Coverage of Essential Early Childhood Development Interventions in Uganda

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Coverage of Essential Early Childhood Development Interventions in Uganda

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TABLE OF CONTENTS

PART II: OTHER PACKAGES

ABSTRACT

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The opinions expressed in the study are those of the authors only and need not represent the views of the World Bank, its Executive Directors, or the countries they represent, nor do they represent the views of the Ministry of Education and Sports.

ABBREVIATIONS

ANC	Antenatal Care
DHS	Demographic and Health Survey
ECCE	Early Childhood Care and Development
ECD	Early Childhood Development
FGD	Focus Group Discussion
JMP	Joint Monitoring Programme
ORS	Oral Rehydration Salts
SABER	Systems Approach for Better Education Results
TBA	Traditional Birth Attendant
VHT	Village Health Team
VIP	Ventilated Improved Pit

EXECUTIVE SUMMARY

This study relies on nationally representative household surveys and qualitative fieldwork to measure the coverage of essential early childhood interventions in Uganda and document some of the obstacles faced by households to benefit from the interventions. For 20 of 25 essential interventions, information is available in the data sources used for the study. After a methodological chapter (chapter 2), the study first analyzes the extent to which households with young children benefit from support programs and policies for families (chapter 3). Access to healthcare and the availability of micronutrient supplementation are discussed next (chapter 4), followed by access to safe water and sanitation including hand washing (chapters 5 to 7). Services related to pregnancies and deliveries are then discussed (chapter 8). The last sets of interventions are related respectively to child growth and development (chapter 9) and to preschools and the transition to primary schools (chapter 10).

The main findings are as follows:

1. There are large differences in coverage between interventions, but coverage tends to be low especially in rural areas and among the poor. National coverage rates are as follows:
    a. Coverage above 80 percent: (i) Entry in primary school; (ii) Antenatal care; (iii) Access to healthcare; and (iv) Breastfeeding (but for some of these interventions, despite high coverage, specific gaps in coverage or delays remain).
    b. Coverage between 55 and 80 percent: (i) Iron and folic acid for pregnant mothers; (ii) Immunizations; (iii) Improved water source: (iv) Adequate diet for children; (v) Attended delivery; and (vi) Vitamin A capsules for children.
    c. Coverage between 25 and 55 percent: (i) Deworming; (ii) Adequate treatment for diarrhea; and (iii) Family planning and contraception.
    d. Coverage below 25 percent: Maternal education (at least primary); (ii) Pre-primary education; (iii) Birth certificate; (iv) Hand washing; (v) Improved latrine; (vi) Parental leave; and (vii) Social assistance through cash transfers.
    e. For five interventions, data are not readily available to assess coverage.
2. While coverage is high for a few interventions, even for those there are often issues. For example, cost remains a constraint for access to healthcare, many mothers start to breastfeed their children too late after birth, and many children start primary school late.
3. Qualitative work suggests that multiple factors contribute to low coverage rates of essential ECD interventions. Cost and affordability are mentioned as constraints reducing take-up of several services by households when services are in principle available. But in addition, lack of functionality (existing facilities are not working properly), lack of local responsibility (poor local leadership), and scarcity (in some communities for example, water is simply not easily available) are also at play. Finally, lack of knowledge and awareness, as well as cultural factors and the weight of traditions, also reduce the take-up of many services, among others for family planning, birth deliveries, and immunization.
4. Overall the constraints faced by households are complex and often require solutions that must be context and community-specific. This does not lead to cookie cutter solutions, but is important to document precisely because of the variety of local circumstances.

CHAPTER 1
INTRODUCTION

Clarence Tsimpo and Quentin Wodon

As noted by Denboba et al. (2014), investing in children in their early years represents a unique window of opportunity to improve individual, community, and societal outcomes. For poverty reduction and shared poverty, investments in early childhood development (ECD) are among the best investments that countries can make. When young children and their families have access to essential services in education, health, nutrition, sanitation, social protection, and water, they are afforded the opportunity to learn and lead healthy and productive lives. The returns to ECD interventions have been shown to be often larger than the returns for interventions later in life. Conversely, failing to invest early in life can lead to irreversible damage for the future. Unfortunately, most countries today fall short in their ECD investments.

In recent years the World Bank's Education Global Practice has developed a set of diagnostic tools known as SABER (Systems Approach for Better Education Results) to assess country policies in a number of domains including ECD. The SABER ECD diagnostic tool or module is structured around three policy goals: establishing an enabling environment, implementing widely, and monitoring and ensuring quality. For each goal three policy levers are analyzed, ranging from the legal framework for ECD services to the extent to which service providers such as care centers or pre-schools comply with nationally standards (Neuman and Devercelli, 2013). Country policies are assessed along these various dimensions. As is the case for other SABER modules, the SABER ECD module is (to a large extent) focused on policy intent, but as its name indicates, the second policy goal in the ECD module is about implementation.

Building on previous work on ECD in Uganda including the application of the SABER ECD module to the country (World Bank, 2012), the focus in this study is on measuring in a more comprehensive way the coverage of essential ECD interventions and understanding some of the obstacles faced by households to benefit from these interventions. In other words, beyond policy intent in the area of ECD, this study looks at policy implementation. While the SABER ECD module already included a number of programs and policies considered important for ECD, the study follows a more comprehensive framework proposed by Denboba et al. (2014) who identify a set of 25 essential ECD interventions that countries should aim to implement. The coverage of these interventions in Uganda is estimated using data from nationally representative household surveys, and for a subset of interventions an assessment based on qualitative fieldwork of some of the constraints faced by households for benefiting from the interventions is provided. Apart from this brief introduction, the study consists of nine chapters.

Chapter 2 explains the framework used for the study and the methodology followed for data collection, with a focus on the qualitative fieldwork carried for education, healthcare, water, and sanitation. The framework consists of 25 essential ECD interventions proposed by Denboba et al. (2014). As already mentioned, for each intervention an analysis of the coverage of the intervention is provided using nationally representative household surveys. This is done nationally, as well as by location and region, and by welfare level. Next, qualitative fieldwork is available for a subset of interventions to understand constraints faced by households to benefit from the interventions. Overall, information is available in the household surveys for 20 of the 25 interventions considered, and qualitative data are available for nine interventions, including many of the most important ones. Therefore, the diagnostic provided is fairly comprehensive.

Chapter 3 is devoted to a first set of interventions providing support for vulnerable families which are part of the ECD family support package outlined in Denboba et al. (2014). Data are available in the surveys used for maternal education, family planning and contraception, transfer programs, and parental leave. In all cases, coverage is found to be low. There are clear gains over time in the level of education of mothers, but the share of mothers of children between birth and six years of age with at least some secondary education or above is well below one-fifth. Few women rely on modern contraception methods. Transfer programs are then the exception rather than the rule. Parental leave is enjoyed only by a small proportion of parents. The qualitative fieldwork focuses on family planning. Both cultural and service delivery factors are at work in leading to a lack of use of modern contraception methods. Negative husband attitudes towards family planning lead many women to opt out of using contraception. This is exacerbated by inconsistency in the availability of contraceptives at health centers. Perceived or actual side effects of some family planning methods also discourage women from using them. When women use contraception, many tend to do it stealthily with risks if their husband notices them.

Chapter 4 considers access to healthcare and micronutrient supplementation. On average, two in three children receive Vitamin A capsules. The focus of most of the chapter is on access to healthcare where cost remains the main reason for not seeking care when needed. Only half of the population pays for consultations for children, but costs for medicine, hospital or clinic charges, and transportation may be substantial. The qualitative fieldwork suggests that distance to facilities and the lack of availability of drugs are constraints to seeking healthcare when children fall sick. Awareness and health education could also help. For example, there is awareness that malaria is preventable and that mosquito nets can be effective to fight against malaria, but there were also pockets of resistance to the use of mosquito nets. In some cases lack of satisfaction with public health centers also reduces the demand for care. Many centers are in poor physical condition, and staff who commute from distant places are often late for work and must leave early. In addition, limited remuneration and lack of personnel may lead to high workloads and staff irritability, as well as inadequate quality of service. Finally, socio-cultural factors also play a role in the demand for care or lack thereof. For example, in some areas female genital cutting has been practiced since time immemorial and persists today and makes local women reluctant to go to government health units for deliveries assisted by midwives from other cultures. But there are also examples in the qualitative fieldwork of local initiatives and leadership to improve the availability and quality of care.

Chapter 5 is devoted to access to safe water. Only a small minority of households have access to piped water, whether in the dwelling or through public standpipes. When considering other improved water sources, three in four households could have access to safe water. Cost, distance to safe water sources, and perceptions that open water sources are good enough are constraints to the use of safe water when it is in principle available. In the qualitative fieldwork, factors that contribute to a lack of availability of water in many communities are analyzed along three dimensions. First, lack of functionality refers to the water facilities that are not working properly, whether this is due to (among others) aging systems, poor maintenance, or the inability to implement necessary repairs. Second, lack of local responsibility refers to poor organization or leadership at the local level that prevents communities from improving water supply and leads to poor maintenance and a lack of incentives for households to keep water sources clean. Third, scarcity refers to the fact that in some communities, water is simply not easily available—it is scarce and often has to be brought into the community from distant sources. Factors that contribute

to a lack of quality of the water used by households and communities include at times erroneous perceptions of what constitutes safe water and in some cases affordability issues.

Chapter 6 is devoted to sanitation. Only a minority of households has access to improved sanitation, and the use of various types of toilets and bathroom facilities has not changed fundamentally over the last decade. The qualitative fieldwork confirms that many communities have limited toilet facilities, with quite a few of the latrines built in a state of disrepair, especially for public facilities. Private latrines are not affordable for many. Yet apart from cost, other obstacles including poor soil quality, lack of land rights, tenant status, and even cultural traditions all may come in the way of better sanitation. When public latrines are available, there is often a consensus that fees should be charged to those using the latrines for maintenance, yet enforcing the fees is often lacking. The same is true for bylaws stating, especially in urban areas, that households should build their own latrines. Alternatives such as ecosan toilets have been proposed, but these are often not seen favorably by households, and also fall into disrepair.

Chapter 7 discusses hand washing. The surveys suggest that the practice remains limited to a minority of households. The issue of cost and lack of affordability is again prevalent in respondents' feedback in the qualitative work. Buying necessary containers and soap, some of which may be stolen at public latrines, may not be feasible for many. In addition, lack of knowledge about the benefits of hand washing seems to be a major issue. In one community, the threat of a cholera outbreak led members to wash hands for a while, but the practice dried up soon after.

Chapter 8 considers interventions related to pregnancy and birth. While the proportion of women who benefit from antenatal care is high, more than one-third of deliveries are still done at home or with traditional birth attendants, and thereby without medical staff. The rate is higher in rural areas and among the poor. Most newborns do not have birth certificates cases, even in Kampala. The provision of iron and folic acid for pregnant mothers is high, at three out of four pregnant women. Breastfeeding is almost universal, which is good news, but one in five children is not breastfed within the first few hours of birth. The qualitative fieldwork suggests that factors keeping mothers from delivering at health facilities include the poor state of many facilities, the lack of maternity wards, and the lack of space and privacy. But in some areas, cultural factors also play a role, whether this is related to concerns by women who have undergone female genital cutting to be mocked by midwives from other cultural backgrounds or trust in traditional birth attendants. The Maama Kit initiative has had limited success in part due to poor health facilities, but also due to traditional values according to which strong women do not deliver outside of their home.

Chapter 9 considers interventions related to child growth and development. Only slightly more than half of all children receive all the immunizations they need, and about two-thirds of children are vaccinated against measles. The proportion for DPT3 is at three-fourths. Data are limited on the extent to which children receive an adequate, nutritious, and safe diet, but a non-negligible share of children do not have much food or fluids for breakfast, pointing to concerns about food security among the poor. Between one-fourth and one-third of children are affected by diarrhea in a two-week period. Only one-third of those children receive fluids from oral rehydration salts (ORS) sachets or recommended homemade fluids (with sugar/salt mixtures). Deworming covers about half of children. The qualitative fieldwork suggests that factors limiting immunization rates are varied. Some parents have reservations about vaccination, at times for religious or traditional reasons. Others are concerned about the safety or efficacy of vaccines. Some forget their visit date. Lack of vaccines at health centers, sometimes due to poor storage facilities,

also reduces coverage, as does poor communication by health workers to parents on the exact timing of immunization schedules. Finally, while immunization itself is free, the cost of going to facilities is a constraint. At the same time, some outreach efforts have been a success.

Chapter 10 considers preschools and the transition to primary school. Enrollment in preschool is low, in large part due to cost given that preschools tend to be privately operated. In addition, some facilities may be operating without trained and qualified personnel. Enrollment in primary school is by contrast quasi-universal at the national level. Yet among the poorest quintile and in the Northern Region quite a few children never enroll, again in large part due to cost (despite the fact that enrollment is free), but also because of longer distances to schools, disability, and the need to work. A separate issue is that many children enroll late for multiple reasons including ignorance about the importance of starting primary school in time, the necessity to keep children at home for chores, work, or the care of siblings, lack of funds to pay for exercise books, pencils, or pens, lack of maturity of the child, or long distances to school. While some of these factors relate to lack of resources, in time or money, others relate to a lack of value placed on a good education in some communities, in which case, since children may not go to secondary school anyway, starting primary school a bit late does not seem to be of consequence. Overall though, most parents place a high value on the education of their children.

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CHAPTER 2
FRAMEWORK AND DATA

Clarence Tsimpo and Quentin Wodon

This chapter introduces the framework informing the study as well as the sources of data used for empirical work. After a brief reminder of the importance of investing in young children, 25 essential interventions for young children are identified. The chapter then discusses the sources of data—household surveys as well as qualitative fieldwork—used for measuring the extent to which essential interventions are indeed available to young children and for understanding constraints faced in implementation and service delivery.

1. Introduction

As noted by Denboba et al. (2014), investing in young children is one of the best investments that countries can make. A child's earliest years present a unique window of opportunity to address inequality, break the cycle of poverty, and improve a wide range of outcomes later in life. Recent brain research suggests the need for holistic approaches to learning, growth, and development, recognizing that young children's physical and intellectual well-being, as well as their socio-emotional and cognitive development, are interrelated (Shonkoff et al., 2012). To fully benefit from opportunities later in life, by the end of early childhood, young children should be healthy and well-nourished, securely attached to caregivers, able to interact positively with families, teachers and peers, able to communicate in their native language, and ready to learn throughout primary school (Naudeau et al., 2011). By contrast, early gaps in childhood development jeopardize a child's capacity to reach these milestones.

The objective of this study is to document the extent to which children and families benefit from essential early childhood development (ECD) interventions. The framework follows Denboba et al. (2014) who identify 25 essential ECD interventions, most of which can be tracked using household surveys. The framework proposed by Denboba et al. (2014) is not unique, and other efforts have been made to think through investments in ECD (see, for example, Britto et al., 2013, as well as Nadeau et al. (2011) about entry points for effective ECD programs). But the framework suggested by Denboba et al. has the benefit of being simple, and useful for organizing descriptive empirical work on the coverage of various interventions.

The purpose of this chapter is to briefly introduce the 25 essential ECD interventions suggested by Denboba et al. (2014) and to document the sources of data used for the analysis. In order to assess not only the coverage of essential ECD interventions in Uganda, but also some of the obstacles that prevent households from benefiting from these interventions, the study relies on both nationally representative household surveys and qualitative fieldwork data, and it seems useful in this introduction to explain why we chose to combine quantitative and qualitative data.

Quantitative data and methods have long been privileged in the development literature, especially in economics. They provide robustness to the results if they rely on appropriate samples, and regression analysis helps to control for a large number of other variables when measuring the impact of a specific variable on a given outcome. Yet quantitative data often cannot fully capture causality and processes, especially when the analysis fails to provide appropriate contextual information. Qualitative methods such as participant observation or community surveys with key informant interviews help to shed light on the economic, socio-cultural, and political context of the processes under study.

While quantitative analysis in development work is often goods- and services-centered, qualitative research is often people-centered (following Sen's work on the importance of freedom and capabilities to achieve functionings) and institutions-centered (since the access to and use of services is driven by processes rather than a condition at a given point of time, the role of institutions in permitting or preventing access must be analyzed). Qualitative research also often contains both objective and subjective dimensions, to the degree that it considers both the objective conditions of people's lives and access to services, and their perceptions about those services including feelings about their situation (this can also be done with quantitative data).

An important aspect of qualitative research methods refers to what scholars call research access. While no hasty conclusions should be made about the advantages of qualitative research techniques (respondents may refuse to be interviewed while they may accept to fill in an anonymous questionnaire), such methods are often better suited to address sensitive issues. In some cases, developing a relationship of trust with the 'researched' is needed for data collection. The need to adapt the language according to the type of actors under study is also important for the discovery of knowledge (Buchanan et al., 1988). In addition, accessing certain types of interviewees such as officials may be hard by simply sending out a questionnaire.

Another argument in favor of integrated research methods relates to the potential of complementing quantitative data with actor-oriented perspectives. An actor-oriented perspective entails the variety of social practices and often incompatible worldviews between various actors and the multiple realities to which these practices and worldviews respond (Long and Long, 1992). In the case of research on service delivery, key actors would include not only the various clients of the organizations providing the services, but also the professionals providing those services, whether they work in private or public institutions. The experience and voice of clients, as well as the perspective of government professionals and private facilities' staffs at the different echelons of the service delivery process, are often overlooked when relying only on quantitative survey data, or at least not systematically and rigorously researched.

Still another argument in favor of integrated research methods relates to policy making. Qualitative data derived from interviews and focus groups are often criticized for their subjectivity. This is a legitimate concern, and it underscores the fact that qualitative research methods must be implemented rigorously by well-trained researchers, with their results ideally supported by further quantitative analysis. But policy-oriented social analysis is concerned with change and agency—i.e., how the beneficiaries of various services, the staffs in the field manning facilities, and the policy makers can act outside and sometimes against a system which may reduce access to services for the poor. In such contexts, the subjectivity of the various actors, and how as persons they perceive their situations of deprivation and/or lack of access to existing services, is crucial to understanding the basis of agency.

Finally, a potential problem with formal, objective, and often quantitative methods is that they may take for granted the context and relationships that constitutes the phenomena under study. At the other extreme, a subjective point of view may assert that social reality is an ongoing process that social actors continually reconstruct, failing to see the existing regularities. A key challenge for analysis is to analyze the objective conditions of reality while identifying how perceptions influence reality. Especially when it takes into consideration the rules, values, and perceptions of the individuals or groups involved, qualitative research may help to ensure that policies and programs are responsive to the needs of intended beneficiaries in all their social and cultural diversity. And while qualitative methods can help enrich areas which have been dominated by quantitative research, the reverse is also true: quantitative methods can enrich areas which have

been dominated by qualitative research. In a nutshell, by combining research methods, it is hoped that this study provides a stronger diagnostic of the issues considered.

The chapter is structured as follows. The 25 interventions suggested by Denboba et al. are outlined in section 2. The next section documents the data used for the analysis, both from household surveys and qualitative fieldwork. A brief conclusion follows.

2. Framework: 25 Essential ECD Interventions

The list of 25 essential interventions proposed by Denboba et al. (2014) is provided in Figure 2.1, both according to the sectors to which the interventions belong, and the time period in the life of children to which they apply. In terms of time periods, the interventions can be grouped into five packages: the pregnancy, birth, child health, preschool, and family support packages. As noted in Box 2.1, these interventions have been shown to have high returns. The objective of this study is to document the extent to which children and families benefit from each of the interventions one by one (coverage analysis), and to discuss for some interventions the obstacles faced by households and communities in making these interventions indeed available.

Box 2.1: Essential ECD Interventions Have High Returns

In this study the ECD period refers to a child's growth and development starting at conception and until entry in primary school. Research suggests that interventions in the five ECD packages suggested by Denboba et al. (2014) have high returns. Examples of such high returns are as follows.

Family support package: In Africa and Asia, access to safe water can have a 3.4:1 benefit-to-cost ratio, and adequate sanitation can have a 4-7:1 benefit-to-cost ratio (Rijsberman and Zwane, 2012). In Africa, South America, Europe, and Southeast Asia regions, food fortification with iron and other micronutrients can have a benefit-to-cost ratio as high as 37:1 (Horton, 1992). Estimates from Africa, East Asia and the Pacific, and South Asia regions indicate that salt iodization can have a benefit-to-cost ratio as high as 30:1 (Horton et al., 2008). In these same regions, vitamin A can cost $3-16 per disability-adjusted life year (DALY) saved (Ching et al., 2000; Fiedler, 2000; Horton and Ross, 2003).

Pregnancy package: Iron supplementation for pregnant mothers costs from $66 (African sub-region with very high adult and high child mortality) to $115 (Southeast Asian sub-region with high rates of adult and child mortality) per DALY saved (Baltussen et al., 2004).

Birth package: In South Asia and Sub-Saharan Africa, a package of maternal and neonatal health packages costs $3,337–$6,129 per death averted and $92–$148 per DALY averted (Laxminarayan, Chow, and Shahid-Salles, 2006). Breastfeeding promotion programs, which can prevent diarrhea, cost $527–$2,000 per DALY (ibid.).

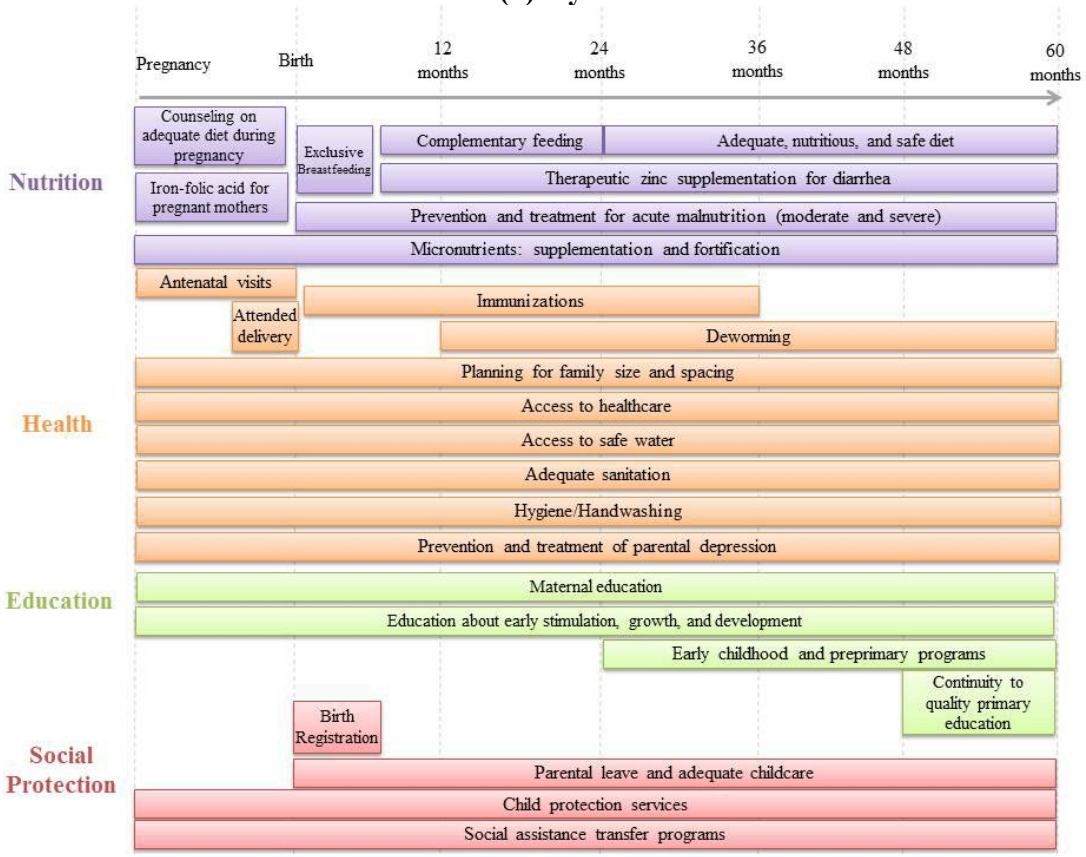
Child health and development package: Immunizations can have a benefit-to-cost ratio up to 20:1 (Barninghausen et al., 2009). In Tanzania, Zinc supplementation for diarrhea management may cost $73 per DALYs saved (Robberstad et al., 2004). Estimates from Africa, East Asia and the Pacific, and South Asia regions indicate that optimal feeding may cost $500-$1,000 per DALY saved (Horton et al., 2010) and deworming can have a benefit-to-cost ratio as high as 6:1 (Horton et al., 2008).

Preschool package: Increasing preschool enrollment to 50 percent of all children in low- and middle-come countries could result in lifetime earnings gains from $14-$34 billon (Engle et al., 2011). High quality ECD programs targeting vulnerable groups in the United States have an annual rate of return of 7–16 percent (Rolnick and Grunewald, 2007; Heckman et al., 2009).

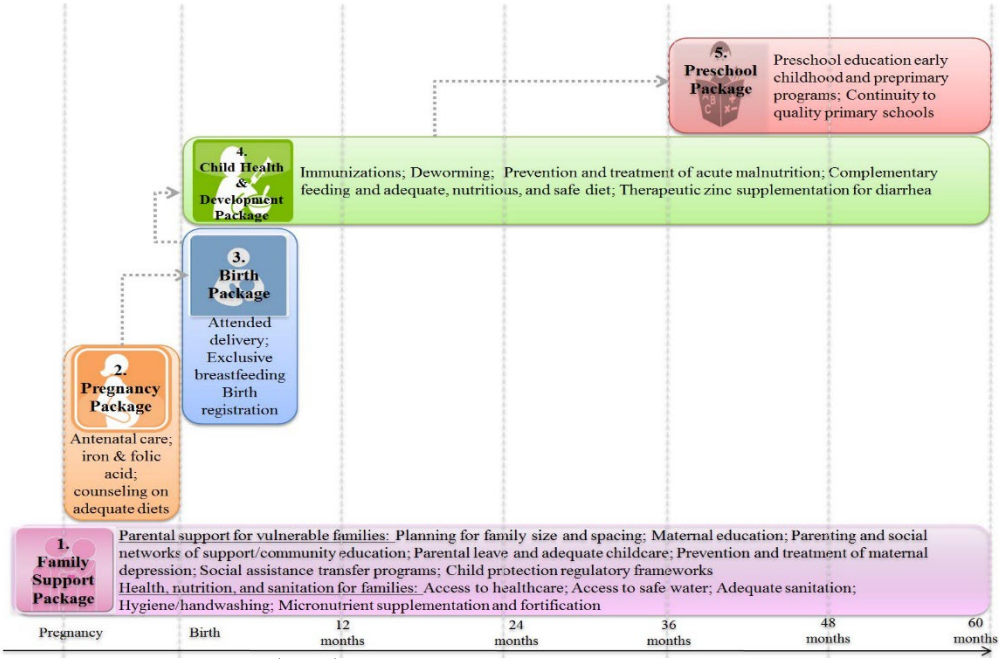
Source: Denboba et al. (2014).

Figure 2.1: Essential Interventions for Young Children

(a) By Sector



(b) By Age



Source: Denboba et al. (2014).

3. Data

Empirical work on ECD is often based on Demographic and Health Surveys (DHS), at least for health and nutrition outcomes and interventions. This study relies instead on multi-purpose household surveys, which have the advantage of providing information on the coverage of a larger set of ECD interventions. In addition, the main survey used for the analysis—the Uganda National Household Survey of 2012/13—is more recent than the latest DHS, which is for 2011. In some instances, data from the Uganda National Panel Survey (which had three rounds of data for 2009/10, 2010/11, and 2011/12) are used to complement the information from the cross-sectional 2012/13 survey (the questionnaire of the panel survey is different, and includes information on some interventions not available in the 2012/13 survey). As shown in table 2.1, information in the surveys is available for 18 of the 25 interventions in the main surveys used for this study. In addition, for three additional interventions, we report data from the 2011 Uganda DHS as the main source of data (we also report additional complementary DHS estimates throughout the document, but as a complement to the main surveys used for the study). Overall the diagnostic of the coverage of ECD interventions provided in the study is thus comprehensive, since data are available for 20 of the 25 interventions, and most of the crucial ones.

Table 2.1: Data Availability on Essential Interventions

Intervention	Principal Household Survey Used	Qualitative Fieldwork
1. Maternal education	2012–13	-
2. Planning for family size and spacing	Panel	Health fieldwork
3. Education about early stimulation and growth	-	-
4. Social assistance transfer programs	2012–13	-
5. Prevention and treatment of parental depression	-	-
6. Parental leave and child care	2012–13	-
7. Child protection services	-	-
8. Access to healthcare	2012–13	Health fieldwork
9. Micronutrient supplementation and fortification	2012–13	-
10. Access to safe water	2012–13	Water & sanitation fieldwork
11. Adequate sanitation	2012–13	Water & sanitation fieldwork
12. Hygiene and hand washing	2012–13	Water & sanitation fieldwork
13. Antenatal care	2011 DHS	-
14. Iron and folic acid for pregnant mothers	2011 DHS	-
15. Counseling on adequate diet for pregnant mothers	-	-
16. Skilled attendance at delivery	Panel	Health fieldwork
17. Birth registration	2012–13	-
18. Exclusive breastfeeding	Panel	-
19. Immunizations	Panel	Health fieldwork
20. Adequate, nutritious, and safe diet	Panel	-
21. Therapeutic zinc supplementation for diarrhea	Panel	-
22. Prevention and treatment of acute malnutrition	-	-
23. Deworming	2011 DHS	-
24. Preprimary education	2012–13	Education fieldwork
25. Continuity to primary	2012–13	Education fieldwork

Source: Authors.

Information is also available from qualitative fieldwork on nine interventions. The fieldwork was implemented separately for healthcare (in 2013), education (in 2012), and water and sanitation (in 2014). For health, the exercise aimed to answer the following questions, many of which are directly relevant for the ECD essential interventions: i) Why do three out of five births

occur outside of health facilities despite government incentives such as the "Maama Kits" program? ii) Why is the demand for care low? iii) Why are children not completing the full dosage of immunization, despite it being free? iv) Why is the contraceptive prevalence rate still very low despite the fact that family planning services are free in government health facilities? v) Why are there persistent drug stock-outs of essential medicines, despite reforms in drug procurement and distribution? Data were collected in 14 districts with at least one district per geographical sub-region. In each region districts were randomly selected from areas with various levels of performance with regards to coverage, quality of health care, and management on the basis on the District League Table presented in the Health Sector Annual Performance Report FY 2011/12. In addition, purposive targeting was used to select and include districts in hard-to-reach/hard-to-stay areas. The selected districts are shown in Table 2.2.

The instruments used included focus group discussions (FGDs), key informant interviews, observations, and case studies. Before fieldwork activities, detailed checklists for FGDs and case studies were developed to guide the different categories of targeted populations. Five categories of stakeholders were targeted for data collection: community members (women, men, youth, elderly), VHTs (where they exist), health providers (health workers and in-charges, biostasticians, HMIS focal persons, hospital administrators and hospital Superintendents), local government officials (CAOs, DHO, Secretary for Health), and, at the national level, officials of National Medical Stores and Ministry of Health officials. Visits to Health Centers as well as National Medical Stores were carried to ascertain the status of facilities through observations and photographs, and the availability of drugs in the case of National Medical Stores.

For education, many of the questions in the fieldwork were also related to the packages of essential interventions. This included questions about why some children have not yet been enrolled in school, and what options are available to parents in terms of early childhood education. As for health, the instruments used included focus group discussions (FGDs), key informant interviews (including head-teachers, the Chairman/ Secretary for Education LC III, the Councilor representing the sub-county at the district, and the Community Development Assistant), observations, and case studies. The fieldwork process began with courtesy calls at the CAO's and RDC's offices, followed by the office of the Secretary to District Local Council, then the Community Development Officer. A first set of FGDs included parents with children who had never enrolled in school at all, parents of children who had dropped out of school. A second set included parents of children enrolled in school at the time of the study, teachers of the school serving the community, School Management Committee members, members of organizations (CBO, NGO, CSO, FBO) that were active on education issues in the area, and village local council executive committee members. The tools to guide data collection are provided in an annex.

As for health, the study was undertaken in 14 districts, selected so as to achieve geographical representation for each of the 10 sub-regions, with oversampling in the Central, Karamoja and Mid-Western sub-regions, which had more districts with a very low share of 6–18 year olds enrolled. The final 14 districts were selected based on various criteria, including low net and gross enrollment rates, high prevalence of late entry in school, and a poor perception of the value of education. Consideration was also given to ensuring adequate urban and rural representation, with communities visited in Kampala, Soroti, Kasese, and Kitgum.

Table 2.2: Location of Sampled Districts for the Qualitative Fieldwork

	Healthcare		Education		Water and Sanitation	
Region	**Districts**	**Number**	**Districts**	**Number**	**Districts**	**Number**
Central 1	Bukomansimbi, Gomba	2	Kalangala, Sebambule	2	Sembabule, Kiboga	2
Central 2	Buvuma	1	Nakaseke	1	Kalangala	1
East-Central	Namayingo	1	Bugiri	1	Bugiri	1
Eastern	Kween	1	Soroti	1	Bukedea	1
Kampala divisions	Makindye	1	Kampala	1	Kawempe	1
North /Mid-Northern	Lamwo	1	Amolatar	1	Lamwo, Apac	2
Karamoja/North-east	Napak, Kaabong	3	Kaabong, Kitgum, Nakapiripirit	3	Kotido, Amudat	2
West-Nile	Yumbe	1	Yumbe	1	Moyo	1
Western/Mid-western	Ntoroko, Hoima	2	Buliisa, Kasese	2	Masindi	1
Southwest/South-western	Kanungu	1	Isingiro	1	Kisoro, Bundibugyo	2
Total		14		14		14

Source: Authors.

Finally, for water and sanitation the qualitative fieldwork was also undertaken in 14 districts with at least one district sampled from each geographical sub-region of Uganda. In each region districts were randomly selected from areas with varied water and sanitation performance grading in order to include good, fair, and poor performing areas in terms of access to safe water in the sample. In addition, purposive targeting was used to select and include districts reflecting some of the main livelihood clusters (pastoralists, crop farmers, fishing) for household. Finally, in each district two communities, one urban and one rural, were visited. The selected districts (as well as their region) for the qualitative fieldwork are shown in Table 2.2.

The instruments used for the fieldwork included again focus group discussions (FGDs), key informant interviews, observations, and case studies. Before fieldwork activities, detailed checklists for FGDs and case studies were developed to guide the different categories of targeted populations. The categories of stakeholders that were targeted for data collection included: community members (women, men, youth, elderly), leaders of Water user committees, local government officials (CAOs, District Water Officers, District Health Inspectors, District Health Educators), and at the national level officials of National Water and Sewerage Corporation, Ministry of Water and Environment, Ministry of Health officials and Kampala Divisions Health Inspectors. Some visits to Health Centers and schools were also conducted to provide a physical assessment of the toilet facilities and provisions for hand washing, with observations and photographs made on site. Visits were also done to water projects like dams and pumping sites.

4. Conclusion

This chapter introduced the framework informing the study as well as the sources of data used for the empirical work. Both household surveys as well as qualitative fieldwork are relied upon in order to not only assess the extent to which essential interventions are indeed available to young children (this is done with the surveys), but also to understand constraints faced in implementation and service delivery (this is done with the qualitative fieldwork, with in some cases additional data from the surveys). Overall, information in the surveys is available for 20 of the 25 essential ECD interventions considered, including many of the most important ones. In addition, qualitative data are available for nine of the interventions. Therefore, the diagnostic provided in the study is fairly comprehensive, although other types of surveys could be used to document coverage and constraints to access for some interventions where data are lacking.

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PART I
FAMILY SUPPORT

CHAPTER 3
SUPPORT FOR VULNERABLE FAMILIES

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This chapter considers a first set of seven essential interventions for ECD that provide support for vulnerable families. These interventions are part of the family support package outlined in Denboba et al. (2014). The introduction briefly describes the interventions. The next section relies on household survey data to assess the level of coverage in the population of the various interventions. The last section provides results from qualitative fieldwork on some of the constraints faced by households in benefiting from some of the interventions, with a focus on family planning.

1. Introduction

Families play a critical role in addressing children's development needs. While some ECD interventions are age-specific, others are required throughout the ECD period. Denboba et al. (2014) identify 12 interventions/services in their children and families support package which are required throughout the ECD period. The first seven interventions are reviewed in this chapter (the others are discussed in chapters 4–7). The seven interventions are: (1) maternal education; (2) planning for family size and spacing; (3) education about early stimulation, growth, and development; (4) social assistance transfer programs; (5) prevention and treatment of parental depression; (6) parental leave and adequate childcare; and finally (7) child protection services.

As reviewed in Denboba et al. (2014), these various interventions tend to have high benefits and thereby also high returns. Examples of such benefits/returns are as follows:

- A higher level of education among mothers benefits their children in multiple ways, not only for a range of health and nutrition outcomes, but also for enrollment in early child care and education programs (e.g., Greenberg, 2011; Lombardi et al., 2014).
- Planning for family size and spacing including through contraceptive use helps parents anticipate and attain their desired number of children. Spacing improves pregnancies and deliveries and helps reduce maternal mortality (Seyfried, 2011; WHO, 2014).
- Support and education for parents through home-visiting programs and ECD campaigns helps them learn about child health, growth, and development. This may improve feeding practices (Aboud and Akhter, 2011; Bentley et al., 201), early stimulation (Young, 2002; Landry et al. 2006), and cognitive and language development (Engle et al., 2011). Child-parent interactions also enhance physical, cognitive and socio-emotional development (Grantham-McGregor et al., 2007), thereby improving future earnings (Heckman and Masterov, 2007).
- Targeted transfer programs help parents provide for their children, increasing food consumption and dietary diversity (Ruel and Alderman, 2013). The programs help reach vulnerable children and may improve school attendance, birth registration rates, and access to healthcare, while reducing child labor and violence (Barrientos et al., 2013).

- Prevention and treatment of maternal depression from pregnancy to the early years of motherhood helps reduce risks for children. Community-based interventions have been shown to reduce depressive symptoms, improve maternal sensitivity and infant attachment, infant health, and time spent playing with infants (Walker et al., 2011).
- Parental leave and child care resources help parents cater to their children (ILO, 2010). They may reduce neonatal mortality, infant mortality and under-five mortality (Heyman et al., 2011). The programs may pay for themselves (Immervoll, 2005) by increasing women's labor force participation, thereby lowing gender inequality (ILO, 2010).
- Child protection services as well as positive family routines reduce risks of domestic violence affecting children's socio-emotional development (Alderman, 2011). Improving institutional environment of non-parental group residential care can also lead to benefits in child cognitive and social-emotional competence (Walker et al., 2011).

To what extent do young children and their families benefit from these interventions in Uganda? To answer this question, this chapter relies on nationally representative household surveys to assess the level of coverage of the interventions in the population (section 2). The chapter also includes a discussion of some of the obstacles to better coverage, relying on qualitative fieldwork with a focus on family planning (section 3). A brief conclusion follows.

2. Household Survey Data

This section documents the coverage of the interventions mentioned in the introduction. Data are available in the surveys used for this study for four of the interventions: (1) maternal education; (2) family planning and contraception; (3) transfer programs; and (4) parental leave.

Table 3.1 provides data on the education of mothers who have children aged zero to six and/or seven to 12. The 2012/13 survey is used for the analysis. As expected, there are virtually no differences in the education of mothers depending on whether the child is a boy or a girl. But there are differences according to the age of the child. As younger generations have become more educated, the education of mothers of younger children is better than for older children. But overall maternal education levels remain low. More than 60 percent of mothers do not have a completed primary education (the proportion would be even higher without the missing data in table 3.1). The share of mothers with at least some secondary education is at about only 16 percent (9.8 percent with some secondary education, and another 5.6 percent with a higher level).

Table 3.1: Level of Education of Mothers by Gender and Age of the Child, 2012–13

	Gender		Child Age Group		Total
	Boys	Girls	0–6	7–12	
	With Missing Values				
No formal education	17.6	17.9	12.8	18.5	17.8
Some primary	46.5	42.8	45.9	43.9	44.7
Completed primary	7.6	9.8	9.9	8.4	8.7
Some secondary (O′ level)	10.1	9.3	12.9	9.8	9.8
Completed secondary or above	5.5	5.7	7.3	4.8	5.6
Other	0.2	0.3	0.3	0.2	0.2
Don't know–missing	12.4	14.2	10.9	14.6	13.2
Total	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2012/13 UNHS survey.

More detailed data are provided in table 3.2 by location, region, and quintile of consumption per equivalent adult. As expected, there are clear rankings between categories.

Mothers living in Kampala are better educated than mothers living in other cities, which in turn are better educated than mothers living in rural areas. The central region where Kampala is located has the best educated population, followed by the western and eastern regions. The northern region lags far behind. Mothers belonging to poorer households (as measured by the quintile of consumption per equivalent adult) have much lower levels of education (with a poverty incidence of 19.5 percent; the bottom quintile essentially represents the poor).

The second essential intervention is planning for family size and spacing, a key issue in Uganda since fertility rates remain very high, at 6.9 children per women in the 2011 Demographic and Health Survey (DHS). This rate has not decreased much in the last 20 years in part because of limited use of family planning. According to the DHS, only 23 percent of married women use contraceptive methods (18 percent for modern methods). DHS surveys also report that unplanned pregnancies are common with one in five births reported as mistimed (mostly wanted later), and some not wanted at all. Apart from its impact on individuals and families, high fertility leads to population growth and strains for livelihood. The population growth rate at 3.2 percent ranks among the highest in the world. Uganda had 24.7 million people in 2002 but could reach 54.8 million by 2025 and 103 million by 2050 under current trends. This rapid population growth could represent a serious threat to future standards of living.

Data are available on contraception and family planning methods used by women aged 15–49 (and in some cases men) in a module of the 2009/10, 2010/11, and 2011/12 national panel surveys. Three questions are asked about each method: Which ways or methods have you heard about? Have you ever used the method? Are you or your partner currently using a method? Fifteen methods are listed: (1) Female sterilization (Women can have an operation to avoid having any more children); (2) Male sterilization (Men can have an operation to avoid having any more children); (3) Pill (Women can take a pill every day to avoid becoming pregnant); (4) IUD (Women can have a loop or coil placed inside them by a doctor or a nurse); (5) Injectables (Women can have an injection by a health provider that stops them from becoming pregnant for one or more months); (6) Implants (Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years); (7) Condom (Men can put a rubber sheath on their penis before sexual intercourse); (8) Female condom (Women can place a sheath in their vagina before sexual intercourse); (9) Lactational amenorrhea method or LAM (Women delay the onset of their menstrual periods after childbirth by breast feeding their newborn babies exclusively); (10) Rhythm method (Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant); (11) Withdrawal (Men can be careful and pull out before climax); (12) Moon beads (As a protective measure women use a collection of specially colored beads secured by a strong cord to monitor their cycle so as to avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant); (13) Foam/Jelly (Women place special foam tablets or jelly in the vagina before sexual intercourse); (14) Emergency contraception (Women can take pills up to five days after sexual intercourse as a one-time method if unprotected sex has occurred to avoid becoming pregnant); (15) Others (Have you heard of any other ways or methods that women or men can use to avoid pregnancy?).

Table 3.2: Level of Education of Mothers, 2012–13

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Cities	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
No formal education	2.8	10.8	20.4	7.0	13.0	41.7	21.3	36.5	17.2	16.2	12.0	14.2	17.8
Some primary	25.6	37.1	47.7	39.9	55.2	44.5	39.5	45.3	54.8	49.8	41.4	36.6	44.7
Completed primary	7.5	10.9	8.1	7.6	8.6	4.7	14.0	4.8	7.2	10.9	9.4	9.6	8.7
Some O′ level	19.4	13.1	8.4	15.1	8.4	4.0	7.6	3.9	7.9	8.8	12.6	12.5	9.8
Completed O′ level and above	24.1	10.4	3.5	8.3	5.0	1.8	5.2	0.9	2.5	2.8	7.2	10.9	5.6
Other	1.4	0.3	0.2	0.3	0.3	0.0	0.3	0.2	0.2	0.0	0.0	0.7	0.2
Don’t know	19.2	17.5	11.8	21.8	9.6	3.4	12.3	8.6	10.4	11.5	17.4	15.6	13.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2012/13 UNHS survey.

Table 3.3 provides statistics for the three years on the knowledge and use of the various methods. In terms of knowledge, many methods are known by a majority of the population. In the 2011/12 survey for example, women are aware of condoms (94.9 percent), pills (94.4 percent), injectables (94.4 percent), female sterilization (76.8 percent), implants (72.9 percent), IUD (66.2 percent), withdrawal (59.5 percent), rhythm method (58.6 percent), male sterilization (57.9 percent), and female condoms (55.9 percent). Knowledge is less widespread for the other methods (LAM, moon beads, foam/jelly, emergency contraception, and other methods).

In terms of past and current use however, many methods are not practiced widely. Still in the 2011/12 survey, none of the identified methods (i.e., the methods not part of the "others" category) have ever been used by more than a third of the women who know about the method. Injectables have been used by 32.1 percent of women who know about the method, followed by condoms (28.9 percent), LAM (28.1 percent), the rhythm method (26.3 percent), withdrawal (19.8 percent), and the pill (17.4 percent). Other methods are only used by a small minority of women knowing the respective methods. And when looking at the share of women currently using the various methods among those who have ever used them, except for those methods that tend to be permanent such as sterilization, statistics on usage are much lower. For example, only 20.5 percent of the 17.4 percent of women who have ever used the pill are currently using it. Similarly, only 23.5 percent of the 28.9 percent of women who have ever used condoms are currently using them. Even for traditional methods such as the rhythm method and withdrawal, only a small minority of women who ever used the method are currently using them.

When factoring the various steps in the analysis—knowing about a method, using it at least once when knowing, and using it currently when it has been used in the past—the final rates of usage are very low, as shown in the last columns of table 3.3. Less than a third of women (32.6 percent) aged 15–49 were using any one contraception method in 2011/12. The proportion relying on any one modern method was even lower, at about a fourth (26.0 percent).

When looking at the three years of data for the panel survey, there is no increase in the use of planning and contraception between 2009/10 and 2011/12. When using Demographic and Health Surveys that cover a longer time span, some progress is seen, with an increase in the use of modern method increasing by three to four percentage points every five years (there are three recent DHS surveys available for 2000–01, 2006, and 2011). At the same time, the rate of use of contraception is lower in the DHS surveys than in the Uganda National Panel Surveys. For modern contraception, the results tend to be similar. In the 2011 DSH 20.7 percent of women aged 15 to 49 report using modern contraception methods, while the proportion is 22.5 percent in the latest panel survey. But the share of women in the DHS reporting using traditional methods is much lower, at only 2.9 percent, so that the total share of women using any method, modern or traditional, is even lower at 23.6 percent than in the Uganda National Panel Survey.

More detailed data are provided in tables 3.4 to 3.6 by location, region, and quintile of welfare for the first of the three survey years as an illustration of differences by region and welfare levels. While differences in knowledge are not necessarily very large, differences in usage patterns are. As expected, the use of modern methods is more prevalent in Kampala and other cities, as well as among better off households in terms of welfare. In rural areas and among the poor, modern contraception methods are clearly the exception rather than the rule. As one example, the ever use rate for the pill is 34.7 percent in Kampala versus 14.0 percent in rural areas, and among those who ever used the pill, only 31.9 percent of women use it today in Kampala, with the proportion being even lower at 16.1 percent in rural areas. Figure 3.1 visualize the rates of use of modern and traditional contraception methods by region.

Table 3.3: Knowledge and Usage of Family Planning and Contraception Methods, 2009–12

	Knows about the Method			Has Used the Method (among Those Who Know)			Is Using Now (among Those Who Have Used)			Is Using Now (among Population as a Whole)		
	2009/10	2010/11	2011/12	2009/10	2010/11	2011/12	2009/10	2010/11	2011/12	2009/10	2010/11	2011/12
Modern methods												
Female sterilization	74.6	79.8	76.8	1.9	2.3	1.5	78.9	90.2	83.7	1.1	1.7	1.0
Male sterilization	47.3	50.8	57.9	0.1	0.2	0.2	46.2	-	100.0	0.0	-	0.1
Pill	93.5	94.2	94.4	17.2	16.8	17.4	21.3	21.3	20.5	3.4	3.4	3.4
IUD	55.7	57.4	66.2	1.1	1.3	1.7	32.2	52.3	52.1	0.2	0.4	0.6
Injectables	93.9	94.1	94.4	31.7	32.7	32.1	38.0	39.8	34.8	11.3	12.2	10.5
Implants	65.6	72.6	72.9	3.3	3.2	4.6	63.4	67.5	56.9	1.4	1.6	1.9
Condom	94.8	94.4	94.9	24.9	25.6	28.9	27.8	29.8	23.5	6.6	7.2	6.4
Female condom	52.8	53.4	55.9	1.9	0.7	2.0	13.8	27.5	64.7	0.1	0.1	0.7
LAM	36.6	36.9	42.9	21.0	26.9	28.1	24.0	31.3	33.7	1.8	3.1	4.1
Emergency contraception	17.8	16.9	22.9	9.7	12.2	4.4	24.5	19.7	6.1	0.4	0.4	0.1
Traditional methods												
Rhythm method	59.2	65.4	58.6	34.3	31.5	26.3	39.8	30.1	37.5	8.1	6.2	5.8
Withdrawal	57.4	58.8	59.5	23.5	21.0	19.8	34.7	31.1	30.2	4.7	3.8	3.6
Moon beads	28.9	23.8	30.8	7.8	3.8	2.4	37.3	10.7	6.0	0.8	0.1	0.0
Foam/jelly	18.8	10.6	13.4	5.9	0.0	0.4	35.4	-	0.0	0.4	-	0.0
Other	12.1	7.7	4.8	44.1	65.4	53.1	64.8	71.5	36.9	3.5	3.6	0.9
At least one method												
Modern method	97.5	97.6	98.1	51.1	53.9	57.0	47.1	52.0	46.5	23.4	27.3	26.0
Traditional method	80.7	80.2	75.7	41.7	38.5	33.5	44.3	37.5	34.8	14.9	11.6	8.8
Any method	98.2	98.9	98.6	62.3	64.8	63.5	56.5	57.3	52.1	34.6	36.7	32.6

Source: Authors using Uganda 2009/10, 2010/11 and 2011/12 UNPS surveys.

Note: Modern methods include Female sterilization, Male sterilization, Pill, IUD, Injectables, Implants, Condom, Female condoms, LAM, and Emergency contraception. Other methods are considered as traditional. LAM stands for lactational amenorrhea method.

Table 3.4: Knowledge of Family Planning and Contraception Methods, 2009/10

	Residence Area			Region				Welfare quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Modern methods													
Female sterilization	78.2	74.6	74.3	74.0	89.4	68.2	68.2	68.3	74.2	72.0	78.5	78.3	74.6
Male sterilization	60.8	49.6	45.5	45.6	56.2	41.4	46.7	33.8	46.8	46.2	50.4	54.9	47.3
Pill	94.2	96.2	93.0	94.4	96.4	86.3	95.5	86.0	94.2	96.2	94.5	95.1	93.5
IUD	71.5	59.0	53.6	65.6	45.0	41.9	62.0	39.7	49.6	52.4	63.8	67.5	55.7
Injectables	96.7	93.7	93.6	95.3	98.1	86.9	93.8	86.5	95.8	94.8	94.2	96.1	93.9
Implants	76.7	67.9	64.2	58.2	73.2	77.3	60.3	58.5	59.3	63.3	71.8	72.4	65.6
Condom	97.8	97.3	94.1	96.9	97.9	88.9	94.1	87.1	94.3	94.5	97.9	98.2	94.8
Female condom	77.7	62.3	48.8	56.4	73.9	45.0	36.6	34.2	44.2	46.6	60.4	70.8	52.8
LAM	42.6	39.1	35.5	39.6	34.3	36.7	34.2	31.7	33.2	32.3	38.0	44.6	36.6
Emergency contraception	38.5	22.1	15.0	23.5	17.3	15.4	12.1	9.6	11.1	15.6	18.9	29.1	17.8
Traditional methods													
Rhythm method	76.5	63.8	56.7	59.5	60.4	71.7	47.9	52.8	53.7	59.5	61.7	65.5	59.2
Withdrawal	71.5	65.0	54.8	61.0	57.7	43.7	63.0	48.8	50.9	56.2	61.7	65.9	57.4
Moon beads	49.6	33.8	26.1	30.5	22.9	30.8	30.4	20.4	20.1	26.3	32.0	41.1	28.9
Foam/jelly	31.1	25.9	16.4	22.2	15.7	16.0	18.9	8.7	11.3	14.4	20.9	33.0	18.8
Other	18.4	14.5	11.1	16.5	17.4	10.3	3.2	8.9	9.5	8.7	11.9	19.1	12.1
At least one method													
Modern method	98.0	98.1	97.3	97.5	98.7	93.6	99.4	92.5	97.6	98.8	99.0	98.3	97.5
Traditional method	88.8	84.7	79.2	80.8	83.2	85.5	74.8	72.3	76.0	79.4	83.9	88.4	80.7
Any method	98.0	98.3	98.2	97.6	98.7	97.4	99.4	96.7	97.9	98.8	99.1	98.3	98.2

Source: Authors using Uganda 2009/10 UNPS survey.

Note: Modern methods include Female sterilization, Male sterilization, Pill, IUD, Injectables, Implants, Condom, Female condom, LAM, and Emergency contraception. Other methods are considered as traditional. LAM stands for lactational amenorrhea method.

Table 3.5: Use (Today or Past) of Family Planning and Contraception among Those Who Know, 2009/10

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Individual methods													
Female sterilization	0.4	2.9	1.9	1.5	2.6	2.9	1.1	1.5	2.1	1.3	2.2	2.3	1.9
Male sterilization	0.0	0.5	0.1	0.0	0.0	0.0	0.5	0.0	0.7	0.0	0.0	0.0	0.1
Pill	34.7	25.8	14.0	24.5	13.2	10.4	15.6	7.0	17.2	13.2	19.8	24.5	17.2
IUD	1.3	1.2	1.0	1.2	1.0	1.4	0.8	0.4	1.3	1.1	0.2	1.7	1.1
Injectables	32.2	39.2	30.4	36.3	30.8	24.4	31.4	26.4	27.8	32.4	37.0	33.5	31.7
Implants	2.4	3.9	3.2	2.2	3.2	2.9	5.1	2.0	2.7	3.1	3.8	4.0	3.3
Condom	51.7	30.3	21.2	37.5	25.1	12.0	16.3	16.5	14.7	21.7	28.3	37.2	24.9
Female condom	4.2	2.9	1.4	2.6	3.0	0.6	0.0	0.3	2.2	2.4	0.8	2.8	1.9
LAM	17.5	17.5	22.1	20.3	19.6	35.6	11.1	26.0	24.4	19.1	25.3	15.1	21.0
Emergency contraception	11.3	12.5	8.6	14.4	4.0	8.3	5.4	17.9	10.1	8.9	6.1	9.9	9.7
Traditional methods													
Rhythm method	38.0	28.8	34.9	35.9	30.9	51.1	15.4	36.0	31.3	36.5	33.6	34.3	34.3
Withdrawal	32.7	20.1	23.0	31.8	14.9	23.9	18.6	16.4	21.0	24.0	25.6	26.5	23.5
Moon beads	7.3	7.2	8.0	7.3	14.3	10.7	2.0	5.3	15.0	4.7	10.5	5.7	7.8
Foam/jelly	4.7	5.3	6.3	7.3	8.8	3.2	3.4	0.0	6.3	10.8	4.5	5.8	5.9
Other	52.7	41.4	43.2	52.7	32.8	54.3	8.0	57.4	40.3	36.5	30.3	50.5	44.1
At least one method													
Modern method	72.0	56.5	48.1	60.3	50.7	41.7	45.7	41.1	44.2	48.9	58.1	58.9	51.1
Traditional method	52.8	40.6	40.7	50.0	37.6	56.7	19.8	40.4	37.2	43.4	41.7	44.4	41.7
Any method	79.2	67.4	59.7	71.7	59.8	64.6	49.5	54.7	56.4	61.7	67.2	68.4	62.3

Source: Authors using Uganda 2009/10 UNPS survey.

Note: Modern methods include Female sterilization, Male sterilization, Pill, IUD, Injectables, Implants, Condom, Female condom, LAM, and Emergency contraception. Other methods are considered as traditional. LAM stands for lactational amenorrhea method.

Table 3.6: Current Use of Family Planning and Contraception among Those Who Have Used, 2009/10

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Individual methods													
Female sterilization	100.0	68.3	81.1	74.4	77.2	90.4	68.9	100.0	89.7	84.3	67.2	70.4	78.9
Male sterilization	-	0.0	100.0	-	-	-	46.2	-	46.2	-	-	-	46.2
Pill	31.9	30.1	16.1	21.7	10.8	11.2	32.8	2.7	15.9	26.3	12.4	30.9	21.3
IUD	0.0	56.6	32.4	29.6	20.2	23.4	54.8	0.0	42.7	32.3	100.0	24.3	32.2
Injectables	41.3	34.0	38.5	33.7	41.5	23.5	50.2	50.8	38.9	49.7	36.6	23.7	38.0
Implants	65.0	57.4	64.6	76.3	52.4	73.4	57.6	74.3	56.9	44.7	42.9	89.1	63.4
Condom	41.7	35.6	22.5	28.0	29.2	32.7	22.9	31.9	27.6	22.1	29.1	28.6	27.8
Female condom	10.6	8.5	17.7	5.2	24.8	0.0	-	0.0	0.0	28.6	0.0	15.6	13.8
LAM	29.7	11.8	25.3	20.8	23.8	21.7	39.6	25.6	20.9	26.7	17.8	30.2	24.0
Emergency contraception	17.1	55.1	16.0	29.2	11.1	25.8	0.0	69.6	16.9	6.3	20.8	17.1	24.5
Traditional methods													
Rhythm method	49.1	44.0	37.8	40.6	42.1	38.0	38.5	40.7	36.8	40.0	35.2	44.0	39.8
Withdrawal	33.0	45.9	33.0	36.5	27.6	41.2	30.2	37.4	33.9	28.6	32.3	39.5	34.7
Moon beads	41.8	22.8	39.4	37.9	49.0	28.6	18.9	29.7	22.2	56.6	58.3	24.2	37.3
Foam/jelly	0.0	13.2	45.4	32.3	64.2	0.0	17.0		48.7	54.1	14.9	27.5	35.4
Other	72.6	73.2	61.5	60.4	66.6	78.4	0.0	91.8	91.4	43.3	33.2	61.7	64.8
At least one method													
Modern method	58.5	54.2	44.0	45.2	46.6	40.0	55.5	50.7	43.8	52.7	41.7	47.8	47.1
Traditional method	50.5	49.0	42.6	46.9	46.4	41.9	37.4	47.6	46.1	36.7	37.9	51.3	44.3
Any method	69.1	62.8	53.8	57.5	58.6	52.6	56.6	59.1	54.3	57.9	48.8	61.5	56.5

Source: Authors using Uganda 2009/10 UNPS survey.

Note: Modern methods include Female sterilization, Male sterilization, Pill, IUD, Injectables, Implants, Condom, Female condom, LAM, and Emergency contraception. Other methods are considered as traditional. LAM stands for lactational amenorrhea method.

Table 3.7: Current Use of Family Planning and Contraception among Population as a Whole, 2009/10

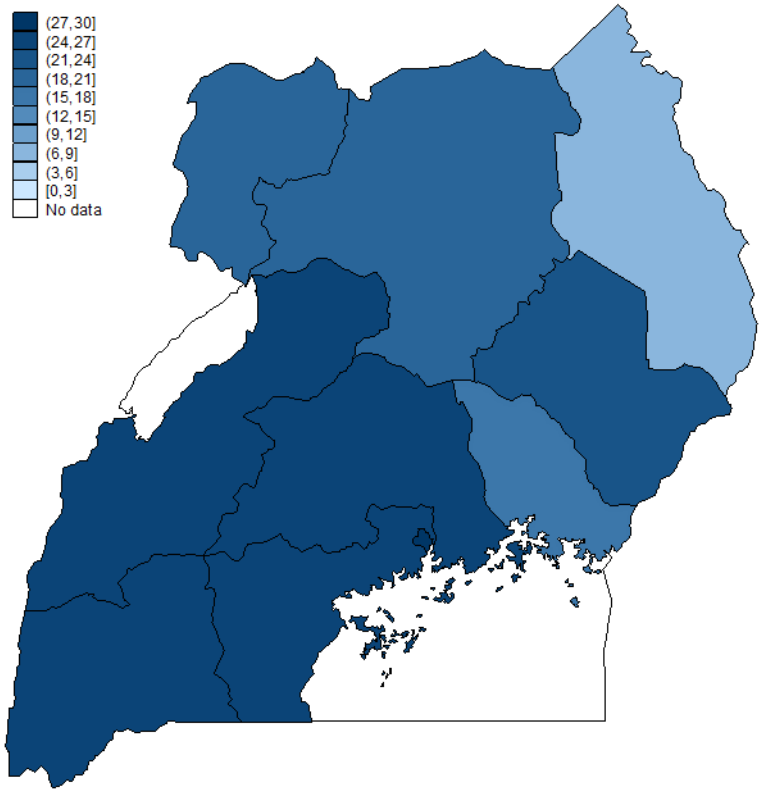
	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Individual methods													
Female sterilization	0.3	1.5	1.2	0.8	1.8	1.8	0.5	1.0	1.4	0.8	1.2	1.3	1.1
Male sterilization	-	0.0	0.0	-	-	-	0.1	-	0.1	-	-	-	0.0
Pill	10.4	7.5	2.1	5.0	1.4	1.0	4.9	0.2	2.6	3.3	2.3	7.2	3.4
IUD	0.0	0.4	0.2	0.2	0.1	0.1	0.3	0.0	0.3	0.2	0.1	0.3	0.2
Injectables	12.9	12.5	11.0	11.7	12.5	5.0	14.8	11.6	10.3	15.3	12.7	7.6	11.3
Implants	1.2	1.5	1.3	1.0	1.2	1.6	1.8	0.9	0.9	0.9	1.2	2.6	1.4
Condom	21.1	10.5	4.5	10.2	7.2	3.5	3.5	4.6	3.8	4.5	8.1	10.5	6.6
Female condom	0.3	0.2	0.1	0.1	0.5	0.0	-	0.0	0.0	0.3	0.0	0.3	0.1
LAM	2.2	0.8	2.0	1.7	1.6	2.8	1.5	2.1	1.7	1.6	1.7	2.0	1.8
Emergency contraception	0.7	1.5	0.2	1.0	0.1	0.3	0.0	1.2	0.2	0.1	0.2	0.5	0.4
Traditional methods													
Rhythm method	14.3	8.1	7.5	8.7	7.9	13.9	2.8	7.7	6.2	8.7	7.3	9.9	8.1
Withdrawal	7.7	6.0	4.2	7.1	2.4	4.3	3.5	3.0	3.6	3.9	5.1	6.9	4.7
Moon beads	1.5	0.6	0.8	0.8	1.6	0.9	0.1	0.3	0.7	0.7	2.0	0.6	0.8
Foam/jelly	0.0	0.2	0.5	0.5	0.9	0.0	0.1	0.0	0.3	0.8	0.1	0.5	0.4
Other	7.0	4.4	3.0	5.2	3.8	4.4	0.0	4.7	3.5	1.4	1.2	5.9	3.5
At least one method													
Modern method	41.2	30.0	20.6	26.6	23.3	15.6	25.2	19.3	18.9	25.5	24.0	27.7	23.4
Traditional method	23.7	16.8	13.8	18.9	14.5	20.3	5.5	13.9	13.0	12.7	13.3	20.1	14.9
Any method	53.6	41.6	31.6	40.3	34.6	33.1	27.9	31.3	30.0	35.3	32.5	41.3	34.6

Source: Authors using Uganda 2009/10 UNPS survey.

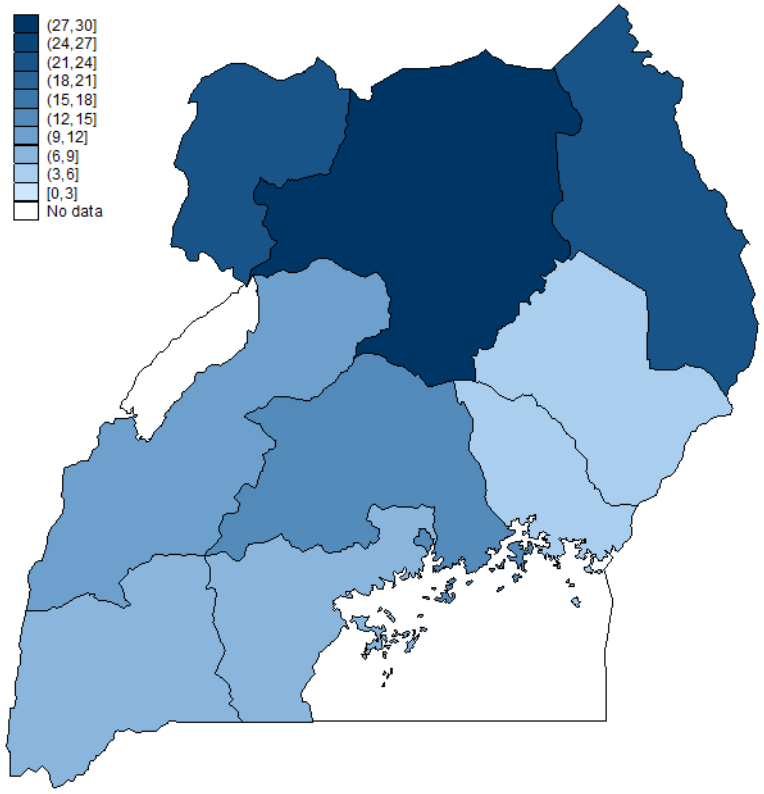
Note: Modern methods include Female sterilization, Male sterilization, Pill, IUD, Injectables, Implants, Condom, Female condom, LAM, and Emergency contraception. Other methods are considered as traditional. LAM stands for lactational amenorrhea method.

Figure 3.1: Use of Contraception by Region, 2011/12

Share using at least one modern method (%)



Share using at least one traditional method (%)



The third intervention consists of parenting and social networks of support and community education about child growth and development. Unfortunately, the household surveys used for this study do not provide information on the coverage of this intervention.

The fourth intervention consists of social assistance transfer programs can help parents provide for their children's needs and invest in their children's nutrition, health and education. As many other low income countries in sub-Saharan Africa, Uganda does not have a tradition of social protection transfers that are provided in cash or kind to households affected by shocks, and the surveys used for this study provide only limited information on such transfers. Yet three questions in the surveys are of interest. First households are asked whether their income sources in the last 12 months have been very unstable, somewhat stable, or stable. They are also asked whether they receive support from a variety of sources. Together these two questions provide an indication of the need for social protection program to protect households from shocks.

As shown in table 3.8, for more than half of the population, income sources have been unstable. For the bottom quintile the proportion is three fourths. In addition, less than one in 10 person lives in a household that received remittances. The shares of households benefiting from other forms of assistance (charity/church, retirement pension, NSSF, welfare grants, bursary/study loan, or other forms of support) are even lower. Clearly households tend to be vulnerable, but the assistance on which they can count is rather limited, except in the area of education, where thanks mostly to government policies for free public primary and lower secondary education, a large share of households do benefit from transfers in that area, especially in rural areas where most children attend public schools. These are, however, transfers in kind through free primary and lower secondary enrollment in public schools, and not in cash. Data are also available in the survey on the share of students benefiting from school lunches, and whether those are received for free or have to be paid for. Only 3.9 percent of students receive free school lunches according to data from the panel surveys (average for the three years).

The fifth intervention consists of the prevention and treatment of maternal depression. While information is available in the surveys on a wide range of illnesses and injuries, or symptoms thereof, these do not include maternal depression.

The sixth intervention consists of parental leave policies and adequate child care resources, including centers. Data on child care resources are not readily available but information on enrollment rates in preschools will be provided in chapter 7. As to parental leave, as shown in table 3.9, only a minority of workers are employees. Among those who are employees, only a minority would benefit from sick leave or maternity/paternity leave, and those who do tend to be from Kampala and higher quintiles of welfare (and therefore also typically have fewer children). As a result, the share of children aged zero to six who live in a household where at least one worker has maternity or paternity leave is low at only 4.5 percent (see the last rows in table 3.9).

The seventh and last intervention considered in this chapter consists of child protection services, for which no data are available in the survey.

Overall, for the four interventions for which the surveys used in this study provide data, coverage in the population is as expected low, especially among the poor and in rural areas.

Table 3.8: Stability of Household Income, Income/Support from Various Sources, and Education Benefits (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
	Stability of Household Income in Last 12 Months (Population Aged 0–6)												
Very unstable	24.9	44.2	54.3	42.1	53.8	67.2	43.7	73.3	60.9	52.3	42.2	35.9	51.1
Somewhat stable	63.4	46.5	39.9	48.4	40.5	29.2	48.6	25.0	35.3	42.5	51.2	50.4	42.1
Stable	11.7	9.3	5.9	9.5	5.7	3.6	7.8	1.8	3.7	5.1	6.7	13.7	6.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Share Benefiting from Income or Support from Various Sources (Population Aged 0–6), 2012–13												
Remittances	12.8	13.3	7.8	13.7	6.2	9.6	4.5	4.3	8.9	9.1	12.1	10.3	8.9
Charity/church	0.3	1.2	1.6	0.2	1.0	5.5	0.5	4.9	0.7	0.5	0.5	0.5	1.5
Retirement pension	0.4	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.1
NSSF	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Welfare grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bursary/study loan	2.5	2.6	3.8	3.7	6.0	0.6	3.1	3.1	2.5	4.1	5.2	2.6	3.5
Other	0.1	0.3	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.2	0.1	0.3	0.1
None	84.2	82.5	86.6	82.3	86.3	84.1	91.6	87.3	87.7	86.1	82.2	86.2	85.9
	Share Receiving Education Subsidy (Overall Student Population), 2012–13												
All	22.5	46.7	70.9	41.6	77.5	86.5	53.1	89.5	79.5	67.9	60.8	37.9	64.7
Primary	22.9	53.9	74.3	45.0	81.2	91.2	57.0	90.5	81.6	69.4	64.6	43.5	69.6
Secondary	25.1	27.1	53.0	34.0	56.8	53.5	38.2	66.8	63.7	61.4	45.1	29.0	44.0
Tertiary	11.0	14.5	22.9	13.4	26.3	11.6	22.0	-	31.4	19.4	27.8	15.5	18.1
	Source of Funding for Education Subsidy (Overall Student Population), 2012–13												
Government	81.0	92.0	97.7	89.7	98.4	98.5	96.5	98.2	98.3	97.4	95.5	92.5	96.7
NGO	9.0	2.5	0.6	2.3	0.6	0.8	1.0	0.7	0.3	1.2	1.5	1.5	1.0
Religious organization	6.9	3.1	0.6	3.1	0.5	0.6	1.1	0.2	0.9	0.6	0.9	3.3	1.0
School	0.5	1.8	0.6	3.5	0.3	0.1	0.5	0.5	0.4	0.5	1.4	1.7	0.8
Other	2.0	0.7	0.5	1.3	0.2	0.1	0.9	0.4	0.1	0.4	0.8	0.9	0.5
Don’t know	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Share Receiving School Lunch (Overall Student Population), Average for Panel Surveys 2009–12												
Yes, provided free	7.3	4.2	3.6	5.6	1.8	6.7	1.9	6.5	3.4	2.9	4.4	5.8	3.8
Yes, pay/contribute	49.5	34.1	29.3	42.1	44.4	7.8	19.0	20.2	24.3	33.3	36.6	47.3	30.5
No	43.3	61.6	67.1	52.3	53.8	85.5	79.1	73.3	72.4	63.9	59.1	47.0	65.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2012/13 UNHS survey.

Table 3.9: Share of Workers Benefiting from Parental Leave and Sick Leave (%), 2012–13

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
	Type of Employment												
Employee	55.2	28.3	11.9	23.6	13.3	10.3	16.4	13.1	12.4	11.2	13.9	25.6	16.1
Employer	2.3	2.2	0.8	2.0	0.8	0.2	1.3	0.4	0.3	0.5	0.8	2.6	1.1
Own-account worker	36.4	43.5	44.7	42.4	39.4	50.0	46.4	39.3	43.0	45.8	48.1	44.1	44.3
Helping without pay	5.8	25.4	42.4	31.7	46.3	39.4	35.2	47.2	44.3	42.4	36.3	27.3	38.3
Cooperative member	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Unpaid work/volunteer	0.3	0.7	0.2	0.3	0.1	0.1	0.7	0.0	0.0	0.1	0.8	0.4	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	If Employee, Would You Get Paid Sick Leave in Case of Illness or Injury?												
Yes	37.5	27.3	13.6	24.9	13.5	22.6	17.6	2.4	5.1	11.8	18.1	34.5	20.2
No	61.5	71.2	84.7	73.1	86.5	76.6	79.6	96.8	94.2	87.0	79.9	63.5	78.3
Don't know	1.1	1.5	1.6	2.0	0.0	0.7	2.8	0.8	0.7	1.2	2.0	2.0	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	If Employee, Would You Get Maternity/Paternity Leave?												
Yes	30.4	21.4	10.4	18.8	9.6	16.9	16.3	2.0	3.3	8.1	12.6	28.2	15.8
No	66.9	75.0	87.0	77.5	89.3	80.8	79.9	97.1	94.8	89.0	84.5	67.9	81.3
Don't know	2.7	3.7	2.6	3.7	1.1	2.3	3.9	1.0	1.9	2.9	2.9	3.9	2.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Share of Children Aged 0–6 Living in Household with at Least One Worker with Maternity/Paternity Leave in the Population as a Whole												
Yes	25.6	9.4	2.6	8.4	2.1	4.2	3.8	0.6	1.4	2.1	3.9	13.3	4.5
No	32.0	32.6	20.6	28.7	21.1	17.4	25.1	22.2	24.4	22.4	22.4	24.3	23.2
Don't know	1.4	1.2	0.5	1.2	0.1	0.7	0.8	0.3	0.2	0.8	0.8	1.1	0.7
No employee in the HH	31.3	53.8	74.7	58.1	74.5	76.7	69.0	75.1	72.7	73.0	70.6	58.3	69.6
No worker in the HH	9.7	3.1	1.6	3.6	2.2	1.0	1.3	1.8	1.5	1.7	2.3	3.0	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2012/13 UNHS survey.

3. Qualitative Fieldwork: Family Planning

Coverage for most interventions documented in the previous section is low. The question is why? To help answer this question, qualitative fieldwork was carried with key informants and focus groups with a focus on family planning. The use of contraception remains limited despite the fact that services are in principles offered at public health facilities at no cost to households. Cultural and delivery factors both play a role in the low take-up of the services by households.

Cultural perceptions of the practice often remain negative. Health providers report that many women secretly use contraceptive methods. But a woman who hides use and experiences a side effect is at risk of stopping the method rather than switching to a method that might be detected by her husband. Informed choice loses much of its meaning when the primary use criterion is a method that cannot be detected, as noted by an informant in Buvuma: "They come and get services except they may want a method which we don't have. Now this lady is escaping from the husband. If you tell her go to Jinja and get counseled, she will not come back."

In an effort to hide contraceptive use, users may improperly administer contraceptives, leading to contraceptive failure. Some users unpack contraceptive pills from their original packs so that they appear like ordinary pharmaceuticals. Health workers fear that by doing so, clients might not comply with the instructions for pill use. Some women fear that men pinch holes at the tips of condoms before using them. Others claim to be allergic to condoms. The negative attitude of many men towards family planning affects its use. A man from Kaabong District complained: "Why is family planning being made a very important issue? Did God proclaim it? Is this not a ploy to divert us from important issues in society like poverty that need urgent attention?"

Health workers reported being threatened more than once with violence by unsupportive husbands. In one village a village local council leader assaulted a nurse for having offered family planning to his wife. The nurse filed a case in court. The judge decided in favor of the nurse. But since then, women have been encouraged to come alone for family planning services. Some men say that the government is only trying to kill their generation by killing their children in the wombs of their wives whom they have spent fortunes of dowry on. Many men, who are often controlling family planning decisions, do not want fewer children when they have paid a high bride price for their wives, and culture is often mentioned as an excuse to avoid family planning.

In some areas men make women feel like a property bought by them from their homes, with the implication that the women must do all that the men require. It is often a man's cultural pride to have many children, apart from the potential economic benefits that are perceived from a large family. Even some women make fun of those who have had few children. They give them nicknames and make them feel out of place in the village or congregation. Some women resent family planning because they want to please their husbands who disagree with the practice, and the more children wives have, the more they are valued by their husbands and their clans. The idea of strength and wealth obtained from more children relates in part to the fact that girls may be seen as an economic property, since they may at times be married as a young age to bring dowry (such as cattle) to their fathers, who also must use this wealth to marry sons. Boys by contrast are seen as a form of security to protect families, including against cattle raids by others.

Some men think that family planning methods only apply to women. Some women fear that condoms may get stuck inside them. Catholic and Muslim communities have religious prohibitions regarding family planning. For example, there is an understanding that Catholics are told to avoid contraceptives based on the fifth commandment, *Thou shall not kill.* When mothers baptize their children, they are told to avoid contraceptives as a method of birth control.

Few men appreciate family planning, with some thinking that long intervals between pregnancy allow women to become better looking and hence an attraction to other men. Men tend see the main reason for marrying as producing children. Women fear family breakages and the risk of violence by men. This keeps them in fear and obedient. But real or perceived potential side effects of family planning methods also have a negative impact on their use. The real or perceived side effects (as seen by women or by men) include irregular periods, infertility, heavy bleeding, loss of sexual appetite, reduction in the flow of breast milk, dizziness (laziness), vomiting, and dryness of the birth canal. A man from Buvuma district explained: "My wife has resorted to use of withdraw method because she fears she might not give birth if she continues to use the pills because of the extended menstruation periods she faces."

Lack of knowledge and misconceptions about family planning are also widespread. In Napak district there is a strong cultural belief that family planning has to be done naturally. When their wives deliver and husbands see the newly born, they may go away from their home to stay in kraals (traditional fenced village of huts). This is not to abandon their homes and responsibilities towards their wife, the newborn and the other children, but rather to respect a cultural norm to keep away from the woman for up to two or three years so as to space their children. During that time a man may find another woman while the first is spacing births. The men hardly know or even want to know anything what they can do about family planning: "The government is trying to destroy our manhood by limiting our ability to give birth." As pointed out by a district health official, "The issue of family planning as a government provided service here in Napak district and Karamoja as a region is not vibrantly responded to"; he adds that "Injectables and pills are the mainly used methods in this region but the level of their use is still so low … because the health education given to them is also low." In Yumbe, a district health official mentioned the important role of faith leaders in promoting the use of family planning methods: "The coverage was very low at 2 percent, and it is only in last 3 years that it has increased to 24 percent, due to involvement of VHTs and religious leaders. 80 percent of the population is Muslim and their religious affiliation discourages family planning."

The fieldwork also looked at traditional family planning options such as ecological breastfeeding, the rhythm method, and systematic natural family planning, as these are seen as more respectful of physical means God built into human nature. Ecological breastfeeding helps in spacing new births for about two years apart on the average. Women can also determine the fertile and infertile times of their cycle, with couples seeking to practice abstinence during the fertile time of the cycle. In the Karamonja sub-region (Napak district) the practice for men to go away from their home for a certain period into the kraals looking after animals has already been mentioned, but this is not always practical nowadays due to limited land and animal movement regulations. As a result men may decide to find another woman until their first wife is ready for sex again. During that time men must still provide all that is needed by their family, and he has to regularly visit his wife to converse about family issues and any other needs she may have. Another natural method is withdrawal, but as many other traditional methods, it does not always work and women may find themselves pregnant unwillingly.

Although many women may want to reduce the number of children they have, few practice birth control. Cultural factors play a role, but so do delivery factors, including lack of information, limited access, and even costs, despite the fact that contraception methods are in principle available free of charge in health centers. Respondents mention that "short-term" family planning services (injections, condoms and pills) are provided at government health centers at no cost, especially from level II to referral hospitals. There is an emblem or poster at each facility that shows the

presence of family planning services so that patients can be aware of their availability. Development partners have invested in family planning. Among the various options available to them, women tend to prefer injectables as the quantitative household survey analysis suggested. Injectables are seen as more convenient and less visible because they are applied only once in a specified period (three to nine months), while pills have to be taken every day. "Longer term" approached such as implants and intrauterine devices are much less requested, and also are often not available as government facilities are not equipped to insert them. As a health worker explained: "Women prefer injection method which men cannot see, compared to pills which men can stop them from swallowing. There is a case in Lamwo district of a man who was reported to have committed suicide because his wife had adopted (oral contraceptive) family planning."

At the same time, in some areas there is only minimal information on the availability of alternative family planning methods and products, with many respondents not knowing when government health facilities receive family planning products. Men are even less aware than women. Men and women may learn about the availability of products in various ways, including through visits to facilities, radio or television announcements, or village notice boards and word of mouth from other village members. Thus, the provision of information on family planning can in principle be enhanced, especially through the use of mass media campaigns. But in hard-to-reach areas (islands, mountains, areas with poor roads) it is often difficult to seek services.

In focus groups lack of supplies in health centers is the most commonly cited barrier to family planning services. Providers who report that they have enough contraceptive supplies still say they lack disinfectant, gloves, family planning cards, and educational materials. Some stock-outs of contraceptives and other supplies were reported to last several months and led to discontinuation in their use by patients. Health workers also reported that lack of supplies led to longer client waiting times and unwanted pregnancies, and also made it more difficult to diagnose and treat sexually transmitted infections, with some women erroneously attributed such infections to contraceptive side effects. Improper sterilization of equipment could also expose clients to infections. Almost all health workers felt that their services were compromised due to work overload and understaffed clinics. Health workers take on multiple responsibilities such as antenatal care, labor and delivery, voluntary HIV counseling and testing, and childhood vaccinations, in addition to family planning services. The work overload was complicated by the tendency of large numbers of clients to visit clinics on open market days and immunization days.

Other barriers to the use of contraceptives include the distance some patients have to travel to the health unit, not being sure that they will find the contraceptive at the health center. One young man petitioned government to make condoms available because the cost to purchase them on a daily basis was too high. As to vasectomy, men do not consider it much. As one elderly man noted, "Even at my age I hope to have a baby even though I am in my 70s; I need to fill my clan," Finally some people were apprehensive that too much support for family planning on the part of development partners may have an ulterior motive.

4. Conclusion

This chapter has considered a first set of seven interventions providing support for vulnerable families as part of the ECD family support package outlined in Denboba et al. (2014). Data were available in the surveys used for this study for four of the seven interventions: (1) maternal education; (2) family planning and contraception; (3) transfer programs; and (4) parental leave. In all cases, coverage was found to be low. There are clear gains over time in the level of education of mothers, but the share of mothers of children between zero and six years of age with

at least some secondary education or above is well below one fifth. Few women aged 15 to 49 rely on modern contraception methods. Transfer programs are then exception rather than the rule, with the exception of in-kind benefits obtained by students in public schools and their families through the universal primary and lower secondary education policy. Parental leave is enjoyed only by about a third of employees, with most workers not being employees.

While these results are not too surprising, they do not seem to reflect some of the efforts made by the government to provide services in principle for free to the population, especially in the areas related to reproductive health. In order to better understand some of the constraints that may reduce the take-up of various services by the population, qualitative work was conducted with a focus on family planning in some of the more disadvantaged areas of the country.

The qualitative fieldwork suggests that a number of factors affect the utilization of family planning services. Negative husband attitudes towards family planning lead many women to opt out of using contraception. This is exacerbated by the inconsistency in the availability of contraceptives at health centers. In addition, perceived or actual side effects of some family planning methods, such as loss of sexual appetite, dizziness, vomiting, or bleeding discourage women from using family planning. When women use contraception, they tend to do it stealthily, but if they are caught by their husbands this may lead to domestic violence or adultery.

The qualitative work suggests that both cultural and service delivery factors are at work in leading to a lack of use of modern contraception methods). While this is known in Uganda, the qualitative work points to the need to combine outreach campaigns with the provision of services in order to help change mindsets, including by involving men to try to prevent negative attitudes towards the practices. Misconceptions about the effects or risks of certain methods are also present, an area where reproductive health education by qualifies health workers can also help.

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CHAPTER 4
HEALTHCARE AND MICRONUTRIENT SUPPLEMENTATION

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This chapter considers a second set of two interventions or services that are part of the family support package outlined in Denboba et al. (2014). These interventions are meant to provide healthcare and nutrition for young children. The introduction briefly describes the two interventions. The next section relies on household survey data to assess the level of coverage in the population of the two interventions. The last section provides results from qualitative fieldwork on some of the constraints faced by households in benefiting from some of the interventions, with a focus on access to healthcare for households.

1. Introduction

As mentioned in chapter 2, families play a critical role in addressing children's development needs. Denboba et al. (2014) identify 12 interventions and services for children and families as part of their family support package. The first seven interventions were reviewed in chapter 3. This chapter discusses the next two interventions: (8) access to healthcare; and (9) micronutrients supplementation and fortification. As for the interventions reviewed in chapter 3, these two interventions tend to have high benefits and returns. Access to and affordability of healthcare is key for households to use the services in a preventive way, or when a child is sick or injured, thereby affecting the health and nutritional status of children (Alderman et al., 2013). Deficiencies in micronutrients such as vitamin A, iodine, iron, and zinc can cause irreversible deficits in the physical and mental development of children. Fortification of staples foods and salt iodization help prevent such deficiencies, while reducing the risk of low birth weight babies and child mortality (Bhutta et al., 2013; Horton et al., 2008).

To what extent do young children and their families benefit from these two interventions in Uganda? To answer this question, this chapter relies on nationally representative household surveys to assess the level of coverage of the two interventions in the population (section 2). The chapter also includes a discussion of some of the obstacles to better coverage, relying on qualitative fieldwork with a focus on healthcare (section 3). A brief conclusion follows.

2. Household Survey Data

This section documents the coverage of access to healthcare for young children and micronutrient supplementation. Tables 4.1 through 4.4 provide information on the need for, access to, and affordability of healthcare. Uganda's population has relatively high rates of morbidity, with illnesses or injuries reported by households for 42.0 percent of children below six years of age over a 30-day period in the 2012/13 survey. Morbidity rates are lower among poorer quintiles and rural areas but this may be due to bias in reporting whereby only more serious episodes would be reported by more disadvantaged households, as has been observed in other countries. Nationally malaria accounts for a third of those episodes, followed by coughs, fever, headaches, and chills. Diarrhea affects a smaller share of children but may be severe, and it tends to represent a larger share of episodes among the poor, possibly because of a lack of access to clean water and sanitation in the bottom quintile of the population.

Nationally, for almost nine in ten (88.5 percent) episodes of illness, parents seek care for their children. However, as shown in table 4.2, the proportion is however lower among households in the bottom quintile. Apart from cases when the illness was mild so that care may not have been needed, cost remains the main reason for not seeking health care when a young child sick despite a number of government interventions and policies to reduce the cost of care.

Data on expenditures for care suggest that government interventions have been somewhat successful in abolishing or at least reducing most consultation fees. As shown in table 4.2, only about half of the population pays for the direct care received by children. Yet other costs, including for medicine, hospital or clinic charges, and transportation remain, and in one out of 20 consultation households declare paying what may amount to illegitimate fees. Fees are also paid when relying on traditional doctors who operate privately. Apart from cost, distance to facilities and the (lack of) availability of drugs are also constraints to seeking health care when children fall sick. As expected, all of those factors are more serious issues in rural areas and for the poor; in upper quintiles by contrast, a majority of the cases where care was not sought when children fell sick can be attributed to illnesses not being severe enough.

Perhaps surprisingly, as shown in table 4,3, half of the consultations for children take place in private health facilities or with private providers. However, government facilities tend to be used more by the poor and in rural areas, while private facilities dominate in Kampala and other cities. The role of traditional practitioners, which is important in some areas, is somewhat marginal for child care.

Finally, in terms of accessibility, also as shown in table 4.3, households live on average 2.8 kilometers away from the nearest health facility, but the maximum distance is 80 kilometers. It takes on average almost forty minutes to reach the facility, although for the poor this is closer to one hour, and some households live six hours away from the nearest facility, taking into account their mode of transportation. Most households go to facilities by foot, but some rely on their own bicycles or Boda Boda (bicycle or motorcycle). The average waiting time at health facilities is about the same as the traveling time, at slightly under 40 minutes on average nationally, although it is again higher for the poor and those living in rural areas and it can also reach up to six hours.

Table 4.1: Morbidity in Last 30 Days among Children Age Six and Under, 2012/13 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Illness/injury in last 30 days	28.7	45.5	41.7	48.7	46.1	37.8	33.0	35.4	39.5	42.3	45.5	45.7	42.0
Symptoms													
Diarrhea (acute)	0.6	2.3	3.5	2.2	3.0	5.2	2.8	5.1	3.4	1.7	2.5	3.6	3.2
Diarrhea (chronic)	0.0	0.0	0.4	0.1	0.2	0.7	0.4	1.0	0.3	0.4	0.0	0.1	0.3
Weight loss (major)	0.0	0.0	0.1	0.0	0.2	0.3	0.0	0.3	0.1	0.2	0.0	0.0	0.1
Fever (acute)	0.8	8.5	8.1	15.4	7.8	1.8	2.8	5.6	7.2	7.2	8.9	9.9	8.0
Fever (recurring)	0.0	3.0	4.6	2.3	7.1	4.1	2.2	6.5	3.3	4.8	3.6	3.6	4.2
Malaria	56.1	33.2	33.8	27.4	38.0	32.6	39.7	33.5	40.2	35.3	32.7	30.7	34.1
Skin rash	1.4	1.9	2.9	2.9	2.8	2.4	2.1	2.0	3.4	2.9	2.5	2.5	2.6
Weakness	2.3	1.7	2.7	2.2	2.7	1.3	4.1	2.6	3.0	1.7	3.4	2.0	2.5
Severe headache	1.7	5.4	6.9	4.7	6.2	11.2	5.1	8.9	6.6	6.1	6.1	5.7	6.5
Fainting	0.4	0.0	0.2	0.1	0.0	0.2	0.3	0.3	0.0	0.1	0.3	0.0	0.1
Chills (feeling hot and cold)	2.7	6.3	4.8	7.5	5.9	2.4	2.4	3.2	4.1	5.1	5.3	6.7	5.1
Vomiting	0.0	0.9	1.4	0.7	1.1	1.4	2.4	1.6	1.3	1.6	1.2	0.8	1.3
Cough	21.0	20.2	15.9	16.2	16.8	17.7	17.3	15.8	16.6	17.2	18.0	16.5	16.9
Coughing blood	0.0	0.3	0.1	0.2	0.1	0.0	0.1	0.0	0.2	0.1	0.1	0.1	0.1
Pain on passing urine	0.7	0.3	0.1	0.1	0.1	0.0	0.5	0.0	0.4	0.1	0.3	0.0	0.2
Genital sores	0.0	0.0	0.2	0.2	0.0	0.0	0.5	0.0	0.0	0.2	0.2	0.2	0.1
Mental disorder	0.0	0.4	0.1	0.0	0.1	0.5	0.0	0.5	0.0	0.1	0.0	0.2	0.1
Abdominal pain	1.1	3.1	4.3	2.7	3.2	5.6	6.0	4.1	2.8	4.8	3.8	4.5	4.0
Sore throat	0.6	0.0	0.2	0.0	0.0	0.6	0.3	0.0	0.1	0.3	0.2	0.3	0.2
Difficulty breathing	2.7	0.4	0.6	0.6	0.2	0.8	1.1	0.2	0.4	0.8	0.3	1.0	0.6
Burn	0.0	0.2	0.2	0.3	0.0	0.1	0.4	0.0	0.4	0.2	0.1	0.2	0.2
Fracture	0.0	0.9	0.6	0.7	0.7	0.3	0.6	0.4	0.4	0.6	0.8	0.7	0.6
Wound	1.1	1.0	1.8	1.4	0.9	3.2	1.7	2.7	1.0	1.6	1.7	1.4	1.6
Child birth related	0.4	1.0	0.3	0.4	0.3	0.8	0.4	0.1	0.0	0.8	0.7	0.5	0.4
Other	6.5	9.0	6.4	11.8	2.6	6.9	6.8	5.6	4.9	6.3	7.5	9.0	6.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2012/13 UNHS survey.

Table 4.2: Obstacles to Consultations for Children Age Six and Under, 2012/13 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Consultation													
Yes	91.4	88.6	88.5	87.3	88.1	89.6	90.2	82.9	87.8	88.1	91.8	90.2	88.5
No	8.6	11.5	11.5	12.7	11.9	10.4	9.8	17.1	12.2	11.9	8.2	9.8	11.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Why no consultation?													
Illness mild	76.4	53.2	45.6	64.4	39.9	43.4	33.5	32.7	40.4	54.3	53.2	60.4	47.5
Facility too far	0.0	7.8	9.6	3.4	13.4	8.0	12.9	16.2	12.4	2.8	4.8	7.2	9.1
Hard to get to facility	0.0	0.0	2.0	0.0	1.0	0.6	7.5	0.4	5.1	1.4	1.5	0.0	1.6
Too dangerous to go	0.0	0.0	0.8	0.0	1.9	0.0	0.0	2.0	0.0	0.0	0.0	0.9	0.7
Available facilities are costly	23.6	7.9	15.6	12.9	16.2	13.2	14.0	19.3	14.0	12.0	13.3	11.4	14.3
No qualified staff present	0.0	0.0	1.0	0.8	0.8	1.5	0.0	1.1	0.0	1.8	1.1	0.0	0.8
Staff attitude not good	0.0	1.5	1.1	0.0	2.6	1.5	0.0	2.5	0.0	1.4	1.6	0.0	1.2
Too busy/long waiting time	0.0	4.1	1.4	1.4	1.8	3.1	1.5	3.0	0.3	1.9	1.4	2.3	1.9
Facility inaccessible	0.0	0.0	0.2	0.0	0.5	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.2
Facility is closed	0.0	0.0	0.3	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.3	0.0	0.2
Facility is destroyed	-	-	-	-	-	-	-	-	-	-	-	-	-
Drugs not available	0.0	9.2	10.9	2.9	17.3	12.3	8.9	12.9	19.5	7.6	6.5	5.3	10.5
Other	0.0	16.4	11.5	14.3	4.7	16.4	20.3	9.2	8.3	16.9	15.3	12.6	12.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Types of payments													
Official fees	66.6	59.4	47.5	64.2	50.4	35.8	43.3	36.8	46.4	49.4	50.8	61.0	50.2
Token of thanks	0.7	0.4	0.5	0.2	0.7	0.6	0.2	0.9	0.3	0.2	0.4	0.5	0.5
Illegitimate payment	13.1	2.7	6.2	2.6	9.6	1.1	8.1	4.6	5.3	6.2	5.2	6.5	5.6
Free (no payment)	19.5	37.5	45.8	32.9	39.3	62.5	48.4	57.7	48.0	44.1	43.6	32.0	43.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Amount paid when positive													
Consultation fees	9945	682	343	624	210	629	602	100	199	289	532	939	469
Medicines	21648	11281	6517	10555	5467	6148	8936	3526	4073	5703	8473	13210	7764
Hospital/clinic charges	20807	4291	1273	2957	362	2222	3047	534	302	764	2678	4216	1964
Traditional doctor	170	535	344	423	178	953	366	406	78	460	269	646	381
Transport to and from	4116	2850	1381	2619	741	1516	2139	701	600	992	1917	3233	1719
Other expenses	6889	3861	1510	4113	733	1643	1275	671	414	900	2374	4321	2005
Average total expenses	6013	7033	3178	6853	2677	2272	4071	1236	1593	2505	4989	8549	3967

Source: Authors using Uganda 2012/13 UNHS survey.

Table 4.3: Type of Provider for Consultations for Children Age Six and under, 2012/13 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Government hospital	12.0	7.8	4.8	5.4	5.2	6.0	5.8	4.6	5.1	5.6	6.1	5.9	5.5
Government health center	9.6	24.3	39.1	25.5	36.6	49.2	35.2	48.8	43.9	37.4	32.5	23.4	35.7
Outreach service	0.0	0.0	0.7	0.2	0.0	2.0	0.4	1.6	0.4	0.6	0.1	0.3	0.5
Field worker/VHT	0.0	1.5	1.7	1.8	0.0	1.1	4.9	0.9	0.5	1.4	3.3	1.3	1.6
Other public sector	0.0	0.5	0.2	0.4	0.0	0.4	0.3	0.3	0.5	0.0	0.0	0.4	0.2
Private hospital/clinic	68.8	44.4	33.2	46.4	20.7	35.6	48.1	21.0	26.1	31.5	40.6	51.4	36.0
Pharmacy	4.7	8.9	7.7	5.2	19.0	0.0	0.4	11.3	8.7	8.5	5.3	7.2	7.9
Private doctor	0.0	0.4	0.3	0.1	0.6	0.1	0.4	0.6	0.2	0.2	0.4	0.2	0.3
Outreach service	0.0	0.3	0.1	0.0	0.0	0.7	0.0	0.5	0.0	0.0	0.1	0.2	0.1
Community health worker	1.4	1.1	1.2	1.7	0.4	0.9	1.9	1.0	1.7	0.7	1.3	1.1	1.1
Other private medical Sector	0.0	2.4	1.8	6.0	0.2	0.3	0.3	0.7	1.3	2.1	2.0	2.7	1.9
Shop	0.8	7.1	7.9	5.1	16.7	1.6	1.6	7.7	10.3	10.0	7.2	4.4	7.6
Traditional practitioner	2.8	0.8	0.9	0.7	0.6	2.1	0.6	1.0	0.9	1.6	0.4	0.8	0.9
Market	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	0.0	0.6	0.5	1.8	0.0	0.0	0.2	0.0	0.4	0.4	0.8	0.8	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2012/13 UNHS survey.

Note: Outreach service does not represent the impact of campaigns, as consultations are often provided in health facilities promoted by capmpaigns.

Table 4.4: Distance to Provider and Time Required for Consultations for Children Age Six and Under, 2012/13 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Distance to provider (km)													
Mean	1.7	2.2	2.9	2.4	2.1	4.2	2.9	3.3	2.3	2.8	2.6	2.9	2.8
Median	0.5	1.0	1.6	1.0	1.5	2.4	1.5	2.0	1.6	1.5	1.5	1.0	1.5
Min	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max	10.0	44.0	80.0	80.0	49.6	80.0	50.0	80.0	27.0	52.0	48.0	80.0	80.0
Model of transportation													
Foot	68.9	67.6	68.9	66.3	64.6	76.7	71.2	79.1	74.9	68.1	67.0	60.0	68.7
Taxi (car)	12.8	5.9	1.5	5.1	1.3	0.5	3.2	0.3	0.7	1.3	3.8	5.0	2.6
Pickup/truck	0.0	0.1	0.4	0.0	0.3	0.8	0.2	0.2	0.3	0.7	0.0	0.4	0.3
Bus/minibus	0.8	1.3	0.1	0.9	0.0	0.0	0.4	0.2	0.0	0.0	0.0	1.2	0.3
Boda Boda (bicycle)	2.5	2.8	4.1	4.2	3.4	2.1	5.6	1.6	4.8	5.7	3.3	3.6	3.8
Boda Boda (motorcycle)	8.7	13.3	9.1	14.1	8.7	3.3	12.6	3.4	4.1	7.4	12.8	17.0	9.9
Own motorcycle	2.6	1.8	1.7	2.5	1.4	0.6	2.3	0.7	0.6	0.8	1.9	3.6	1.7
Own bicycle	0.0	5.1	12.8	4.8	18.6	14.2	3.9	11.8	14.1	14.7	10.6	6.4	11.1
Own car	3.7	2.2	0.1	1.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.6
Other	0.0	0.0	1.4	0.5	1.4	1.9	0.6	2.7	0.5	1.4	0.7	0.5	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Travelling time													
Mean	18.9	27.4	43.3	31.2	35.6	59.7	39.4	53.3	44.9	42.0	35.5	30.4	39.8
Median	10.0	15.0	30.0	20.0	30.0	40.0	25.0	35.0	30.0	30.0	20.0	20.0	30.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Maximum	90.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0
Waiting time													
Mean	31.4	36.7	36.7	24.8	32.2	67.6	30.3	53.3	39.2	34.2	37.6	25.5	36.6
Median	2.0	5.0	10.0	5.0	10.0	40.0	4.0	30.0	10.0	10.0	10.0	4.0	10.0
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0

Source: Authors using Uganda 2012/13 UNHS survey.

The second intervention considered in this chapter is micronutrient supplementation and fortification to avoid deficiencies in vitamin A, iodine, iron, and zinc, among others. Micronutrient supplementation can be achieved through intake of specific doses, as is the case of Vitamin A capsules, which enhances children's resistance to disease and thereby reduce child mortality. It can also be achieved through fortification of staples foods. For example, universal salt iodization is a cost-effective way to deliver iodine to the population (Horton et al., 2008).

Table 4.5 provides data from the panel surveys on the share of children below six years of age who received a Vitamin A capsule over the last six months. On average, about two in three children receive the capsule, although the proportion could be slightly higher if some of children for whom parents do not know whether they have received the capsule actually did. There is no clear trend over time between the three years, since the proportion of beneficiary children was 67.3 percent in 2009/10, 56.9 percent in 2010/11, and 66.5 percent in 2011/12. There are differences between areas as well as between quintiles of welfare in the probability of receiving the capsule, but these differences are not as large as for some other indicators.

Table 4.5 also provides information as to whether the children had a child health card. As explained by the Ministry of Health (2009), the child health card is a tool used by healthcare professionals to record health information for infants and children, and thereby provide them with integrated care. The card also provides critical information to parents and enables them to monitor the growth of their children, which in turn may help parents keep their children healthy. The card records (among others) the date and weight of the child at birth, the child's medical and social history, his or her immunization record (with reminders of when the next immunization is due), and a visual record of the child's growth, nutritional and health status. In 2012/13, the proportion of children who received the capsule with the card was 43.3 percent, with an additional 23.2 percent of children who did not have the card. Children with a card who did not benefit from the capsule accounted for 14.8 percent of the sample, while children without cards who did not get the capsule accounted for 10.5 percent of the sample.

Table 4.6 indicates how children received the capsules, Nationally, two thirds (66.2 percent) of children received the capsules through routine visits to health facilities in 2012/13, a higher proportion than in the previous two years. The child health days organized once a year accounted for 27.8 percent of the children receiving the capsules, although the proportion tends to be lower in the bottom quintile across the three years. Finally, for 4.8 percent of children, the capsule was received when the child was sick and visited the health facility. In principle, the fact that the capsules tend to be received more during routine visits as well as during child health days is a good thing, as this does not depend on whether the child may fall sick or not.

Table 4.5: Share of Children Age Six and Under Who Received a Vitamin A Capsule in Last 6 Months, 2009/12 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
2009/10													
Yes with card	48.7	51.9	34.5	46.0	42.1	19.3	37.2	32.0	38.4	38.8	38.1	42.1	37.7
Yes without card	19.8	22.9	31.3	27.1	36.6	38.3	20.4	23.4	27.7	29.4	35.7	32.0	29.6
No with card	21.9	11.1	15.6	7.4	11.2	24.7	20.5	18.8	18.5	18.0	9.9	10.3	15.2
No without card	8.4	12.6	11.9	17.5	7.0	14.2	8.8	19.2	7.9	10.5	9.0	12.7	11.9
Don't know	1.2	1.5	6.7	2.0	3.1	3.5	13.1	6.7	7.5	3.4	7.2	3.0	5.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2010/11													
Yes with card	40.4	19.3	32.2	34.7	35.1	17.2	40.0	36.0	24.9	36.0	29.6	28.8	31.3
Yes without card	31.2	34.8	24.3	28.0	30.3	26.1	14.2	26.9	22.0	24.4	24.6	31.8	25.6
No with card	14.4	18.1	18.9	12.8	14.6	25.2	23.9	12.9	20.4	18.8	25.4	15.2	18.7
No without card	10.7	21.6	16.6	22.7	13.0	17.3	14.1	16.6	22.0	13.1	14.4	18.7	16.8
Don't know	3.2	6.2	8.0	1.9	7.0	14.2	7.8	7.5	10.7	7.7	6.0	5.5	7.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2011/12													
Yes with card	44.1	51.4	42.0	37.5	42.6	44.9	48.5						43.3
Yes without card	6.1	27.0	23.0	34.8	28.1	19.4	7.7						23.2
No with card	34.0	5.0	15.7	15.7	16.0	10.9	16.2						14.8
No without card	3.8	12.9	10.3	9.3	6.2	15.4	12.9						10.5
Don't know	12.1	3.8	9.0	2.7	7.2	9.5	14.8						8.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0						100.0

Source: Authors using Uganda 2009/10, 2010/11 and 2011/12 UNPS surveys.

Table 4.6: Source of Vitamin A Capsule for Children Age Six and Under, 2009/12

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
2009/10													
Routine visit to health facility	52.4	58.6	50.2	58.9	46.2	51.8	48.6	58.1	51.9	51.1	44.5	54.9	51.7
Sick child visit to health facility	14.6	4.9	4.3	6.1	5.9	3.7	3.0	8.9	3.2	4.8	2.8	5.7	4.9
Child Health Days	26.6	34.7	42.1	33.3	46.8	30.2	47.2	29.3	41.0	41.8	49.9	35.1	40.1
Other (specify)	6.3	1.9	3.1	1.7	1.1	14.3	0.0	3.6	4.0	2.4	2.8	2.7	3.1
Don't know	0.0	0.0	0.4	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	1.6	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2010/11													
Routine visit to health facility	56.7	50.3	52.9	56.1	44.7	59.5	56.3	60.7	55.8	47.2	50.8	49.4	52.9
Sick child visit to health facility	11.0	2.4	11.1	10.0	8.6	5.6	19.3	11.8	8.6	11.6	13.1	5.3	10.4
Child Health Days	27.0	42.6	34.1	31.6	46.3	27.4	24.4	25.4	29.7	40.2	35.2	43.4	34.4
Other (specify)	0.0	0.0	1.4	0.0	0.0	6.2	0.0	1.6	2.9	0.6	0.9	0.0	1.2
Don't know	5.4	4.7	0.5	2.4	0.4	1.3	0.0	0.6	3.0	0.6	0.0	1.9	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2011/12													
Routine visit to health facility	92.4	86.6	62.0	56.1	55.1	80.2	83.9						66.2
Sick child visit to health facility	4.8	2.7	5.2	9.7	4.3	2.4	2.6						4.8
Child Health Days	0.0	10.7	31.4	33.0	39.3	16.5	12.1						27.8
Other (specify)	2.8	0.1	0.8	0.6	0.9	0.8	0.5						0.8
Don't know	0.0	0.0	0.6	0.6	0.4	0.1	0.9						0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0						100.0

Source: Authors using Uganda 2009/10, 2010/11 and 2011/12 UNPS surveys.

3. Qualitative Fieldwork: Healthcare

Uganda has relatively high rates of morbidity, with about 40 percent of children reported sick or injured over the last 30 days in the surveys and quite a few of them not seeking care despite government interventions and policies aiming to reduce the cost of care. Why? To help answer this question, qualitative fieldwork was carried with key informants and focus groups.

A first issue is the cost of care, including in terms of out-of-pocket costs, which already emerged from the statistical analysis on the reasons not to seek care. Many services in public health centers are supposed to be free for users, and others have low cost. Yet even when fees are low, they may still translate into disincentives to seek care, and some services that are supposed to be free may not always actually be. In one center, treatment for open wounds requires patients to first present a police form which users may obtain from the police post at a cost of U Sh 5,000. When wounds are a result of fighting, patients are charged an additional U Sh 5,000, even though this policy is not approved by a local council bylaw. In another district, patients report paying U Sh 500 for syringes when they get injections. In another area, mothers report paying U Sh 15,000 for a delivery at the health center. Still in another area men note that when they seek treatment for syphilis from a government health center, they are asked to pay a fee. Many of those services are supposed to be free, and proving or disproving such claims is hard. But it would be unrealistic to dismiss them as baseless. Indeed, in one area women went so far as directly suggesting that when patients pay a fee at the government health unit, customer care from the medical staff greatly improves (the perception that private healthcare providers offer higher quality services also seems linked to the fact that people pay, with providers then maintaining their clientele through quality care).

Cost, however, is not the only factor affecting the demand for care. Awareness and health education should help in increasing the demand for care, but there is often inaccurate information on diseases in the community. The burden of disease varies from district to district depending on climate and ecology, among others. In all 14 districts visited, malaria was ranked as the main illness affecting community members, and there was a common awareness that mosquitoes are the main transmission mechanism, especially during the rainy season, and around stagnant water as well as uncleared bushes around homes where mosquitoes breed. At the same time, in most communities fever is almost always (and often erroneously) associated with malaria—with the exception of Kaabong where women did distinguish malaria from other types of fevers.

There is awareness in communities that malaria is preventable, and an appreciation that mosquito nets can be an effective tool in the fight against malaria. Most people appreciate government programs of mosquito nets distribution. But there were also pockets of resistance to the use of mosquito nets, even in cases where people know about their usefulness. In Gomba and Bukomansimbi, mosquito net use was limited by the fear that they were highly flammable. Given means of lighting in rural homes using candles and tadoobas, it was deemed safer to avoid the nets. In these districts the nets were diverted to provide shelter and protection for rearing chicken and growing plants. In Ntoroko and Buvuma, mosquito nets were also used for catching fish.

In Ntoroko district, some people said they appreciated the usefulness of mosquito nets, but could not afford them and emphasized that government had the responsibility of providing them. In one community in Kanungu district, one stated reason for not using the nets was “because our grandparents did not use these nets in the olden days.” In Buvuma, rampant malaria was attributed to the fact that the nets used by people had holes through which the mosquitoes would still pass and bite those sleeping under them. And yet the cost of not using or protecting the nets can be high; in Buvuma a case was cited of a person travelling by boat to Jinja for treatment at a cost of

U Sh 60,000, while the cost of a new mosquito net is about U Sh 5,000. The qualitative work pointed to an issue of inadequate sensitization about the proper use and maintenance of mosquito nets before their distribution. Even in Kampala, malaria was mentioned as the top illness, in part because of the fact that the entire city lies in a swampy ecology.

What were some of the other diseases mentioned by communities in being common? In Ntoroko, Kween, and Kanungu, brucellosis was mentioned. It is caused by bacteria from brucella, and the disease was attributed to drinking milk that had not been boiled. Cholera was also mentioned as resulting from periodic flooding and shortage of access to clean water, with boreholes breaking down and repairs taking a long time. In Gomba and Ntoroko non-communicable diseases such as diabetes and high blood pressure were ranked high. Cancer was only mentioned as a common disease in Yumbe district. In Bukomansimbi, measles was noted, while polio was mentioned in Napak district. Sexually transmitted diseases (syphilis and gonorrhea) were mentioned in several areas with erroneous information as to their transmission when using condoms. Tooth decay and eye infections were noted in Bukomansimbi.

In Napak, open wounds were included in common illnesses due to fighting in cattle rustling, as well as the need to move through thorny bushes when looking after animals. Jiggers were mentioned in Kaabong, and hunger was mentioned as well due to droughts and insecurity. Liver cirrhosis was named in Kaabong as caused by alcoholism. Trauma and suicide, together with gender-based violence, were mentioned in Lamwo and attributed to the long war between the government and the Lord's Resistance Army. A similar point was raised in Kole district, where psycho-social challenges may translate into heavy drinking and a higher exposure and vulnerability to HIV. In Lamwo district women stated that they did not know the health problems of men because men are secretive and away from the home for most of the day for work. So they may take ARVs when they are away from the home without their wives knowing about it.

In a number of cases, perceptions about illness and healthcare are erroneous which may contribute to poor health outcomes. In Kaabong, men and women stated that diarrhea was caused by eating green vegetables, that tetanus was caused by overworking in the gardens, that epilepsy was caused by hunger, and that hepatitis was caused by alcoholism. In Yumbe, ulcers were attributed to the habit among youth of chewing Mairungi (a herbal drug). There could be some connection in those attributions, but often not in terms of a direct cause and effect relationship. Overall, awareness of the causes of various diseases and how they can be prevented is low. People do also not necessarily know where to go for what disease. Diseases associated with poor sanitation, such as jigger infestation in Kaabong, and the pervasive malaria cited in virtually all districts are an examples of burdens that could be prevented. The same can be said of diseases associated with unboiled water or a lack of proper hygiene and sanitation in the home. In some cases, modes of livelihood—as is the case with pastoralism in Kaabong and Napak—may reduce the likelihood that children will be taken to health centers to have their full immunization.

Apart from cost and lack of awareness, lack of satisfaction with public health centers also reduces the demand for care. Many centers are in poor physical condition, as they were constructed a long time ago. One center built in 1958 in Lamwo district has not had a face lift since construction. The maternity ward and operating theatre in Yumbe hospital is in poor condition. Lack of clean water and lighting in some centers was documented. In other centers, congestion in maternity and admission wards discourages patients from visiting, particularly in cases of delivery where privacy matters to mothers. In Bala sub-county, Kole district, women complained that "The labor ward is very small, yet several mothers can come for delivery at ago. The lack of privacy in the labor ward makes some mothers prefer TBAs [traditional birth attendants] because there is

more privacy there." Some centers do not have mortuaries, with the dead simply shielded by screens from patients. As a result some patients discharge themselves after other patients die. In one hospital, the operating table that had been installed when the hospital was opened in 1969 had become dysfunctional, and lay in disuse just at the entrance of the theatre. In Kole district, the only delivery bed at one of the health centers had broken and improvisations had to be made.

Some health centers are not connected to the electricity grid. Solar systems help, but they sometimes fail. Darkness at night then prevents needed services from being provided on a 24-hour basis. Inadequate housing also affects health care delivery. Staff who commute from distant places are often late for work and must leave early to catch transport back. Where midwives are not housed at health centers, getting them to attend to expectant mothers at night is difficult. Units that are not fenced are at risk in areas where there is a lack of security. Lack of medical equipment may also be an issue, especially in the case of testing and screening equipment. In Lamwo, the health center has no means to test for typhoid. CD count for the northern region was only available in Gulu Hospital, which can often be reached only by motorcycle. X-ray services were not available in most centers because solar electricity did not function well. Many centers had laboratories that lacked microscopes or reagents. When patients know for sure that such services are not available in public health centers, they tend to go to private providers. Drug stock-outs are an especially serious problem.

In terms of health workers, there is a risk of low motivation and poor service arising from limited remuneration and inadequate numbers of personnel that lead to higher workloads for those present, and thereby risks of staff irritability and rudeness. Many centers have only one midwife who needs to attend to deliveries day and night. In Yumbe, the hospital administrator reported that outpatient attendance had dropped in part due to lack of staff, and when men visited a health unit, they were told that existing drugs had been reserved for women and children who were deemed more vulnerable. Drugs for convulsions and ulcers were reported as not available, so mainly pain killers that are dispensed. One man asked: "Why does government not supply drugs for serious illnesses at all?" Drug shortages were also reported in urban areas. In Hoima, a man mentioned that some people do not go to the health center because they fear being humiliated and ashamed in front of nurses administering the treatment. Instead they mainly resort to buying traditional herbs from vendors or going to private hospitals. In some cases, poor treatment, or the perception thereof, lead to a withdrawal of trust in medical personnel by the patients. One woman vowed: "I cannot go back to that health center because the nurses bruised my baby at birth and even improperly tied the umbilical cord. On top of that it is attendants who clean the labor ward after birth without any protection gear like gloves given to them."

Feeling of marginalization in the running of health units can also alienate health users. In Kaabong district respondents called for another health center to be built in their community in part because of an absence of any sense of ownership with another center located nearby. Lack of availability and possibly commitment of staff in terms of physical presence is another factor echoed time and again. In one area patients complain that "The health center is seldom open on weekends and after lunch on week days. The health workers have turned Saturdays and Sundays as their informal public days." In some cases these issues are linked to administrative laxity, whereby health workers are not supervised and monitored by immediate superiors. People strongly felt that if there had been continuous supervision and inspection, stock-outs would cease being announced just two days after the reception of deliveries. It was claimed staff take the drugs to their clinics, helped by the fact that no one is monitoring their work on a constant basis. In extreme cases, respondents mentioned that staff had allotted themselves an even shorter working week,

being available at their duty stations only from Monday to Wednesday. In other areas patients complain that workers come to work late and leave early: "They come at 10:00 am and leave at lunch time so when one comes after lunch he or she will not be given treatment."

Finally, apart from cost, lack of awareness, and lack of satisfaction with public health facilities, a range of other factors may also influence the demand for care. On a positive note, at Kapedo Health Center III in Kaabong district, the number of deliveries and outpatient care increased in the last five years. A key reason given for the increase is the improved security following disarmament and reduction in cattle rustling, even if communities also acknowledge the role of improved services thanks to an increase in the number of medical staff, better accommodations for staff, and the construction of new health centers at the parish level. In Napak, issues of peace, security, and resettlement are also highlighted. The new resettlement schemes are praised for increasing the number of the people in the area with accessible care.

Political and religious leaders also play a role in mobilizing people to seek care, sometimes positively and sometimes negatively. In one area, one of the reasons mentioned as to why people do not utilize public health facilities as much as they could, was the 'negative' advertisement from politicians who claim (even if it may not be always not correct) that drugs are lacking. As one person said it, "All the time when you tune in on a radio program the only thing you hear is no drugs in health centers at all." Government officials themselves did not utilize public facilities in that area—they took their children, wives, and relatives to private health facilities, suggesting they had little trust in public health facilities. People took this to imply that healthcare facilities are not functional or reliable if the leaders themselves have no faith in them. Politics and partisan politicking were also cited in another area as detrimental for the smooth functioning of health facilities, and blamed for contributing to the spread of malaria. Respondents mentioned that when programs for the distribution of mosquito nets are implemented, those opposing the party in Government politicize the exercise and many of their allies in the community do not participate in what they perceive is an exercise of the ruling party. There is also in some areas alleged favoritism towards helping those who support the party first, and only giving what is left to those who belong to the parties in opposition.

Finally, socio-cultural factors also play a role in the demand for care, or lack thereof. In Kween district, the practice of female genital cutting has existed since time immemorial and persists today. This makes local women reluctant to go to government health units for deliveries that could be assisted by midwives from other cultures who would then be surprised and might even mock their anatomical features being different from those who do not follow the practice.

4. Conclusion

This chapter considered two key interventions for young children: access to healthcare and micronutrient supplementation. Regarding micronutrient supplementation, information was available in the surveys on the share of children below six years of age who received a Vitamin A capsule over the last six months. On average, two in three children receive the capsule. While there are differences between areas as well as between quintiles of welfare in the probability of receiving the capsule, these differences are not as large as for some other indicators.

The focus of most of the chapter was on access to healthcare. Uganda's population has relatively high rates of morbidity. Malaria accounts for a third of the morbidity episodes, followed by coughs, fever, headaches, and chills. Diarrhea affects a smaller share of children, but may be severe, and it tends to represent a larger share of episodes among the poor, possibly because of a lack of access to clean water and sanitation in the bottom quintile of the population. Nationally,

for almost nine in 10 episodes of illness, parents seek care for their children, but the proportion is lower among the poor. Cost remains the main reason for not seeking care. Only half of the population pays for consultations for children, but other costs for medicine, hospital or clinic charges, and transportation may be substantial. Distance to facilities and the lack of availability of drugs are also constraints to seeking health care when children fall sick.

The qualitative fieldwork confirmed that the cost of care is a reason for not seeking care, and there may be cases when households are charged when care should be free. Awareness and health education could also help. For example, there is awareness that malaria is preventable and that mosquito nets can be effective to fight against malaria. But there were also pockets of resistance to the use of mosquito nets and lack of sensitization about proper use and maintenance even in cases where people know about their usefulness. More generally, in a number of cases perceptions about illness and healthcare are erroneous which may contribute to poor outcomes.

Apart from cost and lack of awareness, lack of satisfaction with public health centers also reduces the demand for care. Many centers are in poor physical condition, as they were constructed a long time ago. Some centers do not have mortuaries, with the dead simply shielded by screens from patients. Many centers are not connected to the electricity grid, and while solar systems help, they sometimes fail. Darkness at night then prevents needed services from being provided on a 24-hour basis. Inadequate housing also affects health care delivery. Staff who commute from distant places are often late for work and must leave early to catch transport back. Limited remuneration and lack of personnel may lead to high workloads and staff irritability, as well as in some cases poor service. Drugs are also reported as often unavailable.

Finally, socio-cultural factors also play a role in the demand for care, or lack thereof. For example, in some areas female genital cutting has been practiced since time immemorial and persists today. This makes local women reluctant to go to government health units for deliveries that could be assisted by midwives from other cultures who would then be surprised and might even mock their anatomical features being different from those who do not follow the practice. There were also at the same time examples in the qualitative fieldwork of local initiatives to improve the availability and quality of care, showing that local leadership can make a difference.

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CHAPTER 5
SAFE WATER

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This chapter considers the tenth intervention or service that is part of the family support package outlined in Denboba et al. (2014). Children and households need access to safe water. After a brief introduction, household survey data estimates of the coverage of safe water are provided. The last section summarizes results from qualitative fieldwork on some of the constraints faced by households in getting access to safe water. Note that separate studies for Uganda on piped water and on water and sanitation with more detailed analysis are available from the authors and listed in references.

1. Introduction

As mentioned in chapter 2, families play a critical role in addressing children's development needs. Denboba et al. (2014) identify 12 interventions and services for children and families as part of their family support package. The first seven interventions were reviewed in chapter 3 and the next two in chapter 4. This chapter discusses the tenth intervention, which is access to safe water. Access to safe water (as well as adequate sanitation) is essential for a range of development outcomes, including child morbidity, malnutrition, and mortality (on links between water, sanitation, and child health, see among many others Esrey et al., 1991; Esrey, 1996; Kosek et al., 2003; Jalan and Ravallion, 2003; Dillingham and Guerrant, 2004; Fay et al., 2005; Hutton and Haller, 2004; Moe and Rheingans, 2006; Zwane and Kremer, 2007; Bhutta et al., 2008; Cairncross et al., 2010; World Bank, 2010, Alderman et al., 2013; and Spears, 2013).

Access to safe water has long been an integral part of the Ugandan Government's National Development Plan, which includes references to the link between safe water, adequate sanitation, and poverty reduction. Access to safe water has major impacts on health outcomes and time use and thereby productivity, among others. While different definitions of what constitutes safe water have been used in the literature, it is customary in the literature to follow the definitions adopted by the Joint Monitoring Programme (JMP) for water and sanitation of the World Health Organization. Household survey data suggest that only a small minority of households have access to network (piped) water, whether in the dwelling or through public standpipes. But when considering other water sources considered as improved by the JMP, about three in four households could have access to improved water sources, at least in principle.

The chapter is structured as follows. To assess the extent to which young children and their families have access to safe water, this chapter relies first on nationally representative household surveys (section 2). The chapter then includes a discussion of some of the obstacles to access to safe water relying on qualitative fieldwork (section 3). A brief conclusion follows.

2. Household Survey Data

Summary statistics from the 2012/13 survey on alternative sources of drinking water are provided in table 5.1. Only 6 percent of children below the age of six live in a household with piped water (in the dwelling or in the yard).[1] Piped water coverage rates are much higher among

[1] Residential coverage as measured in the Uganda National Household Surveys at the household level is 7 percent nationally in 2012/13 (this share is higher than the 6 percent for households with children age six and under because

children living in households in the top welfare quintile than among the poor—in part because network water connections are concentrated in Kampala and cities. Network connection rates are virtually inexistent in the bottom half of the population in terms of welfare levels. Public taps (or standpipes), which are also often provided by utilities such as the National Water and Sewerage Corporation, play an important role, serving a larger share of children than private connections.

Other sources of drinking water include boreholes in yards/plots, public boreholes, protected wells/springs, unprotected wells/springs, rivers/streams/lakes, water vendors, tanker trucks, gravity flow schemes, rain water, bottled water, and other water sources. The three main sources for the child population as a whole, a large majority of whom live in rural areas, are public boreholes (for 36.3 percent of children), unprotected wells/springs (19.3 percent), and protected wells/springs (16.9 percent). These are sources of water on which the poor rely.

The water sources used by households are located on average 0.8 kilometer away from their dwelling (the median is half a kilometer away), but for some households the distance is up to five kilometers. It takes about an hour on average for a household to get water, including both the time to go to the water source and the time waiting at the source, when households do not have access in their home or yard. But for some households, the nearest water source is up to two hours away (this may be due to difficult terrain in some cases), and some households have to wait up to three hours when they arrive at the source to get water, although these are extremes. The poor tend to live farther away from water sources and also tend to have to wait longer to get water, but the differences between quintiles are not very large, in part because access to network water remains so limited. As expected, water sources are located closer to dwellings and take less time to visit in Kampala than in other cities, with distances being largest in rural areas.

Statistics on access to various water sources are often presented in a different and more aggregated way. While different definitions of what constitutes a safe water sources are used in the literature, it is customary to rely on the definitions proposed by the JMP for water and sanitation of the World Health Organization. According to the JMP, an improved drinking-water source is such that the risk of outside contamination, particularly from fecal matter, is minimal. Such sources include network water sources (piped water into dwelling or yard/plot, as well as public taps or standpipes), tube wells or boreholes, protected dug wells, and protected springs, plus rainwater. Unimproved water sources include unprotected springs, unprotected dug wells, carts with small tanks/drums, tanker trucks, surface water, and bottled water. Apart from classifying water sources as improved or unimproved, another more detailed approach consists in considering a drinking-water ladder.

Table 5.2 provides statistics on access to improved and unimproved water sources following the above approach, with various sub-classifications of improved sources according to the drinking-water ladder. Slightly less than three-fourths of households (72.4 percent) in principle have access to improved water (in the 2011 Demographic and Health Survey, the proportion of households with access to an improved water source was estimated at 70.0 percent). The term "in principle" is used on purpose, because as will be shown with the qualitative fieldwork in the next section, improved water sources are not necessarily safe or improved, and some households with access to safe water may not use it.

families with young children tend to be poorer and live in area with lower access). At the household level, coverage of piped water was at 5.1 percent in 2009/10, which is consistent with estimates from the 2011 DHS, which estimated the share of households with piped water into their dwelling, yard, or plot at 5.3 percent (Uganda Bureau of Statistics, 2012), an estimate that falls in between the estimates provided here for 2009/10 and 2012/13.

Finally, table 5.3, based on a question asked in the 2010/11 Uganda National Panel Survey, indicates the reasons why some households do not use protected water sources that may be available to them. In Kampala, cost (the fact that the source of safe water requires a financial contribution) is the main factor. In other geographic areas distance and perceptions that open water sources are good enough are mentioned more. The fact that in Kampala the cost of safe water sources is considered high by some households could reflect a concern about the cost of a water network (in terms of connection costs especially as opposed to consumption tariffs), but it could also reflect a concern about the price of water at public taps or standpipes, which may be higher than it should be. As to the fact that cost is not mentioned much elsewhere, it does not imply, as the qualitative work will show, that affordability is not an issue. Often households do not have access to safe water sources, and the cost of boiling water (with charcoal or wood) may be too expensive for many, whether this is in term of out-of-pocket or opportunity (time) cost.

Table 5.1: Main Source of Drinking Water for Households with Children Age Six and Under, 2012/13

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Source of drinking water													
Piped water into dwelling	11.7	4.6	0.4	3.4	1.1	0.6	1.3	0.0	0.0	0.2	0.8	5.7	1.6
Piped water to the yard	37.3	11.3	0.9	10.4	2.2	0.7	3.7	0.0	0.5	1.3	3.7	13.1	4.4
Public taps	35.8	22.1	4.9	13.6	5.1	2.6	16.8	2.8	5.5	7.6	10.7	17.6	9.6
Borehole in yard/plot	1.4	0.8	0.6	0.8	0.9	0.7	0.2	0.5	0.9	0.4	0.5	1.0	0.7
Public borehole	1.3	27.9	40.3	17.8	54.6	57.0	16.6	51.5	42.9	40.9	34.2	19.6	36.3
Protected well/spring	10.0	15.4	17.6	16.3	17.5	13.7	19.7	13.4	20.1	18.3	18.6	14.7	16.9
Unprotected well/spring	1.9	8.7	23.0	25.0	7.5	19.0	27.2	18.5	19.6	21.1	21.8	16.0	19.3
River/stream/lake	0.0	2.3	7.6	4.8	4.9	5.5	10.1	8.7	6.6	7.1	5.7	4.1	6.2
Vendor	0.4	4.6	0.9	4.8	0.5	0.1	0.8	0.0	0.6	0.4	1.4	4.5	1.6
Tanker truck	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Gravity flow scheme	0.0	0.9	2.2	0.0	5.1	0.1	1.5	3.8	1.9	2.1	1.3	0.6	1.8
Rain water	0.0	1.1	1.1	2.3	0.0	0.0	1.8	0.2	0.8	0.4	0.8	2.5	1.1
Bottled water	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Other	0.0	0.4	0.6	0.9	0.6	0.1	0.4	0.6	0.7	0.5	0.5	0.4	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Time to/from source (minutes)													
Mean	8.9	22.1	31.7	32.0	26.9	27.2	32.7	30.2	30.5	30.2	30.6	26.4	29.6
Median	9.0	15.0	25.0	25.0	20.0	20.0	30.0	20.0	25.0	20.0	20.0	20.0	20.0
Min.	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max.	60.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
Waiting time at source (minutes)													
Mean	8.3	21.0	22.6	13.5	28.3	31.8	13.3	25.3	25.4	22.3	20.6	17.4	22.1
Median	4.0	10.0	10.0	5.0	15.0	15.0	4.0	10.0	10.0	10.0	7.0	5.0	10.0
Min.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max.	60.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0	180.0
Distance from source (km)													
Mean	0.3	0.5	0.8	0.8	0.6	0.9	1.0	0.8	0.8	0.8	0.8	0.7	0.8
Median	0.1	0.3	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5
Min.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max.	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Source: Authors using Uganda 2012/13 UNHS survey.

Table 5.2: Improved Water Sources and the Drinking-Water Ladder for Households with Children Age Six and Under (%)

	Location			Region				Welfare Quintile					
	Kampala	**Other Urban**	**Rural**	**Central**	**Eastern**	**Northern**	**Western**	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Improved sources	97.5	83.9	67.9	64.4	86.5	75.4	61.3	72.2	72.4	71.0	70.6	74.5	72.2
Piped schemes	*84.8*	*38.9*	*8.3*	*27.3*	*13.4*	*4.0*	*23.1*	*6.7*	*8.0*	*11.1*	*16.5*	*36.8*	*17.4*
Of which on premises	*49.0*	*15.9*	*1.3*	*13.8*	*3.3*	*1.3*	*4.9*	*0.0*	*0.5*	*1.4*	*4.5*	*18.8*	*6.0*
Borehole	*2.6*	*28.7*	*40.8*	*18.5*	*55.6*	*57.6*	*16.8*	*52.0*	*43.6*	*41.3*	*34.7*	*20.5*	*36.9*
Other improved sources	*10.0*	*16.4*	*18.7*	*18.6*	*17.5*	*13.7*	*21.4*	*13.5*	*20.8*	*18.6*	*19.4*	*17.2*	*17.9*
Unimproved sources	2.2	15.6	31.4	34.5	12.9	24.5	38.0	27.2	26.7	28.5	28.9	24.7	27.1
Other	0.3	0.5	0.8	1.2	0.6	0.1	0.8	0.6	0.9	0.5	0.5	0.8	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2012/13 UNHS survey.

Table 5.3: Reasons Why Households with Children Age Six and Under for Not Using Protected Water Sources, 2010/11 (%)

	Location			Region				Welfare Quintile					
	Kampala	**Other Urban**	**Rural**	**Central**	**Eastern**	**Northern**	**Western**	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Long distance	2.3	10.5	30.9	14.0	22.6	30.3	42.2	33.9	34.3	30.6	23.0	9.0	27.6
Unreliable	12.3	23.8	30.8	25.0	34.1	38.9	19.4	30.4	27.2	32.6	29.7	25.1	29.3
Water does not taste good	20.0	13.4	2.4	7.1	4.0	3.4	2.7	0.7	3.5	3.5	4.8	11.4	4.2
Require contribution	0.0	1.5	0.1	0.3	0.6	0.0	0.0	0.4	0.0	0.4	0.2	0.0	0.2
Long queues	64.0	45.4	29.0	41.8	34.2	22.7	30.2	31.1	26.3	27.4	33.6	48.0	32.1
Open source is okay	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	1.5	5.5	6.9	11.7	4.5	4.8	5.5	3.5	8.8	5.7	8.7	6.5	6.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2010/11 Panel survey.

3. Qualitative Fieldwork: Safe Water[2]

In most communities, water sources are limited in comparison to the number of people living in the areas. Lack of access to safe water, while resulting from multiple factors, can be categorized as resulting in communities and lack of functionality due to poor maintenance, lack of local responsibility, and actual scarcity of water. The three issues are documented below.

Consider first lack of functionality. While it may be due to many factors, including dry/low yielding, low water quality, facilities that do not meet standards, and aging systems, poor maintenance seems to be the main culprit. This is due to lack of spare parts as well as inadequate or simply high prices of repairs that communities cannot afford. There is also a difficulty in finding well-trained technicians. Power shortages and lack of fuel to run generators also play a role. One community had not had functioning water taps for three years because pipes were cut. Another community had a spring, and when pipes were installed, the water stopped coming, and now seeps through the base of the spring, gathering as pond water. In another area most piped water facilities are non-functional. In still another village, the community had six tap stands in 2008, but due to poor workmanship and usage of small pipes coupled with low pressure the tap stands did not last three months. A community near Kampala had eight pre-paid taps, but due to advanced technology used they did not last and could not be repaired once they broke down. As one district officer explained: "The district has 20 valley tanks although very few (four) are still in good condition. Most of them have been abandoned due to negligence by communities. The few dams that are still in good conditions are a result of good community participation as well as the effectiveness of water committees which were selected in those communities."

Consider next the lack of local responsibility. The mention of water committees by the district official just quoted emphasizes the role of communities in maintaining access to safe water. While perceptions of who is responsible for providing clean and safe water vary between communities, local responsibility is clearly essential. Communities with committed members on the water committee tend to have better accountability systems with community members willing to contribute towards maintenance and operational costs. Examples are as follows: "At the dam a caretaker is employed to make sure that no animals drink from the source. This same person helps in maintaining the water by removing silt and mud from the dam and whoever goes to collect water is required to carry five baskets of silt and mud, short of which one must pay U Sh 500 as a contribution to the caretaker"; "Members have to pay a quarterly fee of U Sh 1,000 per household for maintenance and in case of breakdown. This payment is done through the care taker who is the health center in-charge"; "At the only functional borehole, we pay U Sh 1,000 per month. Most feel the fee is affordable for community members." The costs to be paid for access to safe water seem affordable, yet some may not be able to afford them. More problematic is the fact that many communities have failed to set up water committees, and in urban areas, few have heard of these committees (which may be less needed there). As a result, statistics from the Ministry of Water and Environment suggest that only about half of Water Source Committees are functioning. Some districts have adopted community-based maintenance systems with active water user committees, but due to their voluntary character they became non-functional.

Consider finally the issue of water scarcity. In one district water points accessed by one of the communities were located outside the community, with children crossing a busy and dangerous highway to get water. In another site, residents walked two kilometers to get water. The district dug four shallow wells, but three broke down within three weeks. Water is also collected from open ditches or ponds dug to water animals, with the alternative being an 18 kilometer walk to

[2] This section is adapted and shortened from a more detailed discussion available in Tsimpo et al. (2014).

valley dams. In still another village with more than 700 people, water is provided by two ponds, one private shallow well, and one seasonal spring. In one of the districts, water scarcity is so acute that and even dirty water in ponds is considered precious and struggled for. Ponds with green algae are used for domestic use. Seasonality plays a role in water scarcity in many areas. During the dry seasons many areas face shortages of water due to lack of natural springs, with the problem being most severe in cattle-keeping corridors where people have to share water with animals. In one district some households have access to piped water from the National Water and Sewerage Cooperation, but the water is on and off during the dry seasons due to low pressure. In that case households must walk four kilometers to a spring.

Apart from looking at factors restricting access to safe water in communities, the qualitative fieldwork also documented perceptions of safe water among households and some of the cost and cultural reasons that lead households not to use safe water even when it may be available in principle. Households understand the risks associated with water of poor quality, and they have clear views as to what characterizes safe water. Some suggested that for water to be considered safe, it must be boiled. Others considered rain-harvested water as safe and clean. By contrast, in a village the two water points plotted on the village map were not considered safe, and water flows from the hilly grounds collecting in the dam had lots of visibly dirty substances. All agreed that when water is stagnant this makes it even more unsafe. Yet, despite the fact that many considered only boiled water as being clean and safe, few in a number of communities reported actually boiling drinking water, especially when the water came from pipes, boreholes, and shallow wells, which tended to be considered as free from germs, simply because the water came from underground sources perceived to have been filtered naturally through layers of soil.

Community practices may undermine the quality of the water. In one community the biggest challenge is that people privately sink shallow wells in their homes and scoop the water out. These wells are called *shadoufs* after a similar technology used in ancient Egypt to put water in canals for irrigation. Sometimes the *shadoufs* are near toilets. People do not know that sinking a water source requires a permit and regular inspection of the quality of the water. In another community the safety of water was doubted by households because water sources were surrounded by overpopulated settlements, with schools and their latrines located around the same areas. For piped water, residents said that it turns brown, suggesting that it has been mixed up with running water during the rainy seasons. The many cases of diarrhea and typhoid in the community were taken as evidence that the water was not safe at all. When boiling water, some respondents mentioned that the boiling saucepan may turn black, showing that the water is not safe. But there are costs involved in buying charcoal for boiling water. The alternative to using water guard leaves a bad taste to the water according to many. Buying clean storage containers is also costly, and many may not be able to, ending up using unclean and unsafe water.

Apart from cost, cultural practices also limit safe practices. In a community members agreed that water is made safe by boiling it or using water guard. Yet respondents explained that "You know, many if not all of us grew up in rural areas and the days before there was adequate land so homesteads were sparsely located and disease outbreaks were rare due to limited human activities near water sources, so even when we come to towns we forget that the water sources are contaminated by human activities and that areas are much congested." In some areas, some simply believe that water that looks clean can be assumed safe. In many areas, most people especially those of an advanced age, don't boil the water: "We used to take water that was almost dirty from ditches and dams, we therefore feel that water from boreholes is very ok for us," an old man narrated. "Our life span used to be longer than nowadays," he added. Some homes, especially those

with school age children, use water guard since it is supplied to children at school free of charge. But again, in most cases, little is done: "We do nothing to this water. We do not boil, filter or leave it to settle. We are even aware it can cause diseases. We do not have filtering equipment to improve this water. We do not have time to boil this water because of the demanding household chores. We feel it is a waste of time since this water looks clean."

Finally, it is important to reiterate the fact that fetching water has an opportunity cost for households, especially for children and women who are responsible for this chore. Respondents agreed that women, but even more so children, have this responsibility: "It's the woman who suffers with water and that's why we don't expect her to travel for a long distance looking for water and boiling it as well since she has other domestic chores awaiting for her." Distance to water sources is then an important factor in determining whether households get clean water, and in addition to walking time, waiting time is common. Where water is scarce, congestion may lead to chaos and fighting at the water sources, and instances of abuse of children and wives were reported, as when men beat their wife for delays at the water sources. In a village, the following comments were made: "They are few public taps available in the community and only one outside the community, there is a lot of congestion making [it] hard to access water without waiting for a period of one to two hours"; "At the shallow well, in the dry season the water is very little, and after pumping five jerry cans one needs to wait for another 30 minutes."

4. Conclusion

Less than one in 15 children below the age of six lives in a household with piped water in the dwelling or in the yard. The three main sources of water for households with children age six and under (a majority of whom lives in rural areas) are public boreholes, unprotected wells/springs, and protected wells/springs. These are sources of water on which the poor rely. The water sources used by households are located on average 0.8 kilometer away from their dwelling, but for some households the distance is much higher. It takes about an hour on average for a household to get water, including travel and waiting time at the source. When considering the JMP definition, slightly less than three-fourths of households with children age six and under in principle have access to improved water. Finally, in Kampala cost is the main reason some households do not use protected water sources that may be available to them. In other geographic areas distance and perceptions that open water sources are good enough are mentioned more.

The qualitative fieldwork suggests three factors that contribute to a lack of availability of water in many communities: lack of functionality, lack of responsibility, and scarcity. Lack of functionality refers to the fact that in many communities existing water facilities are not working properly, whether this is due to (among others) aging systems, poor maintenance, or the inability to implement necessary repairs to broken down equipment because of affordability or other constraints. Lack of local responsibility refers to poor organization or leadership at the local level that prevents communities from making necessary investments in improving water supply and leads to poor maintenance and a lack of incentives for households to keep water sources clean. Scarcity of water refers to the fact that in some communities, water is simply not easily available—it is scarce and often has to be brought into the community from distant sources. Factors that contribute to a lack of quality of the water used by households and communities include at times erroneous perceptions of what constitutes safe water and in some cases affordability issues.

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CHAPTER 6
SANITATION

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This chapter considers the eleventh intervention or service that is part of the family support package outlined in Denboba et al. (2014). Children and households need access to adequate sanitation. After a brief introduction, household survey data are used to assess the level of coverage of adequate sanitation. The last section provides results from qualitative fieldwork on constraints faced by households in getting adequate sanitation. Note that separate studies for Uganda on piped water and on water and sanitation with more detailed analysis are available from the authors and listed in references.

1. Introduction

As mentioned in chapter 2, families play a critical role in addressing children's development needs. Denboba et al. (2014) identify 12 interventions and services for children and families as part of their family support package. The first seven interventions were reviewed in chapter 3, the next two in chapter 4, and the tenth in chapter 5. This chapter discusses the eleventh intervention, adequate sanitation, including access to latrines, bathrooms, and means of waste disposal. As for other interventions, these services have substantial benefits for households. Access to sanitation (as well as safe water) is indeed essential for a range of development outcomes, including child morbidity, malnutrition, and mortality (on links between water, sanitation, and child health, see among many others Esrey et al., 1991; Esrey, 1996; Kosek et al., 2003; Jalan and Ravallion, 2003; Dillingham and Guerrant, 2004; Fay et al., 2005; Hutton and Haller, 2004; Moe and Rheingans, 2006; Zwane and Kremer, 2007; Bhutta et al., 2008; Cairncross et al., 2010; World Bank, 2010, Alderman et al., 2013; and Spears, 2013).

Adequate sanitation has long been an integral part of the Ugandan Government's National Development Plan, which includes references to the link between safe water, adequate sanitation, and poverty reduction. Access to adequate sanitation has major impacts on health outcomes and time use and thereby productivity, among others. While different definitions of what constitutes adequate sanitation have been used in the literature, it is customary in the literature to follow the definitions adopted by the Joint Monitoring Programme (JMP) for water and sanitation of the World Health Organization. Household survey data suggest that only a small minority of households have access to latrines, so that access to adequate sanitation is low (sanitation includes other components apart from latrines, but we focus on latrines here).

The chapter is structured as follows. To assess the extent to which young children and their families have access to adequate sanitation the chapter relies first on nationally representative household surveys (section 2). The chapter includes next a discussion of some of the obstacles to adequate sanitation faced by households and communities as they emerge from the qualitative fieldwork implemented in 14 districts (section 3). A brief conclusion follows.

2. Household Survey Data

Summary statistics from the 2012/13 survey on the types of toilets used by households are provided in table 6.1. Only 6.1 percent of children below the age of six live in a household with a flush toilet or a ventilated improved pit (VIP) latrine. These facilities are as expected much more

frequent among children in households in the top welfare quintile than among the poor—in part because these types of latrines are concentrated in Kampala. The facilities are virtually inexistent in the four bottom quintiles and remain the exception even in the top quintile. Most households rely on pits, whether covered or not, with or without slabs, with some differences by area and quintile, but not necessarily large ones. The exception is that one in five households does not have any access to toilets in the bottom quintile and thereby relies on bushes, bags, buckets, or other means—a proportion substantially higher than in other quintiles. Close to 40 percent of households with children age six and under share their toilets with other households, with on average three households sharing a toilet, but in extreme cases up to 25 households doing so.

Table 6.2 provides data on modes of waste disposal used by households with children age six and under and the types of bathrooms they rely upon. Garden, pits, or heaps tend to be used most often, by respectively 43.3 percent, 33.9 percent, and 10.9 percent of households. Waste vendors are relied upon mostly in Kampala by close to half of households. Less than one household in 10 uses a skip bin or burning. In terms of bathrooms, makeshift structures or no bathroom at all are the most common occurrence for 37.5 percent and 24.7 percent of households, respectively. Outside bathrooms (with or without drainage) are used by about 40 percent of households. Inside bathrooms with drainage are observed almost exclusively in Kampala for a fifth of households.

Statistics on access to sanitation may also be presented in a more aggregated way. While different definitions of what constitutes improved sanitation are used in the literature, it is customary to rely on the definitions proposed by the JMP for water and sanitation of the World Health Organization. According to the JMP, improved sanitation refers to flush toilets, piped sewer systems, septic tanks, flush/pour flush to pit latrines, ventilated improved pit latrines, pit latrines with slab, composting toilets, and what is referred to as special cases. Unimproved sanitation refers to flush/pour flush to elsewhere (not latrines), pit latrines without slabs, buckets, hanging toilets or latrines, and other modes of disposal. Typically facilities that are shared are not considered as improved, but one may usefully distinguish among unimproved sanitation and improved but shared sanitation. Table 6.3 provides estimates of the share of the population with access to improved sanitation based on these definitions with the 2012/13 data. The data suggest that only 14 percent of households have access to improved sanitation. If unimproved facilities are split between shared but improved facilities and unimproved facilities, the proportion of households with a shared improved facility is 14.9 percent. Clearly, most households do not have access to adequate sanitation, and when they do have access, in most cases the facilities used are shared, often by many households.

Overall, when including both improved and shared improved facilities, 31.3 percent of households have access to improved facilities. The estimates obtained with the 2012/13 Uganda National Household Survey are fairly similar to those obtained with the 2011 Demographic and Health Survey (DHS) according to for all households the corresponding share is 31.9 percent (the DHS thus suggests a higher share of households with their own improved latrine, and a smaller shared with an improved shared latrine that is shared).

The qualitative work in the next section will provide an analysis of some of the constraints faced by households and communities to gain access to adequate sanitation. But one question asked in the 2010/11 Uganda National Panel Survey already provides insights. In the community module of that survey information from community leaders is available on the reasons for incomplete latrine/toilet coverage in the community (these statistics are for communities as a whole, not for households with children age six and under; communities are ranked into three terciles according to the average level of consumption per equivalent adults of households living in the community,

as measured through the household survey module). As shown in table 6.4, community leaders believe that ignorance (in 38.4 percent of cases) and negative attitudes towards sanitation (in 18.1 percent of cases) are to blame in more than half the communities for incomplete latrine/toilet coverage. Low household income comes next (15.2 percent of cases), followed by poor landscape or terrain, poor soil type, or lack of land (each for 6–7 percent of cases). There are differences between areas and by welfare levels in communities in the factors at work (for example, cost is mentioned more in Kampala), but with a few exceptions these differences are limited—suggesting that the three main factors of ignorance, negative attitudes, and low income are at work in many communities.

Table 6.1: Type of Toilets Facility Used by Households with Children Age Six and Under, 2012/13 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Toilet													
Flush toilet	14.5	2.7	0.2	3.1	0.6	0.3	0.7	0.0	0.0	0.1	0.4	4.5	1.2
VIP latrine	24.5	12.7	1.8	11.5	2.1	1.6	3.6	0.8	1.6	1.5	4.4	13.0	4.9
Covered pit with slab	32.9	31.9	12.9	28.6	19.9	7.9	10.8	9.3	11.5	13.8	19.2	28.6	17.5
Covered pit w/o slab	25.6	32.1	49.4	26.3	49.6	40.7	64.3	42.4	49.4	51.0	49.0	35.8	45.0
Uncovered pit with slab	1.4	6.0	4.2	7.6	4.6	2.8	2.3	3.3	4.6	5.8	5.0	3.8	4.5
Uncovered pit w/o slab	0.7	8.7	19.0	17.8	14.9	15.5	16.5	18.6	20.3	18.9	15.3	10.5	16.2
EcoSan	0.0	1.0	1.0	0.4	0.8	2.4	0.6	1.9	1.2	0.6	0.7	0.7	1.0
Bush, bag, bucket, etc.	0.0	5.0	11.5	4.7	7.4	28.8	1.2	23.8	11.4	8.4	6.0	3.2	9.7
Other	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sharing of toilets													
Yes	73.4	53.2	31.5	42.5	34.3	45.4	29.9	29.1	34.4	32.2	38.4	48.9	37.7
No	26.1	42.7	60.7	53.8	63.0	31.7	68.7	51.2	58.4	63.5	57.5	49.3	55.6
N/A (no toilet)	0.4	4.1	7.8	3.7	2.8	22.9	1.5	19.7	7.2	4.3	4.1	1.9	6.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean number of users	6.2	5.3	2.8	4.8	3.7	3.4	2.8	2.7	2.9	3.3	3.9	4.7	3.8
Median number of users	5.0	4.0	2.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	2.0

Source: Authors using Uganda 2012/13 UNHS survey.

Table 6.2: Disposal Method and Bathroom Type Used by Households with Children Age Six and Under, 2012/13 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Disposal method													
Skip bin	6.0	5.1	0.5	2.8	0.9	1.9	0.9	0.6	0.4	0.6	2.1	3.6	1.6
Pit	7.6	33.1	35.4	17.1	50.7	38.7	28.3	33.9	38.0	34.5	34.2	30.2	33.9
Heap	22.5	16.9	8.7	14.8	6.4	12.9	10.1	11.9	7.6	8.9	10.8	13.9	10.9
Garden	3.6	26.2	49.8	39.4	39.6	43.9	51.4	49.3	48.5	49.8	42.1	31.6	43.3
Burning	10.7	11.5	4.9	14.6	1.3	2.2	7.1	3.4	4.0	4.5	7.3	10.9	6.4
Waste vendor	48.0	6.5	0.2	10.3	1.0	0.2	1.1	0.5	1.1	0.9	2.7	9.2	3.3
Other	1.5	0.7	0.6	1.1	0.1	0.3	1.1	0.4	0.5	0.8	0.8	0.7	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Bathroom													
Inside with drainage	19.2	7.0	1.2	7.9	1.4	0.6	1.7	0.5	0.0	1.2	1.4	9.8	3.1
Inside w/o drainage	1.6	1.8	0.9	2.4	0.4	0.4	1.1	0.2	0.0	1.1	1.5	2.1	1.1
Outside with drainage	36.8	27.6	6.2	25.7	5.5	10.0	4.7	2.9	6.5	4.7	11.5	26.5	11.6
Outside w/o drainage	32.5	24.5	20.6	19.2	37.8	20.3	7.3	20.1	21.6	22.6	21.6	22.9	21.8
Makeshift	3.7	23.0	43.0	24.4	36.3	30.8	59.5	34.0	42.0	44.5	42.2	27.4	37.5
None	6.2	15.9	28.0	20.2	18.4	37.7	25.8	41.7	29.9	25.7	21.7	11.3	24.7
Other	0.0	0.1	0.2	0.2	0.2	0.3	0.0	0.7	0.0	0.1	0.0	0.1	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2012/13 UNHS survey.

Table 6.3: Improved and Unimproved Toilet Facilities Used by Households with Children Age Six and Under (%)

	Location			Region				Welfare Quintile					
	Kampala	Other Urban	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	Total
	Improved versus Unimproved Classification												
Improved	24.4	20.3	11.8	22.5	16.3	3.7	10.9	8.3	10.2	12.1	13.9	21.9	14.0
Unimproved	74.5	79.0	87.7	76.8	83.3	95.4	88.6	90.9	89.1	87.8	85.5	77.3	85.4
Other	1.2	0.7	0.6	0.7	0.4	1.0	0.5	0.8	0.7	0.2	0.7	0.8	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Improved, Shared Improved, and Unimproved Classification												
Improved	24.4	20.3	11.8	22.5	16.3	3.7	10.9	8.3	10.2	12.1	13.9	21.9	14.0
Shared improved	48.4	33.6	8.3	28.4	11.6	11.1	7.1	6.8	8.5	9.6	15.6	28.2	14.9
Unimproved	26.1	45.4	79.4	48.5	71.7	84.2	81.5	84.1	80.6	78.1	69.9	49.1	70.5
Other	1.2	0.7	0.6	0.7	0.4	1.0	0.5	0.8	0.7	0.2	0.7	0.8	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2012/13 UNHS survey.

Table 6.4: Major Reason for Incomplete Latrine/Toilet Coverage—Community Module, 2010/11 (%)

	Location			Region				Welfare Tercile			Total
	Kampala	**Other Urban**	**Rural**	**Central**	**Eastern**	**Northern**	**Western**	**T1**	**T2**	**T3**	
Low income	25.5	12.2	15.4	17.4	19.6	6.6	11.3	18.1	12.4	15.1	15.2
Negative attitude	21.1	17.8	18.0	30.1	13.0	9.1	14.5	12.7	11.4	27.4	18.1
Poor landscape or terrain	5.1	6.6	7.6	6.6	6.1	9.0	9.9	4.9	6.9	9.4	7.3
Ignorance	42.5	40.3	37.6	31.7	37.6	53.1	31.8	44.3	45.0	28.8	38.4
Poor soil type	2.0	9.3	5.4	3.2	7.0	9.9	4.7	9.1	4.4	5.3	6.1
Tenants	0.0	2.4	1.6	1.5	1.8	0.0	5.7	0.0	2.3	2.5	1.7
No land	2.0	8.7	6.3	4.4	3.4	10.2	16.9	7.1	5.4	7.1	6.6
Other	1.8	2.7	8.2	5.2	11.6	2.1	5.2	3.8	12.2	4.5	6.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2010/11 Panel survey.

3. Qualitative Fieldwork: Latrines[3]

Many communities have limited toilet facilities. In one area visited in the fieldwork, the sub-county had two toilet blocks: one for staff and the other for the public, but the second one was not in a useable state. There is also an old EcoSan (in which urine and feces are separated into two separate inlets), but it was abandoned due to poor maintenance. The health center has a pit latrine block with three stances for men and another three for women, but it is not clean and virtually unusable. The latrine does not have a ramp for people with disabilities because the entry ground is level, but given its lack of cleanliness it would be too risky to use for people with disabilities. The toilet was about to get full, yet the lengthy bureaucratic procurement process to construct another latrine had not been initiated, so that when full, no toilet would be available at this facility. At home, many households apparently did not have any latrines.

In another community there are three public toilets. One of them charges U Sh 300 per use, but it was reported that many people try to evade paying. At the public toilets, water for hand washing is available, but soap is not provided. One of the public toilets is manned by a volunteer and has a room set aside for people with disabilities. A problem mentioned was that the public toilets are locked at night. In addition, more public toilets will need to be constructed to accommodate the expanding population. The Town Council in principle has flush toilets, but there are not actually functioning because piped water is only available for two hours per day.

Another village bordering the sea has two public toilets. One was constructed by the sub-county local government, but it has seen rough use, especially at night, and is not in a useable state. Its doors were stolen. Some fishermen come and use the toilet at night. When they find it locked, they climb its sheltering wall and squat on top of it and defecate. Most of the homes near the beach do not have toilets, and residents want to use the sub-county toilet without paying. The community proposed that the sub-county deploy a guard to look after the public toilet, anticipating that this person would collect money from those using the toilet so that it could be maintained. A second toilet was constructed by the Uganda National Roads Authority for passengers of the public ferry that passengers use to cross the river Nile. This toilet has a user charge of U Sh 100 and is very clean in comparison to the one constructed by the sub-county.

In Karamoja, one of the poorest areas in the country, when households must choose between food and latrines, the latter becomes a luxury. As a resident exclaimed: “What shall we deposit in those toilets you are telling us to build in a situation where we do not have food to eat?” In one of the urban centers there are two public toilets, including one at a market where people are charged U Sh 100 per visit. But few people go there because they are not accustomed to toilet use, let alone having to pay for it. An NGO constructed a public toilet in each of the wards of the Town Center, but its contract ended and they handed over the toilets which are full.

Some areas have better latrine coverage. In one of these communities, due to the dangers of not having toilets, community members think stringent rules should be in place to ensure that all households have a toilet. Participants also agreed that if local governments were empowered to conduct effective sensitization and grass root training, non-compliance would be reduced. But in many other communities, only the well-to-do and a few centers in communities (health centers and some schools) have good latrines. Households without toilets use open defecation in bushes or toilets from neighbors. Some people have been caught digging pits but not real latrines as a disguise for authorities in order to get around strict bylaws that require households to have proper latrines. Water officers also pointed out that pit latrines are not well suited for some urban areas where space is limited to locate latrines and smell carries to neighbors. Therefore, it was suggested

[3] This section is adapted and shortened from a more detailed discussion available in Tsimpo et al. (2014).

that in those areas people build drainable toilets instead, or simple flush toilets which drain into a pit, but this does not seem to have been adopted much.

While ideally households should have private latrines, this is not always affordable for them, so that the alternative is public toilets, often with an associated fee for their use. In many communities, there is agreement that public toilets should have a care taker to ensure that they are clean. They should be located in a place convenient to everyone, and not in a place where others notice you going to the toilet. They should have running water and soap, and if possible separate rooms for women and men. Charging fees helps for maintenance and cleanliness.

Short of the use of public latrines when households do not have private latrines, other options are unfortunately inadequate. Some households that have no latrine and do not want to pay fees for using public latrines simply rely on the latrines of neighbors, which can create tension and conflict in the community. As for the option of open defecation, it has its own risks and burdens. A person has to wait until it is safest and no one sees him or her, most often at night; one has to go to a different place each time so as to confuse those who would take a keen interest in one's movements; the possibility of snake bites is real in the bushes; the shame and humiliation if one is discovered to be indulging in open defecation is a cost in the community; the fact that the bush grass needs to be bent down for one to defecate, and as he or she leaves, this grass bends upwards and smears the person as he or she goes away must also be taken into account; and above all, the disease one is spreading through open defecation are a cost for all.

In addition to cost, other factors were mentioned for the lack of latrine in many homes. Some people are too old or have physical disabilities which prevent them from digging pits, while in some areas, others were abducted, tortured, and weakened during the 20-year Lord's Resistance Army insurgency and were also not physically able to dig and construct their latrines. And while many claim not to have the money to pay those who dig latrine pits, some residents were also considered by the communities as just stubborn and negligent not to build latrines.

The issue of the responsibility of the respective responsibilities for building latrines of tenants and landlords was also raised, for example, in Kampala where respondents suggested that the Kampala Capital City Authority should close houses without toilets. Some community members proposed however that loans for building toilets for loans should be given to the poor. But many suggested that the presence of many rented tenements created a pervasive "I don't care attitude," with the area dominated by tenants seeking low transportation and housing costs and newly arrived residents said to have poor cultural attitudes towards good hygiene.

One option considered in some communities where latrines can easily sink in and collapse as result of poor soil texture is to use other materials, such as timber and bamboo for construction. This also reduced the cost of latrines in comparison to using bricks and cement. However, the risk when using timber and bamboo for construction is that such latrines cannot last long due to termites that destroy timber and wood. In some areas it was also noted that because of the soil profile, people cannot dig a pit that goes beyond six feet in depth. These complications and cost concerns lead some communities to construct grass thatched toilets with walls made of mud and wattle that may be below the required standards set by the town council.

In some areas land ownership is also an obstacle to the construction of latrines. In one of the communities without a single public toilet, focus group participants explained that no one was willing to offer land where the public latrine could be located. It was also noted that where public toilets were constructed, they were taken over by land-owners after being vandalized by the public. They then ceased being public toilets. To respondents in that community, public toilets should be free, especially those in market places since market vendors already pay taxes. Such public toilets

should be the responsibility of the town council since its mandate is to manage and safeguard cleanliness in public places. As one respondent argued: “it is useless to pay for public toilets because that money is not accounted for.” But without fees of some sort, it is very difficult to operate and maintain public toilets in a sustainable manner.

In some areas such as Amudat district, cultural factors also play a role in the lack of latrines. It is tradition that one should never see one’s spouse answering nature’s call. People take toilets as an imposition from outsiders, which they vow to resist. The Chief Administrative Officer wanted to start a campaign to at least ensure that people use hoes to burry feces. He also proposed that if latrines are constructed at those places where herdsmen water their animals, this may be a good entry point into initiating behavior change to embrace the use of toilets. But people insisted that this would violate the secrecy that is supposed to be observed. In Kangaror Cell within Amudat Town Council, community members again insisted that toilets are a foreign imposition to their culture. Even if this were not so, there are as elsewhere financial costs involved in constructing toilets, and people prioritize access to food and water first, with toilets far down their priority list. Installing public toilets with fees is not an option there.

Cultural and life style obstacles to latrines were also mentioned in Sembabule town, where the way of life of Bahima cattle keepers contributes to some households not having toilets. These are nomadic people who keep moving from place to place in search of pastures and water for their animals. Therefore constructing permanent houses and pit latrines appears to them as being a waste of time. At the same time those sentiments appear to be fading away gradually.

What can be done to encourage households to build pit latrines? Information provided to households and sensitization campaigns can help. Enforcement of fines, bylaws, and rules is another option. Some communities suggested that those without latrines in their home should be brought to the police and made to dig a toilet at a health facility or a school as a way of making them able to appreciate that they could indeed dig a latrine pit in their home if they put their mind to it. Unfortunately, while most local governments have bylaws on sanitation and water for homes and businesses, they are often not enforced, and according to respondents this is in part because politicians do not want to annoy voters and interfere with those charged with enforcing the laws. A more effective action suggested by some communities, but which may put the very poor at a disadvantage, is to make access to government programs conditional on having a toilet in one’s home. In several communities, a latrine in the home is also a condition to access government programs such as those provided by the National Agricultural Advisory Services. In one community, community members are required to sign an undertaking in writing that they will observe proper hygiene by having a toilet and adopting other good practices. This has led to high toilet coverage. But even here, many toilets may collapse and sink during the rainy season.

Finally, a note is warranted about EcoSan toilets that have been introduced in many areas. Most people do not like them for several reasons: they have to climb to enter them, they are expensive, and they are cumbersome to empty regularly. The toilets have proved difficult to manage. Households find them complicated to use because they require the separation of urine and feces. They also require a dry cleaning material such as ash. But Muslims do not like to use a toilet arrangement that does not provide for water, and in some areas it is cultural taboo to put ashes on feces. In one community members declared EcoSan toilets to be for educated people.

4. Conclusion

This chapter provided an analysis of the extent of access to adequate sanitation in Uganda using household surveys, as well as a discussion based on qualitative fieldwork of some of the challenges and constraints faced by households in benefiting from adequate sanitation, as well as some of their ongoing efforts to improve sanitation in their dwellings and their communities.

The national surveys suggest that less than one in 17 children below the age of six live in a household with a flush toilet or VIP latrine. Most households rely on pits, whether covered or not, with or without slabs, with some differences by area and quintile, but not necessarily large ones. In the bottom quintile, one in five households does not have any access to toilets and thereby relies on bushes, bags, buckets, or other means—a proportion substantially higher than in other quintiles. In terms of waste disposal, garden, pits, or heaps are used most often. Waste vendors are relied upon mostly in Kampala by close to half of households. Less than one household in 10 uses a skip bin or burning. In terms of bathrooms, makeshift structures or no bathroom at all are the most common occurrence. Outside bathrooms are used by about 40 percent of households. When using JMP definitions, only a small minority of households have access to improved sanitation. According to community leaders, ignorance, negative attitudes towards sanitation, and lack of income are to blame for incomplete latrine/toilet coverage.

Qualitative fieldwork also suggests that many communities have limited toilet facilities, with quite a few of the latrines built in a state of disrepair, especially for public facilities. Private latrines are not affordable for many. Apart from cost, other obstacles including poor soil quality, lack of land rights, tenant status, and even cultural traditions all may come in the way off better sanitation. Alternatives to public or private latrine are many but often inadequate because unsafe. When public latrines are available, there is often a consensus that in order to ensure proper maintenance, fees should be charged to those using the latrines, yet enforcing the fees requires leadership in the community that is at times lacking. The same is true for bylaws stating, especially in urban areas, that households should build their own latrines; often enforcement of these laws is weak. Information campaigns can help in building consensus at the local level of the need for better sanitation. Some communities condition access to government programs on having a proper latrine in the home. In some areas home inspections are organized to certify the presence of latrines. Even shaming has been used in some communities to incentivize households to build proper latrines. Technological alternatives such as EcoSan toilets have also been proposed, but these are often not seen favorably by households and also fall in disrepair.

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CHAPTER 7
HAND WASHING

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This chapter considers the eleventh intervention that is part of the family support package outlined in Denboba et al. (2014). Hygiene and hand washing can make a major difference in the life of children by reducing morbidity, including from diarrhea. After a brief introduction, household surveys are used to assess the extent of the practice in the population. Next, qualitative fieldwork helps in understanding the constraints faced by households and reasons why hand washing remains the exception rather than the rule. Note that separate studies for Uganda on piped water and on water and sanitation with more detailed analysis are available from the authors and listed in references.

1. Introduction

As mentioned in chapter 2, families play a critical role in addressing children's development needs. Denboba et al. (2014) identify 12 interventions and services for children and families as part of their family support package. The first seven interventions were reviewed in chapter 3, the next two in chapter 4, the tenth in chapter 5, and the eleventh in chapter 6. This chapter discusses the last intervention in the family support package, which relates to hygiene and hand washing. This is a rather important practice. As noted among others by Horton et al. (1999), adequate hygiene and hand washing may reduce the incidence of diarrhea by one third to half and thereby have a major impact on the health and nutrition status of children.

More generally, hand washing is part of sanitation, which together with safe water is essential for a range of development outcomes in the areas of child morbidity, malnutrition, and mortality (on links between on the one hand water, sanitation, hand washing, and hygiene, and on the other hand child health, see among many others Esrey et al., 1991; Esrey, 1996; Kosek et al., 2003; Jalan and Ravallion, 2003; Dillingham and Guerrant, 2004; Fay et al., 2005; Hutton and Haller, 2004; Moe and Rheingans, 2006; Zwane and Kremer, 2007; Bhutta et al., 2008; Cairncross et al., 2010; World Bank, 2010, Alderman et al., 2013; and Spears, 2013).

As for previous chapters, both survey and qualitative data are used for the analysis of the extent of the practice in the population. The chapter is structured as follows. To assess the extent to which young children and their families have access to adequate sanitation with a focus on latrines, the chapter relies first on nationally representative household surveys (section 2). The chapter then includes a discussion of some of the obstacles to access to adequate sanitation relying on qualitative fieldwork (section 3). A brief conclusion follows.

2. Household Survey Data

Hand washing is an essential part of the required hygiene to avoid the spread of disease. Unfortunately, data from the Uganda National Panel Survey (this question is not available in the 2012/13 Uganda National Household Survey) suggest that most households (85.2 percent) do not have a hand washing facility. Among those who do, for half (6.8 percent) only water is available but not soap, and for another 1 percent of the households with children age six and under, no water is available. Thus hand washing with water and soap as a facility accessible within households is available for only 7 percent of households. While some households may be able to wash hands in

other facilities, including public toilets, hand washing is clearly the exception rather than the rule, with few differences by geographic areas of levels of household welfare. Even in Kampala, less than one-fifth of households with children age six and under have a hand washing facility, and there as elsewhere, only about half of those with a facility actually have both water and soap. In the 2011 DHS (Uganda Bureau of Statistics, 2012), a larger share (29 percent) of households with or without children age six and under are documented as having a hand washing facility, but among those, a smaller proportion are documented as having water and/or soap, so that when considering not only the availability of a facility but also the availability of water, soap or both, results are of a similar order of magnitude to those of the Uganda National Household Survey.

Table 7.1: Hand Washing Facilities Used by Households with Children Age Six and Under, 2012/13 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Hand washing facility													
Yes with water only	5.3	9.7	6.1	11.2	6.8	3.1	4.4	5.2	3.9	5.5	7.4	9.8	6.8
Yes with water and soap	11.6	10.3	5.9	8.9	7.9	2.0	7.2	1.9	4.2	6.0	7.3	12.1	7.0
Yes with no water	2.6	1.1	0.8	0.8	0.7	1.3	1.2	0.6	1.2	0.7	1.1	1.0	1.0
No	80.5	79.0	87.3	79.0	84.6	93.6	87.3	92.3	90.7	87.8	84.2	77.0	85.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2012/13 UNHS survey.

3. Qualitative Fieldwork: Hand Washing[4]

The qualitative fieldwork confirms that in most areas hand washing is the exception rather than the rule. Apart from cost and availability of water or facilities to wash hands, lack of knowledge about the potential consequences of not washing hands plays a substantial role in the lack of take-up for the practice (and more so apparently than in the case of water and sanitation).

In Kalangala rural hand washing was not common. The communal toilets did not have facilities for hand washing because of lack of attendants. In Kalangala town council, community members agreed to the importance of hand washing, especially after visiting the toilet, but they also reported that a big percentage of community members did not actually practice it, and this could be due in part to a lack of information. One middle-aged woman said: "When campaigns and trainings on hand washing are done, many of the community members do not attend them, saying that these trainings are a waste of time. Even the trainings are few and are mainly concentrated on the mainland. The campaigns are rare in the far away islands." In Sembabule town hand washing was also found not to be a common practice, and those who washed their hands hardly ever used soap. Lack of knowledge and awareness of the potential consequences of not washing hands after a toilet visit was again mentioned as a probable cause.

In Bumadu in Bundibugyo district the issue of handing washing seemed to be known and understood as important to one's health. Yet again relatively few households followed the practice. One of the main reasons mentioned for not practicing hand washing was that some passers-by steal the soap and containers reserved for that. Others said that the cost of soap and containers limited the practice. In Kiboga as well, hand washing was relatively rarely practice, and the two reasons advanced by community members were ignorance (many households do not know the dangers that come with not washing hands after visiting the toilet) and scarcity of water (some households that were actively practicing hand washing gave up due to that scarcity). In addition, as woman explained it, "We used to have hand washing utensils but the children would play with them and waste the water, so we gave up with the practice." In Moyo as well it was mentioned that when soap would be available some children took it for their games.

In Kamonyi, Kisoro town, participants agreed that most people know in principle about the need to wash hands, but only a handful do it. To members, this was evidence that there is still lack of knowledge, inadequate sensitization, and negligence that require more efforts from authorities. In Ishondoro, Kisoro rural, while participants were again aware about the importance of hand washing, they did not do it systematically, now with soap because soap is reserved for critical domestic uses such as bathing and washing clothes and utensils. Yet others refuted this idea, saying that hand washing with soap is not put into practice because of people's negligence as according to them there are always some small pieces of soap left after washing and bathing in every home. Participants proposed more home-based training and sensitization campaigns so hand washing gains acceptability and becomes an integral aspect of domestic hygiene.

The same was observed in Kijjura, Masindi urban, where despite awareness of hand washing, the practice had not yet been adopted widely. Whenever there is a cholera outbreak members practice it for a while, but the practice ends soon thereafter. In addition, for those who try to wash their hands at the facility near the public latrine, soap is often missing because it has been stolen. Even metallic jerry cans are stolen by those involved in scrap collection and sale. The issue of the soap and jerry cans being stolen was also mentioned in Kagango. Others noted that they were constrained by the little money they had and could not afford to buy the containers where water for hand washing can be kept. But for this case, it was almost unanimously agreed that very

[4] This section is reproduced with minor changes from Tsimpo et al. (2014).

few households could justifiably cite this as their real hindrance in that community. In other communities, however, cost may be a real issue. In northern Uganda in Paloga, Lamwo district, the lack of hand washing was blamed on cost as money was lacking to buy water containers and soap.

In Kyaimba, Kiboga district, some people mentioned that "people are disrespectful to leaders whose messages champion hand washing." There is a need for more intensive sensitization in order for the population to adopt this culture. In Apac district as well, the community views on hand washing underlined soap as expensive to provide regularly for this purpose. But they also noted as a key underlying constraint the fact that people in their community had not been brought up in the culture of hand washing right in the homes where they are raised. In their view, therefore, it still required massive sensitization to be adopted.

In Moyo disaster presented opportunity for behavior change with respect of hand washing. The Deputy Chief Administrative Officer noted that a recent outbreak of cholera led to four deaths and 142 cases of admission to hospital. A massive mobilization of community members on hand washing was carried. As a result, by the time of the fieldwork all district and sub-county offices had a hand washing facility at the entrance, complete with soap and *jik* (a detergent). Compulsory hand washing had also been implemented at the River Nile crossing points for all passengers who use the ferry to cross. But even there it was observed that the challenge of hand washing is that it needed to be learnt when young, rather than adopting the practice only when an outbreak of disease erupts. All the same, fear of the disease significantly helped to make people adopt the practice, since the danger was seen as very real. It was such a matter of life and death that people decided to wash their hands before they entered their houses after being away for some time, so as to avoid bringing in the cholera from wherever they would have travelled.

The issue of leadership was also emphasized as critical in Moyo. At an inter-district meeting held in Nebbi in May 2014, all leaders committed themselves to ensuring that all homes in the districts of West Nile would have VIP toilets with clean surroundings and to enforcing hand washing using small jerry cans. This was in recognition and response to the fact that many people had toilets, yet sanitation-related and water-borne diseases continued to rise. The biggest challenge on hand washing was said to be the fact that it had not been inculcated right from childhood. Availability of water and affordability of soap were also noted as occasional constraints. An additional constraint noted there was the fact that responsibility in the home is not allocated to ensure that regular refills of water at the hand washing facility whenever it is used up. So when someone finds the water used up, he or she walks away without washing their hands.

In Bugiri town council, tip taps for hand washing exist, but it was remarked that many were for show for the health assistants who inspect homes. After they leave, no one bothers to effectively use the hand washing facilities. The general attitude is that hand washing is not a very important aspect of hygiene. Again children were noted to divert the tip taps for their games. It was also observed that some schools could not afford decent hand washing due to the large number of students. In Bugiri rural, it was noted that Muslims had permanent small jerry cans for hand washing, but they did not necessarily use soap, which led to the comment that jerry cans alone may transmit germs from the toilets when soap is not used.

Overall, apart from issues of cost and stolen soaps, it is clear that more sensitization and leadership is needed to achieve higher rates of hand washing in the communities. As a district official summarized it very well, "Local leaders have campaigned, but there is poor response and adoption, because hand washing is viewed as a very strange practice to the local culture in which people have not been exposed to it since childhood. In ordinary circumstances, soap is expensive

to community members and water is quite scarce. Most significantly, local leaders themselves are not visibly seen practicing hand washing, even at the high district level. Yet people are like children, who copy what they see. You cannot simply continue telling people about what they should do but do not see you doing, and hope to have them buy your idea."

4. Conclusion

This chapter provided an analysis of the extent to which hand washing has been adopted by the population. An analysis has been provided using both household surveys and qualitative fieldwork of some of the challenges and constraints faced by households in washing hands.

The available surveys suggest that most households (85.2 percent) do not have a hand washing facility. Among those who do, for half only water or soap but not both is available. As a result, hand washing with water and soap is available for only 7 percent of households. While households may be able to wash hands in other facilities, hand washing is clearly the exception rather than the rule, with few differences by geographic areas of levels of household welfare.

The qualitative fieldwork confirms that hand washing remains the exception as opposed to the rule. As for water and sanitation, the issue of cost is again prevalent, due to the cost of buying containers and soap—some of which may be stolen at public facilities that do not have tight oversight. But in the specific case of hand washing, and more so than for water and sanitation, beyond the issue of cost a lack of knowledge about the benefits of hand washing seems to be a major issue. In one community, the threat of a cholera outbreak led members to wash hands for a while, but the practice dried up soon after. Overall, as was the case for the analysis of access to safe water and sanitation, leadership and perseverance at the local level are both required for implementing solutions that are often context- and community-specific.

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PART II
OTHER PACKAGES

CHAPTER 8
PREGNANCY AND BIRTH

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This chapter considers a set of six interventions or services that are part of the pregnancy and birth packages outlined in Denboba et al. (2014). The interventions are meant to ensure the child's survival and proper growth and development for the first six months of life. After a brief introduction, household surveys are used to assess the level of coverage in the population of the various interventions. The next section provides results from qualitative fieldwork on some of the constraints faced by households in benefiting from some of the interventions, with a focus on birth deliveries attended by skilled personnel.

1. Introduction

The first package of essential ECD interventions or services suggested by Denboba et al. (2014) consisted of 12 interventions providing support to families and documented in chapters 3 through 7 of this study. The second and third packages of essential services are the pregnancy and birth packages. The pregnancy package covers the time from conception to birth, while the birth package covers the time from birth to six months of age. Each of the two packages includes three main interventions. The combined six interventions, numbered 13 to 18, are (13) antenatal visits; (14) iron and folic acid for pregnant mothers; (15) counseling on adequate diet during pregnancy; (16) attended delivery; (17) birth registration; and (18) exclusive breastfeeding.

As reviewed in Denboba et al. (2014), these various interventions tend to have high benefits and thereby also high returns. Examples of such benefits/returns are as follows:

- Antenatal visits: These visits provide opportunities for healthcare providers to deliver a package of services including screening tests, counseling on reduced workload, treatment for identified complications, and behavior-change communication to increase women's skills in identifying danger signs and potential complications. UNICEF and WHO recommend a minimum of four antenatal care visits during pregnancy. Parenting education for expectant mothers is also important to train future mothers with key parenting skills to improve outcomes for newborns. Antenatal visits reduce the risk of maternal and neonatal death (UNICEF, 2009).
- Iron and folic acid for pregnant mothers: Nearly one-quarter of maternal deaths are caused by hemorrhages, which are closely linked to anemia during pregnancy (Black et al., 2013). Iron and folic acid supplementation for pregnant women can reduce anemia as well as the risk of low birthweight babies.
- Counseling on adequate diets for pregnant mothers: Undernutrition during pregnancy can affect fetal growth and development. An estimated 800,000 newborn deaths each year can be attributed to the increased risk associated with fetal growth restriction (Black et al., 2013). Counseling women on healthy diets and lifestyles during pregnancy can help to ensure that they have an adequate diet, including nutrient-rich food.

- Skilled attendance at delivery: Most of the direct causes of maternal mortality related to obstetric complications can be addressed if skilled health personnel are present during delivery and referral facilities are available. Skilled attended delivery can address the risks of birth defects and maternal mortality.
- Birth registration: Worldwide, as many as one in three children below the age of five are not currently registered (UNICEF, 2012). Birth registration is a first step to reach children with the services they need to fully develop. Some form of birth registration is generally required for children to obtain a birth certificate and access to services, protection, and opportunities throughout life.
- Exclusive breastfeeding: Following early initiation of breastfeeding within one hour of birth, exclusive breastfeeding for the first six months contributes to a child's short and long-term health and development through the provision of rich nutritional inputs and positive socio-emotional interaction between mother and child (Nelson, 2007), as well as avoiding diseases caused by contact with contaminated food or water. Promotion of exclusive breastfeeding is one of the most promising interventions for improving child survival in the first six months of life.

To what extent do young children and their families benefit from these interventions in Uganda? To answer this question, this chapter relies on nationally representative household surveys to assess the level of coverage of these interventions in the population (section 2). The chapter also includes a discussion of some of the obstacles to better coverage, relying on qualitative fieldwork with a focus on birth deliveries (section 3). A brief conclusion follows.

2. Household Survey Data

` Of the six interventions in the pregnancy and birth packages, information is available in the Uganda National and Panel Household Surveys used for this study for three: attended delivery, birth registration, and breastfeeding. In addition, information is available in the 2011 DHS for antenatal care as well as for iron for pregnant mothers. Summary tables from the DHS report on those two interventions are reported as well.

Table 8.1, which is reproduced from Uganda Bureau of Statistics (2012), suggests that most women receive antenatal care. Only 4.2 percent do not, but it is not clear that women benefit from four visits as recommended by WHO. Furthermore, antenatal care is typically received from a nurse or midwife or in some cases from a doctor. Table 8.2, also reproduced from the DHS report, suggests that three in four pregnant women received iron tablets (the additional information in the table from the DHS report has been kept but does not refer to specific interventions identified in the pregnancy package).

While antenatal care is near universal, despite interventions to reduce the cost for households of deliveries in health facilities, a substantial number of deliveries are still done at home, especially in rural areas and among the poor as shown in table 8.3. According to the 2011/12 Uganda National Panel Survey, 25 percent of deliveries took place at home, but this share is below the levels observed in the previous two years where the proportion was above one third. About half of the deliveries take place in government hospitals, health centers, and health posts. One in five deliveries takes place in private healthcare facilities. The rest (6.6 percent) take place in the home of traditional birth attendants or in other homes. Overall, about one-third of deliveries are not attended by professional medical staff according to the Uganda National Panel Survey. The proportion, however, is much higher in rural areas, where half of all deliveries take place in one's

home, a traditional birth attendant's home or another home. For the bottom quintile of welfare, the proportion tends to be even higher.

When considering who assisted deliveries, as shown in table 8.4 nurses and midwifes provided assistance in almost two-thirds (65.9 percent) of deliveries in 2011/12. Because multiple options are allowed in the questionnaire, the share of other medical personnel providing assistance is high for other categories (9.9 percent for doctors, 3 percent for medical assistants and clinical officers, and 10.9 percent for nursing aides). But overall, it seems legitimate to suggest that about two-thirds of deliveries were attended by qualified medical personnel in the traditional sense. Note that in the 2011 DHS (Uganda Bureau of Statistics, 2012), the proportion is lower, at 57.4 percent. In the Uganda National Panel Survey, in 15.5 percent of cases, traditional birth attendants provided assistance, with relative and friends also playing a role. As expected, medically assisted deliveries are least likely in rural areas and among the poor.

The next intervention relates to birth certificates and registration. As shown at the bottom of table 8.4, birth certificates are lacking in most cases, with only 15.1 percent of children having a certificate (the rates are shown by region in figure 8.1). For those with a certificate, the short certificate is by far the most common. Even in Kampala, only one in five newborn has a birth certificate. In the bottom quintile, one in 10 does. These results are fairly similar to those reported in the 2011 DHS (Uganda Bureau of Statistics, 2012), where 17.7 percent of children under the age of five are reported to have a birth certificate (in addition, in that survey, 12.2 percent of children under five are reported to be registered but have no birth certificate).

Figure 8.1: Share of Children with a Birth Certificate (%)

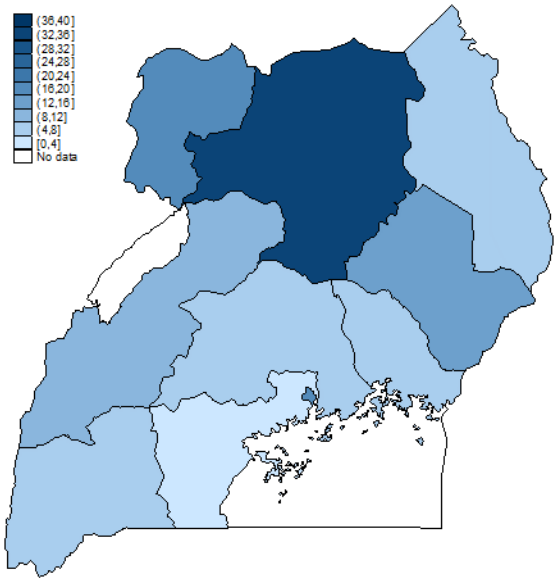

Table 8.5 provides data on breastfeeding, also from the Uganda National Panel Survey. The recommendation is that breastfeeding should be initiated within one hour of birth. The survey asked whether mothers breastfed their children with the first six hours of birth, and this was the case in 81.9 percent of cases in 2011/12, with relatively few differences between geographic areas and by welfare quintile. Ideally infants should be exclusive breastfed for the first six months of their life. The data do not permit assessing whether this is the case or not, but clearly breastfeeding is almost universal, although on average it lasts for about 3 to 14 months, while the recommendation amount of time for (partial) breastfeeding is typically higher.

Table 8.1: Antenatal Care, 2011 DHS (%)

	Antenatal Care Provider								
	Doctor	Nurse or Midwife	Medical Assistant, Clinical Officer	Traditional Birth Attendant	Other	Missing	No ANC	Total	Percentage Receiving Antenatal Care from a Skilled Provider
Mother's age at birth									
<20	11.5	80.5	0.9	0.9	0.8	0.0	5.3	100.0	93.0
20–34	12.2	82.2	1.7	0.4	0.2	0.1	3.2	100.0	96.1
35–49	12.8	77.1	1.6	0.9	0.2	0.1	7.2	100.0	91.5
Residence									
Urban	22.4	74.4	0.6	0.1	0.1	0.0	2.4	100.0	97.4
Rural	10.3	82.4	1.7	0.7	0.3	0.1	4.6	100.0	94.4
Region									
Kampala	27.1	70.1	0.8	0.1	0.0	0.0	1.9	100.0	98.0
Central 1	20.0	66.5	1.3	1.8	0.9	0.0	9.6	100.0	87.8
Central 2	19.3	73.9	0.9	1.2	0.6	0.0	4.1	100.0	94.1
East Central	9.2	80.9	1.1	0.5	0.6	0.5	7.2	100.0	91.2
Eastern	7.3	85.1	1.8	0.0	0.2	0.0	5.5	100.0	94.3
Karamoja	1.9	93.5	1.2	0.5	0.4	0.0	2.5	100.0	96.6
North	8.7	89.3	0.7	0.1	0.0	0.0	1.2	100.0	98.7
West Nile	5.1	91.7	0.8	0.0	0.5	0.2	1.7	100.0	97.6
Western	11.6	79.6	4.6	0.4	0.0	0.0	3.7	100.0	95.9
Southwest	10.2	87.3	0.2	1.0	0.0	0.0	1.4	100.0	97.6
Education									
No education	8.4	82.8	1.1	1.3	0.6	0.0	5.8	100.0	92.3
Primary	10.5	82.4	1.9	0.5	0.3	0.1	4.3	100.0	94.8
Secondary +	19.2	76.5	0.9	0.2	0.2	0.0	3.1	100.0	96.6
Wealth quintile									
Lowest	6.3	86.0	1.6	0.3	0.1	0.0	5.7	100.0	93.9
Second	7.5	85.3	1.7	0.8	0.6	0.0	4.1	100.0	94.5
Middle	10.5	81.5	2.3	0.6	0.4	0.2	4.5	100.0	94.3
Fourth	13.2	80.0	1.2	0.9	0.4	0.1	4.0	100.0	94.5
Highest	23.8	72.3	1.0	0.2	0.0	0.0	2.7	100.0	97.1
Total	12.2	81.1	1.6	0.6	0.3	0.1	4.2	100.0	94.9

Source: 2011 DHS (Uganda Bureau of Statistics, 2012).

Note: Percent distribution of women age 15–49 who had a live birth in the five years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent birth and the percentage receiving antenatal are from a skilled provider for the most recent birth, according to background characteristics.

Table 8.2: Components of Antenatal Care, 2011 DHS (%)

Background Characteristic	Among Women with a Live Birth (Past Five Years), Percentage Who During Pregnancy of Last Birth		Among Women Who Received Antenatal Care for Their Most Recent Birth in the Past Five Years, Percentage with Selected Services						
	Took Iron Tablets or Syrup	Took Intestinal Parasite Drugs	Number of Women with a Live Birth in the Past Five Years	Informed of Signs of Pregnancy Complications	Weighed	Blood Pressure Measured	Urine Sample Taken	Blood Sample Taken	Number of Women with ANC for Their Most Recent Birth
Mother's age at birth									
<20	74.4	51.7	703	51.0	77.5	55.3	23.8	82.8	666
20–34	76.5	50.9	3,412	50.2	78.4	59.2	22.5	81.1	3,300
35–49	69.8	44.5	853	52.4	82.3	62.0	20.1	76.0	790
Residence									
Urban	83.1	53.7	805	61.6	87.1	81.7	42.7	91.6	785
Rural	73.5	49.2	4,163	48.5	77.3	54.7	18.2	78.3	3,971
Region									
Kampala	83.9	51.5	358	68.4	92.5	91.5	56.0	95.2	352
Central 1	69.8	43.9	504	40.7	73.2	59.7	25.6	75.2	455
Central 2	77.5	51.2	507	33.9	76.6	59.0	22.3	78.3	486
East Central	69.6	37.6	532	32.2	74.4	48.6	13.0	73.0	491
Eastern	76.8	57.5	794	45.1	72.2	48.9	20.6	83.6	750
Karamoja	90.8	43.1	186	76.4	96.8	88.7	9.5	85.4	182
North	81.3	51.2	445	62.6	88.7	63.8	20.7	89.7	440
West Nile	86.4	61.9	299	60.9	91.9	75.0	11.9	68.3	294
Western	73.3	51.7	739	61.1	80.6	53.5	22.7	80.9	712
Southwest	61.7	46.7	604	49.7	68.0	47.7	19.3	77.3	595
Education									
No education	70.4	43.7	713	48.6	79.6	55.0	15.4	69.0	671
Primary	73.5	49.7	3,079	48.7	75.8	54.5	18.2	79.8	2,945
Secondary +	82.0	54.2	1,177	57.1	86.4	73.6	36.9	89.0	1,141
Wealth quintile									
Lowest	75.4	48.4	1,055	53.0	80.7	57.2	16.0	76.1	995
Second	72.5	48.3	1,026	48.9	74.9	48.5	16.3	76.7	984
Middle	71.0	47.1	963	45.9	73.9	51.0	17.6	78.3	919
Fourth	74.6	51.3	897	46.2	78.1	58.6	21.5	81.0	859
Highest	81.4	54.5	1,027	58.3	86.4	79.6	39.3	90.2	1,000
Total	75.1	49.9	4,968	50.7	78.9	59.1	22.3	80.5	4,756

Source: 2011 DHS (Uganda Bureau of Statistics, 2012).

Table 8.3: Place of Delivery, Uganda Panel (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
2009/10													
Your home	2.5	12.8	40.4	11.8	36.0	53.3	45.5	49.4	46.4	38.3	28.3	11.7	35.0
TBA's home	0.0	2.3	5.5	9.5	2.6	0.4	5.0	2.7	3.9	5.7	6.6	4.9	4.8
Other home	0.0	0.0	1.4	0.1	1.8	2.6	0.7	3.3	0.4	0.2	0.9	1.5	1.2
Govt. hospital	59.8	43.5	13.0	29.3	20.0	13.0	12.2	13.6	13.8	13.8	25.1	30.7	19.3
Govt. health center	12.6	14.7	24.6	18.5	25.3	25.8	23.0	24.9	19.5	28.6	21.0	19.9	22.8
Govt. health post	-	-	-	-	-	-	-	-	-	-	-	-	-
Other public	1.1	0.7	0.2	0.7	0.5	0.0	0.0	0.4	0.0	0.6	0.3	0.4	0.3
Private hospital/clinic	22.8	26.0	12.8	27.3	11.3	4.3	12.2	3.0	15.2	11.0	16.9	27.6	14.8
Other private med.	1.2	0.0	1.1	1.1	1.7	0.0	1.0	1.8	0.7	0.8	0.2	1.6	1.0
Other public	0.0	0.0	1.1	1.6	0.8	0.7	0.3	1.0	0.3	1.1	0.5	1.7	0.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2010/11													
Your home	2.8	8.3	40.3	11.5	41.1	52.7	35.7	53.1	37.0	41.7	20.3	13.0	35.3
TBA's home	0.0	0.3	7.1	10.6	5.5	2.4	5.6	4.8	8.6	6.7	7.4	0.7	6.1
Other home	0.0	1.2	1.4	0.6	1.8	1.3	1.5	0.8	2.2	0.6	1.8	1.2	1.3
Govt. hospital	55.4	47.3	8.9	26.6	9.3	10.9	13.2	7.6	7.1	9.3	20.8	42.7	15.0
Govt. health center	10.0	16.9	25.7	19.8	28.4	24.1	22.8	23.9	31.2	23.5	24.0	12.5	24.0
Govt. health post	0.0	0.2	1.2	0.7	0.9	2.2	0.1	1.3	0.6	0.8	1.5	0.7	1.0
Other public	-	-	-	-	-	-	-	-	-	-	-	-	-
Private hospital/clinic	31.4	25.0	13.6	29.2	11.3	6.0	16.7	8.0	10.2	16.4	21.2	28.6	15.6
Other private med.	0.4	0.8	1.6	1.1	1.7	0.0	3.4	0.0	3.1	0.1	3.1	0.7	1.4
Other public	0.0	0.0	0.4	0.0	0.0	0.4	1.1	0.5	0.0	0.9	0.0	0.0	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2011/12													
Your home	2.9	7.5	28.5	7.5	25.9	38.8	28.0						25.0
TBA's home	0.0	0.0	5.0	8.7	3.3	0.0	5.1						4.2
Other home	1.6	2.2	2.5	3.1	2.1	4.2	0.0						2.4
Govt. hospital	63.7	59.3	15.9	28.4	25.0	13.4	24.3						22.9
Govt. health center	4.3	19.3	28.3	22.1	23.2	36.3	25.4						26.5
Govt. health post	0.8	0.1	0.3	0.3	0.1	0.1	0.7						0.3
Other public													
Private hospital/clinic	26.1	10.9	17.6	27.1	19.3	6.9	12.7						16.9
Other private med.	0.0	0.7	2.0	2.7	1.1	0.4	3.4						1.8
Other public	0.6	0.0	0.1	0.1	0.0	0.0	0.5						0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0						100.0

Source: Authors using Uganda 2009/10, 2010/11 and 2011/12 UNPS surveys.

Table 8.4: Assistance with Delivery and Birth Certificate, Uganda Panel (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
2010/11													
Doctor	25.7	18.2	4.5	12.9	3.1	3.8	9.4	5.5	2.2	4.1	7.0	22.3	7.1
Nurse/midwife	71.2	72.8	43.4	64.8	44.1	37.8	44.0	33.5	44.4	42.6	63.4	64.8	47.9
Medical/clinical officer	8.1	5.2	2.7	5.9	1.2	2.0	4.5	4.0	2.1	2.6	4.8	3.2	3.3
Nursing aide	7.8	13.4	5.8	7.8	5.7	7.1	5.9	5.3	9.5	3.0	6.1	11.1	6.7
Traditional birth attendant	0.0	6.1	20.5	11.7	16.6	30.4	12.3	26.1	20.8	18.0	13.4	5.7	17.9
Relative/friend	6.8	18.3	31.5	15.4	22.2	43.6	37.4	32.3	32.4	34.9	19.9	19.4	28.7
No one	0.0	2.7	6.1	1.4	12.7	4.5	1.4	6.0	7.2	6.9	3.1	2.4	5.4
Other	0.3	0.7	1.0	0.4	1.7	1.0	0.3	1.9	1.3	0.3	0.2	0.5	0.9
2011/12													
Doctor	50.5	18.7	7.3	20.4	2.3	9.2	10.2						9.9
Nurse/midwife	94.3	87.1	61.6	78.6	66.9	54.9	62.6						65.9
Medical/clinical officer	1.2	3.6	2.9	6.7	1.7	2.0	1.9						3.0
Nursing aide	17.0	26.4	8.2	5.5	10.1	17.5	10.6						10.9
Traditional birth attendant	0.0	2.7	18.0	10.1	11.1	26.8	15.3						15.5
Relative/friend	33.6	35.6	34.5	23.8	37.9	46.2	28.8						34.7
No one	0.0	1.7	2.2	2.9	2.6	1.0	1.6						2.1
Other	9.5	0.1	1.1	1.0	2.9	0.0	0.0						1.2
Birth certificate, 2012/13													
Yes, long certificate	10.3	3.3	2.4	2.4	3.8	1.8	2.9	2.0	2.3	2.3	3.2	4.1	2.8
Yes, short certificate	12.6	13.7	9.9	5.5	8.5	21.3	9.1	8.5	9.8	11.5	9.6	13.6	10.7
No	74.2	80.1	86.4	89.1	87.3	75.8	85.9	89.1	86.6	85.1	85.4	79.3	84.9
Don't know	2.9	2.8	1.3	3.0	0.4	1.1	2.1	0.4	1.4	1.1	1.8	3.0	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2010/11 and 2011/12 UNPS surveys. Data from 2009/10 not included because questions were asked differently.
Note: Birth certificate information is available for children under eight.

Table 8.5: Breastfeeding Practices, 2009/12 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Child ever breastfed													
2009/10	100.0	96.5	98.5	97.5	98.7	97.5	99.1	98.0	98.4	100.0	98.5	95.9	98.2
2010/11	97.8	97.6	99.1	98.0	99.2	100.0	98.0	98.6	98.2	99.4	99.5	98.5	98.9
2011/12	99.5	98.9	98.0	98.3	98.9	96.9	98.1						98.1
Child breastfed now													
2009/10	47.3	62.6	69.5	60.9	69.3	91.4	57.3	78.4	66.7	60.1	67.2	64.1	67.5
2010/11	65.0	71.0	80.8	70.8	75.7	88.8	83.6	75.2	81.9	89.4	79.0	66.1	79.2
2011/12	82.3	78.7	79.6	71.8	80.7	84.7	80.0						79.6
Months of breastfeeding													
Mean, 2009/10	13.2	11.9	14.7	13.9	13.4	15.1	14.7	15.9	15.2	13.1	13.9	13.3	14.2
Median, 2009/10	14.0	12.0	16.0	14.0	12.0	16.0	16.0	18.0	16.0	14.0	14.0	12.0	14.0
Mean, 2010/11	11.1	8.1	14.3	10.8	14.0	16.4	14.6	14.4	14.2	13.6	12.9	11.6	13.3
Median, 2010/11	10.0	6.0	15.0	10.0	15.0	18.0	16.0	16.0	14.0	12.0	13.0	10.0	14.0
Mean, 2011/12	16.6	11.0	13.7	12.1	14.1	15.3	12.5						13.4
Median, 2011/12	18.0	12.0	14.0	12.0	15.0	17.0	12.0						13.0
When started, 2009/10													
0–6 hrs	76.9	83.7	83.2	84.0	84.5	73.6	86.7	85.7	79.7	82.4	81.9	85.6	83.0
More than 6hrs	17.8	13.6	13.8	11.9	12.7	24.6	10.4	11.6	17.5	15.8	12.7	12.3	14.0
Don't know	5.3	2.7	3.0	4.2	2.8	1.9	2.9	2.7	2.8	1.9	5.4	2.2	3.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
When started, 2010/11													
0–6 hrs	96.3	82.4	82.6	86.9	85.9	76.4	83.0	83.0	82.6	85.5	80.9	83.5	83.1
More than 6 hrs	2.7	12.7	14.3	10.8	9.6	20.9	13.9	12.5	14.3	11.3	17.5	13.0	13.7
Don't know	1.0	4.9	3.1	2.3	4.5	2.7	3.1	4.6	3.1	3.2	1.6	3.5	3.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
When started, 2011/12													
0–6 hrs	89.1	93.4	79.9	83.2	80.1	86.0	78.7						81.9
More than 6 hrs	8.6	6.1	17.6	14.7	19.8	11.8	15.5						15.9
Don't know	2.2	0.5	2.5	2.1	0.2	2.2	5.8						2.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0						100.0

Source: Authors using Uganda 2009/10, 2010/11, and 2011/12 UNPS surveys.

3. Qualitative Fieldwork: Birth Deliveries

Despite government incentives to increase the share of assisted deliveries a substantial minority of deliveries still occur outside health facilities, especially in rural areas and among the poor. As an attendant at a health center in Gomba district explained, "Many expecting mothers do come for antenatal care, almost at the 100 percent level, but they do not all come to deliver at the center." Questions were asked to informants and focus groups in the qualitative fieldwork for healthcare conducted in 2013 on why such practices persist. Key results are provided in this section, first in terms of general constraints to birth deliveries in health centers, and next with respect to the Maama Kits initiative launched by the government about a decade ago.

3.1. Constraints to Deliveries in Health Centers

Some of the factors keeping mothers from delivering at government health facilities have to do with the state of the facilities in terms of infrastructure, equipment, and availability of water and electricity. This was mentioned in chapter 4. Shortage of basic utilities leads attendants to bring their own water to health centers to clean labor wards after delivery. In many health centers maternity wards are under construction and any available space, sometimes a store, is converted into a provisional labor suite with limited privacy and convenience. From level III and above, units are supposed to have maternity wards, but at the time of the study many were under construction or, if completed, were not yet equipped. In Bukomansimbi district, women noted that the maternity ward was still under construction. Labor took place in a one-room suite with no privacy. Even some level IV centers seemed not to have functional operating theatres to be able to attend to mothers facing complications and requiring a caesarean. In one center, the maternity ward was under construction, but the process had dragged on for four years. In Napak district the maternity ward was in place but was not equipped.

The story was similar for Kween district, where the level III center did not have a maternity ward and therefore used an improvised delivery suite that was originally a small store. In another center, women complained that the space for checking on pregnant mothers was very small and they felt congested in it. The labor ward was also small. Several mothers could come for delivery, but this led to lack of privacy that made some mothers prefer TBAs. As they did not know the institutional hierarchy and staffing stipulations of health centers, women complained that there was no medical doctor at the center and no ambulance for quick referral of patients to Lira hospital. With the creation of new districts, some health centers II were elevated to category III but without a corresponding improvement in infrastructure. The men in Bukomansimbi noted that Mirambi Health Center had limited space for all the services, as the improvised maternity ward doubles as the receiving room for antenatal cases. The injection room was so open that one was easily seen when receiving an injection. The midwife explained that "Sometimes we receive a mother in labor while we are using the maternity room as the antenatal room, and then we have to shift outside to attend to the mother." In Namayingo, the health center III also did not have an in-patient ward to admit the sick and had to refer cases to Buyinja Health Center IV or Bugiri Referral Hospital, which already tend to be overwhelmed by high numbers of patients.

In Kanungu, some deliveries were done at the center, but again there was no appropriate labor ward, and the lack of privacy was raised as a disincentive to expectant mothers to go there. Lack of accommodation for staff also implied that they were not available at night for expectant mothers who would come for delivery. In Yumbe, like in many other districts, the center had no drug store in part because of a lack of space, so that drugs were stored at the hospital.

In some areas cultural issues also play a large role, making it unappealing for mothers to deliver in health units. Such issues were brought out in Kaabong, Napak, and Kween districts especially. In Kween district, mothers explained that the practice of female genital mutilation has pushed them away from the health center due to the different cultural backgrounds of some of the midwives who at times mocked their anatomical features. They specifically called for a policy of posting midwives from their tribe who would not ridicule or disrespect their cultural practices. This is also why women in Kween tend to trust TBAs more due to their long presence in the community, availability, and positive attitude. They insist that the TBAs know best what is to be done to a Sabiny woman in labor. They also believed that TBAs are vested with mysterious powers that ensure safe deliveries. In Gomba district, men also directly stated that they had no confidence in young midwives who were attending to the delivering of their wives and preferred TBAs who were considered more experienced.

In Napak district an HMIS focal person underscored the strong cultural attachments of the people in Karamoja region to TBAs, and the fear that delivering in health centers may lead them to get diseases because they consider the facilities to be dirty, thereby making them prone to diseases (some untended labor wards do show visible blood stains). Still in Napak, the district health officer noted that strong social-cultural beliefs in TBAs are responsible for stopping mothers from delivering in government health centers, but he also noted that the at times harsh conduct of midwives traumatizes mothers, adversely affecting deliveries. The issue of age as cultural attribute associated with safety also arose in Napak, where mothers believe that TBAs have more experience than midwives delivering babies. The cost incurred at the TBA's place was considered very affordable and was not demanded at time of service in cash. In Napak, this cost could at times be paid by the community in the case that the husband is not able to. Another advantage of TBAs is their availability; by contrast, in Namayingo, men tend not to escort their wives to health centers for antenatal care or delivery because of the perception that a truly Samia man is not culturally allowed to be seen helping (or seeming submissive to) a woman. He must portray a strong persona and keep out of domains considered those of women.

In Yumbe, one sub-county passed a bylaw that any expectant mother who delivers at a TBA's place will be fined. This was meant to encourage delivery at the health center. Yet the biggest factor in low deliveries despite high antenatal attendance in Yumbe is due to the widespread belief that if a mother delivers on her own, unsupervised by anybody, this is proof that she is a very strong woman. In such cases, legal fines may well further alienate centers from patients. Rather than outlawing TBAs, given their centrality, it may be wiser to find ways to give them more training so that if referral is needed, this can be detected and communicated to health centers. In some districts TBAs are trained by NGOs (and even given certificates) so that the mothers trust them for their competence with cultural appreciation for their role deeply anchored.

3.2. Maama Kits

In an effort to reduce maternal mortality and morbidity, the Ministry of Health launched in 2003 the Maama Kit initiative as a cost-effective way to ensure that deliveries are conducted in a clean environment. The kit consists of various childbirth-related items: plastic sheet, sterile gloves, razor blades, cord ligature, cotton wool (gauze pad), sanitary pads, tetracycline, soap, and a child health card. Each kit also includes instruction sheets in English and Luganda. The kit is sealed so as to remain sterile until used. At the launch of the kit, two-thirds of deliveries took place at home with support from TBAs or relatives. When women visited health centers, they often had to buy the items included in the kit, and the absence of these items increased health risks substantially for

all parties involved—mothers, newborns, and midwives. In some cases expectant mothers were even required to come to maternity wards with their own mattress and linen. The introduction of the free Maama kits was meant to reduce the cost of a delivery at public health centers.

Success in the implementation of the kits program has been limited, with the qualitative fieldwork pointing to some of the reasons why. Clearly, the success or lack thereof of the kits depends in part on the overall context of birth deliveries in public health centers discussed earlier. As pointed out by a staff member from the Kapedo Health Center III in Kaabong district, incentives to increase deliveries in health centers must also include availability and presence of qualified staff, especially midwives, and better and more spacious premises for maternity wards to address privacy concerns. A clean environment and possibly the availability of food apart from Maama kits could attract more mothers to deliver at health centers.

An administrator at Yumbe hospital observed that the kits are often out of stock, given the high numbers of mothers (3,000 per month) visiting the hospital. Women in Kaabong also suggested that kits are often out of stock at their health center, in which case they have to buy the items elsewhere, at a cost of possibly up to U Sh 50,000. In some cases kits may be considered as inadequate, which could lead women to have to buy materials elsewhere. Women in Lamwo district observed that international agencies (AVSI and IRC) used to provide kits in the past with two towels, two bed sheets, a large bar of Dettol soap, macintosh, more cotton wool, more gloves, longer cord of string, and a packet of razor blades. The government kit is considered less adequate.

In Kween district, some mothers at first claimed that they had not heard about the kits. Later, on probing and after being given examples of what the kits include, some realized that they had used them as they had received them from the midwives. But even then it was noted that this had not led the women to deliver in the health facilities because many times they facilities were out of supply, which is also why few mothers knew about the kits. The mothers claimed that during antenatal briefings, no education is given to them, not even about drugs and the babies they are to deliver; the only information they get is when to come for the next visit. A similar situation was reported in Kwanyiy Health Center III where the provision of free kits did not persuade mothers to deliver in the health center due to lack of supplies and knowledge.

Finally, in some areas cultural factors also play a role in the lack of usage of the kits. In Napak district, the district health officer also noted that the kits have not increased the percentage of deliveries at the health units. The kits are provided at the third or fourth visit to mothers, but they don't take the kits seriously because it is a taboo to prepare themselves with anything like these kits. Culturally in Ngakarimong as well women are not supposed to buy or prepare anything for delivery, not even cotton wool or cloth pads that can easily be available, until the child is born, seen, and determined to be alive. In such circumstances, even if kits are provided at the third or fourth visit of the mothers, they may well not be used. The same was again observed in Kole and Kween districts where preparations are taken as bad omens for the outcome of the delivery.

4. Conclusion

This chapter provided a survey-based analysis of the coverage of essential interventions that are part of the pregnancy and birth packages outlined by Denboba et al. (2014). Qualitative fieldwork was also provided on challenges and constraints faced by households in those areas.

The available surveys suggest that one in three deliveries are still done at home, or at a TBA's home or another home, with the proportion being higher in rural areas and among the poor. About half of the deliveries take place in government hospitals, health centers, and health posts, and one in five deliveries takes place in private healthcare facilities. As a result, about one-third of

deliveries are not attended by professional medical staff, with again the proportion being higher in rural areas where half of all deliveries take place in homes. Most newborns do not have birth certificates. Even in Kampala, only one in five newborn has a birth certificate. In the bottom quintile, one in 10 children does. Regarding breastfeeding, the practice is nearly universal, which is good news, but one in five children is not breastfed within the first few hours of birth, with few differences between geographic areas and by welfare level.

The qualitative fieldwork focused on factors keeping mothers from delivering at health facilities. Part of the reasons relate to the poor state of the facilities in terms of infrastructure, equipment, and availability of water and electricity as well as the lack of maternity wards in many facilities or the lack of space, which may lead to a lack of privacy. But in some areas cultural factors also play a role. In one district, mothers explained that due to female genital cutting they prefer not to go to health centers where they fear they will be mocked by midwives from different cultural backgrounds. In some cases women tend to trust TBAs more due to their long presence in the community, availability, and positive attitude. There are also fears that delivering in health centers may lead to diseases because facilities may be dirty. In another area, a bylaw requires expectant mothers to deliver at facilities, but there is widespread belief in the community that if a mother delivers on her own, this is proof that she is strong. Rather than outlawing TBAs, given their centrality in some areas, it may be wiser to give them more training and help them refer women to health centers when needed.

The qualitative fieldwork also discussed the mixed success of the Maama Kit initiative. The initiative has had some success, but increasing deliveries in health centers also requires the availability and presence of qualified staff, especially midwives, and better and more spacious premises for maternity wards to address privacy concerns. A clean environment and possibly the availability of food apart from mama kits could attract more mothers to deliver at health centers. In some cases, health facilities have been out of supply, and in some areas it is a taboo for women to prepare themselves for delivery with anything like the kits. Overall, comprehensive improvements in the quality of services at public health centers may be needed to increase the share of women with attended deliveries. In addition, support from men for expectant mothers is often low, yet most health-seeking decisions need their stamp of approval as heads of households. This may require health education efforts targeting men, so as to integrate them fully in the maternal care process. Incidentally, the reluctance of men to undertake testing for HIV was cited as a negative factor for them to get involved, with some of the men asking whether they were also pregnant to be required to accompany their wives for antenatal care or delivery!

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CHAPTER 9
CHILD HEALTH AND DEVELOPMENT

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This chapter considers essential ECD interventions that are part of the child health and development package outlined in Denboba et al. (2014). The introduction briefly describes the interventions in the package. The next section relies on household survey data to assess the level of coverage of the various interventions in the population. The last section provides results from qualitative fieldwork on some of the constraints faced by households in benefiting from the interventions, with a focus on immunization.

1. Introduction

The fourth package of essential services is the child health and development package, which covers the time from birth to six years of age. The main risks of not providing essential services during this period are stunted growth, anemia, impaired cognitive development, and child mortality. The package consists of six main interventions or services, which given the previous interventions already outlined in previous chapters, are numbered 19 to 23: (19) immunizations; (20) adequate, nutritious, and safe diet; (21) therapeutic zinc supplementation for diarrhea; (22) prevention and treatment of acute malnutrition; and (23) deworming.

As reviewed in Denboba et al. (2014), these various interventions tend to have high benefits and thereby also high returns. Examples of such benefits/returns are as follows:

- *Immunizations:* Starting at birth, a complete course of childhood immunizations is essential in reducing child morbidity and mortality. According to the WHO, increasing coverage of PCV (pneumococcal conjugate vaccine), rotavirus, and Hib (haemophilus influenzae type b) vaccine could have prevented 1.5 million deaths of children under 5 in 2002 (Barnighausen et al., 2009). According to the Copenhagen Consensus, expanded immunization coverage for children is among the top 10 most productive investments for countries.
- *Adequate, nutritious, and safe diet:* After six months of exclusive breastfeeding, mothers should continue to breastfeed through 24 months while providing complementary feeding with age-appropriate amounts, frequency, consistency and variety of safely prepared foods. Responsive feeding practices are important, as is adequate feeding during and after illness. After two years, young children continue to need adequate, nutritious, and safe diets. Undernutrition leads to weakened immune systems of babies and young children, putting them at a greater risk of falling sick from preventable illnesses like pneumonia and diarrhea. Nearly one-fifth of under-five deaths could be prevented with optimal feeding (UNICEF, 2009).
- *Therapeutic zinc supplementation for diarrhea:* Approximately 1.5 million children in the developing world die from diarrhea each year. Therapeutic zinc supplementation can reduce deaths from diarrhea by almost one-quarter (UNICEF, 2009).
- *Prevention and treatment of acute malnutrition:* Proven interventions include complementary and therapeutic feeding to provide micronutrient-fortified and/or enhanced complementary foods for the prevention and treatment of moderate malnutrition among children 6–23 months of age, and community-based management of severe acute

malnutrition among children under five years of age. Community-based management of acute malnutrition includes (a) in-patient care for children with severe acute malnutrition with medical complications and infants under six months of age with visible signs of severe acute malnutrition, (b) out-patient care for children with severe acute malnutrition without medical complications, and (c) community outreach (Horton et al., 2010).

- *Deworming:* Worm infections are a chronic condition that affect children's health, nutrition, and development and, as a consequence, limit their ability to access and benefit from education. Worms can cause children to become anemic and malnourished and can impair their mental and physical development (Hotez et al., 2006). Deworming is simple, safe, and inexpensive and has beneficial effects on educational outcomes.

To what extent do young children and their families benefit from these interventions in Uganda? To answer this question, this chapter relies on nationally representative household surveys to assess the level of coverage of these interventions in the population (section 2). The chapter also includes a discussion of some of the obstacles to better coverage, relying on qualitative fieldwork with a focus on immunizations (section 3). A brief conclusion follows.

2. Household Survey Data

Of the five interventions in the child health and development package, information is available in the Uganda National and Panel Household Surveys used for this study for three: immunization, diets, and the treatment of diarrhea. In addition, information is available in the 2011 DHS on deworming and is reported here as well.

Almost half of Uganda's children under five either are not immunized or not fully immunized according to the 2011 Uganda DHS survey (Uganda Bureau of Statistics, 2012), and there may have been a decline in immunization levels in part due to inadequate vaccines and funding, as well as health staff shortages and poor parental adherence to vaccination schedules. Uganda's budget support for the Expanded Programme on Immunization (EPI), which had been hailed for increased vaccination coverage between 2000 and 2007, was reduced by more than half in recent years.

Tables 9.1 and 9.2 provide data on immunization rates for measles and DPT3 from the Uganda National Panel Surveys. Different options are provided in the questionnaire, for example, depending on whether children have a health card. As mentioned in chapter 4, and as explained in Ministry of Health (2009), the health card is used by healthcare professionals to record health information for infants and children. This helps in providing children with integrated care. The card provides critical information to parents to help them keep their children healthy. It records the date and weight of the child at birth, the child's medical and social history, his or her immunization record (with reminders of when the next immunization is due), and a visual record of the child's growth, nutritional, and health status. The abbreviation "NIDS" in the tables refers to national immunization days, which are another way to get children vaccinated. In 2011/12, the proportion of children whose parents recalled that they were vaccinated against measles was 68.6 percent nationally, with relatively limited differences according to welfare levels and geographic location (the modalities change between regions, but overall most differences in immunization rates are not very large). The proportion of children whose parents recalled that they received the DPT3 immunization was slightly higher at 75 percent nationally, with again limited differences by welfare and location (for a visualization of coverage rates by region, see figure 9.1).

Table 9.1: Measles Vaccination Rates for Children Age Six and Under, 2009–12 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
2009/10													
Yes with card	46.6	61.7	42.9	54.9	37.1	34.6	51.2	36.8	48.5	54.9	36.9	54.3	45.7
Yes with exercise book	3.8	2.7	4.8	1.9	9.9	2.8	3.5	5.4	3.0	2.1	9.2	1.6	4.5
Yes from NIDS	-	-	-	-	-	-	-	-	-	-	-	-	-
Yes from memory	26.4	14.1	20.3	16.3	23.2	27.0	15.3	18.6	19.0	14.8	25.0	20.9	19.7
No with card	15.4	4.1	15.9	6.7	18.1	22.4	12.9	15.3	15.5	16.7	13.6	8.7	14.2
No with exercise book	0.0	1.3	1.7	0.0	2.3	2.5	1.8	4.7	1.6	0.7	0.1	0.2	1.5
No from NIDS	0.0	0.0	0.2	0.0	0.0	0.0	0.4	0.6	0.0	0.0	0.0	0.0	0.1
No from memory	7.9	13.6	9.9	17.6	7.0	8.8	6.7	13.3	8.3	8.2	9.5	12.7	10.3
Don't know	0.0	2.5	4.5	2.5	2.5	1.9	8.2	5.3	4.1	2.7	5.7	1.5	4.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2010/11													
Yes with card	27.2	21.9	33.9	27.8	28.5	29.2	49.4	38.9	33.8	30.3	25.8	34.5	32.6
Yes with exercise book	0.0	3.7	4.3	0.0	9.2	2.7	3.2	4.3	5.2	2.2	6.7	1.4	4.1
Yes from NIDS	0.0	0.0	0.3	0.0	0.6	0.0	0.3	0.8	0.0	0.0	0.3	0.0	0.2
Yes from memory	31.0	28.8	23.0	26.0	27.8	26.3	12.0	23.5	29.2	18.1	20.0	31.0	23.9
No with card	32.1	18.0	16.9	18.5	14.8	21.3	16.2	11.2	12.4	24.7	28.5	9.0	17.7
No with exercise book	0.0	1.4	2.1	1.6	2.8	1.3	1.9	2.0	2.9	3.1	0.3	1.2	2.0
No from NIDS	0.0	0.0	0.5	0.3	0.0	1.5	0.0	0.0	0.0	0.3	1.9	0.0	0.4
No from memory	9.2	22.2	14.9	24.2	10.8	14.3	11.7	14.2	13.9	17.0	12.1	20.2	15.2
Don't know	0.6	4.0	4.1	1.6	5.5	3.4	5.4	5.2	2.7	4.3	4.5	2.9	4.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2011/12													
Yes with card	51.6	53.9	46.3	34.0	43.7	55.0	58.2						47.4
Yes with exercise book	0.0	0.2	2.0	0.8	0.6	4.3	1.5						1.7
Yes from NIDS	1.2	0.0	0.1	0.1	0.0	0.0	0.5						0.1
Yes from memory	28.2	21.9	18.8	29.1	20.7	16.2	11.1						19.4
No with card	15.8	12.1	15.7	14.5	18.1	13.6	13.3						15.2
No with exercise book	0.0	0.4	1.3	2.7	0.7	0.0	1.6						1.1
No from NIDS	0.0	0.6	0.0	0.0	0.2	0.1	0.0						0.1
No from memory	3.2	8.9	13.1	18.1	11.2	10.6	10.1						12.3
Don't know	0.0	2.1	2.8	0.7	5.0	0.2	3.6						2.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0						100.0

Source: Authors using Uganda 2009/10, 2010/11 and 2011/12 UNPS surveys.

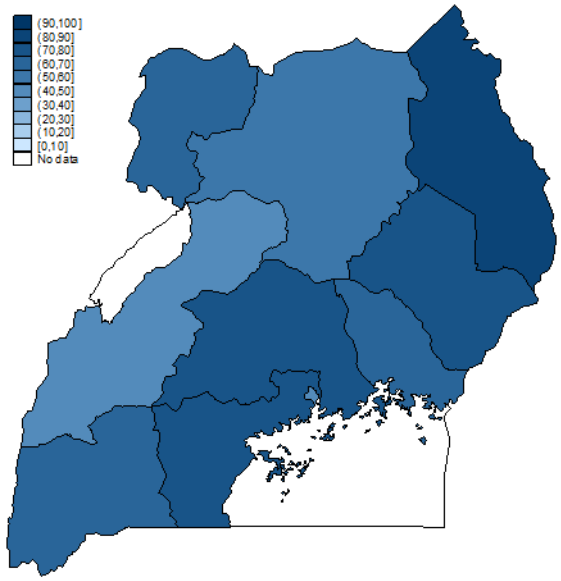
Table 9.2: DPT3 Vaccination Rates for Children Age Six and Under, 2009–12 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
2009/10													
Yes with card	59.6	66.4	49.4	60.1	43.3	43.4	58.3	42.4	54.6	60.9	44.7	62.3	52.3
Yes with exercise book	0.0	3.8	5.1	0.9	11.7	2.8	3.6	7.3	3.0	2.2	7.7	2.3	4.7
Yes from NIDS	0.0	0.0	0.4	0.4	0.3	0.0	0.4	0.9	0.0	0.6	0.0	0.0	0.3
Yes from memory	26.4	16.4	19.6	17.0	22.4	24.8	15.7	17.2	18.3	15.3	26.2	19.6	19.4
No with card	2.4	1.3	9.3	1.7	11.8	13.7	6.8	10.4	10.0	9.6	6.4	2.0	7.9
No with exercise book	3.8	0.2	1.4	1.2	0.8	2.5	1.1	2.8	1.6	1.0	0.9	0.0	1.3
No from NIDS	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1
No from memory	7.9	8.7	10.0	16.1	6.6	10.8	5.3	14.1	7.8	7.3	8.4	11.2	9.7
Don't know	0.0	3.3	4.7	2.6	2.9	2.0	8.8	5.0	4.3	3.2	5.8	2.7	4.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2010/11													
Yes with card	42.4	25.5	39.1	35.1	32.5	35.7	53.2	39.5	39.8	37.0	34.9	39.3	38.0
Yes with exercise book	0.0	5.3	4.8	0.7	9.8	2.8	4.0	5.7	4.7	3.5	6.7	1.7	4.6
Yes from NIDS	0.0	0.0	0.5	0.0	0.0	1.5	0.3	0.0	0.0	0.0	2.1	0.0	0.4
Yes from memory	33.6	32.9	20.8	27.8	22.3	24.0	13.5	20.1	25.6	17.1	21.0	31.4	22.4
No with card	16.8	14.5	13.0	12.5	11.1	17.2	12.4	11.3	8.2	19.2	20.6	4.3	13.3
No with exercise book	0.0	0.0	1.5	0.6	2.1	1.2	1.1	0.6	3.3	1.4	0.0	1.0	1.3
No from NIDS	0.0	0.0	0.2	0.0	0.6	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.2
No from memory	7.2	17.5	15.0	21.6	16.0	10.7	10.2	15.0	15.3	16.8	10.2	17.4	14.8
Don't know	0.0	4.2	5.2	1.6	5.7	6.8	5.4	7.0	3.1	5.0	4.5	4.9	4.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2011/12													
Yes with card	63.3	59.9	51.6	41.2	50.6	57.3	63.6						52.9
Yes with exercise book	0.0	0.2	2.6	2.2	1.2	4.1	1.9						2.3
Yes from NIDS	0.0	0.0	0.1	0.0	0.0	0.0	0.5						0.1
Yes from memory	20.5	25.3	18.9	25.9	21.4	19.0	11.4						19.7
No with card	15.4	8.1	9.3	10.2	8.4	9.3	9.9						9.3
No with exercise book	0.0	0.4	1.1	2.7	0.2	0.0	1.6						1.0
No from NIDS	0.0	0.5	0.4	1.6	0.3	0.0	0.0						0.4
No from memory	0.0	3.0	12.4	15.3	13.4	6.3	7.5						10.9
Don't know	0.8	2.7	3.6	0.9	4.6	3.9	3.6						3.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0						100.0

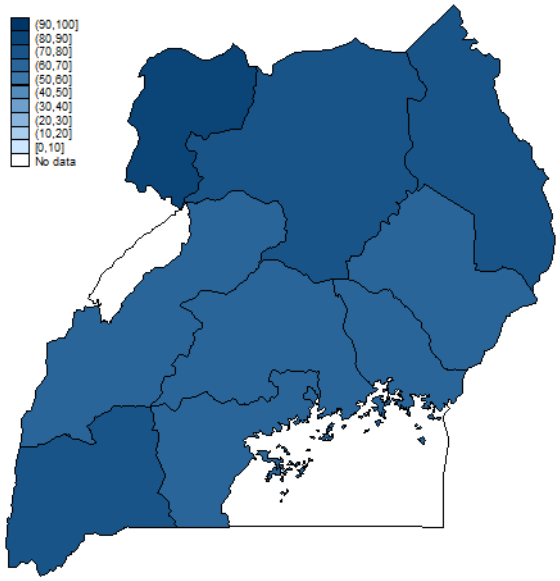
Source: Authors using Uganda 2009/10, 2010/11 and 2011/12 UNPS surveys.

Figure 9.1: Share of Children Receiving Vitamin A and Immunizations for Measles and DPT3 (%)

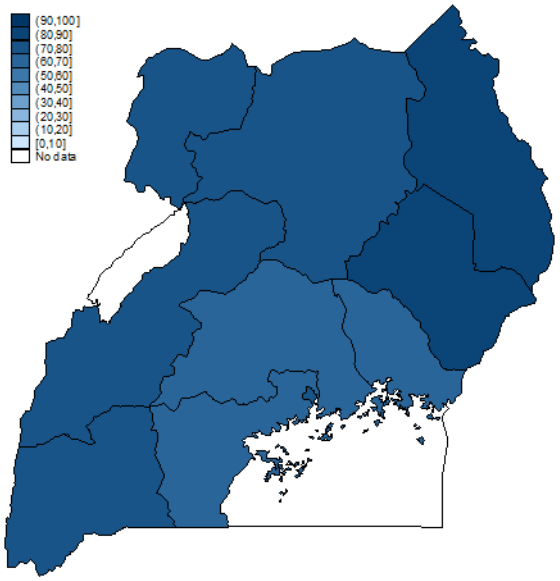
Share of Children Under Six Who Received Vitamin A



Measles Vaccination Rates for Children Under Six



DPT3 Vaccination Rates for Children Under Six



Source: Authors' estimation.

Data are limited on the extent to which children receive an adequate, nutritious, and safe diet in the Uganda National Household and Panel Surveys (although work could be done on the detailed consumption modules of the surveys to assess food security and consumption patterns). Still one interesting question relates to the types of breakfast that children have. As shown in table 9.3, a non-negligible share of children, below four years of age and between five and 13 years of age do not have any food for breakfast (11.6 percent nationally, but 21.4 percent in the bottom quintile), pointing to concerns about food security and especially among the poor.

Table 9.4 reports that between one-fourth and one-third of children are affected by diarrhea in a two-week period, with slightly more than one in 10 having blood in the stool. Only slightly more than one-third (36.6 percent) of the children with diarrhea receive fluids from ORS sachets or recommended homemade fluids (with sugar/salt), while the rest receive other forms of treatment which may or may not be adequate.

Table 9.5 provides additional information on micronutrients for children under five from the latest DHS (Uganda Bureau of Statistics, 2012). In addition the table provides information on deworming, suggesting that nationally half of the children were given deworming medication in the past six months. Among the age groups considered, the youngest and oldest children are less likely to get the medication. While access to various interventions is often lower in Karamoja, this is an area where access to deworming medication for children is higher. Otherwise, children from wealthier backgrounds and more educated mothers are more likely to benefit from the medication. The table also shows that while iodized salt is nearly universal, slightly more than half of the children were given vitamin A supplements in the past six months. But only a small minority was given iron supplements in the past seven days.

Table 9.3: Breakfast for Children in Households with Children Age Six and Under, 2012/13 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Children aged 0–4													
Nothing	4.7	6.3	13.4	2.3	14.6	16.7	14.2	21.4	17.0	11.4	7.4	5.2	11.6
Tea/drink with sugar only	11.7	6.3	4.2	6.5	6.6	2.2	3.5	4.1	5.9	4.0	5.6	4.8	4.9
Milk/milk tea with sugar	21.5	15.2	8.6	16.5	9.2	3.8	10.9	1.5	7.0	9.0	10.4	19.9	10.4
Solid food only	2.4	10.5	18.2	7.5	11.5	30.7	18.0	27.4	19.6	16.9	15.8	5.3	16.0
Tea/drink with solid food	26.6	23.6	18.4	26.9	24.2	15.7	10.2	12.1	19.2	21.5	23.5	20.9	19.8
Tea/drink w/o sugar and solid food	3.0	3.7	3.6	4.1	2.2	5.5	2.9	3.9	3.4	4.3	3.2	3.2	3.6
Porridge with solid food	4.3	4.5	6.4	6.0	5.5	0.9	10.8	3.4	5.6	6.2	5.7	7.9	5.9
Porridge with sugar only	5.0	4.7	4.6	3.1	7.0	2.9	5.1	1.6	3.7	6.0	6.2	5.0	4.6
Porridge with milk	6.0	5.5	2.4	5.9	1.7	0.8	3.8	0.4	0.8	2.6	4.0	6.3	3.1
Porridge without sugar only	0.7	1.8	4.9	1.1	5.1	4.8	5.7	7.2	5.1	4.3	2.6	2.4	4.1
Other (specify)	2.7	4.5	3.8	5.8	2.4	3.5	3.9	3.5	2.8	3.7	3.9	5.2	3.9
Don't know	10.4	11.0	10.0	11.4	9.3	10.4	9.9	11.2	8.0	9.2	10.4	11.8	10.3
No child under 5 in the household	1.2	2.5	1.6	2.8	0.8	2.2	1.2	2.4	2.1	0.9	1.3	2.0	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Children aged 5–13													
Nothing	1.9	6.2	15.9	3.7	18.2	18.6	14.0	0.0	20.0	12.1	8.3	4.8	13.4
Tea/drink with sugar only	10.5	6.4	3.3	5.8	5.5	1.5	3.3	1.0	3.9	3.2	5.8	4.6	4.2
Milk/milk tea with sugar	11.5	6.9	5.3	7.2	5.9	2.2	7.6	2.0	5.6	5.3	5.3	10.3	5.9
Solid food only	2.4	9.4	18.2	8.6	11.8	28.5	17.4	3.0	18.4	18.9	13.4	5.9	15.8
Tea/drink with solid food	17.0	23.5	18.0	27.9	23.7	13.9	8.3	4.0	17.8	21.2	21.5	20.6	19.1
Tea/drink w/o sugar and solid food	3.3	2.9	3.3	3.6	1.6	5.4	2.9	5.0	2.9	3.9	2.7	2.9	3.2
Porridge with solid food	3.4	3.4	6.0	5.8	5.9	1.0	8.2	6.0	4.4	5.9	6.9	6.0	5.4
Porridge with sugar only	4.1	3.6	2.8	1.9	4.6	1.4	3.8	7.0	3.2	4.3	3.7	2.8	3.0
Porridge with milk	2.5	2.8	1.7	3.8	0.5	0.6	2.8	8.0	0.5	1.7	2.7	3.6	2.0
Porridge without sugar only	0.7	1.1	3.4	0.6	3.7	3.8	3.5	9.0	4.1	3.4	1.5	1.0	2.9
Other (specify)	0.0	0.2	1.0	0.7	0.7	0.9	0.7	96.0	0.8	1.1	0.8	0.5	0.8
Don't know	39.5	29.7	19.9	27.1	17.3	20.2	26.1	97.0	16.9	18.8	25.7	33.7	22.6
No 5–13-year-olds in the household	3.2	3.9	1.1	3.4	0.6	1.6	1.5	98.0	1.5	0.2	1.9	3.2	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Total	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2012/13 UNHS survey.

Table 9.4: Incidence and Treatment of Diarrhea in Last Two Weeks, 2009–12 (%)

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Town	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Incidence													
2009/10	32.3	28.9	32.8	30.7	36.8	29.9	31.2	36.4	33.8	32.8	31.0	25.5	32.2
2010/11	20.7	29.5	26.8	26.2	32.1	22.0	25.5	28.7	28.4	26.0	24.3	26.6	26.8
2011/12	7.6	20.6	21.9	14.7	26.8	19.5	21.6						21.4
Blood in diarrhea													
2009/10	3.2	1.9	19.3	10.6	16.4	29.5	13.4	22.4	19.7	12.8	13.7	9.1	16.3
2010/11	0.0	9.8	10.0	9.0	10.2	11.9	7.1	13.4	7.9	7.1	17.3	0.0	9.7
2011/12	0.0	12.9	13.5	10.8	15.7	22.3	0.9						13.3
Treatment, 2009/10													
Fluid from ORS sachet	64.3	12.5	29.2	35.8	25.7	38.2	18.1	24.2	21.4	25.0	43.6	29.9	28.6
Homemade fluid (sugar/salt)	0.0	12.6	7.7	6.3	9.7	10.3	6.3	10.7	6.9	7.8	6.3	7.6	8.0
Other	35.7	74.4	57.8	57.9	61.6	46.0	65.6	59.9	60.3	64.0	49.1	62.5	58.9
Don’t know	0.0	0.5	5.4	0.0	3.0	5.5	10.0	5.2	11.5	3.2	1.1	0.0	4.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2009/10, 2010/11 and 2011/12 UNPS surveys.

Table 9.5: Micronutrient Intake among Children and Deworming, 2011 DHS (%)

Background Characteristic	Among Youngest Children Age 6–23 Months Living with the Mother			Among All Children Age 6–59 Months				Among All Children Age 6–59 Months Living in Households Tested for Iodized Salt	
	Percentage Who Consumed Foods Rich in Vitamin A in Past 24 Hours	Percentage who Consumed Foods Rich in Iron in Past 24 Hours	Number of Children	Percentage Given Vitamin A Supplements in Past 6 Months	Percentage Given Iron Supplements in Past 7 Days	Percentage Given Deworming Medication in Past 6 Months	Number of Children	Percentage Living in Households with Iodized Salt	Number of Children
Age in months									
6–8	43.4	23.2	408	53.2	6.6	18.7	417	98.6	401
9–11	59.8	33.2	405	66.2	8.8	33.5	411	98.5	395
12–17	67.0	37.7	681	68.6	7.7	51.5	723	99.4	695
18–23	67.3	36.6	643	59.4	6.6	57.8	756	98.9	724
24–35	na	na	na	56.8	7.6	56.2	1,515	99.3	1,440
36–47	na	na	na	52.4	6.4	52.0	1,473	99.1	1,424
48–59	na	na	na	52.4	6.9	51.4	1,438	98.7	1,359
Sex									
Male	62.6	34.5	1,049	57.1	7.1	50.4	3,344	99.1	3,205
Female	59.9	32.9	1,087	56.5	7.1	50.1	3,389	99.0	3,232
Breastfeeding status									
Breastfeeding	59.1	31.5	1,681	63.1	7.8	41.9	1,821	99.1	1,738
Not breastfeeding	69.0	41.8	455	54.5	6.8	53.3	4,897	99.0	4,684
Mother's age at birth									
15–19	59.4	30.3	194	58.2	8.2	39.6	332	99.6	310
20–29	59.6	34.7	1,178	58.1	7.3	50.5	3,662	99.1	3,524
30–39	65.3	33.3	647	55.4	6.5	51.3	2,192	98.8	2,092
40–49	57.8	31.7	117	53.2	6.9	50.5	546	98.9	511
Residence									
Urban	61.7	45.2	285	57.7	7.0	59.8	947	99.2	905
Rural	61.2	31.9	1,851	56.7	7.1	48.6	5,786	99.0	5,532

Source: 2011 DHS (Uganda Bureau of Statistics, 2012).

Table 9.5 (Continued): Micronutrient Intake among Children and Deworming, 2011 DHS (%)

Background Characteristic	Among Youngest Children Age 6–23 Months Living with the Mother			Among All Children Age 6–59 Months				Among All Children Age 6–59 Months Living In Households Tested for Iodized Salt	
	Percentage Who Consumed Foods Rich in Vitamin A in Past 24 Hours	Percentage Who Consumed Foods Rich in Iron in Past 24 Hours	Number of Children	Percentage Given Vitamin A Supplements in Past 6 Months	Percentage Given Iron Supplements in Past 7 Days	Percentage Given Deworming Medication in Past 6 Months	Number of Children	Percentage Living in Households with Iodized Salt	Number of Children
Region									
Kampala	60.5	49.0	126	50.7	3.6	59.2	415	99.0	401
Central 1	68.0	43.8	212	36.2	5.9	46.8	649	99.6	617
Central 2	53.7	36.7	231	44.1	5.9	49.6	703	97.5	674
East Central	54.9	33.4	237	70.8	5.4	42.6	767	98.8	735
Eastern	73.9	45.0	382	71.0	9.9	56.5	1,162	100.0	1,105
Karamoja	68.1	9.8	82	73.7	12.3	64.5	260	99.8	229
North	58.6	25.9	202	59.4	11.6	48.2	606	100.0	592
West Nile	71.6	44.5	133	53.7	11.7	46.7	399	98.4	370
Western	56.3	30.8	282	60.0	4.7	52.7	978	98.4	947
Southwest	49.5	9.6	250	44.1	3.9	42.6	794	98.6	768
Mother's education									
No education	61.5	26.4	278	53.8	8.1	43.3	982	98.8	902
Primary	61.9	34.0	1,378	55.4	6.5	47.6	4,297	99.0	4,125
Secondary +	59.2	37.2	481	63.0	8.0	62.5	1,455	99.1	1,411
Wealth quintile									
Lowest	63.7	27.5	499	62.1	8.6	47.8	1,514	99.3	1,410
Second	63.3	33.4	469	58.3	7.8	48.7	1,423	99.2	1,372
Middle	58.1	32.3	415	50.8	5.9	43.9	1,350	98.8	1,288
Fourth	59.5	35.4	384	55.5	5.8	51.8	1,174	98.5	1,132
Highest	60.6	42.3	369	56.4	7.0	60.1	1,272	99.2	1,235
Total	61.2	33.7	2,136	56.8	7.1	50.2	6,733	99.0	6,437

Source: 2011 DHS (Uganda Bureau of Statistics, 2012).

3. Qualitative Fieldwork: Immunization

Questions were asked in the qualitative fieldwork for health to key informants and focus groups on immunization for children, so this is the area of the child health and development package explored in more depth in this section. In some districts visited immunization rates increased, but in others they decreased. As in other areas of healthcare, a number of constraints were mentioned by respondents that could limit child immunization rates.

In all districts participants were aware that immunization boosts children's immunity and protects them from diseases such as measles, polio, tetanus, whooping cough, diphtheria, and tuberculosis. Awareness of their role in preventing pneumonia and hepatitis B was less common. Participants also understood that de-worming helps children grow. As an elderly man explained, "A child who is immunized cannot be weakened by that disease like one who is not." Full immunization was understood by most participants to require five visits before the first birthday of a child, but it was acknowledged that some parents are not proactive enough and extend the time for immunization into the second year of a child's life. Communities visited were aware of public immunization days (family health days) because they are highly publicized, and they noted that during those days most households take their children for vaccination. In addition, immunization services are also provided by various development partners and even by individuals who make a living from providing these and other services. And yet in the districts visited, the shares of children who had completed the full dosage of immunization were low.

In most communities, women are in charge of taking children for immunization. Men rarely do so. Even when they are aware of the importance of immunization, under the division of labor it is women who take the children to health centers. Comments from diverse communities (Kaabong and Bukomansimbi) illustrate this. A woman explained: "Husbands do not accompany mothers to health centers and are more interested in drinking! Men also frequently travel from homes and are not suited to adhering to the immunization schedules of children." One man said, "It's the women who spend most of the time with the children, so I do not know a lot about immunization. I honestly don't know how many times a child should go for immunization."

Practices and attitudes towards immunizing children vary, however, between communities due to differences in cultures and norms. In some cases, parents have reservations about vaccination, either for themselves or their children. Some have religious or philosophical objections and consider mandatory vaccination as interference by the government into what they believe should be a personal freedom and choice. Others are concerned about the safety or efficacy of vaccines, while still others believe that vaccine-preventable diseases do not pose serious health risks. There are also misconceptions arising from claims that some of those who contract the diseases include children who had been vaccinated before. Another claim is that some vaccines cause harmful side effects and illnesses and even death. A few parents explicitly stated that giving a child multiple vaccinations for different diseases increases the risk of harmful side effects and could overload the immune system and disrupt its normal functioning. For some the fear of the accompanying fever as a side effect that a child may get immediately following an immunization makes mothers reluctant to continue with all the prescribed immunization dozes. It was also noted that in a few cases the vaccines led to swelling and large wounds at those points where the vaccine was injected, which made some parents reluctant to take their children.

Some mothers simply forget their visit date and then do not finish the schedule. There are also cases of parents not appreciating the importance of immunization. Being burdened by chores at home, some mothers are so busy that they send young children to take siblings for immunization. In such cases, health workers may not immunize the children due to the absence of a parent.

Another stumbling block is the traditional and religious belief that since ancestors never got immunized and lived a long and healthy life, it is not really required. There was even in one village visited a religious cult called 666 which actively preached against immunizing children. For parents with physical disabilities, taking their children for immunization is an issue. And in some hard-to-reach areas beyond the mountains in Napak, Kween, and Kaabong districts, travelling to health centers for vaccination is also difficult.

Lack of vaccines at health centers is also a factor, particularly for DPT3. When health centers are out of stock, this demoralizes parents who may have made several visits to the centers in vain. As a health worker explained it: "Imagine that the child days have already started but there are no drugs to do the program. Instead, dewormers like merbendazole are only what can be given to children who come to the health facility for vaccination." Laxity in scheduling or poor communication by health workers on the exact timing of immunization schedules may also be a challenge, as mothers then only know, for example, the day to revisit but not the time, leading to cases where some would go in the morning and wait until the afternoon for their babies to be immunized. At other times mothers would come in the afternoon, only to find the immunization already done in the morning, missing the immunization all together. The issue of poor storage of vaccines in health centers was also brought up, especially for facilities not connected to the national electricity grid and without gas cylinders and functioning fridges to preserve vaccines for future use. This forces centers to solicit help from larger facilities or wait until the next supply. In some cases, electricity and fridges may be available, but may not be functional because of a lack of technicians to repair the fridges that broke down.

Immunization services at some centers are offered on a daily basis while others have the traditional practice of providing immunization schedule only one particular day of the week. Clearly immunization on a daily basis is better to accommodate parents who were not in position to have their children immunized on a given specific day. But providing immunizations all week long may strain health workers' workload. Some health centers cope with the situation by training VHTs and integrating them into the staff cohort to ease this workload.

To the above constraints, one must add some of the costs involved, such as transport fares and the purchase of syringes and injections at U Sh 500. In some districts the distances to be travelled are so long or the roads so difficult that some decide to stay home. In Butugama sub-county in Ntoroko district, there is no government health center and mothers must travel 20 kilometers to the nearest center. In such cases parents may not have the money to pay for transport fares (for just three kilometers U Sh 10,000 may be charged for a round trip).

In pastoralist areas like in Ntoroko district and Karamonja sub-region, nomadism keeps communities moving from place to place in search of pasture. This affects the schedule and routine of immunization. Some districts which border the Democratic Republic of Congo (DRC) and South Sudan have had problems with people coming in from those countries who had not been immunized. During the insurgency many people from the DRC came to Uganda. As they may not have been immunized they may have re-introduced diseases which were on the verge of eradication. In flat areas such as Rwebisengo in Ntoroko district, floods are common from October to January, so that a boat or canoe is needed to move around. Because of floods, some of those locations missed the mass immunization in 2013 as the areas were not accessible. Health workers are also constrained by lack of transport. In some cases they cannot reach communities without hiring motorcycles, but funding may not be available to do so.

Finally outreach also matters as a lack of adequate health education and publicity may affect immunization in remote areas, especially when staffing constraints are also present.

Outreach activities may include vans announcing immunizations with loud speakers or radio alert, as well as events held in strategically positioned locations such as places of worship—mosques and churches—and markets where mothers normally come with their children to sell or buy commodities. Outreach efforts have paid off in many districts. In some cases medical workers have camped for a number of days in communities, which gave many a chance to get immunized and also sensitize the population about health care. VHTs are of great help because their members have strong links to the community's cultural norms and practices. Health education can also be provided at antenatal and out-patient clinics to increase awareness. In most districts vaccination uptake is much higher in urban centers than in rural areas in part because of accessibility. But livelihood patterns also play a role, as mentioned in the case of nomadic communities that migrate to places with pasture and water but no access to health services. In one district, health workers still managed to reach those communities: "In order to cope and adjust to this reality, we station and schedule our immunization outreaches to coincide with the WFP food distribution events, where access to the population is more assured."

4. Conclusion

This chapter provided a survey-based analysis of the coverage of essential interventions that are part of the child health and development package of Denboba et al. (2014). Qualitative fieldwork was also provided on challenges and constraints faced by households in those areas.

The available surveys suggest that only about two-thirds of children are vaccinated against measles, and the proportion for DPT3 is about three-fourths. Data are limited on the extent to which children receive an adequate, nutritious, and safe diet, but one interesting question in the panel surveys relates to the types of breakfast that children have. A non-negligible share of children, below four years of age and between five and 13 years of age, do not have much food or fluids for breakfast, pointing to concerns about food security in some areas and especially among the poor. Between one-fourth and one-third of children are affected by diarrhea in a two-week period. Only one-third of the children with episodes of diarrhea receive fluids from ORS sachets or recommended homemade fluids (with sugar/salt mixtures). The rest often receive other forms of treatment, but it is unclear whether these are adequate or not.

The qualitative fieldwork focused on factors limiting immunization rates. In all districts participants were aware that immunization boosts children's immunity and protects them from diseases. Communities were also aware of public immunization days. But actual practices and attitudes towards immunization vary between communities. Some parents have reservations about vaccination, at times for religious or traditional reasons. Others are concerned about the safety or efficacy of vaccines. Some mothers simply forget their visit date to health centers and do not complete the immunization schedule for their child. Being burdened by chores at home, some mothers are so busy that they send young children to take siblings for immunization, in which cases health workers may not immunize the child. Lack of vaccines at health centers, sometimes due to poor storage facilities, is also a factor reducing coverage. Poor communication by health workers to parents on the exact timing of immunization schedules may also be a challenge. Finally, although immunization itself is free, the cost of going to facilities is a constraint for some households. At the same time outreach efforts have paid off in many communities.

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CHAPTER 10
PRESCHOOL AND TRANSITION TO PRIMARY SCHOOL

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This chapter considers a last set of two essential interventions for ECD—preschool and a smooth transition to primary school—that are part of the preschool package in Denboba et al. (2014). The introduction briefly explains the importance of the two interventions. The next section relies on household surveys to assess the level of coverage of the two interventions among children. The last section provides results from qualitative fieldwork on some of the constraints faced by households in benefiting from the two interventions.

1. Introduction

The last and fifth package of essential ECD interventions outlined by Denboba et al. (2014) is the preschool package, which covers the period from three to six years of age. The quality of a child's early learning experience makes a significant difference for school preparation, participation, completion, and achievement. Without adequate early childhood education, young children may not have the necessary skills to fully benefit from the education they receive at the primary level. The preschool package consists of two interventions/services, which given the interventions outlined in previous chapters are numbered 24 and 25: (24) early childhood and pre-primary programs and (25) continuity to quality primary education.

As reviewed in Denboba et al. (2014), and as for the other interventions reviewed in this study, these two interventions tend to have high benefits/returns. Examples are as follows:

- *Preprimary education:* Young children need sustained access to supportive, nurturing environments that provide a high degree of cognitive stimulation and emotional care throughout the early years (UNESCO, 2014). Compared to children who attend quality preprimary programs, children who enter school without adequate preparation are more likely to have poor academic performance, repeat grades, and drop out of school (Heckman and Masterov, 2007; Reynolds et al., 2001; Feinsten, 2003; Currie and Thomas, 1999). Beyond access, quality in preprimary education is equally critical. Children will only benefit from increased access to early child care and education (ECCE) if the services provided meet core quality standards. Box 4 defines quality in ECCE. Quality preprimary programs are linked to life-long benefits for individuals and society at large. They reduce the need for remedial education or rehabilitative actions later on, including in terms of reducing the risk of incarceration and improving welfare in adulthood (Schweinhart et al., 2005).
- *Continuity to primary school:* During the period of time when children move from either home or an early childhood program into primary school, they experience demanding changes (Arnold et al., 2006; Fabian and Dunlop, 2007). For the transition to be smooth, children need to be ready for school, and, equally important, schools need to be ready for children (Consultative Group on EECD, 1991; Myers and Landers, 1989). Evidence suggests that the failure of the first year or two of school to establish basic literacy skills creates inefficiencies that reverberate through a child's progression through the education system (Abadizi, 2006). Young children should possess the school readiness skills necessary—physical health and well-being, social competence, emotional maturity,

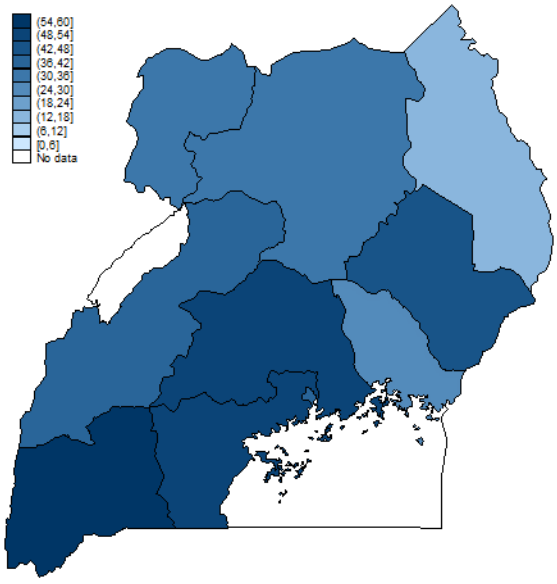
language and cognitive development, communication skills, and general knowledge—in order to be able to learn effectively in school (Janus and Offord, 2000). Ensuring continuity between early childhood and primary years is important to counter potential fade-out of the impact of preschools in primary school. Quality improvement in early primary grades (integrating ECCE/early primary experience, teacher training on classroom strategies for young children, smaller class size, etc.) can improve learning outcomes, school attendance, pass rates, and promotions and reduce dropout and repetition rates (Arnold et al., 2008). Well-trained and high-quality experienced teachers in the early grades of primary school can help close the readiness gaps that young children may face (Pianta et al., 2007; Schady et al., 2014).

To what extent do young children and their families benefit from these interventions in Uganda? To answer this question, this chapter relies on nationally representative household surveys to assess the level of coverage of the two interventions (section 2). The chapter also includes a discussion of some of the obstacles to better coverage, relying on qualitative fieldwork for preschools and late entry in primary schools (section 3). A brief conclusion follows.

2. Household Survey Data

Enrollment in preschools remains low even though gains have been achieved over time. As shown in table 10.1, the share of five-year-old children enrolled in preschools in 2012/13 is 17.8 percent nationally. While this is low, it represents a substantial increase versus the corresponding share of 5.8 percent in 2009/10. The share of six year old enrolled is lower, but this is to be expected given that many of these children should go to primary school. For younger children, information is not available in the survey on preschool enrollment. Enrollment is much higher in the top quintile (27.3 percent in 2012/13 for five year old) than in the bottom quintile (6.5 percent). Enrollment is also higher in urban than in rural areas as expected (although Kampala has a lower enrollment rates than other towns), and in the Central Region.

Figure 10.1: Share of Five Year Old Enrolled in Preschools (%)



Source: Authors' estimation.

The second intervention is a proper transition into primary school. As the qualitative analysis will suggest, a major issue is that many children tend to enroll late in the first year of primary school (P1). This is evidenced in table 10.2, which provides the share of students in P1 by age. A number of children are too young (11 percent of the pupils are five years old), in part because free primary education in public schools represents an alternative versus paying substantial out-of-pocket costs for a private preschool: this leads some parents to enroll children early. Next, 23.5 percent of children are six years old, and 24.4 percent are seven years old. These are likely to be appropriate ages in P1 given that the survey is implemented all year long and some children who enrolled at age six may have reached the age of seven by the time of the survey. But the rest—a total of 41.7 percent of the children in P1—are too old, at age eight or above. Almost 12 percent of students in P1 are above the age of 10, and the average age is 7.4 years. The issue is most severe for the poor—those in the bottom quintile, for which the average age in P1 is 7.7 years, versus 7.1 years in the top quintile. Correspondingly, the problem of late entry is worse for rural areas than other towns, with the lowest age of entry observed in Kampala. There has been little progress in reducing late entry in primary school between 2009/10 and 2012/13.

Table 10.1: Share of Children Enrolled in Pre-schools (%)

	Gender		Residence Area			Region				Welfare Quintile					Total
	Boys	Gils	Kampala	Other Urban	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
							2012/13								
Age 5	16.2	19.6	14.5	24.5	16.2	31.6	9.7	8.6	23.1	6.5	17.1	16.1	23.2	27.3	17.8
Age 6	15.2	10.6	2.6	19.7	11.9	19.2	8.2	7.5	18.1	7.4	10.5	14.7	14.0	20.8	12.9
							2009/10								
Age 5	5.7	5.9	23.9	13.7	4.4	8.8	4.1	5.7	5.3	3.1	5.3	5.1	7.8	8.9	5.8
Age 6	4.5	4.6	3.6	9.3	4.2	5.6	3.8	3.8	5.1	1.1	3.0	5.1	6.2	9.1	4.5

Source: Authors using Uganda 2009/10 and 2012/13 UNHS survey.

Table 10.2: Distribution of Children Attending P1 by Age (%)

	Gender		Residence Area			Region				Welfare Quintile					Total
	Boys	Gils	Kampala	Other Urban	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
							2012/13								
5	9.8	12.2	15.9	15.7	9.9	11.4	12.6	10.0	9.8	5.9	11.4	10.5	12.9	17.3	11.0
6	21.8	25.3	48.6	23.0	23.0	28.9	26.9	20.8	17.7	20.3	23.3	26.4	25.7	21.5	23.5
7	26.6	22.1	20.1	27.4	24.0	26.4	21.6	24.3	25.9	23.2	22.7	26.1	23.7	27.8	24.4
8	18.4	18.0	6.3	13.0	19.5	15.2	19.5	20.0	17.6	22.4	15.6	18.4	18.5	14.4	18.2
9	11.3	11.1	3.8	11.3	11.4	9.5	10.8	12.1	12.3	13.0	14.0	8.9	8.3	11.1	11.2
10	6.9	8.0	5.3	7.3	7.5	5.7	6.5	6.9	10.8	9.0	7.7	6.7	6.5	6.9	7.5
11	3.1	2.0	0.0	1.5	2.8	2.0	1.8	3.3	3.0	3.5	3.3	1.8	2.7	0.8	2.6
12+	2.0	1.4	0.0	0.8	1.9	1.0	0.3	2.6	3.0	2.7	2.1	1.2	1.6	0.3	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	7.4	7.3	6.5	7.1	7.4	7.1	7.2	7.5	7.7	7.7	7.4	7.2	7.2	7.1	7.4
							2009/10								
5	10.8	10.5	13.2	10.5	10.6	11.5	8.8	11.9	10.9	6.1	9.6	11.4	15.2	13.8	10.7
6	19.3	25.1	55.3	21.6	21.4	28.6	24.5	19.3	17.0	16.3	24.7	21.2	24.5	26.5	22.1
7	25.3	23.6	16.5	26.5	24.5	20.5	27.4	24.9	23.7	26.6	21.3	26.7	23.3	24.6	24.5
8	20.4	20.2	5.5	16.8	20.9	14.2	20.3	23.7	21.7	24.1	20.5	19.6	19.7	14.1	20.3
9	12.0	10.6	2.9	18.3	11.0	12.5	10.0	11.5	11.7	14.1	10.9	11.0	9.9	9.6	11.3
10	7.1	5.8	2.8	2.0	6.9	7.9	5.0	5.5	7.9	7.8	7.1	7.3	4.3	4.2	6.4
11	2.5	1.6	2.9	4.0	1.9	3.1	2.1	1.8	1.4	2.3	2.9	0.9	1.6	2.5	2.1
12+	2.7	2.7	0.9	0.4	2.9	1.7	1.8	1.4	5.6	2.7	3.0	1.9	1.5	4.7	2.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average	7.5	7.4	6.6	7.3	7.5	7.4	7.3	7.4	7.7	7.8	7.5	7.3	7.1	7.3	7.4

Source: Authors using Uganda 2009/10 and 2012/13 UNHS survey.

Questions are also asked in the survey about children who never went to school and why. In order to compute the share of children who never went to school, it is important to select the appropriate age, given the issue of late entry just mentioned. The statistics are provided for all children aged 10 to 15 in table 10.3. For that age group, 2.4 percent of children have never gone to school in 2012/13, a slight improvement over the corresponding share of 3 percent in 2009/10. While the share is low, this still represents a large number of children.

Importantly, the share of children who have never gone to school is much higher in the bottom quintile of welfare, at 6.2 percent, than in all of the other quintiles, where the corresponding share ranges from 0.6 percent in the top quintile to 1.4 or 1.5 percent in the middle quintiles. This is then also reflected in comparisons between rural areas, Kampala, and other towns, as well as in comparisons between regions, with 6.1 percent of children in the Northern Region never having been in school. There has been a slight reduction in this share between 2009/10 and 2012/13, but gains in other regions have been similar in absolute terms and larger in proportional terms. The issue of children not going to school is clearly prominent in the north.

Table 10.4 documents the reasons why some children never went to school from a demand-side perspective (supply side effects reducing enrollment may also be at work, including in terms of the quality being provided which may often be low). Cost—in terms of the opportunity cost of schooling or the out-of-pocket cost—is the number one reason. While enrollment in public primary schools is free, households still have to bear the cost of other expenses, including for uniforms and materials such as exercise books and pencils. For some households, especially the poor, this may not be affordable. Relatively low-cost transfer programs to ensure that these costs do not have to be paid in the most affected areas might go a long way in solving the issue of complete lack of schooling for some of these children. But apart from out-of-pocket costs, opportunity cost also makes schooling too expensive. Many children who never enrolled had to work, whether this is to help the family at home, help in the family business, or do farm work. Apart from cost, the fact that some children have a disability or that they live too far away from schools are also reasons for never going to school, as is the fact that some parents did not want the children to go to school (which may also reflect opportunity cost).

Table 10.3: Share of Children of Various Ages That Never Went to School (%)

	Gender		Residence Area			Region				Welfare Quintile					Total
	Boys	Gils	Kampala	Other Urban	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
							2012/13								
10	2.9	3.4	0.0	2.0	3.4	1.8	2.5	7.8	0.9	8.8	1.1	1.1	1.3	2.1	3.1
11	1.2	1.7	2.4	0.6	1.6	0.8	0.6	4.3	0.5	4.6	0.4	1.2	0.4	0.2	1.4
12	2.5	3.1	0.0	0.6	3.4	1.4	2.0	7.7	0.5	6.6	2.8	1.9	1.3	0.1	2.8
13	1.7	2.0	2.1	0.6	2.2	0.2	1.0	4.6	2.3	5.0	0.9	0.6	1.6	0.6	1.9
14	2.7	2.0	3.3	1.1	2.6	2.2	0.8	5.6	1.6	5.7	2.2	2.4	1.1	0.4	2.4
15	2.3	2.4	0.9	1.9	2.5	1.1	1.5	6.0	1.4	5.7	1.3	1.1	3.2	0.5	2.4
Total 10 to 15	2.2	2.5	1.4	1.1	2.7	1.3	1.5	6.1	1.2	6.2	1.5	1.4	1.5	0.6	2.4
							2009/10								
10	3.7	4.4	7.3	2.0	4.1	3.0	2.5	7.4	4.2	9.1	2.3	2.0	3.5	2.0	4.0
11	3.2	3.5	0.0	0.0	3.8	1.7	2.6	8.6	1.5	6.4	2.5	3.6	0.7	2.1	3.3
12	2.6	2.3	0.0	3.5	2.4	0.9	1.1	7.1	1.3	6.6	1.9	1.1	0.8	1.0	2.5
13	2.5	4.2	0.0	0.5	3.7	1.4	1.9	6.0	4.6	8.0	3.8	0.4	1.0	2.1	3.3
14	1.2	3.5	5.2	1.5	2.4	1.7	1.4	4.3	2.7	3.8	1.1	2.7	1.6	2.7	2.4
15	1.4	2.8	0.0	2.9	2.0	1.0	1.1	5.0	1.4	4.6	2.6	1.1	0.0	1.3	2.0
Total 10 to 15	2.5	3.5	2.5	1.9	3.1	1.7	1.8	6.4	2.7	6.6	2.3	1.8	1.5	1.9	3.0

Source: Authors using Uganda 2009/10 and 2012/13 UNHS survey.

Table 10.4: Reason for Never Starting School among Children Aged 10–15, 2012/13

	Residence Area			Region				Welfare Quintile					Total
	Kampala	Other Urban	Rural	Central	Eastern	Northern	Western	Q1	Q2	Q3	Q4	Q5	
Too expensive	52.3	14.8	17.0	37.7	10.7	15.2	14.0	20.8	9.9	28.9	2.7	0.0	17.2
Too far away	0.0	0.0	3.1	0.0	0.0	5.0	0.0	4.3	2.2	0.0	0.0	0.0	2.8
Poor school quality	0.0	1.8	1.1	0.0	0.0	2.0	0.0	1.4	0.0	0.0	1.4	2.9	1.1
Had to help at home	0.0	0.0	20.3	0.0	0.0	31.8	6.5	28.9	6.7	0.0	6.5	0.0	18.5
Help farm work	0.0	0.0	3.4	0.0	0.0	5.5	0.0	4.6	1.7	1.2	0.0	0.0	3.1
Help family business	0.0	0.0	0.9	0.0	0.0	1.4	0.0	1.4	0.0	0.0	0.0	0.0	0.8
Education not useful	0.0	0.0	5.6	0.0	0.0	9.1	0.0	7.8	1.0	0.0	3.9	0.0	5.1
Parents did not want	0.0	28.5	9.1	14.8	8.9	4.3	39.0	4.2	22.5	18.2	18.0	13.8	10.4
Not willing to attend	0.0	15.9	7.1	0.0	18.7	7.3	0.0	11.1	2.7	7.2	0.0	0.0	7.7
Too young	0.0	12.6	5.1	0.0	23.4	1.9	0.0	2.5	3.0	16.0	0.0	38.4	5.6
Orphaned	0.0	10.2	2.5	0.0	0.0	3.1	12.1	3.0	5.1	0.0	0.0	12.9	3.1
Displaced	0.0	0.0	5.4	6.4	18.9	0.8	0.0	3.2	12.5	7.4	3.9	0.0	5.0
Disabled	0.0	16.3	16.6	31.5	16.2	10.4	28.4	5.9	26.1	21.1	50.2	26.6	16.4
Insecurity	0.0	0.0	0.4	0.0	0.0	0.6	0.0	0.0	2.5	0.0	0.0	0.0	0.4
Other	47.8	0.0	2.5	9.6	3.2	1.8	0.0	1.0	4.0	0.0	13.5	5.5	2.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors using Uganda 2012/13 UNHS survey.

3. Qualitative Fieldwork: Preschools and Late Entry in Primary School

Questions were asked of key informants and focus groups in the qualitative fieldwork for education on the availability of early childhood education and the transition to primary school for children, including the issue of late entry for some children. This section discusses both topics.

3.1. Preschools

Parents in the qualitative fieldwork stressed that learning for children starts in the mother's womb, or at least after birth, with home being the first milieu for learning. At home, character molding is considered as foundational and the most important and defining element of learning before children go to school. Learning is seen as a shared endeavor between the home, the community and the school, but it starts at home. Children between birth and age three learn to talk, imitate older persons, walk, run, and play, recognize objects used around the home such as cups and plates, and relate to people around the home. At this stage parents agree that children remember simple things, identify themselves, and understand their own names. Between the ages of three and five, children mentally grasp what is said and do a lot of experimenting to discover new things. They can learn different languages and can help with household chores like fetching water, washing the kitchen utensils, and sweeping around the home. At the age of five and above the children should know what they are doing and have a clear differentiation between good and bad. They should be able to learn things in school as well as have good toilet habits and know how to share with others, and they also help more at home for fetching firewood and water, rearing small animals like goats and sheep, or cooking food. They grow curious about people and how the world works, and they show interest in numbers, letters, reading, and writing.

In speaking about learning, parents are very clear that all preparation for life is learning, in a gradual and cumulative, ongoing way. According to the parents, children must first learn what will sustain them in life before going to school, which includes gender roles: "Children first learn the basic roles of what they will be in the future. Boys must first be taught to graze and protect animals and girls how to look after the home to be good mothers" (FGD, Kaabong district). As an elderly man in Kaabong district explained it, "If a boy can be able to graze goats and return home with all of them in the evening, then that's a sign that he is ready for school and all the other responsibilities that come with schooling." Discipline is crucial in a child's learning at home. One young man in the FGD in Soroti district asserted that "The level of discipline of a child is a true reflection of the level of discipline of the parents of that child."

In contrast to learning at home, early childhood education tends to refer to teaching of young children outside the family. This type of early childhood education is somewhat common in the communities visited for the qualitative fieldwork, but the facilities are typically privately owned, so that payments are required for children to attend (only a few of facilities are owned by the community, for example, in Kaabong district). Many parents are aware of the potential benefits of sending their children to preschools. One parent in an FGD in Kalangala said: "The child who has gone to a preschool can study in Primary one with more ease than a child who joins a primary school directly." Attending an early childhood education program gives a chance to learn how to play and share, and it helps for the child to start to love going to school. Children dance and sing common songs from the community, some of which include messages about how children must behave, so that the preschools may also serve a role towards socialization in the community. An elderly woman in Kalangala district explained that "A child that goes to the early childhood center is diverted from the perverse environment at the landing site and they enjoy staying at school when they reach primary one." But often parents cannot afford preschools.

The fee structures are not regulated by the government, but the facilities are required to register with Ministry of Education. Understandably, many parents report that they cannot afford the fees charged at these facilities, which range from U Sh 10,000 to U Sh 170,000 per term of three months depending on where the facility is located (rural or urban) as well as the type of clientele served and the quality of service offered. As a school inspector in the Kawempe Division in Kampala explained it, "The ECDs fees range from U Sh 50,000 to U Sh 150,000 per term [3 months]. Most parents can't afford this, so many of them wait until their children are of age to be enrolled in UPE [public Universal Primary Education] schools so as to start school." A parent said much of the same in declaring: "We send them at this age [the age of entry in primary school] because we feel they are at the right age to go to school, so rather than taking them to the nursery we simply bring them directly to P1 [the first year of primary] which has no cost." Apart from cost, the distances to the facilities are in some communities another obstacle to enrollment. As a school inspector in Kasese district explained it, "These facilities are still urbanized in our district so the rural children cannot attend them due to the distances involved."

In addition, because of weak inspection and enforcement of standards, some facilities operate in an ad hoc fashion without trained and qualified personnel, and without a systematic curriculum and professionally developed techniques that could promote child development. Most facilities are not adequately stocked with appropriate instructional materials such as story books, play materials, crayons, and materials promoting fine motor skills. As a palliative, some children are taught reading with books used for functional adult literacy courses, especially in rural areas. Some facilities start as early development learning centers (nurseries) and later expand into primary schools, which may not help in ensuring instruction appropriate for young children.

3.2. Late Entry in Primary School

Government policy stipulates that children should start primary one (P1) at the age of six, but many children enroll later. In many communities visited for the qualitative fieldwork, the age of entry in P1 varied from six to 13 years of age depending on the circumstances of each child, but in the Karamoja sub-region some individuals have entered in P1 as late as at the age 20! In that specific and extreme case, the head teacher of the school where the issue was mentioned explained that this happens because boys begin life as shepherds in the kraals, which forces them to start school very late. These children not only come to school late, but they also often stay for no more than three years just to acquire basic numeracy and literacy (reading and writing) skills.

Extreme cases set aside, multiple factors may delay the age of entry in primary school. Delays may be due to the preferences of parents or to affordability issues, even when school is in principle free. For some parents with a negative attitude towards education, the proper age of entry is not of much importance. Some parents don't place an emphasis on education. Children are retained at home to work in the household business (such as a family shop) or to attend to younger siblings. Poverty is a factor, with some parents not able to send children to school due to lack of money to buy basic requirements such as exercise books, pencils, or pens. For children in "broken" families, such as those with a single parent, there may be too many issues or much work to be done at home to even think of sending the children to primary school. As a woman in Bujumba sub-county in Kalangala explained it, "Yes this community has a number of children old enough to go to school but that have never enrolled. This is so for various reasons: broken homes or marriages, particularly for single mothers without resources and with the fathers of these children unconcerned." The loss of both parents may also lead to late entry when guardians/caretakers are not responsible or not in position to send the child to school.

In other cases long distances to school may require the child to be older to go. Lack of development may also be an issue. As an elderly man in Kashenyi Village in Isingiro District explained, "Some children look younger than their biological age due to poor nutrition. Those children between eight and nine years in our community look as if they are five or six years old." Another man in the Karamonja sub-region put it as follows: "Our children do not grow at the same pace as those in Kampala. A rich man's child grows faster." In some areas, and particularly in the north and northeastern regions where insecurity has been rampant, safety may be the issue. In those areas, some parents argue that a child must be at least nine years old and preferably older to be able to run or fight back for his or her life in case of any eventuality on the way to or from school. For other parents still, ignorance is at play in sending children to school late, simply because the parents do not know that this may put the child at a disadvantage. Even witchcraft was mentioned in Buliisa district as discouraging children from going to school, with claims that when they do so, they get sick or develop acute headaches that cannot allow them to stay in school. There are other cases where it was claimed to the fieldwork team that children feel irritated whenever they approach a school, but this could not be authenticated.

Many stakeholders including parents agree that the recommended government age for starting P1 is appropriate. At the age of six a child is able to remember, differentiate, and recognize. He or she can share with others in class and report to teachers, parents, and guardians. They can talk properly, walk to and from school if it is nearby, and take care of themselves. At the age of six most children should be ready to cope with the P1 syllabus, especially when the child has previously gone to a preschool (but few do, as discussed earlier). Children at that age can handle a pencil and book to write, are anxious to explore new things, and are able to be taught.

But some parents would prefer children to be enrolled earlier, if public schools could do so for free. When a child starts school at five, these parents argue, it gives her time to complete the primary level when still young (11–12 years), reducing the likelihood of dropping out later. A woman Kalangala explained it as follows: "When the child starts education late, he or she will be laughed at by fellow children and eventually hates schooling leading to dropping out. There are also many distractions when a child is older." Some parents feel that a child staying home until six years of age may be a burden if nobody is able to attend to the child. A young man in Kampala explained that "Six years of age is too much time for a child to stay at home without a nursery provision, therefore we are requesting government to provide a nursery program for all the children." The ability to benefit from food programs is also a factor to send children to school earlier in some communities. Some schools in the Karamoja sub-region are provided with food from the World Food Program, and many children below the age of 6 are sent to the schools with their siblings in order to have something to eat, which helps with nutrition.

Cost has already been mentioned as an issue. While registration fees have been abolished in public schools, a range of other costs remain. The fieldwork suggested that the cost of schooling varies widely between communities even within a single district or sub-region. Some of the costs are optional, while others are obligatory. Some costs are in cash and others in kind. Some expenditures are requested for each term (and more often in some cases), while others occur once a year. Therefore it may be useful to illustrate what is included in one school.

In one school in Nakaseke district, students must in principle be able to purchase 12 exercise books for each of the first two years of primary school (P1 and P2), 24 (96-page) exercise books for P3 to P7, a school uniform valued at U Sh 12,000, as well as pens and pencils. Lunch meals in the form of a cup of porridge are compulsory for the P7 class, but optional for other classes. This was justified by the necessity for the P7 candidate class pupils to study intensively

from as early as 6 AM in the morning to as late as 6 PM in the evening. Parents also have the alternative option of contributing in kind by providing eight kilograms of dried maize per school term. What is the cost of these requirements? Unit costs would be U Sh 9,000 for books, U Sh 3,000 for pens, U Sh 1,000 for pencils, and U Sh 5,000 for lunch, resulting in a potential total cost of U Sh 35,000 for parents per child per term, depending on the year, which is about the amount noted by a UNHS (2010) report. A parent with two children would therefore need U Sh 70,000 per term to send the children to school, which is high in a rural district where incomes tend to be low and also irregular. In one school in Kasese municipality, costs were reported to be even higher at U Sh 98,200 per child per term. In a school in Kampala, costs were estimated at U Sh 87,500 per child per term. In that school some parents considered the costs affordable, but for others this cost was high, including for parents who used earned a good income from selling merchandise on Kampala streets but were later prevented from doing so.

In the Nakaseke district school mentioned above for which costs were provided, the proportion of pupils whose parents usually fail to meet these requirements is reported to be as high as two-thirds. The school administration does not enforce the rules in part because there is widespread perception among parents that primary education should be free. But in some cases children may be sent home. In that case parents typically report the head teacher to district authorities for charging dues that may not be allowed by the central government. It is not clear whether some of these fees should or should not be charged, but what is clear is that many schools charge some monies outside officially mandated ones. In order to limit the risk of exploitation of parents by schools, the Ministry of Education has the power to authorize or not monies proposed by School Management Committees, which include parent representation and are also mandated to oversee the proper utilization and accounting of such fees. The problem though is that many School Management Committees are weak, so that head teachers typically get the monies approved, with minimal oversight function regarding their proper utilization

Finally, while cost was mentioned as a major constraint for school enrollment across the 14 districts visited for the qualitative fieldwork, it was not always the main reason for poor enrollment. In the multi-ethnic Buliisa district, social and cultural factors were also mentioned as constraints, at least among some groups where children are involved in the livelihood of communities. For example, Alur children may stay fishing because this is the customary livelihood of their parents, while Bagungu children may remain at home to rear livestock.

4. Conclusion

This chapter provided a survey-based analysis of the coverage of essential interventions that are part of the preschool package suggested by Denboba et al. (2014). Qualitative fieldwork was also provided on challenges and constraints faced by households in those areas.

The available surveys suggest that enrollment in preschool is very low, at less than a fifth of the target population in 2012/13, although there have been substantial gains since 2009/10. The lowest enrollment rates in preschools are observed, as expected, among the poorest children and in the Northern Region.

Parents in the qualitative fieldwork stressed that learning for children starts in the mother's womb, or at least after birth, with home being the first milieu for learning. Many (albeit not all) believe that preschools would be beneficial to their children, but the cost of enrolling is too high for most given that preschools are privately operated. In addition, probably in part because of weak inspection and enforcement of standards, some facilities are seen as operating in an ad hoc fashion

without trained and qualified personnel, and without a systematic curriculum and professionally developed techniques to promote child development.

Enrollment in primary school is by contrast quasi-universal, although there remains an issue of affordability among the poorest children (and in the Northern Region) where in the 2012/13 survey 6.2 percent of children in the bottom quintile between the ages of 10 and 15 have never gone to school. This proportion is only slightly lower than that observed in 2009/10, at 6.6 percent. Apart from affordability constraints, issues related to the distance to schools, disability, and the need to work (which is also an affordability or opportunity cost constraint) are also mentioned as reasons for never enrolling. Perhaps the issue of affordability in terms of out-of-pocket costs could be solved by ensuring that basic expenses are covered through schemes.

Another issue is the fact that many children enroll relatively late, especially again among the poor and in rural areas. This affects their chance of completing primary or secondary education. The reasons mentioned by parents for why children in age of primary school have not enrolled are first and foremost that the children are considered too young to enroll. But in some cases, distance to schools as well as cost are also mentioned as reasons for not enrolling. The qualitative work also suggests that for some parents, the proper age of entry is not of much importance. Other parents keep children at home for chores, to work in the household business, or to attend to younger siblings. Some parents don't have enough money to buy basic school requirements such as exercise books, pencils, or pens, which may delay the age of entry or lead some children to never enroll. In other cases long distances to school may require the child to be older to go, or a child may not have matured enough in the eyes of the parents to go to school. While some of these factors relate to lack of resources—in time or money—others relate to a lack of value placed in a good education in some communities, in which case since children may not go anyway to secondary school, starting primary school a bit late does not seem to be of consequence. Overall though, most parents place a high value in the education of their children.

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