



**BASELINE EVALUATION OF THE DEVELOPING HUMAN CAPITAL  
IN RWANDA PROGRAMME - HARNESSING THE POWER OF  
INTEGRATED PROGRAMMING FOR NUTRITION AND EARLY  
CHILDHOOD DEVELOPMENT**

SUMMARY REPORT

May 2019





# CONTENTS

ABOUT THE BASELINE SURVEY	5
A SNAPSHOT OF HOUSEHOLDS AND RESPONDENTS	7
NUTRITION	8
CHILD HEALTH	16
EARLY CHILDHOOD DEVELOPMENT	21
WATER, SANITATION AND HYGIENE	26
SOCIAL PROTECTION	31
OBSERVATIONS	36

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## ABOUT THE BASELINE SURVEY

**UNICEF Rwanda, in partnership with the Embassy of the Kingdom of the Netherlands, commissioned a baseline study of the programme ‘Developing Human Capital in Rwanda’ (DHCR) – Harnessing the Power of Integrated Programming for Nutrition and Early Childhood Development Programme.**

Despite its impressive record in development and economic growth, Rwanda continues to face challenges in optimizing development in the first critical years of children’s lives, including high stunting levels and low developmental achievements among young children.

Close to 800,000 children under the age of 5 (38 per cent) are stunted. This high prevalence of stunting is an obstacle to human capital development in Rwanda. Approximately one third of its young children are not reaching their full potential and around 6 in 10 young children are developmentally on track.<sup>1</sup> Stunting not only carries the risk of increased illness and death among children, but it also leads to poor school performance, decreased work capacity and economic losses to a nation.

Rwanda has put in place several strategies to tackle these challenges. A National Early Childhood Development Policy and Strategic Plan were launched in 2016, and National Early Childhood Development Programme (NECDP) was established in 2017 under the guidance of the Ministry of Gender and Family Promotion.

NECDP oversees all nutrition promotion and Early Childhood Development (ECD) activities in Rwanda, and sets standards, curricula, and implementation approaches to guide to programme implementation. The DHCR programme aligns with the NECDP holistic approach to ECD promotion and stunting reduction.

The DHCR programme is a four-year programme (2017–2020), which is implemented in close collaboration with the Government of Rwanda and its partners in 14 districts. It prioritizes improvements in selected nutrition and developmental outcomes of children between birth and the age of 6. These are achieved through integrated nutrition-specific, nutrition-sensitive, ECD, water, sanitation and hygiene (WASH), pre-primary education, and social protection interventions.

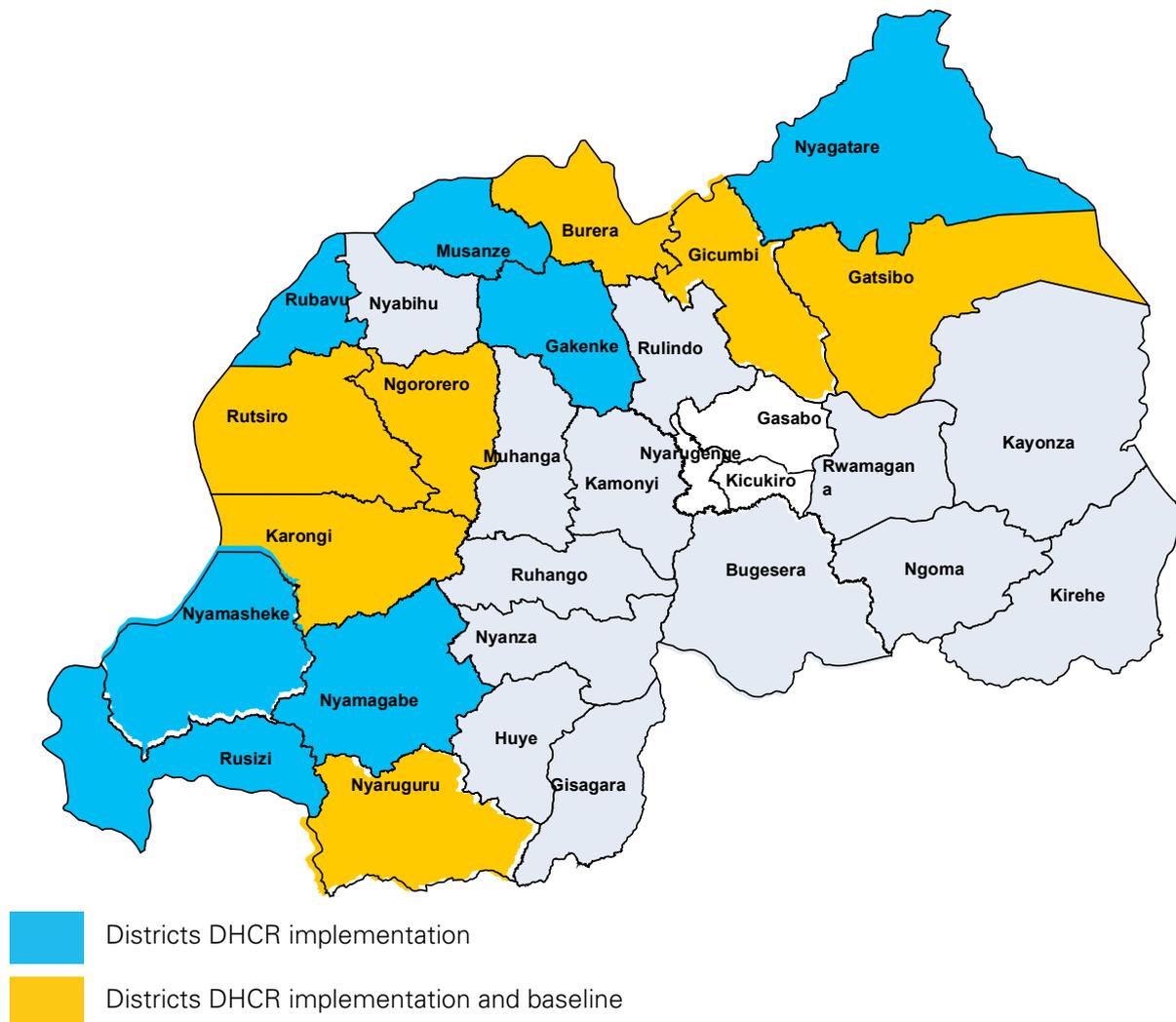
The primary focus of the programme is to contribute to a reduction in stunting while promoting overall early child development, in line with the Government of Rwanda's National Early Childhood Development Programme (NECDP) approach.

This baseline study provides information on the status for child and maternal health, child nutrition, WASH, ECD and social protection in seven of the 14 districts. These districts were specifically targeted for high levels of poverty and presence of social protection programmes. The districts are: Burera, Gatsibo, Gicumbi, Karongi, Ngororero, Nyaruguru, and Rutsiro.

The study was implemented over a period of five months in 2018 and involved 1,637 households where interviews with the primary caregivers of children

aged 6–23 months old were conducted, in the form of surveys. Anthropometric measures of 1,552 children aged 6–23 months were also collected.

The survey results are not nationally representative. They only apply to the seven sites surveyed but the results will be used to inform ongoing programming efforts in all of the 14 intervention districts.





## A SNAPSHOT OF HOUSEHOLDS AND RESPONDENTS

**A total of 1,637 households were selected for the survey. They all belonged to Ubudehe<sup>2</sup> 1 (405), 2 (637) or 3 (547). The mean number of household members is 5.3, with an average of 1.4 children per household below the age of 5. All households had at least one child between 6 and 23 months of age.**

The primary caregiver was overwhelmingly the biological mother (98 per cent). The majority (77 per cent) of children lived with both biological parents. Only 8 per cent of households were headed by a single female (female-headed households). 4 per cent of primary caregivers reported having a disability or chronic illness.

The average age of the primary caregiver was 31.2 years, and the majority of primary caregivers were married or living with a partner. The vast majority (95 per cent) of primary caregivers are farming as main occupation. Regarding educational attainment, 71 per cent of the primary caregivers had primary education and 11 per cent secondary education.

Most households in the survey (91 per cent) owned land. The size of the land however was on average small, with almost half of the respondents owning land between 0-0.09 hectares. Nearly 62 per cent of households owned at least one animal. Just over half

(51 per cent) of respondents reported being part of a community savings group. In terms of household spending, households spent around double the amount on education (6,745 Rwf) compared to medical expenses.

On decision-making in the household, fathers reported deciding how money is used/spent in the households twice as often as mothers, but mothers were more likely to decide what the child eats, if the child attends ECD services and what action to take if the child was sick.

<sup>2</sup> In Rwanda, households are classified into four socio-economic classes known as Ubudehe categories. This classification uses a socio-economic assessment tool (questionnaire) and community-based categorization system, organizing all households in Rwanda according to their living standards.



## NUTRITION

**The value of good child nutrition cannot be overstated. Nearly half of all deaths in children under 5 globally are attributable to undernutrition. Poor nutrition in early childhood can lead to stunted growth, which is associated with impaired cognitive ability and reduced school and work performance.**

**In this section, indicators of nutritional status and food security among surveyed children and households are presented. They include the prevalence of malnutrition; infant and young child feeding practices; consumption of fortified food products; participation in and access to community-based nutrition programming; and measures of food security.**

### Malnutrition

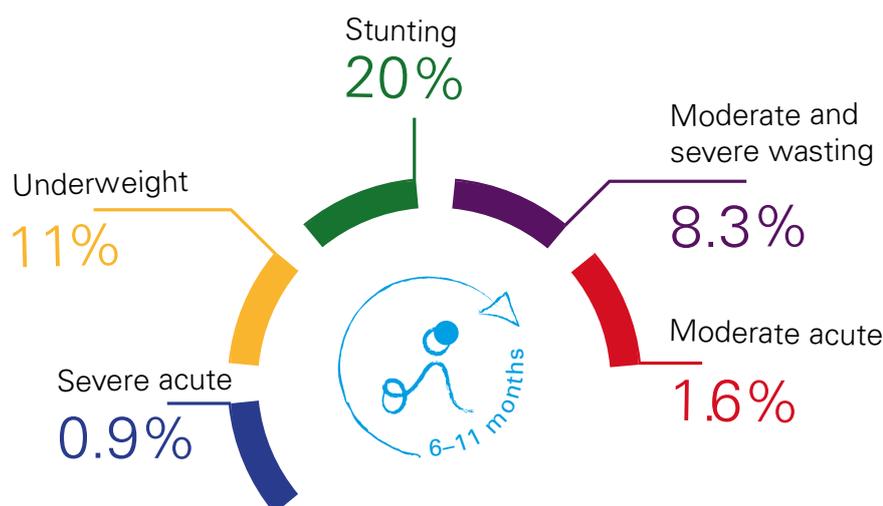
Malnutrition remains a considerable challenge in Rwanda, affecting children’s ability to thrive and fulfil

their full potential. Overall, 31 per cent of surveyed children aged 6–23 months which anthropometric measures were taken were stunted. This is similar to the stunting level of children under 2 found in the 2018 Comprehensive Food Security and Vulnerability Assessment<sup>3</sup>.

There were, however, disparities based on gender, location and income status. Boys (35 per cent) are more likely to be stunted than girls (27 per cent). Children experience the highest levels of stunting in Rutisiro district (40 per cent) and among Ubudehe 1 households (41 per cent) and the poorest households<sup>4</sup> (38 per cent).

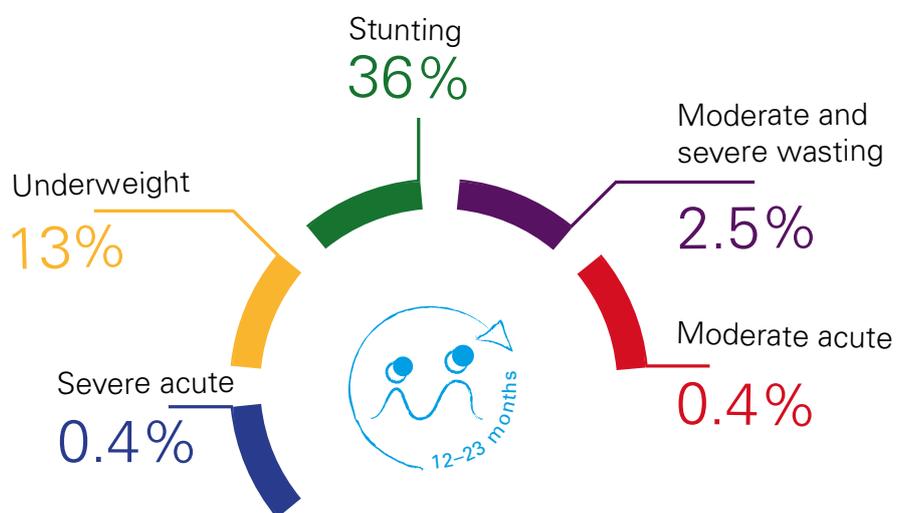
With regards to other forms of malnutrition, 13 per cent of surveyed children were underweight and 3.4 per cent moderately or severely wasted.

### Children’s nutrition status



<sup>3</sup> Programme WF. Comprehensive food security and vulnerability analysis | Rwanda 2018. 2018.

<sup>4</sup> The 1,637 households in the sample were analyzed according to the wealth index, which is an asset-based index, providing a relative measure of poverty. The wealth index created five almost equal quintiles amongst the sampled households, from poorest to least poor household within the sample.



## Infant and young child feeding practices

Good feeding practices, in addition to access to quality health care and adequate sanitation and hygiene, are key for child survival and development in the early years. Relevant infant and young child feeding practices in the surveyed districts are presented below.

### Breastfeeding

Breastfeeding for the first few years of life protects children from infections, provides an ideal source of nutrients, and is economical and safe, particularly in settings where access to clean water is a challenge. The World Health Organization (WHO) recommends breastfeeding until the child is two years of age or older.

The rate of breastfeeding was high – between 95 and 98 per cent – among children in the three age groups: 6–7 months, 8–9 months and 10–12 months. 91 per cent of children 12–23 months are still being breastfed. There were minimal differences between survey sites, mothers' educational attainment and literacy, household wealth, and Ubudehe status.

### Introduction of complementary feeding

Appropriate complementary feeding of children from 6 months to 2 years of age is particularly important for growth and development and the prevention of malnutrition. Complementary feeding should begin at six months of age. While the vast majority of surveyed children aged 6–8 months (92 per cent) are fed solid, semi-solid or soft food, 8 per cent of children have experienced delayed initiation of complementary feeding.

### Minimum meal frequency

Among children 6 months and older, minimum meal frequency<sup>5</sup> is a proxy for energy intake from foods other than breastmilk. In the survey, 57 per cent of children aged 6–8 months received minimum meal frequency. This is higher than the national average of 42 per cent but still means that more than 4 out of 10 children in this age group are not eating enough food. Among children aged 6–23 months, an even greater portion is not receiving adequate food intake – 5 out of 10 children.



<sup>5</sup> In order to meet the criteria for minimum meal frequency, breastfed children aged 6–8 months require at least two complementary feedings of solid, semi-solid, or soft foods and breastfed children 9–23 months require at least three complementary feedings. If children are not breastfed, the minimum meal frequency for children 6–23 months is four meals per day, also including milk feeds other than breastmilk.

### Minimum dietary diversity

Minimum dietary diversity is defined as children receiving foods from at least four different food groups in the previous 24 hours from seven different food groups<sup>6</sup>. Less than 3 in 10 children (27 per cent) aged 6–8 months get minimum dietary diversity. A greater percentage of older children (12–23 months) eat a diverse diet – 38 per cent. The results showed that the poorer the household and the less educated the mother, the more likely children are to eat a poorer quality of diet and not receive minimum dietary diversity.

### Minimum acceptable diet

A minimum acceptable diet is one that consists of both minimum meal frequency and minimum dietary diversity. Less than a quarter (24 per cent) of breastfed children aged 6–23 months received a minimum acceptable diet. The wealthier the households, the more likely children aged 6–23 months were to get a minimum acceptable diet: 38 per cent in the wealthiest households compared to 11 per cent in the poorest. Gatsibo district has the highest rate of children aged 6–23 months with a minimum acceptable diet (40 per cent) and Burerea the lowest (17 per cent).

### Consumption of Vitamin-A rich and iron-rich food

Locally available vegetables and fruits such as pumpkin, carrots, squash, yellow and orange sweet potatoes, mangoes, papayas, tomatoes, and passion fruit are an excellent dietary source of vitamin-A, which is essential for good immunity and eyesight.

In the survey, 47 per cent of children aged 6–8 months consumed vitamin-A rich food, with a decrease observed as children got older and with

<sup>6</sup> The seven food groups are: grains, roots, and tubers; legumes and nuts; dairy (milk, yogurt, and cheese); flesh foods (meat, poultry, fish, liver and organ meats); eggs; vitamin A-rich fruits and vegetables; and other fruits and vegetables.

the poverty level of a household. Most notably, there were large geographic disparities: in Gicumbi 69 per cent of children 6–23 were given vitamin-A rich food compared to only 21 per cent in Nyaruguru.

Measuring consumption of iron-rich foods is an important indicator of micronutrient adequacy. Iron-rich foods in this survey included red meat, poultry, fish, liver, and organ meats. It is clear that access to such food is beyond the reach of most households in the survey. Only 18 per cent of children aged 6–23 months consumed iron-rich foods.

Children aged 6–23 received a significant portion of their iron intake from iron-fortified food (39 per cent) rather than iron-rich food (18 per cent). This has important implications for the effectiveness of improving children's dietary iron intake through food fortification rather than consumption of meat.

### Consumption of micronutrient powders

Micronutrient supplementation, including micronutrient powders (MNPs)<sup>7</sup> and vitamin A, are used to reduce anaemia and to promote healthy growth in children. In the sampled districts, only 1 in 3 children aged 6–23 months (35 per cent) consume MNPs. Children who received MNP get this on an average of 1.7 days per week. This is lower than the recommended dosing of 2–3 days per week.

Interestingly, even though MNPs are not particularly targeted at Ubudehe 1 households, children in these households fare better than children in Ubudehe 2 and 3 households with regards to receiving MNPs and the number of days of consumption of MNP. Respectively 46 per cent of children in Ubudehe 1 households and 24 per cent for both Ubudehe 2 and 3 households.

<sup>7</sup> MNPs are single-dose packets of vitamins and minerals in powder form that can be sprinkled onto any ready-to-eat semi-solid food consumed at home. The powders are used to increase the micronutrient content of a child's diet without changing their usual dietary habits. The sachets are composed of 15 essential vitamins and minerals, including iron, vitamin A and zinc.

### Consumption of fortified cereal-blended foods

Fortified blended foods (FBF) are partially pre-cooked and milled cereals, which are fortified with micronutrients (vitamins and minerals) and made into porridge. The Government's Shisha Kibondo FBF programme aims at providing highly nutritious fortified food to Ubudehe 1 and 2 families with children aged 6–24 months, pregnant women and breastfeeding mothers. Only 15 per cent of all surveyed children consumed FBF, with children in Ubudehe 1 twice as likely to consume FBF (34 per cent).

### Consumption of Vitamin A supplementation

Vitamin A supplementation is a critical child survival intervention, and helps to support growth and combat infections. In Rwanda, all children between 6 months and 5 years of age are recommended to receive a high-dose of vitamin A twice a year. This intervention seems to be effective as nearly 9 in 10 survey children (88 per cent) had received a vitamin A supplement in the last six months.

### Consumption of deworming medication

Intestinal worms are common causes of infection during childhood, with significant negative effect on the growth and development. Periodic deworming, together with improvements in access to WASH and health education, can reduce parasitic infections considerably.

Deworming interventions have reached most children in the survey as 82 per cent of 12 to 23-month-olds were de-wormed in the past six months. Of interest is the fact that Burera district has the lowest rate of deworming and also vitamin A supplementation, indicating that increased attention and investment needs to be paid to service delivery and/or community sensitization in this location.

### Community cooking demonstrations

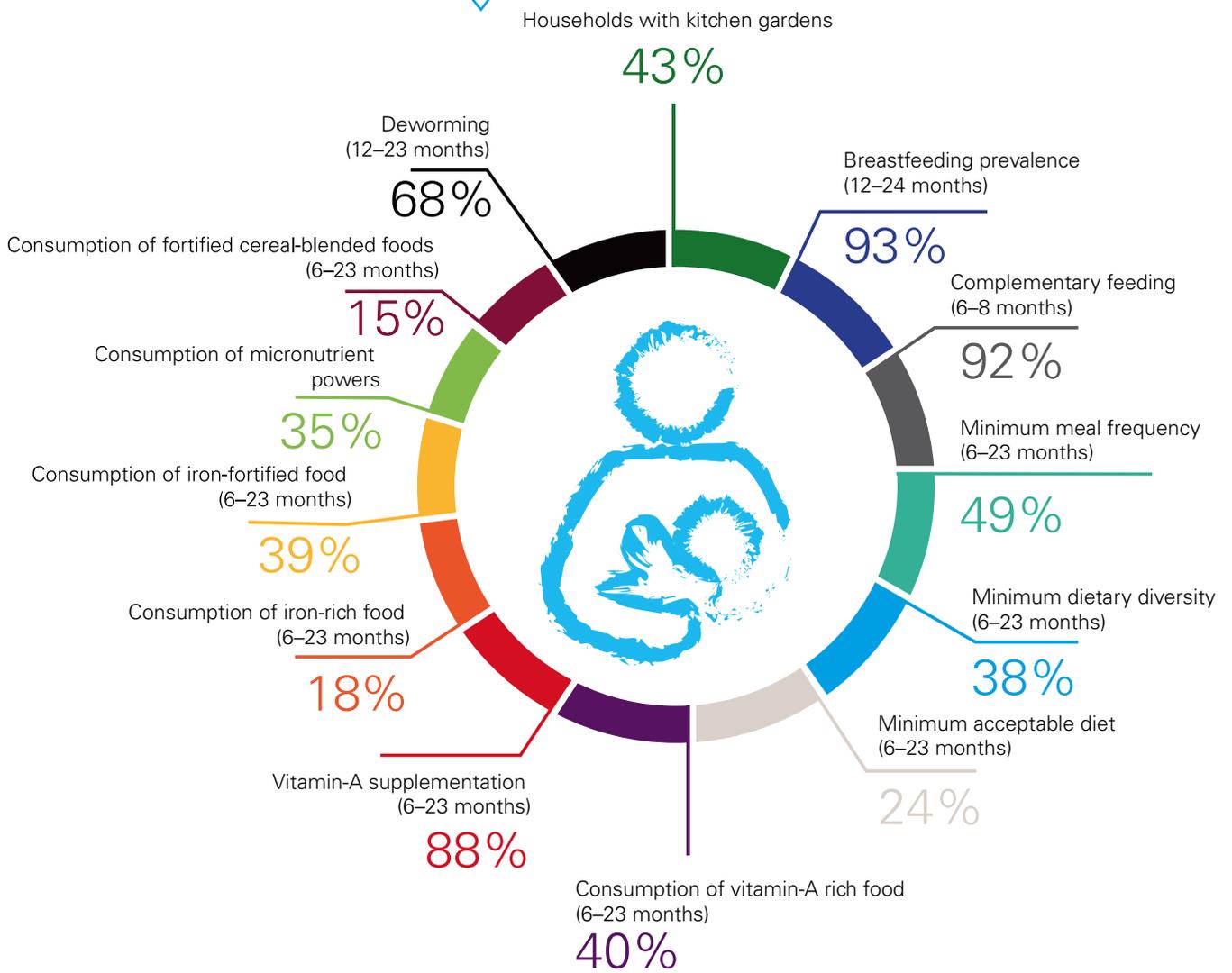
Caregivers were asked about their awareness of cooking demonstrations conducted by community health workers. Sixty-one per cent of the total sample was aware. Among these, 59 per cent had attended at least one demonstration. Illiterate caregivers reported a much higher attendance rate than caregivers with secondary or higher education: 63 per cent and 44 per cent, respectively. In Burera district, the attendance rate was 90 per cent compared to 38 per cent in Rutsiro. The reasons for this are unclear and need further investigation.

### Household kitchen gardens

The DHCR programme supports the poorest households through provision and distribution of small livestock, seeds and other materials needed to establish kitchen gardens. By inspection, 43 per cent of households had physically observed vegetable plots or kitchen gardens. A higher portion of wealthier households had vegetable gardens compared to poorer households, gradually increasing from 35 per cent to 49 per cent, with a slight drop in the fourth wealth quintile.



Key indicators on infant and young child feeding practices



### Household vulnerability to food insecurity

The food security situation of households and their vulnerability to various shocks that negatively impact food security were assessed.<sup>8</sup> Households' economic vulnerability and asset depletion were also assessed. The findings revealed the following:

- Food insecurity is prevalent: more than 7 in 10 households (72 per cent) had compromised on their normal food intake in the past seven days, with the poorest households (85 per cent) and those belonging to Ubudehe 1 (83 per cent) most affected.
- Almost half of the surveyed households (45 per cent) experienced severe food insecurity.
- Households in Burera district reported the highest levels of food insecurity and stress levels and Gatsibo the lowest levels, according to the Reduced Coping Strategy Index.<sup>9</sup>
- Almost 9 in 10 households (88 per cent) used negative coping strategies when faced with the lack of food or insufficient money to buy food. The most frequently used ones were to purchase food on credit or borrow food, harvest immature crops, and consume seed stock that were to be saved for next season.
- Only a mere 8 per cent of households had adequate household food provisioning to last them for a 12-month period.

<sup>8</sup> Measurements of household food security in this study included four methods, namely: the Reduced Coping Strategy Index (rCSI); negative coping strategies used; Months of Adequate Household Food Provisioning (MAHFP); and the Food Insecurity Experience Scale (FIES).

<sup>9</sup> The Reduced Coping Strategy Index is assessed using questions to households on whether they had compromised on their normal food intake including not having had enough food or money to buy food in the previous seven days and categorized across five different coping strategies which are ranked with difference in severity, including: relying on less preferred and less expensive foods; borrowing food; limiting portion size at mealtimes; restricting consumption by adults in order for small children to eat; and reducing the daily number of meals eaten. These compromising behaviours were used to calculate the reduced coping strategies index (rCSI).





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**CHILD HEALTH**  
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**Children need good health and nutrition to survive and thrive in early childhood and beyond. To ensure child survival and development, Rwanda has aligned its new strategic plans and targets to achieve health-related Sustainable Development Goals (SDGs), with a focus on improving child and maternal health.**

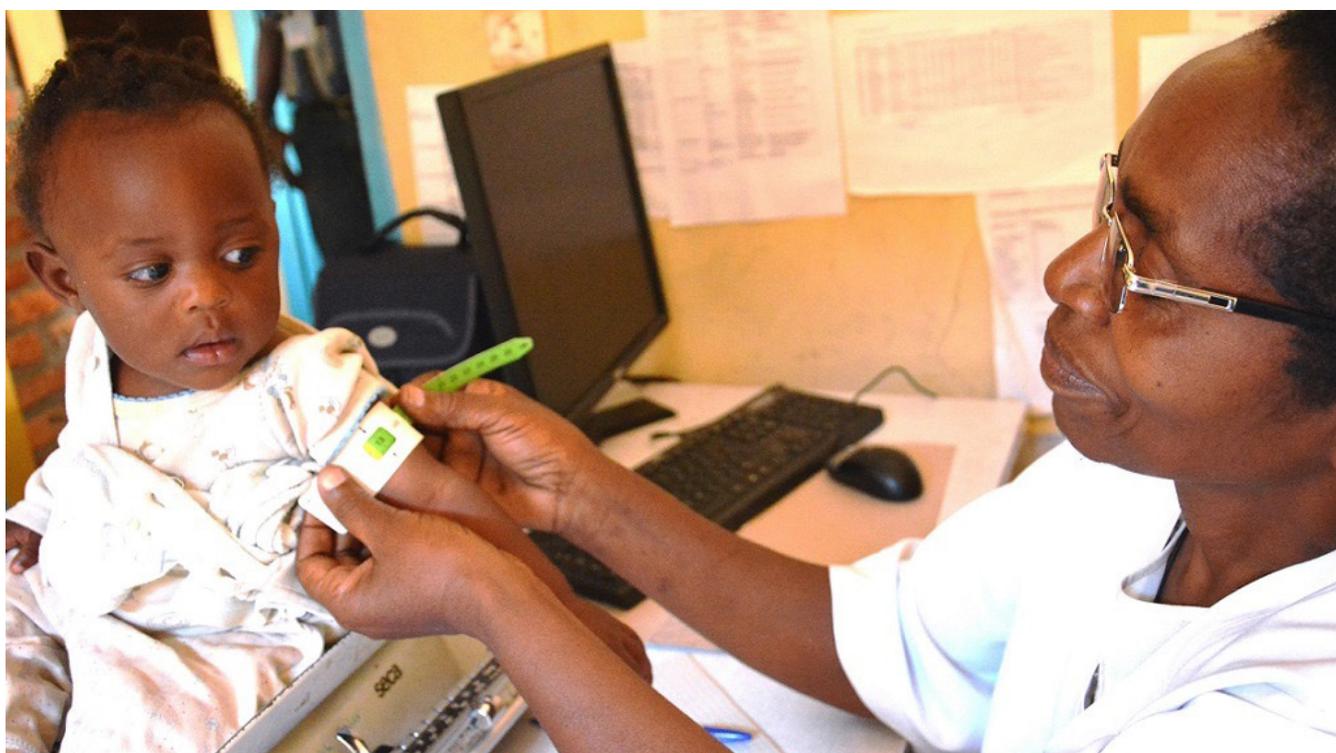
**This section presents a summary of the leading causes of morbidity, mortality, and malnutrition among children under 5. Two key indicators – which have a direct impact on child development, and especially stunting – are considered: prevalence of diarrhoea due to its association with malnutrition; and prevalence of malaria, which is still the leading cause of child death in the country. In addition, data is presented on health-seeking behaviour, health insurance and key child and maternal health interventions.**

## Diarrhoea

Diarrhoea is a key influencer of the nutrition status of young children, with the relationship between the two bidirectional: diarrhoea leads to malnutrition while malnutrition aggravates the course of diarrhoea.

It is therefore critical that young children with diarrhoea are treated with oral rehydration solution (ORS) or a recommended homemade fluid (clean water, sugar and salt), complemented by access to safe drinking water, improved sanitation and hand washing with soap.

In the survey, children aged 12–23 months had a similar reported prevalence of diarrhoea to their younger counterparts aged 6–11 months: 31 per cent and 34 per cent, respectively.



However, a greater percentage of caregivers of the older children (65 per cent) sought treatment for diarrhoea compared to the caregivers of the younger cohort (54 per cent).

When looking at the educational level of the primary caregivers of the older age group (12–23 months), it is clear that the more educated the caregiver, the more likely a child with diarrhoea was taken for treatment: 78 per cent for primary caregivers with secondary education or higher; 65 per cent for those with primary education; and 59 per cent for those with no education.

When it came to socio-economic status, it is interesting to note that children aged 12–23 months living in the poorest households were more likely to get treatment (72 per cent) than children living in the wealthiest households (59 per cent).

Of concern is that fact that under a quarter (24 per cent) of children aged 6–11 months and less than a third (31 per cent) of the older children aged 12–23 months were given ORS or recommended homemade fluid.

### Malaria and fever

Although malaria deaths have decreased dramatically in Rwanda – by 90 per cent between 2005 and 2011 – 6 per cent of children under 5 still die from this disease. The survey found that over a third (35 per cent) of children aged 6–23 months had fever in the two weeks preceding the survey, which is a proxy for malaria.

In terms of treatment, two thirds (67 per cent) of children aged 6–23 months were taken for treatment, with Gicumbi district having the highest rate of treatment seeking (90 per cent) and the lowest percentage of fever prevalence (23 per cent).

Malaria is a preventable and curable disease.

Measures such as the use of insecticide treated bed nets can greatly reduce the risk of contracting malaria, and prompt treatment with effective drug regimes can save lives.

The majority of the survey households (87 per cent) owned at least one mosquito net but the rate of usage for children sleeping under a net (80 per cent) was below that of ownership, with usage declining as the rate of household poverty increased. Only 70 per cent of children aged 6–23 months slept under a net in the poorest households compared to 91 per cent from the wealthiest households.

### Mother's health

Antenatal care services play a key role in healthy fetal development and reduction of newborn mortality. Up until recently the WHO recommended that women attend at least four antenatal care visits – a practice that is promoted in Rwanda. WHO adjusted their guidelines in 2016 and now recommend eight antenatal visits. Rwanda has yet to formally adopt this new guidance.

The vast majority of women in the survey – 96 per cent – went for at least one antenatal care visit during their last pregnancy. However, less than half of the women (45 per cent) reported having attended at least four antenatal care visits.

A woman's educational level had the greatest impact on antenatal care attendance, with 87 per cent of women with no education attending antenatal care compared to 95 per cent of women with secondary or higher education.

Optimal maternal health and nutrition are critical for fetal growth and newborn health. This is why WHO recommends deworming pregnant women through preventative chemotherapy and supplementing with iron and folic acid to prevent maternal anaemia, low birth weight and preterm birth.

In the survey, close to a third (32 per cent) of women reported that they took deworming medication during their last pregnancy, which is below the national average. With regards to iron supplementation, over half of the women (56 per cent) took iron tablets during their last pregnancy, with wealthier, more educated, and higher Ubudehe status women more likely to receive iron supplementation.

### Health insurance

Rwanda has an innovative community-based health insurance scheme called Mutuelle de Santé. The system has been responsible for increasing access to health services and contributing to drastic reductions in child morbidity and mortality. National coverage of Mutuelle de Santé was high as 97 per cent in 2014–2015<sup>10</sup>. The poorest households – those belonging to Ubudehe 1 – get their Mutuelle de Santé premiums paid by the state.

Other health insurance includes Military Medical Insurance (MMI), La Rwandaise d'Assurance Maladie (RAMA) for government employees, and private insurance schemes that are mostly out of reach for poor and vulnerable households.

Two thirds (66 per cent) of all household members in the survey, including children, were covered by medical insurance. As household wealth increased, so did the coverage of medical insurance for all household members, with the wealthiest households at 77 per cent and the poorest at 52 per cent.

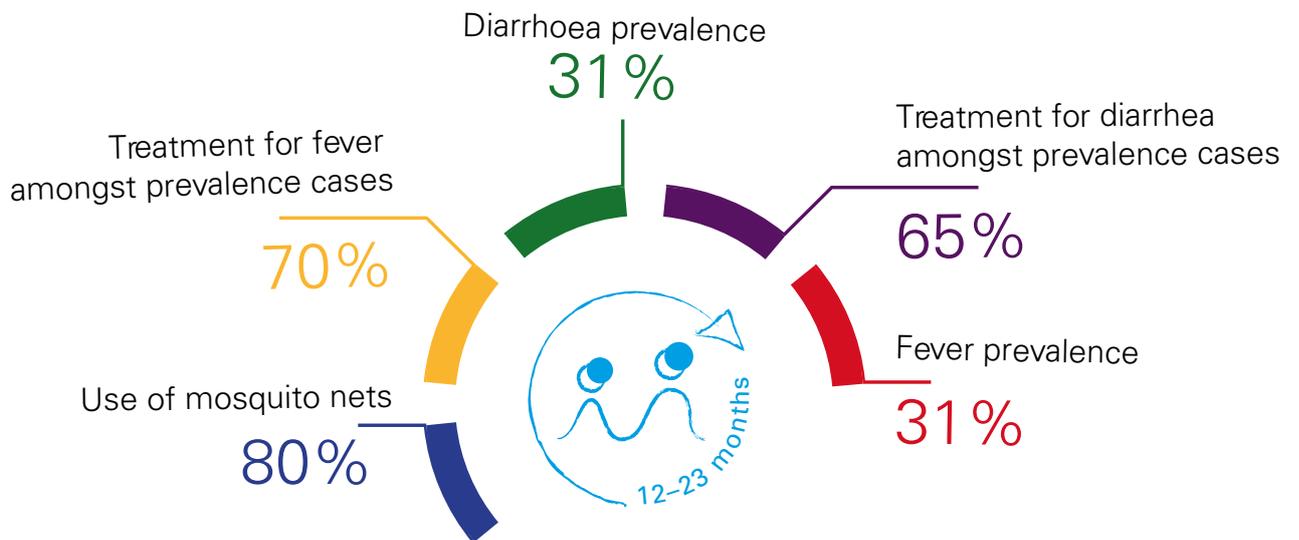
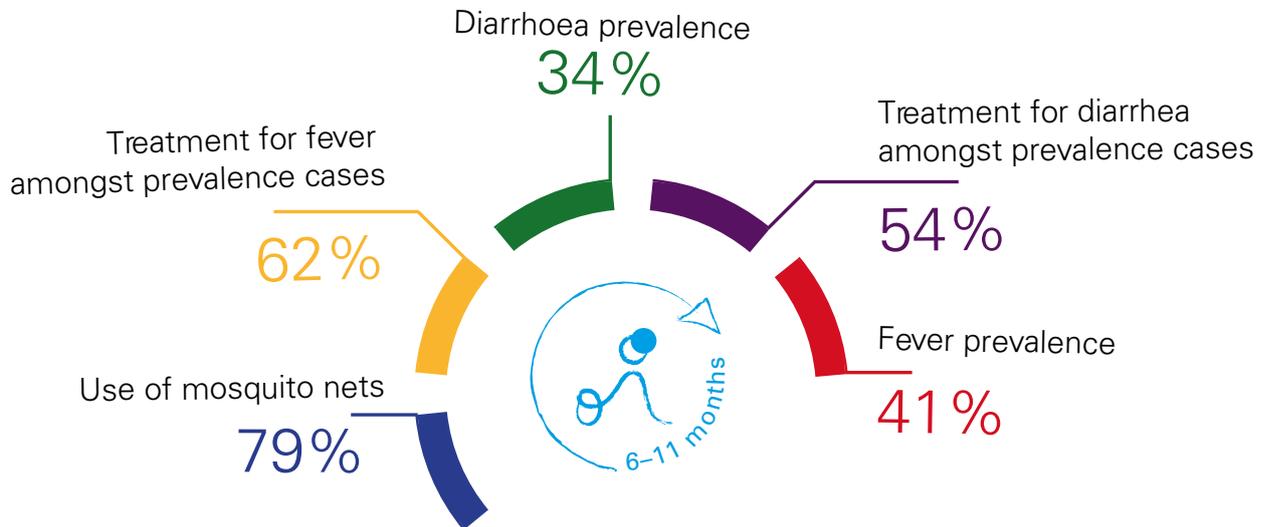
The same trend was observed for children aged 6–23 months in the household. The majority of the wealthiest children (80 per cent) were covered by health insurance while only 56 per cent of the poorest children had health insurance.

Children in Ubudehe 1 households had higher health insurance coverage (60 per cent) compared to children in Ubudehe 2 (48 per cent). This is most likely as a result of subsidized Mutuelle de Santé enrolment for Ubudehe 1 households.



<sup>10</sup> National Institute of Statistics of Rwanda MoH, and ICF International. Rwanda Demographic and Health Survey 2014-2015. Rockville, Maryland, USA: NISR, MOH, and ICF International;2015

Key indicators on child health and health-seeking





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**EARLY CHILDHOOD  
DEVELOPMENT**  
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**Early childhood development covers behaviours towards, practices for, and resources that are provided to young children – with the active participation of their parents and caregivers – to help them grow and develop their full potential.**

**This section explores childcare practices in the home environment. It presents findings on inadequate care and violent discipline; access to opportunities for learning in the home, mother/child interactions and children’s overall developmental status. Together, these individual and home environment factors provide a picture of children’s development and opportunities for thriving.**

#### Inadequate care of young children

Children need adequate supervision to be protected from harm and for their early learning and stimulation. However, many children do not get adequate adult supervision and are left alone or left in the care of other young children.

Overall, more than a third (35 per cent) of surveyed children aged 6–23 months experienced inadequate care<sup>11</sup> of any kind in the last seven days prior to the survey. The inadequate care most commonly experienced was being left in the care of another child under the age of 10 (32 per cent).

Children in households in which the primary caregiver has secondary or higher educations were less exposed to any inadequate care (24 per cent) than children in households with primary caregivers who had primary education (37 per cent) or no education (35 per cent).



11 Inadequate care is defined as being left in the care of someone under 10 years old for more than one hour in the past week or being left alone for one hour or more in the past week.

#### Children’s exposure to violence discipline

Teaching children self-control and acceptable behaviour is an integral part of child discipline in all cultures. However, in many country settings around the world, children are often exposed to harsh and violent disciplinary practices.

In the survey, it was found that 59 per cent of children were reportedly exposed to any violent discipline<sup>12</sup>. Overall, 40 per cent of children experienced physical punishment, 28 per cent experienced psychological aggression and 1.5 per cent of children experienced severe physical punishment. The study showed no significant difference between boys and girls in being exposed to violent discipline.

Violent discipline is often thought to be an effective way of getting children to behave well. When parents in the survey were asked whether physical punishment was necessary in raising children, nearly half of primary caregivers (48 per cent) said that it was.

#### Caregiving practices and home environment

The quality of home care is a significant determinant of a child’s development, especially in the first few years of life. Children thrive when they are nurtured, have positive interactions with the adults around them, and have access to books, toys and other playthings and are stimulated to play with them.

12 Any violent discipline is defined as any psychological aggression as punishment or physical punishment.

In the survey, caregivers were asked whether the mother, father, or another adult in the home had done any of the following activities that promote learning with the child: read or looked at books; told stories; sang songs; took the child outside the home/compound; played with the child; or named, counted or drew things with the child.

Only 41 per cent of primary caregivers of children aged 6–23 months engaged in four or more activities to promote learning or school readiness in the past three days. Children in the wealthiest households and those with educated parents stood the best chance of being stimulated by their parents or caregivers. This rate goes from 31 per cent for the poorest quintile households to 48 per cent to the wealthiest quintile households and from 30 per cent when parents record having no education through to 51 per cent when parents have recorded secondary education attainment.

The most common early stimulation activity that 85 per cent of caregivers reported was “played with the child”. The least common early stimulation activity was “read to/looked at books with the child” – at 19 per cent. Mothers, rather than fathers, engaged in early stimulation activities most often across all of the different activities.

Almost a quarter of households (24 per cent) have homemade or purchased toys that children play with. However, very few households (7 per cent) reported having any children’s or picture books in the home at all.



### Mother-child interactions

Interactions between parents or caregivers and children are essential to children’s healthy development. In this study, the responsiveness of interactions between caregivers and the child was measured using the Observation of Mother-Child Interactions (OMCI)<sup>13</sup>.

The mean overall score on the OMCI was 26.7, which is 47 per cent of the maximum possible score. The mean for caregivers was 19, which is 52 per cent of the caregiver maximum possible score. The mean for children was 8.1 for children, which is 37 per cent of the child maximum possible score.

These scores are sub-optimal, showing moderately responsive interactions and point to a significant need for improvement in interaction practices to increase responsive play.

Younger children (6–11 months), children in poorer and lower Ubudehe status households and children with lesser educated and literate caregivers also experienced less responsive play interactions.

### Itetero radio programme

To promote positive child stimulation, an early childhood educational programme called Itetero is broadcast on a weekly basis by Rwanda Broadcasting Agency (RBA) with UNICEF support. The survey sought to find out the reach and effectiveness of Itetero.

Just over 23 per cent of the surveyed households said that they have listened to Itetero, with more than a third (36 per cent) listening on a weekly basis. The vast majority of listeners (90 per cent) reported that they enjoyed (liked or strongly liked) the programme.

<sup>13</sup> The OMCI is an observational measure, where the primary caregivers are provided with a children’s book in the local language and asked to play with their child for five minutes. A trained observer scores the play interaction by looking for signs of affection, and promotion of learning, and enjoyment, which characterize a positive, responsive interaction.

The wealthiest households reported much higher percentages (44 per cent) of having ever listened to Itetero as compared to households in the poorest wealth quintile (8 per cent). This is expected since owning a radio is one of the assets correlated with higher wealth status in Rwanda. The same trend is held true for Ubudehe status and a primary caregiver's educational and literacy levels. Among those who did not listen to Itetero, the majority (63 per cent) reported that it was because they did not own a radio.

### Access to ECD services

Access to ECD and early learning services helps improve children's development and readiness for school.

Given that this baseline study focused on children aged 6–23 months, the information gathered on access to ECD services focused mainly on parenting and raising young children at home. Other ECD services for children under the age of 2 are not yet very common in Rwanda, but may include mobile crèches or other childcare support. For this reason, only three children aged 6–23 months in the study were reported to be attending any ECD services. However, amongst the caregivers, 5 per cent reported participating in ECD services.

Just under half of the surveyed households (46 per cent) had children in the 4–6 years age group. Among these children, nearly 35 per cent attended either a nursery school or pre-primary school. Children whose primary caregivers had secondary education or higher attend nursery or pre-primary school twice as often as children whose primary caregivers had a lower educational attainment.

### The Caregiver-Reported Early Development Index

The Caregiver-Reported Early Development Index (CREDI) is a measure of early childhood development for children from birth to age 3. It is a tool that captures motor, cognitive, and socio-emotional skills of the child within a certain population.<sup>14</sup>

In this survey, the CREDI score was obtained for each of the three age groups: 6–11 months, 12–17 months and 18–23 months. The results reveal the following:

- Children aged 6–11 months: Able to complete 10–11 out of the 20 items asked, giving them an average total summary score of 39.6 This puts their average standardized scores just above the 50<sup>th</sup> percentile.
- Children aged 12–17 months: Able to only complete 8–9 of the 20 items asked, giving them an average summary score of 47.1. This is just slightly below the 50<sup>th</sup> percentile.
- Children aged 18–23 months: They fared the worst compared to the other age groups and were only able to complete 4–5 items out of 20 items asked, giving them an average summary score of 50.9. This is below the 25<sup>th</sup> percentile.

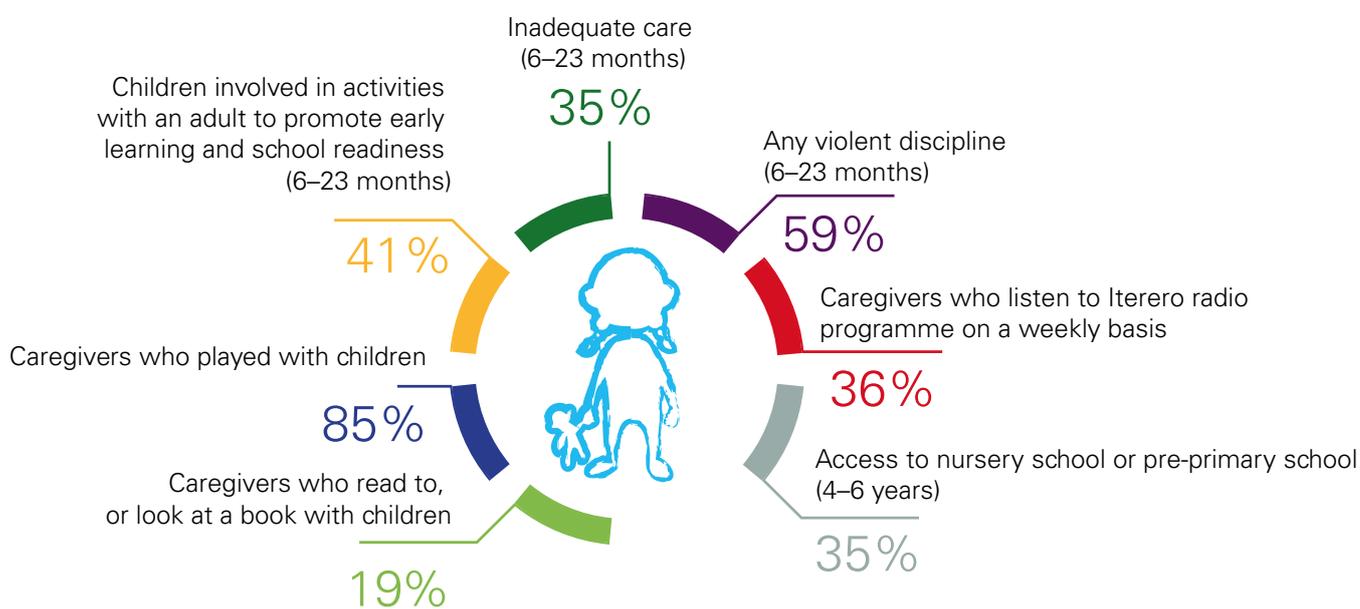
When children's skills were assessed by domain, it was found that children aged 6–11 months performed highest in the domains of motor skills and cognition, and lowest in language and social-emotional skills. For children aged 12–17 months, social-emotional skills were highest, but children's performance on motor, language, and cognition all dropped compared to achievements at the younger age ranges. Older children (18–23 months) performed particularly poorly in the cognitive domain.

<sup>14</sup> CREDI is not an individual screening tool to detect early developmental delays or disorders.

This information can help guide programming to help children achieve expected milestones in their development. For example, more emphasis on language and responsive communication in the earliest ages could be considered while greater focus could be placed on broader learning and stimulation that allows children to practice motor skills, build on their communication, and engage in activities to promote cognitive development.



Key indicators on ECD





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**WATER, SANITATION  
AND HYGIENE**  
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**Consistent and correct practice of key WASH actions is necessary for child growth and development, as well as for health and resiliency of communities.**

**Rwanda's WASH sector has defined targets to ensure all people are using sustainable water services within 30 minutes of the home and free of contamination by 2024.**

**For sanitation, Rwanda's 2024 target is to have all households using basic sanitation services, ensuring each household has its own improved latrine/toilet and a place to wash hands.**

**The findings on WASH in this study are in line with SDG monitoring indicators as well as Rwanda's Water and Sanitation Sector Strategic Plan (WATSAN SSP) monitoring framework.**

## Water

Data for household water were collected on access to safe drinking water, household water treatment and storage of water before drinking, availability of water, and payment for water services. The findings show that:

- Half of the households (50 per cent) used basic water services,<sup>15</sup> with households with educated caregivers (secondary education or higher), the wealthiest households and households in Gatsibo having the greatest access to basic water services.
- Just over a fifth of households (23 per cent) had access to a limited drinking water service,<sup>16</sup> with households in Nyaruguru, Gicumbi and Burera all having greater than 30 per cent access.

- Over a quarter of households (28 per cent) have access to unimproved water,<sup>17</sup> with the most common type being an unprotected spring. Lower educated households, the poorest households and households in Karongi and Rutsiro were most likely to use unimproved water.



<sup>15</sup> Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing

<sup>16</sup> Drinking water from an improved source for which collection time exceeds 30 minutes for a round trip, including queuing.

<sup>17</sup> Drinking water from an unprotected dug well or unprotected spring.

Treatment of drinking water can improve the safety of drinking water by removing contaminants present in the water. Water can be treated at the source or at the household level. Water treatment at the source in rural areas of Rwanda is rare. The most common way of treating water is therefore at household level, which includes boiling, chlorination, straining through a cloth, and using a water filter. Improving the safety of water is also reliant on whether households safely store water at home in closed storage containers such as jerry cans, bottles and pots.

Most households (64 per cent) do not treat their water or store it safely. Only 14 per cent of household stored water in closed containers and 30 per cent treated their water before drinking. Only 7 per cent of households both store their water safely and treat the water before drinking. The most common water treatment method was boiling the water.

Nearly 20 per cent of the households experienced insufficient drinking water in the past two weeks, with physical inaccessibility to a water source (for example, due to mountainous terrain) and the cost of water reported as the main reasons for water insufficiency.

More than a quarter (26 per cent) of the households paid for drinking water and the most common price range paid per month is between 501 and 1,000 Rwandan francs (RWF). The majority of households (77 per cent) that use a public tap or piped water to their yard paid for their drinking water.

## Sanitation

The study assessed household access to unimproved, limited, and basic sanitation services. The results show that:

- Just over two-thirds of households (64 per cent) used basic sanitation services.<sup>18</sup> The wealthiest households and households in Gatsibo had the highest rate of access to basic sanitation services.
- Only 10 per cent of households used limited sanitation facilities.<sup>19</sup>
- Around a quarter of households (26 per cent) used unimproved sanitation services.<sup>20</sup> Use of unimproved sanitation services was most common among the poorest households and households with uneducated primary caregivers, as well as households in Rutsiro.

## Hygiene and handwashing

Handwashing with soap is the most effective ways of preventing diarrheal and acute respiratory diseases, which are among the top contributors to child mortality in Rwanda. The survey measured access to handwashing facilities as well as the practice of handwashing.

<sup>18</sup> Use of improved facilities that are not shared with other households.

<sup>19</sup> Use of improved facilities shared between two or more households.

<sup>20</sup> Use of pit latrines without a slab or platform, hanging latrines or bucket latrines

The findings show that:

- More than a third of households (36 per cent) had a basic hygiene facility.<sup>21</sup> The wealthiest households were twice as likely to have a basic hygiene facility than the poorest households – 50 per cent compared to 25 per cent.
- A fifth (20 per cent) had a limited hygiene facility.<sup>22</sup> Burera district had the highest percentage (25 per cent) of such households, compared to 15 per cent in Karongi.
- 44 per cent of households had no hygiene facility.<sup>23</sup> The poorest and most uneducated households were most likely to have no hygiene facility.

Primary caregivers were asked about their ability to wash their hands when they wanted to, and the majority (91 per cent) responded positively. The most common time that caregivers reported washing their hands was before meals (82 per cent). Almost 50 per cent of primary caregivers said that they washed their hands after work and after using the toilet. For those who couldn't not wash their hands when desired, the top three reasons given were the lack of water, unavailability of soap, and that soap was too expensive.

### Community hygiene clubs

The Government of Rwanda has a policy for establishing community hygiene clubs in all villages across the country. Members of community hygiene clubs promote hygiene and sanitation and mobilize their communities around these issues.

Nearly 27 per cent of respondents reported that their community had such a club. Of these, 68 per cent stated that the club meets regularly and that they attend meetings. Gicumbi has the highest percentage of community hygiene clubs at 62 per cent while Gatsibo has the lowest at 13 per cent.

While Ubudehe status did not have any effect on whether a household reported their community having a community hygiene club, those households with lower Ubudehe status reported higher percentages of active community hygiene clubs and active participation in them – 79 per cent for Ubudehe 1 and 60 per cent for Ubudehe 2.

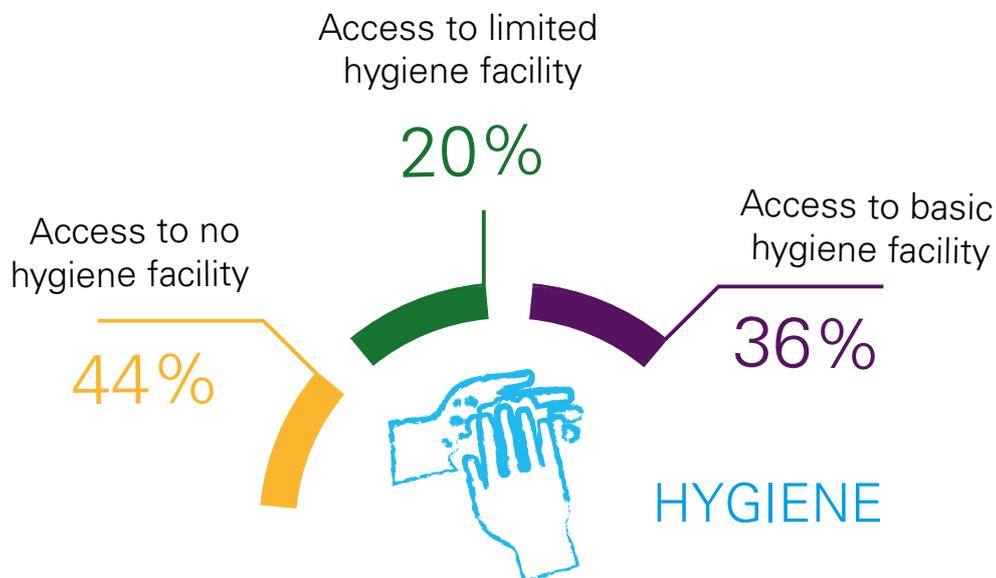
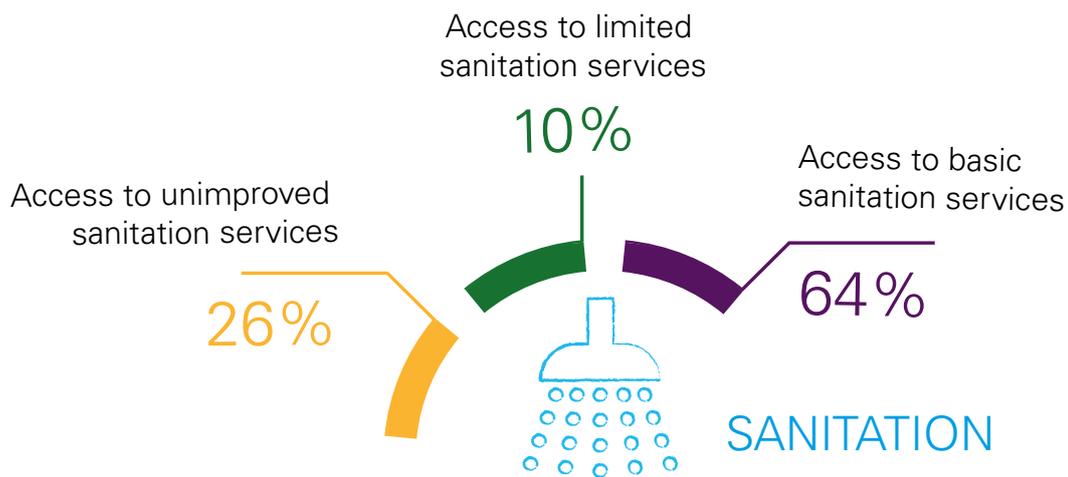
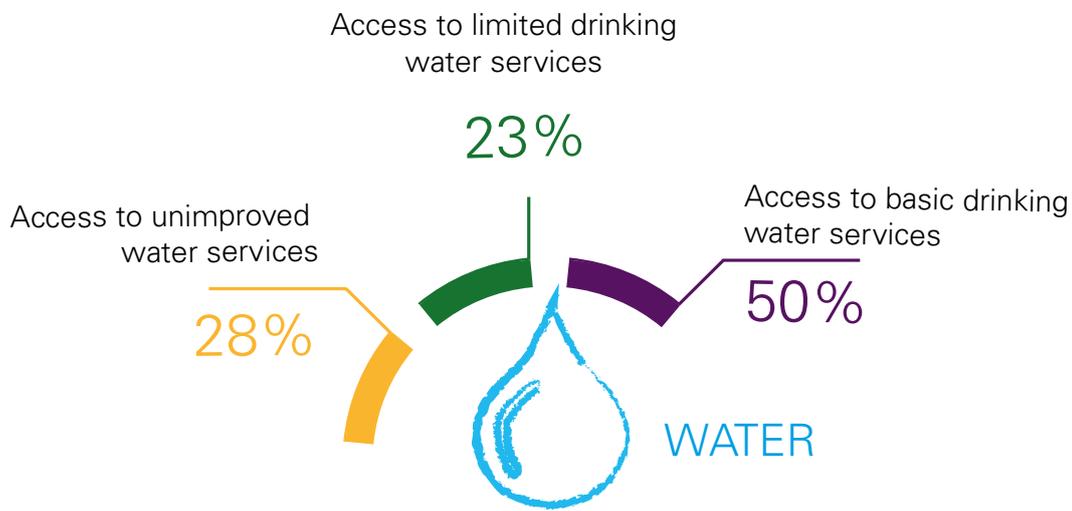


21 A handwashing facility on premises with soap and water.

22 A handwashing facility on premises without soap and water.

23 No handwashing facility on premises.

Key indicators on WASH





**SOCIAL PROTECTION**

**One of Rwanda's national social protection programme – known as the Vision 2020 Umurenge Programme (VUP) – provides several services to households in the lowest Ubudehe categories. These services include temporary cash for work projects ('public works'), direct cash transfers for households with no labour capacity ('direct support') and other complementary services for livelihood strengthening including financial services, asset provision and community sensitization programmes.**

Under VUP, public works programming is split between two models:

- **Classic public works** provides short-term work opportunities to extremely poor, labour-endowed households. Typically, the short-term work is labour-intensive, such as digging ditches and building roads, which could take place in areas either near or far from the participant's home depending on where the work is needed.
- **Expanded public works** (supported by UNICEF) targets vulnerable households with caring responsibilities – often female single-headed households with young children – who are unable to benefit from the classic public works programme due to the intensive physical labour demands and childcare and domestic responsibilities. The expanded public works have therefore flexible hours, light labour-intensive work close to home and year-round employment.

The study included an oversampling of expanded public works households in order to be able to have a representative sample of these households. Among the total surveyed households, 19 per cent of households were enrolled and participated in VUP in the past 12 months. Of these, 38 per cent were enrolled in classic public works and 63 per cent in expanded public works.

The expanded public works programme tended to enrol more households from the lower wealth quintiles and Ubudehe, with 80 per cent of households in expanded public works in the lower three wealth quintiles compared to 68 per cent of households in classic public works. For Ubudehe, 92 per cent of households enrolled in expanded public works were in Ubudehe 1 compared to 85 per cent of households in classic public works.

These general trends provide some evidence that the expanded public works approach may be more successful in targeting the poorest of the poor.

Households enrolled in VUP programming were asked about various programme benefits they might have received. Just over a third (34 per cent) received livestock, 34 per cent participated in a savings group, and a much lower percentage – 14 per cent – said that they got skills training as a part of VUP.

As additional analysis, the study compared key indicators between the classic public works and expanded public works households. The main findings are:

#### Land ownership

Land ownership is high among households in classic and expanded public works programmes (93 per cent and 87 per cent, respectively). Unsurprisingly, households in the lowest Ubudehe category and household wealth quintile have the lowest percentages of land ownership compared to the higher Ubudehe categories and household wealth quintiles for both classic and expanded public works households. Over half of the land (56 per cent) owned by expanded public works households is less than 0.1 hectares.

### Insurance coverage for children

All households in Ubudehe 1 are eligible for subsidized health insurance. As per the community-based health policies, health insurance is purchased for the household as a whole, and not by individual members. However, in practice only around half of the surveyed children in both classic and expanded public works households were enrolled in health insurance.

Very few households in the classic public works households (5 per cent) and expanded public works households (6 per cent) reported all members covered by health insurance. The child is covered by health insurance in 66 per cent of classic public works households and 54 per cent of expanded public works households. In Ubudehe 1 and 2 households enrolled in public works, only 60 per cent and 48 per cent of children, respectively, are covered by health insurance.

One of the possible reasons for the low uptake of children in health insurance may be linked to challenges of timely registration of children at birth. Lack of birth registration and certification effectively excludes newborns from access to the health insurance Mutuelle de Santé through the automated Mutuelle de Santé system.

### Household expenditures on drinking water, food, education and health

The survey measured average spending on key households needs and services. For all expenditures measured, classic public works households spent or were able to spend more on their basic needs.

- Overall, 28 per cent of classic public works households spent money on drinking water compared to 16 per cent of households in expanded public works.

- Households in classic public works reported spending slightly more on average on food each week than households in expanded public works – 4,447 Rwf compared to 3,998 Rwf.
- With regards to average spending on education in the previous three months, classic public works households spent slightly more than expanded public works households – 7,069 Rwf compared to 5,730 Rwf.
- Classic public works households spent about twice the amount on medical expenses in the previous three months compared to households in expanded public works (2,543 Rwf vs. 1,233 Rwf).



Households were also asked about negative coping strategies during times of food insecurity over the past 30 days. These included selling household assets, harvesting immature crops, begging and migrating the family, among several other strategies.

The vast majority (93 per cent) of households in both classic public works and expanded public works reported using negative coping strategies. Almost all expanded public works households in Rutsiro (97 per cent) reported engaging in negative coping strategies in the past 30 days.

The expanded public works programme is intended to reduce household vulnerability and avoid the use of adverse coping mechanisms. However, the monthly payment that expanded public works households receive is 10,000 Rwf, which is less than the combined monthly expenditures on basic needs of water, food, education, and health (Rwf 21,398 based on the mean expenditures).

### Family care practices

Inadequate care<sup>24</sup> of children aged 6–23 months was assessed in classic and expanded public works households. Overall, 39 per cent of children in classic public works households experienced any inadequate care in the previous seven days compared to 35 per cent of children in expanded public works households. This is the only indicator where expanded public works households reported more positively than classic public works households, which could refer to the element of child care as part of expanded public works. Interestingly, girls in both classic and expanded public works households are reported to have higher percentages of inadequate care compared to boys.

<sup>24</sup> Any inadequate care is defined as being left in the care of someone under 10 years old for more than one hour in the past week or being left alone for one hour or more in the past week.

Any violent child discipline – defined as any psychological or physical punishment – was also measured. Classic public works households reported a lower percentage (49 per cent) of any violent discipline than expanded public works households (59 per cent) in the past 30 days.

### WASH

Overall, classic public works households were slightly better off than expanded public works households, looking at the WASH indicators:

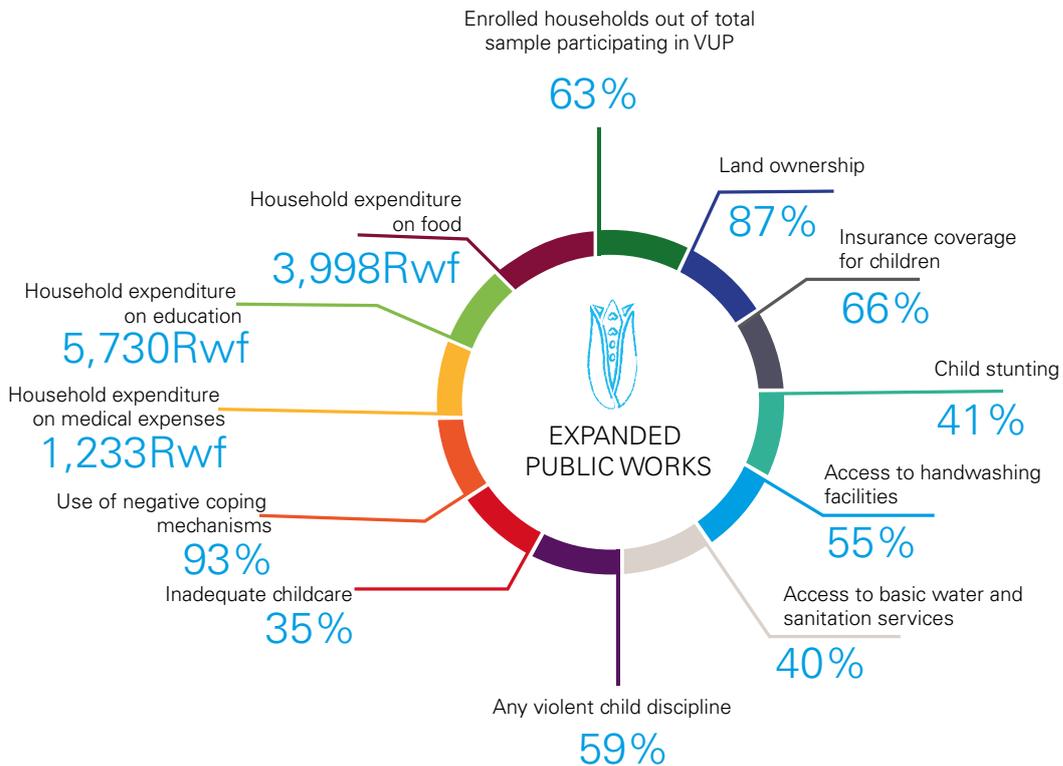
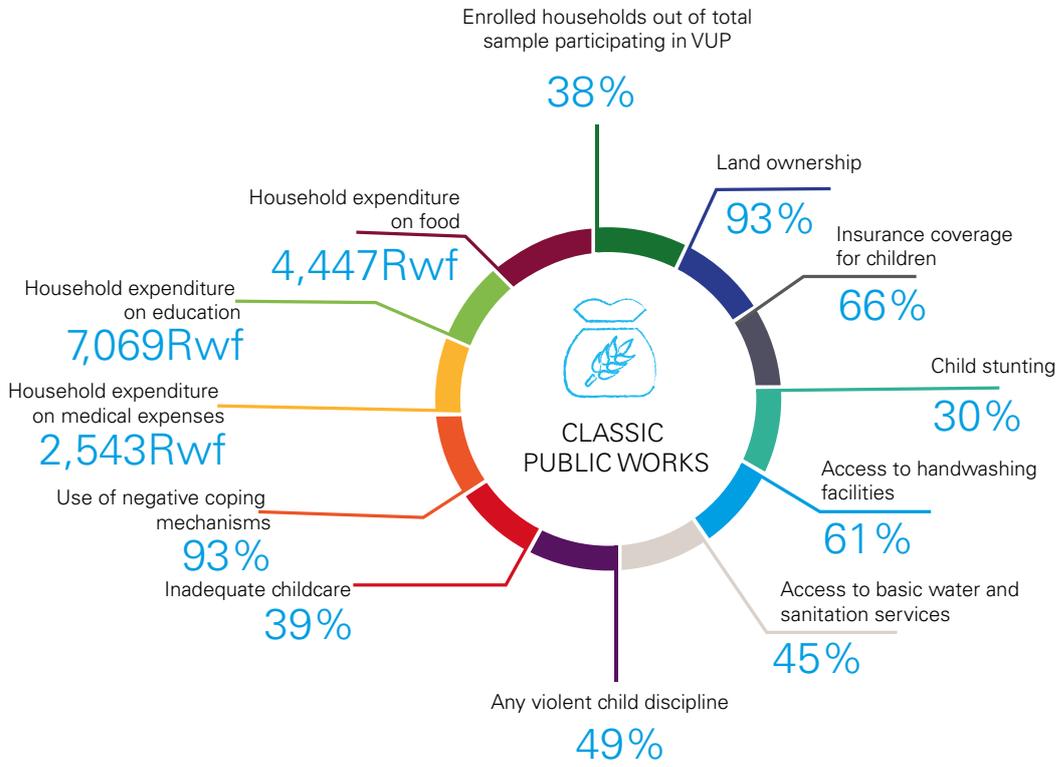
- A higher portion (45 per cent) of classic public works households have access to basic water services and basic sanitation services compared to expanded public works households (40 per cent).
- Handwashing facilities were present in a greater percentage of classic public works households (61 per cent) than 54.9 per cent of expanded public works households (55 per cent).
- Basic hygiene services – handwashing facilities that include both soap and water – were found in 33 per cent of classic public works households and 34 per cent of expanded public works households.

### Nutrition

Children in classic public works households had a lower percentage of stunting (31 per cent) than children in expanded public works households (41 per cent). In line with the findings of the whole sample, stunting rates for boys were higher than for girls.

### Key indicators on social protection

Key indicators on social protection





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**OBSERVATIONS**  
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**The baseline survey of the DHCR programme was implemented in geographic regions selected for their high levels of poverty, participation in social protection schemes and the need for ECD interventions. Though not nationally representative, the study revealed progress in some areas while highlighting key challenges that should be addressed as programme implementation moves forward.**

Educated parents and households with greater wealth are able to provide better care for children.

Overall, children's level of development and access to key services is dependent on the educational and wealth status of their primary caregivers, with the rate of positive practices and other child indicators increasing with educational attainment and wealth.

There is high participation of the poorest households in nutrition-specific interventions such as deworming, vitamin A supplementation and micronutrient supplementation. However, the poorest children remain disproportionately vulnerable to food insecurity, and to lack of access to high impact child health interventions.

The delivery and targeting of the nutrition-specific and nutrition-sensitive interventions need to be strengthened to reach the most vulnerable (particularly the poorest households). Innovative approaches to improve food security and diversity, developed in collaboration with communities, should be pursued.

Infant and young feeding practices are still insufficient – as seen by the continuing high levels of childhood stunting in the surveyed children. However, more analysis is needed to better understand where insufficiencies appear and for what reasons.

Health-seeking behaviour, as well as other health practices contributing to the growth and health of children, remain unexpectedly poor. More information is required to determine the causality of the low uptake of treatment versus improving the delivery of basic health services and potentially related costs.

Access to health insurance remains somewhat low for younger children and may need to be better monitored and understood in order to increase access to basic health services.

Additional efforts must be invested in basic hygiene and sanitation practices, which have a significant impact on children's health and nutrition, while increasing access to basic WASH services. The study shows a commonly found discrepancy between reported ability to wash hands and having the required facilities with water and soap to do so.

The DHCR programme needs to further promote access to ECD and pre-primary services while promoting measures to increase uptake among children from the poorest households. Whereas the study did not measure access to ECD services for older groups of children (this data will be collected at the endline), more than one third of children aged 4–6 years included in the study had access to nursery and pre-primary education.

With regards to early childhood stimulation, more promotion is needed on the presence and use of toys and reading materials/books in households, particularly in the poorest ones, and improve early stimulation activities by caregivers.

Inadequate care of young children and violent child discipline have to be reduced. It is, however, expected that these practices will decline to a certain degree with full implementation of the parenting programme and home visits envisaged under the programme design. There is also a significant need for increased activities to promote children's cognitive development and development of motor and communication skills.

More contextual information on district-specific challenges may need to be obtained in order to addressing specific capacity gaps at later stages of programme implementation.

Due to its equity focus, the study focused on assessing children in the extremely poor households included in the national social protection programme. It revealed that children in class public works households fared better in almost all areas than those in expanded public works households. This can be linked to the fact that the latter was introduced to better target extremely poor and vulnerable households, and is child and gender-sensitive. The impact of the expanded public works programme on the overall socio-economic status of the household and child development will have to be carefully analysed.





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