Basic prevention, promotion, and curative care

Health Centre (HC) II
Parish
First level and point of contact with formal health sector, provision of comprehesive services

Village Health Teams
Village/ rural areas
Health promotion, community engagment, basic service delivery (5-6 CHWs)

District government responsibility

3.2.3 Maternal and Child Health and service delivery in Uganda

Maternal and Child Health status

Uganda's maternal health is compromised by birth related complications and preventable deaths. Although there has been progress in the areas of skilled birth attendance and access to postnatal care (PNC), and an increase in the use of contraception and family planning services, maternal mortality remains high (90). In 2011 Uganda's maternal mortality was 438 per 100,000 which was above the MDG target of 131 per 100,000 (90, 93). The top five causes of death, accounting for approximately 72% of the mortality rate between 2013-2014, included ante-partum and post-partum haemorrhage, abortion, pregnancy related hypertension and uterine rupture (110). Maternal health and health-seeking behaviours[7], delays in arrival at health services, and access to adequate healthcare were identified as

---

[7] Delays with seeking help, lack of support from partners, refusing medical admission and treatment, refusing transfer to higher facilities

key factors to contributing to maternal morbidity and mortality by Uganda's Ministry of Health (110). This called for more work across health advocacy, behavioural change, service accessibility and quality of healthcare (110). To address these areas, Uganda's planning for RMNCH focuses on scaling up and expanding targeted interventions addressing safe pregnancy and neonatal care, and educating and empowering women on social determinates of health[8] (103). For ECD this includes healthy maternal and child nutrition, access to antenatal care (ANC), skilled attendance at birth, PNC, and neonatal care (103), each of which present opportunities to address CCD.

While progress in maternal health and mortality remains slow, child health in Uganda has seen key advancements in the areas of child mortality and morbidity. Uganda still faces child health challenges across prenatal, birth asphyxia and infection, neonatal deaths and pneumonia, malaria, diarrhoea and Human Immunodeficiency Virus (HIV) related infant and child deaths (103). Communicable and preventable diseases are still a key cause of infant and child mortality with malaria, pneumonia, anaemia, perinatal natal conditions[9] and respiratory infections accounting for 61.3% of under-five mortality (90, 93, 110). However between 1995 and 2011 Uganda's under five mortality dropped from 156 deaths per 1000 to 90 deaths per 1000 (90). This has been linked to improved vaccination coverage, malaria prevention, Prevention of Mother-to-Child Transmission (PMTCT) of HIV, prevention and management of communicable disease, healthy nutrition, sanitation and housing (90). While the 2015 MDG target of 56 per 1000 deaths was not met, child health interventions have achieved considerable progress and they continue to be central to Uganda's key child health priorities (90). Uganda's national efforts to address and promote child health include, healthy child nutrition, expanded immunisation program, promoting hygiene, water and sanitation and IMCI (103).

Maternal and Child Health service delivery and potential avenues Care Child Development
MCH global commitments have focused on ensuring health systems have the capacity to provide women and children with a continuum of integrated care and services that address positive reproductive health, healthy pregnancies, healthy nutrition and the prevention and management of common maternal and child illness (2, 111). In line with these Uganda has five key RMNCH priorities which include sexual and reproductive health, maternal and child

---

[8] Hygiene, water, sanitation,
[9] Birth asphyxia prematurity syphilis, respiratory distress syndrome, jaundice, intrauterine growth restrictions meningitis sepsis birth trauma

nutrition, newborn care, immunisation and childhood illness (110). These provide services across safe motherhood, healthy maternal and child nutrition, ante and post-natal care, safe deliveries and child health services that address breastfeeding, immunisation and disease prevention (103). **Table 3-1 (below)** summarises the main RMNCH services being provided in Uganda and **Figure 3-4 (below)** illustrates the integrated approach and continuum of care. RMNCH care is provided at the households (community), outreach (population) and individual (clinical) levels through home visit, community outreach programs and health information sessions, and facility based health care (103).

The following paragraphs briefly discuss Uganda's RMNCH services and potential opportunities to integrate CCD into these services. During pregnancy, the government, in partnership with NGOs and development partners, provides service and interventions in the areas of emergency obstetric care, skilled birth attendants, ANC, PNC, family planning, nutrition and immunisation (112). In 2011 it was estimated that approximately 90% of mothers attended at least one ANC visit out of the four recommended ANC visits at a health facility (90, 112). However only 47% of women were receiving the four recommended ANC visits[10] (103). Furthermore the 2011 Demographic Health Survey (DHS) estimated that only 58% of women had a skilled provider present during birth (93). Data showed that 50% of those women were estimated to receive care from nurses and midwives with 18% receiving care from traditional birth attendants, 7% received care from doctors and 21 % of births were unattended (7% occurred without assistance and 15% occurred with unqualified assistance) (93). The government's RMNCH sharpened plan is addressing this by expanding the coverage of high impact maternal intervention and investing in maternal health care and nutrition, specifically improving access to ANC and empowering and educating women on social determinant of MCH (103). For this reason, family planning, ANC and PNC services provide an important point of contact to deliver CCD and psychosocial care to mothers during the conception, pregnancy and neonatal stages.

---

[10] Based on the previous WHO recommendations

Table 3-1: RMNCH services summary (103, 113)

Service type	Key healthcare priorities	Platform	Key activities
Reproductive health	Safe sex Family planning	Households, outreach and clinical services	• Counselling on unwanted pregnancies and using family planning • Manage family planning methods • Physical assessment • Pelvic examination
Healthy nutrition	Infant and young child feeding	Households, outreach and clinical services	• Exclusive breastfeeding for six months • Complementary feeding at six months • HIV status of pregnant and lactating mums and appropriate feeding counselling • Treating and management of dehydration hypoglycaemia, hypothermia, Vitamin A deficiency.
Maternal health checks	Antenatal care – four visits	Households and clinical services	• Delivery Plan • Identity and refer HIV positive mothers • PMTCT of HIV • Tetanus (TT) vaccination • Assess foetal growth, anaemia and pregnancy induced hypertension
	Postnatal care	Households, outreach and clinical services	• Identify and treat postnatal danger signs • Newborn and infant Immunisation • Promote and support exclusive breastfeeding • Start Antiretroviral treatment for mother and infant (as necessary) • Manage PMTCT HIV • Provide health education • Early infant Diagnosis of HIV and other diseases • Assess and manage infant growth and nutrition • Complementary feeding at 6 months • Promote unintended pregnancies and birth spacing (2 years)

Service type	Key healthcare priorities	Platform	Key activities
Child health checks	Immunisation	Households, outreach and clinical services	• Promote and provide age appropriate immunisation (Birth, six, 10 and 14 weeks and nine months)
	Nutrition	Households, outreach and clinical services	• Exclusive breastfeeding for six months • Complementary feeding from six to 24 months • Full solids at two years and older • Assess and manage low birth weight
	Prevention and management of common childhood illness	Households, and clinical services	• Check for general danger signs for pneumonia, diarrhoea, malaria, malnutrition, anaemia, ear infections, eye infections, • Assess treat and manage childhood illness (e.g. antibiotics, oral rehydration)
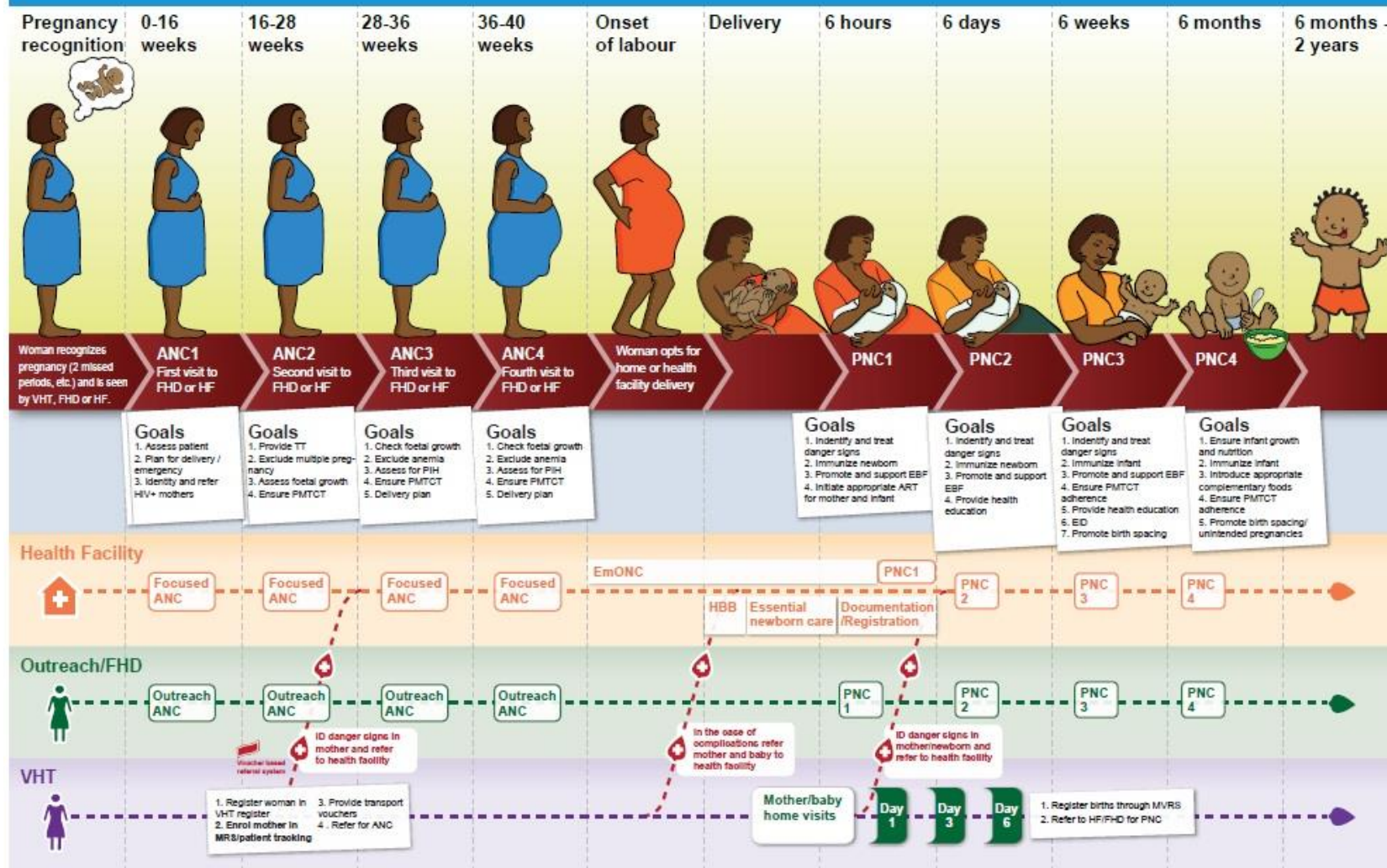
Figure 3-4: RMNCH services continuum of care (103 p 27)

After pregnancy and during the neonatal, infancy and toddler period, healthcare and counselling to mothers focuses on breastfeeding and home care for infants, including healthy nutrition and the prevention and management of common childhood illness (i.e. child immunisation) (113). Immunisation is one of the largest follow-up healthcare services that infants and children access. The coverage rate for vaccinations continues to increase and according to the 2011 DHS 51.6% of Uganda's children had received all basic vaccinations and at least 75% of children had received their measles vaccination by 23 months (refer to **Figure 3-5**) (90, 93). To improve immunisation coverage, mothers are encouraged to bring their infants at specific age intervals, in order to ensure they receive all relevant immunisations against preventable communicable diseases (refer to **Table 3-2**) (93, 114). The immunisation schedule presents an ideal point of contact to address CCD. Child nutrition services and home care counselling are also important avenues to integrate CCD and address psychosocial ECD with the mother-child dyad.
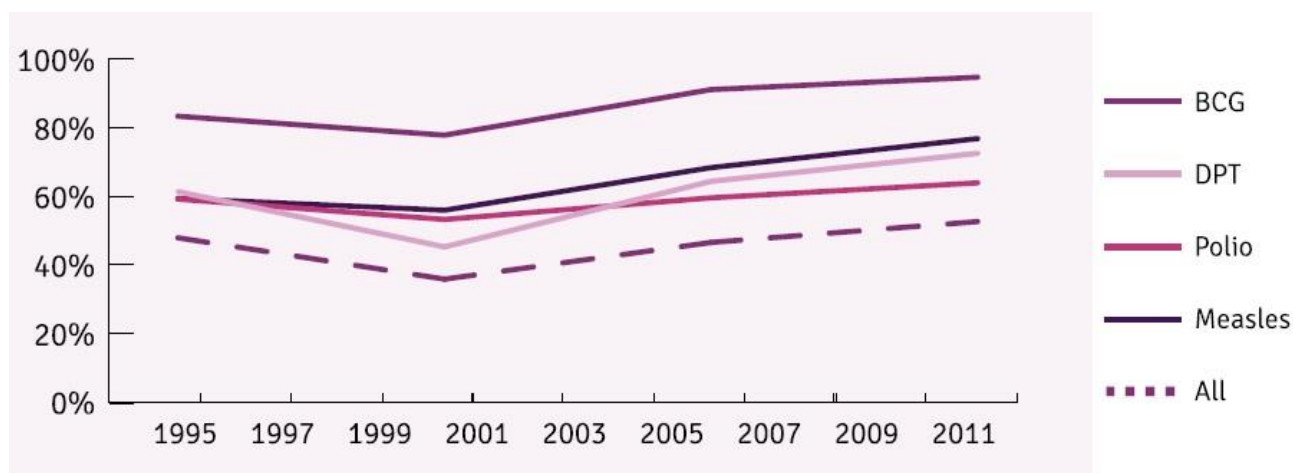
Figure 3-5: Uganda infant vaccinations rates 1995-2011 (90 p 23)

Table 3-2: Uganda's immunisation schedule (114)

Age	Vaccine	Protection against
Birth	BCG	Tuberculosis
	Polio 0	Polio
6 weeks	Polio 1	Polio
	DPT-HepB+Hib1	Diphtheria, tetanus, Whooping Cough, Hepatitis B, Haemophilus Influenza type b
	PCV1	Pneumococcal Pneumonia
10 week	Polio 2	Polio
	DPT-HepB+Hib2	Diphtheria, tetanus, Whooping Cough, Hepatitis B, Haemophilus Influenza type b
	PCV2	Pneumococcal Pneumonia
14 weeks	Polio 2	Polio
	DPT-HepB+Hib2	Diphtheria, tetanus, Whooping Cough, Hepatitis B, Haemophilus Influenza type b
	PCV2	Pneumococcal Pneumonia
9 month	Measles	Measles

3.3 Conclusion

Uganda's prioritisation of reproductive health and the prevention of common child illness make these important population health services to address psychosocial ECD and CCD, however changes to its ECD governance and RMNCH service mandate are necessary. The integrated RMNCH care services present important timeframes where CCD can be promoted and addressed during pregnancy, infancy and toddlerhood. Additionally, immunisation services are an avenue where CCD can be incorporated into routine child healthcare. Mothers, children, health providers and health governors are all actively involved in immunisation and this presents an opportune service point of contact for consolidating psychosocial ECD in health. However to achieve these, further leadership and service delivery changes are necessary. The applied conceptual framework in Chapter 6: discusses the governance considerations and explores how ANC, PNC, MCH nutrition and immunisation services can be used as points of contact to delivery CCD and address psychosocial ECD.

Chapter 4: Methodology

4.1   Overview

Health Policy and Systems Research, specifically health systems thinking (defined in section 5.4.1) was used to explore how Care for Child Development (CCD) and care for psychosocial ECD can be scaled up in Uganda's RMNCH services. Qualitative methods were employed to identify the governance and service delivery features needed to scale up and strengthen care for psychosocial ECD across frontline reproductive maternal and child health services in Uganda. This chapter describes the research methodology and tools used.

4.2   Health Policy and Systems Research theoretical framework

This research follows the tradition of Health Policy and Systems Research and uses health systems thinking (further defined in section 5.4.1) to explore how to scale up CCD and strengthen it in Uganda. Health Policy and Systems Research focuses on examining how health systems are organised, identifying where changes can be made to improve the healthcare responsiveness and quality and acknowledging the interrelation between, politics, policy, health systems and society (115, 116). It acknowledges the importance of strengthening broader health systems when scaling up services, in order to enable health intervention to have sustained population health outcomes (117). Employing a Health Policy and Systems Research framework emphasises the intersection between governance and health services in order to explore how CCD can be scaled up in health. Its underpinning principles make it an ideal guiding approach to explore how ECD governance and health service delivery factors can improve care for psychosocial ECD in health. It also caters to the multisectoral approach required to address the research questions, which is important given ECD's multisectoral nature (3, 24, 58, 118).

Specifically, Health Policy and Systems Research encompasses four key elements; 1) health systems which involves the provision of health services and the protection and promotion of health; 2) health systems development or strengthening, which explores the structural and social elements to improve health systems; 3) health policy, which involves developing the formal rules and regulations to provide effective health services and; 4) health policy analysis which focuses on the development and evaluation of policies and their context (118). The boundaries of these elements can be separated into three overlapping domains that look at global and national forces, health policy context and health systems context (118). **Figure 4-1** provides an illustration of their context and how these boundaries

overlap and interrelate with each other. The thesis focuses on the health policy and health systems strengthening elements and their boundaries. It uses a normative analysis to explore how CCD can be scaled up in Uganda's existing National Integrated ECD (NIECD) policy and Reproductive, Maternal, Newborn, and Child Health (RMNCH) services environment. It explores the national health policy context by focusing on Uganda's NIECD policy, actors and powers of influence, and the health systems context by investigating how its reproductive maternal and child healthcare structures can address CCD and, the implications that key actor's perception and values will have on the health sectors role in psychosocial ECD.
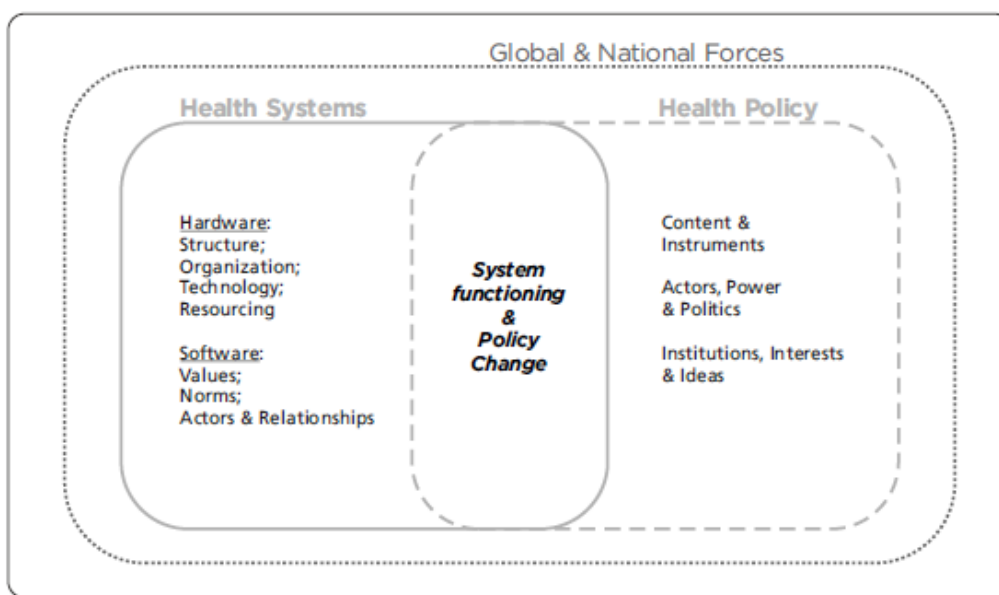
Figure 4-1: The terrain for health policy and systems research (118 p 30)

To address the intersection between ECD governance and health services, I focus specifically on the governance and health service components that would influence the systems-wide planning, implementation and scale up of CCD in Uganda's RMNCH services.

4.3   Research design

A qualitative multiphase research design was used to explore the systems scale up options for CCD. Qualitative research is particularly useful in contextualising circumstance, finding links between concepts and behaviours, and exploring lived experiences in-depth (119, 120). Qualitative health research provides an in-depth insider's perspective that is person or community centred, holistic and contextual (119). In the context of health systems research, Swanson et al. (51 p 58) observed that "*qualitative health research can help*

understand health systems complexities: the behaviours of actors, and the perceptions and culture of the people related to health systems". For these reasons qualitative methods are used to explore the governance and service delivery mechanisms required to plan, implement and scale up care for psychosocial ECD and CCD at frontline MCH services in Uganda.

4.4   Research methods and phases

Seven qualitative data collection methods divided into four phases were used to systematically identify and explore how Uganda's maternal and child healthcare systems can support, promote and scale up care for psychosocial ECD and CCD (refer to **Figure 4-2**). The first phase employed a narrative review and a normative analysis to develop a conceptual health systems framework for use in Uganda's setting. Guided by the conceptual framework, the second phase used a document and policy review to map Uganda's ECD governance and service delivery environment and identify the key stakeholders. Together the findings of phase one and two set the context for the phase three, which was a scoping trip to identify and network with ECD stakeholders and primary health care service providers for the research. The fourth phase of the research used key informant interviews, focus group discussions, observations and reflective journals to explore how Uganda's maternal and child public healthcare systems can scale up CCD and strengthen positive care for psychosocial ECD with primary caregivers. The triangulation of research methods and data were designed to gain an in-depth understanding of how psychosocial ECD is being addressed in Uganda and how CCD can be scaled up in Uganda's population health services.
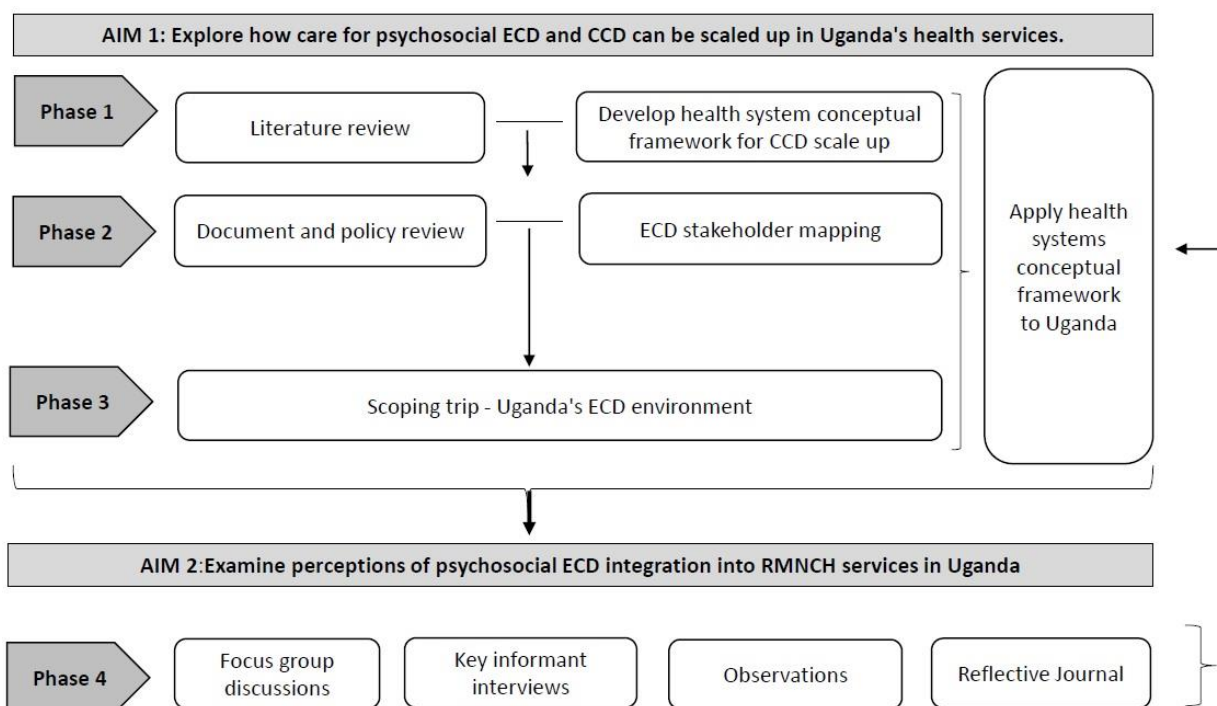
Figure 4-2: Illustration of the research design

4.4.1 Phase one: literature review and developing a health systems conceptual framework for Care for Child Development scale up

A literature review for primary research can be employed to set the scene, concisely appraise relevant literature and provide a foundation for primary research (121). Additionally narrative reviews can be used to "*provide insights into the dynamics and underlying findings of other studies*" (122 p 102) as they report "*the authors findings in a condensed format that typically summarise" (122 p 103).* A narrative review on caregiving and psychosocial ECD outcomes was conducted to identify the evidence based best practices on positive caregiving and psychosocial ECD in health. The purpose of the narrative review was to identify concepts of psychosocial ECD and positive caregiving; review the evidence on psychosocial ECD health interventions in Low and Middle Income Countries (LMICs), and locate best practice resources from peer reviewed and grey literature (mainly literature from key multilateral organisations such as WHO UNICEF and World Bank). This focused on identifying the key implementation themes and health system considerations from psychosocial ECD parenting interventions delivered in health settings.

To identify concepts of 'psychosocial ECD' and 'positive caregiving', a review of peer reviewed articles and grey literature was undertaken. This was used to generate key psychosocial ECD and caregiving principles. A further review and shortlist of these papers was done to identify psychosocial ECD intervention in LMICs. The terms, 'child

development', 'early childhood development', 'psychosocial early childhood development', 'early intervention', 'caregiving', 'parenting' and 'health' were searched in PubMed and Cinahl databases, and across the WHO, UNICEF and World Bank websites and publications. This initially focussed on identifying evidence based principles and best practice concepts on positive caregiving and psychosocial ECD, to clearly establish what this entails. Once this was done the second part of the literature review focussed on exploring how LMIC health services have implemented care for psychosocial ECD into routine MCH health services. To do this peer reviewed articles published from 2006 onwards were searched in PubMed and Cinahl databases to identify health based psychosocial ECD and caregiving interventions. The search generated a total of 886 articles. The title and abstracts were reviewed to shortlist articles on parenting and/or caregiving interventions specifically addressing psychosocial ECD in health. The articles were screened to identify 57 papers relevant to responsive and positive parenting and/or caregiving, and psychosocial ECD in health settings.

Additionally, I used more specific search strategies by purposely searching for articles on psychosocial ECD and health care in the Lancet (specifically the Lancet series on ECD), the Early Child Development and Care journal and manually searching references of papers and reviews.

For each of those searches, interventions and publications that addressed promoting positive caregiving and psychosocial ECD in LMIC health settings were reviewed to identify key concepts and health systems deliver themes. Studies were selected if they:

- Were peer reviewed and published
- Included a psychosocial ECD intervention
- Assessed or reviewed a psychosocial ECD intervention
- Interventions were delivered in a healthcare setting
- Interventions occurred in a LMIC

In total 14 articles were found with four of those specifically using CCD interventions in LMIC health settings.

For the grey literature, I searched for ECD resources and guidelines on the WHO document centre, UNICEF website and World Banks' ECD website. The term 'Early Childhood Development' was searched across each of the website. Any document, publication and

guidelines with ECD in their title were shortlisted and their summaries were reviewed to see if they specifically addressed psychosocial ECD. This involved reviewing the title, summary and introduction to find grey literature focusing on ECD, psychosocial ECD and health. Documents that addressed psychosocial ECD and parenting interventions were reviewed. At total of 23 documents were found. These include papers, reviews, reports, guidelines and brochures on ECD, psychosocial ECD and responsive caregiving. It identified the CCD health systems intervention package which is being used as a guideline on how LMIC health settings can promote responsive and positive parenting to improve psychosocial ECD in children aged 0-2 years.

Based on the evidence and best practice principles identified from the literature review, a normative analysis– which examines what should happen to improve population health – (123, 124) was then used to develop and apply a conceptual framework for scaling up care for psychosocial ECD in health. In global health a normative analysis moves from describing how health interventions improve health to exploring what should happen for them to become routine practice (123, 124). To develop the conceptual health systems framework, the WHO/UNICEF CCD package was used as an evidence-based reference point on how healthcare services can scale up care for psychosocial ECD. In this context, the package was used to identify the healthcare components required to provide psychosocial ECD healthcare services to caregivers and their infants during routine healthcare. The WHO health system building blocks were employed as an analysis guideline and used to identify pathways for scaling up CCD across maternal and child population health services and developing the conceptual health systems framework.

In following De Savigny and Adam (52), steps to systems thinking, the health systems thinking analysis focuses on: step 1) identifying multidisciplinary stakeholders; step 2) brainstorming systems-wide effects of CCD on RMNCH services and, step 3) conceptualising system-wide implementation and scale up (52). I pay specific attention to the governance and service delivery building blocks to CCD scale up as research has identified these as important components to sustainable and effective ECD services. For instance, Shawr and Shiffman's (58) research on ECD governance global priority found achieving coordinated governance arrangements a challenge. They listed leadership, national level fragmentation and an absent unified approach as key governance challenges to creating collective ECD goals and coalitions (58). Also RMNCH services have been

identified as pathways for scaling up ECD services such as health, nutrition and nurturing care (6).

The developed conceptual health system framework was then applied to the Ugandan context. It was used to plan how Uganda's reproductive, maternal and child healthcare services can deliver CCD to scale by identifying the specific healthcare system requirements. This framework was further refined and improved throughout research phases two and three.

4.4.2   Phase two: Early Childhood Development stakeholder mapping

ECD stakeholder mapping was conducted to understand the ECD governance and service delivery environment in Uganda. The prescriptive and formal ECD governance arrangements were first explored through a document review of the 2007 ECD policy and the 2013 NIECD policy final draft. This provided insight on the Uganda ECD environment, what the NIECD policy approach entailed, who the key actors were, and the appropriate processes with which to engage them. A review of the 2013 draft NIECD policy was used to provide initial information on the government ministries, organisations and individuals involved in ECD and psychosocial ECD governance in Uganda. These helped identify key actors and decision makers involved in ECD governance and service delivery; core government ministries (Ministry of Gender Labour and Social Development (MoGLSD), Ministry of Health (MoH) and Ministry of Education and Sports (MoES)); primary healthcare service providers; multilateral organisations dealing with ECD in Uganda and; NGOs working in child health and development in Uganda.

Following the document and policy review, a stakeholder mapping analysis was undertaken to identify stakeholders involved in ECD governance, psychosocial ECD governance and service delivery and MCH governance and service delivery. The analysis identified and mapped the main ECD decision makers and actors, their roles in Uganda's NIECD policy and how they interacted with each other to address psychosocial ECD in Uganda (120). The findings of the mapping exercise were used to guide the scoping trip.

4.4.3   Phase three: scoping trip

A scoping trip was conducted in Uganda between August and September 2015. The purpose of the trip was to establish contact with potential research participants and health care facilities located in rural, semi-urban and urban locations. In addition, the scoping trip

was used to establish initial contact with relevant stakeholders from the national government, multilateral organisations, academic institutions and NGOs involved in ECD. Meetings with staff from national government, multilateral organisations, academic institutions, hospitals and researchers were used to establish networks and contacts in the ECD space and get information on who are the key stakeholders to include in the research (refer to **Table 4-1**). Meetings were also held with government representatives across MoH, MoGLSD and MoES. These were used to obtain national government permission to conduct the research from each of the ministries. The permissions made it possible to apply for Australian and Ugandan ethics approval.

Table 4-1: Meetings held during the scoping trip

Types of Institution	Organisation	No
Government	MoH MoGLSD MoE	3
Multilaterals organisations	UNICEF	4
	WHO	1
Academic institution	Kyambogo University	1
Hospital	Mulago National Referral hospital	1
Public health researcher/ consultants	Public health consultant	2
	ECD researcher	1

4.4.4 Phase four: field work and data collection

Phase four included an extensive field work and data collection using a variety of qualitative research methods. This took place between July and October 2016. The methods employed in this phase included, semi-structured key informant interviews, focus group discussions, observation and reflective journal. A total of 61 participants were involved in the research during this phase. Purposive sampling was used to recruit participants who could provide the most relevant and useful data (125-127). Depending on the context, different types of purposive sampling were adopted including maximum variation, snowball sampling and venue-based sampling. Details of the sampling procedure are provided in description of each research methods below.

Semi-structured interviews

Semi-structured key informant interviews were used to capture perspectives, knowledge and experiences of ECD governance and psychosocial ECD care from government, multilateral organisations, NGO, and MCH clinical staff in Uganda. Given its open and flexible nature, this method was most appropriate for exploring how psychosocial ECD is being addressed and supported in Uganda, and gaining insight on how key ECD governance

and service delivery stakeholders perceive, experience and conceptualise care for psychosocial ECD and health (126).   Specifically, the interviews were used to:

- Explore how ECD was being governed
- Explore how psychosocial ECD was prioritised in Uganda
- Gain insight on how Uganda was working to address psychosocial ECD and
- Understand perceptions of psychosocial ECD in public health.

An interview guide was developed based on the findings of phases one and two (refer to Appendix 3: interview guide for further details). During data collection, the interview guide was further modified to incorporate new emerging themes and information with new themes added in subsequent interviews (e.g. the importance of male involvement).

Sampling: Purposive sampling aimed at maximum variation was used to recruit the governance level participants from different government departments and organisations. The approach used an iterative process and selected participants based on emerging information and data (125, 126). A desk-based literature review, scoping trip and networking (phase one and two) were used to identify departments and agencies across the national government, multilateral agencies, NGO and health facilitate. Participants were chosen based on their professional experience in ECD, psychosocial ECD and MCH to make sure the diversity relevant to the research question was covered. Snowball sampling technique was also used to recruit additional participants, using recommendations and referrals from meetings and interviews.

Participant recruitment and interview arrangement: Key informant participants were initially contacted using publicly available contact information (primarily sourced through website and business contact details) and contacts received from the scoping trip and networks. Initial contact was made via phone and email to assess their willingness to meet and/or participate in the research study. Once participants agreed to participate, an interview date and time was decided based on their availability. At the beginning of the interview, participants were provided with a participant information sheet and asked to sign a consent form. All participants were made aware that the interview participation was voluntary and they had the option to cancel or withdraw at any time.

A total of 22 semi-structured key informant interviews were conducted between July and October 2016. **Table 4-2** (below) provides details of the interviews and participants. The

national local level government representative was approached for an interview but no response was received. The MoH Village Health Team (VHT)[11] representative was also approached but they refused to be interviewed. The interviews were conducted by the author (myself) and occurred at locations that were convenient to participants. All but one participant had interviews in private rooms located at their workplace, with one being held at a restaurant upon request by the participant. 20 interviews were audio recording with permission from participant and detailed written notes were taken for the two interviews that did not give permission to be audio recorded. Further details are provided in the data management section 4.5.

---

[11] Uganda's equivalent of CHW

Table 4-2: Details of participants of key informant interviews

Organisation	Area of work	Department	Gender
National government			
Ministry of Health	Senior government official	Senior policy and management	Female
	Senior government official	Senior policy and management	Female
	Implementing staff	Neonatal and child health	Male
Ministry of Gender Labour and Social Development	Senior government official	Senior policy and management	Male
	Implementing staff	Program management	Female
Ministry of Education and Sports	Senior government official	Senior policy and management	Male
	Former senior government official	Senior policy and management	Female
		Subtotal	**7**
Multilaterals organisations			
UNICEF	ECD policy and programs	ECD program	Female
	ECCD Program	ECD program	Female
World Health Organization	ECD program	Reproductive, maternal, child and adolescent health	Male
World Bank Uganda	Health manager	Senior management	Male
		Subtotal	**4**
NGOs			
Plan Uganda	ECCD program staff	ECCD program	Female
Save the Children[12]	Health program	Health division	Female
	Neonatal and Child Health Program	Child health division	Female
Private Sector Foundation Uganda	ECD program staff	ECD program	Male
Paediatric Association	Senior management staff	Paediatrics	Male
		Subtotal	**5**
Health facilities			
Mulago National Referral Hospital	Senior management and clinician	Clinical services department	Female

---

[12] One interview with both participants was done upon request

Organisation	Area of work	Department	Gender
	Senior management	Paediatric department	Male
Mulago National Referral Hospital	Senior management and clinician	Paediatrics department	Male
	Senior management and clinician	Maternal and child nutrition department	Female
Kalangala Health Centre IV	Senior Management and clinician	Clinical services department	Male
	Clinical staff	Maternal and child health department	Female
	Clinical staff	Maternal and child health department	Male
		Subtotal	7
		Total	23

Focus group discussion

In qualitative research focus group discussions have been used to solicit ideas and explore range of opinions among a group of participants in relation to a particular topic (120, 126). These can consist of 3 – 15 people who are well informed observers and can generate the exchange of key concepts and ideas on a research topic (119, 120, 127, 128). *Padget states "the size of a focus group should be large enough to generate diversity of opinions but small enough to permit everyone to share in the discussion—about 7 to 10 participants is optimal, but size can range anywhere from 3 to 15" (119 p 124)'.* In circumstances where participants are hard to reach focus groups can consist of at least 3 people. Given the research was targeting busy and sometimes understaffed health workers at frontline primary healthcare services, I aimed to ensure a minimum of three participants were available for the focus group discussions. To understand how psychosocial ECD was being supported at frontline health services in Uganda, focus group discussions were arranged to capture different views, experiences and perceptions of health workers. Focus group discussions with doctors, nurses, midwives and VHTS were used to explore how frontline RMNCH health workers were supporting CCD and psychosocial ECD. These were used to explore how health workers encourage mothers to play, talk and stimulate their infant's psychosocial development.

A focus group discussion guide was prepared to structure the discussion (refer to Appendix 4: focus group discussion guide). to encourage participants to talk about relevant issues, it was important the moderator ensured participants understood the concepts being explored by providing clearly defined questions and by clarifying new ideas or issues as they were introduced by participants during the discussion (127). Because psychosocial ECD was not a familiar term to health workers in Uganda, it was important to explain it in terms of the overarching concept of child health and development and begin the focus group discussion with a general question about child health. A simple definition of psychosocial ECD was also provided in the participant information sheet, which was given to each participant prior to group discussion.

The main discussion topics covered included:
- MCH service delivery
- How frontline health workers were addressing psychosocial ECD
- Where they used the CCD practices with mothers, and

- The work challenges they experience.

To engage the participants, the focus group discussions began by asking health workers to discuss what the key child health concerns were, and how they were addressing those in their respective health facilities. This was followed by discussions on how they addressed psychosocial ECD by asking how they advise a mother who expressed child problems with language delays or socialising issues. Following this, participants were shown the WHO/UNICEF CCD poster and prompted to discuss when and how they advise mothers on these developmental milestones (refer to **Figure 2-1**). The CCD poster was also used as a prompt to generate further discussions on care for psychosocial ECD (refer to **Figure 2-1**).The focus group discussions ended by asking the health workers to discuss the work challenges they face, and to provide any further comments or feedback.

The focus group discussions were held between August and October 2016 at health facilities located in rural, semi-urban and urban locations in Uganda. Based on the 2014 national census on the district population size, Kalangala, Luweero and Kampala district were selected to represent the rural and semi-urban and urban location respectively. To represent the highest level of government healthcare services in an urban, semi-urban and rural location, the focus group discussions were conducted at Kalangala Health Centre IV, Luweero Health Centre IV and Mulago National Referral Hospital. Research participants included Reproductive Maternal Neonatal and Child health (RMNCH) workers and consisted of doctors, nurses, midwives and VHTs. **Table 4-3** and **Figure 4-3** details the healthcare facilities and districts where the focus group discussions were conducted.

Table 4-3: Locations of focus group discussions (95)

Health service name	Classification	Location and population size	Healthcare level
Mulago National Referral Hospital	Urban	Kampala District Central Uganda 1,516,210 people	National Referral Hospital
Luwero/Kasana Health Centre IV	Semi-urban	Luweero District Central Uganda 458,158 people	Health Centre IV
Kalangala Health Centre III	Rural	Kalangala District Central Uganda 53,406 people	Health Centre III

Figure 4-3: Districts where focus group discussions were conducted (129)

Participant sampling and recruitment: Both venue-based and snowball sampling were used to identify maternal and child health workers. Venue-based sampling uses specific locations to identify research participants and snowball sampling uses existing participants to identify new participants (125, 126). In this case, snowball sampling was used to identify relevant health workers who may not have been captured during the initial venue based sampling but would provide valuable insight on psychosocial ECD in health. Consent and approval were obtained from the Officer in Charge at the different health facilities. This was in line with the health facility protocols and procedures. An information sheet and consent form were provided at the beginning of all group discussions. Participants were asked to read both documents and given an opportunity to ask any question or refuse to participate. All participants were made aware that their participation was voluntary and they had the option to cancel or withdraw at any time.

A total of seven focus group discussions were conducted with 41 health workers **Table 4-4** provides an overview of the focus group discussions and locations. Due to the location and limited availability of staff at Kalangala Health Centre IV, key informant interviews and a focus group discussion (with three participants) were conducted with two nurses and one senior management clinician at the health centre. Additionally given the availability and limited access to busy health workers at Luweero Health Centre IV the first two focus groups had four to five participants and the final two had seven to eight participants. The focus group discussions were conducted in private rooms at the health facilities for easy access to participants. Groups one, two, and seven included a supervisor. Participants discussed comfortably amongst each other issues around healthcare and psychosocial ECD and engaged freely in the presence of their supervisors'. The focus group discussions were conducted in private rooms at the health facilities for easy access to participants. Groups one, two, and seven included a supervisor.

Although efforts were made to avoid having a supervisor present, the recruitment process made it difficult to fully achieve this particularly when following facility protocols that required obtaining permissions from the Officer in Charge at each facility and using them to identify relevant participants for the focus group . For health service research in circumstance where the research topic is benign having supervisors is not seen as a problem (119). The presence of a supervisor in the discussion was not ideal but since the discussion topics mainly focused on child health care and psychosocial ECD (i.e. benign issues) and did not address sensitive health worker issues (e.g. health worker performance), no impact was observed on the behaviour of the participants. Participants discussed comfortably amongst each other issues around healthcare and psychosocial ECD and engaged freely in the presence of their supervisors'. The focus group discussions were conducted in private rooms at the health facilities for easy access to participants. Groups one, two, and seven included a supervisor.

Table 4-4: Details of the focus group discussions

No	HC/Hospital	No	Participants	Gender	Venue
1	Kalangala Health Centre IV	3	MCH Nurse	1 Female 2 Males	Kalangala Health Centre IV
2	Luweero Health Centre IV	5	Doctor	4 Females 1 Male	Luweero Health Centre IV
3	Luweero Health Centre IV	4	VHTS	3 Females 1 Male	Officer in Charge Office
4	Luweero Health Centre IV	8	VHTS	2 Females 6 Males	Spare meeting room in the community health building at Luweero Health Centre IV
5	Luweero Health Centre IV	7	MCH Nurses MCH Nursing Assistant Midwife, General Nurse, Theatre Nurse, 2 MCH Ward Nurses	7 females	Immunisation room after morning immunisation session was completed
6	Mulago National Referral Hospital-Mulago branch	7	Nurses-immunisation and paediatric ward	7 females	Senior clinician private Office
7	Mulago National Referral Hospital-Kawempe branch	7	Midwife	7 females	Spare antenatal care room
Total		**41 healthcare workers**			

As part of the Mulago Research Ethic Committee requirements, all participants needed to be compensated for the time they spent participating in the research. A compensation fee of UGX 30,000 (approximately AUD 12) was set by the Mulago Research Ethics Committee and paid to all health workers for their complete participation. Participants were made aware they would be compensated before the group discussion. The final compensation amount was only disclosed after the group discussion In order to avoid any ethical bias

Observations of Reproductive, Maternal, Newborn, and Child Health care services
Onsite observations of reproductive, maternal and child healthcare service provision were conducted to explore what aspects of psychosocial ECD were being supported during healthcare delivery. The aim of this activity was to gain insight on what healthcare service resources exist at frontline health services and how these resources can support care for psychosocial ECD.

Site selection and arrangement: Venue-based sampling was used to select the facilities for observations. The observations were conducted at the rural, semi-urban and urban facilities as listed in **Table 4-3** between August and October 2016. Consent and approval to observe services was received from the Officer in Charge of specific facilities and a research information sheet and consent form were provided.

Non-participatory observations of immunisations, nutrition, paediatric and antenatal facilities were conducted at Kalangala Health Centre IV, Luweero Health Centre IV and Mulago National Referral hospital August and October 2016. **Table 4-5** provides an overview. The observations covered the infrastructure, space and resources of health services, understanding how they function to serve mothers and their children, and examine how this can be used to support care for psychosocial ECD services. An observational facility audit checklist (listed in Appendix 5) was developed to guide the data collection (refer to Appendix 5).

Table 4-5: Details of observations of RMNCH services

Location	Health services observed	Date and duration
Kalangala Health Centre IV	• Immunisations clinic • Family planning health education talk • Nurse nutrition generic consultation • Early Infant Detection HIV services	3rd and 4th August 2016 1.5 days
Luweero Health Centre IV	• MCH inpatient ward	9th August 2016
	• Immunisation clinic • ANC clinic • Family planning health education talks	6th September 2016 9 - 12pm
Mulago National Referral Hospital- Mulago	• Immunisation clinic	22nd September 2016 9am -2pm 23rd September 2016 10am -12pm
Mulago National Referral Hospital- Reproductive unit Kawempe	• ANC centre	23rd September 2016 9:30 - 12pm 26th September 2016 9:00am - 3pm
Mulago National Referral Hospital	• Inpatient child health nutrition department	3rd October 2016 10 - 12pm
	• Outpatient child health nutrition clinic (open to the public)	5th October 2016 9 - 2pm

Location	Health services observed	Date and duration
Mulago National Referral Hospital - Jelliffe (children's) Ward	• Acute care children's ward	12th October 2016 9-11am
Mulago National Referral Hospital	• Immunisation clinic	12th October 2016 11am-1pm

Additional policy meetings were observed before the NIECD policy launch. These included:

- MoGLSD one day meeting on Public and Private Partnerships and ECD - 23 August 2016 - 9 am -1 pm
- MoGLSD one day meeting -media campaign, communication strategy and advocacy – 24th August 2016 - 9 am -12 pm
- MoGLSD one day meeting - draft M&E framework for NIECD policy - 1st September 2016 – 9 am – 4 pm

Reflective journal

Padgett states reflexivity is *"the ability to critically examine one's self, is a central preoccupation in qualitative research"* (119 p 19). This involves reflections on researcher roles and documenting the influence or bias it may present to the research (119, 120, 130, 131). A reflective journal was used to write down my thoughts and experiences throughout the fieldwork and data collection and to provide further data observations and context (131). This was used to reflect on my work as an independent, young female researcher in Uganda and to, document data observations and personal experiences on the opportunities, challenges and new directions that occurred during my fieldwork and data collection. The writing did not occur on a daily basis but rather occurred when something significant or relevant came across my mind. Typically, the journal was used to record my thoughts on:

- What happened or what did I do?
- What did I learn?
- What went well?
- What didn't go well?
- What are my next steps?
- What implications will this have on the research?
- Additional data observations relevant to ECD in Uganda

Sample size and data saturation

Given the time, resource and funding constraints, the sample size focused on including a representative sample of key informants and experts across ECD governance, psychosocial ECD and RMNCH care in Uganda. **Table 4-6** provides an overview of the research methods and sampling strategies adopted for the thesis. Overall, the research employed purposive sampling as informed by literature review and ECD informants in Uganda. The sampling of the key informant interviews covered the diverse governance stakeholders (except national local level government and the MoH VHT representatives who declined to be interviewed). To provide a representative MCH service delivery sample, it targeted informants and RMNCH services provided at the highest level of government services in rural, semi-urban and urban locations. These ensured the participants adequately represented ECD governance and RMNCH service delivery. In addition, data saturation was reached at the 20th interview and the sixth focus group discussion and these indicated an adequate sample size was achieved.

Table 4-6: Overview of the data collection methods and sampling strategies

Methods	Sampling technique	Organisation
Semi-structured in-depth interview	Purposive sampling for maximum variation	National government 1. MoH 2. MoGLSD 3. MoES Multilateral organisations 4. UNICEF 5. WHO 6. World Bank NGOs 7. Plan Uganda 8. Save the children 9. Private Sector Foundation Uganda
	Snowball sampling	National government 10. MoH NGOs 11. Paediatric Association
Focus group discussion	Venue-based sampling Snowball sampling	1. Mulago National Referral Hospital 2. Luweero Health Centre IV 3. Kalangala Health Centre IV
Observations of reproductive maternal and child healthcare	Venue-based sampling	1. Mulago National Referral Hospital 2. Luweero Health Centre IV 3. Kalangala Health Centre IV

4.5 Data management procedures

Audio and written recording were used to collect data from the interview and focus groups discussions and visual and written recordings were used to collect data from the observations. All recordings were kept in a secure and safe location that was only accessible to the primary investigator. All interviews and focus group discussions were audio recorded except for two interviews where consent to be audio recording was not given. For these two interviews (senior clinicians), written notes were used to record the data. Once data collection was completed, all audio recordings were transferred onto a computer hard drive that was password protected and only accessible to the principle investigator. Any written recording taken during the interviews, focus groups and observations were kept secure and locked in a safe location when not in use.

The interviews and focus group discussions were transcribed for data analysis. Given the time and resource constraints, only 11 out of the 23 key informant interviews and six of the seven focus group discussion were transcribed. The interviews and focus group discussions selected for transcription were based on their relevance to the context and the importance of the informants to ECD, psychosocial ECD and RMNCH service delivery. Data that were not transcribed was directly analysed via listening to the audio recording and reading the field notes taken during and after data collection.

All the data were de-identified during the data transfer, storage and analysis. Any data shared with transcribers or co-investigators were first de-identified. This was done by excluding the first part of the recording which included introductions and in some circumstances, participant names and or position. This part of the recording was not given to the transcriber or co-investigators. All identifiable information was removed during the data reporting, data analysis and chapter writing. To protect the privacy of individuals and organisations, generic labels were used when quoting participants.

4.6 Data analysis

A thematic analysis was used to analyse the data. Thematic analysis is a widely used method for analysing, identifying, categorising and reporting patterns within qualitative data (128, 132-134). It involves *"categorising the recurrent or common themes"* (128 p 177). An integrated inductive and deductive approach was used to analyse the data collected. The conceptual framework defined the broad themes on psychosocial ECD governance and service delivery to be analysed and subthemes and categories were generated inductively

from the data through repeat coding rounds. The process of data analysis involved four key steps that included data immersion, data coding, constant comparison and theme development and interpretation (133).

Qualitative data immersion involves reviewing and becoming familiar with the data to identify potential interesting and or problematic themes that need further investigation, and developing and identify important preliminary data themes and concepts (133, 134). During the data collection, audio and written recordings of the interviews, focus group discussions and observations were repeatedly reviewed to identify emerging themes, and topics for further exploration, coding and analysis. This involved paying attention to emerging and repeated ideas and, the scope of issues being discussed to getting familiar with the data. The next step of the analysis involved developing conceptual codes, categories and themes on ECD governance, care for psychosocial ECD and public healthcare in Uganda. The analysis focused on examining and organising the data into codes; grouping the codes into categories and identifying and interpreting the categories into themes and key concepts (125, 133-137). The data analysis process was an iterative process and involved constant comparison and refinement of codes, categories and themes.

The thesis triangulated across various data sources including, semi-structured key informant interviews, focus groups discussion and observations. The transcripts, written notes and audio recording from the interviews, focus group discussions and observations were coded, categorised and placed into key governance and service delivery themes by myself and the results cross-checked by one of the supervisors, Dr Hebe Gouda.

Appendix 6 provides the coding data tree, which shows what themes and concepts were identified in the interviews, focus groups group discussions and observations. The key findings are further discussed in the two key results chapters and are used to inform the final consideration and recommendation in the discussions chapter.

4.7 Research rigor and validity

To improve the rigor and validity of the current study, the following procedures were adopted (119):

1. Triangulation of different data collection methods to compare and confirm the themes from different data sources

2. Cross-checking data analysis with supervisors to increase the objectivity and validity of my data analysis
3. Purposive sampling and snowball sampling to include a representative participant sample relevant to the research question
4. Systematic data recording and management to allow others to retrace and check my analysis and interpretation
5. Being reflective and critical throughout the investigation.

Data triangulation and cross-checking: To improve credibility of the analysis, multiple data sources were used to obtain a comprehensive account across governance and service delivery. Data triangulation and saturation across the interviews, focus groups and observational data collection ensured a comprehensive description and a fit between participant views and interpretation. The data coding and interpretation were also shared and cross-checked by my supervisory team, most especially Dr Hebe Gouda. Peer debriefing and support from supervisors and local counterparts were used to receive feedback on the research processes and ensure data collection and analysis was comprehensive, accurate and representative. Weekly, fortnightly and monthly meetings were held when appropriate throughout the research proposal development, data collection, data analysis and chapter writing phases.

Representative sampling: To align the findings with Uganda's ECD context, efforts were made to include a representative sample of psychosocial ECD governance and RMNCH service delivery in this country. To capture all relevant stakeholders, multiple sampling strategies were used to ensure the research participants were representative of ECD governance, psychosocial ECD, and RMNCH care (refer to section 4.4.4). Given the changing and multisectoral ECD environment, it was difficult to completely determine all ECD stakeholders at any one point in time, snowball sampling was used to ensure any new details and relevant participants were captured and accounted for in the data collection. As new details were discovered, snowball sampling was used to capture new participants and relevant ECD policy documents and grey literature. Additionally the key findings from the data aligned with the global literature on ECD governance and service delivery demonstrating similarities with the global ECD context.

Systematic data recording and management: Clear and concise data collection and data management procedures and protocols were developed to ensure the validity of the

research process. The data collection and management procedures listed in section 4.4 and 4.5 of this chapter, provides further details on the procedures and protocols used to ensure systematic and reliable data collection process and procedures. A report of the findings will be sent to participants who provided their contact details.

4.8   Researcher positionality

Throughout the research, I was mindful of my own expertise, bias and values and how they might influence the research and my interpretation of the data. This included recognising my own values, belief and pre-conceived ideas around caregiving, psychosocial ECD and health; my relation to participants and my professional experience in ECD and Uganda. I entered this research with the aim of exploring how these best practices and principles in psychosocial ECD could be applied to Uganda. Having previously worked on an ECD program, I had both valuable real-world experience but also preconceived ideas of how psychosocial ECD should be addressed and promoted. I was mindful of the fact that this could cause me to lean towards certain approaches of psychosocial ECD and I made efforts to ensure it did not alter the approach, collection and data analysis. This was achieved by using peer-reviewed evidence to guide conceptualisation in Uganda. I used evidence-based literature on psychosocial ECD, caregiving and health in LMICs to guide and provide a framework on the best practice principles for Uganda. Additionally, the document review and primary data were used to explore concepts on ECD, psychosocial ECD and health in Uganda enabling these concepts to be grounded in the Ugandan context.

Being based and having worked in Australia, I had no Ugandan work experience, limited contact with the Uganda public healthcare systems and limited relationships with ECD stakeholders and participants. These limitations were addressed by using by using a three-step phase to research study that included: 1) a desk-based stakeholder analysis, 2) a scoping trip, and 3) local data collection.   A desktop review was used to gain an understanding of Uganda's key ECD governance and service delivery actors and environment and the national RMNCH care mandates. Following this, a scoping trip to Uganda was used to develop networks and contacts with potential participants. The contacts made during the scoping trip enabled me to establish community links and develop a good network of key stakeholders and informant. Key contacts were made with government staff and NGOs who expressed their interest and willingness to be involved in the research. Additional local contact was made with people working in child health and public health, which provided a good local support network and assisted in understanding how the public

health system works in Uganda. Finally, there was the local data collection where active professional engagement with key stakeholders produced key informants for the primary data collection. Using this three-step process helped build professional relationships and experience with ECD stakeholders in Uganda.

The lack of clinical background meant I could not technically relate to the RMNCH clinical work. However this was not important given the health systems approach to the research, and having a clinical background while useful was not necessary. All clinically relevant knowledge was sourced through clinical guidelines and the practical clinical care expertise was generated from the health worker's data. My previous work experience in international health and development ensured I had the practical experience in global health, population health services and health systems strengthening activities in LMICs. This experience was helpful when exploring and analysing the governance aspect of health systems and acknowledging the realities of systems thinking and health service delivery in LMIC context.

Being a young Ugandan female, based overseas and new to Uganda's ECD context created initial challenges during the data collection. I was seen as young and inexperienced newcomer by some of the participants, and had to deal with the power dynamics that came with being a young female engaging with senior officials and staff. To overcome these it was necessary to establish professional relationships with key stakeholders that required engaging in key government meetings and ECD events and being seen as a professional in the space. Building trust and ongoing relationships was a necessary first step. It was difficult to manage in a time limited situation however, the government meetings and visits to healthcare facilities allowed me to build these relationships during the first few weeks of data collection. Following these efforts, key stakeholders were able to recognise me as ECD researcher and they began to interact with me on a professional level. I was not seen as a young female outsider, but rather an ECD researcher who was working to best address psychosocial ECD in Uganda.

4.9 Ethical considerations

Ugandan government permission to conduct research was obtained from the MoH, MoGLSD and MoES. Copies of the permission are provided in Appendix 7.

Ethics approvals were obtained from the School of Public Health Research Ethics (University of Queensland, Australia), Mulago Research Ethics Committee, and the Uganda

National Council for Science and Technology. Copies of the ethics approval letters are provided in Appendix 8 and include:

- School of Public Health Research Ethics Committee NN16022016
- Mulago Research Ethics Committee MREC 979
- Uganda National Council for Science and Technology Ref SS 5009.

Prior to conducting the interviews, focus group discussion and observations, all participants and relevant Officers in Charge received a participant and/or a research information sheet to inform their decision. They were all made aware that this was voluntary and they were allowed to withdraw at any time. Once verbal consent was received all participants were asked to sign a consent form. All data was de-identified during data analysis and reporting of findings.

Chapter 5: Developing a conceptual framework for Care for Child Development scale up and implementation.

5.1 Overview

Chapter two presented an overview of the latest evidence based research and practice for achieving positive psychosocial ECD outcomes. It identified the WHO/UNICEF Care for Child Development (CCD) intervention as an appropriate health systems intervention to support positive caregiving for psychosocial ECD in Low and Middle Income Countries (LMICs). This chapter builds on this by developing a health systems conceptual framework for CCD that identifies the essential health system requirements needed to reinforce, scale up and implement CCD and care for psychosocial ECD at frontline health services. This requires the integration of two health systems frameworks: De Savigny and Adam's Systems Thinking for Health Systems Strengthening (52), and the WHO Health Systems Building Blocks (53). The chapter achieves this by applying steps one, two and three of De Savigny and Adam's ten steps to system thinking application to examine multi-stakeholder and multi-disciplinary approaches to ECD, explore the systems wide components to scale up, and conceptualise and map how scale up will be achieved. The WHO Health Systems Building Blocks provide a pragmatic structural framework for ensuring that all elements of the health system are addressed in this analysis. The application of this integrated framework is explored in the next chapter, with an emphasis on the governance, service delivery and workforce building blocks, which form the focus of the research findings.

5.2 Background

Psychosocial ECD is a complex area of development that requires multisectoral and intersectoral engagement and action. Positive psychosocial ECD requires cross cutting initiatives across health, education and social services that focus on providing children with a package of services that addresses the physical, mental and social requirements for positive child development (3). These intersect across various services and for a well-rounded provision of services, child health services will need to play an active role in providing services that encourage positive psychosocial ECD.

LMICs face many challenges when trying to provide adequate psychosocial ECD services. The nature of ECD requires cross sectoral involvement across, health, education, agriculture, infrastructure, civil societies and NGOs; this often makes it difficult for governments to fully understand or articulate ECD priorities and the cost benefits to health and the economy (32). Currently, the investment in ECD is low, and in most cases education

is still the main focus for ECD investments through preschool and kindergarten initiatives that are often privately owned (4, 21, 32). Most LMICs are often faced with many challenges associated with ECD service availability, accessibility and funding (6) . Furthermore while psychosocial ECD investment through education is crucial, these miss the critical window of opportunity that occurs during 0 - 3 year age range. The limited government recognition of the economic benefits; the unavailability of global indicators and monitoring tools; the long term nature of results and investments; and the poorly defined sector roles and responsibilities all contribute to implementation challenges and the slow uptake of ECD initiatives in LMICs (32). For psychosocial ECD, one solution to this is planning how psychosocial ECD programs can be integrated and scaled up across the health sector through programs such as WHO/UNICEF CCD (66).

5.2.1 Care for Child Development - a health systems intervention for psychosocial Early Childhood Development

The global health community is beginning to harness the potential of parenting and caregiving practices on reinforcing psychosocial ECD in infants and toddlers. They are increasingly acknowledging the opportunity for public health services to promote positive, responsive and stimulating caregiver among mothers, fathers and their children. Global and national organisations are focusing on ways to make positive parenting resources and tools readily available to caregivers through program based interventions (7, 21, 58). For these to translate into population wide benefits, it is important to understand how to use public health services as a means to systematically address and promote psychosocial ECD.

Recent global health developments in ECD have endorsed WHO and UNICEF's CCD intervention package as a global health systems resource to support psychosocial ECD in health, using age appropriate play and stimulation to encourage cognitive, language and social development in children aged 0-5 years (7, 16). CCD interventions have shown improvements to health worker competencies, maternal behaviour and attitudes towards care, and results in increased responsive and stimulating caregiving practices, and enhanced home environments (7, 16, 33, 73, 74) (refer to Chapter 2:). In many countries, CCD is currently being adopted as a health system intervention for addressing psychosocial ECD. While ideally aimed at first level or frontline health facilities the package presents the potential for widespread use across all different maternal and child healthcare services as a means of achieving maximum impact (45). Key efforts have focused on scaling up CCD through health services with training occurring in Africa, and planning for regional and

country level roll-outs is already underway (74, 138). This momentum creates a timely opportunity to explore the key health system requirements to effectively scale up and deliver CCD across national health systems.

5.2.2 Scaling up Care for Child Development to improve psychosocial Early Childhood Development in health

For the CCD package to be effectively implemented across health systems, it is important to understand what health resources are required to make this achievable (74). This can involve identifying how the structure of existing public health services can be used to systematically address CCD and psychosocial ECD.

In the health sector, the most effective interventions to support the early years have been implemented through reproductive maternal and child health initiatives and services (18, 19, 32). These services have been used successfully to support child survival through system wide interventions for healthy maternal and child nutrition, growth monitoring, preventing communicable disease, promoting healthy lifestyles and much more (3). The reductions in childhood mortality and morbidity in LMICs were partly due to improving sanitation, nutrition, breastfeeding, immunisation, healthy pregnancies and maternal wellbeing, and scaling up these interventions through frontline health services (10, 11). These population health improvements demonstrate how important it is to address the CCD health system scale up requirements, in seeking to improve psychosocial ECD outcomes in health. This can involve system level planning that specifies the health components needed to incorporate, deliver and scale up CCD across MCH services.

5.3   Summary of methods

This chapter uses a normative analysis to develop an integrated framework for exploring how CCD can be scaled up in health. In global health, a normative analysis involves exploring what should happen to promote and protect population health and wellbeing, in the context of evidence based practices and the global and political context and influences (123, 124). It extends the dialogue from describing how health interventions improve health to exploring the actions required to make them routine practice (123, 124). The conceptual framework uses a normative analysis to unpack what should happen for psychosocial ECD services and CCD to be scale up in a LMIC health context. In public health, scale up focuses on system level interventions and understanding how to increase, coverage, access and uptake of essential health interventions or services (139). For this

thesis, going to scale involves exploring how CCD can be integrated into routine frontline MCH health services, and exploring what systems level changes are needed to make this a routine part of MCH care (140).

To do this, two complementary approaches are combined to explore the implementation of CCD:

- The first, employs systems thinking to explore how health systems can scale up CCD in a complex environment. The first two steps of De Savigny and Adam's ten steps to system thinking application are used to guide the systems thinking approach which: 1) identifies the multi-disciplinary and multi-stakeholder nature of ECD; and 2) defines the systems wide implementation requirements needed to scale up CCD in health (52).
- The second, uses the WHO health systems building blocks as a framework for analysis and planning, ensuring that each of the components of health systems are addressed (53).

To integrate the two, the chapter begins by justifying the rationale behind using the health systems thinking approach and the WHO health systems building blocks. It explores the nature and application of systems thinking and the building blocks for health and I bring them together in a conceptual framework that describes how CCD can be scaled up.

5.4 Using health systems thinking and the WHO health systems building blocks to strengthen and scale up Care for Child Development in public health services

The framework developed will combine systems thinking and a health systems strengthening approach. In this scenario, the WHO/UNICEF CCD package will be treated as the foundation for what is required to adequately implement care for psychosocial ECD in health services. The health systems thinking analysis will use the WHO building blocks as a framework to identify what governance, service delivery, health workforce, finance, information and health technologies will be required to implement it in a public health system. The following chapter will apply this analysis, examining what is required to deliver the CCD package at a system level and developing a conceptual health systems framework and guide for CCD scale up in Uganda.

5.4.1 Health systems thinking for health systems strengthening

Health systems thinking is the process used to define, analyse and evaluate components of a health system, and exploring how their interactions, relationships and synergies contribute to improved health services and outcomes (52). Systems thinking uses macro-level analysis to understand the various inputs, processes and outcomes that influence population health (52). It explores the relationships between these components, the influence of key actors, stakeholders and the impact of intersectoral action (52, 53, 141-144). In the context of health, this involves acknowledging all possible components of a health system and understanding how system inputs, cross cutting relationships (across disciplines and sectors) and continuous innovations can influence and improve how health systems address population health problems (51, 52).

A review of the literature on systems thinking approaches to health has identified key health system features and principles to include (145-147):

1. Goals and objectives
2. Guiding principles, processes and procedures to achieve the goals and objectives
3. Key actors and stakeholders
4. Context and
5. Performance regulators.

Table 5-1 lists some key components of these features that interact with the local context to create interconnections and interdependencies which impact on the health systems function, performance and its outcomes. These features also result in health systems constantly changing and adapting to new circumstances and environments, and it is important to initially acknowledge these health systems features as a whole, discuss how their interactions will influence the health systems behaviour and understand what role these will play in the scale up and delivery of CCD (145, 147).

Table 5-1: Health system features (53, 145, 147-152).

Health system goals and objectives	Guiding Principles
• Improve health status	• Access
• Responsiveness	• Coverage
• Protect against risk	• Quality
• Quality	• Equity
• Customer satisfaction	• Efficiency
	• Choice
	• Safety

Key actors and stakeholders	Contexts
• Population	• Population demography
• Government	• Epidemiology socio-economic context
• Healthcare providers	• Country economy
• Healthcare organisations	• Political environment
• Other sectors	• Legal and regulatory environment
Health system performance regulators	
• Stewardship - leadership and regulation	
• Health service inputs - resource management and allocation	
• Health service delivery and provision - public and private resources and institutions, financing and resource allocation	
• Financing - resource generation, regulation, allocation	
• Health financing – resource generation, regulation and allocation, revenue collection, risk pooling and strategic purchasing	
• Health systems behaviour	

Applying a health systems thinking lens to public health initiatives involves careful consideration of the health systems features, all the elements influencing population health outcomes and accounting for those when planning, organising and delivering primary, secondary and tertiary health services. Using the input, process and output model, this involves acknowledging the key inputs required to deliver particular health services, establishing the processes and interactions required to connect each input and anticipating or planning the health system performance outputs and population health outcomes (153). While this provides a logical approach, health systems are complex entities with multiple influencing factors at the individual and population health level and across, political, societal, physical, economic and legal environments (51, 145, 151, 154). In essence, health systems thinking embraces a complex multipolar framework that considers political, economic and societal influences, patterns in population and health systems behaviours, and the underlying systematic relationships and intersectoral action required to deliver specific health services, goods and outcomes (141, 155-157).

In line with the health systems features listed in **Table 5-1** the goal of the conceptual framework is to improve the responsiveness of healthcare systems to psychosocial ECD, with the guiding principles focusing on access to and coverage of psychosocial ECD services. The context looks at public health service and planning how governance, stewardship and health service delivery can improve the way public health service address psychosocial ECD in children aged 0-3 years.

5.4.2 WHO Health System Building Blocks for health systems strengthening

Health systems thinking involves a holistic approach that is not limited to one definite approach or discipline (51, 158). It often requires contextual considerations that are flexible to specific settings and health requirements. Van Olmen et al. (159) point to the evolution of health systems frameworks over time and their links to political context, locally and globally. They provide a useful narrative on the context of systems thinking, and describe how global health paradigms, actors, context, priorities, discourse and policies have influenced health systems thinking frameworks, with each new framework conceptualised and framed within emerging political, social and economic context (159). The existence of so many different frameworks, while useful, presents challenges and makes it clear that there is no one "correct" approach to systems thinking and analysis, but that each context will shape the appropriate framework. Health systems thinking must be anchored in country context, global and national priorities and population health outcomes. Acknowledging the context and key concepts of health systems thinking in LMICs and Uganda in particular, is crucial to the conceptual framing of the thesis and the CCD health systems framework for scale up.

Given this complexity, the WHO Health System Building Blocks framework recognises that for health systems strengthening in LMICs, there needs to be a pragmatic framework of health systems elements to ensure that all systems aspects are considered (140, 160). The building blocks provide a framework to evaluate targeted health system components to ensure they are achieving the minimum requirements to function. They acknowledge six key requirements to ensure a health system are running to their full potential and supporting each other. These include (53):

1. Governance and leadership: the development and oversight of strategic policy, direction and frameworks.
2. Financing: ensuring adequate funding is available for health systems.
3. Health workforce: providing a responsive health workforce with the right people and skills.
4. Service delivery: effective, efficient and safe delivery of health services.
5. Health information systems (HIS): the collection and development of timely information on health, status, interventions and systems performance.
6. Health products and technologies: the availability and access to medical products and the use of technologies to support health.

The six building blocks have become internationally recognised components for strengthening health system capacity and they play a crucial part in understanding what is required to ensure health systems are working at a minimum capacity (161, 162). **Figure 5-1** illustrates how they are used to improve health goals and outcomes.
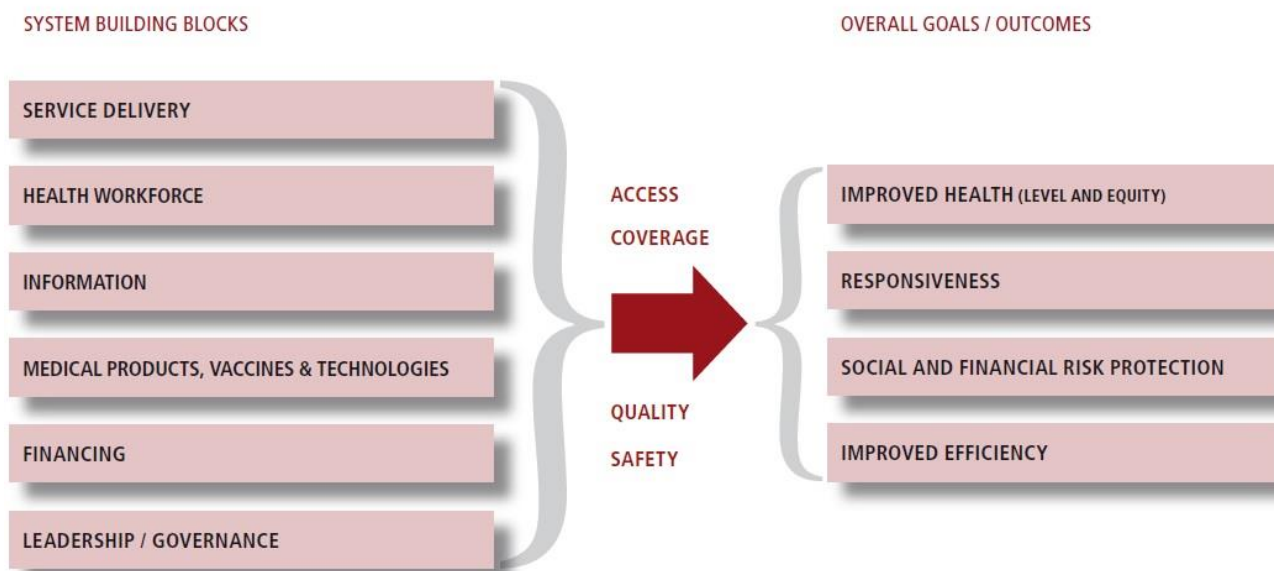
Figure 5-1: The WHO Health systems framework (53 p 3)

Each building block needs to be explored to understand the basic requirements to implement, scale up and strengthen CCD and care for psychosocial ECD in population health. The system successes seen with Integrated Management of Childhood Illnesses and exclusive breastfeeding have shown this can be achieved with careful planning and consideration (163, 164).

5.5 The conceptual framework for Care for Child Development, planning, implementation and scale up

The overall aim of the conceptual framework is to demonstrate how to create an enabling public health sector environment, where CCD and positive caregiving practices for psychosocial ECD are being promoted and addressed and scaled up at frontline MCH services. Health systems thinking has been used to deal with the ECD complexity and the building blocks provide parameters on how to pragmatically scale up CCD in health. The conceptual framework visualises how CCD and psychosocial ECD can be strengthened and scaled up in the health sector. It functions as both a descriptive and analytical tool for CCD planning, implementation and scale up. The descriptive component defines the key health

governance and service delivery inputs needed to address CCD, and the analytical aspect elaborates on the relationships and interactions across the inputs and building blocks. **Figure 5-2** (below) conceptualises the systems components required to achieve this. Combining health systems thinking analysis and the WHO health system building block framework, the CCD health systems conceptual framework presents how the governance, service delivery, health workforce, finance, information and health technologies building blocks can work together to scale up and delivery CCD across public healthcare services.

The framework begins by using health systems thinking to identify the ECD multisectoral and intersectoral context and interactions, specifically focusing on the ECD governance context and the mechanisms required to scale up CCD. The top half of framework captures the complexity and looks at multiple actors and sectors that are involved in ECD. Following this, the remaining sections present the interfaces between governance and finance and how these can influence and improve CCD service delivery by framing the CCD health workforce, Monitoring and Evaluation (M&E) and technologies.

The framework acknowledges the multisectoral context of ECD by identifying the national level-enabling environment required. Firstly, it identifies ECD national policies and frameworks as the key guiding principles to ECD governance and service. These will frame and dictate how government agencies and public services are addressing ECD and the harmonisation across sectors. They will also describe who the leading government agencies are, who the supporting government agencies and organisations are, and how they work together in multisectoral partnerships to guide national ECD service delivery. The ECD national policies and frameworks and the multisectoral collaborations and partnerships, will ultimately influence how health addresses psychosocial ECD.

The framework then presents how the health sector can more actively address psychosocial ECD. For the public health sector to be more involved in psychosocial ECD, there needs to be national government stewardship and governance on psychosocial ECD. This requires the MoH to actively acknowledge this as a child health priority and provide leadership and direction on how to address psychosocial ECD in health. At the governance level, this will require national government prioritisation of psychosocial ECD as a RMNCH mandate, which should then create finance mechanisms that ensures adequate budget and resource allocations for CCD scale up.
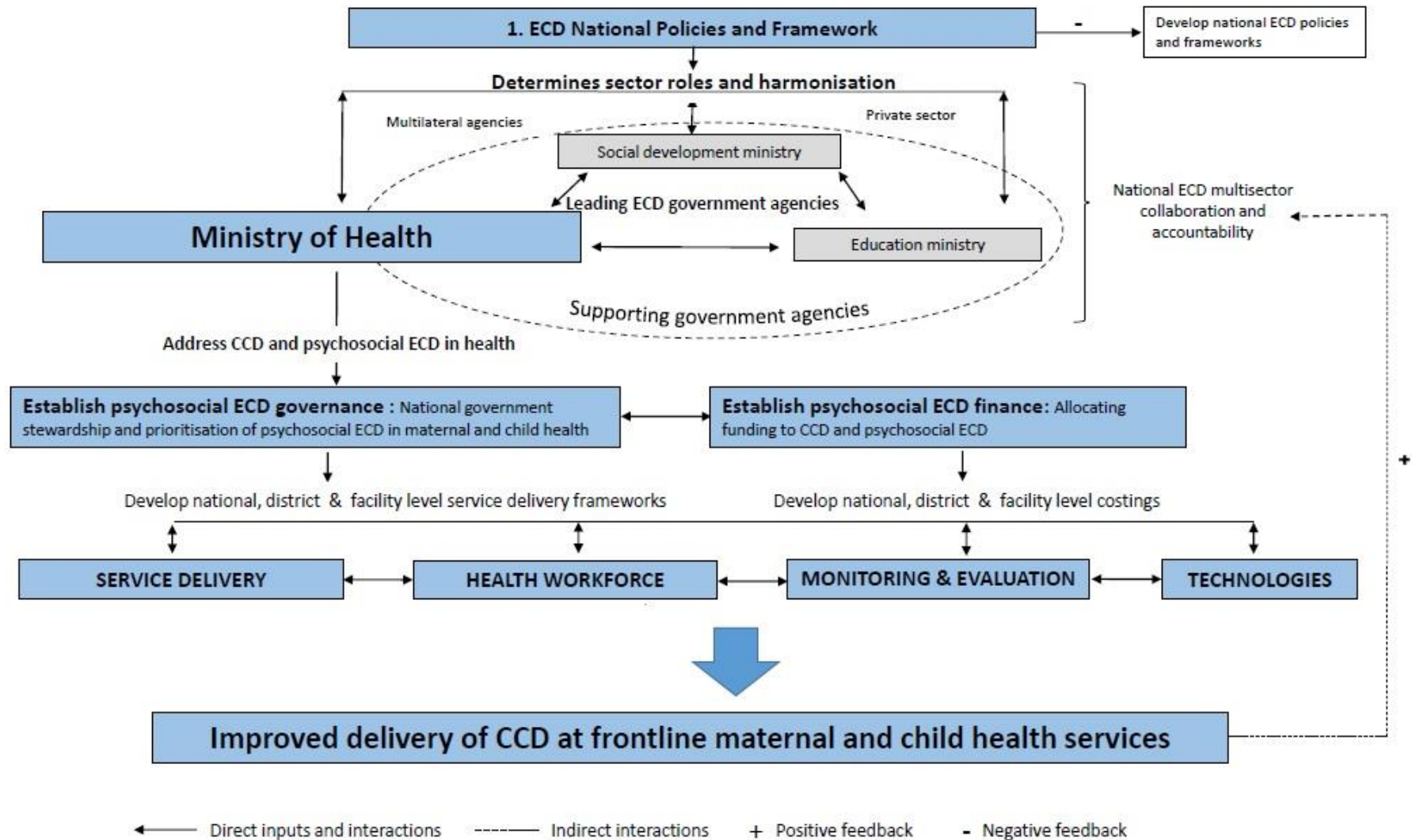
Figure 5-2: A conceptual health systems framework for CCD, planning, implementation and scale up

Having established the governance and finance mechanisms for CCD scale up, these will frame the national, district and facility level service delivery framework and costings. The governance mechanisms should define what service delivery requirements are needed and work together with finance to define the costs required to deliver these services. These in turn will define the specific service delivery, health workforce, M&E and their supporting health information systems, and technology requirements needed to deliver improved CCD at frontline MCH services.

5.6 Conclusion

The conceptual framework combines complex health systems thinking represented in the upper half of the diagram, interfacing with a pragmatic service delivery planning approach to implementation below. The complex health systems dynamics acknowledges the multisectoral context of ECD governance and its influence on how the health system deals with psychosocial ECD. The pragmatic planning for service delivery uses the WHO health systems building blocks framework to identify and map out the basic and underlying health system components and inputs required to scale up CCD in health services, with a particular focus on the governance and service delivery mechanisms. The next chapter applies the conceptual framework to explore how Uganda's RMNCH services can scale up CCD and care for psychosocial ECD in public health.

Chapter 6: Applying the conceptual health systems framework for Care for Child Development scale up in Uganda

6.1 Overview

Chapter five established the importance of using systems thinking to scale up Care for Child Development (CCD) in Low and Middle Income Countries (LMICs) and introduced the Health System building blocks as a framework to assist with developing strategies to strengthen CCD at health services. It integrated these two approaches to develop the conceptual health systems framework for CCD, planning, implementation and scale up. This chapter builds from this, and applies the conceptual framework to Uganda's context, mapping out the basic healthcare system inputs required to scale up CCD in Uganda. Using the available literature, it details what each of the conceptual components entails and then explains how this can be applied in Uganda. Based on the available policy documentation, it specifically looks at how the health governance and health service delivery context and mechanisms will influence scale up by exploring the interactions and relationships between the health inputs and the influence that key actors will have on care for psychosocial ECD in health.

6.2 Background

Research on ECD and psychosocial ECD prioritisation has identified governance and service delivery to be key challenges to the provision of adequate and successful ECD services (58, 87). Shawar and Schiff's (58) research on the global political priority of ECD identifies a number of governance challenges to ECD prioritisation and advancement: poor ECD institutionalisation, intersectoral ECD governance issues, national government fragmentation and poor national-to-local level coordination. The lack of a consistent scope of ECD services, including determining the ECD period and the range of services required to support it, was identified as a service delivery challenge (58). Also Uganda and other LMICs have limited psychosocial ECD public services for children aged 0-3 years. However research shows psychosocial ECD service can be effectively integrated in Maternal and Child (MCH) services – specifically those that target the early years of life – indicating the potential for scale up (66). These challenges and opportunities highlight the importance of effective ECD governance and service delivery planning that defines the role the health sector plays in ECD and psychosocial ECD.

With this in mind, the applied conceptual framework focuses on the governance and service delivery requirements needed to improve and scale up the delivery of CCD and care for psychosocial ECD at frontline health services. It explores how healthcare service delivery can be organised to support CCD and how CCD can become part of the scope of health services that address psychosocial ECD during pregnancy and the very early years of life. In this context, the framework explores how healthcare services can support population-level psychosocial ECD through appropriate health governance, and service delivery responsiveness and resourcing, with particular focus on how the health workforce can be used to deliver psychosocial ECD (151, 165). The health systems thinking analysis primarily focuses on how public health governance and service delivery can improve care for psychosocial ECD, specifically by exploring how healthcare actors, features and factors will guide reforms and influence service delivery change.

6.3   Summary of methods

In this chapter, I apply the CCD health systems conceptual framework to explore how CCD and care for psychosocial ECD can be scaled up at frontline Reproductive, Maternal, Newborn, and Child Health (RMNCH) services in Uganda. The previous chapter used two of the ten steps to systems thinking application, to develop a conceptual framework for CCD scale up in health: step one (multi-stakeholder identification), and step two (identifying system wide implementation requirements) (52). This chapter builds from this and uses step three (conceptualising the effects) to explore how the framework can be applied to Uganda (52). It also uses the six WHO Building Blocks to map and conceptualise the pathways and actions needed for successful integration and implementation of CCD in Uganda's public health system (52). A normative analysis, which moves from describing how interventions improve health to exploring what should happen for them to become routine practice (123, 124), and health systems thinking approach is used to explore the interactions between governance and service delivery environment and the influence this has on CCD scale up.

6.4   Conceptual framework building block application

The chapter presents the enabling factors required to deliver psychosocial ECD services. It focuses on the ECD policy environment and how stewardship, accountability, collaboration, multisectorality and intersectorality can support public healthcare services to scale up CCD and better address psychosocial ECD. It also details the service delivery and health worker requirements. A normative analysis, is used to identify the key inputs and components

required to plan, implement and scale up CCD, focusing on the implications for each health systems building block and how this applies to Uganda.

In response to the ECD governance and integrated service delivery priorities the governance, service delivery and health workforce building blocks are extensively developed to show the enabling factors required to address psychosocial ECD in health (6, 66, 87). Although each of the six WHO building blocks are addressed, given the focus on governance and service delivery, those blocks, together with the health workforce, will be analysed in greater detail. The finance, M&E and health technologies building blocks are discussed in the supportive roles they play in relation to the other building blocks. The building blocks are numbered and addressed in the following order:

1. Governance
2. Service delivery
3. Health workforce
4. Finance
5. Monitoring and Evaluation
6. Heath technologies

The nature of this analysis is normative, outlining what will be required for successful scale up of psychosocial ECD, rather than a description of what has currently been achieved. The findings chapters of this thesis—Chapters seven and eight —will present an analysis of perceptions around governance and integration of psychosocial ECD into health services.

1 Governance

The governance component of conceptual framework acknowledges the importance of work already completed on national ECD polices and frameworks, the sector harmonisation across leading government agencies (Ministries of Health, Education, and Social Development), supporting government agencies, multilateral agencies and the private sector, and the national multisector collaboration and accountability between the different agencies. The section discusses the top part of the conceptual framework that focuses on:

1. The national ECD policies and framework and sector harmonisation and,
2. The MoH formal psychosocial ECD health governance and implementation systems

National level governance and leadership plays an important role in establishing an enabling environment for CCD and care for psychosocial ECD in health, together with key external

government stakeholders and actors. Analysis of this governance context acknowledges the role of policy, leadership and stewardship mechanisms on CCD service delivery, and how interactions and relationships between governance inputs can influence change and scale up (166, 167). Specifically, it recognises how government prioritisation, country context, guiding principles, centrality of psychosocial ECD knowledge and inter-organisational relationships are enabling contributors to CCD scale up (6, 142, 167).

The governance building block for CCD scale up requires leadership, policy and operational reforms that integrate psychosocial ECD and CCD into existing child health activities (6). A crucial part of this task is assessing how national level ECD priority setting, negotiations and resources rationalisation, influence where health resource are directed, what child health concerns are prioritised and how the health sectors address psychosocial ECD (52, 167). The governance arrangements can involves key planning and systems thinking that acknowledges how to create an enabling environment at the national level and understand how to transfer this to subnational systems and public health facilities.

The governance roles in psychosocial ECD are complex, and can be linked to child health policies and strategies that focus on protecting and maintaining child health and wellbeing, as well as policies across, education, social protection, economic wellbeing, agriculture, environment, infrastructure and housing (21, 58, 166). As a result, psychosocial ECD governance will necessarily involve different sectors such as education, social development, justice, infrastructure, environment and the private sector (21, 58, 168). This multisectoral environment is significant to scaling up CCD and psychosocial ECD in health, and understanding how the health sector and their relevant counterparts prioritise psychosocial ECD and how they can work together to address psychosocial ECD.

Political commitment across all levels of government is a crucial part of prioritising psychosocial ECD in health (6, 7, 26). This can involve establishing psychosocial ECD as a priority across the competing ECD agendas. In the first instance, it is important to have National ECD policies and frameworks that involve all relevant government agencies and sectors and reinforces political commitment to ECD (6, 7). These include (6, 7):
1. National ECD frameworks and plans.
2. Specific accountability measures and indicators to delivery psychosocial ECD services across all ministries including health, education and social development.

3. Specific accountability measures and indicators to evaluate psychosocial ECD population outcomes across all ministries including health, education and social development.
4. National M&E indictors and systems to measure psychosocial ECD services and performance at the community, facility and national level.

Once national ECD policies and frameworks are developed, it is important to reinforce psychosocial ECD within the health sector's existing child health priorities. A key part of this can involve understanding: 1) how relevant psychosocial ECD is to the government's child health priorities; 2) how to make psychosocial ECD a government and national child health priority; and 3) how to use the CCD intervention as a tool to guide the population health priorities, strategies and action plans around psychosocial ECD. Once established as a priority, specific leadership initiatives are necessary at the different levels of government and health systems, with particular governance and stewardship activities undertaken within the health sector.

For the health sector, the governance activities will require the MoH to develop formal rules and regulation on CCD and primary healthcare service delivery (166, 167). This can involve specific psychosocial ECD health policy development; sector wide collaborations within the health sector and across other relevant agencies; the generation and use of information; and CCD health system design, regulations and accountability (6, 53, 167). The initial practical considerations for CCD scale up include developing national health policies and strategies for psychosocial ECD; harmonising the health sector activities with the national ECD approach; directing and managing public and private health resources; and supporting a centralised or decentralised system of psychosocial ECD governance and accountability (163, 169).

In the context of CCD scale up, it is important to develop health sector strategies that explicitly acknowledge and promote positive psychosocial ECD, develop CCD implementation frameworks, and performance and monitoring systems that can enable psychosocial ECD to be addressed and monitored at all levels of healthcare facilities. It is also important to develop systems that link psychosocial ECD strategies within existing RMNCH system functions (53), for example:
1. Including psychosocial ECD and CCD in national RMNCH strategies and action plans

2. Ensuring national and institutional level financial budgeting and resources allocation to psychosocial ECD and CCD, and

3. Establishing national and institutional level implementation frameworks, mechanism and indicators for CCD and care for psychosocial ECD in MCH.

Effective action will require national and institutional senior level planning that places psychosocial ECD as an explicit child health and public health priority. At the national level, creating an enabling environment for CCD and psychosocial ECD involves assessing what existing child polices and regulations can be used to enhance and promote care for psychosocial ECD, and using these to develop clear points of entry for CCD interventions. This necessitates reforms to RMNCH services that incorporate CCD practices from pregnancy through to 5 years of age. This can include 1) integrating CCD into existing reproductive, maternal and child health policies and strategies; 2) developing standards and regulations for CCD delivery, and 3) developing national and service level M&E. Where psychosocial ECD becomes a prominent part of child health goals with short (2 years), medium (5 years) and long term (10 years) goals and action plans for practically achieving system wide integration of CCD and improvements to psychosocial ECD.

In the LMIC context, the decentralisation of health systems and the ultimate local level government ownership of services create complications for priority setting and allocation. Translating national level CCD priority into local level outcomes requires engaging district or local level government to prioritise psychosocial, ensuring all their activities are aligned with national agendas, and adequate financial and human resource allocation. Accordingly, the development of the formal governance and implementation system can involve local level government engagement and ownership, which guide and directly engage facility level management and governance systems. While formal national governance systems can assist with collective action and measures (i.e. concrete aims, goals and objectives), it is crucial to account for the informal contextual influences, and ensure that the perceptions and attitudes of governance at lower levels are in line with national government priorities. Developing their knowledge in these areas is key, and engaging them in activities that broker knowledge, expertise and ownership will be essential.

Accordingly, the governance activities can involve promoting positive leadership and stewardship in CCD and psychosocial ECD across all health system entities (166). This has to happen at all levels of the systems from national, to local level and service delivery level.

1.1 Uganda's governance context

Uganda currently has the National Integrated Early Childhood Development (NIECD) policy that is integrating all ECD activities into a single national framework and strategic policy direction. The current lead agency and secretariat for this policy is the Ministry of Gender Labour and Social Development (MoGLSD), supported by the Ministry of Health (MoH) and Ministry of Education and Sports (MoES). The MoH's mandate under the NIECD is *'to ensure the survival and healthy growth of all young children in Uganda'* (98 p.17) through the provision of prenatal, postnatal preventative healthcare service, and access to safe water and environmental sanitation (100). Under the NIECD policy's services for psychosocial ECD, the MoES currently retains responsibility for Early Childhood Care and Education (ECCE) services that ensure appropriate play, stimulation and learning in children aged 0-8 years (98). There are key challenges with achieving this mandate: during the early years, this specifically involves the provision of ECD centres and services, but 80% of these are currently privately owned (98, 100). Compounding these services access issues is the fact that they mainly target children aged 3-5 years, and do not address the needs of children aged 0-3 years, an age group more commonly engaged by MoH services (66, 97, 102). To effectively address psychosocial ECD the NIECD policy will need to include the MoH as the first point of call for ECCE.

In Uganda, health governance is diverse and deals not only with national level leadership but different levels of leadership across, districts, facilities and communities and, harmonising each to ensure common goals are being supported and achieved (96). Extending psychosocial ECD services to public health will require the MoH establishing formal psychosocial ECD health governance and implementation systems that develop formal rules and regulation on CCD and primary healthcare service delivery (166). This can involve integration of key action plans and strategies for CCD and psychosocial ECD into Uganda's National Health Policy, and the RMNCH Strategy, with national and institutional level financial budgeting and resources allocation, implementation frameworks, mechanism and indicators; governance and service delivery accountability and performance measures for national, institutional and organisational psychosocial ECD.

Because of the highly decentralised health system, the formal psychosocial ECD health governance and implementation systems can be developed with local level government engagement.   Local level healthcare systems need to understand why psychosocial ECD is a concern they can address. This needs to ensure they make the relevant means available

to address this concern, and allocate the right resources to support psychosocial ECD. To assist with this, national, district and facility level service delivery frameworks can be established that guide service delivery and facility level governance and management. These would involve:

1. Accountability and performance measures that track national, institutional and organisational psychosocial ECD governance and service delivery.
2. Reproductive maternal and child health primary healthcare implementation plans and indicators for psychosocial ECD and CCD.
3. The incorporation of psychosocial ECD indicators into existing MCH and M&E systems.

2 Service Delivery

The key service delivery themes from the literature review included integrating CCD and care for psychosocial ECD in RMNCH services and delivering through communities and facilities using various health workers (43, 49, 66, 73). This section looks further at elaborating the service delivery requirements based on the key health systems themes identified in the literature review.

The main service delivery themes from the literature review suggest integrating CCD and psychosocial ECD into MCH services and using CHW and doctors to address care for psychosocial ECD at homes, communities or facilities (43, 49, 66, 73). The service delivery building block specifically addresses the provision of integrated services and provider networks, and appropriate infrastructure and logistics to support this (52, 53). For CCD scale up, this can primarily involve ensuring a network of service providers are available to support positive parenting throughout public health services; ensuring services adhere to national and international standards; and providing infrastructure and logistics to support these services (53, 66, 86). These all require service delivery to account for access to functioning health facilities and workers that can address psychosocial ECD and CCD, support responsive and positive parenting, and, provide integrated CCD services (53).

Quality service delivery is characterised by comprehensive services which are accessible and ensure adequate population coverage, continuity of care, quality care, and person centred care through coordinated and efficient systems (170). This encompasses the provision of a range of services at the primary secondary and tertiary level. It requires taking into account the different settings, and planning services so that they are accessible to all

particularly the most vulnerable population, ensuring a continuity of care, that is person centred, coordinated and developing accountability measures for quality care (170). The service delivery building block for CCD scale up focuses on detailing how different types of health facilities can integrate appropriate models of CCD care into routine healthcare and provide continuity of care.

To account for this CCD services, changes to RMNCH primary care practices will need to accommodate CCD and care for psychosocial ECD. This requires exploring the practical and conceptual considerations around service delivery governance; the target population reach; the service delivery mode and setting, the types of CCD intervention, the points of MCH contact and the duration of contact (6, 171). The RMNCH environment already provides a platform to address psychosocial ECD (6, 66, 172), and an important requirement will be understanding how to work within existing healthcare services by identifying key strengths and weakness and using these to plan and implement healthcare changes that address psychosocial ECD and CCD (6, 7). For this reason, the service delivery building block explores how existing RMNCH services can integrate CCD into existing models of care. It systematically discusses opportunities where different types of RMNCH facilities can integrate CCD care into routine healthcare services and how they can provide a continuum of care for psychosocial ECD. It specifically focuses on:

- CCD service delivery governance and leadership
- CCD target population
- Modes of CCD service delivery
- CCD service delivery settings
- Types of CCD intervention
- CCD points of contact
- Duration of CCD contact

2.1 Care for Child Development service delivery governance and leadership

To create an enabling CCD service delivery environment, it is important to have strong service delivery governance and leadership on psychosocial ECD in health (6). Initially this can involve national psychosocial ECD and CCD governance and implementation systems being transferred and applied to the service delivery environment through facility based health practice, frameworks and regulations that specify CCD management, healthcare and health worker expectations and requirements. These can establish clear management,

financing and service delivery strategies on how health facilities can incorporate CCD into RMNCH services.

Once CCD and psychosocial ECD are established as management and service delivery requirements, the next step is to assess how quality CCD healthcare services can be integrated and delivered within current health services capacities, identifying the most appropriate health service to deliver the CCD intervention, and ensuring the relevant resources and tools to delivery CCD (16). Additionally, it will be important to investigate the demand-supply dynamic between the services and the MCH target population in order to understand where the largest user interfaces are located and what will be required to ensure CCD is readily available to them through these services (53).

2.2 Uganda's service delivery context

2.2.1 Care for Child Development target population

The first task will be determining the most relevant target population for CCD, and the service delivery mode, settings, types of intervention, points of contact and number of contacts required to reach this target group. Specifically, this can involve exploring the key RMNCH services mothers and infants use; what adaptations to service delivery are required to accommodate CCD; what will be the most relevant setting for change; and who should deliver CCD.

Determining the target population requires identifying the most appropriate caregiver based on the country context, identifying how to reach them and provide services that are centered and organized around their access to healthcare (52, 53). In the Ugandan RMNCH context, the main target population would be the mother-child dyad who access RMNCH services. The following sections explore where, when and how often CCD can be provided to the mother-child dyad by presenting the modes and settings for CCD service delivery, and what interventions, points of contact and duration of contacts are feasible.

2.2.2 Modes of Care for Child Development service delivery

To optimise contact, CCD services can be provided across the continuum of care, and include primary, secondary and tertiary level points of care. This ensures CCD is being addressed at all points of reproductive, maternal and child healthcare contact using health promotion activities, community-based programs and clinical care interventions. Based on existing Ugandan RMNCH services, the modes of CCD service delivery can include:

Healthcare level	Types of healthcare	Key CCD healthcare activities
Primary level	CCD health promotion CCD	• Mass media CCD health promotion • Group information sessions during MCH outreach and all MCH clinical settings (e.g. waiting rooms)
	CCD clinical care	• CCD health promotion during one-on-one individual reproductive, maternal and child health checks • Psychosocial milestone development assessment and tracking during routine MCH checks
Secondary level	CCD clinical care	• Referrals to ECD specialist for children facing major development delays or disabilities
Tertiary level	CCD specialist clinical care and intervention.	• Neurological interventions for extreme development delays or disabilities

2.2.3   Care for Child Development service delivery settings

Once the modes of CCD service delivery are established, the setting for CCD service delivery can involve examining the most relevant RMNCH services where CCD can be positioned. **Figure 6-1** provides an overview of the key interventions targeting young children and their families (172). The settings for CCD service delivery can span key nutrition and health interventions, including all routine RMNCH services (6). The continuum of care for CCD can start with using reproductive health services—specifically family planning and antenatal care (ANC) services—to introduce mothers and fathers to the concepts of positive parenting (7). In Uganda, CCD service delivery can be incorporated across a continuum of care from family planning services, to ANC, postnatal care (PNC), expanded immunisation programme, child growth monitoring services and IMCI services (7, 172, 173). As shown in the CCD trials (refer to section 2.3.4), home visits, community and facility based RMNCH services can provide further interactive sessions on positive caregiving and child development. In Uganda, these can provide opportunities to discuss CCD with pregnant women, mothers and fathers during Village Health Team (VHT) home visits, family planning sessions, growth and development services, immunisation and routine MCH services.
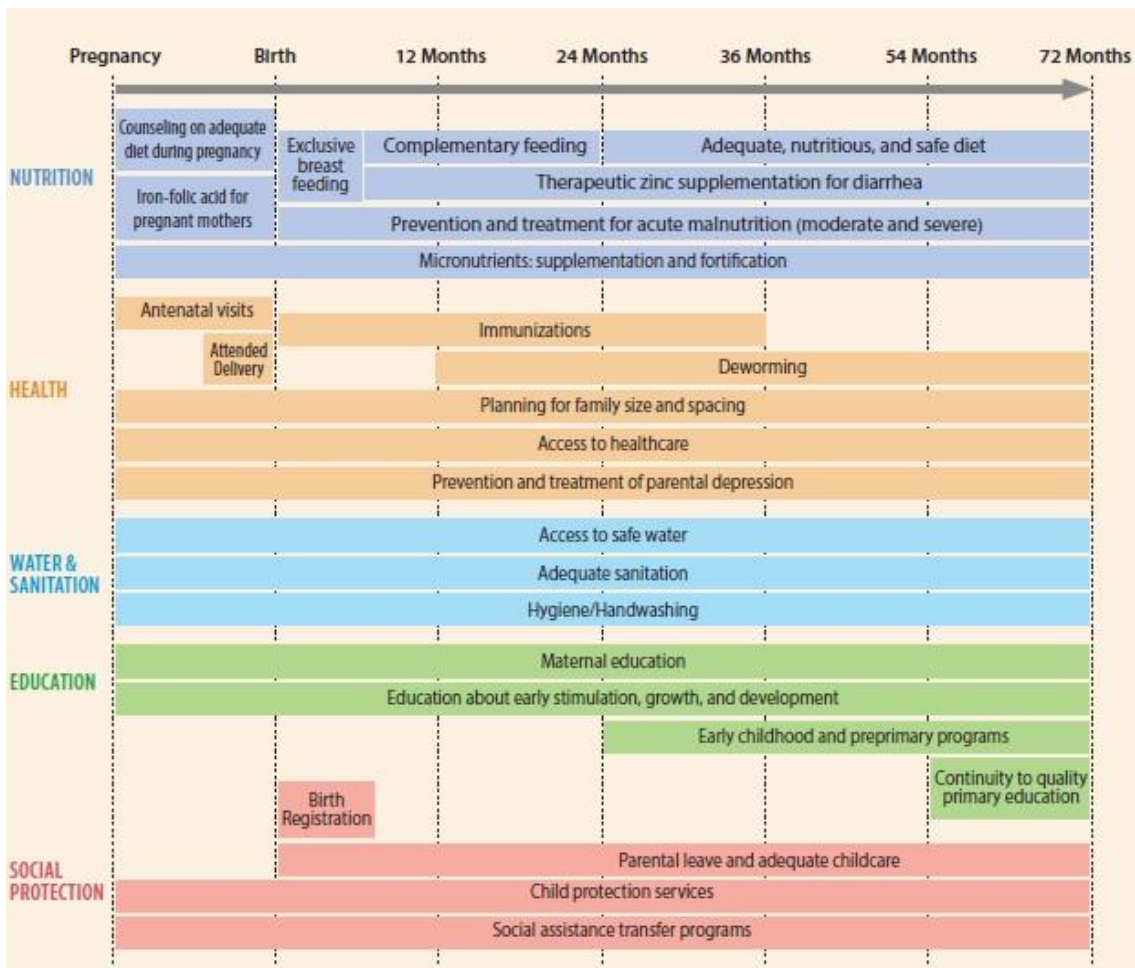
Figure 6-1: Key interventions for young children and their families (172 p 3)

ECD research and programs stress the importance of targeting mothers and fathers during early pregnancy to enhance effective outcomes, ensuring caregivers understand the development potential of the foetus, and to promote early behaviour change (36). In Uganda CCD promotion is proposed to begin at family planning services and ANC services, where mothers and fathers are receiving reproductive health promotion services specifically relating to healthy pregnancies and child rearing. These services can provide mothers with initial knowledge and skills on CCD and children's psychosocial development capacity during pregnancy, encouraging mothers to begin talking to their baby during pregnancy and emphasising the importance of creating a bond with their unborn baby (44). Once the baby is born, PNC services and MCH home visits can be used to make mothers aware of positive caregiving and promote their practice. The PNC and home visits can incorporate newborn CCD health promotion and healthcare consultations alongside other routine MCH promotion activities that focus on promoting healthy child nutrition, ensuring timely child immunisation, sanitation, and preventing common illnesses (66, 172, 174). This should be continued at facility based MCH services where age appropriate psychosocial ECD is assessed,

monitored and addressed alongside other child health check-up, treatments or clinical services. This can include attaching CCD to nutrition, immunisation, growth monitoring and sick child services (7, 43, 66). During contact at these settings the health workers can ensure they are tracking the age appropriate psychosocial development milestones, providing caregiver with age appropriate knowledge and skills to promote psychosocial ECD at home and referring any concerns to specialist services. Across each of modes of service delivery, CCD can become a distinct part of MCH care provision where health workers delivery age appropriate health promotion and care for psychosocial ECD (7). **Figure 6-2** illustrates how the continuum of care can be achieved in Uganda.

Early Childhood Development timeframe

	Pregnancy	Neonatal, infancy and toddlerhood 0-3 years
Community based CCD service delivery setting	Family planning session	MCH home visits Family planning session
Facility/clinical based CCD service delivery setting	Antenatal care services	Postnatal care services Immunisation services Child growth monitoring services Sick child healthcare services

Figure 6-2: Service delivery settings to include CCD

2.2.4 Types of Care for Child Development intervention

The types of CCD intervention corresponds with CCD service delivery modes and settings and focus on the mechanism to achieve behavioural change among individuals and communities. These can occur across the primary secondary and tertiary levels of healthcare and can be grouped into: 1) health promotion activities; and 2) clinical interventions (43, 66) . Similar to other programs, the CCD interventions can use household, facility group or community settings to promote CCD and provide counselling, at home visits or at clinics (16, 43, 66). The types of interventions to consider include: educational interventions; community mobilisation and participation activities; interpersonal communication and counselling services; and facility based clinical care (43, 171).

Health promotion: Education and community mobilisation should focus on engagement intervention that encourages mothers and their supportive communities to provide positive CCD in a group setting (37, 171). The interpersonal communications can involve one-on-

134

one counselling that encourages behaviour change and engagement in positive parenting. These can each involve providing mothers and caregivers with general knowledge, information and skills on CCD and positive caregiving practices, as demonstrated in the China, Turkey, Pakistan (PEDs) and Malawi CCD trials (43, 49, 66, 73). In Uganda, these can be community or facility based and can use mass media and Information Education and Communication (IEC) materials, community programs or outreach, and facility based information session to deliver CCD. Interpersonal communication can be provided through MCH home visits and facility based counselling to promote CCD (16, 66, 76).

Clinical interventions: The clinical care interventions can primarily focus on providing age specific CCD healthcare service that monitors the psychosocial ECD milestones, and provides relevant healthcare advice or treatment during routine MCH care services (43). This can be individually based and require a combination of health promotion and behaviour change practices as health workers counsel mothers on positive parenting practices for psychosocial ECD and track psychosocial development milestone (43, 66, 73). **Table 6-1** provides a summary of the types of CCD interventions to consider for Uganda and their context.

Table 6-1: The types of CCD interventions and their context (171)

Types of healthcare	Intervention	Setting	Context
Health promotion	Educational activities	Mass media IEC materials	• General CCD information and communication materials using audio-visual CCD materials
	Community mobilisation and participation activities	MCH outreach programs Facility based information session	Health worker facilitated group information session • Community engagement initiatives • Facility based CCD group counselling
	Interpersonal communication and counselling services	MCH home visit Facility based counselling	• One-on-one CCD counselling • One-on-one psychosocial ECD milestone progress
Clinical care	CCD healthcare service provision	Facility based routine MCH clinical care	• One-on-one CCD counselling • One on one psychosocial ECD clinical care and monitoring.

2.2.5 Care for Child Development points of contact

Having established the types, setting and interventions for CCD it will be important to plan the continuity of these services and define systematic points of contact across RMNCH. The literature on positive care for psychosocial ECD outcomes emphasises the importance of continuous contact with the parent-child dyad from pregnancy until toddlerhood (16, 78, 81). Positive parenting programs in a LMIC health context done by Yousafzai et al. (37) Lucas, et al. (16) Gardner et al. (78) Nahar et al. (82), Singla and Kumbakumba (85) indicate a range from eight to 50 health worker supervised play and stimulation sessions across the pregnancy, neonatal, infancy and toddlerhood stages to occur weekly, fortnightly or monthly. Parenting programs that have used one type of MCH service (e.g. home visits, community programs or medical consultations) to deliver supervised play and stimulation have described the limited number of visits as a challenge to achieving best practice recommendations of weekly (or fortnightly) visits (37, 175). Recommendations from these studies have emphasised the importance of integrating supervised play and stimulation visits into comprehensive and multiple MCH services. To account for these challenges and to optimise as many points of contact as possible, a combination of reproductive maternal and child healthcare services can be used to deliver CCD (7).

To feasibly achieve the eight to 50 health worker supervised visits (evident in the research studies) in Uganda, points of contact for CCD can include ANC, PNC and immunisation services. Uganda currently follows an earlier WHO recommendation that encourages at least four ANC visits during the first, second, and third trimester of pregnancy, and in the postnatal period (176, 177). This can provide an opportunity for health workers to address CCD during 10 – 20; 20 – 28; 28 – 36 and >36 weeks of pregnancy (103, 113). The PNC services provide continuing maternal and neonatal CCD support at 24 hours, three days, seven days and six weeks after birth (178). Continuing from this, as a minimum, CCD can be delivered alongside routine child immunisation, and can be included in all immunisation related health services, along with growth monitoring and developmental assessment. If this is achieved, the child immunisation schedule will provide points of contact at birth, 6 weeks, 10 weeks, 14 weeks, 9 months, 12 months and 15 months of age (114, 179), ensuring CCD is provided approximately once every week during the first four weeks of life, and then at fortnightly, monthly, bimonthly or quarterly time points thereafter. During each of these, immunisation schedules CCD and age related psychosocial ECD milestone development can be assessed by the clinicians or health workers providing the immunisation (either nurses, doctors or health worker assistants). **Table 6-2** provides a summary of the points of

contact across ANC, PNC and immunisation services and corresponding CCD practice attached to each for Uganda.

Table 6-2: Potential points of contact for CCD in Uganda (45, 176, 178-180)

MCH service	Points of MCH contact	CCD practices
Antenatal care contacts (four visits)	10-20 weeks pregnant	CCD promotion - general awareness and knowledge
	20-28 weeks pregnant	
	28-36 weeks pregnant	CCD promotion - positive intrauterine psychosocial development
	>36 weeks pregnant	
Postnatal care visits (four visits)	24 hours care after pregnancy	CCD newborn practices
	3 days (48–72 hours) after pregnancy	CCD 1 week- 6 months practices
	7–14 days after birth	
	6 weeks after birth.	
Immunisations (six points of contact)	6 weeks old	
	10 weeks old	
	14 weeks old	
	9 months old	CCD 9 - 12 months practices
	12 months old	CCD 12 months – 2 years practice
	15 months old	

The child growth standard checks can also be used as cues for assessing CCD, tracked alongside immunisation services (66). As health workers monitor the length, height, weight, body mass index for age in the MCH booklets (refer to **Figure 6-3**) or HIS, they can also have the chance to assess simple psychosocial development milestones such as the number of words spoken, socialisation cues and problem solving capacity which has been an integrated approached used by previous research studies (66). They can also assess the caregiving practices by asking questions on the books read to the child, the toys available and play done with the child and advise on positive CCD practices accordingly (49) (refer to M&E section 6.4.6) . Similar to existing programs homemade toys or playing with household items e.g. cooking pots, plastic bottles, containers, can be used for play demonstrations at home and clinical settings (16, 49).

GROWTH CHART

Weight for age: GIRL (Birth to 2 years)

IMPORTANT: Give your baby only breast milk for
the first 6 months
Add foods and other liquids only at 6 months
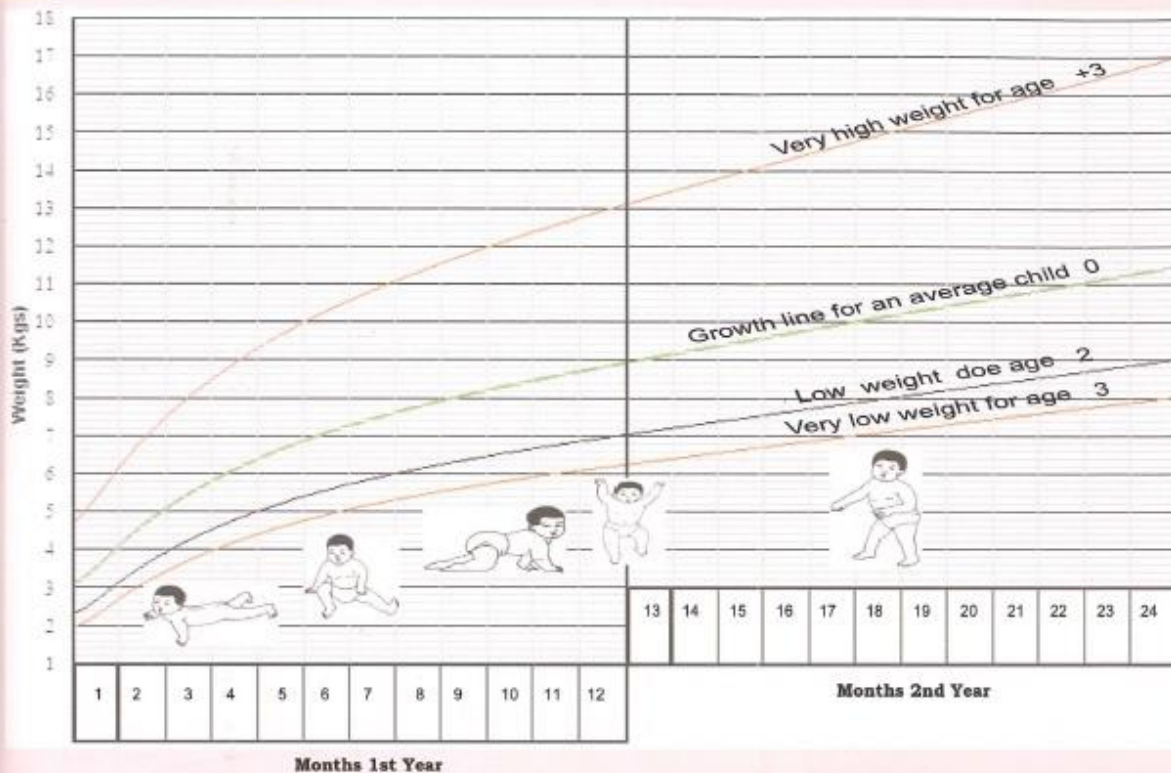
Weight the child during each visit, properly record on the card and interpret to the mother or caretaker

Figure 6-3: Example of child growth chart and potential CCD reference points (104 p 17)

2.2.6 Duration of Care for Child Development contact

Having established where and how CCD can be delivered, the duration of contact can be navigated and should account for time and setting feasibility (16). A review of the ECD parenting interventions on play, stimulation and positive psychosocial ECD outcomes in LMIC health settings, identified the duration of health worker contact with mother-child dyad ranged from 15-90 minutes depending on the country, location, infant's health, nature of services, and health worker (81-84). Additionally, CCD visits during trials and pilot studies lasted 30-60 minutes per a consultation (with some as little as 10 minutes) (16, 49, 66, 73).

The service delivery planning for scale up will need to account for appropriate duration times for CCD contact. This will depend on:

- The nature of the consultation (whether it's, health promotion, information or counselling)
- Where it is being provided (at home, community or clinical setting) and
- When it is being provided (the age of the infant).

For example, home visits or community outreach programs can provide health workers the opportunity to have longer contact sessions where they go through the infant's development, the parenting skills, the caregivers concerns and the child's psychosocial ECD milestones (66). These can take an average of 30-60 minutes (49, 66, 73). Whereas the provision of CCD care in some clinical settings can be constrained by limited health worker time and capacity. For example in Uganda, providing CCD during routine immunisation may only allow for 15 minutes or much less to assess the milestones and advise the caregiver, depending on patient numbers attending the immunisation services (refer to photos below of immunisations services). During these circumstances, supplementary health promotion activities can take place (e.g. IEC materials to promote CCD in waiting rooms, having CCD information group session while mothers wait for immunisation services). Additionally, task shifting may be appropriate with support staff (e.g. nurse assistants or clinical administrators or trainees) providing group or one-on-one sessions with the mother-child dyad as they wait for immunisations services. In the current service delivery contexts, these proposed additional time allocations appear difficult to accommodate, as key informants have advised. Although integrated programs have shown feasibility to address psychosocial ECD in 15 minutes during other routine MCH (83). **Table 6-3** provides a mixture of proposed contact times across MCH services in Uganda.

Table 6-3: Duration of CCD contacts during MCH services in Uganda

MCH service	Proposed duration of CCD contact	Integrated with other RMNCH care or exclusive CCD
Antenatal care	15 minutes	CCD integrated with other RMNCH
Postnatal care	15 minutes	CCD integrated with other MCH
MCH Home visits	30-60 minutes	CCD integrated with other MCH
Immunisation services	10 minutes	CCD integrated with other MCH
Routine MCH care services	10-15 minutes	CCD integrated with other MCH
MCH outreach	30-60 minutes	CCD integrated with other MCH
Facility based health information sessions	30-60 minutes	Exclusive CCD delivered in health promotion setting
Community based health information sessions	30-60 minutes	Exclusive CCD delivered in health promotion setting

Providing CCD during ANC contacts, PNC visits and immunisation schedule can enable minimum points of CCD contact during the scheduled MCH visit. For Uganda, if these points of contact are planned, resourced and supported adequately, there are four points of contact where CCD can be promoted during pregnancy, and the mother-child dyad can receive at least 10 points of contact where CCD and psychosocial ECD is addressed during neonatal period, infancy and toddlerhood (0-3 years). This reaches the evidence based minimum practice of eight supervised visits (78) and it provides a continuum of CCD care from pregnancy to toddlerhood which is an important priority raised in the current ECD literature (6, 7) . These can be further supplemented with MCH home visits and facility and community health information sessions where a mother can receive health promotion on CCD and psychosocial ECD. **Figure 6-4** provides an illustration of how the modes of health care, service delivery settings, points of contact and duration of contact can correspond with each other during pregnancy, neonatal, infancy and toddlerhood phases.
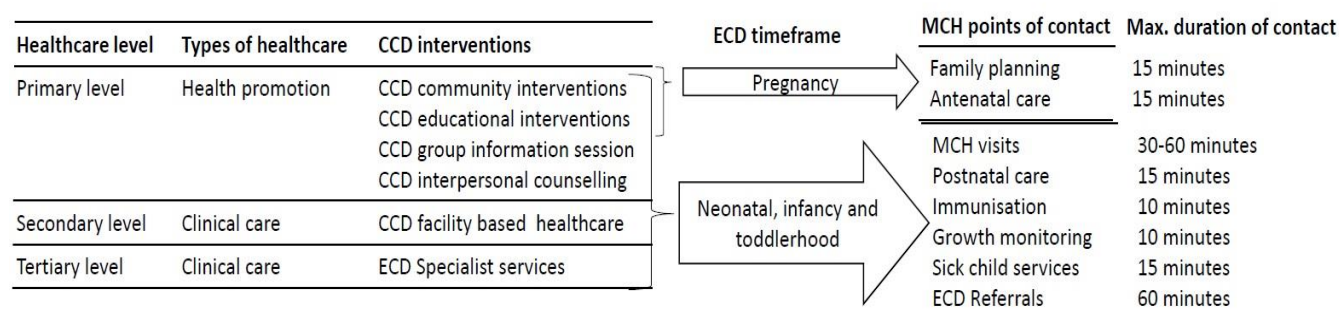
Figure 6-4: Service delivery inputs for CCD scale up in Uganda

2.2.7 Ugandan illustration of Care for Child Development contact

The following pictures illustrate how CCD services could be integrated in Uganda's rural, semi-rural and urban immunisation services, based on health worker workload.

Photo 6-1: Immunisation clinic at rural health centre

Immunisation services in rural health centre: In the picture above a nurse is providing immunisation services to infants. CCD points of contact can include IEC materials and 15-20 minute individual counselling sessions between nurse and mother-child dyad where positive parenting is promoted and psychosocial ECD milestones are tracked and recorded as the mother-child dyad receives immunisation services. Photo taken by Nakazinga Ndugwa on 4th August 2016.

Photo 6-2: Immunisation clinic in semi-urban health centre

Immunisation clinic in semi-urban health centre: In the picture above a nursing assistant checks the mother and child immunisation records before they see the nurse for immunisation. CCD points of contact can include IEC materials and 15 minute individual counselling sessions between nurse assistant and mother-child dyad as she attends to them before getting their immunisations. Using a standardised interview from existing M&E tools (refer to section 5) psychosocial ECD milestones can be tracked and recorded by nurse alongside the delivery recording and tracking of immunisations. Photo taken by Nakazinga Ndugwa on 27th September 2016.

Photo 6-3: Immunisation services in urban hospital

Immunisation services in urban hospital: In the picture above, mothers wait for immunisation service and are attended to by nursing assistants who check their child health records before they see the nurse. CCD points of contact can include IEC materials and CCD group information sessions between health workers and mothers as they wait to be seen by nurse for immunisation services. Using a standardised interview from existing M&E tools (refer to section 5) psychosocial ECD milestones can be tracked and recorded by supporting health workers while they wait to receive immunisation services. Photo taken by Nakazinga Ndugwa on 3rd October 2016.

3 Health workforce

At the core of any functioning health system are the people that run the system and perform the services. This requires having the right people with the right skills at the right place (53, 181). A good performing health workforce is one that has competent, available and

responsive staff, and also has the ability to produce these people when required (53). A health systems' workforce consists of management staff, service providers and support workers, in both the public and private sectors (53). It also encompasses paid and unpaid professional workers and lay workers thus creating a complex network of individuals who work across varying settings (53, 181).The variety and variations of health workforce requires systems in place that can effectively align the health workforce supply with health demand and priorities. For this reason, understanding how to strengthen health workforce component requires developing strategies that can appropriately utilise the existing health workforce skill mix; ensuring sufficient funding to support health workers across their jobs; ensuring the accessibility and availability of training and qualification resources and maintaining high health worker retention through advocacy and support mechanisms (53, 181, 182). For CCD scale up, this will require identifying key health workers to effectively manage, implement and delivery CCD; exploring how to strengthen their capacity and skills in CCD service delivery; and providing them with CCD resources and supportive work environment (49, 66, 73).

Studies how shown CCD has been effective delivered using existing health workers (16, 43, 66). Accordingly the CCD scale up health workforce component, requires examining the types of clinical and non-clinical MCH workers available to deliver CCD, what their roles and capacities will involve and where and when they will deliver CCD. This is vital part of mapping what CCD healthcare services are being provided, and understanding what upskilling will be required to improve or enable CCD to be delivered by existing frontline health workers. The health worker type, skills mix and location and how each can integrate CCD practice into their current RMNCH skill set is a critical part of the health systems scale up and planning (6). This can involve exploring what health worker can adequately assume CCD roles, how they access the population and what point of contact is necessary to ensure relevant service provision. The LMIC studies on CCD and care for psychosocial ECD have mainly used CHW and doctors to counsel caregivers on psychosocial ECD (43, 66). This section explores how Uganda's existing frontline RMNCH workers can be used to deliver CCD.

For Uganda, it is important to consider which health workers will have regular contact with a mother-child dyad, at what point they deal with mothers and their children, and how each can build from each other's point of contact to ensure continuity of CCD care. It is also important to consider how the roles, skills and capacity of the clinical and non-clinical health

workforce can provide comprehensive and quality CCD care. Additionally accounting for the existing health worker load and understand how additional CCD roles can be manage to avoid (where possible) additional burdens is an important part to CCD scale up. It is also important to anticipate the unintended consequences that additional CCD roles would have on the current MCH care prerequisites and ensure mechanisms are in place so the quality of MCH care is not compromised. From a service delivery perspective, the health workforce analysis and planning for CCD scale up can involve identifying:

Health worker type	• Which health workers should deliver CCD and why?
Health worker mix	• What health worker mix can provide a continuum of care for CCD?
Health worker responsibilities	• Clear identification of the health worker's CCD role and responsibilities
Health worker points of contact	• The healthcare schedule for CCD contact
Integrating CCD into their current RMNCH responsibilities	• Including CCD responsibilities into existing MCH roles • Managing health worker workloads
Health worker training/supervision	• CCD upskilling or qualification • CCD supervision

3.1   Uganda Health workforce context

3.1.1 Health worker type

To effectively scale up CCD requires an enabling environment that includes support from non-clinical and clinical senior management (governance mechanisms) and making CCD a service delivery priority (6). To achieve this it is proposed that the national CCD governance mechanisms is translated to facility level service delivery (6), and, health service management staff are responsible for creating mechanisms and resources for service providers to delivery CCD. At the service delivery level, health workers who regularly deal with mothers and children are the most suitable people to provide CCD and care for psychosocial ECD. In this scenario, RMNCH workers would be best suited to deliver CCD (7, 16). In Uganda, this can consist of formal and informal health workers that include:

- Village Heath Teams (VHTs)
- Midwives
- Nurses
- Doctors/Paediatricians and
- ECD specialist[13]

---

[13]Education or social workers with technical expertise in ECD

3.1.2 Health worker mix

For Uganda it's proposed that, VHTs can be the primary point of contact for CCD health promotion, community based activities and home visits. Whereas midwives, nurses, doctors, paediatricians and ECD specialist can be more involved with facility based CCD care. It will be important for the CCD care to complement each other and provide continuum of care where VHTs are used to promote CCD at community, midwives discuss perinatal CCD and psychosocial ECD with caregivers and nurses, doctors, paediatricians and ECD specialist provide age appropriate CCD advice and evaluation during routine MCH care services. This can enable a systematised and progressive approach to CCD care and supports a continuum of care that is an important priority discussed in the ECD scale up literature (6, 7).

3.1.3 Health worker responsibilities

As per the CCD studies and evidence (43, 66, 73), Uganda's health worker responsibilities can include:

Role	CCD Care	Key activities
VHT	CCD health promotion	• Observation of care for psychosocial ECD in home or community setting • Observation of home environment • Counselling mothers and community on positive age appropriate CCD and caregiving • Demonstration of play and communication activities
Midwife	CCD health promotion	• Promoting foetal psychosocial development and capacity • Encouraging mothers to talk to foetus during pregnancy • Counselling mothers on concepts of positive caregiving for newborns
Nurse	CCD health promotion CCD clinical care	• Observe care for psychosocial ECD • Systematic examination of child's psychosocial ECD milestones • Monitor psychosocial ECD milestones • Counsel mothers on age appropriate CCD • Demonstrate age appropriate play and communication activities • Observe psychosocial development delays and referrals
Doctor	CCD health promotion CCD clinical care	• Observe care for psychosocial ECD • Systematic examination of child's psychosocial ECD milestones • Monitor psychosocial ECD milestones

Role	CCD Care	Key activities
		• Counsel mothers on age appropriate CCD • Demonstrate age appropriate play and communication activities • Evaluate psychosocial development delays and referrals
ECD specialist	Psychosocial ECD clinical care	• Provide clinical care and interventions for psychosocial ECD delays or conditions

3.1.4 Health worker points of contact

As discussed in the service delivery section of this chapter, delivering CCD can involve health workers providing CCD care at different points of time during routine RMNCH. In Uganda, at the community level, VHT and nurses can incorporate CCD into existing reproductive, maternal and child health community activities. VHTS can include CCD into their outreach home visits and group information sessions. This would primarily include discussing CCD during group information sessions and MCH home visit that focus on sanitation, promoting healthy nutrition, ensuring timely child immunisation and preventing common illnesses (183, 184). These services can be further supported by nurses or other clinician conducting health outreach programs in family planning, ANC, PNC, immunisation, and child grow monitoring. For each of these scenarios you can either have a 1: group or a 1:1 health worker and mother ratio as per the CCD trials and evidence presented in section 2.3.4. The 1: group health worker ratio will be during health information session and community programs where 1 health worker leads an informative sessions to caregivers (49, 66) . The 1: 1 ratio will be during MCH home visits and medical healthcare services where health workers provide individual counselling to mothers on key RMNCH areas such as healthy nutrition, preventing common childhood illness and child growth monitoring (43, 66).

In the clinical setting, midwives, nurses and doctors can include CCD and psychosocial ECD assessment into their routine RMNCH care services. This can involve incorporating it into routine MCH care services that include, ANC services, PNC services, child growth monitoring services, clinical/sick child healthcare services, and hospital wards (7). The 1:1 health worker and mother ratio will continue when mothers receive those services from midwives, nurses or doctors. Each of these health workers can attend to the mother and child during routine check-ups and can address CCD as part of their routine care (i.e. reproductive health, family planning, ANC, immunisation and clinical services). This integrated approach has been proven to be feasible in studies done by Ertem et al (43) Yousafzi et al (66) and Gladstone et al. (49).

Incorporating CCD into existing community health programmes will mean that CCD can be integrated into VHT visits as they provide basic community primary care and health promotion activities. This can then extend to midwives, nurses and doctors as they provide ANC, PNC, immunisation, growth monitoring and other routine child health services. **Table 6-4** summarise the health worker CCD intervention, points of contact, and the corresponding MCH service integration.

Table 6-4: Health worker points of contact and CCD integration

Health worker	CCD Intervention	MCH services	Duration
Midwife	CCD health promotion	Family planning	15 minutes
		ANC	15 minutes
VHT	CCD community interventions CCD educational interventions CCD group information session	MCH visits	30-60 minutes
Nurse Doctor	CCD interpersonal counselling CCD facility based healthcare	PNC	15 minutes
		Immunisation	10 minutes
		Growth monitoring	10 minutes
		Sick child services	15 minutes
ECD specialist	ECD Specialist services	ECD Referrals	60 minutes

3.1.5 Health worker training

The health worker training will primarily involve training in new models of care (6). When introducing new CCD healthcare practices relevant training and upskilling is necessary (6). This will primarily need to rethink traditional models of RMNCH medical training to incorporate CCD into current and future health worker training circular (6). For existing health workers, this will need to acknowledge the current CCD health worker knowledge and capacity, any gaps and ways to address these. Considerations that come to mind are:

- How to facilitate training through relevant mechanisms (e.g. structured curriculum, train the trainer workshops or CCD upskilling courses) (6, 74)
- Health worker access to materials and resources to support CCD professional development and skills (49)
- Ongoing health worker supervision (6)
- Ensuring an enabling work environment to train and deliver CCD, and
- Managing health worker CCD perceptions, acceptability and concerns

There are various approaches that can be used to train health workers in CCD. Facility based training can be used to upskill health workers. Studies by Walker et al. (34) and Singla and Kumbakumba (67) indicate it takes approximately two to four weeks to effectively train health worker as educators on positive parenting skills and psychosocial ECD. Additionally Yousafzai's et al (66) study on CCD effectiveness in Pakistan took three days to train community health worker in CCD which was enough to help them integrate it into existing MCH services. These short timeframes make it feasible to upskill health workers within a reasonable timeframe. However considerations of cost and impact on health worker time are necessary. CCD train the trainer workshop have been used as a mechanism to upskill health workers who then go out and train their colleagues (138). Trainer the trainer workshop can be used to upskill CCD champions who then go out and train their colleagues. In Uganda, CCD has also been integrated in IMCI upskilling training providing a potential avenue for structured curriculum training and initial health worker upskill. A key informant interviews also indicated CCD is being included in IMCI training and computer assisted IMCI training models. These are promising developments that will require further stewardship and funding to apply across all RMNCH workers.

4 Finance

The finance health systems building block involves exploring ways to ensure universal coverage of health services, and protecting the population from financial catastrophes linked to health (53, 185). For CCD scale up this would mainly involve exploring how to fund national CCD services, through existing or new primary healthcare resources (6). In LMICs ECD faces inadequate funding and budget constraints (6). Additionally, the funding of public sector health services faces significant budget challenges, often compounded by inadequate funding commitments, inefficient funding allocations and misappropriation of public funds (186). This has resulted in financial reforms that stress the importance of cost effectiveness, transparency and accountability. Furthermore, efforts to ensure adequate health financing have focused on raising additional internal and external funds for key health priorities and establishing social protection systems that ensure poor and vulnerable people can access key services (53).

When introducing CCD into the public sector it is crucial to acknowledge the additional system level demands on staffing, infrastructure and facility requirements and logistics[14] and

---

[14] For example: organisation, planning, management, arrangement, administration, direction, orchestration, coordination, execution

ensure relevant funding can be sourced to support these additional costs (49). Costings will need to accurately estimate the additional funds required to incorporate CCD into routine RNMCH services, and the recurring budget allocations to enable sustainability, but also demonstrate the cost (and other) benefits of introducing these into routine reproductive maternal and child healthcare (6). Advocates must be able to show benefits across public health systems and population health outcomes for them to become a budget priority (6).

For countries faced with budget constraints it is important to examine how new CCD and care for psychosocial ECD services can be accommodated and sustained within current RMNCH funding in efforts to avoid requiring additional funding that may not be available. In this scenario, it is important to examine the existing national, district and facility level MCH financial arrangement and understand whether existing pooled funding can accommodate CCD scale up, or whether new funding needs to be sourced. This can involve exploring the national and local level budget requirements for rolling out the intervention, as well as understanding the staff, infrastructure and operational support systems costs needed to enable and assist health professionals to deliver CCD at frontline health services. To achieve this will require program and systems level costings that can accurately estimate the additional costs required to delivery CCD at frontline health services, and also evaluate how national and district level governments can work together to support the scale up and roll out of CCD (6). For example a psychosocial ECD study in Jamaica estimated the cost of their intervention to be USD 70 per child for an 8-week period intervention using CHW and home visits, suggesting it a low cost early intervention (78). Also Richter et al. (6) estimated an additional investment of USD 0.20 per capita is needed for low income countries to expand CCD and WHO's Thinking Healthy package across health system and achieve universal coverage. These types of implementation costing estimates will need to be clearly articulated especially in light of the investment, economic and national returns.

The financing component for CCD scale up can begin with an evaluation of the national RNMCH funding allocation to examine what internal and external funding can be allocated to CCD scale up. Accordingly national cost estimations should be used to provide clear indication on the funding required to support CCD scale up. This should account for nationwide service delivery, CCD health workforce upskilling and training cost, national development and distribution of CCD package and service delivery resources (e.g. toys, promotional material) cost, integrating CCD indicators into national HIS costings, developing national MCH indictors and MCH records and IEC costs (6, 49).

Health service planning at the facilities level will also need to adequately account for the operational cost to delivery CCD. A cost effective and benefit analysis can account for effective funding allocation at the facility level, by estimating the service delivery costs at institutional and facility level. Cost estimations of CCD scale up by Richter et al (6) estimate primary healthcare service delivery cost to account for 83% of scale up cost, with training accounting for 15% and communication accounting for 2% of cost. At first glance, the frontline health service delivery CCD cost would primarily be associated with health workforce training and supervision, the CCD package resource cost and CCD M&E cost. However, further considerations on the staff time allocation and cost implications of CCD inclusion into clinical time will be a key part of understanding the financial implications of introducing CCD (49). Additional cost considerations on logistic and facility requirement are necessary.

4.1   Uganda's national Early Childhood Development finance context

Uganda's national government prioritisation of psychosocial ECD and CCD scale up will ultimately guide and determine what funds are available for CCD scale up, though currently this is being framed as budget neutral. The National Development Plan II and programme based budgeting for ECD anticipates to increase ECCD[15] budget from 1.7 billion Uganda Shillings in 2013/2014 to 5.3 billion Uganda shillings in 2019/2020 (100, 187). While this is a promising increase, the majority of this funding is allocated to education, which is responsible for ECCD and psychosocial ECD. To scale up care for psychosocial ECD in health, additional funding allocations that account for incorporating CCD into public healthcare services are important. It is proposed that if psychosocial ECD is prioritised by the national government, and nationwide accountability is enforced on public health, more realistic financing and funding mechanisms will be put in place to support the scale up of CCD. In anticipation of this scenario, the MoH can be responsible for developing cost estimations for nationwide implementation that determines service delivery, health worker training, Monitoring and Evaluation (M&E) and CCD material costs. These costing can then be included in Uganda's National Finance and Planning Authority Health Sector Budget framework to ensure the allocation of appropriate government funding and expenditure for health. Further research which explores the national costing and financial implications of CCD scale up in depth is required.

---

[15] Which covers psychosocial ECD activities

5 Monitoring and Evaluation

To assess the impact of public health interventions to population health outcomes, functioning HIS are vital to generating and providing key knowledge on population health trends and outcomes. This requires national and facility level information systems that are able to produce, analyse and disseminate public health data that is timely and reliable (53). It is important to have appropriate knowledge management systems that can: generate data on population health status and determinants; monitor healthcare system performance; detect key public health concerns; generate relevant health information; and promote health knowledge healthcare availability and application (53). Accordingly for CCD scale up, it will be important to ensure effective information systems are in place that can monitor the management and quality of CCD services delivery as well as the outcomes to psychosocial ECD milestones. Based on the CCD resources and previous studies, this can include two distinct M&E tasks, namely 1) CCD service delivery performance monitoring and 2) psychosocial ECD milestone development monitoring (45, 66).

HIS and M&E tracking tools will play a crucial part in the M&E of the CCD intervention, and it is important to understand what resources are currently available to collect, store and analyse data on child health and development, and what HIS and tracking tools can be used to monitor CCD service delivery and psychosocial ECD outcomes in children. Systems that can monitor and track psychosocial milestone development and challenges will play a vital role with not only providing data on development outcomes, but in understanding how to support this through the provision of appropriate services. It is essential to develop systems that collect data and translate it into public health information that can be used to: 1) monitor child development outcomes; 2) monitor health service performance; and 3) provide quality improvement feedback mechanisms into CCD health service delivery. M&E systems for CCD scale up will need to accommodate systems and tools to monitor the quality of CCD service delivery and psychosocial ECD outcomes in children.

The CCD intervention includes an M&E Framework, which is used to evaluate the intervention's implementation and service delivery outcomes (45). It specifically focuses on measuring the status, quality and equity of implementation, and the impact of the intervention on service providers and caregiving practices (45). The framework acknowledges the importance of scale up by providing guidance on tools and indictors to evaluate the existence of national level enabling factors. It lists key M&E indicators to include the existence of policies to promote ECD, stakeholder workshop for policy maker, plans for

integrating CCD into existing service, adaptation of CCD; training the trainer, conducting baseline and final evaluation. It accounts for the impact of the intervention by listing training courses coverage, population coverage and implementation type, provider and intensity, as indicators for implementation coverage (45). Assessment and indicators on how the health worker delivers CCD are also listed to evaluate the impact of the intervention. It also includes indicators to measure supportive home environments from the Multiple Indicator Cluster Surveys. Appendix 9 provides an illustration of the CCD M&E framework component.

While the framework provides indicators that health facilities and workers can use to measure the impacts of the intervention, and lists the Multiple Indicator Cluster Surveys to evaluate supportive home environments, how psychosocial child development milestones are captured and screened is less evident as it mainly focuses on service delivery, training and caregiving outcomes. It does not adequately cater for effective monitoring and screening of psychosocial ECD outcomes. The framework is useful to evaluate the immediate CCD service delivery outcomes and impacts. But its intervention focus, limits it to program delivery outcomes, and does not appropriately address how it can be integrated into existing RMNCH services and psychosocial ECD milestone development metrics.

The existing range of M&E tools that are used to measure psychosocial development in LMIC programs, studies or across sectors, can be employed as M&E tool however planning which would be the most feasible and appropriate is essentially. **Table 6-5** provides a brief summary of the main M&E tools used to assess psychosocial ECD milestones in LMIC studies, government organisations or multilateral organisations (45, 66). The tools used will need to be country specific and take into consideration existing RMNCH and psychosocial ECD data collection tools and examining how they collect or can incorporate the psychosocial measures into existing tools. It can also involve understanding how the RMNCH service delivery mechanisms can be used to track monitor and assess CCD service delivery and psychosocial ECD milestones, and how they the feed into individual development outcomes (e.g. the child's growth and development) as well as population based outcomes. Each of these should then be used as feedback mechanisms to effectively address development delays using appropriate individual or family based strategies and population based interventions that promote changes in behaviours and caregiving practices.

Table 6-5: Summary of M&E tools and ECD metric tools used in LMICs

Tools	Summary
Individual level	
The Ages and Stages Questionnaire ASQ:SE-2™-child's (188)	Assess social and emotional behaviour by screening speech development, social skills and problem solving, Helps identify strengths and areas for improvement.
Bayley's Infant Developmental Scale (189)	Measures development delays using psychometric standards.
Home Observation for the Measurement of Environment (HOME) (190)	Measures child home environment by assessing the care giving and cognitive stimulation environment
Population level	
Demographic and Health Survey (DHS)	Assess early childhood care and education measures across cognitive stimulation and language, e.g. reading, singing, play, language development
UNICEF's Multiple Indicator Cluster Surveys ECD assessment (58)	Assess ECD in four domains: language-cognitive, physical, socio-emotional and approaches to learning
UNESCO's holistic early childhood development index (191)	35 ECD index across health, nutrition, education, social protection, poverty, and parental support. Specific psychosocial ECD index includes - home stimulation activities, child development, and the child attendance of an early childhood education program

A systems approach to the CCD M&E scale up can also account for existing M&E tools and align to these. In LMICs the education sectors mandates on quality ECD care and pre-primary education have created systems and platforms to monitor positive caregiving practices and psychosocial ECD outcomes (192). To enable sectoral continuity health systems tools, indicators and systems can be aligned to the existing education tools and should address psychosocial ECD for children aged 0-3 years who access CCD services and care.

5.1 Psychosocial Early Childhood Development Monitoring and Evaluation in Uganda

In Uganda, psychosocial ECD and caregiving is assessed using the DHS Early Childhood Care and Education survey, the MoES early learning and development standards and the Multiple Indicator Cluster Surveys ECD assessment (96, 101, 193). Examples of the assessment indicators are provided in **Figure 6-5** and **Figure 6-6.** For continuity, the CCD scale up can involve exploring how existing RMNCH M&E tools can incorporate these into routine M&E activities. The existing indicators can be used to assess psychosocial ECD during routine CCD service provision. The question used in the DHS survey and early

learning and development standards can be used to assess psychosocial ECD during service provision and use CCD to advise mothers on positive caregiving. From this health workers can monitor the development milestones and ensure continuity across services and other sectors.

Implementation of the existing DHS and education indicators can be achieved by integrating them into existing RMNCH routine data collection occurring at facilities. The Maternal and Child Health passport and the Health Management Information System (HMIS) are used to collect routine data on ANC, child growth and development and immunisation. For child health, they specifically collect data on immunisation at both the facility and community level. An example is provided in Figure 6-7. Including psychosocial ECD indictors alongside these routine child health data collection activities can allow for population level monitoring. Additionally individual level monitoring can be incorporated in the Maternal and Child Health passports. Updating these to incorporate psychosocial measures from the DHS and MoES early learning standards can be one avenue to capture, monitor and evaluate psychosocial ECD at the individual and population level. The questions used in the DHS can be employed to monitor psychosocial ECD during home and facility consultations. For age relevant monitoring Ages and Stages Questionnaire or the Bayley's Infant Developmental Scale can be incorporated into the tools used to assess psychosocial ECD. However to update the current M&E tools will require significant planning and funding that reforms existing tool to include new measures.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES				SKIP
EC9	Does (NAME) attend any organized learning or early childhood education programme, such as a private or government facility, including kindergarten or community child care?	YES .... 1 NO .... 2 DON'T KNOW 8				
EC10	In the past 3 days, did you or any household member over 15 years of age engage in any of the following activities with (NAME)? IF YES, ASK: Who engaged in this activity with (NAME)? a) Read books to or looked at picture books with (NAME)? b) Told stories to (NAME)? c) Sang songs to (NAME) or with (NAME), including lullabies? d) Took (NAME) outside of the home, compound, yard or enclosure? e) Played with (NAME)? f) Named, counted, or drew things to or with (NAME)?		MOTHER	FATHER	OTHER	NO ONE
		a) READ BOOKS	A	B	X	Y
		b) TOLD STORIES	A	B	X	Y
		c) SANG SONGS	A	B	X	Y
		d) TOOK OUTSIDE	A	B	X	Y
		e) PLAYED WITH	A	B	X	Y
		f) NAMED OR COUNTED	A	B	X	Y
EC11	I would like to ask you some questions about the health and development of (NAME). Children do not all develop and learn at the same rate. For example, some walk earlier than others. These questions are related to several aspects (NAME)'s development. Can (NAME) identify or name at least ten letters of the alphabet?	YES .... 1 NO .... 2 DON'T KNOW 8				
EC12	Can (NAME) read at least four simple, popular words?	YES .... 1 NO .... 2 DON'T KNOW 8				
EC13	Does (NAME) know the name and recognize the symbol of all numbers from 1 to 10?	YES .... 1 NO .... 2 DON'T KNOW 8				
EC14	Can (NAME) pick up a small object with two fingers, like a stick or a rock from the ground?	YES .... 1 NO .... 2 DON'T KNOW 8				
EC15	Is (NAME) sometimes too sick to play?	YES .... 1 NO .... 2 DON'T KNOW 8				
EC16	Does (NAME) follow simple directions on how to do something correctly?	YES .... 1 NO .... 2 DON'T KNOW 8				
EC17	When given something to do, is (NAME) able to do it independently?	YES .... 1 NO .... 2 DON'T KNOW 8				
EC18	Does (NAME) get along well with other children or adults?	YES .... 1 NO .... 2 DON'T KNOW 8				
EC19	Does (NAME) kick, bite, or hit other children or adults?	YES .... 1 NO .... 2 DON'T KNOW 8				
EC20	Does (NAME) get distracted easily?	YES .... 1 NO .... 2 DON'T KNOW 8				

Figure 6-5: Extract of DHS ECD survey questions - part 1 (193 p 526)

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
EC9	Does (NAME) attend any organized learning or early childhood education programme, such as a private or government facility, including kindergarten or community child care?	YES .... 1 NO .... 2 DON'T KNOW 8	
EC10	In the past 3 days, did you or any household member over 15 years of age engage in any of the following activities with (NAME)? IF YES, ASK: Who engaged in this activity with (NAME)? a) Read books to or looked at picture books with (NAME)? b) Told stories to (NAME)? c) Sang songs to (NAME) or with (NAME), including lullabies? d) Took (NAME) outside of the home, compound, yard or enclosure? e) Played with (NAME)? f) Named, counted, or drew things to or with (NAME)?	MOTHER FATHER OTHER NO ONE a) READ BOOKS A B X Y b) TOLD STORIES A B X Y c) SANG SONGS A B X Y d) TOOK OUTSIDE A B X Y e) PLAYED WITH A B X Y f) NAMED OR COUNTED A B X Y	
EC11	I would like to ask you some questions about the health and development of (NAME). Children do not all develop and learn at the same rate. For example, some walk earlier than others. These questions are related to several aspects (NAME)'s development. Can (NAME) identify or name at least ten letters of the alphabet?	YES .... 1 NO .... 2 DON'T KNOW 8	
EC12	Can (NAME) read at least four simple, popular words?	YES .... 1 NO .... 2 DON'T KNOW 8	
EC13	Does (NAME) know the name and recognize the symbol of all numbers from 1 to 10?	YES .... 1 NO .... 2 DON'T KNOW 8	
EC14	Can (NAME) pick up a small object with two fingers, like a stick or a rock from the ground?	YES .... 1 NO .... 2 DON'T KNOW 8	
EC15	Is (NAME) sometimes too sick to play?	YES .... 1 NO .... 2 DON'T KNOW 8	
EC16	Does (NAME) follow simple directions on how to do something correctly?	YES .... 1 NO .... 2 DON'T KNOW 8	
EC17	When given something to do, is (NAME) able to do it independently?	YES .... 1 NO .... 2 DON'T KNOW 8	
EC18	Does (NAME) get along well with other children or adults?	YES .... 1 NO .... 2 DON'T KNOW 8	
EC19	Does (NAME) kick, bite, or hit other children or adults?	YES .... 1 NO .... 2 DON'T KNOW 8	
EC20	Does (NAME) get distracted easily?	YES .... 1 NO .... 2 DON'T KNOW 8	

Figure 6-6: Extract of DHS ECD survey questions - part 2 (193 p 527)

HMIS FORM 073: CHILD REGISTER

COLUMN HEADINGS:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)				(11)			(12)			(13)		
Child No.	Name	Village and Parish	Sex	WT	Age	Date of Birth	Date BCG	PAB	Dates Polio				Dates DPT-HepB + Hib			Dates PCV			Dates Rota Virus		
									0	1	2	3	1	2	3	1	2	3	1	2	3
	Child: Mother's Name: Father's Name:																				

(14)	(15)	(16)	(17)	(18)	(19)					(20)		(21)
	MEASLES VACCINATION			Fully Immunised by 1 Year	Vitamin A Administration					Deworming		
Date Of Measles Vaccination	WT at Measles Vaccination	Under Weight (Below -- 2SD Line)	Over Weight (Above +3SD Line)		1st Dose administered within this year		2nd dose administered within this year			1st dose administered within this year	2nd dose administered within this year	
					Children 6 to 11 months	Children 12 to 59 months	Children 6 to 11 months	Children 12 to 59 months				Remarks

Figure 6-7: Extract of Uganda's HMIS child registration form (194 p 66)

6 Health technologies

The health technologies building block encompasses a whole range of activities that ensure effective health technologies to delivery and monitor services are accessible, safe, cost effective and of a high standard and quality (53). For CCD scale up, the health technologies can focus on ways to assist with the delivery of CCD. This can involve understanding how health technologies can be used to encourage quality CCD service delivery and monitor psychosocial ECD (53). The health technologies for scale up CCD can be grouped into three categories:

- Technologies to collect data on CCD and psychosocial ECD milestone
- Technologies to monitor service delivery, and
- Technologies to promote and delivery CCD.

In Uganda the existing RMNCH data collection systems can be used to collect and monitor psychosocial ECD progress during routine chid health services. For continuity across the existing education sector, it will be important to ensure the same indicators are used. This could involve using the existing pre-primary and ECD indictors employed to assess psychosocial ECD milestones in children aged 0-3 years, and developing simple assessments from this that can be asked during routine service (e.g. immunisation and growth monitoring). Uganda collects RMNCH using HMIS systems and MCH booklets, which can each be used to collect the data on individuals and population level psychosocial ECD as discussed in section 5.1.

The current data collection platforms used to collect RMNCH service performance and outcomes can be updated to accommodate CCD service delivery indicators and psychosocial ECD indicators. Updates to the HMIS systems and Maternal and Child Health passports can incorporate the M&E requirements listed in section 5.1. This is a big undertaking requiring finance negotiations and health workforce upskilling.

Existing audio-visual tools can be used to promote CCD at heath facilities and in communities. Uganda's NIECD policy is using radio and songs to promote messages on positive ECD, which include positive parenting for psychosocial ECD[16]. Adding to this, health facilities can use existing CCD posters and resources to promote it at facilities and with communities. The available CCD videos could also be played on TVs available in waiting

---

[16] Observed during field work and data collection

rooms[17]. Mobile technology can also be used to disseminate messages on positive caregiving and psychosocial milestone development. During CCD assessment, homemade toys (e.g. plastic bottles, cooking pots and spoons) and books can be made available to use when assessing and consulting mother on how to engage and stimulate their child. This could also demonstrate how mothers can use basic household items to play and stimulate their child.

To monitor service delivery, the CCD's M&E tool can be added to existing facility performance indicators and supervision, allowing health management and the national government to monitor implementation progress (refer to Appendix 9).

6.5 Conclusion

The public health sector needs to be more accountable for psychosocial ECD outcomes (6). To achieve this, RMNCH services need to integrate and systematically support psychosocial ECD and scale up CCD (6, 66). Integrating psychosocial ECD into existing services requires identifying how to systematically strengthen and integrate care for psychosocial ECD into routine MCH services. This requires a phased approach that involves deliberate governance and policy framing; strategic resource allocation; integrated approaches to CCD service deliver, health workforce and M&E; and frontline health workforce capacity building.

This chapter systematically identifies how to integrate CCD into RMNCH by conceptually planning the health system requirements needed to scale up CCD at frontline RMNCH services and applying it to the Ugandan context. Currently, the NIECD policy is being used as Uganda's national ECD framework to direct the ECD approach and sector harmonisation. The leading government agencies are the MoGLSD, MoH and MoES who have the primary ECD responsibilities and implementing capacities. A multisectoral collaboration and partnership approach with leading multilateral and NGOs is being used to delivery and achieve the NIECD policy. For CCD to be scaled up further action will require the MoH to develop national health stewardship for psychosocial ECD and formal public health governance and implementation systems. These can specify national district and facility level service delivery frameworks and relevant national finance and costing support. These can then determine the service delivery, health workforce, M&E and technologies needed to scale up CCD. At the service delivery level CCD interventions can include health

---

[17] Observed during field work

promotion and clinical initiative that deliver interpersonal and community level CCD services. This can occur across various RMNCH services and use task shifting roles between VHT, nurses, doctors and ECD specialist. **Figure 6-8** (below) brings these elements together to conceptually showcase how the framework developed in Chapter 5: can be applied to Uganda.
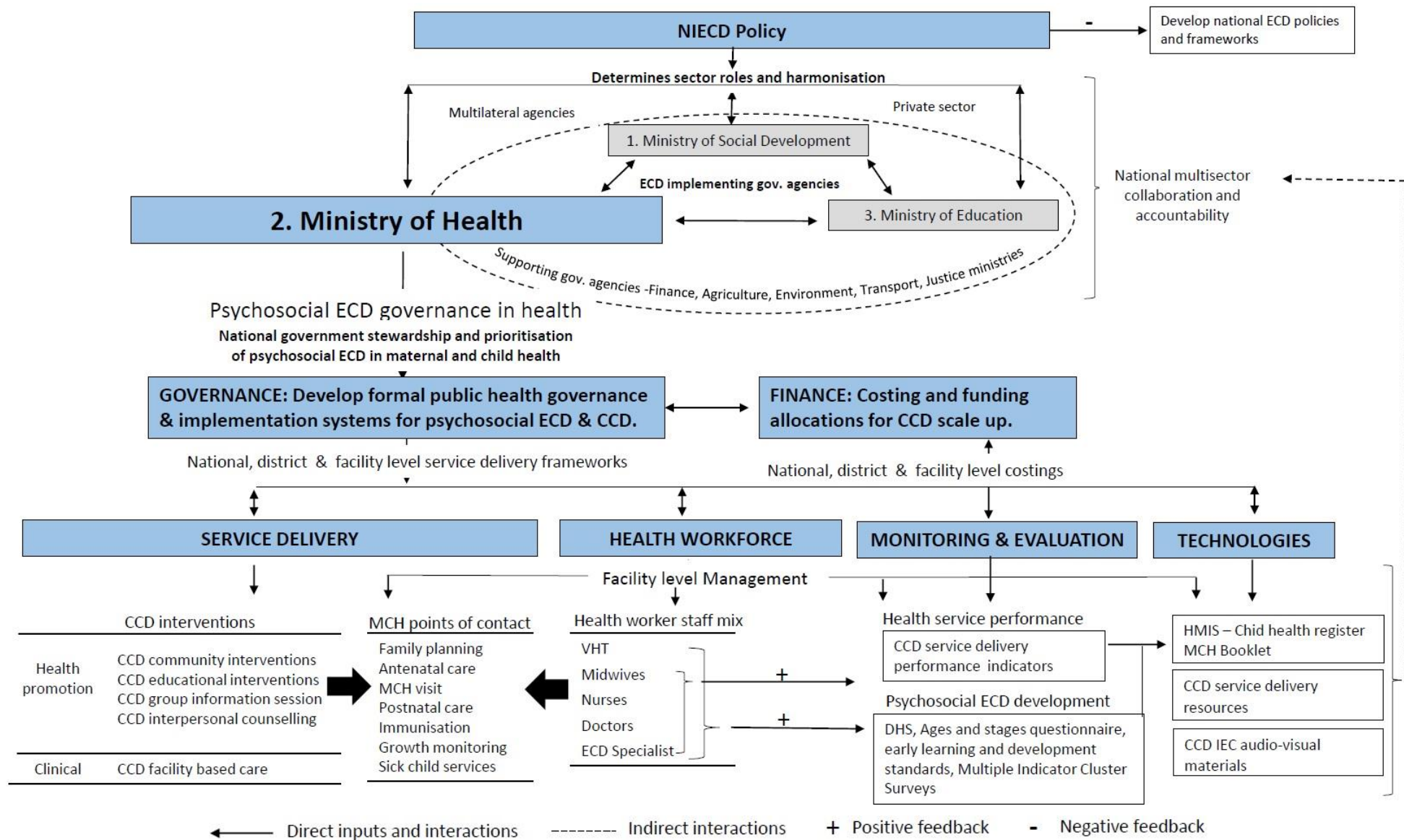
Figure 6-8: A conceptual health systems framework for CCD scale up in Uganda

Chapter 7: Results - framing the governance support for Care for Child Development scale up: stakeholder perceptions in Uganda

7.1 Overview

This results chapter present the governance findings of the thesis. It begins by introducing the concepts of good governance and stewardship and provides a more detailed overview of Uganda's NIECD policy governance structures and approach. It focuses on the complex multisectoral ECD governance and stewardship environment in Uganda, exploring how key actors in ECD governance and policy will influence the public health sector's approach to psychosocial ECD and CCD scale up. It looks at the multisectoral response to the NIECD policy, and how key governance actors from the ministries of Health, Gender and Social Development and Education; multilaterals including WHO, UNICEF and World Bank; and key ECD Non-government Organisations (NGOs) such as Plan International, Save the Children, and Private Sector Foundation Uganda, are working together to address ECD in Uganda.

In Uganda, understanding psychosocial ECD governance and stewardship primarily involves examining how national and local level government systems might promote positive psychosocial ECD. For health, this includes looking at how ECD stewardship and leadership across government, institutions and facilities will impact the delivery and provisions of effective psychosocial ECD services in the public health sector. The chapter explores Uganda's ECD governance arrangement, the perception of psychosocial ECD and the role of key stakeholders. It looks at the ECD governance arrangements prescribed by policy— and the perceptions of those stakeholders and their informal influence on governance.

The introductory sections of this chapter are grounded in the peer-reviewed literature, and in policy grey literature identified through a desktop review and Ugandan ECD stakeholders. The findings of 22 key informant interviews are then presented, further exploring stakeholder perceptions on governance for psychosocial ECD and its implementation.

7.2 Background

In exploring the governance framing of ECD and psychosocial ECD in Uganda, the thesis uses Hyder et al.'s definition of framing as "*how boundaries are drawn around problems, how policy problems are defined, and what is included and excl*uded"(195 p 311). This framing is used to guide this chapter as it explores the governance and perceptions of ECD and psychosocial ECD.

Governance addresses the "*authority power and decision making in institutional areas*" (166 p 4). It is influenced by larger social, economic and political environment and consists of political, economic, institutional and legal factors across the whole health system and within the different levels of the healthcare system. The political aspects focus on authorities and their power and roles; the economic aspects are central to the availability, management and allocation of public resources; the institutional factors focus on public institutions and their impact on population wellbeing; and the legal factors look at the legal regulations and laws (53, 166). This makes governance, multisectoral as it moves across all 'social' system, going beyond the confines of one sector. For public health governance, this means that influences across other sectors such as education, social development, and agriculture will have implications on the health sector's roles in psychosocial ECD. This is important to acknowledge when unpacking the governance mechanisms for CCD scale up and RMNCH services.

The governance environment and priority setting for ECD will determine where and how the public health sector addresses psychosocial ECD. The conceptual framework for CCD scale up in Chapter five and six discusses the importance of a national ECD framework that develops formal public health governance and implementation systems for psychosocial ECD and CCD. This involves examining the mechanisms for change including developing formal public health governance and implementation systems. It also requires exploring the ECD governance context and understanding how psychosocial ECD prioritisation, political influence and stakeholder engagement will have implications on effective governance. This chapter extends this analysis by focusing on the operationalisation of ECD governance in Uganda, and explores the process, context and relationships of ECD, psychosocial ECD and the public health sector. It specifically looks at the concepts of good governance and the ECD governance arrangements and stewardship that can enable psychosocial ECD to be addressed in public health sector.

7.2.1 The concepts of good governance and stewardship

Governance is the term used to define formal and informal processes that delegate responsibility and accountability to specific actors (196). It centres on collective action and focuses on understanding how formal institutions, organisations and population and social groups can be directed and managed to achieve specific goals and outcomes (166, 168). From a pragmatic perspective, governance involves the decision making and implementing

processes and structures to achieve specific goals (196). It looks beyond policy to focus on additional elements such as accountability, stakeholder engagement, authority, decision making rules and regulations and institutional or organisations self-regulating mechanisms (53, 166, 168) (166, 196). Good governance involves formulating effective policy and strategic direction, establishing government and institutional accountability mechanisms, providing adequate implementing mechanism, and ensuring there is relevant stakeholder engagement and partnerships to deliver services (166, 196).

Governance can be explored through different aspects. It can be analysed in terms of: 1) the characteristics of governance; 2) the operationalisation of governance and; 3) the outcomes of governance (196). The characteristics of governance looks at the principles and values of good governance; the operationalisation of governance looks at the actions and processes to "good governance" and; the outcomes of governance looks at whether goals are achieved and improvements can be measured (196). Barbazza and Tello's (196) review of health governance lists policy development, strategic direction, regulation and accountability as core aspects to operationalising good governance, with transparency, partnership, systems designs, engagement and the generation of information and intelligence also listed as additional aspects (196). Each of these is seen as key operational functions and processes to governance, and this chapter specifically examines the policy, strategic direction, partnership, accountability and stakeholder engagement elements of Uganda's national ECD response, and their implication on psychosocial ECD services.

While governance focuses on developing the systems, process and regulation for good leadership (196), stewardship is the centrepiece to good governance (159). It involves the leadership and oversight of systems, actors and organisation according to specific goals or objectives. Stewardship is the relationship between the actors, mechanisms and function of a health system, and it determines the boundaries of the health system's actors according to its overarching goals (167). It emphasises the importance of understanding how decision-making and control in multisectoral systems influences system objectives, performance and outcomes. At the centre of stewardship are key governance elements, which include the development of strategic policies, relevant regulation and accountability and implementation mechanisms (166, 167). Accordingly the key domains for stewardship are governance related and include: politics—the provision of formal and informal policies; and legislation which includes the regulatory rules; financing—the availability and allocation of resources and; structure—developing complimentary institution and service delivery arrangements

(166). **Figure 7-1** demonstrates the different boundaries to health systems stewardship (167). It shows how the health systems functions are embedded in the strategic policies and their stewardship, which in turn are influenced by secondary and wider, political economic and social factors.
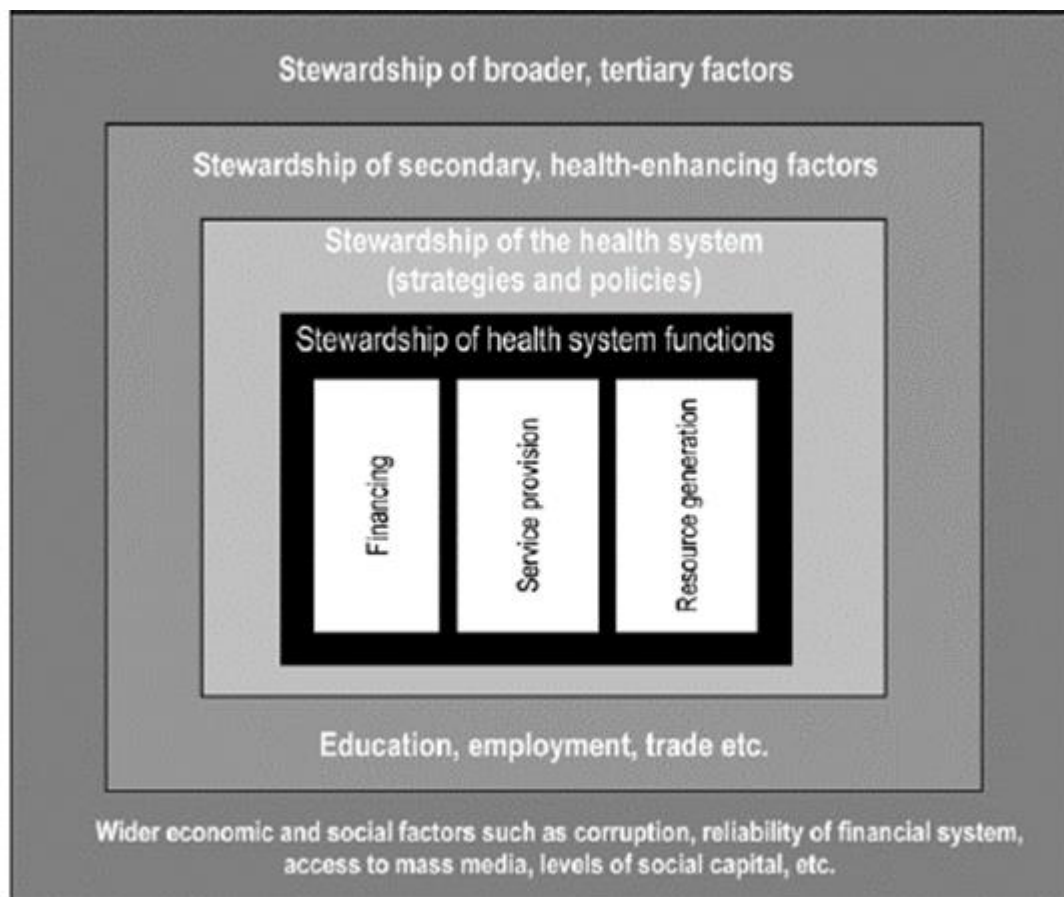
Figure 7-1: The boundaries of health systems stewardship function of national health ministries (167 p 193)

The ECD and psychosocial ECD governance and stewardship at the national and facility level are critical part of CCD scale up and delivery.

7.2.2 The governance arrangements of Uganda's National Integrated Early Childhood Development policy

The NIECD policy good governance arrangements

Uganda's NIECD policy's guiding principles is to promote the holistic development of children aged 0-8 years by ensuring it's ECD initiatives addresses physical, mental, emotional, social, language development domains (98). One of the policy's main goal is to

"*provide direction and guidance to all sectors for quality, inclusive, coordinated and well-funded ECD services and programs*" (10 p 13). It lists good governance and accountability, public and private partnership and inclusive and complimentary ECD service provision as core guiding principles, emphasising the importance of effective stakeholder engagement and partnerships (98).

The NIECD policy's approach to good governance emphasises the importance of shared leadership and accountability across different sectors and stakeholders (98). This is based on their technical mandates which list clear roles, responsibilities and obligations; financial human, and material resource investment and mobilisation; Monitoring and Evaluation (M&E) and quality assurance for each of the sectors (98). The policy has established action areas, as a frame of reference for its initiatives identify specific government responsibilities and aims that relate to child health, learning and social development. A brief summary of the action areas are listed in **Table 7-1**. Learning and stimulation, the key component of CCD, specifically falls under the Early Childhood Care and Education (ECCE) and the primary health care action areas, which are both Ministry of Education and Sports (MoES) and Ministry of Health (MoH) mandates. This indicates an interconnected approach that identifies the role of both education and health in psychosocial ECD.

Table 7-1: NIECD Policy action area (98, 100)

Action areas	Main elements	Responsible sector
ECCE	• Implement and support early learning at all the different stages of development. • Equitable access to quality early learning and stimulation for children aged 0-8 years that is developmentally appropriate, inclusive and integrated.	MoES
Food security and nutrition	• Ensure food security and access to appropriate nutrition to support child growth and development. • Support production of nutrition food • Promote and increase healthy nutrition and behaviour within communities. • Reduce malnutrition in infants, children, pregnant women and lactating mothers.	MAAIF MOH
Child protection	• Promote child survival, protection and safety rights • Promote adequate family, community and national child care • Prevent exploitation, abuse violence against children.	MoGLSD

Action areas	Main elements	Responsible sector
Primary health care, sanitation and environment	• Ensure the right to survival and healthy growth of all young children in Uganda. • Ensure access to quality primary health care services and safe water and sanitation facilities. • Prioritise stimulation, care and development aspects in the traditional child health and survival programs to ensure children not only survive but also thrive. • Scale up quality MCH programs.	MOH
Family strengthening and support	• Strengthen family capacity; structures and systems to provide community based holistic care for children 0-8 years.	MoGLSD
Communication, advocacy and resource mobilization	• Increase awareness and commitment to ECD services.	MoGLSD
Multisectoral partnerships and coordination	• Develop mechanisms for partnership and collaboration to ensure effective NIECD services in Uganda. • Develop streamlined and coordinated systems for efficient delivery of ECD services and programmes.	MoGLSD

While the Department of Youth and Children in the Ministry of Gender Labour and Social Development (MoGLSD) is responsible for the policy, specific ECD services are provided by the MoH and MoES, with cross sectoral involvement of the Ministry of Financing, Planning and Economic Development, Local Government, Agriculture, Animal Industry and Fisheries, Internal Affairs (Immigration, Justice and Constitutional Affairs), Disaster Preparedness, Work and Transport, Trade Industry and cooperative, Public Service, Information Communication and Technology, Land Housing and Urban Development, Defence and the Office of the Prime Minister, including the First Lady's Office (99, 100). **Figure 7-2** provides an illustrative representation of the key psychosocial ECD stakeholders involved in the NIECD Policy, their hierarchal placing and the multisectoral networks and relationships used to engage and deliver ECD services to the community.
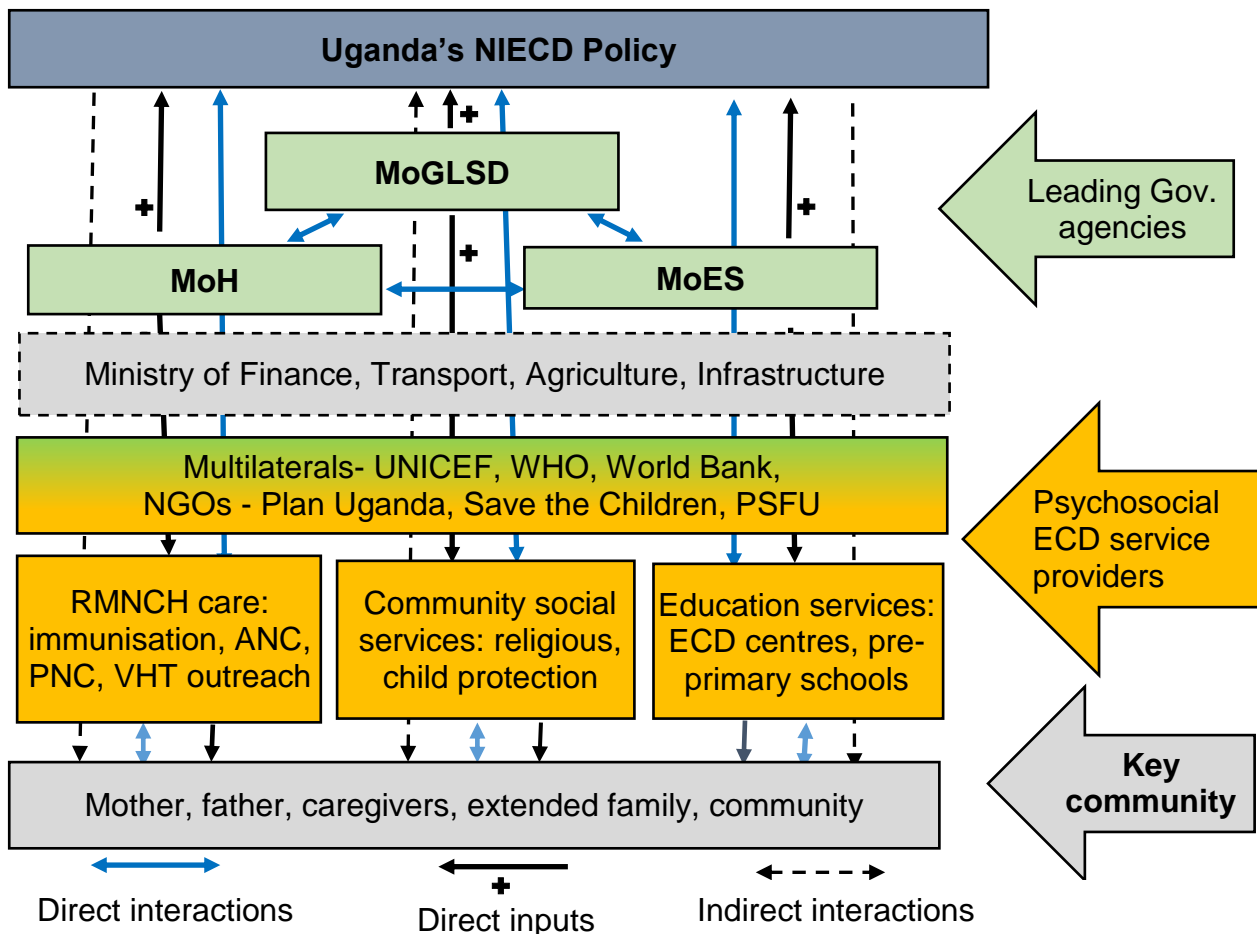
Figure 7-2 Key psychosocial ECD stakeholders involved in Uganda's NIECD approach.

7.3 Summary of methods

22 semi-structured key informant interviews with senior government officials, multilateral program staff, NGO program staff and senior clinical staff from respective ECD or child health departments or programs were used to inform the chapter results and findings. Purposive and snowball sampling was used to identify participants based on the NIECD policy's ECD governance and key stakeholder. This focused on the national ECD governance structures and mechanism and the roles of key actors and; explored the psychosocial ECD governance interactions at the national and service delivery level (164). It was important to focus on the interconnection of stakeholders and the critical points of psychosocial ECD interactions and networks at the governance and operational domains (165). Further details can be found in the methodology chapter four. An interview guide was developed from the policy analysis, literature review and conceptual framework in chapter five (refer to Appendix 3). The interviews were an interactive discussion process that enlisted the assistance of experts and stakeholders in generating contextually relevant data on ECD, psychosocial ECD and its governance in Uganda.

The findings for this chapter triangulate three separate data sources: 22 semi structured interviews with key informants listed in section 4.4.4; Uganda's ECD government policy and grey literature; and peer reviewed literature on ECD governance. A qualitative thematic analysis of the interviews was undertaken. This was a concurrent process that was guided by the applied conceptual framework (refer to chapter 6) and a systems thinking approach (refer to Chapter 5). The thematic analysis used an inductive approach that derived codes categories and themes from the data and a deductive approach that identified codes categories and themes based on the conceptual framework's governance and service delivery concepts. The coding and analysis was based on the conceptual framework and drew on the health systems and policy research's operational aspects of good governance to produce a priori codes on accountability, stewardship, partnership, engagement and capacity. The interview transcripts were manually coded and the audio recordings were listened to identify codes, categories and themes. Consistent and comparative analysis between the interviews, conceptual framework and concepts of good governances was used to refine the codes, categories and themes.

The findings are split into two sections, the first, looking at ECD governance as a whole, and then the second examining psychosocial ECD governance. Six themes were evident from the analysis. When looking at ECD governance the following themes were identified:

1. ECD is a national government priority and commitment.
2. Multisectoral and integrated engagement is being employed for the NIECD response.
3. Challenges to NIECD leadership authority and implementing capacity.
4. Political commitment and district level government engagement were perceived as important to NIECD governance and success.

When exploring psychosocial ECD governance and prioritisation two themes were identified:

5. Lack of services addressing psychosocial ECD.
6. Limited health sector involvement in psychosocial ECD.

Table 7-2 provides an overview of the emerging governance themes, and corresponding codes, categories and themes. Appendix 6 provides an overview of the reoccurring themes across the interviews.

Table 7-2: Summary of emerging governance themes and corresponding categories from interviews

Themes	Category	Codes
National level government ECD commitment and prioritisation	Political commitment	• National government commitment and prioritisation of ECD • National government accountability • National government coordination. • NIECD policy launch
Successful NIECD governance	Political advocacy and engagement	• Advocacy from highest level of government • Advocacy and involvement of strategic government departments
	Local level government engagement.	• Subnational level government buy in • Local level government commitment and engagement.
An integrated and multisector approach to ECD.	Multisectoral engagement	• Whole of government approach • Multisectoral engagement across government departments, NGOs and private sector to provide key resources and services.
	Collaboration	• Integrated ECD approach across health, gender and education sector • Intersectoral collaboration between government ministries • Bisectoral collaborations across health education and social sector • Multisectoral collaborations involving health, education, private and social development sectors
	Partnership	• Delivering ECD services through partnership • Public and private sector partnerships • Private sector mobilisation and engagement in national policy and ECD action plan • Private sector mobilisation of funds and services
Challenges to NIECD leadership authority and implementing capacity.	Challenges to multisectoral ECD	• Multisectorality implementation unclear • Implementing capacity tension • Independent ECD work arrangements

Themes	Category	Codes
	ECD ownership and implementing responsibilities	• Authority of MoGLSD • Implementing capacity of MoGLSD • Limited capacity and mechanisms to implement ECD • Funding allocation tensions - who gets what
	Operationalising multisector engagement	• Resource allocation concern • Managing different sectoral implementing capacity
Lack of services addressing psychosocial ECD.	Inadequate implementation mechanisms	• ECD services provided by private sector- inequitable access • ECD formally available through private ECD centres.
Limited health sector involvement in psychosocial ECD.	Health not seen as avenue for psychosocial ECD	• ECD services under MoES • ECD education mandate • ECD responsibility of MoES

7.4 Results

The results combine the findings from thematic interview analysis and the policy and document review and discusses each accordingly. They present the current ECD governance situation in Uganda and explore how this will influence and impact nationalising care for psychosocial ECD in health and CCD scale up. The analysis shows the link between what the key findings say is important to ECD governance and how it applies to prioritising psychosocial ECD in health, and subsequent CCD scale up. It specifically focuses on accountability, as one of the critical aspects to good governance, and looks at the multisectoral coordination and collaborations between the different governance actors and decision makers. It explores the perceptions of psychosocial ECD and its perceived relation to public health, and the implications for how psychosocial ECD and CCD scale up is addressed in health.

7.4.1 Early Childhood Development is a national government priority and commitment.

The findings from the interviews and policy review demonstrate that ECD is regarded as a national priority by stakeholders in Uganda, with national level government commitment and prioritisation embodied in the NIECD policy. Almost all participants spoke about the NIECD policy, acknowledging it as Uganda's national and coordinated approach to improved ECD. Across all interviews with government and non-government participants, the NIECD policy was consistently acknowledged as leading strategic efforts towards positive ECD. There was particular emphasis on the policy approval, the September 2016 launch and subsequent implementation of the NIECD policy. Government staff from the key ministries—MoGLSD, MoH and MoES—discussed the central government activities relating to the NIECD policy, ranging from policy approval and national government prioritisation, to stakeholder engagement and sector partnerships. Senior government officials from the different implementing ministries also endorsed and referenced the NIECD policy as the current national ECD efforts that clearly define the roles of the various ministries and encouraged horizontal collaboration. A senior government official reaffirmed the national commitment and NIECD policy endorsement by stating:

> *"…by having it* [the national integrated ECD Policy] *approved and passed by cabinet as a policy that means that the government has committed itself putting funding into this as a priority."* **Government staff 3, key informant interview.**

When discussing the ECD related commitments, senior officials and government staff from the different ministries reinforced their mandates listed in section 7.2.2. Participants from the MoGLSD discussed their coordinating role, which involved managing the different stakeholder activities to enable an integrated national ECD approach. They also discussed the MoGLSD's role around child protection, ensuring child rights and child participation. Participants from the MoH discussed their role in preventing common childhood illnesses and death and promoting healthy maternal and child nutrition, while participants from MoES talked about the pre-primary education services and the future plans to include government ECD centres across all public schools. Participants from non-government institutions discussed their ECD mandate within NIECD Policy framework often describing government, organisational, community and facility initiatives that were contributing to NIECD policy. These included advising the government on latest national and local ECD evidence, providing technical inputs to the NIECD policy and establishing the linkages between their community services and the NIECD policy.

Key informants across the various multilaterals and NGOs also referred to the NIECD as the current national priority for ECD and, contextualised their activities within the NIECD policy objectives. For example, discussion with management staff working in Uganda's leading paediatric organisation highlighted their stakeholder consultations and inputs into the NIECD policy. Additionally, the activities of leading ECD NGOs were anchored in the NIECD Policy initiatives, with key informants discussing how their program-based services supplemented the government's NIECD Policy activities. Senior clinicians working in the different health facilities were also aware of the government's prioritisation of NIECD policy and, referred to it as Uganda's national ECD initiative. All senior clinicians were aware of the new psychosocial ECD regulations, however it was not clear how this would translate to immediate practice, as they were unsure about where they were placed in terms of implementation. When discussing how health facilities were supporting psychosocial ECD a quote from a senior clinician reflects this by acknowledging the MoGLSD leadership while also pointing to the operational uncertainty:

> "*Early Childhood Development remains a huge gap across the structure. If I remember very well, it's only recently that they are trying to coming up with polices and guidelines through Ministry of Gender Labour and Social Development.*" **Clinician 17, key informant interview.**

7.4.2 A national integrated and multisector approach to Early Childhood Development

The key findings on national ECD government commitment also revealed a multisectoral approach to ECD services. The policy review, document analysis and interviews all presented strong prescriptive and interview based themes of multisectoral engagement. The NIECD policy approach involves a multisectoral and inclusive process with the active engagement of key stakeholders across different government agencies, multilaterals, NGOs and the private sector. The policy outlines integrated and multisectoral ECD initiatives between MoGLSD, MoH and MoES, multilateral agencies, NGOs, and private sector as each collaborate to deliver NIECD. To ensure effective planning and coordination, interministerial committees are being developed. A senior official notes:

> *This* [NIECD Policy] *is looking at ECD in a wider perspective, looking at education, looking at health, looking at environment. All these sectors cut across* [ECD] *that is now…the national integrated ECD policy."* **Government staff 2, key informant interview.**

In line with the policy's multisectoral approach the key informant interviews reflected strong themes on collaboration. These were discussed in the context of intersectoral collaborations between the government ministries; developing bisectoral or multisectoral collaborations across health, education, private and social development sectors; and using public and private partnerships to deliver services. Senior government officials elaborated on how intersectoral government collaborations where being used to support the implementation of the NIECD policy and align all sectors to the NIECD Policy initiatives. They enthused about how the policy and national response has '*created linkages across the different sectors*' and encouraged sectors to implement their respective parts in an integrated multisectoral environment. At the policy level, key informants from MoGLSD, MoH and MoES each discussed how a large number of government ministries were on board with the NIECD policy and were actively involved with the policy preparations and implementation. A senior official describes how a wide spectrum of ministries came together to contribute to the NIECD policy:

> *"In the policy we hadn't included some sectors, ministries and they complained… we can also do this …, so now we told them to bring in what they can do, we put it in the policy, you know stakeholder analysis… the key ministries we had included were*

education, health, agriculture, finance, gender and of course president's office and prime minister's office, but now, and justice and also internal affairs, those had responsibilities… It shows commitment and the fact that the planning authority is also thinking that. So they want to be part of it." **Government staff 3, key informant interview.**

Additionally information from the interviews with non-government participants provided evidence of multilateral collaborations between government, multilaterals and non-government organisations. Key informants from the multilateral agencies and NGOs were eager to describe their active involvement and contributions to the NIECD policy. They discussed their sector roles and contribution and, acknowledged the roles of other sectors and how they contribute to the NIECD Policy and the national integrated ECD response. This included providing ECD technical inputs to the policy and national planning efforts and, coordinating and aligning their community-based efforts with the NIECD Policy and national response.

Participants also stressed the importance of integrating the NIECD approach into existing public and private services. While the policy stipulates the introduction of an integrated approach, many key informants also stressed the importance of introducing it to existing services. It was particularly important to avoid creating new or duplicating services that would further burden the existing systems. A program government staff reflected this sentiment by emphasising the integration of new initiatives and re-alignment of existing infrastructure, anticipating ECD engagement and its potential impact on service delivery arrangements:

"We already have systems in place. What we are saying with this policy is that we are not trying to create something new, we are just trying to align and use the strength of the different sectors and make them work better. We are already using the systems already in place as it is… for example Ministry of Health has village health workers at the community level. Education has education extension workers. Ministry of Gender has community development officers… So we are using the already available structures and just strengthening them, and beefing them up and making sure they are coordinated from [frontline services]*."* **Government staff 1, key informant interview.**

Private sector mobilisation

Private sector mobilisation and engagement was an important collaboration and partnership theme raised by all key stakeholders in government, multilateral agencies, NGOs and health facilities. They perceived private sector engagement as critical to the NIECD policy success, providing suggestions for using the private sector to mobilise corporate business interest and funds, and using public and private sector partnerships to delivery ECD services. To strengthen ECD services, public and private sector partnership were discussed as solutions for addressing the ECD service delivery gaps. The private sector and NGOs were seen as support mechanisms to the government to deliver services and mobilise resources and funding in resource limited setting. It was seen as an avenue to provide ECD resources and services in the absence of government services, with government developed private sector guidelines on implementation—but no promise of government funding:

> "*We are also working with the private sector so that they can continue doing the private ECD centres, in the gap of this other one. So that the private sector can continue doing the work and increase in number but also giving them guidelines to work with.*" **Government staff 1, key informant interview.**

The challenges of multisectoral engagement

Overall, key informant perceptions on the NIECD policy success reiterated strong normative statements on collaboration, strategic partnership and integrating NIECD into existing services. All participants articulated why collaboration was vital to successfully achieve the national ECD commitments and NIECD policy outcomes. They understood the need for strategic collaborations and partnerships across different ministries and sectors and using public and private partnerships to mobilise resources:

> "*We need to collaborate with each other. In areas of nutrition, how does the Ministry of Health come in? Nutrition, water and environment, security all these are complementary to each other. So that at the end of the day we come out with a full package that we can give to the child*". ***Government staff 2, key informant interview.***

However, achieving effective multisectoral engagement was a perceived NIECD challenge. While the abovementioned notions of multisector engagement and participation are being promoted at the national government level, there was little clarity on how these would be

effectively achieved across lower level institutions and frontline services. The interviews with different stakeholders shows the concepts of multisectoral engagement are seen as necessary, however it is difficult to envision how this will translate into effective community level services, particularly for psychosocial ECD. A government worker reflects this by stating:

> *"The challenge also is that… still it has too many players, sometimes it can get a bit confusing for the community--you are not coordinated. Yes, because all of you are talking ECD, especially if you approaching the community differently in your different sectors.   That integration aspect is just something now we are trying to bring together."* **Government staff 1, key informant interview***.*

The findings reveal that Uganda's NIECD strategies are conceived as multisectoral and integrated. This was a prominent theme across the data and specifically focused on collaborations, partnership and ECD integration across the various sectors. But how effective multisectoral approach was achieved is a challenge faced by all. The rhetoric for multisectoral engagement was strong; however, how this will be implemented remains unclear. The contentious issues particularly relates to who has the capacity to deliver the services and implement them effectively and holistically.

7.4.3 The National Integrated Early Childhood Development policy leadership authority and implementing capacity challenges

When discussing the current challenges facing the NIECD policy and ECD in Uganda, key informants from government, NGOs and health facilities listed attaining effective multisectoral engagement as the biggest obstacle. Two key subthemes and challenges emerged explicitly in interviews: 1) ECD ownership and implementation responsibilities across government ministries, and 2) operationalising multisector engagement at the government and community level. In addition, observations of senior level meetings and the policy launch indicate there could be tensions between how services are delivered and who gets government funding to deliver these. These challenges create dilemmas regarding who 'owns' ECD, who has the capacity to deliver services, and whether costings and allocation of funding is adequate. Although multisectorality and integration were key themes across all the interviews, there was anxiety and confusion around who had the capacity and mechanism in place to effectively lead, integrate and delivery the NIECD policy. The MoGLSD was not always seen as the most appropriate agency to lead the NIECD policy,

given its limited implementing capacity and ECD engagement. Yet these capacity shortfalls in the MoGLSD were not necessarily seen as invalidating its coordinating role required to achieve the NIECD approach. One key informant from within the MoGLSD addressed these concerns about its authority as the leading Ministry by stating:

"*Up to now even members of parliament… they said how, how can it go to* [ministry of] *gender, what has gender to do with this? Even in education… they say why, why is the secretariat going to gender? They haven't understood the issues but when they come, when we take them through they will understand.*" **Government staff 3, key informant interview.**

There were also resource allocation concerns as individuals contemplated the possibility of ministries losing existing funding to other ministries in order to underwrite new ECD initiatives. When discussing the new funding arrangement under the NIECD policy and the implications to the health sector, a key informant raised concerns around the funding allocation in the context of potential sector budgets cut stating:

"*My thoughts on government* [funding allocation] *is that it needs to be done with care without jeopardizing the other programs. So there needs to be a clear and honest discussion between different sectors and people who allocate the funding in Ministry of Finance because if that is not done carefully then the quality of the other services, that target, the survival agenda* [is affected]… *I think re allocating money for Care for Child Development should not be done at the expense of other existing programs.*" **Non- government staff 5, key informant interview.**

7.4.4 The perceptions on successful National Integrated Early Childhood Development governance

The key informant interviews provided important perceptions and insights on achieving successful NIECD governance and accountability. Good ECD governance was represented by informants within the themes of political commitment, and local level government engagement. While ECD is a national government priority, participants discussed how strong leadership and senior level ECD advocacy and commitment were both important, and necessary to ensure access to sufficient government resources and actual NIECD outcomes. They also emphasised the importance of additional advocacy from strategic senior parliamentary officials, to ensure effective and sustained government commitment. A

key theme that was evident in the interviews was that the highest level of government prioritisation of ECD is necessary to guarantee available resources for effective service delivery outcomes. To enable this, increased advocacy is required from top level management in government. This particularly needed to involve strategic departments such as the President's Office and the National Financing and Planning department. They also emphasised the importance of effective local-level government commitment and engagement.

Political commitment

While there was national commitment to ECD it was evident that in order for the NIECD policy to be successful it needed strategic political commitment. In these instances, government commitment and political action were believed to be vital to the success of NIECD Policy. The experience to date from senior government officials, multilaterals, clinicians and NGO staff emphasised the importance of top-level government commitment, leadership and advocacy. This primarily required ECD leadership and advocacy by the highest government officials and, national government funding commitments.

Informants from the key ministries, multilateral agencies, NGOs and health facilities discussed how political commitment influenced the availability and access to quality ECD resources and services. In this regard, they discussed how political commitment and action were important to achieve the NIECD Policy and national ECD outcomes. For example, when reflecting on the multisectoral whole of government approach to ECD, a senior official from the MoH reinforced the importance of high-level political commitment in the NIECD policy to ensure its success:

> "*We've done* [ECD] *before. It began with health—it didn't work, went to education it didn't work equally! In gender, we need to understand why it didn't work in health and education.* So *maybe it's the time to take it to a higher level so that the prime minister* [is engaged], *because there are also issues of commitment. We* [the ministries] *have committed ourselves but how do we make sure that we implement or realize our commitments that we've made. We may need somebody else to do that for us.*" **Government staff 6, key informant interview.**

There seemed to be a broad consensus on the importance of political will and how government planning and coordination should begin at the Office of Prime Minister—the

highest level of government. When discussing accountability and how to achieve the NIECD policy, key informants from the government again explained the necessity of having highest level of government involved and using influential officials to advocate and lead the government's NIECD policy. Participants from NGOs and health facilities also reinforced this by discussing the influence political involvement and commitment had on ECD resources availability.

District level government engagement

When reflecting on the NIECD approach and success, participants discussed the significance of subnational buy in to ECD and how district and local level government commitment impacts community level outcomes:

> *"I think one of the things* [that is important is] *the local government. Government must really ensure* [the] *multi sectoral nature of ECCD has been emphasized and the roles and responsibilities must be well defined and signed by everybody, if you want to see the implementation or the rolling out of the ECD policy."* **Non-government staff 7, key informant interview.**

The importance of local level government engagement was a reoccurring theme across interviews with government, multilateral, NGO and clinical staff.   Because of the decentralised system, district governments need to prioritise ECD to ensure community level outcomes. This should include '*strong involvement of the district'*[18] *by* empowering district government teams and institutionalising NIECD into their systems and structures. At the governance level, key informants discussed the importance of operationalising NIECD into existing district government structures, such as district executive council committees and technical planning committees. Additionally, it is anticipated that existing district level community structures, such as Community Development Officers or Village Health Team workers will be used to deliver the NIECD initiatives—but within their existing technical capacity. These findings demonstrate, for the NIECD policy to be effective and to work, it needs political commitment at all levels.

> **"***Local government is very key because we operate in a decentralized system.   And so if you are not guided by the local government guidelines and you don't have the*

---

[18] Government staff participant statement

support from the top, it becomes very difficult to directly approach the districts and expect the output." **Government staff 1, key informant interview.**

7.4.5 Lack of services addressing psychosocial Early Childhood Development

The concerns around the lack of services were salient among participants. Respondents were frank in their assessment that there were limited services addressing psychosocial ECD in children aged 0-3 years. When discussing the service delivery capacities for psychosocial ECD, findings from the interviews indicated that:

- There are inadequate implementation mechanisms for psychosocial ECD services for children aged 0-3 years
- There are limited integrated strategies targeting psychosocial ECD for children aged 0-3 years and
- There is limited involvement of public health sector in psychosocial ECD.

What was evident from the interviews was the services targeting psychosocial ECD were 'formally' available through privately owned ECD centres and nurseries or community based initiatives. Uganda's government documents, grey literature and the interviews indicate that the majority of existing services available to support psychosocial ECD for children aged 0-3 years were privately funded ECD centres that are part of the education sector. Participants acknowledged that most of the services available were in the private sector, creating inequities in access. A key informant from the MoGLSD recognised the imperative to move away from private sector monopoly of ECD by stating:

> *"But the other thing also is moving ECD from the private sector, from being majorly a private sector issue to a government led issue, and that's a big challenge. But we are [committed], the commitment is there."* **Government staff 3, key informant interview.**

While on one hand, the private sector are seen as a critical resource to provide ECD services in the absence of available government resources, the challenge is to ensure that access to ECD centers is equitable. Currently the majority of ECD services are provided by the private sector (102). Some informants suggested that continuing using the private sector as implementing partners was logical given their service delivery capacities, but there was anxiety expressed around the need for a balance that accounts for inclusive ECD access

and prevents an extension of a profit-orientated monopoly by the private sector as indicated by the current statement.

> "*People are investing lots of [private] resources [in ECD] …because government cannot provide it so the private sector has come in but how well is the private sector doing... right now the biggest provider is the private sector but what is the quality.*"
> **Non-government staff 2, key informant interview.**

7.4.6 Limited health sector involvement in psychosocial Early Childhood Development

There are currently limited health sector involvement and services catering to psychosocial ECD. The NIECD policy's proposals for primary health care services reinforces the importance of including stimulation and care for development into traditional child health and survival programs (98, 100). However, the institutional arrangements for implementation lists the MoH's main roles and responsibilities as including delivering quality MCH services. These focus on maternal, newborn and child survival rather than development (98). The MoES remains the primary government agency responsible for play and stimulation in young children under the NIECD—though their public sector programs have limited contact with the target age of 0-3 years. Additionally, the NIECD Policy Action Plan lists water, sanitation, nutrition and environmental health as its MCH programs to be scaled up, it makes no direct mention of play and stimulation as a distinct part of these programs (100).

Under the NIECD Policy Action Plan the primary healthcare strategies include (100):
- Prenatal and postnatal care
- Preventive healthcare for children
- Reducing mother-to-child HIV transmission
- Increased access to safe water and environmental sanitation and
- Essential best practice health care.

These are necessary, but not sufficient for ECD. Furthermore, the action plan costings for primary healthcare, sanitation and environment—the key NIECD mandates for health—do not accommodate play and stimulation activities. In unpacking sectoral responsibilities for this multisectoral approach, informants indicated that the focus remains limited to prenatal and postnatal care, preventative health for children (specifically immunisation, nutrition and

curative services), reducing mother to child HIV transmission, increasing access to safe water and environmental sanitation. The early learning and stimulation programs that focus on ensuring young children demonstrate early learning and development is the responsibility of the MoES, with the MoH being listed as a supporting agency, but there is no indication of how the MoH contributes to play and stimulation in the policy documents (100). Accordingly, there is unclear direction on how the health sector can incorporate play and stimulation and address psychosocial ECD at the policy or program level.

The perceptions of psychosocial ECD among senior officials and decision makers further demonstrate that psychosocial ECD continues to be seen as the responsibility of the education sector. Upon elaborating on how psychosocial ECD was being addressed, pre-primary education services and private ECD centres were often discussed as the main points of contact to address psychosocial ECD during interviews. Some agencies were familiar with ECCD or CCD—mainly UNICEF, MoH, Plan Uganda, and Save the Children—but beyond these there was very limited acknowledgement of how the health sector can be involved with promoting learning, stimulation and psychosocial ECD in children under 3 years. This was mainly seen to be the role and responsibility of education services, specifically nursery schools and ECD centres. Senior decision makers at health facilities, multilateral agencies and NGOs also acknowledged the dilemma around the health sector's engagement in psychosocial ECD, noting that active involvement of the health sector in psychosocial ECD was not being adequately promoted at government and facility level. Different senior decision makers at health facilities candidly acknowledged that psychosocial ECD was not a health governance or service delivery priority. When discussing how health facilities were addressing psychosocial ECD, a senior clinician stated:

> *"The Ministry of Health in general has not had any clear structures or systems or policies as far as* [psychosocial] *Early Childhood Development from 0-2 years. Of course what we* [health] *have is mainly inclined in terms of healthcare and what we call growth monitoring and ensuring immunisation..."***Clinician 17, key informant interview.**

A key informant from a multilateral organisation also acknowledged the dilemma around psychosocial ECD and the need to revisit the health sector's role—extending beyond its conventional roles:

"… ECD seems to be… under education… it's not only education, but more importantly, each sector is kind of required to help interventions that promote development. For example… in the IMCI [Integrated Management of Childhood Illnesses]*, health recommended play and stimulation activities that ultimately will lead to… child development. We cannot say that* [play and stimulation] *is* [only for education]*, otherwise education only come in at three years. So health has got a lot to do indeed, and that's why we are designing the program and that is why this is multisectorial according to the ECD policy."* **Non-government staff 5, key informant interview.**

While the NIECD policy acknowledges learning and development as a key part of ECD, there is little clarity on how and when the health sector can engage and address psychosocial ECD. For health to play this extended role requires further policy on the timing and nature of health interventions for ECD and service delivery improvements that make the health sector accountable for early childhood learning and development activities, in addition to its current preventive care, health promotion and growth monitoring functions.

7.5   Summary of findings

The key findings present important contextual considerations on Uganda's ECD governance and how this will influence the scale up of CCD and care for psychosocial ECD. There is national level commitment to ECD in Uganda and the NIECD policy has been firmly established as the national strategic direction and commitment to ECD. It was discussed as the key strategic document and framework for ECD among all key informants. This policy involves a complex interplay of different sectors, which is critical to effectively addressing psychosocial ECD in public health. However, there was poor articulation on how the health sector can contribute to psychosocial ECD. Additional work is required to establish psychosocial ECD as a public health mandate and responsibility.

7.5.1   National commitment to Early Childhood Development is important

The commitment and accountability of the different ECD governance actors in Uganda are crucial elements and influences on the relevance, availability, and access to timely ECD and psychosocial ECD resources and services. The findings showcase a strong acknowledgement and commitment to the NIECD policy and, demonstrate nationally coordinated commitment and prioritisation of ECD. Interviews indicate the NIECD Policy has done a good job with placing ECD as a national priority among government and non-

government actors, with government agencies being committed to the policy. Respondents from influential non-government institutions, including leading ECD multilateral and international NGOS, are on board with the policy and aligning their activities with the NIECD policy initiatives. These are both a critical part of achieving an inclusive and coordinated approach that can lead to effective and positive ECD outcomes in Uganda. They also align with the principles of good governance as the NIECD policy is developed and dictates the strategic direction for ECD. Elements of partnership and accountability are evident as different stakeholder commit to the policy and become accountable to specific roles and mandates (196). However while there is an acknowledged collaborative commitment to NIECD policy the practical implications of an integrated approach have not been clearly identified. The different sectors continue to independently work on their technical areas and the interviews demonstrated uncertainty on how an integrated approach will be feasibly achieved.

7.5.2 Uganda's Early Childhood Development governance has multisectoral challenges and tensions

Research shows ECD's multisectoral nature makes determining and defining the governance roles and responsibilities difficult (58). The key challenges include different interpretations of the ECD issues and boundaries, and unclear understanding of the roles and accountabilities of the various actors (58, 87). These issues are also evident in Uganda. Despite universal acceptance of the need for multisectoral collaboration, themes around leadership capacity, leadership authority and appropriate distribution of resources were repeatedly raised. Participants raised concerns around the authority of MoGLSD leadership and its ability to effectively manage and achieve the multisectoral integrated ECD approach. In this regard, the governance of the NIECD policy remains a contested space, despite the clear policy direction. Additionally, Uganda's new ECD funding availability and resource redistribution created tension around allocation, specifically when the majority of funds are redistributed or allocated to 'new' ministries that are not seen to have the implementing capacity. Funding availability and allocation are key issues in LMICs. Limited funding creates competition among sectors and certain sectors (for example health) are seen to have an unfair advantage given the significant amount of funding that goes to child health programs (58).Though this makes sense especially with the global child survival pertinence, it creates tension as the multiples sectors compete for limited resources to deliver their ECD mandates.

While there is an acknowledged collaborative commitment to NIECD policy the practical implications of an integrated approach have not been clearly identified. The different sectors still continue to work independently in their respective technical areas, and are not collaborative in their efforts, which is indicative of ECD initiatives in LMICs (168). The number of ECD actors with different technical expertise creates a fragmented governance environment that hampers the national coordinated efforts (58, 87). Issues across prioritisation, roles and authority makes it difficult to easily develop and implement a cohesive multisectoral approach among different government ministries, multilateral agencies and NGODs (58). This presents challenges to the NIECD Policy outcomes and service delivery and also presents challenges to the successful integration of psychosocial ECD into health. If current tensions persist among ECD actors under their normal mandates, these are bound to translate with the inclusion of new mandates.

7.5.3 Effective political commitment will influence the success of the National Integrated Early Childhood Development approach

CCD scale up will need advocacy at all levels of governance. Globally research indicates that ECD needs political prioritisation, government commitment and enabling policy environment (6, 87). The findings on political commitment and district level government engagement highlight the importance of commitment and stewardship across all government levels. While government commitment is a central part of NIECD initiatives in Uganda, the ultimate success of NIECD is reliant on political will across the national and district level governments. Additionally, while political commitment is important, the context of this is also crucial to ensure resources and services are provided.

The political interest in care for psychosocial ECD and CCD in health is vital to effective scale up. The government's political powers of influences will be influential to CCD. The themes on political commitment show that to ensure effective CCD scale up, it is essential that strategic people of influence and power see positive psychosocial ECD as a health priority. Britto et al.'s research on ECD scale up governance arrangements, further supports this as their study showed the involvement of finance ministries was vital to ECD prioritisation in LMICs, given their funding power and influence (168). In a public health context, the highest levels of leadership need to see health's involvement as critical to psychosocial ECD. For effective and action orientated change to occur, it is important to ensure officials at the highest level of government and within the Prime Minister's Office consider CCD and psychosocial ECD a relevant health priority, particularly during the 0-3

year age range. But high-level support is not enough in isolation—this understanding then needs to be recognized by other governance leaders in district and institutional level government structures.

National and centralised ECD commitments and policies need to translate to local level government engagement and involvement for effective changes to be seen at communities. ECD research points to the importance of lower level governance engagement and the vertical coordination of national and local level governance that clearly states the roles and responsibility of local level government (as lower level government delegates) and their multisectoral engagement with the other local level counterparts (168). For Uganda, the findings show that there needs to be effective district and local level engagement in the NIECD approach, where their governance structure amalgamate the NIECD vision and goals into their district plans, priorities and agendas. This governance engagement is necessary not only for effectively delivery of the NIECD policy but also for CCD scale up. This shows for effective CCD delivery, the NIECD and CCD needs to be prioritised and operationalised by local level government. To enable community level changes, this important task needs to be done first before CCD can even be considered a priority and scaled up.

7.5.4 Increased health sector involvement in psychosocial Early Childhood Development

While high-level support is imperative, capacity and resources are also critical to service delivery. Uganda currently does not have the implementing mechanisms and services to support psychosocial ECD. ECD services are now being integrated across health, education, nutrition child protection and social services (6). The Ugandan health sector has unique opportunities to address psychosocial ECD by targeting caregivers when they access key RMNCH services (3). Their reach and access to children aged 0-5 years, make them a critical resource to begin addressing positive psychosocial ECD. The advancements across the expanded reproductive health services, immunisation coverage, and MCH nutrition promotion further emphasises how RMNCH primary healthcare cannot be ignored as a potential avenue for addressing, scaling up and systemising CCD and positive psychosocial ECD in health. The NIECD policy has partly recognised this by including play and stimulation into the health sectors mandate, however there is a disconnect between the policy, perceptions and implementing realities.

Uganda's NIECD policy includes an inclusive approach to ECD that addresses the physical, mental, emotional and social development of young children (98). The NIECD Policy appropriately acknowledges play, stimulation, learning and development as important parts of ECD that need to be effectively supported. Additionally, participants from the different sectors recognised the importance of play stimulation and learning to ECD outcomes. They acknowledge the different elements of ECD to '*include learning, include stimulation, include emotional psychological, physical development' and 'early childhood care and education'.* But there were few occasions where health was seen as an avenue for these activities during the interviews. While the MoH and public health sector are key players in the NIECD policy, there is a disconnect between the health sector's current psychosocial ECD functions and the expectations at the policy and service delivery level.

7.6   Conclusion

Uganda is at a pivotal time as it works to develop the NIECD approach. Development action in ECD requires a multistakeholder participatory process that involves interactions between, policy makers, frontline decision makers, service providers and research to provide an inclusive ECD environment. The NIECD policy analysis and key informant interviews has indicated that this is currently occurring at the national government level, however translating this to community and grassroots outcomes requires effective governance mechanisms at national and level lower level institutions including district level government, frontline facilities, communities and households. Effective ECD governance should translate national level priorities and systems to local level and community institutions. To demonstrate good and effective ECD governance in Uganda, there needs to be evidence that the national level ECD prioritisation follows through to lower level institutions and services especially understanding the concept, allocation of resources, and restructuring of services. This is particularly evident for psychosocial ECD as the expected policy level initiatives on play, stimulation and ECD, do not adequately match the service delivery plans, especially during the early childhood years between 0-3 years.

The findings point to the need to exercise the policy functions of governance — not just ensuring political support, but ensuring that the necessary re-imagining of ECD is understood by all actors and the radical demands are translated into action—especially for health this needs to be spelled out in practical terms.

Chapter 8: Results - health worker perceptions of care for psychosocial ECD and Care for Child Development.

8.1 Overview

This chapter presents the health worker perceptions on psychosocial ECD and CCD in Uganda and explores frontline health service capacities from their perspective. It elaborates on service delivery and health workforce component of the CCD framework, by exploring the frontline health worker perceptions and attitudes to psychosocial ECD in Uganda and its influence on service delivery. The chapter aims to gain insight on how frontline health workers perceive and conceptualise care for psychosocial ECD and what services, if any are being provided. It explores a) how health workers perceive psychosocial ECD; b) the extent to which it is part of their formal or informal role and c) the perceived barriers and opportunities to incorporating Care for Child Development (CCD) into existing reproductive, maternal and child healthcare remit. The findings are informed by key informant interviews and focus group discussions with nurses, midwives, doctors and Village Health Teams (VHTs) in Uganda.

8.2 Background

The conceptual framework in chapter four provides insight into the service delivery and health workforce components to CCD scale up. It highlights the importance of an interconnected CCD provider network and the mechanism to support these (53). Accounting for health worker perspective, the health worker staffing mix and integrated health service provision is an essential part of planning process (53). In chapter six the applications of the framework lists VHTS, midwives, nurses and doctor as suitable health workers to delivery CCD at RMNCH services. When exploring the potential network of CCD health workers, it is important to explore the existing strengths and perceptions of the current health worker as well.

To effectively address CCD at frontline health services, reforms and changes to models of care and service delivery are necessary and will involve changes to health workers roles and responsibilities. This is a complex matter and health workers resistance to change has been recognised as an important factor to the success or failure of reforms (181). Exploring the perceptions among frontline RMNCH workers is an important aspect of addressing ways to scale up services (195). Hyder's et al. paper on health systems research and policy discusses the importance of stakeholder and provider engagement to inform health system reforms stating *"Attitudes and understanding of workers in these institutions and those who*

use them – their framing of problems and solutions – influence performance" (195 p 311). Additional country case studies on achieving sustainable universal health coverage and health workforce scale up indicate that health workers' beliefs and bias will influence how they address health conditions and their scale up (181). This research proposes for CCD changes to Reproductive, Maternal, Newborn, and Child Health (RMNCH) care to be successful, the adoption of a grassroots approach that identifies the key health worker perceptions and attitudes to psychosocial ECD is an essential step. This should explore how health workers conceptualise and frame psychosocial ECD, what they perceive are the key development milestones associated with psychosocial ECD, and their understanding of caregiving required to promote healthy psychosocial ECD.

8.3   Summary of methods

Qualitative research methods were used to identify existing conceptualisation and perceptions of psychosocial ECD and CCD among frontline health workers. This explored health workers' perception of psychosocial ECD, and how they believed they supported psychosocial ECD using the CCD as a point of reference. To represent healthcare delivery at rural, semi-urban and urban locations, seven key informant interviews, seven focus group discussions and RMNCH care observations occurred at Kalangala Health Centre IV, Luweero Health Centre IV, and Mulago National Referral Hospital. The interviews and focus group discussions were used to generate data on child health service provision, how health workers were addressing psychosocial ECD and whether there was an enabling environment to support CCD. Healthcare observations were also used to explore whether there was an enabling environment to deliver systematic healthcare services for psychosocial ECD. Key informant interviews enable the in-depth exploration and discussion of topics while, focus group discussions can be used to discuss and conceptualise meaning through the exchange of ideas among a group relevant people (120, 126). These methods provided the opportunity for frontline healthcare workers to actively conceptualise and discuss the strengths and weakness in care for psychosocial ECD, CCD and child healthcare amongst each other. The aim was to use these to allow healthcare workers to formulate discussions, ideas and information on the healthcare environment and how that impacts on the quality and delivery of care for psycho-social ECD (126). Specifically, it focused on:

1. Exploring perceptions on how health workers are supporting child development
2. Exploring health worker opinions on how they support psychosocial ECD and

3. Obtaining perceptions on how feasible it is to incorporate psychosocial care into current child health.

The data generated from the interviews and focus group discussions were used to develop key codes, categories and themes across ECD governance and psychosocial ECD care in health using an inductive thematic analysis. The observations were used to contextualise how and when healthcare services can support CCD service delivery. Together these were used to develop concepts on psychosocial ECD and healthcare; to get insight on how health workers were addressing CCD and care for psychosocial ECD; to explore what healthcare workers consider this to involve and to examine how to feasibly incorporate CCD into RMNCH services. These are important as they provided practical insights into how healthcare workers are addressing psychosocial ECD, as well as the system challenges and benefits faced by frontline health workers.

8.4 Results

This chapter presents five key themes and findings associated with health worker perceptions of psychosocial ECD and health systems structural barriers.

Theme 1: Informal practices to promote positive caregiving and psychosocial ECD. There were informal practices being used to promote positive caregiving and psychosocial ECD. Health workers frequently discussed key CCD practices including play, talk and stimulation. However, this was an informal practice that was based on their own personal experiences, rather than through a structured and systemised approach.

Theme 2: Limited awareness of psychosocial ECD milestones. There was limited awareness of psychosocial ECD milestones, and the perceptions of psychosocial ECD varied among health workers. Because psychosocial ECD is not formalised, participants had different approaches towards it and different understanding of what it involves (i.e. some health workers were more knowledgeable than others).

Theme 3: Identified opportunities to address psychosocial ECD at frontline MCH services: There was a strong perception for the need for CCD and psychosocial ECD in healthcare and participants identified opportunities and points of contact to address CCD at frontline health services. These included health worker and community sensitisation and

training, delivering CCD at child wellness clinics and developing sector and community partnerships.

Theme 4: Emphasis towards addressing physical child health over psychosocial ECD. There was a strong emphasis towards physical child health and development over psychosocial ECD, with health workers more inclined to prioritise physical child health and development.

Theme 5: Health system structural challenges. There were structural health systems challenges and limitations to RMNCH service delivery. For example heavy workload and limited health worker capacity. Health workers were not empowered to take CCD forward in clinical settings and had resource limitations depending on location e.g. access to community support services or limited facility resources.

Table 8-1 provides an overview of the emerging themes, and corresponding categories and codes from the interviews and focus group discussions. Appendix 6 provides an overview of the reoccurring themes across the interviews, focus groups and observations.

Table 8-1: Summary of emerging service delivery themes and corresponding categories from interviews and focus groups

HEALTH WORKER PERCEPTIONS OF PSYCHOSOCIAL ECD				HEALTH SYSTEMS STRUCTURAL BARRIERS
Theme 1: Informal practices to promote positive caregiving and psychosocial ECD	**Theme 2: Limited awareness of psychosocial ECD milestones**	**Theme 3: Identified opportunities to address psychosocial ECD at frontline RMNCH services**	**Theme 4: Emphasis towards addressing physical child health over psychosocial ECD**	**Theme 5: Health system structural challenges**
Category 1: Care for psychosocial ECD informally addressed and encouraged by frontline health workers 1. Encourage caregivers to give time, show love, bonding and attachment 2. Encourage caregivers to provide toys for stimulation, 3. Encourage caregivers to talk and socialise with their infants and toddlers.	**Category 2:** Limited knowledge of CCD and psychosocial ECD milestones amongst frontline health workers. 1. No clear recognition of the different age related psychosocial ECD milestones 2. Differences in health workers' perception and understanding of infant psychosocial ECD capacities	**Category 3:** Integrating care for psychosocial ECD and CCD into existing MCH activities 1. Use existing MCH health platforms to delivery CCD – nutrition, immunisation, health education talks, child wellness clinics 2. Health worker training 3. Health worker sensitisation on CCD	**Category 4:** Prioritising physiological child health 1. Strong focus on physical child health and development 2. Health worker priority – preventing child death and disease 3. Health worker priority-promoting growth and development 4. Psychosocial ECD – parents or community–responsibility	**Category 5:** Health system challenges and impact on the quality and delivery of care 1. Heavy workload 2. Health workers not empowered 3. Resources distribution inequities. 4. Lack of respect 5. Differences in health workers capacity to address psychosocial ECD

8.4.1 Informal practices to promote positive caregiving and psychosocial Early Childhood Development

Participants had a common understanding of how positive caregiving can support psychosocial ECD. When discussing how they address psychosocial ECD and the CCD practices listed in the CCD poster, many health workers were aware of practices to promote psychosocial ECD among infants and children. Both the interviews and focus group discussions provide clear demonstrations of how health workers engaged in informal practices to promote positive and responsive caregiving and psychosocial ECD. In some instances health workers would tell mothers to play and talk to their child, demonstrating an understanding of CCD key concepts. There was a basic understanding of how to use caregiving to encourage psychosocial ECD but this was not consistent and depended on an individual health worker's background and personal experiences. The key themes from the interviews and focus groups included encouraging love and bonding between mothers and their infants and encouraging mothers to engage in responsive and stimulating parenting by talking to their babies and giving them time. When discussing how they advise mothers who are worried about their infants language delays, a VHT illustrates the importance of a stimulating environment by stating:

> *"We first assess the environment surrounding the baby. Probably the baby isn't talking because it has no one at home and is lonely…* [we tell mothers] *to get someone to stay, spend time with the baby. It could be because of the environment that the baby might delay to reach some stage of development."* **VHT 8, Focus Group Discussion.**

When talking about positive and responsive caregiving health workers explained the importance of engaging in stimulating health care and encouraging mothers to give time to their child, play and socialise with their child, and provide a safe and stimulating home environment. Participants also discussed making mothers aware of the impact of negative caregiving and the importance of empowering mothers with knowledge on positive caregiving. A nurse illustrates this by stating:

> *"…But also the care, you might not have what to feed the child but your care as a mother to that child will help the child so much. You should be there for your children. Because there are some who are also negligent, they don't care… So we tell them to be so much loving to their children."* **Clinician 3, key informant interview.**

When health workers described how they encouraged parents to engage with their children, they frequently discussed how play and stimulation can be used to promote and address psychosocial ECD. Midwives, nurses, doctors and VHTs all empathised with how caregivers could promote psychosocial development often discussing how talk and play can be used to engage and stimulate children. At an individual level, there seemed to be an intuition among female health workers who spoke of their own experiences as a parent and how they encouraged or engaged children in play and stimulation. A nurse from one of the health centres provided examples of how she encouraged mothers to stimulate and play with their child stating:

> "And when a child is actually looking at you, staring at you, it means you should also give a positive feedback and start smiling back. Start talking to your child. Like when a child is crying; you just don't keep quiet. But when you are comforting the child you should be talking, don't just shake the baby while you are quiet. But communicate Munange silikawo [please keep quiet] with the baby. Because the child will know 'I' am in safe hands, there is somebody caring and there is somebody around me" **Clinician 26, focus group discussion.**

Additionally, a midwife related to her own experience and discussed how she actively talked and sang to her baby during pregnancy

> "… at one time I learnt from a bit of psychology that these kids listen to us and understand us even when they are still in the uterus. So it is like I experienced it when I talked to one of my child. I used to have a particular song for this child, already had a name for him before he was born. So I would talk to him like say am so tired and the baby was over kicking; so when I gave birth the baby knew this song and whenever he was crying I would sing for him this song and he falls asleep. He grew up knowing this song and that is how I relate with him up to now and he knows." **Clinician 19, focus group discussion.**

Also a VHT worker discussed how she encouraged mothers to play with their babies using toys stating:

> "Sometimes you may find the child crying and you tell the mother to improvise a toy from the available resources. Some parents can come and say the baby isn't playing

and as if they are sick; and when you run tests the baby is normal. So you advise the mother to give the child something to play with and then you see that there is a change" **VHT 8, focus group discussion.**

While a stronger sense of empathy and relatedness was evident among female health workers, the majority of male health workers also recognized the importance of play and stimulation to child development (and aligned it with other child health areas). For example when discussing how to address delays in children's language development, a male clinician from a health center, advised caregivers to use play and stimulation to assist with delays, stating:

"*And for others* [with delays] *we just need to stimulate play. Like for example, a baby can be there when they are leaving maybe it's the first child, they are in an enclosure so the baby is all to themselves, the mother is all to themselves, the father is all to themselves, so in some case when they link up with their peers they help to stimulate with their growth and development and some of them will have to eventually catch up.*" **Clinician 5, focus group discussion.**

When the health workers discussed how they engage, caregivers in play and talk you could observe their sense of empathy and enjoyment. The stories they provided on how they encouraged mothers to stimulate and talk to their child showed a sense of warmth, happiness and gratitude and demonstrated a sense of satisfaction from this. During the observation and reflections of the focus group interactions, it was clear to see how they personally related to psychosocial ECD and how it gave them a sense of enjoyment.

8.4.2 No strong concepts of formal psychosocial Early Childhood Development milestones

A core understanding of psychosocial ECD was present among the participants. A large majority of doctors, nurses, midwives and VHTs all acknowledged speech development (language), infant-mother socialisation and playing as a key part of child development. The key themes included smiling, play and stimulation, talking and socialising (understanding) with one nurse stating:

"*Let me first go back to smiling, that is how a child is socialising with the community… And attachment and belonging.*" **Clinician No. 13, focus group discussion.**

Additionally, some health workers discussed development outcomes relating to seeing, hearing, touching to stimulate exploration for learning and infant recognition of mothers (carers). One of the nurses from the health centre provided a good example of how health workers conceptualised the psychosocial ECD development milestones.

> "*… when* [the baby] *starts smiling it starts playing with the mother and also getting interested in the environment because it can start staring at the sky, looking around and seeing whatever the environment* has." **Clinician 26, focus group discussion.**

However, there was no reference to formal psychosocial ECD milestones. While they recognised key elements of psychosocial ECD, there was limited recognition of the different development stages and milestones by the participants.

There were also clear differences in how participants conceptualised or understood psychosocial ECD and what was required to encourage this area of development. Differences existed in when and how they envisioned psychosocial ECD milestones to occur. For example, midwives and nurses from the paediatric and public health units demonstrated good knowledge on how to encourage psychosocial ECD. They discussed cases where they had identified problems in psychosocial development and advised mothers to talk to the baby during pregnancy and the early years to stimulate language development; socialise with the infant to encourage learning; and giving the baby time and show love to encourage bonding and attachment. A nurse illustrates this awareness by explaining how she encouraged a mother to teach and engage with their toddler;

> "*I used to always talk to the postnatal mothers when they are going home that when they reach home, they shouldn't leave the babies alone, be with them, and talk to them because much as they are babies they understand though we think they don't understand. Talk good words, tell the baby everything like dad is away but he will come back in the evening. Dad has gone to look for money so that we can survive. Mothers were very proud of it and one of them said it is true because she used to do it and the baby was so good to her and responding.*" **Clinician 19, focus group discussion.**

In contrast, some nurses were less aware of the psychosocial ECD milestones and showed limited knowledge about the cognitive and psychosocial capacities of children during

pregnancy and the neonatal days. While they were aware that infants have mental and social capacity, they had different perspectives on when this began. For example during one focus group, the nurses debated if a child could hear at one-day old. In one case, a participant thought that it was pointless to talk to the infant until it was two weeks old.

Furthermore, some health workers were more inclined to discuss psychosocial development in the context of physical conditions and revert to a child's physical health challenges. When talking about psychosocial ECD the participants would often put this in the context of physical child health development. At times, respondents associated psychosocial development delays with physical impairments or extreme circumstance such us deafness, tongue tie or mental retardation. For example, when discussing how they address psychosocial ECD development delays, some participants would relate delays to physical impairment such as deafness or tongue tie. When discussing how they counsel mothers on delays associated with talking or socialising, one nurse states:

> *"Sometimes it's a tongue tie and they need to cut it…So you advise the mother to take the baby for that minor surgery."* **Clinician 30, focus group discussion.**

Physical impairments and tongue tie was also raised by another participant in a separate focus group. When discussing how they counsel mothers whose children are having problems with socialisation and language development, they state**:**

> "*… but then there are some others for example if their speech is [delayed] or if they are not talking like we expect them to we look at things such as tongue tie, then we help but in most cases the midwives look out for this at birth and take care of it but in some cases which sneak out of the systems so that if they have tongue tie then we release and we free the tongue and some of them they catch up with time*" **Clinician 5, Focus Group Discussion.**

8.4.3 Identified opportunities to address Care for Child Development and psychosocial Early Childhood Development in maternal and child health services

There was a strong sense of how CCD can be addressed, promoted and introduced at RMNCH health services. Participants mainly cited health worker training and the use of health education and child wellness clinics as points of contact to address CCD. Health

workers from all facilities identified opportunities where CCD could be integrated into current RNMCH service delivery. A key theme was providing and promoting positive caregiving practices at specific RMNCH services including, health education settings, clinical waiting rooms and general child health clinics. A doctor acknowledges the healthcare system challenges while also presenting opportunities to incorporate CCD at immunisation clinics.

> "*But* [CCD] *might be difficult in the clinical rooms; however sometimes we have special clinics for the children like the immunisation clinic...In such a clinic we can easily pass on this* [CCD] *information because it is specific to the children; we can give the whole day for that.*" **Clinician 3, focus group discussion**

Interviews with senior management staff on how psychosocial ECD and CCD was being addressed also indicated that there are existing services and structures to address this area of child development. Key services listed included immunisation services, well child clinics, nutrition services, and child health wards. However these were not being appropriately used. A senior clinician states:

> "*If ECD is* [happen] *in health institutions, the aim is to tag [it] onto immunisation clinics, [immunisation has] worked well and [is] institutionalised. The best way to address issues of child development is to tag them to immunisation, family planning and ANC. Right from ANC let mothers be educated on social issues of children, and when mother comes for PNC [and] for immunisation*" **Clinician 17, key informant interview**

Improving health workers' capacity to deliver care for psychosocial ECD and CCD, through training and sensitisation was another identified opportunity to address CCD. Sensitisation (knowledge) of health workers and communities on psychosocial ECD was a reoccurring theme raised when discussing ways to encourage CCD. Health workers talked about the importance of being sensitised about psychosocial ECD as well as being trained in CCD. This was often raised as a key part of improving MCH service delivery and psychosocial ECD development. A health worker highlighted the importance of being equipped with the right knowledge and skills.

> "*So introducing it into our work circle would begin by sensitizing and having training. In the different areas and then after the training the implementation of the training we*

need to assess to see whether we have really understood what we are doing then we can try it out with a few cases or patients and then reassess and then we reassess to see if the intervention is working or not. If it is really working then we can scale it up and adapt it slowly into the systems." **Clinician 4, key informant interview.**

Furthermore, a nurse in a separate focus groups discussion reiterates this by stating:

"*Maybe even nurse we would also specialise in areas like play therapy, speech therapy, those areas which may delay the growth and development we need to specialise. Either we train.*" **Clinician 15, focus group discussion.**

Community engagement and participation in CCD and child health and development was a reoccurring theme in the focus groups and interviews. There was specific reference to the influence of cultural traditions (e.g. religion and witchcraft) on caregiving and, the importance of community sensitisation on CCD. One respondent talked of how when children suffer from development challenges they can be regarded as cursed and subsequently neglected. This further highlights the importance of community sensitisation. Additionally, during the observations there was a strong sense of community engagement and involvement in child rearing.

The participants also discussed the importance of sector and community partnership and using these to improve how RMNCH services address psychosocial ECD. They particularly discussed referrals and partnership with other sectors (e.g. education pre-primary sector) and working with faith-based organisations and community services to support child development. For example, when discussing how they advise mothers whose infants experience development delays a clinician talks about how they connect them to education services stating:

"*Okay what we do, I'll give an example there is some baby I saw and she was one and half years and they were not growing well and the mother was working class and goes in the morning and comes back in the evening. So what we did we advised that we take the baby to a day care centre where there are very many other babies. So when they went to a day care centre within one year the baby had showed some good improvements and progress in the development of some of these milestones.*" **Clinician No. 5, Focus Group Discussion,**

Observations at the different health facilities also showed a sense of community among health workers working in rural and semi-urban locations. The doctor, nurses and VHTs displayed friendly interactions with the people attending their clinics. There was a friendly environment and stronger sense of community in these areas as opposed to urban locations. Also, from a health systems perspective, the differences in community engagement between urban and rural health facilities was a reoccurring theme across focus group discussions and interviews. VHTs, community outreach and community engagement where seen as an advantage that rural and semi-urban health centres had over urban facilities. The below quotes demonstrate the differences experienced in a hospital setting versus a health centre setting.

"… it would have been good if you could use the VHTs in the community to remind [mothers] because most of them they don't follow up the schedule … but we lack that VHT…Like when you go to the rural, those other health facilities are attached to them which is not the same with hospital" **Clinician 15, focus group discussion.**

"…When you go to them you feel good to know where a particular mother stays … they are also happy to see that the health worker has at least come nearer to them… When you go to them they are very happy; bring you seats and also give you food and you eat…It even helps us make friends with them…It makes them comfortable and always come back for more services because they develop trust in you….They also feel great and cared for when they see you in their villages." **Clinician 26, focus group discussion.**

8.4.4 Emphasis towards addressing physical child health and development over psychosocial Early Childhood Development

There was a tendency for health workers to prioritise physical child health and development outcomes over psychosocial ECD outcomes. When discussing ECD health workers were more inclined to talk about how they prevent child disease and death. Psychosocial ECD was often seen as the parents' or community's responsibility and participants were more inclined to discuss their role in preventing common childhood illnesses and disease. For example, before the CCD prompts were presented, when concepts around positive caregiving were discussed health workers often listed practices to do with healthy physical

development such as good nutrition, immunisation, hygiene and sanitation with little mention of psychosocial ECD aspects such as play and stimulation.

Furthermore, discussions on child health priorities within different facilities indicate that preventing child morbidity and mortality was a key priority for health workers. Participants discussed health promotion activities that encouraged mothers to prevent childhood illness or death by attending antenatal care (ANC) during pregnancy, exclusive breastfeeding for six months, having healthy maternal and child nutrition, immunising their babies, promoting hygiene, preventing malaria, preventing diarrheal diseases and Prevention of Mother to Child Transmission (PMTCT) of HIV. When discussing child health and development, health workers frequently mentioned the clinical practices and activities used to monitor growth and development milestones. They emphasised the importance of physical health and development. This included promoting growth and development by actively monitoring milestones including healthy weight gain and head and arm circumference. When discussing milestone development and making sure children are talking, walking, and ruling out abnormalities, a nurse provided a useful illustration of the child health priorities by stating:

> "*Most especially at* [this clinic] *we have a management plan as they come, we first health educate them and then we also screen, we carry out growth monitoring so when the weights are less according to the age, we find out what is the cause of the less weight. We also advise them on nutrition. And then another management plan, we screen and assess whether they are eligible for immunisation*" **Clinician 15, focus group discussion.**

The importance of maternal and child nutrition was another recurring theme that reiterated the priority to address physical child health and development. Maternal and child nutrition was recurring priority across all interviews and focus groups. Health workers repeatedly stressed the importance of nutrition to ECD outcomes. This focused on preventing child malnutrition by promoting exclusive breast feeding for six months; promoting good nutrition; preventing low birth weight and preventing stunting. When discussing the child health areas they promote, a VHT provides a useful demonstration of how health workers prioritise nutrition in child health by stating:

> "*Exclusive breastfeeding up to six months to boost the immunity and brain…. Because according to what I have seen; children who aren't breastfed sometimes develop mental*

retardation or they may not be very bright in school. A fully breastfed child is normally bright in school unlike one who wasn't breastfed". **VHT 7, focus group discussion**.

8.4.5 Health system challenges - large workload, resource inequities, limited empowerment and lack of respect

There were a number of structural health systems challenges discussed by health workers across all locations. In the context of CCD and care for psychosocial ECD, they discussed how current healthcare services were not effectively dealing with this area of child development, often listing issues such as, lack of knowledge, resources and time. Additionally, heavy workload, resource inequities, lack of empowerment and lack of respect were reoccurring themes raised in the focus group discussions and interviews. The task and heavy workload of health workers was a frequently occurring theme and barrier to delivering basic health services. Not having enough time or resources to deliver care was a challenge raised by the health workers. The capacity and resource limitations made it difficult for health workers to meet the basic healthcare roles yet alone addressing psychosocial ECD. In order to be efficient in the face of a large patient work load, a 'check list' approach to care was common, which focused on doing the immediate job and moving onto the next patient or task. When talking about the challenges they face, a health worker stated:

"Heavy workload; the nurse to patient ratio is high….When you think of staying with a mother for more hours talking to her yet there are 50 more mothers waiting outside for the same; you cut short everything because you have to make sure you cover every mother who has come so that they all benefit. So you take shorter time than required." **Clinician 25, focus group discussion.**

Further to this, health workers discussed experiencing poor treatment, often citing lack of respect and high expectations from patient. In many case this influenced their motivation as the poor treatment had a negative effect on their work motivation. Some examples include:

"The community has very high expectations, I face a challenge when you do not have necessary drugs sometimes you need to write something but it is not available and the patients can't afford it. Being a free health service, it becomes difficult because people expect to get these services free of charge and they are not there, you cannot tell them to go to buy these medicines and yet we have to write for them the medicines. So what

I am saying is workload, high expectation and lack of essential supplies or drugs those are the 3 major challenges" **Clinician 5 key informant interview.**

They don't respect us. They compare you with where they have been and how they have been treated; so they come to you with a bias knowing that you are also going to treat them the same way." **Clinician 26, focus group discussion.**

Resource inequity between urban and rural health facilities was a common theme, where clinicians in rural facilities discussed the additional resources their urban counterparts received and vice versa. The clinicians discussed the difference in allowances, drugs and commodities, community links among urban and rural facilities, discussing how the other got more. There were also evident resources and capacity differences between the different facilities. The observations of RMNCH services in urban locations identified a heavy work load and high patient load. They were more focused on delivering core services with less time for sociable interactions than RNMCH services in the semi-urban and rural locations. The number of patients and health worker load in urban settings, did not bring out a sense of community that was evident in the rural and semi urban locations. Health workers provided their care in efficient manner. Whereas, health workers in rural areas while still having high workloads, had a lower number of mothers to deal with than their urban counter parts. They were more engaged with the mother and at times they also engaged in informal CCD practices.

8.5 Summary of findings

The findings indicate that there was an informal recognition of the importance of play and stimulation to child development. However, there was no strong conceptualisation of how health services can systematically promote psychosocial ECD, and there was no formalised system addressing this with mothers and children receiving RMNCH services from health workers. When discussing how they support child health and development, health workers were more inclined to discuss how they dealt with common childhood illness and disease that have been formalised through systems such as the National Expanded Immunization Program, Intergrated Management of Childhood Illness (IMCI) and clinical care for childhood sicknesses. The practice of care for psychosocial ECD and CCD partly exist. However, this is informal with no strong conception of how it should be progressively encouraged according to an infant's age and capacity. Based on the findings, the following sections discuss the actions required to formalize and strengthen CCD.

8.5.1 Formalising psychosocial Early Childhood Development perceptions in health

Strengthening and scaling up CCD at frontline health services will require formalising psychosocial ECD perceptions in health. While health workers demonstrated basic knowledge on positive parenting, the perceptions of infant psychosocial ECD capacities varied among health workers. There was a notable difference between what people understood psychosocial ECD to be and their perception of infant's psychosocial ECD capacities. Observations indicated that health worker experience in public health and in health promotion, influenced how they framed and approached psychosocial ECD. Those with a background in public health and reproductive maternal and child health promotion, demonstrated a stronger sense of what psychosocial ECD involved and how to encourage positive development among infants. They identified ways to equip mothers and caregivers with basic parenting skills to address psychosocial development.

The differences in perception of infant psychosocial ECD were mainly around when infants developed their psychosocial ECD capacities. Additionally, some health workers talked about referring mothers to specialist services (e.g. tongue tie), indicating a more 'extreme' approach to psychosocial development milestones, whereby they focused on delays and curative care. While the latter is important for severe development delays, this approach is not necessary when trying to promote caregiving for positive psychosocial ECD at the primary health care level (16, 26, 41). This suggests that certain health workers do not have an awareness of the initial positive caregiving practices for psychosocial ECD. Additionally, this signifies the need to change perceptions on psychosocial ECD among health workers so they are aware of practices and understand how they can be an initial point of contact for promoting and addressing psychosocial ECD. Achieving this will require including psychosocial ECD in medical school curricula, in health workers' training and incorporating it into RMNCH roles, similar to the Baby-friendly Hospital Initiative efforts made to systematically include exclusive breastfeeding into RMNCH workers roles (6, 197). This involved health facility management changes that included developing feeding policies, M&E systems and improving health worker competencies and skills; and clinical practice changes that required health workers to advise, counsel, support and manage MCH health nutrition practices among caregivers and infants (197). Systematically integrating nutrition into RMNCH facilities and health workers' roles showed improvement to the duration of exclusive breastfeeding amongst mothers attending primary health care services from high and low income countries (164, 198-200). Additionally, integrating exclusive breastfeeding practices into RMNCH workers roles showed drastic changes and improvements in how

health workers dealt with healthy infant nutrition as they began to advocate, promote and support exclusive breastfeeding (198-200). The perceptions of the importance of nutrition changed through proactive inclusions into their training and knowledge. This approach should be used for CCD and should ideally focus on fostering changes to RMNCH clinical practice and perceptions by informing health worker on what psychosocial ECD is, why it is important and upskilling health workers in CCD and care for psychosocial ECD. Furthermore, it will be important to ensure training and upskilling occurs across all levels of health workers to ensure care for psychosocial ECD and CCD is systematically accounted for at all levels of service delivery and planning.

8.5.2 Using heath workers' informal psychosocial Early Childhood Development practices to formalise Care for Child Development.

Care for psychosocial ECD and CCD can be formalised and developed from existing informal practices. The findings demonstrate that a majority of the participants were aware of the core caregiving practices required to encourage positive psychosocial development among infants. There was a general understanding of how play and talk can stimulate psychosocial child development among the participants, and health workers demonstrated basic knowledge on the principles of positive care for psychosocial ECD. Fundamental terms and concepts around brain stimulation, secure attachment, language development and socialisation, were discussed by health workers. These aligned with current evidence based and best practice concepts of psychosocial ECD and positive caregiving which emphases the importance of age appropriate play and stimulation (35, 45, 201).

Additionally, when participants were discussing the principles of play and talk to child development, there was a strong "informal" understanding on how to use positive parenting to support psychosocial ECD (i.e. playing and talking with infants, giving infant time). What was lacking was how they systematically engaged mothers to promote and provide age appropriate care for psychosocial ECD. While they acknowledge key principles behind play and stimulation, they did not specify how this varied and requires different approaches as the child grows (refer to section **2.3** for details on age appropriate play). For example, the respondents did not clearly distinguish that during the first 0-4 months of life, talking to a infant involves copying their sounds and as the child grows older you begin to talk to using simple language or instructions (45). They simply referred to the general act of talking as important to the child development.

The existence of informal psychosocial ECD practices, and the perceptions towards CCD provide are an important stepping stone to begin addressing and formalising care for psychosocial ECD and CCD in health. Research indicates attitudes towards program acceptability can be a strength or barrier to successful health systems changes and integration (202). Particularly, in the context of evidence-based policy and implementation, the acceptability and appropriateness of programs by health workers has been identified as an influence on how effective health systems changes are (202, 203). If health workers are already informally addressing CCD this can present a potential level of acceptability and an existing foundation for formalisation. To scale up CCD, it will then be important to ensure health workers are all aware, knowledgeable and skilled in age appropriate caregiving for psychosocial development milestones. Upskilling health workers in what needs to happen, how it needs to happen and when it needs to happen will be important for improved CCD services. The existing informal practices and perceptions provide a good starting point to address this, and would provide initial pathways to make health workers aware of CCD and formalise their counselling and practices to follow the recommended activities.

8.5.3 Integrating Care for Child Development into existing Reproductive Maternal, Newborn, and Child Health practices

The physical child health focus and the pathways to address CCD in the existing RMNCH identified by health workers are an important consideration for scale up, as they each provide a platforms to consider for CCD integration. Extending from this are health worker perceptions of its integration and how this will influence scale up. For example, a case study on the integration of other MCH service into immunisation services in four African countries showed the perceptions of integration and its benefits to the provision and access to care were important influences to the effective integration of services, particularly if health worker and community saw a value add and efficiency to the integration of new services (204). Effectively integrating and scaling up CCD will need to take into account how it's perceived and becomes an accepted part of RMNCH care services. By identifying points of contact in existing RMNCH the health workers acknowledge how CCD can be provided alongside current child health services, which can suggest a positive approach to its integration.

Health workers from each of the facilities recognised the need to encourage nurturing parenting, which includes play and stimulation among other areas like healthy nutrition, healthy weight gain and preventing illness. There was space for psychosocial ECD, however this was seen as an "add-on" to what health workers were required to address. There was

little recognition of the formal role the healthcare services and health workers could have with promoting psychosocial ECD. When it came to child health and development, the key themes from the interviews and focus group discussions demonstrated greater acknowledgement of formalised RMNCH healthcare practices the focus on growth and development over psychosocial ECD. This often included promoting healthy nutrition for mothers and children, ensuring children were developing as per the international growth and development milestones, preventing common illnesses and, MCH promotion services such as immunisation, ANC visits and PMTCT of HIV services. While they acknowledge play and simulation as important to nurturing caregiving, this demonstrated a strong focus on ensuring the physical child health and wellbeing.

In Uganda, physical child health and development is still the first priority and call of action for health workers. The findings indicate an emphasis towards physical child health and development outcomes, which remained a priority over psychosocial ECD among the participating health workers. This was aligned with national priorities that focus on promoting physical child health and preventing child illness and death (103, 205). For example, the focus on preventing common childhood illness (such as malaria, malnutrition, promoting vaccination) was frequently related to Uganda's national child health priorities and the political, governance and management priorities set around the Millennium Development Goals (MDGs) and Uganda's child mortality reduction goals (103). The emphasis on physical child health is expected when dealing with reproductive, maternal and child health workers. Given the nature of their training and professional backgrounds health workers are more inclined to address child disease and death as a priority. Furthermore international, national and government priorities surrounding the MDGs and Sustainable Development Goals (SDGs) promote a maternal and child public health mandate that ensures health sectors in LMICs are primarily focusing on preventing common maternal and childhood illness and disease (1, 15, 206). The intention here is not to argue that psychosocial ECD should be prioritised over child mortality or morbidity but that it should supplement the current agenda. CCD scale up should incorporate it in ways that ensures health workers are promoting psychosocial ECD alongside existing RMNCH priorities.

The physical child health and development focus will need to be the platform to include CCD and care for psychosocial ECD in Uganda. Information, knowledge and skills on psychosocial ECD should be delivered alongside existing RMNCH priorities including healthy pregnancies, nutrition, immunisation and prevention of common childhood illnesses.

For example, messages on a foetal psychosocial development and abilities during pregnancy should be provided alongside messages on foetal development, maternal nutrition and maternal wellbeing during antenatal care services. In this particular circumstance, embedding this within existing RMNCH promotion activities at ANC care clinics and family planning will ensure messages are delivered to expecting mothers in a timely manner. If done effectively this can also prompt mothers to consider engaging in her infant's psychosocial development during pregnancy, which is considered vital to promoting psychosocial ECD (43, 72, 73). However, how health workers perceive its integrated and overall benefits to MCH care will influence how well CCD services are accepted and integrated and considerations around workload, capacity, feasibility and health worker motivations are important (203, 204).

8.5.4 The impact of health system structural challenges to Care for Child Development scale up

The health worker challenges will influence how effectively CCD is scaled up and delivered by health workers. Staff shortages, limited health worker capacity and lack of equipment are some of the health systems constraints impacting MCH service delivery (202, 204, 207). The heavy workload and resource inequity findings present challenges to general care which also extend to how CCD can be addressed at health facilities. If health workers are struggling to meet their current RMNCH tasks and roles due to limited capacity, adding additional tasks that require more interactive engagement and time will be a challenge that needs to be considered when exploring CCD scale up (50). While larger health system-wide changes are required to address the health worker constraint (207), interim solutions can focus on working within the current strengthens and limitations. For CCD this ideally needs to identify how feasible it will be to incorporate CCD into the existing health worker roles and what are the suitable points of contact to deliver it. For example, the nature of health facilities located in rural, semi-urban and urban locations presents an important element and avenue to CCD scale up and delivery. The findings on health worker community engagement indicate that being in a remote and semi-urban location can allow health workers to build connections and friendships with their patients and could further foster a conducive environment for CCD and psychosocial ECD. Additionally, having more direct interactions with the community, through the VHTS, provides an opportunity to be more engaged with mothers and their children and to promote CCD and psychosocial ECD. These circumstances and considerations are important when exploring the most effective and appropriate points of contact for scale up. Using the existing community interaction and engagement strengths is

a potential avenue for CCD implementation and scale up, where health workers with the ability to engage with mothers more (e.g. VHTs) can provide longer consultations, supplemented by shorter consultations at busy health facilities. The joy and empathy the health workers demonstrated when they discussed CCD could be another strength. Having positive and empathetic responses to CCD and psychosocial ECD could suggest that CCD would be a healthcare practice that health workers enjoy and are motivated to do.

8.6   Conclusion

For Uganda's population healthcare services to actively address psychosocial ECD, it is important to understand the relevance of psychosocial ECD and the perceptions held by frontline health workers on how it fits into their roles. Currently, Uganda's health systems do not provide a formal structure for health workers to deliver CCD and care for psychosocial ECD. To effectively prioritise and scale up care for psychosocial ECD at frontline healthcare services, CCD initiatives, need to be formalised and embedded within the existing primary, secondary and tertiary reproductive maternal and child healthcare services. This will require a strategic approach that emphasises its importance and significance among other more 'tangible' elements of physical child health and development. The key findings suggest that changes in perceptions of psychosocial ECD at frontline healthcare services is required for CCD to be formally delivered. Frontline health workers need to be empowered to delivery CCD through training, upskilling and sufficient knowledge on the importance of psychosocial. These can each be built from the existing informal perceptions on psychosocial ECD, using these to formalise psychosocial ECD into a relevant child health priority that health workers need to support.

In addition, both health system and operational level changes will be necessary for CCD scale up. The findings identify system level themes that focus on integrating it into existing RMNCH service and operational level themes that focus on improving health worker knowledge, sensitisation, training and upskilling. Health workers identified pathways and points of contact where CCD could be included in existing RMNCH services. These include addressing CCD in child wellness clinics, immunisation services or community health information sessions. In Uganda's context, this should involve addressing CCD alongside key RMNCH services including nutrition, immunisation, and prevention of common childhood illness activities. Scale up will require embedding CCD into the MCH nutrition, immunisation and curative services and exploring how to support health workers to deliver these alongside their existing roles and foster positive health worker perceptions on CCD.

Chapter 9: Integrating psychosocial Early Childhood Development in health: Opportunities, strengths and challenges.

In this thesis, I highlight the importance of ECD—specifically, early interventions that promote positive psychosocial ECD—and detail the multisectoral challenges to ECD implementation in Uganda. I demonstrates the importance of engaging the health sector in psychosocial ECD, and conceptualises how Care for Child Development (CCD) can be practically integrated into existing Reproductive, Maternal, Newborn, and Child Health (RMNCH) services within Uganda. I analyse the governance challenges across leadership authority, capacities, funding and implementation, and the service delivery challenges associated with limited infrastructure and health workforce constraints. Drawing attention to the tensions implicit in integrating CCD strategies into a heavily loaded RMNCH program. These strategies will not only require the addition of new tasks to the workload of current health staff, but also the re-orientation their services to include CCD activities that may not generate immediate perceptible outcomes, but they will lay down the developmental foundation that psychosocial ECD offers children during their lifecourse.

ECD is necessarily multisectoral. Countries are beginning to recognise this by developing multisectoral policies and services that address health, nutrition education, water and sanitation across the reproductive, infancy and early childhood lifecourse as illustrated in **Figure 9-1** (3). I unpack the multisectoral and interconnected nature of ECD, and the strengths and challenges that interdependency presents to scaling up care for psychosocial ECD in Uganda. The strengths come from the synergies that arise in enabling positive ECD outcomes in Uganda. This requires multiple government agencies, sectors and facilities, with different ECD technical areas, to work together to facilitate change, which is happening with the NIECD policy approach. However, achieving effective multisectoral governance, resources allocation and implementation is a substantial challenge.
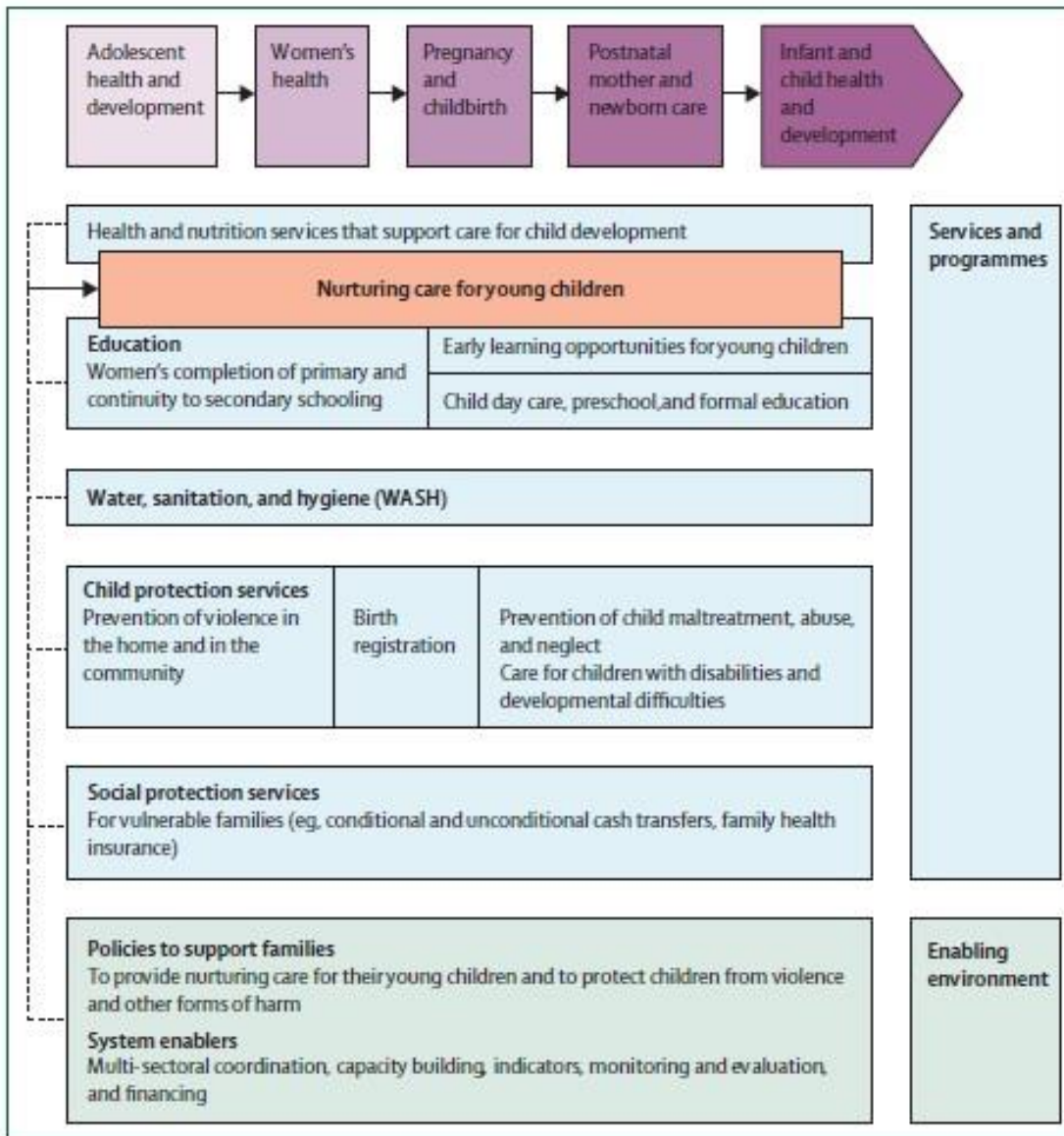
Figure 9-1: The multisectoral approach to ECD (6 p 3)

Uganda's holistic approach to ECD ensures that psychosocial ECD is integrated into the initiatives and narratives that are currently being supported by government agencies, NGOs and service providers. However, for children aged 0-3 years, the challenges of healthy child nutrition and growth positions psychosocial ECD as a lower priority when dealing with child health and development. The assumption is in health the protection of child health alone is sufficient for ECD. This ignores the complex interplay between physical and psychological health and wellbeing, and their interdependence for health and development. Addressing this requires proactive health initiatives at the policy and implementation level that promote positive psychosocial ECD alongside other child health and development outcomes — both extending the remit of early childhood health services, but requiring a substantial reimagining of them that incorporates psychosocial ECD care practices.

The policy analysis, interviews, focus groups and observations undertaken in this research demonstrate national government endorsement and recognition of ECD in Uganda. Psychosocial ECD is currently being addressed by the education sector; however the critical window of opportunity is now in health. The findings of this research indicate that there is an openness and receptivity among frontline health workers that reflects the policy consensus on psychosocial ECD, but concerns that they don't have the structure, resources and time to address this within their current workloads. Each of these elements calls for more action on the governance and implementation of psychosocial ECD within RMNCH services.

This chapter synthesises the findings of the thesis and presents the implications for CCD scale up in Uganda and their potential application to other LMIC contexts. It concludes by discussing the Ugandan government's multisectoral ECD approach and the challenges associated with leadership authority and implementation capacity and mechanisms. It acknowledges strategic political commitment and local level government engagement as an important prerequisite for CCD scale up and sustainable commitment, and summarises health worker perceptions and health worker capacity implications for implementation. It points to the importance of reorientating RMNCH workers roles to incorporate CCD, while acknowledging the reality of overburdened RMNCH workers and facilities and the challenges they present to the integration of CCD into health.

9.1 Extending the whole-of-government Early Childhood Development approach to psychosocial Early Childhood Development

Uganda has made important gains in ECD by making it a national multisectoral priority. This research reflects the strength of national endorsement of ECD in Uganda. The findings from documentary review and in-depth interviews confirm national government commitment and the prioritisation of ECD through the involvement, accountability and engagement of multiple ministries in the National Integrated ECD (NIECD) policy. The research also demonstrates an accepted multisectoral ECD approach where partnerships and collaborations among government ministries, multilaterals and NGOs are being used to plan and deliver the NIECD approach. The integration of ECD across sectors and within existing structures emerged as a key theme in key informant interviews, with participants highlighting the importance of incorporating NIECD into existing ministerial mandates and their sectoral structures. However, while there was strong consensus on multisectoral engagement at the policy level, the mechanisms for achieving this was unclear. Challenges across leadership authority, implementing capacity and funding were evident, and the research identifies

tensions around the ECD roles, responsibilities and capacities. While the Ministry of Gender Labour and Social Development (MoGLSD) is the lead government ministry for the NIECD policy, their capacity to guide and deliver the process was questioned in the interviews. These challenges raise uncertainty over governance arrangements for an effective and inclusive multisectoral approach, at the policy, program and service delivery level.

While there were strong notions of government policy solidarity on ECD, the research also demonstrated the difficulties in translating that into effective political commitment, extending government endorsement from national to strategic government engagement. Critical insights from high-level key informants highlighted the importance of political action, and the inclusion of strategic departments such as the President's office and the National Finance and Planning department in the NIECD policy. In this scenario, participants acknowledged political advocacy and strategic engagement of top-level government officials as essential for effective and sustainable change. These are critical when considering ways of prioritising psychosocial ECD and scaling up CCD in health. While the Ugandan government currently endorses ECD, sustained political commitment to CCD and psychosocial ECD in health remains necessary. Clearly, for system wide changes to occur, the governance and framing of psychosocial ECD in health requires ongoing political and national prioritisation and ownership (58).

In addition to the government and political commitment, the research shows district and local level commitment and engagement was also necessary for sustainable change. This requires operationalising the NIECD policy at the district and local level and adapting existing structures to deliver it.

This research has shown that achieving CCD scale up in health in Uganda will now require top level leadership to develop and drive national level actions on CCD principles, guidelines, resources allocation and funding allocation. It shows the NIECD policy has made important steps in bringing together national stakeholders to collectively agree on the different sectoral ECD inputs required to provide comprehensive services. It has also fostered national bisectoral and multisectoral partnerships and a collaborative environment to delivery ECD. However there are still challenges around how to implement and deliver the mutlisectoral ECD approach. To make changes to the current psychosocial ECD environment, effective planning and operationalisation are required at the top level of government and public health systems, which includes both national and district level

government and facility and community level governance (6). Having established the priority, the national government now needs to integrate psychosocial ECD outcomes into the matrix of public health performance and indicators, using CCD as a mechanism for this, and ensuring psychosocial ECD outcomes are routinely monitored. These measurable elements for CCD governance will need to be established at all levels of the health system, with formal policies, rules and regulations developed at the national level and transferred down to district and facility level entities—as explored in chapter six which applies the conceptual framework for CCD scale up to Uganda's health sector. This positive stewardship for ECD at the national level can translate into district and facility level health systems, where management encourages RMNCH workers to deal with psychosocial ECD alongside other child health priorities, incorporating CCD into RMNCH priority setting at the national level, and influencing lower levels of governance and stewardship. These translational steps are critical to responding to the prioritisation concerns raised by frontline key informants. Developing national government CCD and psychosocial ECD initiatives can have a cascading effect whereby national level commitment, policies and action plans on CCD and psychosocial ECD are adopted and implemented by senior management at district, community and facility level.

9.2 Opportunities to implement psychosocial Early Childhood Development and Care for Child Development in health

While Uganda has made important national governance advancements in ECD, this research questions the adequacy of implementation mechanisms for psychosocial ECD for children aged 0-3 years. While advocacy for multisectoral and integrated services emerged strongly in interviews, there were limited strategies identified to achieve this at the service delivery level. Despite recognition of the importance of psychosocial ECD—even among health professionals—there was limited engagement of the health sector as a whole. As experienced in other contexts (87), this research indicates that in Uganda, psychosocial ECD perceptions and services are primarily located in the domain of education and social development, with limited mechanisms for integration into the health sector. This highlights a critical gap: that while the vital contributions of play, learning and stimulation to support psychosocial ECD are increasingly being made available through the education sector, this is not effectively reaching children aged 0-3 years. Given the health services potential to engage this age group, they offer an important window of opportunity to develop a continuum of interventions for psychosocial ECD.

The health sector offers many service delivery platforms to address psychosocial ECD during the 0-3 years age bracket. This research demonstrates how Uganda's existing RMNCH services can address this gap by systematically providing CCD at antenatal care (ANC), postnatal care (PNC), nutrition services, immunisation services and child health services. However the reported perceptions of psychosocial ECD among governance stakeholder and health workers indicate that changes to the perceptions, prioritisations and implementation of psychosocial ECD services need to occur across all levels of governance and service delivery.

9.3 Changing Reproductive, Maternal, Newborn, and Child Health care and the perceptions of psychosocial Early Childhood Development in health.

This research provides initial insight into how health workers in Uganda perceive psychosocial ECD and, provides inroads into what currently exists and what is currently being promoted in the areas of psychosocial ECD and health. The findings showed that RMNCH workers have empathy towards psychosocial ECD (based on their personal child care experiences) allowing for a positive perception towards it. Interviews and focus groups confirmed that they were informally promoting CCD and care for psychosocial ECD by telling the mothers to give their child time and talk to their child, addressing key concepts on play and stimulation. They also showed a sense of joy in discussing how CCD was being addressed among them. They acknowledged the importance of including CCD into RMNCH service through sensitisation, training and also acknowledged the importance of partnerships with the education sector facilities and the community. Despite this evidence of openness to enriching infant engagement through RMNCH services, the participants acknowledged having limited knowledge of CCD and psychosocial ECD. There was a strong focus on physical child health and development, mainly the prevention of common childhood illnesses and a persisting interpretation of psychosocial ECD through physical child health and development lens. The research also identified workplace and structural constraints as key limitations to health worker capacities. They voiced their concerns around heavy workloads, not having enough time, capacities and resources to do their current jobs—before even considering extending that workload to address CCD. The focus group discussions and observation also showed that structures and resources were insufficient to assist them with addressing CCD. These key challenges will have implications on how well CCD is scaled up and delivered, particularly when dealing with RMNCH health workers.

CCD frontline service delivery needs to ensure care for psychosocial ECD is systematically addressed by all frontline health workers. While models of childcare can be adapted to include CCD, achieving appropriate delivery will need effective behaviour change among RMNCH workers, as they reimagine their roles to deliver MCH care. The extent of behaviour change will depend on the conceptualisation and perceptions of psychosocial ECD and its importance. The assumption that psychosocial ECD can be added to routine RMNCH services is, unfortunately, unrealistic. Given their strong child health focus and heavy clinical loads, structural, workforce and resourcing changes are required that redefine RMNCH roles to accommodate CCD and provide health workers with the knowledge and tools to deliver CCD. Without reorienting those services, providing additional training and resources, and restructuring services to provide the kinds of interactions that model the behaviours integral to psychosocial ECD, the necessary translation of psychosocial ECD into the RMNCH service context cannot be achieved. Delivering CCD requires a different form of child-centred interaction that allows health workers to be more interactive and engaged with the caregiver and child. Currently frontline RMNCH services in Uganda and LMICs are overburdened and poorly resourced and as a result MCH services are often checklist orientated. This is not conducive to the nature of CCD services. RMNCH models of care and service delivery need to be reorientated to allow for space to interact and discuss with clients at RMNCH services. Milestones—already recorded in child growth monitoring—need to include psychosocial ECD markers, and thresholds for referral and intervention clearly marked. Play needs to be modelled— during waiting times and locations need to be adapted to enable this to occur—and the style of interaction between health staff and mothers will need to adapt, shifting the balance towards interactive responsive exchanges, rather than efficient, but "top-down" instruction.

9.4   Conclusions

Achieving positive psychosocial ECD is a problem for all emerging economies. The literature on ECD and psychosocial ECD demonstrates its global significance for sustainable development, by presenting its influence on health, social development, mental wellbeing and economic engagement. Globally we are seeing significant momentum around investing in ECD and early interventions. The Sustainable Development Goals (SDGs) have included psychosocial ECD and Early Childhood Care and Development (ECCD) as a global priority, calling for quality ECD, care and pre-primary education (15). Research has also endorsed the importance of ECCD services and interventions, often citing the need for multisectoral

approaches that incorporates positive caregiving, health, nutrition, education, environmental safety, and child and social protection services.

There have been calls for collective responsibility from governments, development partners, organisations, civil society, communities and families to ensure that children are provided with the means to positive health and development through integrated multisectoral packages, though achieving these is challenging (7, 14). Increasingly, we need to deal with complex multisectoral responses to multifaceted ECD issues. Even with ECD policy prioritisation and political consensus, implementation remains unclear, with limited leadership delegation undermining coordinated sectoral efforts and concerns around implementing capacity. Finite funding allocations create tensions around who can and should deliver ECD and how. The introduction of new ECD actors creates tensions with established ECD players over available resources, and differing sectoral approaches and priorities. If RMNCH services are to promote CCD, they are unable to do this with the current health worker vocational orientation and resource base.

The lessons learned from exploring Uganda's multisectoral ECD response are a template for the evolving ECD governance and the incorporation of psychosocial ECD in health, and have relevance for other LMICs seeking to extend their engagement in psychosocial ECD. It calls for a phased approach that involves deliberate governance and policy framing; strategic resource allocation; integrated multisector engagement of health in psychosocial ECD; and frontline health workforce capacity building. Senior leadership, policies and direction need to effectively account for psychosocial ECD in health at the national, district and facility level. Extending psychosocial ECD to health builds on this political commitment and health sector accountability to include district and local level government commitment that can facilitate prioritisation of psychosocial ECD. Pragmatically, RMNCH workers and facilities are central to scaling up CCD at MCH services as psychosocial ECD becomes a child health priority in RMNCH services. But the integration of psychosocial ECD into RMNCH services redefines their roles, and requires reorientation of their perceptions and behaviours towards psychosocial ECD. If service delivery changes are to be achieved, new vocational skills will be required to build health worker capacity, and the physical and health service "space" extended so that CCD can be incorporated in ways that add a minimal workload burden. This will be difficult in the current overburdened MCH care environment, and in the context of larger health systems challenges and requires incremental changes that address the above.

9.5 Research challenges, gaps, and limitations

While key measures had been taken to ensure quality, rigour and validity, the following challenges, gaps and limitations have been acknowledged.

Multisectoral inclusion and challenges*:* The multisectoral nature of ECD means they are many interconnected stakeholders that play an important role in psychosocial ECD. This presents both a strength and a challenge particularly when trying to establish clear pathways for change in a multifocal context filled with many different stakeholders and players across different levels of society. The thesis primarily focused on selected governance and health service delivery influences to CCD scale up. Given the time and resources available, it was difficult to capture all the possible ECD stakeholders involved and the thesis specifically focused on influential governance and service delivery stakeholders. Exploring how to capture a complete and relevant picture of psychosocial ECD influences within the health systems thinking boundaries and, the time and resource constraints meant many community level stakeholders—for example local level government representatives, caregivers, ECD centres—were not able to be included in the research. These are important parts of psychosocial ECD and further research that explores the roles and influences of these stakeholders on CCD scale up is required.

Central government and central Uganda focus*:* The thesis aimed to examine a representative sample of Uganda's national health governance arrangements and its rural, semi-urban and urban health services. This resulted in a central government and a geographic sample and focus. Uganda has many districts and local levels of government. Focusing on the national government and central Uganda provides important initial insight into the situation. However, not exploring how other local level government and regions are managing psychosocial ECD is a limitation. While the research provides valuable insight into the national and central Ugandan circumstances, further research on other regions, districts and local level government is necessary to provide comprehensive picture or the strengths and limitations to CCD scale up.

Cultural context: The thesis aimed to look at how to strengthen CCD in Uganda's health services. It specifically focused on the health systems requirement components and context for CCD scale up. The cultural context will need to be further explored to gain insight on the community and societal influences. The caregiving provided to infants and children happens in a cultural context with multiple societal and community influences. Male involvement and

cultural caregiving beliefs were key data themes that would influence how CCD and psychosocial ECD were addressed at a governance and community level. Research has also acknowledged the importance of male involvement in caregiving and child health and development (67, 208). Male sensitisation to CCD, engagement in ECD and RMNCH involvement were raised as important influences on how CCD is addressed across all levels of society. Additionally the influence of cultural, traditional and religious beliefs on mother's behaviour, caregiving practice and health services utilisation were also raised as key influences on CCD practice and caregiving. These are important governance, facility and community level factors that would need to be further investigated and explored in a social behavioural context and applied to the systems planning and scale up.

Grassroots community engagement: Because the scope of the research was to look at the health system governance and service delivery factors, insight from caregivers - mothers, father, extended family and hired help – was excluded. By focusing on the systems components to CCD scale, the thesis aimed to capture frontline health workers as community representative of the healthcare systems. While they are a crucial part to explore the health systems changes, the engagement of caregivers is critical for sustained household level changes. Future studies should focus on grassroots and community engagement and explore how to effectively use existing community and caregiving capacities and practices to promote health and positive psychosocial ECD. This should look at exploring how mothers, fathers, extended family and hired help can be effectively engaged to bring about positive changes to caregiving practices and psychosocial ECD.

List of References

1. World Health Organization. Health in 2015: from Millennium Development Goals to Sustainable Development Goals. Geneva, Switzerland: World Health Organization, 2015.

2. United Nations. The global strategy for women's, children's and Adolescents' Health 2016–2030. Every Woman Every Child. New York: United Nations; 2015.

3. Daelmans B, Darmstadt GL, Lombardi J, Black MM, Britto PR, Lye S, et al. Early childhood development: the foundation of sustainable development. The Lancet. 2016;389(10064):9-11.

4. United Nations, editor Transforming our world: the 2030 agenda for global action -final draft of the outcome document for the United Nations Summit to adopt the post-2015 development Agenda. United Nations Sustainable Development Summit,; 2015; New York: United Nation.

5. United Nations. The Millennium Development Goals Report 2014. New York, USA: United Nations, 2014.

6. Richter LM, Daelmans B, Lombardi J, Heymann J, Boo FL, Behrman JR, et al. Investing in the foundation of sustainable development: pathways to scale up for early childhood development. The Lancet. 2016.

7. Britto PR, Lye SJ, Proulx K, Yousafzai AK, Matthews SG, Vaivada T, et al. Nurturing care: promoting early childhood development. The Lancet. 2016.

8. United Nations. The Millennium Development Goals Report 2015. New York, United States: United Nations; 2015.

9. Black RE, Morris SE, Bryce J. Where and why are 10 million children drying every year? The Lancet. 2003;361:2226 - 34.

10. Jones G, Steketee RW, Black RE, Bhutta ZA, Morris SS. How many child deaths can we prevent this year? The Lancet. 2003;362(9377):65-71.

11. Bryce J, el Arifeen S, Pariyo G, Lanata CF, Gwatkin D, Habicht J-P. Reducing child mortality: can public health deliver? The Lancet. 2003;362(9378):159-64.

12. World Health Organisation, World Food Programme, United Nations System Standing Committee on Nutrition, UNICEF. Community-Based Management of severe acute malnutrition: a joint statement by the World Health Organization, the World Food Programme, the United Nations System Standing Committee on Nutrition and the United Nations Children's Fund. Geneva Switzerland: United Nations; 2007.

13. Grove J, Claeson M, Bryce J, Amouzou A, Boerma T, Waiswa P, et al. Maternal, newborn, and child health and the Sustainable Development Goals—a call for sustained and improved measurement. The Lancet. 2015;386(10003):1511-4.

14. Lo S, Das P, Horton R. A good start in life will ensure a sustainable future for all. The Lancet. 2016;389(10064):8-9.

15. United Nations. Transforming our world: the 2030 agenda for Sustainable Development A/RES/70/1. 2015.

16. Lucas JE, Richter LM, Daelmans B. Care for Child Development: an intervention in support of responsive caregiving and early child development. Child: Care, Health and Development. 2017;44(1):41-9.

17. Irwin LG, Siddiqi A, Hertzman C. Early Child Development: a powerful equalizer - final report for the World Health Organization's commission on the social determinants for health. World Health Organization, 2007.

18. Grantham-McGergor S, Cheung YB, Cueto, S., , Glewwe P, Richter L, Strupp B. Development potential in the first 5 years for children in developing countries. The International Child Development Steering Group. The Lancet. 2007;369(9555):60-70.

19. Walker SP, Wachs TD, Meeks Gardner J, Lozoff B, Wasserman GA, Pollitt E, et al. Child development: risk factors for adverse outcomes in developing countries. The Lancet. 2007;369(9556):145-57.

20. Rebello Britto P, Engle PL, Super CM. Handbook of early childhood development research and its impact on global policy. Oxford: Oxford University Press; 2013.

21. Olusanya BO. Priorities for early childhood development in low-income countries. Journal of Developmental and Behavioral Pediatrics. 2011;32(6):476-81.

22. Naudeau S, Kataoka N, Valerio A, Neuman MJ, Elder LK. Investing in young children: an early childhood development guide for policy dialogue and project preparation. Washington, DC: World Bank; 2011.

23. McCartney K, Phillips DA. Blackwell handbook of early childhood development. Malden, Mass; Oxford: Blackwell Publishing; 2005. Available from: http://www.blackwellreference.com.ezproxy.library.uq.edu.au/subscriber/book.html?id=g9781405120739_9781405120739.

24. Young ME, World Bank. From early child development to human development: investing in our children's future. Washington, D.C: World Bank; 2002.

25. Allen G. Early intervention: the next steps. An independent report to Her Majesty's government. . The Stationery Office: London; Cabinet Office, 2011.

26. Holt RL, Mikati MA. Care for child development: basic science rationale and effects of interventions. Pediatric neurology. 2011;44(4):239-53.

27. UNICEF, World Health Organization. Integrating Early Childhood Development (ECD) activities into Nutrition Programmes in emergencies. Why, what and how. Geneva, Switzerland: United Nations; 2012.

28. Grantham-McGregor SM, Powell CA, Walker SP, Himes JH. Nutritional supplementation, psychosocial stimulation, and mental development of stunted children: the Jamaican Study. The Lancet. 1991;338(8758):1-5.

29. World Health Organization. A critical link: interventions for physical growth and psychological development: a review. 1999.

30. Hill Z, Kirkwood B, Edmond K. Family and community practices that promote child survival, growth and development: a review of the evidence. Geneva, Switzerland: World Health Organization; 2004.

31. Centre on the Developing Child. Enhancing and practicing executive function skills with children from infancy to adolescence. In: Centre on the Developing Child HU, editor. Activities guide: enhancing and practicing executive function skills with children from infancy to adolescence. Cambridge, Massachusetts2014.

32. Engle PL, Black MM, Behrman JR, Cabral de Mello M, Gertler PJ, Kapiriri L, et al. Strategies to avoid the loss of developmental potential in more than 200 million children in the developing world. The Lancet. 2007;369(9557):229-42.

33. Cabral de Mello M, Ulkuer N, Engle PL. WHO/UNICEF Joint Initiative for promoting early childhood development through health system Care for Child Development. Early Childhood Matters. 2010.

34. Walker SP, Chang SM, Vera-Hernandez M, Grantham-McGregor S. Early childhood stimulation benefits adult competence and reduces violent behavior (Report). Pediatrics. 2011;127(5):849.

35. Eshel N, Daelmans B, de Mello MC, Martines J. Responsive parenting: interventions and outcomes. Bulletin of the World Health Organization. 2006;84(12):991-8.

36. Eckenrode J, Campa M, Luckey DW, Henderson CR, Cole R, Kitzman H, et al. Long-term effects of prenatal and infancy nurse home visitation on the life vourse of youths: 19-year follow-up of a randomized trial. Archives of Pediatrics & Adolescent Medicine. 2010;164(1):9-15.

37. Yousafzai AK, Obradović J, Rasheed MA, Rizvi A, Portilla XA, Tirado-Strayer N, et al. Effects of responsive stimulation and nutrition interventions on children's development and growth at age 4 years in a disadvantaged population in Pakistan: a longitudinal

follow-up of a cluster-randomised factorial effectiveness trial. The Lancet Global Health. 2016;4(8):e548-e58.

38. Walker SP, Chang SM, Powell CA, Grantham-McGregor SM. Effects of early childhood psychosocial stimulation and nutritional supplementation on cognition and education in growth-stunted Jamaican children: prospective cohort study. The Lancet. 2005;366(9499):1804-7.

39. Daelmans B, Black MM, Lombardi J, Lucas J, Richter L, Silver K, et al. Effective interventions and strategies for improving early child development. BMJ : British Medical Journal. 2015;351.

40. Siddiqi A, Irwin LG, Hertzman C. The total environment assessment model of early child development. Evidence Report for the World Health Organization's Commission on the Social Determinants of Health, OMS. 2007.

41. Walker SP, Wachs TD, Grantham-McGregor S, Black MM, Nelson CA, Huffman SL, et al. Inequality in early childhood: risk and protective factors for early child development. The Lancet. 2011;378(9799):1325-38.

42. Olds DL, Kitzman H, Cole R, Robinson J, Sidora K, Luckey DW, et al. Effects of Nurse Home-Visiting on maternal life course and child development: age 6 follow-up results of a randomised trial. Pediatrics. 2004;114(6):1550-9.

43. Ertem IO, Atay G, Bingoler BE, Dogan DG, Bayhan A, Sarica D. Promoting child development at sick-child visits: a controlled trial. Pediatrics. 2006;118(1):e124-e31.

44. Richter L. The importance of caregiver-child interactions for the survival and healthy development of young children. A review. Geneva, Switzerland: World Health Organization, 2004.

45. World Health Organisation, UNICEF. Care for child development: improving the care for young children. Geneva, Switzerland2012.

46. Centers for Disease Control and Prevention. Learn the signs. Act early - developmental milestones

47. Woodhead M, Oates J, editors. Early childhood in focus: developing brains. Milton Keynes, United Kingdom: Open University; 2012.

48. Avan BI, Raza SA, Kirkwood BR. A community-based study of early childhood sensory stimulation in home environment associated with growth and psychomotor development in Pakistan. International Journal of Public Health. 2014;59(5):779-88.

49. Gladstone M, Phuka J, Thindwa R, Chitimbe F, Chidzalo K, Chandna J, et al. Care for Child Development in rural Malawi: a model feasibility and pilot study. Annals of the New York Academy of Sciences. 2018;14191(1):102-19.

50. Slemming W, Saloojee H, Berry L, Biersteker L, Dawes A, Lake L, et al. Beyond survival: the role of health care in promoting Early Childhood Development. South African Child Gauge. 2013:50-5.

51. Swanson R, Cattaneo A, Bradley E, Chunharas S, Atun R, Abbas KM, et al. Rethinking health systems strengthening: Key systems thinking tools and strategies for transformational change. Health Policy and Planning. 2012;27(4):iv54-iv61.

52. De Savigny D, Adam T, editors. Systems thinking for health systems strengthening. Geneva: Alliance for Health Policy and Systems Research, WHO; 2009.

53. World Health Organization. Everybody's business: strengthening health systems to improve health outcomes : WHO's framework for action. Geneva: World Health Organization; 2007.

54. Siraj-Blatchford I, Woodhead M. Effective Early Childhood Programmes. In: Woodhead M, Oates, J., editor. Early childhood in focus. Walton Hall, Milton Keynes, United Kingdom: The Open University; 2009.

55. Karoly LA, Kilburn MR, Cannon JS. Early Childhood Interventions: Proven Results, Future Promise. Santa Monica, California: RAND Corporation; 2005.

56. UNICEF Uganda. Early Childhood Development: a solid investment in Uganda's future - research briefing. Kampala Uganda2013.

57. Heckman JJ, Moon SH, Pinto R, Savelyev PA, Yavitz A. The rate of return to the High Scope Perry Preschool Program. Journal of Public Economics. 2010;94(1):114-28.

58. Shawar YR, Shiffman J. Generation of global political priority for early childhood development: the challenges of framing and governance. The Lancet. 2016;389(10064):119-24.

59. Black MM, Hurley KM. Investment in early childhood development. Lancet. 2014;384(9950):1244-5.

60. Frongillo E, Kulkarni S, Basnet S, Castro F. Family care behaviors and Early Childhood Development in Low and Middle Income Countries. Journal of Child and Family Studies. 2017;26(11):3036-44.

61. Schweinhart LJ, Weikart DP, Barnes HV. Significant benefits: the High-Scope Perry Preschool study through age 27. Ypsilanti, Michigan: High/Scope Press; 1993.

62. Olds DL, Kitzman HJ, Cole RE, et al. Enduring effects of prenatal and infancy home visiting by nurses on maternal life course and government spending: Follow-up of a randomized trial among children at age 12 years. Archives of Pediatrics & Adolescent Medicine. 2010;164(5):419-24.

63. Engle PL, Fernald LCH, Alderman H, Behrman J, O'Gara C, Yousafzai A, et al. Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries. The Lancet. 2011;378(9799):1339-53.

64. Bornstein MH, Putnick DL. Cognitive and socioemotional caregiving in developing countries. Child Development. 2012;83(1):46-61.

65. Oberklaid F, Baird G, Blair M, Melhuish E, Hall D. Children's health and development: approaches to early identification and intervention. Archives of Disease in Childhood. 2013;98(12):1008-11.

66. Yousafzai AK, Rasheed MA, Rizvi A, Armstrong R, Bhutta ZA. Effect of integrated responsive stimulation and nutrition interventions in the Lady Health Worker programme in Pakistan on child development, growth, and health outcomes: a cluster-randomised factorial effectiveness trial. The Lancet. 2014;384(9950):1282-93.

67. Singla DR, Kumbakumba E, Aboud FE. Effects of a parenting intervention to address both maternal psychological wellbeing and child development and growth in rural Uganda: a community-based, cluster randomised trial. The Lancet Global Health. 2015.

68. Muennig P. Can universal pre-kindergarten programs improve population health and longevity? Mechanisms, evidence, and policy implications. Social Science & Medicine. 2015;127:116-23.

69. Dua T, Tomlinson M, Tablante E, Britto P, Yousfzai A, Daelmans B, et al. Global research priorities to accelerate early child development in the sustainable development era. The Lancet Global Health. 2016;4(12):e887-e9.

70. World Health Organization. Infant and young child feeding - tools and materials. In: Organisation WH, editor. Geneva, Switzerland: World Health Organization; 2009.

71. Engle PL, Najimidinova G, Agency of Sociological and Marketing Surveys Kazakhstan, Faromuzova K. Care for Development in three central asian countries-report of a process evaluation in Tajikistan, Kyrgyz Republic, and Kazakhstan. UNICEF, 2011.

72. Petrovic O, Yousafzai A. Promoting Care for Child Development in community health services - a summary of the Pakistan Early Childhood Development scale trial. Early Childhood Development Unit, Programme Division, Three United Nations Plaza, New York, NY 10017: United Nations Children's Fund, 2013.

73. Jin X, Sun Y, Jiang F, Ma J, Morgan C, Shen X. "Care for development" intervention in rural China: a prospective follow-up study. Journal of Developmental and Behavioral Pediatrics. 2007;28(3):213-8.

74. World Health Organization, UNICEF. Building global capacity for the implementation of the WHO/UNICEF Intervention Care for Child Development: report on the Interagency workshop. World Health Organization/UNICEF, 2013.

75. Wendland-Carro J, Piccinini CA, Millar WS. The role of an early intervention on enhancing the quality of mother-infant interaction. Child development. 1999;70(3):713-21.

76. Cooper PJ, Landman M, Tomlinson M, Molteno C, Swartz L, Murray L. Impact of a mother - infant intervention in an indigent peri-urban South African context: Pilot study. The British Journal of Psychiatry. 2002;180(1):76-81.

77. Mejia A, Calam R, Sanders MR. A Review of Parenting Programs in Developing Countries: Opportunities and Challenges for Preventing Emotional and Behavioral Difficulties in Children. Clinical Child and Family Psychology Review. 2012;15(2):163-75.

78. Gardner JM, Walker SP, Powell CA, Grantham-McGregor S. A randomized controlled trial of a home-visiting intervention on cognition and behavior in term low birth weight infants. The Journal of Pediatrics. 2003;143(5):634-9.

79. Nahar B, Hamadani JD, Ahmed T, Tofail F, Rahman A, Huda SN, et al. Effects of psychosocial stimulation on growth and development of severely malnourished children in a nutrition unit in Bangladesh. European journal of clinical nutrition. 2009;63:725-31.

80. Hamadani J, Huda S, Khatun F, Grantham-Mcgregor S. Psychosocial stimulation improves the development of undernourished children in rural Bangladesh. The Journal of Nutrition. 2006;136(10):2645-52.

81. Walker SP, Chang SM, Powell CA, Simonoff E, Grantham-Mcgregor SM. Effects of psychosocial stimulation and dietary supplementation in early childhood on psychosocial functioning in late adolescence: follow-up of randomised controlled trial. British Medical Journal. 2006;333(7566):472.

82. Nahar B, Hamadani JD, Ahmed T, Tofail F, Rahman A, Huda SN, et al. Effects of psychosocial stimulation on growth and development of severely malnourished children in a nutrition unit in Bangladesh. European Journal Of Clinical Nutrition. 2008;63:725.

83. Rahman A, Iqbal Z, Roberts C, Husain N. Cluster randomized trial of a parent-based intervention to support early development of children in a low-income country. Child: Care, Health and Development. 2009;35(1):56-62.

84. Dusing CS, Brown ES, Van Drew MC, Thacker RL, Hendricks-Muñoz DK. Supporting play exploration and early development intervention from NICU to home: a feasibility Study. Pediatric Physical Therapy. 2015;27(3):267-74.

85. Singla DR, Kumbakumba E. The development and implementation of a theory-informed, integrated mother-child intervention in rural Uganda. Social Science & Medicine. 2015;147:242.

86. Kapil U. Integrated child development services (ICDS) scheme: a program for holistic development of children in India. The Indian Journal of Pediatrics. 2002;69(7):597-601.

87. Black MM, Walker SP, Fernald LCH, Andersen CT, DiGirolamo AM, Lu C, et al. Early childhood development coming of age: science through the life course. The Lancet. 2016;389(10064):77-90.

88. World Health Organization, Department of Child and Adolescent Health and Development (CAH), UNICEF. Handbook : Integrated Management of Childhood Illness. Geneva, Switzerland: WHO publications; 2005.

89. Brett E. State failure and success in Uganda and Zimbabwe: the Logic of political decay and reconstruction in Africa. The Journal of Development Studies. 2008;44(3):339-64.

90. Ministry of Finance PaED. The Millennium Development Goals report for Uganda 2013: drivers of MDG Progress in Uganda and implications for the Post-2015 development agenda. Kampala, Uganda: Government of Uganda, 2013.

91. Department for International Development. Summary of DFID's work in Uganda 2011-2015. Department for International Development; 2012.

92. AfDB, OECD, UNDP, ECA. "Uganda" African economic outlook 2012: promoting youth Employment. African Economic Outlook 2012: Promoting Youth Employment: OECD Publishing; 2012.

93. Uganda Bureau of Statistics and ICF International Inc. Uganda Demographic and Health Survey 2011. In: Statistics UBo, editor. Kampala, Uganda2012.

94. Ministry of Health, Health Systems 20/20, Makerere University School of Public Health. Uganda health system assessment 2011. Kampala, Uganda and Bethesda, MD.: Health Systems 20/20 project, Abt Associates Inc, 2012.

95. Uganda Bureau of Statistics. National population and housing census- provisional Results. Kampala, Uganda2014.

96. Ministry of Health. The second National Health Policy: promoting people's health to enhance socio-economic development. In: Health Mo, editor. Government of Uganda, Kampala.2010.

97. Ministry of Education and Sports. The Early Childhood Development policy. In: Childhood DoE, editor. Kampala, Uganda: Government of Uganda; 2007.

98. Ministry of Gender Labour and Social Development. National Integrated Early Childhood Development Policy of Uganda. In: Ministry of Gender LaSD, editor. Kampala, Uganda: Ministry of Gender, Labour and Social Development.; 2016.

99. Ministry for Gender Labour and Social development. The Uganda National Integrated Early Childhood Development Policy-Final Draft. In: Ministry for Gender lasd, editor. 2013.

100. Ministry for Gender Labour and Social development. The National Integrated Early Childhood Development Policy Action Plan of Uganda (2016-2021). . In: Ministry for Gender Labour and Social Development, editor. Uganda2016.

101. Ministry of Education and Sports. Early learning and development standards for 3 and 5 year olds. In: department P-p, editor. Kampala, Uganda: Government of Uganda.; 2015.

102. Uganda Bureau of Statistics. The national population and housing census 2014 – education in the thematic report series. Kampala, Uganda. 2017.

103. Ministry of health. Reproductive Maternal Newborn and Child Health sharpened plan for Uganda In: Primary Health Care Division, Reproductive Health Division, Child Health Division, editors. Kampala, Uganda2013.

104. Ministry of Health. Mother Child Health Passport. Kampala, Uganda. 2012.

105. Bashaasha B, Najjingo M, Nkonya E. Decentralization and rural service delivery in Uganda. IFPRI Discussion Paper 01063. The International Food Policy Research Institute (IFPRI), Development Strategy and Governance Division. 2011.

106. Ministry of Health. Guidelines for governance and management structures. In: Health Mo, editor. Government of Uganda, Kampala2013.

107. Ministry of Health. Health Sector Strategic Plan III 2010-2015. In: Health Mo, editor. Government of Uganda, Kampala2010.

108. Waiswa P, Pariyo G, Kallander K, Akuze J, Namazzi G, Ekirapa-Kiracho E, et al. Effect of the Uganda Newborn Study on care-seeking and care practices: a cluster-randomised controlled trial. Global Health Action. 2015;8(1):1-11.

109. Ssengooba F. Uganda's minimum health care package: rationing within the minimum? Health Policy and Development. 2004;2:14-23.

110. Ministry of Health. Annual Health Sector Performance Report: Financial Year 2013/2014. In: Health Mo, editor. Government of Uganda, Kampala2014.

111. United Nations. The global strategy for women's, children's and Adolescents' Health 2010-2015. In: The Partnership for Maternal Newborn & Child Health, editor. New York, USA: United Nations; 2010.

112. Ministry of Health. Facility assessment for reproductive health commodities and services Uganda. Kampala Uganda: Reproductive Health Division, Global Programme for enhancing Reproductive Health commodity Security (GPRHCS),Eficon Consulting firm, 2014.

113. Ministry of Health. Uganda clinical guidelines: national management of common conditions. In: Health Mo, editor. Kampala Uganda: Government of Uganda; 2012.

114. Ministry of Health, WHO, UNICEF. Uganda National Expanded Programme on Immunization multi year plan. In: Child Health Division, editor. Kampala, Uganda2012.

115. Sheikh K, Gilson L, Agyepong IA, Hanson K, Ssengooba F, Bennett S. Building the field of health policy and systems research: framing the questions. PLOS Medicine. 2011;8(8):e1001073.

116. Jan HFR, Taghreed A, Francisco B-P, Catherine D, Arcangues, Michael D, et al. Defining research to improve health systems. PLoS Medicine. 2010;7(11):e1001000.

117. Mills A. Health policy and systems research: defining the terrain; identifying the methods. Health Policy and Planning. 2012;27(1):1-7.

118. Gilson L, Organization WH. Health policy and system research: a methodology reader: the long version: World Health Organization; 2012.

119. Padgett DK. Qualitative and mixed methods in public health. London, United Kingdom: Sage Publications Ltd; 2012.

120. Tolley EE, Ulin PR, Mack N, Robinson ET, Succop SM. Qualitative methods in public health : a field guide for applied research. Second edition.. ed. ProQuest, Ebscohost, editors. San Francisco, California: Jossey-Bass A Wiley 2016.

121. Bolderston A. Writing an Effective Literature Review. Journal of Medical Imaging and Radiation Sciences. 2008;39(2):86-92.

122. Green BN, Johnson CD, Adams A. Writing narrative literature reviews for peer-reviewed journals: secrets of the trade. Journal of Chiropractic Medicine. 2006;5(3):101-17.

123. Ooms G. From international health to global health : how to foster a better dialogue between empirical and normative disciplines. BMC INTERNATIONAL HEALTH AND HUMAN RIGHTS. 2014;14(1).

124. Ooms G. Navigating between stealth advocacy and unconscious dogmatism : the challenge of researching the norms, politics and power of global health.

INTERNATIONAL JOURNAL OF HEALTH POLICY AND MANAGEMENT-IJHPM. 2015;4(10).

125. Silverman D. Interpreting qualitative data. 5 ed. London, United Kingdom: Sage; 2014.

126. Bourgeault I, Dingwall R, DeVries RG. The SAGE handbook of qualitative methods in health research. London: SAGE; 2010.

127. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. International Journal for Quality in Health Care. 2007;19(6):349-57.

128. Green J, Thorogood N. Qualitative methods for health research. London: SAGE; 2004.

129. Ezilon maps Uganda map - political map of Uganda [cited 2014 16 October]. Available from: https://www.ezilon.com/maps/africa/uganda-maps.html.

130. Maharaj N. Using field notes to facilitate critical reflection. Reflective Practice. 2016;17(2):114-24.

131. Friedemann M-L, Mayorga C, Jimenez LD. Data collectors' field journals as tools for research. Journal of research in nursing : JRN. 2011;16(5):10.1177/1744987110387319.

132. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative research in psychology. 2006;3(2):77-101.

133. Green J, Willis K, Hughes E, Small R, Welch N, Gibbs L, et al. Generating best evidence from qualitative research: the role of data analysis. Australian and New Zealand Journal of Public Health. 2007;31(6):545-50.

134. Bradley EH, Curry LA, Devers KJ. Qualitative data analysis for health services research: developing taxonomy, themes, and theory. Health Services Research. 2007;42(4):1758-72.

135. Birks M, Mills J. Grounded theory: a practical guide. 2 ed. Los Angeles, Calif. ; London: Sage; 2015.

136. Leavy P. The Oxford handbook of qualitative research. Oxford; New York: Oxford University Press; 2014.

137. Richards L. Handling qualitative data : a practical guide 2nd ed.. ed. London: London : SAGE; 2009.

138. UNICEF. Care for Child Development regional Training of Trainers in Early Childhood Development in response to the Sahel crisis. UNICEF West and Central Africa Regional Office, 2012.

139. Van Lerberghe W, Matthews Z, Achadi E, Ancona C, Campbell J, Channon A, et al. Country experience with strengthening of health systems and deployment of midwives in countries with high maternal mortality. The Lancet. 2014;384(9949):1215-25.

140. Adam T, Hsu J, de Savigny D, Lavis JN, Røttingen J-A, Bennett S. Evaluating health systems strengthening interventions in low-income and middle-income countries: are we asking the right questions? Health Policy and Planning. 2012;27(suppl4):iv9-iv19.

141. Prashanth NS, Marchal B, Devadasan N, Kegels G, Criel B. Advancing the application of systems thinking in health: a realist evaluation of a capacity building programme for district managers in Tumkur, India. Health Research Policy and Systems. 2014;12(1):42.

142. Malik AU, Willis CD, Hamid S, Ulikpan A, Hill PS. Advancing the application of systems thinking in health: advice seeking behavior among primary health care physicians in Pakistan. Health Research Policy and Systems. 2014;12(1):43.

143. Blanchet K, Palmer J, Palanchowke R, Boggs D, Jama A, Girois S. Advancing the application of systems thinking in health: analysing the contextual and social network factors influencing the use of sustainability indicators in a health system–a comparative study in Nepal and Somaliland. Health Research Policy and Systems. 2014;12(1):46.

144. Chughtai S, Blanchet K. Systems thinking in public health: a bibliographic contribution to a meta-narrative review. Health Policy and Planning. 2017;32(4):585-94.

145. Atun R. Health systems, systems thinking and innovation. Health Policy and Planning. 2012;27(4):iv8-.

146. Walt G, Gilson L. Reforming the health sector in developing countries: The central role of policy analysis. Health Policy and Planning. 1994;9(4):353-70.

147. Shakarishvili G, Atun R, Berman P, Hsiao W, Burgess C, Lansang MA. Converging health systems frameworks: towards a concepts-to-actions roadmap for health systems strengthening in Low and Middle Income Countries. Global health governance. 2010;3(2).

148. Frenk J. Dimensions of health system reform. Health Policy. 1994;27(1):19-34.

149. World Bank. Healthy development : the World Bank strategy for health, nutrition, and population results. Washington, DC , United States of America: The International Bank for Reconstruction and Development/The World Bank; 2007.

150. Mills A, Ranson K. The design of health systems. . In: Merson MH, Black RE, Mills A, editors. International public health : diseases, programs, systems, and policies Gaithersburg, MD Aspen Publishers; 2001.

151. World Health Organization. The World Health report 2000: health systems improving performance. Geneva: World Health Organization; 2000.

152. Roberts MJ, Hsiao W, Berman P, Reich M. Getting health reform right a guide to improving performance and equity. Oxford, New York: Oxford University Press; 2008.

153. Berman P, Bitran R. Health systems analysis for better health system strengthening. International Bank for Reconstruction and Development/ The World Bank; 2011.

154. Mavalankar DV, Sankara Raman P. Health systems. In: Hussien J, McCaw-Binss A, Webber R, editors. Maternal and perinatal health in developing countries. Oxfordshire, UK: CAB International; 2012. p. 64-76.

155. Paina L, Bennett S, Ssengooba F, Peters DH. Advancing the application of systems thinking in health: exploring dual practice and its management in Kampala, Uganda. Health Research Policy and Systems. 2014;12:41-.

156. Adam T. Advancing the application of systems thinking in health. Health Research Policy and Systems. 2014;12(1):50.

157. Rwashana AS, Nakubulwa S, Nakakeeto-Kijjambu M, Adam T. Advancing the application of systems thinking in health: understanding the dynamics of neonatal mortality in Uganda. Health Research Policy and Systems. 2014;12(1):36.

158. Leischow SJ, Milstein B. Systems thinking and modeling for public health practice. American Journal of Public Health. 2006;96(3):403-5.

159. Van Olmen J, Marchal B, Van Damme W, Kegels G, Hill PS. Health systems frameworks in their political context: Framing divergent agendas. BMC Public Health. 2012;12(1):774-.

160. Du Toit R, Faal HB, Etya'Ale D, Wiafe B, Mason I, Graham R, et al. Evidence for integrating eye health into primary health care in Africa: a health systems strengthening approach. BMC Health Services Research. 2013;13(1):102-.

161. Bucagu M, Kagubare JM, Basinga P, Ngabo F, Timmons BK, Lee AC. Impact of health systems strengthening on coverage of maternal health services in Rwanda, 2000-2010: a systematic review. Reproductive Health Matters. 2012;20(39):50-61.

162. Shakarishvili G, Lansang MA, Mitta V, Bornemisza O, Blakley M, Kley N, et al. Health systems strengthening: a common classification and framework for investment analysis. Health Policy and Planning. 2010;26(4):316-26.

163. Atun R, de Jongh T, Secci F, Ohiri K, Adeyi O. A systematic review of the evidence on integration of targeted health interventions into health systems. Health Policy and Planning. 2010;25(1):1-14.

164. de Oliveira MIC, Camacho LAB, Tedstone AE. Extending breastfeeding duration through primary care: a systematic review of prenatal and postnatal Interventions. Journal of Human Lactation. 2001;17(4):326-43.

165. Atun R, de Jongh T, Secci F, Ohiri K, Adeyi O. Integration of targeted health interventions into health systems: a conceptual framework for analysis. Health Policy and Planning. 2010;25(2):104-11.

166. Caulfield T, Hort K. Governance and stewardship in mixed health systems in Low-and Middle-Income Countries. Working Paper 24 (Melbourne: Nossal Institute for Global Health), 2012.

167. Veillard JH, Brown AD, Baris E, Permanand G, Klazinga NS. Health system stewardship of National Health Ministries in the WHO European region: concepts, functions and assessment framework. Health Policy. 2011;103(2-3):191-9.

168. Britto PR, Yoshikawa H, van Ravens J, Ponguta LA, Reyes M, Oh S, et al. Strengthening systems for integrated early childhood development services: a cross-national analysis of governance. Annals of the New York Academy of Sciences. 2014;1308:245.

169. Swanson RC, Bongiovanni A, Bradley E, Murugan V, Sundewall J, Betigeri A, et al. Toward a consensus on guiding principles for health systems strengthening. PLoS Medicine. 2010;7(12):e1000385.

170. World Health O. Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies. Geneva: World Health Organization; 2010.

171. World Health Organization, International Initiative for Impact Evaluation. An evidence map of social, behavioural and community engagement interventions for reproductive, maternal, newborn and child health. Geneva: World Health Organization; 2017.

172. Denboba AD, Sayre RK, Wodon QT, Elder LK, Rawlings LB, Lombardi J. Stepping up Early Childhood Development : investing in young children for high returns. World Bank, Washington, DC; 2014.

173. Black RE, Walker N, Laxminarayan R, Temmerman M. Reproductive, Maternal, Newborn, and Child Health: key messages of this volume. In: Black RE, Laxminarayan R, Temmerman M, Walker N, editors. Reproductive, Maternal, Newborn, and Child Health: Disease Control Priorities, Third Edition (Volume 2). Washington (DC): The International Bank for Reconstruction and Development / The World Bank

(c) 2016 International Bank for Reconstruction and Development / The World Bank.; 2016.

174. World Health Organization. Pregnancy, childbirth, postpartum and newborn care: a guide for essential practice – 3rd edition. Geneva: World Health Organization; 2015.

175. Institute of Medicine, National Research Council. Scaling program investments for young children globally: evidence from Latin America and the Caribbean: summary of a joint workshop by the Institute of Medicine, the National Research Council, and Fundacao Maria Cecilia Souto Vidigal, Sao Paolo. Washington, DC: The National Academies Press; 2015.

176. World Health Organization. WHO Recommendations on antenatal care for a positive pregnancy experience. Geneva: World Health Organization; 2016.

177. Kawungezi PC, AkiiBua D, Aleni C, Chitayi M, Niwaha A, Kazibwe A, et al. Attendance and utilization of Antenatal Care (ANC) Services: multi-center study in upcountry areas of Uganda. Open journal of preventive medicine. 2015;5(3):132-42.

178. World Health Organization. WHO recommendations on postnatal care of the mother and newborn. Geneva: World Health Organization; 2013.

179. World Health Organisation. WHO recommendations for routine immunization - summary tables 2017 [cited 2017 Nove 2017]. Available from: http://www.who.int/immunization/policy/immunization_tables/en/.

180. de Masi S, Bucagu M, Tunçalp Ö, Peña-Rosas JP, Lawrie T, Oladapo OT, et al. Integrated person-centered health care for all women during pregnancy: implementing World Health Organization recommendations on antenatal care for a positive pregnancy experience. Global health, science and practice. 2017;5(2):197.

181. Maeda A, Araujo E, Cashin C, Harris J, Ikegami N, Reich MR. Universal Health Coverage for inclusive and sustainable development : a synthesis of 11 Country case studies: Washington, DC: World Bank; 2014.

182. World Health Organization. Integrated Management of Childhood (IMCI) Care for Development: for the healthy growth and development of children. In: World Health Organization, editor. Geneva, Switzerland2001.

183. Ministry of Health. Village Health Team: strategy and operational Guidelines. In: Health Mo, editor. Kampala, Uganda: Uganda Ministry of Health; 2010.

184. Ministry of Health. National Village Health Teams (VHT) assessment in Uganda. In: Health Mo, editor. Kampala Uganda2015.

185. World Health Organization. The World Health Report 2013: research for universal health coverage. Geneva: World Health Organisation; 2013.

186. Kiwanuka SN, Ekirapa EK, Peterson S, Okui O, Rahman MH, Peters D, et al. Access to and utilisation of health services for the poor in Uganda: a systematic review of

available evidence. Royal Society of Tropical Medicine and Hygiene. 2008;102(11):1067-74.

187. Government of Uganda. The National Development Plan (NDP) II and programme-based budgeting: budgeting for Early Childhood Development. In: National Planning Authority, Ministry of Finance PaED, National Council for Children, editors. Kampala, Uganda. 2016.

188. Ages and Stages Questionnaire. Ages and Stages Questionnaire ASQ:SE-2™ United States of America: Paul H. Brookes Publishing Co., Inc. All Rights Reserved.; 2016 [cited February 2016 5 February 2016]. Available from: https://agesandstages.com/products-services/asqse-2/.

189. Bayley N. Bayley Scales of Infant and Toddler Development®, Third Edition (Bayley-III®): Pearson Education, Inc 2005 [cited 5 February 2016 5 February 2016]. Available from: https://www.pearsonclinical.com/childhood/products/100000123/bayley-scales-of-infant-and-toddler-development-third-edition-bayley-iii.html.

190. Totsika V, Sylva K. The Home Observation for Measurement of the Environment revisited. Child and Adolescent Mental Health. 2004;9(1):25-35.

191. UNESCO. Holistic Early Childhood Development Index (HECDI) Framework: A technical guide. 7, place de Fontenoy, 75352 Paris 07 SP, France: United Nations Educational Scientific and Cultural Organization; 2014.

192. UNESCO. Education for all 2000-2015: achievement and challenges. France: United Nations Educational, Scientific and Cultural Organization, 2015.

193. Uganda Bureau of Statistics (UBOS) and ICF. Uganda Demographic and Health Survey 2016. Uganda and Rockville, Maryland, USA UBOS and ICF; 2018.

194. Ministry of hEalth. The Health Management Information System: health unit procedure manual. Kampala Uganda: Government of Uganda; 2010.

195. Hyder AA, Bloom G, Leach M, Syed SB, Peters DH. Exploring health systems research and its influence on policy processes in low income countries. BMC Public Health. 2007;7(1):309.

196. Barbazza E, Tello JE. A review of health governance: definitions, dimensions and tools to govern. Health policy. 2014;116(1):1-11.

197. World Health Organization. Implementation guidance: Protecting, promoting, and supporting breastfeeding in facilities providing maternity and newborn services: the revised Baby-friendly Hospital Initiative Geneva2018.

198. Munn AC, Newman SD, Mueller M, Phillips SM, Taylor SN. The impact in the United States of the baby-friendly hospital initiative on early infant health and breastfeeding

outcomes. Breastfeeding medicine : the official journal of the Academy of Breastfeeding Medicine. 2016;11:222-30.

199. Kim SK, Park S, Oh J, Kim J, Ahn S. Interventions promoting exclusive breastfeeding up to six months after birth: a systematic review and meta-analysis of randomized controlled trials. International Journal of Nursing Studies. 2018;80:94-105.

200. Yotebieng M, Labbok M, Soeters HM, Chalachala JL, Lapika B, Vitta BS, et al. Ten steps to successful breastfeeding programme to promote early initiation and exclusive breastfeeding in DR Congo: a cluster-randomised controlled trial. The Lancet Global Health. 2015;3(9):e546-e55.

201. Britto PR, Britto PR, Engle PL, Engle PL, Super CM, Super CM. Handbook of Early Childhood Development research and its impact on global policy: Oxford University Press; 2013.

202. Glenton C, Colvin CJ, Carlsen B, Swartz A, Lewin S, Noyes J, et al. Barriers and facilitators to the implementation of lay health worker programmes to improve access to maternal and child health: qualitative evidence synthesis. Cochrane Database Syst Rev. 2013;10(10).

203. The SURE Collaboration. SURE guides for preparing and using evidence-based policy briefs. Version 2.1 [updated November 2011]. 2011.

204. Ryman TK, Wallace A, Mihigo R, Richards P, Schlanger K, Cappelier K, et al. Community and health worker perceptions and preferences regarding integration of other health services with routine vaccinations: four case studies. The Journal of Infectious Diseases. 2012;205:S49-S55.

205. Ministry of Health. Roadmap for accelerating the reduction of maternal and neonatal mortality and morbidity in Uganda: 2007-2015. Uganda: Government of Uganda; 2007.

206. World Health Organization. Health and the Millennium Development Goals. Geneva, Switzerland: World Health Organization,, 2005.

207. Travis P, Bennett S, Haines A, Pang T, Bhutta Z, Hyder AA, et al. Overcoming health-systems constraints to achieve the Millennium Development Goals. The Lancet. 2004;364(9437):900-6.

208. Elgibaly O, Aziz MM. Assessment of the needs of mothers and primary healthcare providers to support early childhood development in Egypt: a qualitative study. Child: Care, Health and Development. 2016;42(3):394-401.

209. CORE, USAID. Training in qualitative research methods: building the capacity of PVO, NGO, and MOH partners. Bureau for Global Health and United States Agency for International Development (USAID); 2005.

Appendix 1: Examples of key features to psychosocial ECD in children aged 0-3 years (45, 46)

Psycho-social ECD	Key milestones	Positive caregiving practices
Social skills and development: The ability to express themselves through verbal and non-verbal skills and communicating their interests and needs. Examples include, understanding their name, understanding who their primary caregiver is ,their , their language and talking skills, e.g. making sounds or communicating with their mother/caregiver	0 – 1 years • Smiles at people. • Looks for parents or knows parents • Copies movement and facial expressions, and later sounds and gestures. • Can communicate with others and progress from babbles, copying sound they hear, stringy vowels together • Has different cries for hunger, pain, tiredness. • Likes to play with people. • Responds to other people's emotions • Likes looking at reflection. • Understands and responds to name • Recognises strangers. • Understands simple instructions. • Copies adults and older children • Plays and co-operates with other children • Knows basic grammar and can engage in simple language like sing songs, say poems 1-2 years • Attached and clingy to parents • Has favourite people or items, plays games • Gets attention by repeating sounds or actions • Understands and responds to simple request • Says simples words like mama, dada, yes or no • Hands things to others to play • Can show interesting by pointing • Can explore with parents close by 2-3 years • Play near or with other children	• When feeding, dressing or bathing infant, cuddle, talk, and play with infant • Teach how to self soothe-e.g. sucking thumb • Understand infants' cues (e.g. different cries) and respond to them • Provide toys to play with • Provide safe areas to play

Psycho-social ECD	Key milestones	Positive caregiving practices
	• Repeats words- know sentences or 2 or 3 words • Has more independence	
Cognitive development This is involves learning thinking and problem solving. It involves the development of the brain and key functions such as sight, hearing and sounding, muscle movement. Examples include touching to stimulate exploration for learning; how they recognize people, things, and sounds; how they compare sizes and shapes, problem solving skills	0-1 year • Pays attention to face • Eye movement - follows objects from side to side • Looks and recognises familiar people and things in nearby and in the distance e.g. parents • Watches faces closely, notices things nearby • Gets bored if activity not changed • Use of eyes and hands – sees toy and reaches for it, pass things from hand to hand, picks things up • Can point at things. 1-2 years • Copies gestures • Uses things correct, e.g. spoon to eat, drinking from cup • Can do small actions like – put and remove items from containers, • Follows simple instructions • Identifies things correctly • Can follow simple requests- e.g. sit down • Can scribble or draw • Can find hidden things • Play peekaboo • Can find hidden things • Can sort shapes and colours • Building towers or blocks • Flows simple instruction – pick up shoes	• Engage in age appropriate play and talk • Provide age-appropriate toys to play e.g. rattle • Play with infat e.g. peek a boo • Read books • Describe things to infant • Give simple instructions for things

Psycho-social ECD	Key milestones	Positive caregiving practices
	• Can name items 2-3 years • Understand counting • Understand times • Starts to copy letters	
Mental development (emotional skills): Having appropriate emotional reactions to their own efforts and other people, and receiving and expressing appropriate affection. Examples include socialising with mother or caregiver, how they play and communicate with their caregiver, whether they understand and read cues properly, do they look at caregiver for assistance or learning by doing things e.g. copying actions like pick up and throwing things).	0-1years • Self soothe or calm themselves e.g. sucking hand • Let's you know when happy or sad- shows joy and pleasure. • Responds to affection • Begins to differentiate between familiar faces and strangers • Responds to other people's emotions 1-2 years • May be shy or nervous or afraid around strangers • Show affection to familiar people • Clingy to parents or familiar adults • Shows more developed emotions e.g. tantrums • Can show fear 2-3 years • Gets excited when around other children • Shows defiant behaviours • Can separate easily from parents • Shows affection without prompts • Show concern for others	• Understand infants mood, what makes them happy or unhappy and encourage or soother accordingly • Praise good behaviour • Gently correct wrong or harmful behaviour

Appendix 2: **Key evidence and outcomes of responsive and stimulative caregiving interventions on positive parenting and psychosocial Early Childhood Development outcomes for children age 0-3 years in Low and Middle Income Countries**

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
Psychosocial ECD health interventions							
Effects of psychosocial stimulation on growth and development of severely malnourished children in a nutrition unit in Bangladesh (79)	Bangladesh	Time lagged control study Control group – routine nutritional and hospital care Intervention group – stimulation 18 supervised play session during hospital stay and home visit over 6 months	54 children	Bayley's Scale of Infant Development- psychomotor and mental development – emotional tone, cooperation, vocalisation, motor activity,	Six months	N/A	Intervention had significant outcomes and effect on motor and mental development No effect on behaviour scores
Psychosocial stimulation improves the development of undernourished Children	Bangladesh	Randomised control trial Psychosocial stimulation intervention during nutrition	107 malnourished children aged 6 to 24 months	Bayley Scales of Infant Development – mental and psychomotor development (responsivenes	12 months	Positive treatment effect and improvements to maternal child rearing	Intervention group had improved mental development, responsive behaviour and showed

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
in Rural Bangladesh (80)		services for malnourished children

Weekly group sessions at clinic for 10 months and group session every two weeks for two months, home visits twice a week for eight months and after and weekly home visits for four months | N 107 intervention group
N 107 healthy infants | s emotional tone, cooperation, vocalisation, happiness, compliance

Mother-child interactions | | knowledge improved

Information on hygiene and health remained the same | treatment effect on mental development, and emotional tone.

No difference in mental development between intervention and health infants |
| The role of an early intervention on enhancing the quality of mother-infant interaction (75). | Brazil | Randomised control group intervention

Two to three days after birth intervention group shown video on newborn | 38 mothers and newborn infants

N17 intervention group N19 control group | Development of responsive, sensitive and stimulating caregiving – free play interactions, bathing interactions | One month | Higher frequency of responsive and stimulating interactions in intervention group (e.g. reciprocated interactions | N/A |

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
		competence (visual skills, auditory skills, alertness irritability response to stimuli),affection (soothing baby) and mother-child interaction and a one month follow up consult with health worker Two to three days after birth control group received basic video on basic caregiving (feeding, hygiene, skin ailments, fever management and immunisation) and infant				between infant-mother) More unresponsive caregiving occurrences observed in control group (infant vocalise-mother unresponsive)	

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
		health problems.					
Nutritional supplementation, psychosocial stimulation, and mental development of stunted children: the Jamaican Study (28)	Jamaica	Randomised controlled study - four group Nutritional supplements of 1 kg milk based formula per week and/or a psychosocial Play and stimulation intervention CHW weekly session one hour per week for 2 years.	Mothers with children age 9-24 months 129 children from single parent homes (N32 stimulation only; N32 supplement & stimulation; N32 nutritional supplement only; and N33 control)	Nutritional intake and psychosocial development- Griffiths mental development – locomotor (large muscle), hand and eye coordination, speech and hearing, performance development	Two years	Improved stimulation at home. Higher dietary intake in supplement group	Supplement significant effect on gross motor skills and performance Stimulation improved all development outcomes and significantly more than supplement only Combined intervention had better outcomes across, language, hand and eye coordination, locomotor performance, problem solving and better scores than supplement only.

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
Effects of early childhood psychosocial stimulation and nutritional supplementation on cognition and education in growth-stunted Jamaican children: prospective cohort study (38).	Jamaica	Follow up prospective cohort study Follow up test at 7, 11 and 17/18 years. Determine effect of nutritional and psycho social stimulation on brain development and education	129 intervention children plus 52 non stunted and non-intervention children	Wechsler adult intelligence scales (WAIS) IQ, non-verbal reasoning, memory (visual-spatial and auditory) verbal analogies, vocabulary, reading, maths and school drop out	10 year follow up	N/A	Children who received psychosocial stimulation - better outcomes in IQ, vocabulary, verbal analogies test and reading test; lower scores in verbal IQ test and verbal analogies. Stunted children lower educational and cognitive outcomes even in the presence of stimulation and supplementation, no sustained benefits in education and cognitive

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
							development at 17/18 years

No effects of supplementations at 11 years. |
| A randomised controlled trial of a home-visiting intervention on cognition and behaviour in term low birth weight infants (78) | Jamaica | Randomised control trial

Eight week intervention – one hour weekly CHW home visits for two months after delivery to improve maternal-child interactions and encourage positive cognitive development and infant behaviour | 140 Mothers with low birth weight infants

N 69 low birth weight infant control group and N 66 low birth weight infant intervention group

N 87 normal birth weight control group | Cognitive assessment at 7 months

Four trials to assess infant problem solving assess– cover test (retrieve toy covered by cloth) and support test (use cloth to retrieve toy placed far away with 30 seconds)

Infant Behaviour test- cooperation, emotional tone | Eight weeks | N/A | Low birth weight intervention group better cover test score but not support test than low birth weight control group

Low birth weight intervention group lower scores than normal birth weight infants in support test

Low birth weight control group significantly less happy and cooperative than |

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
				and vocalisation			intervention group Significant difference in vocalisation between intervention and control group, intervention No significant difference in infant behaviour between low birth weight intervention group and normal birth weight group
Effects of responsive stimulation and nutrition interventions on children's development and growth at	Pakistan	Follow up study of Cluster randomised effectiveness trial Enhanced nutrition and/or stimulation	1302 (87% of original) mother–infant dyads aged 4 years N 331 control group – routine	Child IQ – Weschler Preschool and Primary Scale Of Intelligence Executive function tasks	4 year follow up	Mothers who received CCD intervention significantly better responsive caregiving practices	Responsive stimulation significantly higher average IQ executive function and pre academic skills

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
age 4 years PEDs (37)		interventions delivered by Lady Health worker CCD provided once a month and during routine home visits	health and nutrition service N 311 enhanced nutrition - education and supplement N 345 CCD stimulation group N315 combined enhance nutrition and CCD stimulation	Pre academic skill - Bracken School Readiness Assessment Child motor development - Bruininks-Oseretsky Test for Motor Proficiency, Version 2, Standard protocols for child height and weight Parenting knowledge and practices - ECD module UNICEF Multiple Cluster Index Survey Observation for Mother-Child		Children in responsive intervention significantly higher levels or maternal responsiveness – effect size 0.3 Significantly higher quality of caregiving in responsive intervention group effect size 0.3	Effect size for children who received combined intervention 0.1 IQ, 0.3 executive function and 0.5 pre academic skills Higher mean pro-social behaviour scores for children who received responsive stimulation No effect on child behavioural problems Enhanced nutrition children had significantly higher motor development scores – 0.2 effect size

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
				Interactions (OMCI) Measure - maternal and child interactions			
				Caregiving environment - HOME Early Childhood version			
Cluster randomized trial of a parent-based intervention to support early development of children in a low-income country (83)	Pakistan	'Learning Through Play' programme, - 1 centre-based parent groups, (half a day) and fortnightly individual home visits (15-20 minutes) from 16 week pregnancy to 3 months to increase mothers' knowledge of	163 mothers received the 'Learning Through Play' programme, 146 mothers control group	Mothers' knowledge of early infant development and attitudes supportive of healthy development (15-item Infant Development Questionnaire) The mental state of mothers (20 item *self-*	6 months	Increase in *Infant Development Questionnaire-* mothers' knowledge of early infant development and attitudes supportive of healthy development No effect on levels of mental distress	N/A

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
		early infant development and supportive healthy development attitudes		*Reporting Questionnaire*			
Impact of a mother–infant intervention in an indigent peri-urban South African context: pilot study (76)	South Africa	Comparison intervention – providing emotional support and promoting, sensitive and responsive infant interactions CHW visits – two antenatal visit, twice a week for four weeks after birth, once a week for eight weeks, fortnightly for one month and monthly for 2 months.	32 pregnant women and their newborn infants	Quality of mother-infant engagement and caregiving – play interaction, maternal sensitivity, interaction and engagement	Six months postnatal	Improvements to quality of mother-infant engagement, mother's understanding of baby's needs and problem solving	N/A

Title	Country	Intervention	Study group	Assessing	Duration	Caregiving outcomes	Child development outcomes
Effects of a parenting intervention to address maternal psychological wellbeing and child development and growth in rural Uganda: a community-based, cluster-randomised trial (67)	Uganda	Cluster randomised control trial on a manualised parenting program for mother with low education 12 fortnightly peer - CHW parenting group sessions on maternal wellbeing and child care (play, talk and engagement, diet, hygiene and love and respect) between	194 Mother-child (12-36 months)	Bayley's Scale of Infant Development - cognitive and receptive language development Parenting practices- , illness prevention, diet, hygiene psychosocial stimulation (HOME), child development	Seven months	Intervention group - improvements across all 5 parenting practices; lower symptoms of maternal depression; higher coping mechanisms. No difference in reported daily stressors or perceived negative support.	Intervention group higher cognitive and receptive language development scores

Appendix 3:   Interview guide

Sequence of contact:

- Greeting and introductions.
- Purpose of research activity –aims and goals.
- Briefly discuss consent and confidentiality and confirm participant's approval.
- Brief opportunity for participant to discuss their role and work and how it relates to ECD.

Table 9-1: Interview guide – compilations of questions across the different interviews

Health System Building blocks	Questions
Conversation starters	• **Can you give me a bit more information about your role?** <u>**Probe:**</u> *How does this relate to early childhood development* • **What are your thoughts on the main progress in early childhood development in Uganda?** <u>**Probe:**</u> Can you list some leading initiatives, progress, improvements in child *health* • **Can you elaborate on how the MoH/MGLSD/MoES is supporting psychosocial ECD during the early years (0-2 years)?** • **How relevant do you believe psycho-social ECD is to the current child health priorities in Uganda and why?**
Relevance of psychosocial ECD	• **Can you discuss how or where you think psychosocial ECD fits amongst the current child health priorities?** <u>**Probe:**</u> Tell me about where you think psychosocial ECD fits amongst the current child health priorities? <u>**Probe:**</u> Can you elaborate on how relevant is psycho-social ECD to the current child health priorities? • **Can you go into some details on what your ministry has being doing to address psychosocial ECD?** <u>**Probe:**</u> Can you tell me about any previous or current MoH public health initiatives in psychosocial ECD? <u>**Probe:**</u> Please describe any government activities that have aimed to support social, mental and cognitive development in the early years? <u>**Probe:**</u> where could I find any existing policies or practice guidelines or resources available to address this area of child development? **What has been their successes and challenges?**

Health System Building blocks	Questions
	What advocacy activities are in place to make psychosocial ECD relevant to government priorities? **Probe:** Who are driving these and how does it influence on outcomes? **Can you describe what more could be done at government health services to further support psychosocial development during the early years/in young children? Probe:** Which other groups others could do this and why? **Probe**: What's required to make this sustainable?
Governance	**MoH** **What do you believe are important governance or leadership direction need to delivery and scale up Care for (psychosocial) Child Development at key maternal and child health services?** *Probe:* what is needed to make Care for (psychosocial) Child Development a health care services? **Probe:** How does this work in a decentralised systems? **Who would be some of the key stakeholders to involve when addressing Care for (psychosocial) Child Development in public health?** <u>*Probe*</u>**:** Who are important people to involve at governance and service delivery? <u>*Probe*</u>**:** Who are important people to involve when trying to make this available at frontline health services? <u>*Probe:*</u> Can you explain how MoH, MoE, Department of reproductive health/clinical services/primary healthcare can assist or contribute to CCD and psycho-social ECD **How is multisector engagement achieved with other ministries and sectors such as MoE, MGLSD, NGOs, private sector etc**? *Probe:* Do you feel the various agencies and stakeholders have important linkages with their approaches to psychosocial ECD? If yes can you elaborate on these **The Uganda National Integrated Early Childhood Development Policy was developed by the MGLSD to integrate all sector activities on ECD. Please tell me what you think is the MoH's role is and how well can it fulfil that role at the moment?** *Probe*: Are you aware of this? Is this new to you? Is better coordination with MoH required **How has funding been made available?** **How are local level governments and controlling bodies involved to ensure appropriate engagement?** **How does Uganda ensure that sustainable efforts are put in place to enable government run public services**

Health System Building blocks	Questions
	• **With all the work that's gone into the NIECD what is the strategic direction and engagement strategies for implementation across health?** *Probe:* What is the next step from MoH? • **What is required to encourage health sector to increase focus on psychosocial ECD and children thriving?** • **A lot of paradigm shifts are taking place to better address ECD, within health what do you thing is necessary for CCD to become a key part of routine/basic child health** • **Can you explain what the MoH is doing to address some of the service delivery constraints that are brought about by different levels of authority with different priorities (District/local level governments, decentralisation etc)?** **MoGLSD/MoE** • **Can you elaborate on how the MoGLSD/MoES is supporting psychosocial ECD during the early years?** *Probe:* What are some of the outcomes of the Uganda National Integrated Early Childhood Development Policy? *Probe*: What are some of the things the MoGLSD/MoES are actively working on? • **Can you list or explain any existing national services that are available to support psychosocial ECD during 0-2 years?** • **Do you feel the various agencies and players have similarities in the way the view psychosocial ECD and its importance?** *Probe*: Can you give examples of how MoH/MoGLSD/MoE has worked with other ministries? *Probe:* What is one way of aligning policies/national priorities with other relevant stakeholders such as MoH? • **The Uganda ECD policy and the National Integrated ECD policy was developed by the MoGLSD to integrate all sector activities on ECD. Can you please tell me how the MoGLSD intends to manage or coordinate stakeholders?** • **How is engagement achieved with other ministries and sectors such as MoH? Probes** Can you elaborate on any services that the MoGLSD/MoE are providing to support the MoH in psychosocial ECD? *Probe:* How do you see the MoH assisting with psychosocial ECD? *Probe:* What NGOs would you consider being useful in addressing psychosocial ECD? Potential resources?

Health System Building blocks	Questions
	• **Have there been any recent committee activities or workshops on psychosocial ECD? If yes can you elaborate on some of the key outcomes or available resources?**
	• **Current policies on ECD include ECD policy and the NIECD Policy? Are they complimentary or parallel systems**
	• **Could you discuss how ECCD is currently be planned/implemented? Probe: NIECD approach, partnership with /MoH/MoG/MoE?**
	• **If problems are being identified what specialist services are available to assist families and their child with developmental delays?** *Probe:* Does the sector have the capacity to handle specialist ECD requirements?
	• **When it comes to implementing the NIECD policy, can you describe the multisector strategies being used to connect MoH MoG and MoE?**
	• **Can you describe what indicators are being used to track progress on ECD milestones?** *Probe:* Under the NIECD policy what are some of the indicators being used to assess ECD?
	• **What systems are in place to collect these and how does the MoH contribute to this?**
	 UNICEF/WHO/Plan International • **Can you elaborate on the role is UNICEF/WHO/Plan Uganda/ World Bank has in the psychosocial ECD in Uganda and how this impacts governance and service delivery?** *Probe:* funding, stakeholder engagement, policy strategy
	• **Who do you believe are key stakeholders at the governance level and how do they impact psychosocial ECD services and outcomes?**
	• **How does political interest influence psychosocial ECD priorities at the national and global context?** *Probe:* what are some of the international priorities (that may) influencing child health and psycho-social ECD? *Probe:* are there any particular political interests or influences that are or aren't contributing to psycho-social ECD

Health System Building blocks	Questions
	• **Do you feel the various agencies and players have similarities or linkages in the way the view psychosocial ECD and its importance?** _**Probe:**_ How is multisector engagement achieved with other ministries and sectors such as MoE, MGLSD, private sector etc.
	• **What do you believe the government/MoH should do to help facilitate CCD at front line health facilities?**
	 Additional new questions for all • **What systems are being put in place to support Care for Child Development/ Early Care for Child Development?**
	• **Could you discuss how ECCD is currently be planned/implemented with the NIECD/MoH/MoG/MoE?**
	• **Can you discuss how the existing health, education and gender systems are being used to address ECD?**
	• **As a key funder how influential is UNICEF when it comes to funding priorities and ECD direction?**
	• **What is required to encourage health sector to increase focus on psychosocial ECD and children thriving**
	• **The NIECD multisectoral approach - Can you discuss what are some of the strengths and challenges associated with a multisectoral approach in Uganda?**
	• **What have been some of the challenges linked to achieving appropriate stakeholder engagement?**
	• **When implementing the ECCD program, in your experience what is important when it comes to governance/leadership and how does this influence service delivery?**
	• **Based on your implementation experience, what is required for ECCD to be systematically scaled up across Uganda?**
	• **What is essential for sustainable and long term implementation?**
Finance:	• **Can you provide some insight on how funding is being made available for NIECD/ECD/CCD? Probe:** How is funding being made available for psycho-social ECD or CCD? What prioritisation or budgeting needs to be considered when planning for the inclusion of new services?

Health System Building blocks	Questions
Service Delivery	**MoH** • **What are some of the health systems considerations to keep in mind when introducing new CCD innovations in maternal and child health**? ***Probe***: What are some of the HR considerations that may influence CCD? ***Probe:*** What are some of the considerations when it comes to resource allocation and funding? National vs district capacity? ***Probe***: What are key considerations that will be important when introducing new innovations to MCH clinical care? • **What do you believe are some of the public health systems concerns when implementing new innovations to child health**? • **What are some of the bottle necks impacting child health services? Can you advise how Uganda is overcoming these or what may be required to overcome these?** • **Tell me your ideas on how we could use the existing public health systems to provide/strengthen care for psychosocial ECD at frontline health services?** ***Probe:*** When addressing CCD in a health systems context, what do you believe are the key areas of strength and concern? • **How important is the community based approach when delivering services in Uganda?** ***Probe***: Can you explain what role community based services have on MCH service accessibility and how this can be applied at a large scale or through public health programs? ***Probe***: How can VHTs be used? Homes visits • **What needs to be consider when new models of care are being introduced across health systems?** ***Probe:*** What are the health systems strengths or weaknesses • **What are your thoughts on how to roll out and implement CCD so it's efficient, effective and less strenuous on current resources?** • **How do you believe CCD can be included in high impact interventions that target key child health issues b(such as malaria, pneumonia, diarrhoea, vaccine-preventable diseases (e.g. measles), HIV/AIDS, neonatal conditions and malnutrition)?** Probe: What would be the main service delivery implications to consider **Clinical staff (management)** • **What are your thoughts on the main progress PHC/clinical care and early childhood development**? *Probe:* Can you list some leading initiatives, progress, improvements in child health

Health System Building blocks	Questions
	• **In the context of primary health care or clinical care can you describe how psychosocial ECD is incorporated into current PHC or service delivery priorities?** • **Can you elaborate on the key clinical services addressing psychosocial ECD or supporting care for its (child) development?** *Probe*: Main role of clinical services when supporting psychosocial ECD • **Can you elaborate on what may be required to make CCD services a part of the basic healthcare package at all health services?** *Probe*: What is crucial or relevant to make this part of the Uganda National Minimum health Care Package? *Probe:* What healthcare system requirements are important to make CCD a basic service delivery provision by HW and health facilities? • **What do you believe are important governance/ leadership direction need to delivery and scale up CCD at primary clinical services?** *Probe:* what's needed to make these services available to all? • **How does government assist with making child health services/ECD available across frontline health services?** *Probe:* Can you explain what engagement the health facility has with government when planning and delivering healthcare? • **What do you believe are key considerations that will be important when introducing new innovations to MCH clinical care?** *Probe:* can you elaborate on any particular considerations that will be important *when* introducing new innovations to MCH clinical care/primary healthcare*? Probe:* What would be some of the health systems concerns when implement new innovations to clinical care? *Probe* – what are the service delivery implications when promoting the uptake of new models of care? **Mulago** • What are some of the psycho-social ECD complication that get referred to Mulago? • Can you describe occasions where Mulago has used these approaches to improve Care for Child development? • What would be some of the challenges when making these available?
Health Workforce:	• **How can current health workers be used as a point of contact and advocacy for ECCD or CCD?** • **What are some of the current health worker challenges that would impact the scale up of CCD and child healthcare delivery?**

Health System Building blocks	Questions
	• If new models of care were to be introduced how would be the best way of upskilling and capacity building current health workforce?
M&E	• Can you describe how psychosocial milestone indicators are tracked and monitored? *Probe:* are there any system or individual level tracking mechanisms. • Are there existing M&E systems that have been able to capture psychosocial ECD? • Can you elaborate on any new technologies being used to collect and analyse psychosocial ECD? • What are some of the IEC campaigns need to roll this out across health services?
Technologies	• How are psychosocial ECD milestones, being capture in the current data collection systems? • Can you describe how psychosocial milestone indicators are tracked and monitored? From a systems level and care/individualised level • What are some of the M&E technologies that can be scaled up or can be used to monitor ECD?
Finishing questions	• In an ideal setting how would you see care for psychosocial ECD being addressed in Uganda's health systems? • Can you advise who else would be important to talk to regarding psychosocial ECD and public health? • Are there any government resources you'd recommend I read? • Is there anything else I missed that maybe relevant to know?
Closing Remark	Thank you so much for your time, it has been very useful, should I have any further questions would you be available for a follow discussions? This may not necessarily be face to face could be via email or phone. Would there be anyone else who you believe is relevant to ECD governance and is important to talk?

Appendix 4:   Focus groups process protocol and guide

Procedural guidelines for focus groups:

Prior to departure

☐ Prepare all documentations such as notes, study protocol, topic guide research information sheets, and consent forms.

☐ Ensure relevant equipment and tools required are available and working, these include: tape recorder, pen and paper/writing material, visual materials.

On arrival at venue

☐ Set up the room

☐ Prepare participant information such as group identification codes and generic profession based research participant identifiers (e.g. community health worker)

Starting the focus groups:

☐ Introduce yourself and explain role, invite participants to introduce themselves (if appropriate).

☐ Take 10 minutes to debrief participants on the objective and nature of the group discussion making sure to introduce the study.

☐ Assure participants of confidentiality

☐ Assure them of their right to ask questions and clarifications

☐ Assure them of right to decline a questions

☐ Discuss researcher contact details and debriefing contact details

☐ Discuss approximate length

☐ Obtain permission to record the session, if permission has be obtained by everyone, begin the record once the introductions are complete. If permission not obtain begin take notes

☐ Permission to precede with the interview (sign Participant Consent Form)

Conducting the focus group discussion

☐ Begin with warm up questions, take note of which individuals are and are not talking and ensure those who aren't speaking as much get a chance to participate in the discussion.

☐ Use a guide to direct the conversation based on the prior research findings and use open ended question. Use probes to elaborate on discussions making sure to avoid leading participants with their elaborations, probe in ways that make the participants describe what they want to say in their own words. Throughout the session take notes about key themes being raised and key observations.

End of the focus group discussion

☐ Thank individuals for their participation and inform them on how the information will be used and how they can obtain a copy of the results

After focus group:

☐ Electronically type all hand written notes taken at the end of the day. Reflect on the discussion and observation using memos. Develop a system for transcription and ensure all recordings are transcribed in a timely manner. Make a list of emerging themes to discuss in follow up sessions and focus groups.

Focus group welcome/introduction script

Introduction:

Thank you all for agreeing to participate in the focus group. My name is Zina Ndugwa and I am PhD student at the University of Queensland.

My research is focusing on how Maternal and Child Healthcare services are supporting Early Childhood Development (ECD). The purpose of my research is to explore how Uganda's public health systems can further strengthen and improve psycho-social Early Childhood Development (ECD). I want to use the focus groups to understand how clinicians at frontline health service are supporting ECD and what can be done to strengthen psycho-social ECD.

I will be using the term ECD to describe the period of physical, social and psychological development and growth in children aged 0-8 year. With particular focus on ages between 0-2 years.

Also when I mention Psycho-social ECD I am referring to the mental, social and emotional development of children and this looks at the brain development, language and sociol emotional skills). Examples include:

Child skill	Sample component
Physical development (motor skills)	Healthy weight gain, healthy use of hands and legs and other body parts – Reaching and grabbing, eye and hand movements, control and strengthen muscles.
Social skills	Communicating interests and needs – to express self through verbal and non-verbal skills. Their problem solving skills, understanding their name, understand who their primary caregiver/mother is, language and talking skills, e.g. making sounds or communicating with their mother/caregiver
Brain development (Cognitive skills)	Seeing, hearing, moving, touching to stimulate exploration for learning; to recognize people, things, and sounds; to compare sizes and shapes.
Mental and social development (Emotional skills)	Having appropriate emotional reactions to own efforts and other people, and receiving and expressing appropriate affection. This includes socialising with mother/caregiver. How they play and communicate with their caregiver, are they understanding and reading cues properly? Are they looking at caregiver for assistance or learning by doing things e.g. pick up and throwing things

Consent

Before we begin the session I would just like to bring your attention to the Participant Information Sheet and Consent Form. This should have been provided to you before this session. Is there anyone who has not received this?

- If no- continue with next session
- If yes- provide them with the documents and ask them to take a few minutes to read and sign

I will just take the next few minutes to go through some important points raised in the consent form:

By attending this focus group you acknowledge that you have fully read the Participant Information Sheet and you have read and signed the consent form. For those of you who haven't can I please ask that you take these next few minutes to do so.

You acknowledge that you understand the purpose of the focus group, and what is required for you to participate.

Voluntary: You are aware that your participation in this study is voluntary. You can change your mind and quit at any time without any consequences or repercussions. Should this be the case please just let me know. You can contact on the details provided in the sheets and quote your ID number

Risks: There are no major risk to you if you participate in the focus group. The main risk is the chance that I may ask some questions that you may feel uncomfortable discussing in a group setting. If this happens and makes you feel uncomfortable please let me know and we can move on to another discussion topic.

Privacy and confidentiality: Please note that the discussions had during the focus groups are confidential and should remain within the group. Please do not repeat any of the discussion outside this room. Your confidentiality will be maintained at all levels of data collection and analysis. No personal or identifying data will be collected and all data collected will remain anonymous and will be non-identified during the final data.

Benefits: You will be compensated for your time and transport, this will be made available to you after the group session/upon completing the group session.

Recording: For the purposes of data collection and analysis I would like to audio record the session with a digital recorder, this will be very helpful in my finally analysis however it is not compulsory and can it be stopped at any time. If you would like for the session not to be recorded please let me know at any time and I will continue to take notes.

Did you have any question regarding the consent and any of the points raised?

How the focus group will run

I thought I would take the moment to briefly go through how I will run the focus group. This is a session to understand your work experiences and perceptions on how primary healthcare services are supporting ECD.   You are all very important to healthcare and wellbeing and the aim is to get knowledge from you on how you provide care to mothers/caregivers and their children and understand what does and doesn't helps you achieve this.

Keeping the discussion informal and relaxed: I would like to keep the discussion relaxed and informal and I encourage that you interact and discuss among each other, I will basically be a moderator and help guide the discussions between you.

Questions: If something is not clear, please ask me to explain it. Also please feel free to ask each other or myself any questions. There are no right or wrong answers. If you disagree with someone please feel free to mention this, otherwise I will think that you all agree.

Being respectful: Some of you may have strong opinion about the topics which may differ from each other, there is nothing wrong with that, in such circumstances could I please ask that were are respectful of each other's opinions.

Everyone's involvement: It is very important to have everyone speak and contribute to the discussion and my job is to make sure we hear from everyone. If there are people talking more than others I will be encouraging others to talk, this is not to single people out or stop people talking but to make sure everyone's voices are heard.

Talking at once: Please be careful not to all talk at once. There may be times when the discussion gets exciting and I would like to make sure I get everything,

Refreshments: There will also be some refreshments available after the session

Did anyone have any question about what has just been discussed?

- No- continue to next
- Yes- answer questions

Is everyone okay with what has been mention?

- Yes-continue to next
- No- Can you please tell me what your concerns are?

Permission to record: Can I proceed with recording the session

Group Introduction

Maybe we can now take a few moment to introduce ourselves to. You can provide your first name and your profession. If you would rather not state your name please just say what your profession is. Let us start from the left and go round the room

CHW, NURSES, DOCTORS FOCUS GROUPS GUIDE

Participants	Key Aim
CHW/VHT, nurses, doctors-frontline implementers which represent service delivery &HW Purpose will be 2 fold info gathering (resources) and descriptive info	Explore the feasibility of carrying out CCD at frontline health services : • Understand the extent to which CCD can be carried out by HW • Understand how CCD intervention can be applied to current healthcare delivery). • Explore the service delivery capacity to delivery CCD Understand what's currently being done by HWs to support psycho-social ECD. Understand how HW are or can be used to improve CCD competence of caregivers[19] – are they indirectly or directly doing this or not? Understanding if there is an enabling work environment, HW knowledge and attitudes towards CCD and HW acceptability and concerns.

AIM/OBJECTIVE	QUESTIONS
Conversation starter	**What do you believe are important parts of early childhood health and development? And how do you help mothers/caregivers address this?** **What are some of the key development milestones you focus on when addressing child health during healthcare to children and their mothers?**
Understand how child health is addressed and approached by health workers	**When a mother/caregiver and their baby come to a health facilities for routine check-up, what are the main health care services you?** • *Probe*: What health assessments do you do health assessments/services you provide to a mother presenting with a healthy child that is not sick? What are the routine health checks/assessment provided on a regular basis • *Probe:* Can you go through some of the initial conditions you focus on and assess? **How do you counsel mothers/caregivers on child health, development and wellbeing?** • Probe: what are the key messages you focus on? • Probe: when do you get the opportunity to do this? **Can you explain why you focus on these areas?** • *Probe:* Why do you believe these are leading areas of concern or importance when addressing child health? • *Probe:* Is there anything that influences your approach – Knowledge? Protocol? Community? Mothers? • *Probe:* Can you explain how your experience influence's this? **Can you explain how you support/encourage fathers/males to support child health and development?**

---

[19] by increasing their understanding of their child's development capabilities and providing them with knowledge

Explore how psychosocial ECD fits into current MCH care Determine relevance of psychosocial ECD to child health and care. Is Care for Child Development a priority?	**What are some of the development milestones you focus on when addressing child health?** **If a mother/caregiving comes and starts discussing development delay associated with language, understanding, socialisation, etc. how do you guide/advise the mother?** • *Probe:* Can you give examples of situations where a mother has asked for your guidance on how to assist their child to talk or be more social active? • *Probe:* Do you experience such scenarios? • *Probe:* Is this an area of concern or relevance? • *Probe:* Can you describe what information or skill you have to address this? Where did you learn this? **What would your recommendations be to mothers who have babies facing these development challenges?** • *Probe:* How do you help mothers? Do you give the advice, information, skills, refer them or show them? • *Probe:* What approaches can be used to prevent bad development? Primary care or prevention? Referrals? • *Probe:* Can you think of other resources to assist mothers/caregivers with these development problem? **Can you give me examples of how to encourage mothers to provide good/ positive caregiving?** • *Probe:* What advice do you provide mothers? • *Probe:* What development areas would you emphasis? • *Probe:* Do you provide any skills or information? If yes how? • *Probe:* Do you do this proactively or reactively? Do you do this regularly **What services can you think of that exist to support child care?**
	Give/discussion Care for Child Development (CCD) POSTER
	Please tell me about a time where you have addressed these caregiving skills with mothers/caregivers? • *Probe:* Can you give me example of how or when you have used these? • *Probe:* Can you discuss how you actively addressed these areas of caregiving with mothers/caregivers attending your facilities? • *Probe:* What advice, information or skills do you provide to mothers? • *Probe:* Is this part of practice? • *Probe:* How do you provide this advice? Regularly? Opportunistic or when the need arises or is relevant? **For children not getting the right amount of care and stimulation how do you advise or assist caregivers? How do you encourage mothers to bond with their child?**

	What are the existing services or resources that are available to help you and/or mothers with positive parenting? • *Probe:* Are there referral services? Or community services? Childcare centres, community centres, feeding programmes? **What are some of the challenges faced when encouraging this (CCD)?** **Can you explain how you believe the health services are supporting mothers and caregivers to deliver CCD?** • *Probe:* What are some of the services available to support good caregiving? Can you explain what they do? **How do you develop ongoing and regular health contact with mothers/caregivers and their baby? What services are available to support this?** • *Probe:* What MCH services do you believe are reaching mothers/caregiver and their children the most regularly? • *Probe:* How would you track/ follow up on child health and development progress (or milestone achievements)? System for follow up? Monitoring and Evaluation systems? Driven by health facilities or mothers?
Understand their work environment – what is working and what is not in and how does this influence the work environment	**What are some of the work challenges you face when trying to do your job?** • *Probe:* What are some of the things that make it easy or hard for you to provide healthcare to mothers and their children • *Probe:* Time, capacity, HW shortages, insufficient facility resources? • *Probe:* do you face any challenges with resources and facilities?
Closing question	**In an ideal situation if you had all the resources required how might you provide care for child development (psycho-social ECD) services at your place (here?)?** **Is there anything you would like to add**

FOCUS GROUPS QUESTION WITH VHTS

AIM/OBJECTIVE	QUESTIONS
Conversation starter	**What are some of the key roles you have in mother and child health?** **What are the main health care services/messages you provide to a mother and her child?** **What are the things that are working when it comes to health and wellbeing of mothers and their children at your community?**
Understand how child health is addressed and approached by health worker.	**How do you counsel mothers and their families on child health?** **What are the key messages you are giving mothers and the community about child health?** **Why are these important?** **Can you explain why you focus on these areas?** • *Probe:* Why do you believe these are leading areas of concern or importance when addressing child health? • *Probe:* Are there any reasons influencing this – Knowledge? Protocol? Community? Mothers? • *Probe:* Can you explain how your experience influence's this? **How does the health centre assist you with caring for mothers and their children in the village/ community?** **How do you develop ongoing and regular contact with mothers/caregivers and their baby?** • *Probe:* What MCH services do you believe are reaching mothers/*caregiver* and their children the most regularly? • *Probe:* How would you track/ follow up on child health and development progress (or milestone achievements)? System for follow up? Monitoring and Evaluation systems? Driven by health facilities or mothers?
Community ownership	**What is important to your communities and families when providing health services?** • *Probe:* what do the community's value? • *Probe:* what values impact their behaviour?

	What are some of the things your community finds important which impact/influence their health? **How are key health messages and good health behaviours achieved at the community?** • Probe: what have you found makes your community change their behaviour or practice better health (behaviour)? **Can you explain to me how important your role is to the health of people in the village/community? Why?**
Explore how psychosocial ECD fits into current MCH care? – determine relevance of psychosocial ECD to child health and care. Are aspects of care for child development a priority?	**Can you give me examples of how you encourage mothers to provide good/ positive caregiving?** • *Probe:* What advice do you provide mothers? • *Probe:* What development areas would you emphasis? • *Probe:* Do you provide any skills or information? If yes how? • *Probe:* Do you do this proactively or reactively? Do you do this regularly **Can you give me examples of the existing community resources that are available to help with positive/good parenting?** **If a mother/caregiving comes and starts discussing development delay associated with language, understanding, socialisation, etc. how do you guide/advise the mother?** • *Probe:* Can you give examples of situations where a mother has asked for your guidance on how to assist their child to talk or be more social active? • *Probe:* Do you experience such scenarios? • *Probe:* Is this an area of concern or relevance? • *Probe:* Can you describe how you address this?
	Give/discussion Care for Child Development (CCD) POSTER – I am just going to hand you a poster that shows how play and communication can be used to promote positive psychosocial development, if you could take a moment to study the poster.
	Please tell me about a time where you have addressed these caregiving skills with mothers/caregivers? • *Probe:* Can you discuss how you actively addressed these areas of caregiving with mothers/caregivers attending your facilities? • *Probe:* What advice, information or skills do you provide to mothers?

	• *Probe:* Is this part of practice – during health promotion, when doing community visit? • *Probe:* How do you provide this advice? Regularly? Opportunistic or when the need arises or is relevant? **What are the existing services or resources that are available to help you and/or mothers with positive parenting?** • *Probe:* Are there referral services? Or community services? • *Probe:* Childcare centres, community centres, feeding programmes?
Understand their work environment – what is working and what is not in and how does this influence the work environment	**What are some of the work challenges you face?** • *Probe:* What are some of the things that make it easy or hard for you to provide healthcare to mothers and their children
Closing question	**In an ideal situation if you had all the resources required how might you provide care for child development (psychosocial ECD) services at your community?** **Is there anything you would like to add**

Appendix 5: Observational facility audit checklist

Facility observation guide - Minimum requirements/standards for MCH service delivery[20] (209)

Health facility assessment/audit checklist Background information	
Study questions:	Assess/evaluate how health facilities are addressing or implementing the psycho-social ECD /CCD
Study aims:	a. What MCH services are being provided and how is this addressing Care for Child Development b. What infrastructure, resources and materials are available to support CCD or psycho-social ECD? c. What information on child health and development is provided at facilities (erg nutrition, caregiving, maternal health, environmental wellbeing)? d. What are the main services for child health e. What basic resources or aides exist to support CCD or psycho-social ECD?
Health facility ID Date - Start Time – Finish Time-Initials	
Location of health facility	
Type of Health facility	
Level of Health Facility	
Date	
Observer	

Overview

AUTHORITY OF HEALTH FACILITY	HEALTH WORKERS PRESENTLY AVAILABLE AT HEALTH FACILITY:
☐ Government ☐ Private for Profit ☐ Private Not for Profit ☐ Public university ☐ Private university ☐ Private institution or company ☐ Faith-based organizations ☐ NGOs / Multilaterals ☐ Other, specify:	☐ Doctor ☐ Assistant Doctor ☐ Medical Officer ☐ Nurse ☐ Assistant Nurse ☐ CHW ☐ Management staff - list ☐ Other- list
PHYSICAL INFRASTRUCTURE:	**Status of health facilities** (classified into four categories).[21]
☐ Consultation room ☐ Waiting area ☐ Child friendly room/waiting area.	☐ Functional ☐ Completed

---

[20] Service Availability Mapping Uganda Final Report 2006
[21] MoH Health Facility Inventory update July 2012 http://library.health.go.ug/publications/health-infrastructure-physical-infrastructure/health-facility-inventory/health-facility

☐ Electricity ☐ Running/piped water ☐ Child safe? ☐ Other- list	☐ Under construction ☐ Requires serious maintenance ☐ Un-functional **Four readiness component (staff and guidelines, equipment, diagnostics, and medicines and commodities).**
Types of MCH service provision at health facility ☐ Clinical MCH care ☐ Child health ☐ Antenatal care ☐ Postnatal care ☐ Reproductive Health ☐ Maternal health ☐ Women's health ☐ Care for Child Development ☐ Inpatient care? ☐ Other – List	**Key areas of service provision** ☐ Clinical management of diseases (curative) ☐ Disease prevention (preventative) ☐ Health promotion or information ☐ Counselling ☐ Other- list
Aides, tools or resources to support CCD delivery and/or info ☐ Age appropriate toys ☐ IEC Material –list ☐ Assessment/ evaluation tools – o Ages and stages questionnaire, o Home Observation Measurement of the Environment, o The Bayley Scales of Infant and Toddler Development or o equivalent	**HEALTH PROMOTION AND IEC MATERIALS:** ☐ Advertising material at health facility ☐ Brochures/ print material ☐ Group information/announcements ☐ Other - list
MCH data collection systems ☐ Electronic health Information systems ☐ Manual MCH data collection and tracking system ☐ Maternal and/or child health record ☐ Psycho-social ECD/CCD monitoring and evaluation resources- list ☐ Other - list	

AUDIT CHECKLIST NOTE SECTION:

Authority of health facility:
Physical Infrastructure:
Health workers presently available at health facility:
Availability basic medical equipment for child health
Types of service Provision observed during visit
Delivery of service provision – did it see adequate time spent for each client and their rem? Any other comment on quality of service observed?
CCD delivery aides –does it seem these aides are regularly used?
Health Promotion And IEC Materials - does it seem these aides are regularly used? Appropriate for the topics being seen at clinic? Accessible to low literacy clients? Adequate amounts for clients to take with them?
Status of health facilities:
MCH data collection systems: wat was your assessment of the regularity and quality f use of these? Did any ECD seem to be included already
Other -Observations to consider   - Record where do mothers or caregivers wait   - What constraints or problems are there (and how are these different across MCH facilities)?   - What possibilities or opportunities are there to address psychosocial ECD?   - Record whether the provider asked if the client had any questions and encouraged questions.   - Record whether the provider used any visual aids for health education or counselling during the consultation.   - Record whether the provider looked at the client's health card (either before beginning the exam, while collecting information or examining the client).

Maternal and child healthcare observation tool

Maternal and child healthcare observation tool Background information	
Study questions:	Understand if and how psycho-social CCD is being addressed during routine MCH service provision.
Study aims: a. What key child health and development areas are addressing during MCH consultation b. What information on child health and development is provided (e.g. nutrition, caregiving, maternal health, environmental wellbeing)? c. What are the main child health and development checks d. What caregiving advice is provided (if any) and how does this relate to psychosocial ECD? e. What advice is provided on caregiving at point of contact? f. What proportion of time is allocated to child health and development and caregiving?	
Type of healthcare staff providing care	
Health facility ID Date - Start Time – Finish Time-Initials	
Location of health facility	
Type of Health facility	
Level of Health Facility	
Date	
Observer	

CHECKLIST ON GENERAL RESOURCE AVAILABLE FOR CCD DURING HEALTHCARE CONSULTATION:

MCH Health worker: ☐ Doctor ☐ Assistant Doctor ☐ Medical Officer ☐ Nurse ☐ Assistant Nurse ☐ CHW ☐ Management staff - list ☐ Other- list	**AVAILABILITY BASIC MEDICAL EQUIPMENT FOR CHILD HEALTH** ☐ Injection equipment ☐ Under 5 Weight scale ☐ Thermometer ☐ Blood Pressure machine ☐ Stethoscope ☐ Sterilization/sanitation equipment ☐ Gloves ☐ Drugs and vaccinations ☐ Fetoscope ☐ Other – list
MCH data collection systems ☐ Electronic HIS ☐ Manual MCH data collection and tracking system ☐ Maternal and/or child health record ☐ Psycho-social ECD/CCD monitoring and evaluation resources- list ☐ Other - list	**HEALTH PROMOTION AND IEC MATERIALS:** ☐ Advertising material at health facility ☐ Brochures/ print material ☐ Other - list
Aides, tools or resources to support CCD delivery and/or info ☐ Age appropriate toys ☐ IEC Material –list	☐ Assessment/ evaluation tools - Ages and stages questionnaire, Home Observation Measurement of the Environment, or equivalent ☐ Other

Scenarios and Questions	Yes	No	Observations notes
OVERVEIW OF MCH CARE DELIVERY			
TYPE OF CARE ☐Clinical care, ☐ Curative, ☐ Prevention ☐ Health Promotion ☐ Health Information ☐ Other			
KEY AREAS OF CHILD HEALTH ☐Childhood illness and management (IMCI), ☐Nutrition ☐Breast feeding, ☐ Immunisation, ☐Milestone development, ☐Newborn health (kangaroo care, baby washing practices), ☐ Child health and development ☐ Other			
KEY AREAS OF MATERNAL HEALTH ☐ Maternal health, ☐ maternal wellbeing, ☐ reproductive health, ☐ counselling ☐ HIV counselling , ☐ other			
AVERAGE LENGTH OF CONSULTATION (per mother):			
OTHER			
CARE AND ASSESSMENT OF CHILD HEALTH AND DEVELOPMENT			
KEY AREAS OF CHILD HEALTH AND DEVELOPMENT: ☐Weight, ☐ Fine Motor Skills, ☐Gross Motor Skills, ☐Cognitive Development, ☐Language Development, ☐Social development			
CHILD HEALTH M&E TOOLS/RESOURCES ☐Medical records keeping ☐ Health Information Systems ☐ MCH booklet ☐ Child health booklet			
OTHER			
CARE FOR CHILD DEVELOPMENT			
IS CCD ADDRESSED DURING CARE?			
LIST MAIN CCD AREAS ADDRESSED DURING CARE? ☐ Play ☐ Communication ☐ Other			
LIST TOOLS/TOYS USED TO COUNSEL MOTHER ON PSYCHO-SOCIAL DEVELOPMENT AND CAREGIVING			

LIST RESOURCES, EQUIPMENT OR TOOLS USED TO ASSESS CCD/ PSYCHO-SOCIAL ECD MILESTONES			
OTHER			
MEDICAL AIDES/DIAGNOSTIC TOOLS			
Equipment/tools to assess child development milestones ☐**Growth promotion chart** ☐**Ages and Stages,** ☐**HOME** ☐ **The Bayley Scales of Infant and Toddler Development** ☐**Other**			
Are there tools/toys available to assist with assessing development milestones? If yes list			
Are tools available to evaluate Care for Child Development and psycho-social ECD? If yes list			
Other			
HEALTH PROMOTION OR INFORMATION ON PSYCHO-SOCIAL CHILD DEVELOPMENT			
INFORMATION EDUCATION AND COMMUNICATION (IEC) ON CAREGIVING AND PSYCHO-SOCIAL ECD ☐ **Information booklets,** ☐ **MCH booklets,** ☐ **Brochures,** ☐**Posters,** ☐ **CCD cards?**			
Health promotion or advocacy on CCD or psycho-social ECD			
Point of HP contact at service delivery			
Other			
REFERRAL SERVICES			
Child health referrals services, are mother and children being referred to other services? List			
Existence of specialist psycho-social ECD services? ☐ **internal** ☐ **external**			
Other			
Field notes and observations			

HSS framework reflections

	HSS considerations	Yes	No	Observations
1.	Governance			
1.1	**Evident leadership and directives on child development and CCD (Management or clinical)**			
1.2	**Other**			
2	Finance			
2.1	**Other**			
3	Service Delivery			
3.1	**Evident point of contact for CCD**			
3.2	**Evident staff to support CCD implementation**			
3.3	**Appropriate health facilities, infrastructure and resources to delivery CCD**			
3.4	**Clinical or Health promotion opportunities to present CCD**			
3.5	**Other**			
4	Health workforce			
4.1	**Appropriate health workers to deliver CCD available?**			

4.2	**Are clinical staff able to deliver additional (CCD) services?**			
4.3	**Other**			
5	**Technologies**			
5.1	**Are there any child health M&E systems**			
5.2	**Is there a functioning HIS for MCH data collection?**			
5.3	**Audio- visual technologies for Health Promotion**			
5.5	**Are there exist play and communication materials available for potential CDD?**			
5.6	**Other**			
6.	**Information**			
6.1	**Are there psycho-social ECD evaluation tools**			
6.2	**CCD Info, education and community (IEC) materials/campaigns- HW & community**			
6.3	**Is there audio visual material for HP**			
6.4	**Other**			

Appendix 6: Overview of qualitative results

An overview of key recurring themes and concepts- interview, focus group discussion, document review and observations.

Recurring themes	Interviews			FGD	Doc. Review	Observations
	Gov staff	NGO staff	Clinicians			
GOVERNANCE THEMES						
National level government ECD commitment and prioritisation	X	X	X	N/A	X	N/A
Successful NIECD governance	X	X	X	N/A	X	X[22]
An integrated and multisectoral approach to ECD.	X	X	X	N/A	X	N/A
Challenges to NIECD leadership authority and implementing capacity	X	X		N/A		N/A
Lack of services addressing psychosocial ECD.	X	X		X	X	N/A
Limited health sector involvement in psychosocial ECD.	X	X	X			N/A
SERVICE DELIVERY THEMES						
Informal practices of care for psychosocial ECD	N/A	N/A		X	N/A	X
Limited familiarity of psychosocial ECD milestones	N/A	N/A		X	N/A	X
Sensitisation on psychosocial ECD	N/A	X	X	X	N/A	
Identified opportunities to address CCD and psychosocial ECD.		X	X	X		X
Emphasis towards addressing physical child health and development over psychosocial ECD	X		X	X		X
Health systems structural barriers		X	X	X		X
Importance of male involvement in maternal and child health and ECD	X	X	X	X	X	N/A
Impact of cultural beliefs on care and ECD	X	X	X	X	N/A	N/A

---

[22] Observation during NIECD policy launch

Data analysis coding tree

Themes	Category	Codes
Governance themes		
National level government ECD commitment and prioritisation	Political commitment	• National government commitment and prioritisation of ECD. • National government accountability • National government coordination • NIECD policy launch
Successful NIECD governance	Political advocacy and engagement	• Increased advocacy is required from highest level of government • Advocacy and involvement of strategic government departments
	Local level government engagement.	• Subnational level government buy in. • Local level government commitment and engagement.
An integrated and multisectoral approach to ECD.	Multisectoral engagement	• Whole of government approach • Multisectoral engagement across government departments, NGOs and private sector to provide key resources and services.
	Collaboration	• Integrated approach to ECD across health, gender and education sector. • Intersectoral collaborations between the government ministries • Bisectoral collaborations across health education and social sector • Multisectoral collaborations across health, education, private and social development sectors;

Themes	Category	Codes
	Partnership	• Delivering ECD services through partnership • Public and private sector partnerships (PPPs) • Private sector mobilisation and engagement in national policy and ECD action plan. • Private sector mobilisation of funds and services
Challenges to NIECD leadership authority and implementing capacity.	Challenges to multisectoral ECD	• Implementation of multisectorality unclear • Implementing capacity tension – regarding capacity to deliver ECD services • Independent ECD work arrangements
	ECD ownership and implementing responsibilities	• Authority of MoGLSD • Implementing capacity of MoGLSD • Capacity and mechanisms to implement ECD • Funding allocation tension - who gets what
	Operationalising multisector engagement	• Resource allocation concern • Managing different sectoral implementing capacity
Lack of services addressing psychosocial ECD.	Inadequate implementation mechanisms	• ECD services provided by private sector-inequitable access • ECD formally available through private ECD centres.
Limited health sector involvement in psychosocial ECD.	Health not seen as avenue for psychosocial ECD	• ECD services under MoES • ECD education mandate • ECD responsibility of MoES

Themes	Category	Codes
Service delivery themes		
The conceptualisation and understanding of psychosocial ECD	Conceptualisation of psychosocial ECD	• Psychosocial ECD associated with smiling, playing and socialising with caregiver. • Psychosocial ECD associated with mental health (conditions).
Acknowledgment of psychosocial ECD and social factors	Psychosocial ECD related to social factors	• (Lack of) stimulation • Nurturing environment • Attachment • Nutrition
Informal practices to promote positive caregiving and psychosocial ECD	Care for psychosocial ECD informally addressed and encouraged by frontline health workers	• Informal encouragement of bonding and attachment- e.g. time for child, play with child's cheeks • Informal engagement/promotion of psychosocial ECD activities with mothers- laugh with baby, talking to baby
Limited awareness of psychosocial ECD milestones	Limited knowledge of CCD and psychosocial ECD milestones amongst frontline health workers.	• No clear recognition of the different age related psychosocial ECD milestones • Differences in health worker's perception and understanding of infant psychosocial ECD capacities
Psychosocial ECD sensitisation	Sensitisation on the importance of ECD and psychosocial ECD	• Sensitising health worker on CCD • Sensitising caregiver CCD • Sensitising community CCD
Emphasis towards addressing physical child health over psychosocial ECD	Prioritising physiological child health	• Prioritising preventative and curative child healthcare over care for psychosocial ECD • Strong focus on physiological child health and development • Health worker priority –preventing child death and disease • Health worker priority- promoting growth and development

Themes	Category	Codes
		• Psychosocial ECD – parents or community—responsibility (i.e. ECD centres, caregivers, community)
Identified opportunities to address psychosocial ECD at frontline RMNCH services	Integrating care for psychosocial ECD and CCD in existing MCH activities	• Use nutrition and immunisation services to promote psychosocial ECD • Use health education talks, to promote psychosocial ECD • Use child clinics to promote psychosocial ECD • Health worker training • Health worker sensitisation on CCD
Health systems structural challenges	Health system challenges and impact on the quality and delivery of care	• Limited health worker time and capacity • Resource distribution inequities - limited resources • Empowerment - lack of respect • Low health worker motivation • Heavy work load
Socio-cultural themes		
Importance of male involvement in MCH and ECD	Male involvement	• Male sensitisation and involvement important to MCH. • Male engagement across all levels of society – government and fathers in the community is important • Inadequate services prevent male involvement in MCH
Impact of cultural beliefs on ECD and care for psychosocial ECD.	Cultural beliefs and care for ECD	• Influence of cultural beliefs on mother's behaviour and caregiving • Influence of cultural and religious beliefs on caregiving • Influence of cultural and religious beliefs on health services utilisation

Appendix 7: Government permission to conduct research

TELEPHONE: General office
340874/231563/9
PS-s office: 340872
TELEFAX: 231584
TELEX: 61372 HEALTH UGA.
In ANY CORRESPONDENCE ON
THIS SUBJECT PLEASE QUOTE NO. ADM.130/313/05

THE REPUBLIC OF UGANDA

MINISTRY OF HEALTH
P.O. Box 7272
KAMPALA,
UGANDA

Tuesday, September 08, 2015

Ms. Nakazinga Ndugwa
The University of Queensland
Room 115, Public Health Building
Herston Road
Herston, QLD 4006 Australia
Tel: +256 0790-200570
        +61 424 987 541

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN THE MINISTRY OF
       HEALTH AND OTHER HEALTH FACILITIES

Your letter dated 26th August 2015 on the above subject matter refers.

This is to inform you that permission has been granted to you to carry out your research as a PhD student at the School of Public Health, University of Queensland in Brisbane, Australia basing on the research topic *"the feasibility of strengthening psyco-social ECD in Uganda's public health systems"*.

Please ensure the research is conducted following ethical code of conduct. Thus it is necessary to get the necessary ethical approves from the relevant boards.

Yours

Prof. Anthony K. Mbonye
Director Health Services (Clinical and Community)

THE REPUBLIC OF UGANDA

**Ministry of Gender, Labour
and Social Development
P.O. Box 7136
Kampala
Uganda.**

7th September, 2015

To whom it may concern,

**RE: PERMISSION TO CONDUCT RESEARCH IN UGANDA ON THE
        FEASIBILITY OF STRENGTHENING PSYCHO-SOCIAL ECD IN
        UGANDA'S PUBLIC HEALTH SYSTEMS**

The Ministry for Gender, Labour and Social Development has been contacted by Ms Nakazinga Ndugwa, a PhD student at the University of Queensland, Brisbane, Australia who is embarking on conducting a research on Early Childhood Development in Uganda as part of her PhD thesis.
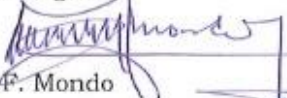
The activities for the research will include;

- Interviews
- Focus Groups
- Observational data of Maternal and Child healthcare services and
- Secondary data

I am aware that her research will involve recruiting participants currently working in Uganda. I understand that all information collected from participants will be done with informed consent and participants can refuse participation with no negative consequences. I understand that the privacy, confidentiality and wellbeing of participants will be upheld and respected at all times of the data collection. I understand that the research will also involve the collection of observational data and secondary data from organisations in Uganda.

As a ministry, we look forward to closely working with and supporting the research study and we believe that the research findings will contribute towards informing policy and interventions aimed at strengthening psycho-social ECD in Uganda's public health systems.

Best regards

K. F. Mondo
FOR PERMANENT SECRETARY

Telegram: "EDUCATION"

Telephone: 257200

General line: 234451/8

Fax: 230437

Website www.education.co.ug

THE REPUBLIC OF UGANDA

In any correspondence on
this subject please quote No. ADM/48/175/01

Ministry of Education, Science
Technology and Sports,
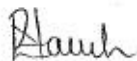Embassy House,
P.O. Box 7063,
Kampala, Uganda.

2nd September 2015

Ms. Nakazinga Ndugwa
Student
School of Public Health
AUSTRALIA

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN UGANDA

Reference is made to your letter dated 26th August 2015, requesting for permission to conduct research in Uganda

This letter is therefore to inform you that the Ministry has granted you permission to go on with your research in the areas requested.

Dr. Rose Nassali Lukwago
PERMANENT SECRETARY

Appendix 8:   Ethics approval

THE UNIVERSITY
OF QUEENSLAND

Public Health Building
Herston Road, Herston
Brisbane Qld 4006
Telephone +61 7 3365 5345/5280
Facsimile +61 7 3365 5442
Email: Enquiries@sph.up.edu.au
Website www.sph.uq.edu.au

To   Ms Nakazinga Ndugwa

From   Lisa Fitzgerald

Date   16 February 2016

Re   Ethics Approval NN16022016

Dear Nakazinga,

Thank you for your application for ethics approval for your research:

Research topic:

Psycho-social Early Childhood Development (ECD) and public health: a health systems approach.

The School of Public Health Research Ethics Committee has reviewed the materials submitted for review and ethics approval has been given.

Yours faithfully

Lisa Fitzgerald
Chair, School of Public Health Research Ethics Committee
School of Public Health, University of Queensland

31st May, 2016.

Ms. Nakazinga Ndugwa
Principal Investigator
Brisbane School of Public Health University
University of Queensland.

Dear Nakazinga,

Re: Approval of Protocol MREC: 979: "Psycho-Social Early Childhood Development and Public Health in Low and Middle Income Countries: a Health Systems Approach to Inform the Scale up of Care for Child Development".

The Mulago Research and Ethics Committee reviewed your proposal referenced above on 25th May, 2016 and hereby grant approval for the conduct of this study for a period of (1) year from 25th May, 2016 to 24th May, 2017.

This approval covers the protocol and the accompanying documents listed below;

- Additional study location form
- Informed consent.
- Letters/emails to healthcare professional
- Facility information poster on observational data collection at MCH facilities
- Advertising recruiting poster
- Information sheets (General research information sheet)
- All participant information sheets.
- MREC consent form
- UQ Consent forms
- Interview guide and focus group forms
- Observational facility assessment checklists.

This approval is subjected to the following conditions:

1. That the study site may be monitored by the Mulago research and ethics committee at any time.
2. That you will be abide by the regulations governing research in the country as set by the Ugandan National Council for Science and Technology including abiding to all reporting requirements for serious adverse events, unanticipated events and protocol violations.
3. That you will submit this approved protocol and all accompanying documents for approval to UNCST before starting the study. In case of studies involving drug and medical devices, approval must be obtained from the National Drug Authority before starting the study.
4. That no changes to the protocol and study documents will be implemented until they are reviewed and approved by the Mulago Research and Ethics Committee.
5. That you provide annual progressive reports and request for renewal of approval at least 60 days before expiry of the current approval.
6. That you provide an end of study report upon completion of the study including a summary of the results and any publications.
7. That you will include Mulago hospital in your acknowledgements in all your publications.

I wish you the best in this Endeavour.

DR.NAKWAGALA FREDERICK NELSON
CHAIRMAN- MULAGO RESEARCH & ETHICS COMMITTEE.

APPROVED
APPROVAL DATE   EXPIRY DATE
2 5 MAY 2016   2 4 MAY 2017
MULAGO RESEARCH ETHICS COMMITTEE
IRC

Vision: "To be the leading centre of Health Care Services"

Uganda National Council for Science and Technology

(Established by Act of Parliament of the Republic of Uganda)

UNCST

Our Ref: SS 5009

20th July 2016

Nakazinga Ndugwa
Principal Investigator
C/o School of Public Health
Makerere University
Kampala

Re: Research Approval: Psycho-Social Early Childhood Development and Public Health in Low
and Middle Income Countries (LMICs): A Health Systems Approach to
Inform the Scale up of Care for Child Development (CCD)

I am pleased to inform you that on **27/06/2016**, the Uganda National Council for Science and Technology (UNCST) approved the above referenced research project. The Approval of the research project is for the period 27/06/2016 to 27/06/2017.

Your research registration number with the UNCST is **SS 5009**. Please, cite this number in all your future correspondences with UNCST in respect of the above research project.

As Principal Investigator of the research project, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the research protocol or the consent form (where applicable) must be submitted to the designated Research Ethics Committee (REC) or Lead Agency for re-review and approval **prior** to the activation of the changes. UNCST must be notified of the approved changes within five working days.
3. For clinical trials, all serious adverse events must be reported promptly to the designated local REC for review with copies to the National Drug Authority.
4. Unexpected events involving risks to research subjects/participants must be reported promptly to the UNCST. New information that becomes available which alters the risk/benefit ratio must be submitted promptly for UNCST review.
5. Only approved study procedures are to be implemented. The UNCST may conduct impromptu audits of all study records.
6. A progress report must be submitted electronically to UNCST within four weeks after every 12 months. Failure to do so may result in termination of the research project.

LOCATION/CORRESPONDENCE

Plot 6 Kimera Road, Ntinda
P. O. Box 6884
KAMPALA, UGANDA

COMMUNICATION

TEL: (256) 414 705500
FAX: (256) 414-234579
EMAIL: info@uncst.go.ug
WEBSITE: http://www.uncst.go.ug

Uganda National Council for Science and Technology
(Established by Act of Parliament of the Republic of Uganda)

UNCST

Below is a list of documents approved with this application:

	Document Title	Language	Version	Version Date
1.	Research Proposal	English	N/A	May 2016
2.	General Research Information Sheet	English	N/A	May 2016
3.	Participant Information Sheet – Interviews	English	N/A	May 2016
4.	Participant Information Sheet – Focus Groups	English	N/A	May 2016
5.	Participant Information Sheet – Observational Facility Assessment	English	N/A	May 2016
6.	Participant Information Sheet –Observational Data Collection of Maternal and Child Healthcare Interactions- Healthcare Staff	English	N/A	May 2016
7.	Participant Information Sheet –Observational Data Collection of Maternal and Child Healthcare Interactions- Mothers/Caregivers	English	N/A	May 2016
8.	Consent Form	English	N/A	May 2016
9.	Consent Form- Interviews	English	N/A	May 2016
10.	Consent Form- Focus Groups	English	N/A	May 2016
11.	Consent Form- Observational Health Facility Assessment	English	N/A	May 2016
12.	Consent Form- Maternal and Child Healthcare Observations	English	N/A	May 2016
13.	Consent Form- Mothers/Caregiver participation in Maternal and Child Healthcare Observations	English	N/A	May 2016
14.	Interview Guide and Focus Group	English	N/A	May 2016
15.	Observational Facility Assessment Checklist	English	N/A	May 2016
16.	Maternal and Child Healthcare Observation Checklist	English	N/A	May 2016

Yours sincerely,

Hellen N. Opolot
For: Executive Secretary
UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

cc: Chair, Mulago Research Ethics Committee

Appendix 9:   Care for Child Development Monitoring and Evaluation framework

CCD M&E programme and implementation framework (45 p 3)

Task	WHAT questions to answer	WHEN to gather the information	WHO to gather the information	Sample indicators (see full list of proposed indicators in sections that follow and sample tools in the Annex)
To monitor programme implementation	What is the **status of implementation** of the Care for Child Development intervention?	Continuous	Programme manager/coordinator	• Policies conducive to promote early childhood development being implemented • Training courses completed *See Annex A*
	What is the **quality of inputs** to the intervention (training and supervision)?	Continuous	Programme manager/coordinator	• Course duration • Hours in clinical practice • Facilitator/participant ratio • Intensity of supervision (hours, frequency) *See Annex A*
	How well does the intervention address **equity,** to reach the most marginalized children?	During the Situational Analysis, to identify children of greatest need	Programme manager/coordinator	• Disaggregated data (e.g. by region, district, income, and/or ethnicity, and gender) • Proportion of the most marginalized communities and/or families receiving intervention who were targeted for it *See Annex A*
To evaluate the impact of the intervention	What is the impact of training and supervision on counselling by *service providers?*	Periodic (no training, at the end of training, one month after training, three months later)	Facilitators/supervisors	• Caregiver-child interactions assessed by provider • Recommendations for play and/or communication given *See Annex B*
	What improvements were seen in *caregiver practices?*	Periodic (no caregiver counselling, after counselling)	Facilitators/supervisors or household surveyors	• Support for learning in the home: playthings • Support for learning in the home: adult play and communication activities with child *See Annex B*

CCD Multiple indicators Cluster Survey – Supportive Environment in Home assessment (45 p 14)

SUPPORTIVE ENVIRONMENT IN THE HOME (MICS items)

Tool to evaluate the RECOMMENDED INDICATORS on the impact on caregiver practices.

EC1. How many children's books or picture books do you have for (name)?	None _____ 00 Number of children's books _____ 0 __ Ten or more books _____ 10
EC2. I am interested in learning about the things that (name) plays with when he/she is at home. Does he/she play with [A] homemade toys (such as dolls, cars, or other toys made at home)? [B] toys from a shop or manufactured toys? [C] household objects (such as bowls or pots) or objects found outside (such as sticks, rocks, animal shells or leaves)? *If the respondent says "YES" to the categories above, then probe to learn specifically what the child plays with to ascertain the response*	Y N DK Homemade toys _____ 1 2 8 Toys from a shop _____ 1 2 8 Household objects or outside objects 1 2 8
EC3. Sometimes adults taking care of children have to leave the house to go shopping, wash clothes, or for other reasons and have to leave young children. On how many days in the past week was (name): [A] left alone for more than an hour? [B] left in the care of another child (that is, someone less than 10 years old) for more than an hour? *If 'none' enter' 00'. If 'don't know' enter' 98'*	Number of days left alone for more than an hour _____ __ __ Number of days left with other child for more than an hour _____ __ __

EC4. In the past 3 days, did you or any household member over 15 years of age engage in any of the following activities with (name): *If yes, ask:* who engaged in this activity with (name)? *Circle all thataq apply.*		Mother	Father	Other	No one
[A] Read books to or looked at picture books with (name)?	Read books	A	B	X	Y
[B] Told stories to (name)?	Told stories	A	B	X	Y
[C] Sang songs to (name) or with (name), including lullabys?	Sang songs	A	B	X	Y
[D] Took (name) outside the home, compound, yard or enclosure?	Took outside	A	B	X	Y
[E] Played with (name)?	Played with	A	B	X	Y
[F] Named, counted, or drew things to or with (name)?	Named/counted	A	B	X	Y