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SUAAHARA
Building Strong & Smart Families

SUAAHARA II

GOOD NUTRITION PROGRAM

ANNUAL SURVEY YEAR THREE (2019)



January 2020

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Cover Picture: An enumerator interviewing a respondent in Kanchanpur. (Photo: Kenda Cunningham, Suaahara/USAID)

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Executive Summary

Nepal's reductions in maternal and child undernutrition since the mid-1990s have been remarkable, but the high burden persists. Among children under five years, 36% are stunted, 10% are wasted, and 27% are underweight. Additionally, 17% of women of reproductive age (WRA, 15-49 years) are underweight while 41% are anemic (Nepal DHS Survey, 2016). The Government of Nepal (GoN) is rolling out the second phase of their national Multi-Sector Nutrition Plan (MSNP), with support of external development partners (EDPs). *Suaahara II* (SII) is a USAID-funded multisectoral nutrition program, aligned with Nepal's MSNP, and is being implemented in all communities of 42 of Nepal's 77 districts from April 2016 to March 2021. SII's overall aim is to reduce the prevalence of stunting, wasting, and underweight among children under five years of age and to reduce the prevalence of anemia among WRA and children 6-59 months of age. SII works across thematic areas including nutrition, health and family planning (FP), water, sanitation and hygiene (WASH), agricultural/homestead food production (HFP), and governance, using a gender equality and social inclusion (GESI) approach for all interventions.

SII has a large, rigorous monitoring, evaluation, and research system. Annual monitoring surveys, a key component of SII's monitoring system, primarily serve to monitor progress over time related to key SII inputs, outputs, and outcomes in intervention areas. The first SII annual monitoring survey was conducted between June to September 2017 among a representative sample of households with a child under five years by New ERA, a local survey firm. At the household level, mothers were the primary survey respondents. A primary male (or female, if male unavailable) household decision maker, the youngest child's grandmother, and an adolescent girl (10-19 years), if residing in the same household, were also interviewed. Data was also collected from Female Community Health Volunteers (FCHVs) and 1 key informant from each health facility in the sampled areas. The household surveys included questions related to exposure, knowledge and practices for each of the thematic areas mentioned above. Anthropometric status was assessed for all female respondents and children. FCHV and health facility surveys collected information on exposure to training, motivation, supervision, and work-related activities. In 2017, the final survey sample included 3,642 households.

New ERA also carried out the second and third surveys between July and September 2018 and 2019 respectively, again among a representative sample of households with a child under five years in the same sample clusters. In the 2018 and 2019 surveys, only mothers as the primary survey respondents and a primary male (or female, if no males available) household decision maker were interviewed. Other household members, health facility workers and FCHVs were not interviewed and at the household level, anthropometry information was not collected. The final survey sample was 3,648 households in both 2018 and 2019.

Some variation in survey modules and questions existed across the 2017, 2018, and 2019 tools, mostly due to adding questions of important for program staff as activities implementing changed and dropping questions not needed to measure on an annual basis. Key modules and questions, however, needed for calculation of indicators along SII's primary pathways to impact remained unchanged. Trends in key indicators from 2017, 2018, and 2019 for all intervention areas - nutrition, health, FP, WASH, and agriculture - can be measured. To assess changes over time, comparison of results between years 1 and 2, years 1 and 3, and years 2 and 3 were done, with more significant p-values expected for the changes between years 1 and 3 due to a longer period of program exposure in the population. Changes in key indicators from 2017 to 2018 to 2019 are noted in Table 1.

Table 1 Key indicators from 2017, 2018, and 2019 surveys

Indicators	2017 Mean/%	2018 Mean/%	2019 Mean/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Maternal health and nutrition						
<i>Women's Dietary Diversity (10 food groups):</i>						
Mean number of food groups consumed by women of reproductive age (N=3640, 3648, 3648)	4.1	4.3	4.4	<0.001	<0.001	0.015
Minimum dietary diversity among WRA (foods from 5 or more of 10 food groups) (N=3640, 3648, 3648)	35.6%	41.6%	45.3%	<0.001	<0.001	0.011
Women consuming all 180 tablets of Iron and folic acid (IFA) during pregnancy (N=1835, 1899, 1820)	52.4%	59.1%	53.9%	<0.001	0.391	0.002
Pregnant women weighed during most recent ANC visit, among those who received ANC (N=1772, 1855, 1775)	86.7%	93.4%	94.7%	<0.001	<0.001	0.132
Births receiving at least 4 ANC visits during pregnancy (N=1850, 1910, 1825)	79.5%	85.5%	88.8%	<0.001	<0.001	0.001
Births attended by a skilled birth attendant (N=1848, 1910, 1825)	73.2%	77.2%	82.3%	0.004	<0.001	<0.001
WRA in union who are currently using a modern method of contraception (N=3642, 3648, 3648)	34.2%	33.2%	35.7%	0.400	0.194	0.020
Child health and nutrition						
Low birth weight (N=621, 702, 896)	11.1%	8.3%	9.5%	0.090	0.296	0.387
Newborns receiving postnatal health check within 24 hours of birth (N=1820, 1896, 1784)	73.5%	79.1%	83.0%	<0.001	<0.001	0.066
Children 0-2 years weighed in the past month (N=1850, 1910, 1827)	17.8%	22.2%	26.3%	0.010	<0.001	0.048
Children 0-2 years who were put to the breast within one hour of birth (N=1843, 1902, 1820)	67.5%	69.3%	74.8%	0.030	<0.001	0.002
Exclusive breastfeeding of children under 6 months of age (N=455, 450, 431)	62.9%	65.8%	68.9%	0.860	<0.001	<0.001
Children 12–15 months of age who are breastfed (N=201, 265, 222)	98.5%	99.6%	98.2%	0.230	0.0821	0.178
Minimum acceptable diet among children 6-23 months of age (N=1385, 1460, 1396)	37.5%	45.7%	47.2%	<0.001	<0.001	0.456
Minimum dietary diversity among children 6-23 months of age (foods from 4 or more of 7 food groups) (N=1385, 1460, 1396)	46.7%	53.5%	57.5%	0.001	<0.001	0.053
Infants 6–8 months of age who receive solid, semi-solid or soft foods (N=214, 210, 204)	91.6%	88.1%	92.2%	0.260	0.848	0.220
Breastfed and non-breastfed children 6–23 months of age, who received solid, semi-solid, or soft foods (N=1385, 1460, 1396)	81.2%	87.8%	85.5%	<0.001	0.004	0.121
Children 6–23 months of age who received an iron-rich food or iron-fortified food (N=1385, 1460, 1396)	84.2%	88.6%	89.8%	0.001	<0.001	0.300

Indicators	2017 Mean/%	2018 Mean/%	2019 Mean/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Sick children 6-23 months of age fed more during illness (N=593, 541, 597)</i>	38.5%	38.8%	35.9%	0.900	0.342	0.285
<i>Children <5 years who had diarrhea in the prior two weeks (N=3642, 3648, 3648)</i>	11.1%	9.1%	9.5%	0.010	0.062	0.629
<i>Sick children 6-23 months (diarrhea) given oral rehydration solution (ORS) and zinc (N=190, 165, 176)</i>	20.0%	14.6%	19.3%	0.151	0.859	0.249
<i>Households with a child aged 0-2 years who had contact with the FCHV in the previous month (N= 1848, 1909, 1826)</i>	52.5%	58.5%	60.9%	0.002	<0.001	0.199
Water, sanitation and hygiene						
<i>Households using an improved sanitation facility (N=3642, 3647, 3648)</i>	86.6%	88.3%	84.1%	0.264	0.100	0.019
<i>Households practicing correct use of household water treatment technologies (N=3629, 3646, 3647)</i>	14.3%	19.0%	18.4%	<0.001	<0.001	0.593
<i>Households with soap and water at a handwashing station commonly used by family members (N=3629, 3646, 3647)</i>	37.0%	48.5%	61.2%	<0.001	<0.001	<0.001
<i>Women practicing handwashing at 6 critical times (N=3640, 3648, 3648)</i>	7.8%	19.0%	9.8%	<0.001	0.161	<0.001
Agriculture/Enhanced Homestead Food Production						
<i>Households with homestead gardens meeting minimum criteria (N=986, 988, 988)</i>	7.7%	22.3%	22.1%	<0.001	<0.001	0.938
<i>Households with chickens (N=986, 988, 988)</i>	42.9%	47.4%	43.4%	0.022	0.782	0.098
<i>Number of chickens vaccinated against Newcastle disease (ND) (N=423, 468, 429)</i>	1.0	0.1	3.2	0.263	0.215	0.052
<i>Number of nutrient dense vegetable cultivated by households in previous year (N=986, 988, 988)</i>	8.2	9.9	11.6	0.001	<0.001	<0.001
<i>Households with a child aged 0-2 years who received HFP inputs from village model farmers (VMFs) and/or graduated HFP beneficiaries (N=519, 552, 510)</i>	16.8%	27.2%	21.0%	0.003	0.127	0.084
<i>Households who sold surplus vegetable production in the past year (N=986, 988, 988)</i>	20.9%	17.9%	19.9%	0.263	0.737	0.267
<i>Number of eggs produced in the past month (N=423, 543, 513)</i>	11.3	8.9	12.3	0.092	0.568	0.017
<i>Households who sold surplus eggs produced in the past month (N=423, 543, 513)</i>	4.3%	2.0%	3.1%	0.015	0.257	0.189
<i>Households that used revenue earned by selling HFP surplus for nutrition, in the previous years (N=220, 180, 211)</i>	17.3%	31.1%	21.3%	0.015	0.373	0.032

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Report Objectives

The purpose of the annual survey report is to document and disseminate key results from the SII annual monitoring surveys related to the four key intermediate results' (IRs) themes – (i) household nutrition and WASH behaviors, (ii) use of nutrition and health services by women and children, (iii) access to nutrient rich foods by women and children, and (iv) accelerated roll-out of the MSNP through strengthened local governance. Each annual survey provides data on outcome variables for each IRs and is used to assess progress from the previous year and establish “baseline” levels for the following year. In addition to providing the results from the third annual monitoring survey, this year’s report also analyzes and discusses trends over time by comparing results across the three annual surveys – 2017, 2018, and 2019 – and discuss the implications of these trends for program modifications or improvements.

Acronyms

AHW	Auxiliary Health Worker
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwifery
BMI	Body Mass Index
DAG	Disadvantaged Groups
EDP	External Development Partner
EHFP	Enhanced Homestead Food Production
FCHV	Female Community Health Volunteer
FLW	Frontline worker
FP	Family Planning
FS	Field Supervisor
GESI	Gender Equality and Social Inclusion
GMP	Growth Monitoring and Promotion
GoN	Government of Nepal
GPS	Global Positioning System
HFP	Homestead Food Production
HFPB	Homestead Food Production Beneficiaries
HH	Household
HKI	Helen Keller International
HMG	Health Mothers' Group
HTSP	Healthy Timing and Spacing of Pregnancy
IFA	Iron and folic acid
IR	Intermediate Result
IYCF	Infant and Young Child Feeding
MER	Monitoring Evaluation and Research
MSNP	Multi-sector Nutrition Plan
NDHS	Nepal Demographic and Health Survey
NHRC	Nepal Health Research Council
NPC	National Planning Commission
ODK	Open Data Kit
ORS	Oral Rehydration Solution
PNC	postnatal care
PPS	Probability Proportion to Size
SBCC	Social and Behavior Change Communication
TOT	Training of Trainers
USAID	United States Agency for International Development
VDCs	Village Development Committees
VMF	Village Model Farmers
WASH	Water, Sanitation and Hygiene
WRA	Women of Reproductive Age

1. Background

1.1 Health and nutrition context in Nepal

Nepal has witnessed substantial political, economic, and demographic changes over the last three decades. Years of armed conflict and political instability culminated in the formation of a democratic republic government in 2008. A new constitution was promulgated in 2015, replacing the interim constitution created in 2007. The related restructuring of administrative and geographic boundaries throughout Nepal included a transition from 75 to 77 districts organized into 7 provinces in 2017. Within the districts, rural and urban municipalities were allocated to replace and, in most instances, amalgamate the former village development committees (VDCs) and municipalities as the first sub-district unit, with wards now being the smallest formal administrative unit. At present, there are a total of 753 local government units (6 metropolitans, 11 sub-metropolitans, 276 urban municipalities and 460 rural municipalities) and 6743 wards operating under these districts in Nepal.

The Nepal Demographic and Health Survey (NDHS) 2016, found persistent high undernutrition prevalence rates among children under five years: 36% are stunted, 27% are underweight, and 10% are wasted. While national prevalence rates of stunting, underweight, and wasting have declined over the last 20 years, their current levels remain among the highest in the world. The NDHS 2016 also found 53% of children aged 6 to 59 months to be anemic based on $HB < 110g/L$. Furthermore, it reported that 17% of women of reproductive age (WRA) (15-49 years) are thin/underweight ($BMI < 18.5$) and 41% of WRA are anemic. These high levels of both child and maternal undernutrition highlight the need for continued investments and improvements in effective maternal and child nutrition programs in Nepal. Given the large socio-economic, caste/ethnicity, and agro-ecological variability in the country, it is no surprise that nutrition and health indicators also vary widely by these factors (NDHS, 2016).

The Government of Nepal (GoN), with support from external development partners (EDPs), is now implementing the second phase (2018-2022) of its multi-sector nutrition plan (MSNP) throughout the country. Health, education, federal affairs and local development, and the agriculture and development sectors are managing their own programs with multi-sector coordination. All nutrition-specific and nutrition-sensitive activities are coordinated by the National Planning Commission (NPC) at the central level. The MSNP's aim is for Nepal to significantly reduce malnutrition in the next decade and ensure that it no longer impedes development.

EDPs invest heavily in supporting the GoN to address persistent health and nutrition burdens and achieve goals outlined in Nepal's MSNP. *Suaahara II* (SII) is one such USAID-funded program, with an overall objective to reduce undernutrition among women and children, particularly those in the 1000-day period between conception and a child's second birthday and those residing in disadvantaged communities.

1.2 Description of SII

SII is a USAID-funded multisectoral nutrition program, being implemented in 42 of Nepal's 77 districts in 6 out of the 7 provinces from 2016 to 2021. SII builds and follows on the first *Suaahara* project (i.e. Phase 1) implemented from 2011-15. Helen Keller International (HKI) serves as the prime and lead organization for SII and partners with six consortium organizations to implement the program (CARE, FHI360, Digital Broadcast Initiative Equal Access (DBI EA), Environment and Public Health Organization (ENPHO), Nepali Technical Assistance Group (NTAG), Vijaya

Development Resource Center (VDRC)), and a Community-Based Organization (CBO) in each district, who implement activities within communities of the 42 districts. SII covers a total of 389 municipalities (262 rural municipalities and 127 urban municipalities) and 3353 wards in Nepal.

The primary aims of SII are to reduce the prevalence of stunting, wasting and underweight among children under five years of age and to reduce the prevalence of anemia among WRA and children 6-59 months of age. The program uses a multi-sectoral approach across four key intermediate results (IRs) themes: (1) improved household nutrition, sanitation and health behaviors; (2) increased use of quality nutrition and health services by women and children; (3) improved access to diverse and nutrient rich foods by women and children; and (4) accelerated roll-out of the MSNP through strengthened local governance. SII activities span health including family planning (FP), nutrition, agriculture/homestead food production (HFP); water, sanitation and hygiene (WASH); and nutrition governance. Diverse social and behavior change communication (SBCC) approaches are used, primarily to generate demand for access to improved services. Gender equality and social inclusion (GESI), in part by targeting women and disadvantaged groups (DAGs); public private partnership (PPP) to increase access to services and commodities by encouraging private sector investments; and monitoring, evaluation, and research (MER) for learning are cross-cutting themes for all SII implementation.

1.3 Structure of the baseline report

Following this introduction/background section (Chapter 1), this report will outline SII's 2019 annual survey methods including survey design, sampling and data collection, management, and analysis (Chapter 2). The results sections describe the survey sample (Chapter 3) and present key findings by IR theme: IR 1 – Nutrition (Chapter 4); IR 1 – WASH (Chapter 5); IR 2 – Health and Family Planning (Chapter 6) and IR 3 – Agriculture/Homestead Food Production (Chapter 7). Results for cross-cutting themes will then be presented: SBCC (Chapter 8) and GESI (Chapter 9) and finally, an assessment of program implications for 2020 and beyond (Chapter 10).

correlation for each outcome and assumed a desired power of 0.80, in a two-arm cluster-designed study. Using these factors, along with the prevalence from NDHS 2016 and expected change over time, we calculated the sample sizes needed for each indicator (Table 2.1).

Table 2.1 Sample sizes needed for each indicator, by population type

Indicator	Population	Sample Size Needed
Stunting	Children <5 years	1728
Underweight	Children <5 years	980
Wasting	Children <5 years	980
Anemia	Children 6-59 months	3460
BMI	Women aged 15-49 years	2304
Anemia	Women aged 15-49 years	3072

Given the need for 3460 children between 6-59 months of age for measuring changes in anemia over time, and to allow for refusals, we decided to include at least 3600 households in the survey, estimating that some households would have a child 0-6 months of age but that some would also have two children.

2.2.2 Sampling methodology

The annual surveys (2017, 2018, and 2019) were designed using the new administrative units (e.g. urban and rural municipalities and wards), based on government request given that the transition happened during survey firm training for the first SII annual survey. We employed a multi-stage cluster sampling design (Figure 2.2) with the first-stage sampling unit as districts ($n=16$), the second-stage sampling unit as municipalities (1 urban and 1 rural per district, excluding the district headquarter municipality; $n=32$), the third-stage sampling unit as wards (3 per municipality, $n=96$), the fourth-stage sampling unit as “old” wards (2 per ward, $n=192$) as the new wards are too big to be a survey cluster, and the final-stage sampling unit as households with at least one child under five years (19 per cluster, $n=3648$). The first four stages were conducted using PPS techniques, based on total population sizes according to 2011 national census data. For the fifth stage, households with a child under five years and his/her mother in residence were selected randomly from a full listing done at the start of the survey field work.

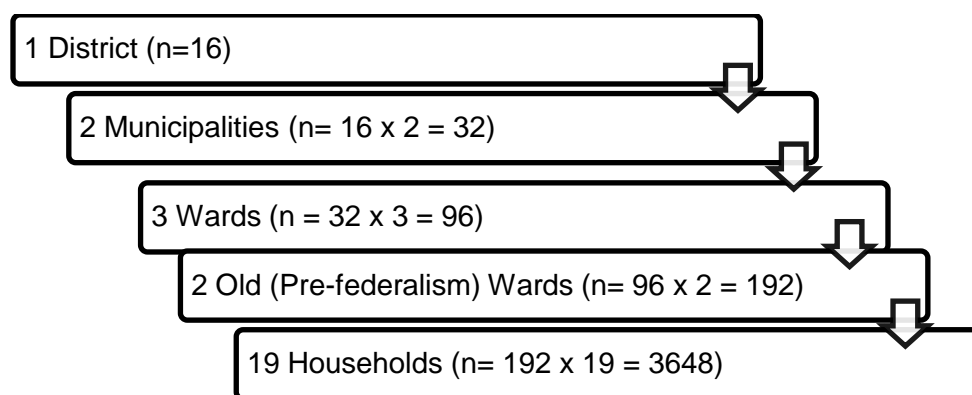


Figure 2 Sampling methodology

Household population data from the 2011 census was used to inform the PPS methods to select the sample districts, municipalities and clusters. Using the list of the districts and number of households per district, sampling interval (k) was obtained by dividing the total number of households in the district in each study arm (mature (22) and non-mature (18) SII districts) by the desired sample size of 8 per study arm. A random number (x) between one and the sampling interval (k) was chosen as the starting point, and the sampling interval (k) was added cumulatively and repeatedly $(x+k)^{th}$, $(x+2k)^{th}$, and so on, until the 8 districts were selected in each arm. The same process of listing, sampling interval and selection of the desired number of municipalities (1 urban and 1 rural per district), wards (3 per municipality) and clusters (2 per ward) was followed.

In the selected wards, a listing of households was conducted which contained information about the name of the household head, whether the household has a child under five years or not, and if yes, the name of the mother of the child. From the list of all households, a list of households having a child under five years of age and the child's mother residing together was prepared and 19 households were randomly selected for inclusion in the survey, by drawing names from a hat. If there was an insufficient number of eligible households in a survey cluster, the same procedures were followed in the adjoining (defined as shortest distance from working cluster) cluster (old "pre-federalism" ward) to select the remaining required households. In 2017, this happened in 17 clusters and due to this, the same adjoining wards were selected in 2018 and 2019. Sampled households were also replaced if they were found to have a mother with any kind of disability (unable to speak/dumb), no children within the study age range, or if the mother/child were not available during data collection.

From each selected household, one child under five years was selected as the child of focus for the survey (reference child for questions re: young child). If more than 2 children under 5 years resided in the same household, the youngest child was selected. The mother of the selected child was the respondent for the mothers' questionnaire. A male (or female, if male unavailable) primary decision maker in the household was selected for the household questionnaire, with first preference given for the father of the child. In some cases (e.g. mother lived alone with child; of available adults, mother was the lead household decision maker), the mother also answered a shortened version of the household questionnaire which did not repeat modules she would have already answered in the mothers' questionnaire (i.e. empowerment or exposure to key messages).

Additionally, one FCHV was selected from each cluster. If there are more than one FCHV in one cluster only one FCHV was selected randomly. In case of health facility, one health facility was chosen from every two clusters randomly. From the selected health facility, the most senior ranking staff member was chosen for interview. The chain of command was followed if the senior staff member was unavailable.

2.3 Survey instruments

2.3.1 Household questionnaires

In 2019, the household level survey had two different respondents: 1) mother of the child under five years; and 2) household decision-maker (male, when possible). The modules of questions differed for each respondent (Table 2.3). Global Positioning System (GPS) coordinates including

altitude, latitude, and longitude of all sampled households were measured using Garmin eTrex 30x devices.

Table 2.2 Household questionnaire modules, 2019

Women	Men/ Household Heads
1. Child health and nutrition practices <ul style="list-style-type: none"> a. Child health and childcare b. Child dietary recall c. Infant and Young Child Feeding (IYCF) practices* 	1. Demographic information <ul style="list-style-type: none"> a. Household roster b. Background information of respondents
2. Maternal health and nutrition <ul style="list-style-type: none"> a. General health seeking practices b. Antenatal Care (ANC)* c. Delivery and postnatal care (PNC)* 	2. Household economics <ul style="list-style-type: none"> a. Socioeconomic status
3. Maternal dietary recall	3. Food security and diets <ul style="list-style-type: none"> a. Household food security b. Dietary recall
4. Empowerment <ul style="list-style-type: none"> a. Role in household decision-making b. Group membership 	4. Land use and agricultural practices
5. Agriculture/homestead food production	5. Empowerment <ul style="list-style-type: none"> a. Role in household decision-making b. Group membership
6. Water, sanitation, and hygiene	6. Integrated nutrition knowledge and exposure
7. Integrated nutrition knowledge and exposure	7. Self-efficacy
8. Self-efficacy	8. <i>Suaahara</i> exposure
9. <i>Suaahara</i> exposure	9. Observations
10. Adolescent mother-specific questions	

* Note: these modules were limited to the sample households with a child less than 2 years of age to avoid measuring behaviors that could have happened up to 5 years ago.

2.4 Training and fieldwork logistics

2.4.1 Training of personnel and testing of survey tools

New ERA recruited a team of 89 field staff, including 4 quality controllers, 17 supervisors, and 52 enumerators, to make up 17 teams of 1 male supervisor and 3 female enumerators each. Selecting from their pool of field researchers, criteria for the field staff included: prior work experience in similar surveys (*Suaahara* annual survey 2017/2018 or similar), work experience in rural communities, at least a bachelors' degree, fluency in a local language needed for the survey and rapport building skills, while also keeping gender and caste/ethnicity diversity in mind. The recruited field staff included an additional 10% for each position, who were invited to the training, so that there would be backup persons if needed. Each field staff was evaluated during the training and further screened to ensure quality before confirmation of selection as field staff for data collection. Further information regarding hired field staff is in annex A.

New ERA led a training of trainers (ToT) for the quality controllers and supervisors from June 2-5, 2019. This training included a brief overview of the revised tools of 2019's annual survey to supervisors and quality controllers. The ToT helped in checking inconsistencies and anomalies in the paper-based questionnaires and in the Open Data Kit (ODK) programming. Supervisors beta tested the ODK programming for all survey tools in Panauti, Kavrepalanchowk from June 6-7, 2019. Feedback from the field-testing was presented on June 9, 2019 and informed revisions to the surveys in preparation for the main training.

New ERA and SII staff trained the entire field survey team for 12 days from June 12-25, 2019 to familiarize the trainees with the survey objectives and tools. Role play and mock interviews with peers were used and the questionnaires were further checked for content, consistency, flow, validity and reliability. The training included detailed explanations of the survey objectives and design including multi-stage sampling and selection of households and appropriate informed

consent and interviewing methods. Every question of every module was discussed and skip patterns, filtering, and probing techniques were explained. They were also trained in how to collect data using Android phones. Roles and responsibilities of the field team members were clearly outlined and quality control elements by interviewers, supervisors and the quality controllers were highlighted. The training also went over important ethical concepts including referral for severely malnourished or ill persons found; confidentiality and privacy during the survey; and the importance of informed consent prior to the start of the interview.

All the questionnaires were tested multiple times in training and pre-testing before finalization. The 17 teams were sent to 4 different sites of Lamiung – Simpani (Khudi), Sundarbazar (Tarkughar), Parewadanda and Gausahar – from June 26-29 for a pilot test. This pilot test was practice for the data collectors to use the survey equipment in real field settings and the team tested all the tools including the questionnaires and GPS measurements. In two days of pre-testing, each male supervisor was assigned to do four household head interviews, and each female supervisor/interviewer was assigned to interview one household head and two mothers. A review of the pre-test took place on July 1, 2019, with an additional two days of training on July 2-3 to address any issues encountered during the pre-test. After pre-testing, the survey tools were again revised and SII and New ERA re-checked and finalized the revised questionnaire.

2.4.2 Administration of survey questionnaires

After completion of trainings, ethical approvals, and other logistics, data collection occurred during the rainy season (July 5-September 14, 2019), following 2017 and 2018 SII annual survey timing. During the training period, one supervisor and one enumerator left from the study team due to personal reasons. Thus, on July 5, 2019, 16 field teams of four members each (one male supervisor and three female enumerators) departed for data collection. Enumerators were responsible for household-level data collection and GPS data. Only female enumerators were allowed to interview mothers, due to the sensitive nature of some of the topics.

Each field team was provided with a field schedule before departure to assigned clusters. As the teams reached each district, they contacted the SII district office. After consultation with district level authorities (District health office) and the *Suaahara* district team, the field teams then moved to the assigned clusters, where again they met official municipality authorities prior to the start of data collection. New ERA core team and *Suaahara II* MER team members conducted periodic field monitoring and supervision, giving feedback on the interviews and verifying the consistency and accuracy of the completed questionnaires. The first round from New Era was from July 8th to 11th, 2019 in Nawalparasi and Dhading and the second round was conducted in Rupandehi, Bardiya, Kailali and Arghakanchi from July 13-23, 2019. Likewise, the *Suaahara II* MER team's first round of field monitoring was from July 17th to 21st, 2019 in Gorkha, Dhading, Dang and Salyan and the second round was conducted in Kailali, Dadeldhura and Bajhang from August 21-30. Fieldwork was completed on September 14, 2019.

2.4.3 Fieldwork challenges

Because data collection occurs annually during the rainy season, execution of the *Suaahara II* annual survey is always challenging. Geographical terrain and heavy rainfall, floods and landslides, illness and agricultural workloads due to paddy plantation timing all pose challenges. This year, 65 actual days were needed for fieldwork because of weather and the related need to take longer routes to avoid dangerous conditions, causing delays in reaching some clusters. Furthermore, due to difficult geographical terrain and no mobile network availability in Belapur and Sirsha clusters in Dadeldhura, it took the team two days (rather than the one planned) to complete the listing. One team member couldn't contribute to data collection for a few days in

Rupandehi due to illness. In addition to delays in data collection, field teams work outside of their schedule to interview respondents at alternate times (either in the early morning or late evening).

2.5 Data management

2.5.1 *Data entry and cleaning*

For the household questionnaires, data was collected on Android phones by the field staff, using Ona, an offline data collection application. Once the data was collected and reviewed by the supervisor, the enumerator synced the data to the Ona server. New ERA and SII MER staff in Kathmandu had access to the uploaded data. New ERA staff were responsible for downloading the data from the Ona server weekly, checking the quality and consistency of the data, and providing feedback to enumerators, as needed. All corrections were recorded by the New ERA staff who consequently updated the database and informed the SII MER team.

Immediately after mobilizing the field teams, a software package for data entry was developed by the data supervisor in New ERA's central office, for paper-based survey modules (e.g. 24-hour dietary recalls). Quality check mechanisms, such as range checks and skip instructions, were developed to help detect errors in data entry. Before data entry, each questionnaire was thoroughly checked by the coders and open-ended questions were coded. There was some overlap between field work and data management. Paper forms were maintained from each completed cluster to Kathmandu in files, labeled by location and cluster number.

New ERA completed the first round of data cleaning and verification and translated the data (e.g. other (specify) responses), into English, where necessary before sharing the cleaned raw data files in Stata to the SII MER team on September 26th, 2019 for further data cleaning. The SII MER team followed standard data cleaning procedures such as range checks and skip patterns, before starting the process of variable generation and tabulations. All data cleaning and variable generation was done using StataSE 14 from the first week of October to December 2019, including sharing early findings with thematic program teams in early November 2019, who provided feedback regarding additional checks that were needed.

2.5.2 *Statistical Analysis*

The SII MER team, supported by an intern from Johns Hopkins University, conducted the analyses using StataSE 14. The team generated results on means and proportions for the entire survey sample (or sub-sample, where appropriate, for example by age or geographic area) to examine descriptive trends. Some indicators were derived from NDHS data – for example, the equity quintiles (lowest, 2nd lowest, middle, 2nd highest, highest) were derived from NDHS 2016 data and followed guidance from www.equitytool.org.

To know if differences between 2017, 2018, and 2019 were meaningful, the SII MER team conducted tests of statistical significance for key indicators. Two statistical significance comparisons were conducted – between 2017 and 2019 and between 2018 and 2019 – adding to the comparisons conducted last year between 2017 and 2018. For these tests of statistical significance, binary logistic regression was used for dichotomous variables, linear regression was used for continuous variables, and ANOVA for variables with multiple categories. Standard errors were adjusted for sample clustering in all binary logistic or linear regression tests; other factors which may influence the differences found (e.g. socio-economic status, age, education) were not adjusted for in this descriptive analysis. In the tables in this report, all variables for which tests of significance were done are in *italics* and the P values are reported. Each test of statistical significance provided a p-value – our team interpreted p-values greater than or equal to 0.05 to

present no significant change. This means that the change between years, whether an increase or a decrease, is not significant and should instead be interpreted as “no change” since it is likely due to chance. Accordingly, p-values less than 0.05 indicated a significant change between years.

Statistical testing was only done on single indicator changes over time and not on disaggregated analyses. For example, the p-value presented for equity quintiles only presents change over time in each quintile. It does not compare the disaggregated categories against each other (i.e. highest quintile vs. lowest quintile).

It is important to note that these surveys were not powered to conduct sub-population analyses and thus, the smaller the sample size, the more challenging it is to confirm statistical significance or not of findings, regardless of whether the statistical testing was done. This is also a monitoring survey and thus, there is not a counter-factual (e.g. comparison) and attribution of changes to *Suaahara II* may be plausible but cannot be assumed.

3. Results: Background

The annual survey included 3642 households in 2017, 3648 households in 2018, and 3648 households in 2019, which represents response rates of 99.8%, 100%, and 100% respectively. This section presents results on the demographic characteristics of the sampled households (Table 3.1) followed by the sample household heads (Table 3.2), mothers (Table 3.3), and children (Table 3.4).

Equity quintiles, using the 2016 DHS data as a reference point, were calculated to understand the socio-economic status of the study population relative to Nepal's overall population. To calculate the equity quintile, a household's ownership of assets and home characteristics (e.g. roof/wall/floor materials) are used (for further details please see www.equitytool.org). The distribution of households across equity quintiles indicated that the sample mostly represented households belonging to the middle quintile or lower. Fewer than one-third of houses had a roof, floor, and walls made of improved materials. More than 6 in 10 households used firewood as a main source of energy for cooking across the three surveys. However, the prevalence of firewood used for energy decreased by 8% from 2017 to 2019 and the percentage of households from lower equity quintiles decreased from 22% in 2017 to 16% in 2019 ($P < 0.001$), both indicating improvements in socio-economic well-being in the survey areas (Table 3.1).

Most household heads were *Brahmin/Chhetri* in 2017, 2018, and 2019. The prevalence of household heads without any formal education declined from 34% in 2017 to 24% in 2019 ($P < 0.001$). Household head demographic data were further disaggregated into household heads that were mothers, fathers, and grandparents to highlight how age and gender of household head may influence household characteristics (Tables 3.2).

The demographic characteristics of mothers and children showed little variation among the three survey rounds. On average, the mothers were 26 years (Table 3.3) and their youngest child was 25 months (Table 3.4). Agriculture was reported to be the primary occupation for nearly two-thirds of mothers. Almost 1 in 5 reported living alone, more than 25% with only her husband and child, and slightly more than half living with extended family. The percentage of mothers who had never attended school declined from 21% in 2017 to 15% in 2019, and the percentage of mothers who had completed secondary school (grade 10) increased from 24% in 2017 to 29% in 2019 ($P = 0.016$) (Table 3.3).

Table 3.1 Household socio-economic and demographic characteristics

	2017	2018	2019	P-value	P-value	P-value
	All HH Heads N=3642	All HH Heads N=3648	All HH Heads N=3648	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
Equity quintile¹				<0.001	<0.001	<0.001
Poorest	21.7%	17.1%	16.2%			
2nd Poorest	28.6%	24.8%	22.6%			
Middle	23.2%	24.9%	22.0%			
2nd Wealthiest	20.3%	24.9%	29.5%			
Wealthiest	6.2%	8.3%	9.8%			
Mean Equity Quintile Score	2.6 (1.2)	2.8 (1.2)	2.9 (1.2)	<0.001	<0.001	<0.001

¹ Equity quintiles were updated since the Annual Survey Report 1. Previously they were based on the NDHS, 2011 but now based on NDHS, 2016; all in line with guidance provided by www.equitytool.org

	2017	2018	2019	P-value	P-value	P-value
	All HH Heads N=3642 Mean (SD)/%	All HH Heads N=3648 Mean (SD)/%	All HH Heads N=3648 Mean (SD)/%	2017/ 2018	2017/ 2019	2018/ 2019
<i>Mother headed households (N=1445, 1504, 1518)</i>	2.5 (1.2)	2.7 (1.2)	2.8 (1.3)	<0.001	<0.001	0.120
<i>Father headed households (N=937, 1311, 1328)</i>	2.5 (1.2)	2.9 (1.2)	3.0 (1.2)	<0.001	<0.001	0.002
<i>Grandparents headed households (N=900, 763, 746)</i>	2.8 (1.1)	2.9 (1.1)	3.1 (1.2)	0.001	<0.001	0.031
Home characteristics: cement as main material						
Floor	18.7%	26.0%	28.5%			
Exterior/outer wall	16.0%	21.2%	25.0%			
Roof	12.6%	13.0%	14.8%			
Main source of energy for lighting						
Electricity	70.8%	73.0%	77.7%			
Solar panel	23.4%	22.6%	19.6%			
Other (e.g. torch, kerosene, paraffin, gas, oil lamp, candles, open fire	5.8%	4.1%	2.5%			
Main source of energy for cooking						
Electricity	0.1%	0.0%	0.0%			
Firewood	76.5%	71.9%	67.9%			
Liquefied propane gas	17.1%	22.8%	27.4%			
Biogas	4.1%	3.9%	3.4%			
Animal dung	2.0%	1.2%	1.2%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the p-value column.

Table 3.2 Household heads' demographic characteristics

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=3642 Mean (SD)/%	All HH heads N=3648 Mean (SD)/%	All HH heads N=3648 Mean (SD)/%	2017/ 2018	2017/ 2019	2018/ 2019
<i>Gender: male</i>	47.6%	49.2%	48.4%	0.206	0.521	0.504
<i>Age</i>	39.3 (15.1)	34.4 (13.3)	34.0 (13)	<0.001	<0.001	0.185
Age: Male respondents (N=1734, 1794, 1767)	43.8 (15.1)	37.7 (14.3)	36.8 (13.6)			
Age: Female respondents (N=1908, 1854, 1881)	35.1 (13.9)	31.3 (11.5)	31.4 (11.8)			
<i>Mothers (N=1445, 1504, 1518)</i>	29.5 (9.6)	26.7 (5.3)	26.6 (5.3)	0.049	0.858	0.075
<i>Fathers (N=937, 1311, 1328)</i>	32.7 (8)	30.7 (7.5)	30.5 (7.2)	<0.001	<0.001	0.314
<i>Grandparents (N=900, 763, 746)</i>	55.9 (9.3)	55.3 (9.5)	54.9 (9)	0.110	0.006	0.395
<i>Agriculture as main occupation</i>	64.7%	64.4%	62.0%	0.837	0.046	0.031
<i>Mothers (N=1445, 1504, 1518)</i>	65.6%	69.7%	66.0%	<0.001	<0.001	0.689
<i>Fathers (N=937, 1311, 1328)</i>	50.4%	47.8%	48.5%	0.245	0.394	0.722
<i>Grandparents (N=900, 763, 746)</i>	75.1%	81.1%	76.9%	0.003	0.316	0.039
Religion: Hinduism	89.8%	90.0%	90.7%			
Relation to the survey reference child						
Mother	39.7%	41.2%	41.6%			
Grandmother	12.4%	8.8%	9.3%			
Father	25.7%	35.9%	36.4%			
Grandfather	20.5%	12.1%	11.2%			
Other	1.7%	2.0%	1.5%			
Caste				<0.001	<0.001	0.323

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=3642 Mean (SD)/%	All HH heads N=3648 Mean (SD)/%	All HH heads N=3648 Mean (SD)/%	2017/ 2018	2017/ 2019	2018/ 2019
Socially excluded (Dalit, Muslim, disadvantaged)	49.6%	21.9%	54.1%			
Brahmin/Chettri	39.3%	38.8%	37.1%			
Others (Newar, Gurung/Thakali, Non-dalit <i>Terai</i> caste)	11.1%	8.5%	8.8%			
Education levels						
<i>Never attended school/ grade 1 not complete</i>	34.1%	25.8%	23.7%	<0.001	<0.001	0.041
Some primary school (grades 1-4)	17.3%	14.9%	13.2%			
Completed primary school (grades 5)	8.7%	8.7%	8.4%			
Some secondary school (grades 6-9)	24.4%	29.5%	30.7%			
Completed secondary school (grade 10)	9.3%	11.4%	13.1%			
Completed class 12	4.7%	7.5%	7.9%			
Higher education	1.6%	2.2%	3.0%			
Completed secondary school (grade 10) or more	15.5%	21.2%	24.0%	<0.001	<0.001	0.002
Men (N=1734, 1794, 1767)	17.5%	25.1%	29.2%			
Women (N=1909, 1854, 1881)	13.8%	17.4%	19.1%			
<i>Mothers (N=1445, 1504, 1518)</i>	17.7%	21.1%	23.3%	0.005	<0.001	0.109
<i>Fathers (N=937, 1311, 1328)</i>	25.5%	31.3%	35.3%	0.005	<0.001	0.031
Grandparents (N=900, 763, 746)	5.1%	4.2%	4.7%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 3.3 Mothers' demographic characteristics

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3642 Mean (SD)/%	Mothers N=3648 Mean (SD)/%	Mothers N=3648 Mean (SD)/%	2017/ 2018	2017/ 2019	2018/ 2019
Age in completed years (range: 15-49y)	26.2 (5.5)	25.9 (5.4)	26.0 (5.3)			
Currently married	99.4%	99.4%	99.5%			
Currently pregnant	5.0%	5.0%	5.2%			
Agriculture as main occupation	62.6%	62.7%	60.5%			
Education						
<i>Never attended school/grade 1 not complete</i>	20.6%	17.4%	14.9%	<0.001	<0.001	0.001
Some primary school (grades 1-4)	13.9%	12.9%	11.7%			
Completed primary school (grades 5)	7.7%	7.5%	7.2%			
Some secondary school (grades 6-9)	34.1%	35.9%	37.7%			
Completed secondary school (grade 10)	12.6%	13.4%	14.3%			
Completed grade 12	9.2%	10.9%	11.7%			

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3642	Mothers N=3648	Mothers N=3648	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
Higher education	1.9%	2.3%	2.5%			
Completed secondary school (grade 10) or more	23.7%	26.3%	28.5%	0.002	<0.001	0.016
Household structure						
<i>Mother lives alone</i>	19.4%	19.1%	19.8%	0.814	0.808	0.469
<i>Mother, husband and child only</i>	30.8%	26.6%	26.1%	0.005	<0.001	0.643
<i>Mother in extended family</i>	49.8%	54.3%	54.1%	<0.001	<0.001	0.872

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 3.4: Children's demographic characteristics

	2017	2018	2019
	Children N=3642	Children N=3648	Children N=3648
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%
Gender of youngest child: male	55.6%	54.7%	57.0%
Age in completed months (range: 0-59)	24.8 (16.0)	24.6 (16.2)	25.4 (16.3)
Age of youngest child (completed months)			
0-23.9	50.8%	52.4%	50.1%
24-59.9	49.2%	47.6%	49.9%
Age of youngest child (completed months)			
0-5.9	12.5%	12.3%	11.8%
6-11.9	14.6%	13.7%	13.2%
12-17.9	11.1%	13.0%	12.2%
18-23.9	12.5%	13.3%	12.9%
24-29.9	10.5%	10.8%	10.8%
30-35.9	11.5%	9.8%	10.8%
36-41.9	8.8%	7.7%	8.5%
42-47.9	7.9%	8.3%	7.4%
48-53.9	6.0%	5.3%	6.4%
54-59.9	4.5%	5.7%	6.0%

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

4. Results: IR 1/Nutrition

Among indicators of breastfeeding knowledge, between 2017 and 2019, household heads' correct knowledge improved by 18 percentage points for colostrum should be given ($P<0.001$) (Table 4.1). The percentage of mothers who gave the correct definition of exclusive breastfeeding increased from 16% in 2017 to 24% in 2019 ($P<0.001$). Similarly, the percentage of mothers who knew that the appropriate time to stop exclusive breastfeeding was 6 months increased from 80% in 2017 to 87% in 2019 ($P<0.001$) (Table 4.2). While ever breastfed and colostrum feeding were nearly universal in all three survey rounds, early initiation increased from 68% in 2017 to 75% in 2019 ($P<0.001$) (Table 4.3).

Complementary feeding knowledge, specifically appropriate timing of introduction (6-8.9 months) of all food items increased from 23% in 2017 to 36% in 2019 ($P<0.001$) among household heads (Table 4.4) and from 43% in 2017 to 57% in 2019 ($P<0.001$) among mothers (Table 4.5). Regarding complementary feeding practices, the average month for introduction of all food items to children declined from 6.5 in 2017 to 6.3 in 2019 ($P<0.001$); the percentage of mothers reporting to have introduced all foods to children when 6-8.9 months increased from 33% in 2017 to 45% in 2019 ($P<0.001$). Furthermore, the prevalence of, breastfed and non-breastfed children 6-23 months of age, who received solid, semi-solid, or soft foods (also including milk feeds for non-breastfed children) the minimum number of times or more increased from 81% in 2017 to 86% in 2019 ($P=0.004$). Consumption of iron-rich foods among these children also increased from 84% in 2017 to 90% in 2019 ($P<0.001$) (Table 4.6).

Knowledge and practices on feeding a sick child were poor all three years. There was no progress between 2017 and 2019 on household heads and mothers' knowledge to give more food to a sick child. Household heads' knowledge that a sick child should be taken to a health facility or FCHV, however, increased from 57% in 2017 to 76% in 2019 ($P<0.001$) (Table 4.7); maternal knowledge increased similarly from 54% in 2017 to 71% in 2019 ($P<0.001$) (Table 4.8). There was no significant change in sick child feeding (Table 4.9).

Open-ended 24-hour recalls were used to collect foods consumed in the previous 24-hours, which were combined into food groups during analysis to assess dietary diversity. Dietary diversity scores for children were calculated out of 7 food groups: grains, pulses, dairy, flesh foods, eggs, vitamin-A rich fruits/vegetables, other fruits and other vegetables. Children 6-23.9 months meeting the minimum dietary diversity requirement (4 or more food groups) increased from 47% in 2017 to 58% in 2019 ($P=0.001$) with average individual dietary diversity score increasing from 3.4 in 2017 to 3.7 in 2019 ($P<0.001$). Similarly, the percentage of those with a minimum acceptable diet increased from 38% in 2017 to 47% in 2019 ($P<0.001$) (Table 4.10). The prevalence of children 24-59.9 months meeting the minimum dietary diversity requirement (4 or more food groups) increased from 60% in 2017 to 65% in 2019 ($P=0.005$) (Table 4.11).

Between 2017 and 2019, knowledge that pregnant women should consume more food than usual increased from 72% to 81% ($P<0.001$) among household heads (Table 4.12) and from 86% to 91% ($P<0.001$) among mothers (Table 4.13). In practice, the percentage of pregnant women that consumed more food than usual increased from 48% to 61% ($P<0.001$) in 2019 (Table 4.14).

Dietary diversity score for women was calculated out of 10 food groups: grains, pulses, nuts and seeds, dairy, flesh foods, eggs, dark green leafy vegetables, vitamin-A rich fruits/vegetables, other fruits, and other vegetables. The individual dietary diversity score among mothers increased from 4.1 to 4.4 ($P<0.001$), while the percentage of mothers meeting the minimum dietary diversity (5

out of 10 groups) increased from 36% to 45% ($P<0.001$) between 2017 and 2019 (Table 4.15). Dietary scores were calculated for household heads in the same way. Male household heads saw a similar increase in individual dietary diversity score, from 4.1 in 2017 to 4.3 in 2019 ($P<0.001$) in 2019, with an increase in meeting minimum dietary diversity from 37% to 42% ($P=0.005$) (Table 4.16).

There prevalence of mothers reporting to have input in all or nearly all decisions about her own diet and child feeding increased from 43% in 2017 to 79% in 2019 ($P=0.005$) and 92% in 2017 to 95% in 2019 ($P<0.001$), respectively (Table 4.19). On the other hand, the prevalence of male household heads with this level of decision-making for child feeding decreased by 8% ($P<0.001$) (Table 4.18).

Table 4.1 Breastfeeding knowledge among household heads

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=1898	All HH heads N=2142	All HH heads N=2130	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
<i>Breastfeeding should be initiated within 1 hour</i>	62.6%	65.0%	65.5%	0.160	0.128	0.826
<i>Colostrum should be given to baby</i>	76.1%	81.4%	83.5%	0.001	<0.001	0.140
Exclusive breastfeeding characteristics						
<i>Breast milk and nothing else (not even water)</i>	11.4%	14.5%	13.8%	0.030	0.126	0.662
<i>Don't know</i>	62.4%	56.4%	49.2%	0.010	<0.001	0.011
Appropriate timing to stop practices						
<i>Breastfeeding (in months)</i>	35.3 (12.7)	37.0 (13.6)	36.7 (12.7)	0.002	0.004	0.580
<i>Exclusive breastfeeding: 6 months</i>	62.9%	65.8%	68.9%	0.369	0.060	0.328

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.2 Breastfeeding knowledge among mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3640	Mothers N=3647	Mothers N=3647	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
<i>Breastfeeding should be initiated within 1 hour</i>	82.4%	83.9%	87.2%	0.135	<0.001	0.002
<i>Colostrum should be given to baby</i>	91.0%	93.2%	94.1%	0.500	<0.001	0.217
Exclusive breastfeeding characteristics						
<i>Breast milk and nothing else (not even water)</i>	16.4%	18.8%	23.5%	0.080	<0.001	0.013
<i>Don't know</i>	55.8%	50.3%	36.2%	0.010	<0.001	<0.001
Appropriate timing to stop practices						
<i>Breastfeeding (in months)</i>	38.6 (14.9)	38.1 (15.8)	37.7 (14.1)	0.171	0.051	0.440
<i>Exclusive breastfeeding: 6 months</i>	80.1%	86.0%	87.1%	<0.001	<0.001	0.269

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.3 Breastfeeding practices among children <2 years

	2017 Mothers N=1848 %	2018 Mothers N=1910 %	2019 Mothers N=1825 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Ever breastfed	99.7%	99.6%	99.7%			
<i>Colostrum given (among mothers who ever breastfed, N=1843, 1902, 1820)</i>	93.1%	95.9%	96.3%	0.001	<0.001	0.534
<i>Early initiation of breastfeeding: within 1 hour (among mothers who ever breastfed, N=1843, 1902, 1820)</i>	67.5%	69.2%	74.8%	0.030	<0.001	0.002
<i>Exclusive breastfeeding (among children 0-5.9m, N=455, 450, 431)</i>	62.9%	65.8%	68.9%	0.860	<0.001	<0.001
Continued breastfeeding at 1 year (among children 12-14.9m, N=201, 265, 222)	98.5%	99.6%	98.2%			
Continued breastfeeding at 2 years (among children 20-23.9m, N=308, 323, 346)	93.8%	96.9%	95.4%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.4 Complementary feeding knowledge among household heads

	2017 All HH heads N=1898 Mean (SD)/%	2018 All HH heads N=2142 Mean (SD)/%	2019 All HH heads N=2142 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Appropriate age to introduce each liquid/food (in months)						
Water/clear liquids	5.8 (2.2)	5.7 (1.7)	5.5 (1.5)			
Milk/milk products (excluding breast milk)	6.8 (3.9)	6.4 (3.0)	6.3 (2.8)			
Semi-solid foods	6.8 (2.9)	6.5 (1.9)	6.3 (1.6)			
Solid foods	8.7 (4.6)	7.9 (3.6)	7.6 (3.0)			
Eggs	9.7 (5.2)	8.7 (4.0)	8.3 (3.6)			
Animal meat/fish	10.9 (5.8)	9.7 (4.8)	9.4 (4.9)			
<i>All food items</i>	8.1 (3.0)	7.5 (2.3)	7.3 (2.0)	<0.001	<0.001	0.001
Appropriate age to give each liquid/food: 6-8.9 months						
Water/clear liquids	73.7%	77.7%	74.9%	0.020	0.481	0.061
Milk/milk products (excluding breast milk)	71.1%	76.6%	73.9%	<0.001	0.080	0.055
Semi-solid foods	80.4%	86.7%	84.8%	<0.001	0.001	0.107
Solid foods	60.3%	70.1%	72.4%	<0.001	<0.001	0.126
Eggs	48.4%	59.2%	65.6%	<0.001	<0.001	<0.001
Animal meat/fish	38.2%	48.3%	52.7%	<0.001	<0.001	0.006
<i>All food items</i>	23.4%	34.0%	36.4%	<0.001	<0.001	0.027

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.5 Complementary feeding knowledge among mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3640	Mothers N=3647	Mothers N=3647	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
Appropriate age to introduce each liquid/food (in months)						
Water/clear liquids	5.8 (1.7)	5.8 (1.0)	5.8 (1.3)			
Milk/milk products (excluding breast milk)	6.3 (2.4)	6.1 (1.8)	6.2 (2.1)			
Semi-solid foods	6.3 (2.0)	6.1 (0.9)	6.1 (0.9)			
Solid foods	7.4 (2.8)	7.0 (2.3)	7.0 (2.6)			
Eggs	8.1 (3.4)	7.4 (2.5)	7.2 (2.7)			
Animal meat/fish	8.7 (4.1)	8.1 (3.3)	7.8 (3.2)			
All food items	7.1 (1.8)	6.8 (1.3)	6.7 (1.3)	<0.001	<0.001	0.137
Appropriate age to give each liquid/food: 6-8.9 months						
Water/clear liquids	83.4%	87.0%	87.7%	<0.001	<0.001	0.477
Milk/milk products (excluding breast milk)	85.0%	89.3%	89.1%	<0.001	<0.001	0.826
Semi-solid foods	90.6%	93.7%	93.9%	<0.001	<0.001	0.751
Solid foods	74.6%	81.8%	81.4%	<0.001	<0.001	0.766
Eggs	66.0%	74.9%	81.0%	<0.001	<0.001	<0.001
Animal meat/fish	58.8%	65.3%	70.5%	<0.001	<0.001	0.001
All food items	42.7%	52.0%	57.3%	<0.001	<0.001	0.002

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.6 Complementary feeding practices for children <2 years

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=1848	Mothers N=1910	Mothers N=1825	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
<i>Introduction of solid, semi-solid or soft food of infant at 6-8.9m of age (N=214, 210, 204)</i>	91.6%	88.1%	92.2%	0.260	0.848	0.220
<i>Prevalence of breastfed and non-breastfed children 6–23 months of age, who received solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more (6-23.9m, N=1385, 1460, 1396)</i>	81.2%	87.8%	85.5%	<0.001	0.004	0.121
<i>Consumption of iron-rich foods (6-23.9m) (N=1385, 1460, 1396)</i>	84.2%	88.6%	89.8%	0.001	<0.001	0.300
Age in months of introduction, among those who have been introduced already						
<i>Water/other liquids (N=1502, 1550, 1498)</i>	4.9 (1.8)	5.1 (1.6)	5.1 (1.6)	0.030	0.018	0.553
<i>Milk/milk products (other than breast milk) (N=1358, 1454, 1386)</i>	5.2 (2.8)	5.2 (2.6)	5.4 (2.4)	0.790	0.044	0.093
<i>Semi-solid foods (N=1357, 1443, 1375)</i>	5.9 (1.5)	5.8 (1.3)	5.9 (1.2)	0.170	0.720	0.052
<i>Solid foods (N=1392, 1456, 1409)</i>	6.7 (1.9)	6.5 (1.7)	6.5 (1.7)	0.005	0.006	0.841
<i>Eggs (N=1102, 1266, 1286)</i>	7.6 (2.6)	7.1 (2.3)	6.9 (2.1)	<0.001	<0.001	0.010
<i>Animal meats (N=1217, 1304, 1292)</i>	7.9 (2.8)	7.3 (2.4)	7.2 (2.1)	<0.001	<0.001	0.109

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=1848	Mothers N=1910	Mothers N=1825	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
<i>All food items (N=929, 1128, 1148)</i>	6.5 (1.4)	6.3 (1.3)	6.3 (1.2)	<0.001	<0.001	0.961
Appropriate age (months) of introduction, among those introduced already (6-8.9 months)						
<i>Water/other liquids (N=1502, 1550, 1498)</i>	58.5%	63.8%	64.9%	0.003	0.002	0.566
<i>Milk/milk products (other than breast milk) (N=1358, 1454, 1386)</i>	56.9%	63.6%	65.1%	<0.001	<0.001	0.424
<i>Semi-solid foods (N=1357, 1443, 1375)</i>	78.4%	82.1%	82.6%	0.020	0.007	0.749
<i>Solid foods (N=1392, 1456, 1409)</i>	75.7%	78.6%	78.4%	0.060	0.069	0.850
<i>Eggs (N=1102, 1266, 1286)</i>	65.1%	75.1%	78.6%	<0.001	<0.001	0.050
<i>Animal meats (N=1217, 1304, 1292)</i>	61.5%	70.7%	72.5%	<0.001	<0.001	0.330
<i>All food items (N=929, 1128, 1148)</i>	33.1%	42.1%	44.5%	<0.001	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.7 Child feeding during illness and recovery knowledge among household heads

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=1896	All HH heads N=2142	All HH heads N=2142	2017/ 2018	2017/ 2019	2018/ 2019
	%	%	%			
Knowledge of appropriate feeding practices during illness*						
<i>Giving more food (extra meal, more food, more liquids, increase breastfeeding)</i>	40.7%	40.1%	37.7%	0.772	0.141	0.287
<i>Go to health facility/FCHV</i>	56.7%	65.3%	76.2%	<0.001	<0.001	<0.001
Knowledge of appropriate feeding practices during diarrhea*						
<i>Giving more food (extra meal, more food, more liquids, increase breastfeeding)</i>	NA	31.2%	34.0%	NA	NA	0.122
<i>ORS</i>	NA	73.2%	77.8%	NA	NA	0.002
<i>ORS & Zinc</i>	NA	11.2%	12.7%	NA	NA	0.229
<i>Go to health facility/FCHV</i>	NA	56.4%	67.0%	NA	NA	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 4.8 Child feeding during illness and recovery knowledge among mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3640	Mothers N=3647	Mothers N=3647	2017/ 2018	2017/ 2019	2018/ 2019
	%	%	%			
Knowledge of appropriate feeding practices during illness*						
<i>Giving more food (extra meal, more food, more liquids, increase breastfeeding)</i>	46.6%	32.2%	43.8%	0.041	0.131	0.511
<i>Go to health facility/FCHV</i>	54.2%	63.8%	71.1%	<0.001	<0.001	0.001
Knowledge of appropriate feeding practices during diarrhea*						

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3640	Mothers N=3647	Mothers N=3647	2017/ 2018	2017/ 2019	2018/ 2019
	%	%	%			
<i>Giving more food (extra meal, more food, more liquids, increase breastfeeding)</i>	NA	38.4%	42.6%	NA	NA	0.042
<i>ORS</i>	NA	78.7%	81.8%	NA	NA	0.056
<i>ORS & Zinc</i>	NA	18.3%	17.7%	NA	NA	0.731
<i>Go to health facility/FCHV</i>	NA	50.0%	60.1%	NA	NA	0.981

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 4.9 Practice of child feeding during illness, among children ill in the last 2 weeks

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=1400	Mothers N=1213	Mothers N=1329	2017/ 2018	2017/ 2019	2018/ 2019
	%	%	%			
Offered to drink including breastmilk						
Less than usual	10.2%	12.1%	14.0%			
About the same as usual	52.5%	55.5%	51.8%			
<i>More than usual</i>	32.4%	28.2%	31.1%	0.040	0.480	0.133
Nothing	4.9%	4.2%	3.2%			
Offered to eat, excluding breastmilk						
Less than usual	16.7%	16.3%	17.9%			
About the same as usual	52.3%	51.0%	52.0%			
<i>More than usual</i>	21.6%	23.0%	20.3%	0.394	0.446	0.129
Nothing: stopped foods	0.9%	0.7%	0.4%			
Nothing: doesn't yet eat foods	8.4%	8.9%	9.4%			
<i>Sick children 6-23 months of age fed more during illness (N=593, 541, 597)</i>	38.5%	38.8%	35.9%	0.899	0.342	0.285

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.10 Dietary practices among children 6-23.9 months

	2017	2018	2019	P-value	P-value	P-value
	Children N=1385	Children N=1460	Children N=1396	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
<i>Individual dietary diversity score (7 food groups)</i>	3.4 (1.2)	3.6 (1.2)	3.7. (1.2)	<0.001	<0.001	0.051
<i>Minimum dietary diversity (4+ of food groups)</i>	46.7%	53.5%	57.5%	0.001	0.001	0.053
<i>Minimum acceptable diet</i>	37.5%	45.7%	47.2%	<0.001	<0.001	0.456
Vegetarian diet (no animal sourced foods given)	4.7%	2.7%	2.3%			
Consumption of specific food groups						
Grains (cereals and tubers)	96.9%	97.4%	97.8%			
Pulses (legumes and nuts)	72.0%	75.4%	79.2%			
Dairy	50.7%	48.2%	48.6%			
<i>Flesh foods</i>	17.9%	24.0%	23.3%	<0.001	0.001	0.632
<i>Eggs</i>	10.6%	17.7%	23.1%	<0.001	<0.001	0.001
<i>Vitamin A rich fruits and vegetables</i>	32.0%	34.5%	36.3%	0.190	0.028	0.311

	2017 Children N=1385 Mean (SD)/%	2018 Children N=1460 Mean (SD)/%	2019 Children N=1396 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Other fruits and vegetables</i>	57.7%	64.8%	64.1%	0.001	0.001	0.745
Consumption of snack foods						
Any snack food	49.0%	45.3%	48.4%			
Commercial savory snacks	26.2%	23.2%	25.7%			
Commercial sugary foods	25.8%	24.9%	26.7%			
Commercial fizzy or sweetened drinks	5.1%	6.5%	7.2%			
<i>MNPs/sprinkles/LBNS consumed</i>	5.4%	7.7%	9.8%	0.050	<0.001	0.124
<i>Times solid or semi-solid consumed</i>	3.2 (1.3)	3.7 (1.6)	3.4 (1.3)	0.490	0.326	0.078
<i>Times jaulo consumed</i>	0.5 (0.9)	0.5 (0.9)	0.5 (1.1)			
<i>Jaulo commercially sourced (N=384,404)</i>	16.2%	18.6%	15.8%	0.210	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.11 Dietary practices among children aged 24-59.9 months

	2017 Children N=1779 Mean (SD)/%	2018 Children N=1738 Mean (SD)/%	2019 Children N=1819 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Individual dietary diversity score (7 food groups)</i>	3.8 (1.0)	3.9 (1.0)	3.9 (1.0)	<0.001	<0.001	0.703
<i>Minimum dietary diversity (4+ of food groups)</i>	60.5%	65.4%	65.8%	0.010	0.005	0.866
Vegetarian diet (no animal sourced foods given)	1.0%	1.4%	0.8%			
Consumption of specific food groups						
Grains (cereals and tubers)	99.9%	99.9%	99.9%			
Pulses (legumes and nuts)	75.9%	74.1%	79.3%			
Dairy	41.6%	41.6%	41.1%			
<i>Flesh foods</i>	25.4%	29.6%	29.0%	0.010	0.033	0.711
<i>Eggs</i>	8.7%	15.3%	15.9%	<0.001	<0.001	0.595
<i>Vitamin A rich fruits and vegetables</i>	42.2%	46.4%	43.7%	0.060	0.461	0.149
<i>Other fruits and vegetables</i>	82.1%	83.8%	83.3%	0.200	0.412	0.733
Consumption of snack foods (un-probed, 24-hour dietary recall)						
Any snack food	53.2%	53.6%	58.4%			
Commercial savory snacks	23.6%	24.2%	26.1%			
Commercial sugary foods	33.7%	33.6%	36.9%			
Commercial fizzy or sweetened drinks	7.8%	9.2%	10.8%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.12 Maternal nutrition knowledge among household heads

	2017	2018	2019	P-value	P-value	P-value
	All HH heads	All HH heads	All HH heads	2017/	2017/	2018/
	N=1898	N=2142	N=2130	2018	2019	2019
	%	%	%			
Diet during pregnancy						
Less than usual	6.2%	3.7%	3.6%			
Same as usual	20.0%	16.3%	14.8%			
<i>More than usual</i>	<i>72.2%</i>	<i>78.6%</i>	<i>80.6%</i>	<i><0.001</i>	<i><0.001</i>	<i>0.143</i>

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.13 Maternal nutrition knowledge among mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers	Mothers	Mothers	value	value	2018/
	N=3640	N=3647	N=3647	2017/	2017/	2019
	%	%	%	2018	2019	
Diet during pregnancy						
Less than usual	3.5%	2.1%	2.0%			
Same as usual	10.6%	7.5%	6.7%			
<i>More than usual</i>	<i>85.9%</i>	<i>90.5%</i>	<i>91.2%</i>	<i><0.001</i>	<i><0.001</i>	<i>0.485</i>

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.14 Dietary practices during pregnancy and lactation among mothers of children <2 years

	2017	2018	2019	P-value	P-value	P-value
	Mothers	Mothers	Mothers	2017/	2017/	2018/
	N=1848	N=1910	N=1825	2018	2019	2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
Amount ate during pregnancy						
Less than usual	18.2%	13.0%	13.2%			
Same as usual	33.4%	28.6%	26.3%			
<i>More than usual</i>	<i>48.4%</i>	<i>58.4%</i>	<i>60.6%</i>	<i><0.001</i>	<i><0.001</i>	<i>0.198</i>
Fasting during pregnancy						
Fasted at least 1 day during pregnancy	14.6%	13.9%	13.8%			
Number of days fasted during pregnancy, among those who fasted (N=267, 266, 251)	3.7 (6.2)	3.6 (6.5)	3.3 (5.4)			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.15 Dietary practices among mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers	Mothers	Mothers	2017/	2017/	2018/
	N=3640	N=3648	N=3648	2018	2019	2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
<i>Individual dietary diversity score (10 food groups)</i>	<i>4.1 (1.2)</i>	<i>4.3 (1.2)</i>	<i>4.4 (1.2)</i>	<i><0.001</i>	<i><0.001</i>	<i>0.015</i>
<i>Minimum dietary diversity (5 of 10 food groups)</i>	<i>35.6%</i>	<i>41.6%</i>	<i>45.3%</i>	<i><0.001</i>	<i><0.001</i>	<i>0.011</i>
Vegetarian diet (no animal sourced foods)	1.7%	1.8%	1.6%			

Consumption of specific food groups

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3640	Mothers N=3648	Mothers N=3648	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
Grains, white roots and tubers, and plantains	100.0%	100.0%	100.0%			
Pulses (beans, lentils)	76.0%	76.5%	81.0%			
Nuts and seeds	3.5%	1.5%	1.7%			
Dairy	28.9%	26.2%	25.9%			
<i>Meat, poultry, and fish</i>	28.4%	31.3%	33.7%	0.02	<0.001	0.027
<i>Eggs</i>	5.7%	10.2%	12.2%	<0.001	<0.001	0.009
<i>Dark green leafy vegetables</i>	44.6%	41.4%	45.5%	0.02	0.549	0.002
<i>Other Vitamin A rich fruits and vegetables</i>	6.5%	12.9%	8.6%	<0.001	0.109	<0.001
<i>Other vegetables</i>	86.2%	89.2%	89.4%	0.001	0.001	0.892
<i>Other fruit</i>	32.3%	40.7%	42.0%	<0.001	<0.001	0.407
Consumption of snack foods						
Any snack food	16.4%	18.0%	17.8%			
Commercial savory snacks	6.9%	8.7%	8.7%			
Commercial sugary foods	7.6%	7.4%	6.7%			
Commercial fizzy or sweetened drinks	3.9%	3.6%	4.7%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.16 Dietary practices among male household heads

	2017	2018	2019	P-value	P-value	P-value
	Male HH heads N=1733	Male HH heads N=1792	Male HH heads N=1765	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
<i>Individual dietary diversity score (10 food groups)</i>	4.1 (1.1)	4.2 (1.1)	4.3 (1.2)	0.506	<0.001	<0.001
<i>Minimum dietary diversity (5 of 10 food groups)</i>	36.5%	36.1%	42.3%	0.824	0.005	0.001
Among fathers (N=936, 1309, 1326)						
Individual dietary diversity score	4.1 (1.2)	4.2 (1.2)	4.4 (1.2)			
Minimum dietary diversity	36.8%	37.2%	44.1%			
Among grandfathers (N=745, 441, 407)						
Individual dietary diversity score	4.1 (1.1)	4.0 (1.1)	4.2 (1.2)			
Minimum dietary diversity	36.2%	33.3%	36.9%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.17 Dietary practices among female household heads, other than mothers

	2017	2018	2019	P-value	P-value	P-value
	Female HH heads N=164	Female HH heads N=350	Female HH heads N=362	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
<i>Individual dietary diversity score (10 food groups)</i>	4.3 (1.2)	4.1 (1.1)	4.2 (1.1)	0.036	0.334	0.141
<i>Minimum dietary diversity (5 of 10 food groups)</i>	45.1%	30.0%	35.6%	0.001	0.051	0.132
Among grandmothers (N=103, 322, 338)						

	2017	2018	2019	P-value	P-value	P-value
	Female HH heads N=164	Female HH heads N=350	Female HH heads N=362	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
Individual dietary diversity score	4.3 (1.2)	4.1 (1.1)	4.2 (1.1)			
Minimum dietary diversity	44.7%	30.1%	35.5%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.18 Nutrition-related decision-making power of male household heads, among those who stated a decision was made

	2017	2018	2019	P-value	P-value	P-value
	Male HH heads N=1733 %	Male HH heads N=1792 %	Male HH heads N=1767 %	2017/ 2018	2017/ 2019	2018/ 2019
Own food consumption (N=1727, 1790, 1766)						
Little to no input	2.3%	2.5%	0.2%			
Input into some decisions	17.6%	16.2%	8.4%			
<i>Input into most or all decisions</i>	<i>80.1%</i>	<i>81.3%</i>	<i>81.3%</i>	<i>0.453</i>	<i>0.848</i>	<i>0.380</i>
Child feeding (N=1720, 1773, 1760)						
Little to no input	8.0%	11.9%	13.1%			
Input into some decisions	58.7%	56.4%	61.5%			
<i>Input into most or all decisions</i>	<i>33.3%</i>	<i>31.7%</i>	<i>25.4%</i>	<i>0.455</i>	<i><0.001</i>	<i>0.002</i>

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 4.19 Nutrition-related decision-making power of mothers, among those who stated a decision was made

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3642 %	Mothers N=3648 %	Mothers N=3648 %	2017/ 2018	2017/ 2019	2018/ 2019
Own food consumption (N=3628, 3645, 3648)						
Little to no input	3.1%	2.6%	2.0%			
Input into some decisions	22.1%	20.6%	19.5%			
<i>Input into most or all decisions</i>	<i>42.8%</i>	<i>76.8%</i>	<i>78.6%</i>	<i>0.178</i>	<i>0.005</i>	<i>0.175</i>
Child feeding (N=3637, 3635, 3648)						
Little to no input	0.6%	0.9%	0.3%			
Input into some decisions	7.1%	4.8%	4.6%			
<i>Input into most or all decisions</i>	<i>92.3%</i>	<i>94.3%</i>	<i>95.2%</i>	<i>0.029</i>	<i><0.001</i>	<i>0.166</i>

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

5. Results: IR 1/WASH

The prevalence of knowledge on appropriate drinking water treatment methods (defined as naming at least 1 correct answer and no incorrect answers) has decreased from 87% to 82% in 2019 ($P<0.001$) (Table 5.1). Among mothers, there was no significant change in knowledge between 2017 and 2019 (Table 5.2). Drinking water treatment practices, however, are improving. Households using an appropriate drinking water treatment method and no inappropriate methods increased from 13% to 16% ($P:0.016$) in 2019 and among those households who could be observed treating their drinking water, the increase in use of appropriate drinking water treatment methods was similar from 15% in 2017 to 18% in 2019 ($P:0.008$) (Table 5.3). The prevalence of household heads who reported that their household does not treat drinking water declined from 62% in 2017 to 58% in 2019 ($P:0.029$) (Table 5.3), which was consistent with the mothers' report of never treating drinking water declining from 60% in 2017 to 35% in 2019 ($P<0.001$) and always treating drinking water increasing from 16% in 2017 to 21% in 2019 ($P:0.014$) (Table 5.4).

Knowledge of handwashing with soap and water at all six critical times has seen mixed results between 2017 and 2019. Among household heads, knowledge of handwashing with soap and water at all six critical times has had no overall progress from 2017 to 2019 (Table 5.5). Similarly, among mothers, the prevalence of correct knowledge increased from 3% to 6% from 2017 to 2019 ($P<0.001$) (Table 5.6). Consistently, knowledge on handwashing before feeding, before eating, and before cooking, as well as after handling livestock, are lower than after defecation and after cleaning a child's feces. The practice of handwashing with soap and water at all six critical times among mothers saw a similar trend, increasing only from 8% to 10% in 2019, but no significant overall change between 2017 and 2019 (Table 5.7).

Presence of water user groups in the communities has increased significantly as reported by both household heads and mothers, increasing from 39% to 59% ($P<0.001$) (Table 5.8) and from 35% to 57% ($P<0.001$) (Table 5.9) between 2017 and 2019, respectively.

Observation of sanitation facilities and practices showed mixed results. The practice of covering drinking water pots showed no significant change between 2017 and 2019. The percentage of households with a handwashing station with soap and water, however, steadily increased from 37% in 2017 to 61% in 2019 ($P<0.001$). The availability of improved toilets (at about 85%) and toilet cleanliness (slightly over 40%), however, did not change over time (Table 5.10). The use of commercial/disposable pads among mothers steadily increased from 20% in 2017 to 27% in 2019 ($P:0.002$) (Table 5.11).

When asked about decision-making on the purchase and use of water treatment supplies (in 2018 and 2019 surveys only), there was a decline in the prevalence of mothers having input into most or all decisions, from 58% in 2018 to 51% in 2019 ($P:0.001$) (Table 5.13), but no overall change in this for household heads (Table 5.12).

Table 5.1 Drinking water treatment knowledge among household heads

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=1896 %	All HH heads N=2141 %	All HH heads N=2130 %	2017/ 2018	2017/ 2019	2018/ 2019
Specific methods*						
<i>Boil it</i>	81.4%	81.4%	79.3%	0.990	0.131	0.155
<i>Add bleach/chlorine</i>	22.4%	16.9%	18.2%	<0.001	0.002	0.310

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=1896 %	All HH heads N=2141 %	All HH heads N=2130 %	2017/ 2018	2017/ 2019	2018/ 2019
<i>Filter it</i>	59.1%	63.1%	72.6%	0.050	<0.001	<0.001
<i>Solar disinfection/SODIS</i>	8.4%	10.0%	13.2%	0.110	<0.001	0.001
Let it stand/settle	15.7%	15.8%	11.0%			
Strain it through cloth	35.8%	36.2%	41.5%			
Warm it	NA	10.6%	17.9%			
Other	9.7%	7.2%	8.1%			
<i>Any appropriate method (boil, chlorine, filter, SODIS)</i>	90.9%	91.9%	93.4%	0.353	0.009	0.091
<i>Any appropriate method and no inappropriate method</i>	86.8%	83.8%	81.6%	0.020	<0.001	0.147

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 5.2 Drinking water treatment knowledge among mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3640 %	Mothers N=3648 %	Mothers N=3647 %	2017/ 2018	2017/ 2019	2018/ 2019
Specific methods*						
<i>Boil it</i>	82.8%	88.3%	84.8%	<0.001	0.162	0.008
<i>Add bleach/chlorine</i>	13.1%	13.6%	15.0%	<0.001	0.117	0.225
<i>Filter it</i>	55.2%	68.3%	74.8%	<0.001	<0.001	0.001
<i>Solar disinfection/SODIS</i>	8.9%	15.9%	17.6%	0.010	<0.001	0.246
Let it stand/settle	14.8%	15.4%	12.0%			
Strain it through cloth	44.1%	47.9%	48.5%			
Warm it	NA	9.0%	15.2%			
Other	9.7%	5.8%	7.7%			
<i>Any appropriate method (boil, chlorine, filter, SODIS)</i>	89.2%	93.3%	95.0%	<0.001	<0.001	0.054
<i>Any appropriate method and no inappropriate method</i>	85.5%	87.9%	86.9%	0.035	0.245	0.430

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question

Table 5.3 Drinking water treatment practices as reported by household heads

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=3630 %	All HH heads N=3646 %	All HH heads N=3647 %	2017/ 2018	2017/ 2019	2018/ 2019
Drinking water treatment (observation)						
<i>Boil it</i>	8.3%	10.8%	8.9%	0.010	0.477	0.016
<i>Add bleach/chlorine</i>	0.1%	0.1%	0.2%	0.700	0.268	0.221
<i>Filter it</i>	6.6%	9.3%	10.4%	<0.001	<0.001	0.150
<i>Solar disinfection/SODIS</i>	0.2%	0.2%	0.3%	0.770	0.654	0.490
Let it stand/settle	10.9%	9.0%	5.3%			
Strain it through cloth	4.5%	5.9%	10.2%			
Other	0.2%	0.2%	0.2%			
Warm it	NA	0.5%	1.0%			
<i>Do not treat water</i>	62.2%	58.1%	58.0%	0.030	0.029	0.966

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=3630 %	All HH heads N=3646 %	All HH heads N=3647 %	2017/ 2018	2017/ 2019	2018/ 2019
Could not observe	9.3%	10.6%	10.3%			
Among all respondents						
<i>Any appropriate method (boil, chlorine, filter, SODIS)</i>	14.3%	19.0%	18.4%	<0.001	<0.001	0.593
<i>Any appropriate method and no inappropriate method</i>	13.2%	17.1%	15.9%	<0.001	0.016	0.193
Among those that could be observed (N=3293, 3261, 3270)						
<i>Any appropriate method (boil, chlorine, filter, SODIS)</i>	15.8%	21.2%	20.5%	<0.001	<0.001	0.539
<i>Any appropriate method and no inappropriate method</i>	14.6%	19.2%	17.7%	<0.001	0.008	0.166

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017 and 2018, with the result presented in the P-value column.

Table 5.4 Drinking water treatment practices as reported by mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3640 %	Mothers N=3648 %	Mothers N=3647 %	2017/ 2018	2017/ 2019	2018/ 2019
Frequency of treating drinking water						
<i>Always</i>	16.4%	23.2%	21.2%	<0.001	0.014	0.300
<i>Sometimes</i>	23.5%	36.6%	34.1%	<0.001	<0.001	0.242
<i>Never</i>	60.1%	40.2%	34.9%	<0.001	<0.001	0.034

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as additional responses were allowed for this question.

Table 5.5 Handwashing with soap and water knowledge among household heads

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=1896 %	All HH heads N=2141 %	All HH heads N=2130 %	2017/ 2018	2017/ 2019	2018/ 2019
<i>All six critical times caretaker should wash hands (open-ended)</i>	0.8%	12.8%	2.4%	<0.001	<0.001	<0.001
<i>All six critical times caretaker should wash hands (with picture probe)</i>	NA	NA	11.5%			
Specific times caretaker should wash hands (open-ended)						
<i>After defecation</i>	81.3%	90.5%	81.4%	<0.001	0.963	<0.001
<i>After cleaning the child's bottom</i>	67.6%	83.6%	72.2%	<0.001	0.027	<0.001
<i>After handling animals/livestock</i>	37.1%	68.3%	53.7%	<0.001	<0.001	<0.001
<i>Before preparing food/cooking</i>	10.7%	28.3%	15.5%	<0.001	<0.001	<0.001
<i>Before eating</i>	37.6%	56.4%	44.3%	<0.001	0.001	<0.001
<i>Before feeding the child</i>	48.3%	56.8%	44.5%	<0.001	0.045	<0.001
Specific times caretaker should wash hands with probe (pictures)+						
<i>After defecation</i>	NA	NA	91.5%			
<i>After cleaning the child's bottom</i>	NA	NA	81.9%			
<i>After handling animals/livestock</i>	NA	NA	81.8%			
<i>Before preparing food/cooking</i>	NA	NA	64.3%			
<i>Before eating</i>	NA	NA	67.0%			
<i>Before feeding the child</i>	NA	NA	73.3%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 5.6 Handwashing with soap and water knowledge among mothers

	2017 Mothers N=3640 %	2018 Mothers N=3648 %	2019 Mothers N=3647 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>All six critical times caretaker should wash hands (open-ended)</i>	3.3%	9.1%	6.3%	<0.001	<0.001	0.015
All six critical times caretaker should wash hands (with picture probe)	NA	NA	16.0%			
Specific times caretaker should wash hands (open-ended)						
<i>After defecation</i>	78.1%	77.4%	77.3%	0.640	0.677	0.959
<i>After cleaning the child's bottom</i>	84.7%	95.6%	88.5%	<0.001	0.003	<0.001
<i>After handling animals/livestock</i>	43.1%	64.5%	58.6%	<0.001	<0.001	0.007
<i>Before preparing food/cooking</i>	13.0%	27.3%	26.2%	<0.001	<0.001	0.501
<i>Before eating</i>	32.3%	39.3%	41.5%	<0.001	<0.001	0.214
<i>Before feeding the child</i>	60.1%	64.7%	60.0%	<0.001	0.954	0.022
Specific times caretaker should wash hands (with picture probe)						
After defecation	NA	NA	91.6%			
After cleaning the child's bottom	NA	NA	87.4%			
After handling animals/livestock	NA	NA	82.2%			
Before preparing food/cooking	NA	NA	70.5%			
Before eating	NA	NA	65.8%			
Before feeding the child	NA	NA	79.5%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 5.7 Practice of handwashing with soap and water among mothers

	2017 Mothers N=3640 %	2018 Mothers N=3648 %	2019 Mothers N=3648 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Handwashing with soap and water all 6 critical times always</i>	7.8%	19.0%	9.8%	<0.001	0.161	<0.001
Handwashing with soap and water (open-ended)						
<i>After defecation</i>	96.4%	97.8%	97.6%	0.01	0.006	0.953
<i>After cleaning a young child's bottom</i>	73.1%	84.6%	73.0%	<0.001	0.957	<0.001
<i>After handling livestock/animals</i>	61.0%	85.7%	68.3%	<0.001	0.001	<0.001
<i>Before cooking/preparing food</i>	21.5%	42.3%	35.5%	<0.001	<0.001	<0.001
<i>Before eating</i>	46.0%	61.1%	53.7%	<0.001	<0.001	<0.001
<i>Before feeding children</i>	22.1%	41.2%	22.1%	<0.001	0.992	<0.001
Handwashing with soap and water (closed-ended)						
<i>After defecation</i>	99.4%	99.8%	99.8%	0.005	0.011	1.000
<i>After cleaning a young child's bottom</i>	99.1%	99.4%	99.4%	0.085	0.177	0.794
<i>After handling livestock/animals</i>	94.2%	93.3%	86.1%	0.254	<0.001	<0.001
<i>Before cooking/preparing food</i>	85.2%	89.8%	90.5%	<0.001	<0.001	0.519
<i>Before eating</i>	87.6%	92.1%	91.4%	<0.001	<0.001	0.369
<i>Before feeding children</i>	87.9%	90.6%	90.2%	0.008	0.036	0.669
Handwashing with soap and water always (closed-ended)						
<i>After defecation</i>	82.1%	94.3%	90.4%	<0.001	<0.001	<0.001
<i>After cleaning a young child's bottom</i>	73.6%	89.5%	84.5%	<0.001	<0.001	<0.001
<i>After handling livestock/animals</i>	39.3%	66.9%	49.9%	<0.001	<0.001	<0.001
<i>Before cooking/preparing food</i>	14.0%	28.3%	16.9%	<0.001	0.099	<0.001

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3640 %	Mothers N=3648 %	Mothers N=3648 %	2017/ 2018	2017/ 2019	2018/ 2019
<i>Before eating</i>	13.3%	28.9%	18.6%	<0.001	0.003	<0.001
<i>Before feeding children</i>	13.9%	28.7%	18.7%	<0.001	0.011	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 5.8 Water user group available in the community reported by household heads

	2017	2018	2019	P-value	P-value	P-value
	Male HH heads N=1733 %	Male HH heads N=1792 %	Male HH heads N=1767 %	2017/ 2018	2017/ 2019	2018/ 2019
<i>Water users' group</i>	39.1%	53.2%	59.1%	<0.001	<0.001	0.003

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 5.9 Water user group available in the community reported by mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3642 %	Mothers N=3648 %	Mothers N=3648 %	2017/ 2018	2017/ 2019	2018/ 2019
<i>Water users' group</i>	35.4%	49.0%	56.7%	<0.001	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 5.10 Household sanitation and hygiene facilities and practices

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=3644 %	All HH heads N=3647 %	All HH heads N=3647 %	2017/ 2018	2017/ 2019	2018/ 2019
Usual cooking place: indoors in a separate kitchen room	50.4%	49.4%	48.5%			
Used for cooking: improved stove (closed with chimney)	10.2%	10.9%	10.8%			
<i>Improved sanitation (toilet is: flush to piped sewer system, flush to septic tank, flush to pit latrine, composting toilet/eco-san, bio-gas toilet)</i>	86.7%	88.3%	84.1%	0.264	0.100	0.019
<i>All drinking water pots covered (N=3629, 3646, 3647)</i>	42.4%	37.4%	44.9%	<0.001	0.102	<0.001
<i>Clean toilets (N=3629, 3646, 3647)</i>	42.4%	35.1%	40.6%	<0.001	0.318	0.003
<i>Handwashing station with soap & water (N=3629, 3646, 3647)</i>	37.0%	48.5%	61.2%	<0.001	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 5.11 Menstrual hygiene practices among mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers	Mothers	Mothers	2017/	2017/	2018/
	N=3640	N=3648	N=3647	2018	2019	2019
	%	%	%			
Pad use during menstruation						
Do not use anything	5.1%	5.3%	2.2%			
<i>Commercial/disposable pad</i>	20.2%	25.6%	26.8%	0.530	0.002	0.003
Old cloth	72.2%	67.5%	69.1%			
Reusable/homemade pad	2.4%	1.4%	1.7%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 5.12 Decision-making power on purchase and use of water treatment supplies among household heads

	2018	2019	P-value
	Male HH Heads	Male HH Heads	2018/ 2019
	N=1792	N=1767	
	%	%	
Among those who stated a decision was made (N=805, 898)			
Little to no input	20.6%	23.4%	
Input into some decisions	52.2%	49.4%	
<i>Input into most or all decisions</i>	27.2%	27.2%	0.987

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 5.13 Decision-making power on purchase and use of water treatment supplies among mothers

	2018	2019	P-value
	Mothers	Mothers	2018/ 2019
	N=3648	N=3648	
	%	%	
Among those who stated a decision was made (N=1795, 1870)			
Little to no input	10.8%	17.5%	
Input into some decisions	30.9%	31.8%	
<i>Input into most or all decisions</i>	58.3%	50.7%	0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

6. Results: IR 2/Health

SII's IR 2 focuses on increased use of quality nutrition and health services by women and children. This section presents data on child and maternal health, including exposure to key messages and health-related knowledge and practices.

The prevalence of households who had their GoN vaccination cards for children under five years available to be seen increased from 55% in 2017 to 63% in 2019 ($P<0.001$). Deworming in the last 6 months also increased from 63% in 2017 to 66% in 2019 ($P<0.001$) (Table 6.1). The incidence of diarrhea among children in the two weeks preceding the survey, as well as treatment for diarrhea, showed no significant change over time. Among the sample of children with diarrhea, about 20% of mothers each year reported seeking no treatment and about two-thirds were seen by a health worker or FCHV in 2019. Among those children that were taken to a health worker/FCHV, only 13% were given ORS and zinc (Table 6.2). Among the sub-population of children under two years, the incidence of diarrhea in the previous two weeks and care was the same, except that the prevalence of giving ORS and zinc was slightly higher at about one in five children with diarrhea treated by a health worker (Table 6.3).

The prevalence of children being sick did not change over time (Table 6.4). The percentage of children under two years weighed in the previous month (recommendation as per Nepal protocol) increased from 18% in 2017 to 26% in 2019 ($P<0.001$). Also, among mothers whose child was weighed in the previous month, the prevalence of being told about their child's growth in the last GMP session increased from 28% in 2017 to 43% in 2019 ($P<0.001$) (Table 6.5).

Significant gains in maternal health knowledge were found. Among household heads, maternal knowledge is still very low, but between 2017 and 2019 the prevalence of maternal health knowledge changed: needing 4 ANC checkups increased from 31% to 34% ($P:0.015$), 180 iron and folic acid (IFA) tablets during pregnancy from 15% to 18% ($P:0.015$), 3 postnatal care (PNC) checkups from 17% to 13% ($P:0.001$) and 1 Vitamin A capsule post-partum from 7% to 9% ($P<0.001$) (Table 6.6). Among mothers, there were similar significant increases from 2017 to 2019 in knowledgeable about: needing 4 ANC checkups from 70% to 77% ($P<0.001$), 180 IFA tablets during pregnancy from 71% to 82% ($P<0.001$), 45 IFA tablets post-partum from 55% to 65% ($P<0.001$), and 1 Vitamin A capsule post-partum from 44% to 52% ($P<0.001$) between 2017 and 2019. The prevalence of knowledge about the need for 3 postnatal care (PNC) checkups, however, declined slightly from 18% in 2017 to 16% in 2019 ($P:0.054$) (Table 6.7). ANC practices were high and improved between 2017 and 2019: any ANC increased from 96% to 97% ($P:0.015$), at least 4 ANC visits increased from 80% to 91% ($P<0.001$), and weight taken during ANC from 87% to 95% ($P<0.001$). There was no significant change in the percentage of mothers who took the recommended 180 IFA tablets during pregnancy between 2017 and 2019 (Table 6.8).

Delivery in the presence of a skilled birth attendant increased from 73% in 2017 to 82% in 2019 ($P<0.001$). The average weight of the child at birth was 3 kg with 10% of low birth weight children, with no changes over time. PNC practices improved: the percentage of mothers receiving PNC on the first day increased from 73% in 2017 to 81% in 2019 ($P<0.001$), children receiving PNC on the first day increased from 74% in 2017 to 82% in 2019 ($P<0.001$), and mothers receiving breastfeeding support in the first hour after birth increased from 71% in 2017 to 86% in 2019 ($P<0.001$). The prevalence of women who reported taking any IFA increased from 70% in 2017 to 79% in 2019 ($P<0.001$). Similarly, taking IFA for the recommended 45 days or more post-partum increased from 36% in 2017 to 42% in 2019 ($P:0.001$) (Table 6.8).

The prevalence of mothers getting married at 20 years of age or older (government protocol) has increased from 25% in 2017 to 28% in 2019 (P:0.01) (Table 6.9). The prevalence of knowing that a woman should wait until 20 years of age to become pregnant has remained at about half of household heads and nearly 60% of mothers, with no change over time. Knowledge of modern FP methods, measured as naming *only* modern methods and no traditional methods when asked an open-ended question, declined slightly among household heads from 89% in 2017 to 86% in 2019 (P:0.012), with an even steeper regression among mothers from 93% in 2017 to 82% in 2019 (P:<0.001) (Table 6.10 and 6.11). Among non-pregnant mothers, avoiding pregnancy increased between 2017 and 2019 from 40% to 44% (P:0.001) as did the prevalence of mothers using a modern method of FP from 36% to 38% (P:0.168). When limiting the analyses to those living with their husband, more than 50% of mothers were using a modern method, with no significant changes over time (Table 6.12).

Health frontline workers interactions with household heads and mothers increased between 2017 and 2019 from 45% to 58% (P:<0.001) (Table 6.13) and 67% to 84% (P:<0.001) respectively (Table 6.14). Between 2017 and 2019, the prevalence of male household heads' having input into most or all decisions declined in several domains: use of FP methods from 58% to 51% (P:0.019), their own healthcare from 89% to 91% (P:0.054), and child healthcare from 62% to 52% (P:<0.001) (Table 6.15). Maternal input increased for making most or all decisions between 2017 and 2019 regarding their own health care from 87% to 93% (P:<0.001) and child healthcare from 91% to 94% (P:<0.001), with no significant change regarding input in FP method (Table 6.16).

Table 6.1 Child vaccination and supplementation

	2017 Mothers N=3642 %	2018 Mothers N=3648 %	2019 Mothers N=3648 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Vaccination: has card (seen)</i>	55.1%	58.9%	63.1%	0.001	<0.001	0.001
<i>Vitamin A: received in most recent campaign (among children 6-59.9m, N=3173, 3177, 2992)</i>	49.7%	63.0%	92.6%	<0.001	<0.001	<0.001
<i>De-worming: taken in last 6 months</i>	63.2%	62.1%	66.2%	0.476	<0.001	<0.001
<i>Micronutrient powder: taken in last week (among children 6-23.9m, N=1394, 2460, 1396)</i>	9.3%	11.4%	14.3%	0.160	0.003	0.088

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 6.2 Child health: diarrhea and treatment, among children 0-5 years

	2017 Mothers N=3642 %	2018 Mothers N=3648 %	2019 Mothers N=3648 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Diarrhea in last 2 weeks</i>	11.1%	9.1%	9.5%	0.010	0.062	0.629
Among children who had diarrhea (N=404, 332, 345)						
Blood in stools	11.9%	12.7%	10.7%			
Treatment for diarrhea (N=404, 332, 345)						
None	23.0%	22.6%	19.7%	0.884	0.294	0.352
Health worker/FCHV at facility or at home	66.8%	67.2%	68.4%	0.923	0.650	0.724
ORS and zinc	9.7%	7.8%	9.9%			
Given for diarrhea (among children who sought treatment for diarrhea, N=311, 257, 277)						
ORS Only	38.6%	38.1%	39.0%			
Zinc Only	6.8%	6.6%	5.8%			
ORS and Zinc	12.5%	10.1%	12.3%			
Among children treated by health worker/FCHV for diarrhea (N=258, 211, 218)						

	2017 Mothers N=3642 %	2018 Mothers N=3648 %	2019 Mothers N=3648 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
ORS Only	42.3%	40.8%	41.7%	0.524	0.905	0.631
Zinc Only	7.8%	7.6%	6.9%			
<i>ORS and zinc</i>	13.2%	11.4%	12.8%			
Homemade remedy	59.3%	57.8%	62.8%			
Antibiotics	NA	NA	39.5%			

Note: *Italics* indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 6.3 Child health: diarrhea and treatment, among children 0-2 years

	2017 Mothers N=1850 %	2018 Mothers N=1910 %	2019 Mothers N=1827 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Diarrhea in last 2 weeks</i>	11.1%	9.1%	12.4%	0.108	0.868	0.194
Among children who had diarrhea (N=234, 208, 227)						
Blood in stools	9.0%	13.0%	10.6%			
Treatment for diarrhea (N=234, 208, 227)						
None	25.2%	26.4%	19.8%	0.758	0.161	0.101
<i>Health worker/FCHV at facility or at home</i>	65.0%	67.3%	69.6%	0.681	0.264	0.597
<i>ORS and Zinc</i>	16.8%	12.5%	15.0%	0.190	0.587	0.448
Given for diarrhea (among children who sought treatment for diarrhea, N=175, 153, 182)						
ORS Only	34.9%	36.0%	31.3%			
Zinc Only	7.4%	7.8%	6.6%			
ORS and Zinc	22.3%	17.0%	18.7%			
Among children treated by health worker/FCHV for diarrhea (N=146, 133, 147)						
ORS only	38.4%	37.6%	33.3%			
Zinc only	8.9%	9.0%	7.5%			
<i>ORS and zinc</i>	23.3%	18.1%	19.1%	0.190	0.587	0.448
Homemade remedy	52.7%	52.6%	55.1%			
Antibiotics	NA	NA	41.5%			

Note: *Italics* indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 6.4 Child health: acute respiratory illness (ARI) and treatment

	2017 Mothers N=3642 %	2018 Mothers N=3648 %	2019 Mothers N=3648 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Any sickness (fever, cough, chest, or breathing)</i>	34.5%	29.4%	32.3%	0.001	0.175	0.016
<i>Any sickness among children 0-2 years (N=1850, 1910, 1827)</i>	36.3%	31.1%	35.4%	0.006	0.648	0.012
<i>Fever in last 2 weeks</i>	26.1%	22.6%	24.5%	0.010	0.354	0.040
<i>Cough in last 2 weeks</i>	24.4%	20.4%	22.1%	0.002	0.097	0.123

Note: *Italics* indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 6.5 Growth monitoring practices among children 0-2 years

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=1850	Mothers N=1910	Mothers N=1827	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
<i>Weight/height ever taken by professional/FCHV</i>	89.3%	94.3%	95.7%	<0.001	<0.001	0.115
<i>Children 0-2 years weighed in the past month</i>	17.8%	22.2%	26.3%	0.009	<0.001	0.048
<i>Told about child's growth in last GMP, among those whose height or weight was taken in the last month (N=1654, 1626, 1748)</i>	28.4%	38.6%	43.0%	<0.001	<0.001	0.049
In last 6 months, among total sample						
Weight was taken by professional/FCHV	71.9%	90.5%	90.7%			
Times weight taken by professional/FCHV (N=1907, 1826)	NA	2.3 (1.8)	2.6 (1.9)			
In last 6 months, among those whose height/weight was ever taken						
Weight was taken by professional/FCHV (N=1652, 1801, 1748)	80.5%	90.0%	90.3%			
Times weight taken by professional/FCHV (N=1789, 1739)	NA	2.6 (3.6)	2.8 (2.9)			
In last 1 month, among those whose height/weight was ever taken (N=1644, 1759, 1718)						
Weight was taken by professional/FCHV	20.1%	24.1%	27.9%	0.026	<0.001	0.080
Time (in months) since weight was taken by professional/FCHV	4.0 (4.5)	3.2 (3.9)	2.8 (3.6)	<0.001	<0.001	0.013
Received any counseling during GMP (N=1654, 1626, 1748)	68.3%	62.3%	43.0%	0.016	<0.001	<0.001
Topics discussed during GMP, among those that received counseling (N= 1129, 1013, 751)						
Maternal nutrition	7.5%	8.9%	13.1%	0.303	0.001	0.016
Maternal health	2.0%	3.6%	3.2%	0.020	0.098	0.704
Breastfeeding	9.0%	16.1%	25.6%	<0.001	<0.001	<0.001
Complementary Feeding	18.5%	28.6%	39.7%	<0.001	<0.001	<0.001
GMP	24.6%	29.8%	53.1%	0.063	<0.001	<0.001
Immunization	41.7%	43.6%	43.1%	0.494	0.622	0.871
Child nutrition	30.8%	40.1%	44.6%	<0.001	<0.001	0.135
Child health	18.7%	27.3%	22.5%	<0.001	0.104	0.072
WASH	5.1%	8.4%	18.0%	0.015	<0.001	<0.001
Family planning	2.2%	0.8%	3.3%	0.020	0.179	0.002

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 6.6 Knowledge on maternal health among household heads

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=1898	All HH heads N=2142	All HH heads N=2130	2017/ 2018	2017/ 2019	2018/ 2019
	%	%	%			
<i>4 ANC checkups needed for pregnant woman</i>	30.5%	34.0%	34.4%	0.020	0.015	0.771
<i>180 days of IFA tablets need for pregnant woman</i>	14.7%	14.5%	17.8%	0.880	0.015	0.013

	2017 All HH heads N=1898 %	2018 All HH heads N=2142 %	2019 All HH heads N=2130 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>45 IFA tablets needed for post partum woman</i>	10.6%	10.9%	12.6%	0.700	0.066	0.123
<i>3 PNC checkups needed for post-partum woman</i>	17.0%	11.9%	12.8%	<0.001	0.001	0.419
<i>1 Vitamin A capsule needed for post-partum woman</i>	7.1%	7.5%	9.4%	0.180	<0.001	0.070

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 6.7 Knowledge on maternal health among mothers

	2017 Mothers N=3640 %	2018 Mothers N=3647 %	2019 Mothers N=3647 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>4 ANC checkups needed for pregnant woman</i>	69.5%	75.2%	77.1%	<0.001	<0.001	0.279
<i>180 days of IFA tablets need for pregnant woman</i>	71.4%	75.1%	81.7%	0.02	<0.001	<0.001
<i>45 IFA tablets needed for post-partum woman</i>	55.1%	59.0%	65.0%	<0.001	<0.001	0.004
<i>3 PNC checkups needed for post-partum woman</i>	17.9%	20.6%	15.7%	0.01	0.054	<0.001
<i>1 Vitamin A capsule needed for post-partum woman</i>	44.3%	46.8%	51.5%	0.16	<0.001	0.025

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 6.8 ANC, delivery, and PNC practices among mothers with children <2 years

	2017 Mothers N=1848 Mean (SD)/%	2018 Mothers N=1910 Mean (SD)/%	2019 Mothers N=1825 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
ANC practices						
<i>Any ANC received</i>	95.8%	97.1%	97.3%	0.040	0.015	0.802
<i>4+ ANC checkups, among mothers who received any</i>	79.5%	85.5%	91.4%	<0.001	<0.001	0.001
<i>Weight taken in most recent ANC, among mothers who received any (N=1772, 1855, 1775)</i>	86.7%	93.4%	94.7%	<0.001	<0.001	0.132
Iron/Folic acid tablets taken during pregnancy						
None	6.1%	4.4%	3.6%			
1-60	10.4%	8.1%	6.2%			
61-120	11.8%	8.3%	7.8%			
121-140	1.2%	0.9%	1.1%			
141-160	9.5%	8.3%	8.6%			
161-179	9.1%	11.2%	19.0%			
180 and above	52.0%	58.8%	53.8%	<0.001	0.391	0.002
Delivery practices						
<i>Delivery assistance: skilled birth attendance</i>	73.2%	77.2%	82.3%	0.001	<0.001	<0.001
<i>Child weight (for those with record) in kg (N=621, 702, 896)</i>	3.0 (0.5)	3.0 (0.5)	3.0 (0.5)			
<i>Low birth weight (N=621, 702, 896)</i>	11.1%	8.3%	9.5%	0.090	0.296	0.387
PNC practices						
<i>Received for mother within 1 day</i>	72.6%	77.6%	80.8%	<0.001	<0.001	0.026

	2017 Mothers N=1848 Mean (SD)/%	2018 Mothers N=1910 Mean (SD)/%	2019 Mothers N=1825 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Received for baby within 1 day (N=1820, 1896, 1784)</i>	73.5%	79.1%	83.0%	<0.001	<0.001	0.066
<i>Vitamin A received in 6 weeks after delivery</i>	63.1%	59.8%	59.7%	0.060	0.051	0.940
<i>Breastfeeding support in first hour after birth</i>	70.6%	83.8%	85.5%	<0.001	<0.001	0.212
Iron/Folic acid after delivery						
<i>Any IFA taken</i>	70.0%	73.8%	79.0%	0.010	<0.001	<0.001
<i>Taken for at least 45 days</i>	36.2%	39.4%	42.2%	0.042	0.001	0.083
<i>Taken for at least 45 days (among those who took any, N=1293, 1410, 1442)</i>	51.8%	53.3%	53.4%	0.420	0.438	0.971

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 6.9 Age at marriage, pregnancy and childbirth

	2017 Mothers N=3642 Mean (SD)/%	2018 Mothers N=3648 Mean (SD)/%	2019 Mothers N=3648 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Age at marriage	18.0 (2.8)	18.1 (2.8)	18.2 (2.9)			
Under 15 years	6.9%	5.9%	6.2%			
15-17.9 years	40.9%	40.4%	37.8%			
18-19.9 years	26.7%	28.0%	28.1%			
20+ years	25.4%	25.7%	27.9%	0.730	0.010	0.009
Number of times pregnant	2.4 (1.6)	2.3 (1.6)	2.3 (1.5)			
Age at first pregnancy	19.5 (3.0)	19.5 (2.9)	19.7 (3.0)			
Age at first birth	20.1 (3.3)	20.1 (3.0)	20.3 (3.0)			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 6.10 Family planning/ healthy timing and spacing of pregnancy (HTSP) knowledge among household heads

	2017 All HH heads N=1898 %	2018 All HH heads N=2141 %	2019 All HH heads N=2130 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Age in years woman should first become pregnant: 20 years</i>	51.6%	53.8%	52.9%	0.170	0.416	0.594
<i>Months woman should wait between giving birth and becoming pregnant again: 24 months</i>	13.4%	12.7%	15.0%	0.540	0.220	0.068
<i>Months woman should wait between miscarriage/abortion and becoming pregnant again: 6 months</i>	13.9%	13.0%	14.1%	0.420	0.858	0.349
<i>Knowledge of only modern methods of FP, no traditional method</i>	89.4%	91.0%	86.1%	0.303	0.012	0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 6.11 Family planning/ healthy timing and spacing of pregnancy (HTSP) knowledge among mothers

	2017 Mothers N=3640 %	2018 Mothers N=3647 %	2019 Mothers N=3647 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Age when woman should first become pregnant: 20 years</i>	58.2%	58.9%	59.1%	0.580	0.543	0.914
<i>Months woman should wait between giving birth and becoming pregnant again: 24 months</i>	12.3%	11.5%	15.6%	0.390	0.001	<0.001
<i>Months woman should wait between miscarriage/abortion and becoming pregnant again: 6 months</i>	17.9%	19.7%	19.6%	0.055	0.177	0.871
<i>Knowledge of only modern methods of FP, no traditional method</i>	92.9%	89.3%	81.5%	<0.001	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 6.12 Family planning practices among non-pregnant mothers

	2017 Mothers N=3641 %	2018 Mothers N=3645 %	2019 Mothers N=3459 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Doing anything to delay/avoid pregnancy</i>	40.2%	39.1%	44.4%	0.330	0.001	<0.001
<i>Using modern method of FP (I.e. female/male sterilization, IUCD, injectable, implant, pills, condom, diaphragm, foam jelly)</i>	36.0%	35.0%	37.6%	0.412	0.168	0.017
<i>Using modern method of FP among those living with spouse (N=1052, 916, 897)</i>	58.4%	60.3%	61.3%	0.457	0.211	0.630

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 6.13 Interactions of household heads with health workers, in last 6 months

	2017 All HH heads N=1894 Mean (SD)/%	2018 All HH heads N=2142 Mean (SD)/%	2019 All HH heads N=2129 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Met Health assistant (HA)/ Auxiliary Health Worker (AHW)/ Auxiliary Nurse Midwife (ANM)*</i>	44.8%	53.2%	57.8%	<0.001	<0.001	0.010
<i>Number of times met HA/AHW/ANM (N=849, 1140, 1231)</i>	2.6 (2.0)	2.4 (1.8)	2.4 (1.7)			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 6.14 Interactions of mothers with health workers, last 6 months

	2017 Mothers N=3637 Mean (SD)/%	2018 Mothers N=3647 Mean (SD)/%	2019 Mothers N=3646 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Met HA/AHW/ANM*</i>	67.4%	80.1%	84.0%	<0.001	<0.001	0.004

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3637	Mothers N=3647	Mothers N=3646	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
Number of times met HA/AHW/ANM (N=2452, 2921, 3064)	2.7 (2.1)	2.9 (1.9)	3.0 (1.8)			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 6.15 Health-related decision-making power of male household heads, among those who stated a decision was made

	2017	2018	2019	P-value	P-value	P-value
	Male HH heads N=1733	Male HH heads N=1792	Male HH heads N=1767	2017/ 2018	2017/ 2019	2018/ 2019
	%	%	%			
Use of FP methods (N=1545, 1399, 1528)						
Little to no input	10.4%	6.4%	5.6%			
Input into some decisions	21.9%	32.6%	42.9%			
<i>Input into most or all decisions</i>	<i>57.7%</i>	<i>61.0%</i>	<i>51.4%</i>	<i>0.203</i>	<i>0.019</i>	<i><0.001</i>
Own healthcare (N=1726, 1789, 1765)						
Little to no input	1.0%	0.2%	0.2%			
Input into some decisions	10.2%	7.9%	8.4%			
<i>Input into most or all decisions</i>	<i>88.8%</i>	<i>91.9%</i>	<i>91.3%</i>	<i>0.004</i>	<i>0.054</i>	<i>0.627</i>
Child healthcare (N=1728, 1790, 1765)						
Little to no input	2.0%	2.5%	3.2%			
Input into some decisions	36.0%	39.1%	45.0%			
<i>Input into most or all decisions</i>	<i>62.0%</i>	<i>58.4%</i>	<i>51.8%</i>	<i>0.075</i>	<i><0.001</i>	<i>0.006</i>

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 6.16 Health-related decision-making power of mothers, among those who stated a decision was made

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3642	Mothers N=3648	Mothers N=3648	2017/ 2018	2017/ 2019	2018/ 2019
	%	%	%			
Use of FP methods (N=3140, 2813, 3109)						
Little to no input	6.7%	6.8%	5.0%			
Input into some decisions	34.5%	36.7%	38.1%			
<i>Input into most or all decisions</i>	<i>58.9%</i>	<i>56.5%</i>	<i>57.0%</i>	<i>0.330</i>	<i>0.419</i>	<i>0.817</i>
Own healthcare (N=3630, 3648, 3648)						
Little to no input	0.9%	1.0%	0.4%			
Input into some decisions	12.2%	6.8%	6.6%			
<i>Input into most or all decisions</i>	<i>87.0%</i>	<i>92.2%</i>	<i>93.0%</i>	<i><0.001</i>	<i><0.001</i>	<i>0.333</i>
Child healthcare (N=3636, 3648, 3648)						
Little to no input	0.7%	0.8%	0.3%			
Input into some decisions	8.2%	4.9%	5.3%			
<i>Input into most or all decisions</i>	<i>91.1%</i>	<i>94.3%</i>	<i>94.4%</i>	<i><0.001</i>	<i><0.001</i>	<i>0.933</i>

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

7. Results: IR 3/Agriculture and Enhanced Homestead Food Production

SII also has an enhanced homestead food production (EHFP) component in about half of its intervention areas. There are EHFP intensive districts where all areas of the district receive the EHFP interventions, and EHFP non-intensive districts where EHFP is only implemented in select VDCs (now within the new municipality and ward structure). The EHFP intervention was prioritized for areas classified by the government in 2010 as being remote, disadvantaged, and food insecure. The EHFP component, thus, was to support these populations with poor access to resources by providing inputs to 1000-day households to increase their agricultural production, dietary diversification and livelihoods opportunities. This section presents results for agriculture and food security related indicators, among EHFP-intervention areas, which were randomly selected into the annual monitoring survey. It is important, however, to note that these are not necessarily EHFP households, given that the intervention primarily targeted households who were in the 1000-day period at one point in time (varying across intervention areas)

In EHFP areas, the percentage of food secure households increased from 52% in 2017 to 73% in 2019 ($P<0.001$). The overall household food insecurity score (1-4) also decreased from 2.6 in 2017 to 1.4 ($P<0.001$) in 2019 (Table 7.1). Nearly all households own agricultural land. The majority of land owned, both agricultural and non-agricultural, was over 0.3 hectares, and the percentage of households using their owned land for kitchen gardens increased from 62% in 2017 to 78% in 2019 ($P<0.001$) (Table 7.2).

Interactions between households, village model farmers (VMFs), and Homestead Food Production Beneficiaries (HFPB) saw mixed trends between 2017 and 2019. The percentage of mothers reporting an HFPB group to exist in their ward increased from 9% in 2017 to 12% in 2019, however the changes are not significant ($P:0.343$). The percentage of households who received EHFP inputs from a VMF and/or a graduated HFP beneficiaries increased from 17% to 24% (Table 7.3).

Household heads' HFP-related knowledge improved significantly: more recognized that improving diets of women and children is a benefit of both homestead gardens (from 48% in 2017 to 69% in 2019 ($P<0.001$)) and small animal production (from 41% in 2017 to 67% in 2019 ($P<0.001$)) (Table 7.4). Among mothers, a similar trend was seen (Table 7.5). Both mothers and household heads knew an average of 2 of 3 good poultry management practices by 2019, and 2 of 7 basic homestead garden planning practices (Table 7.4 and 7.5).

The percentage of households with vegetables growing on the roof, garden, etc. to be observed as a kitchen garden decreased from 87% in 2017 to 79% in 2019 ($P:0.007$). The length of time these gardens provide enough food for the family has increased from 5.8 to 7.1 months of the year between 2017 and 2019 ($P<0.001$). Households with a homestead garden that meets minimum criteria, established by *Suaahara*, increased from 8% in 2017 to 22% in 2019 ($P<0.001$). The mean number of nutrient dense vegetables cultivated in the previous year increased from 8.2 in 2017 to 11.6 in 2019 ($P<0.001$) (Table 7.6). Poultry ownership saw no significant change, with about 43% of households owning at least one chicken. Among these households, almost none vaccinated their chickens against New Castle Disease. However, no action taken for sick chickens decreased from 59% in 2017 to 41% in 2019 ($P:0.008$) (Table 7.7).

Among those that produced vegetables from their homestead gardens, about one in five sold any in the past year in all three survey rounds. Among those who sold, about two-thirds of households reported to spend the extra money on food (staples) and WASH supplies (e.g. filters) (Table 7.8). About 18% of households in 2019 sold any chickens and about one-third of households with chickens, sold any in the last year. Among households that produced eggs, only 3% reported selling any surplus in the past month (Table 7.9). Similar patterns emerged for selling and use of revenue from other crop and animal production (Table 7.8 and 7.9). The overall trend among those that produced and sold any vegetables, chicken, or eggs saw only 22% of households using revenue for food, and nearly two thirds of revenue for WASH supplies (Table 7.10).

Interactions between household heads (Table 7.11) and mothers (Table 7.12) with agricultural FLWs (livestock and agricultural extension workers) saw no significant changes.

Availability of agricultural/livestock/fisheries producer groups increased from 2017 to 2019 as reported by both male household heads (Table 7.13) and mothers (Table 7.14), each from 20% to 38% ($P<0.001$). A similar trend was seen for reported availability of land/forest users' groups, increasing from 65% in 2017 to 75% in 2019 ($P<0.001$) among household heads (Table 7.13) and 60% to 75% ($P<0.001$) among mothers (Table 7.14). Between 2017 and 2019, the percentage of male household heads participating in decision-making for both horticulture and poultry/processing increased from 46% to 68% ($P<0.001$) and from 55% to 61% ($P<0.001$) respectively, but saw declines in having input into most or all decisions in the two areas from 74% to 59% ($P<0.001$) and 63% to 48% ($P<0.001$), respectively (Table 7.15). Mothers also saw significant increases in participation in the decision-making process for both horticulture/high value crop farming and poultry/processing of milk/meat between 2017 and 2019, from 44% to 67% ($P<0.001$) and 61% to 66% ($P<0.001$) respectively. Similar to household heads, the percentage of mothers having input into most or all of the decisions in these two areas decreased from 52% to 43% ($P<0.001$) and from 57% to 51% ($P<0.001$), respectively (Table 7.16).

Table 7.1 Household food security status

	2017	2018	2019	P-value	P-value	P-value
	All HH heads HFP areas N=987 %	All HH heads HFP areas N=987 %	All HH heads HFP areas N=988 %	2017/ 2018	2017/ 2019	2018/ 2019
Household food insecurity (in past 30 days) (HFIAS)						
<i>Food secure</i>	52.4%	63.9%	72.7%	<0.001	<0.001	0.001
Mildly food insecure	22.5%	20.6%	14.7%			
Moderately food insecure	22.0%	12.0%	11.2%			
Severely food insecure	3.1%	3.6%	1.4%			
<i>Household food insecurity score</i>	2.6 (3.7)	1.8 (3.1)	1.4 (2.9)	<0.001	<0.001	0.010

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 7.2 Land ownership and use

	2017	2018	2019	P-value	P-value	P-value
	All HH heads HFP areas N=988 Mean (SD)/%	All HH heads HFP areas N=986 Mean (SD)/%	All HH heads HFP areas N=987 Mean (SD)/%	2017/ 2018	2017/ 2019	2018/ 2019
<i>Owns any agricultural land</i>	98.0%	98.7%	99.0%	0.258	0.015	0.471
Size of land in hectares (among those who own any)						
Agricultural land size (N=966, 971)	NA	0.3 (0.5)	0.3 (0.4)			
0-0.1 hectares	NA	24.4%	22.7%			
0.11-0.2 hectares	NA	24.4%	23.8%			
0.21-0.3 hectares	NA	15.8%	17.4%			
0.31+ hectares	NA	35.4%	36.2%			
Non-agricultural land size (N=973, 977)	NA	0.1 (0.2)	0.1 (0.1)			
0-0.1 hectares	NA	71.7%	77.1%			
0.11-0.2 hectares	NA	13.7%	9.8%			
0.21-0.3 hectares	NA	6.4%	6.7%			
0.31+ hectares	NA	8.2%	6.5%			
Total land size (N=968, 966, 971)	0.5 (0.9)	0.4 (0.6)	0.4 (0.5)			
0-0.1 hectares	16.0%	21.4%	20.9%			
0.11-0.2 hectares	21.8%	20.0%	18.9%			
0.21-0.3 hectares	17.8%	13.5%	14.5%			
0.31+ hectares	44.4%	45.1%	45.7%			
Use of land owned (N=788, 785)						
Cultivated Crops	93.9%	95.2%	94.6%			
Kitchen garden	61.8%	69.3%	78.1%	0.140	<0.001	0.004
Livestock	4.1%	3.8%	5.4%	0.807	0.391	0.465
Decision maker on use of land, if current use is for agriculture (N=936, 957, 965)						
Male household member	52.1%	49.3%	53.1%			
Female household member	47.9%	50.7%	46.9%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 7.3 Interactions between VMFs and homestead food production beneficiaries (HFPB)

	2017	2018	2019	P-value	P-value	P-value
	Mothers HFP areas N=986 Mean (SD)/%	Mothers HFP areas N=988 Mean (SD)/%	Mothers HFP areas N=988 Mean (SD)/%	2017/ 2018	2017/ 2019	2018/ 2019
<i>HFPB group in the ward</i>	9.0%	16.6%	11.5%	0.051	0.343	0.089
<i>Member of HFPB group (among those with HFPB in ward, N=89, 153, 114)</i>	36.0%	40.2%	26.3%	0.728	0.067	0.149
Ever received from graduated (prior) HFPBs						
Any input (seeds, chicks, info, other inputs)	16.7%	15.7%	11.9%	0.702	0.051	0.222
Seeds	13.5%	9.7%	7.3%			
Chicks	6.7%	9.9%	6.8%			
Agriculture/HFP-related info	8.8%	4.8%	2.8%			
Other agriculture/HFP inputs	2.2%	1.9%	0.8%			
<i>Households with a child aged 0-2 years who ever received HFP inputs</i>	16.8%	27.2%	21.0%	0.003	0.127	0.084

	2017	2018	2019	P-value	P-value	P-value
	Mothers HFP areas N=986	Mothers HFP areas N=988	Mothers HFP areas N=988	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			

from VMFs and/or graduated HFP

beneficiaries (N=519, 552, 510)

Households who ever received HFP
inputs from VMFs and/or graduated
HFP beneficiaries

16.7% 29.2% 24.1%

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 7.4 HFP knowledge among household heads

	2017	2018	2019	P-value	P-value	P-value
	Male HH heads HFP areas N=541	Male HH heads HFP areas N=596	Male HH heads HFP areas N=571	2017/ 2018	2017/ 2019	2018/ 2019
	%	%	%			
Benefits of homestead garden*						
<i>Improve household food</i>	84.1%	66.4%	50.3%	<0.001	<0.001	<0.001
<i>Source of income</i>	67.3%	80.0%	75.1%	0.002	0.032	0.154
<i>Improve diets of children/women</i>	48.4%	73.8%	69.0%	<0.001	<0.001	0.247
Advantages of producing small animals*						
<i>Improve household food</i>	67.8%	54.5%	38.9%	0.008	<0.001	<0.001
<i>Source of income</i>	98.5%	97.0%	95.6%	0.156	0.005	0.304
<i>Improve diets of children/women</i>	40.5%	71.8%	66.9%	<0.001	<0.001	0.255
Key points for planning a homestead garden*						
<i>Proximity to home</i>	N/A	51.3%	41.7%	N/A	N/A	0.049
<i>Ease of watering</i>	N/A	65.4%	65.2%	N/A	N/A	0.932
<i>Plants that grow well in local conditions</i>	N/A	13.8%	18.7%	N/A	N/A	0.125
<i>Plants that improve household nutrition</i>	N/A	7.7%	9.5%	N/A	N/A	0.417
<i>Crops that bring in most income</i>	N/A	10.1%	5.3%	N/A	N/A	0.009
<i>Protection from animals</i>	N/A	61.7%	73.4%	N/A	N/A	0.001
<i>Available space</i>	N/A	16.6%	15.6%	N/A	N/A	0.732
<i>Mean score: homestead garden planning points (0-7)</i>	N/A	2.3 (1.3)	2.3 (1.2)	N/A	N/A	0.801
Good poultry management practices *						
<i>Keep chicken inside a coop</i>	N/A	82.2%	90.4%	N/A	N/A	0.001
<i>Provide quality food</i>	N/A	63.3%	73.4%	N/A	N/A	<0.001
<i>Vaccinate regularly</i>	N/A	15.4%	19.1%	N/A	N/A	0.228
<i>Mean score: poultry management practices (0-3)</i>	N/A	1.6 (0.9)	1.8 (0.7)	N/A	N/A	0.002

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 7.5 HFP knowledge among mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers HFP areas N=985 %	Mothers HFP areas N=988 %	Mothers HFP areas N=988 %	2017/ 2018	2017/ 2019	2018/ 2019
Benefits of homestead garden*						
<i>Improve household food</i>	83.3%	62.8%	53.1%	<0.001	<0.001	0.018
<i>Source of income</i>	72.8%	81.2%	71.5%	0.033	0.673	0.012
<i>Improve diets of children/women</i>	49.1%	80.1%	67.4%	<0.001	<0.001	0.019
Advantages of producing small animals*						
<i>Improve household food</i>	70.0%	54.6%	36.8%	0.004	<0.001	<0.001
<i>Source of income</i>	98.3%	96.4%	95.2%	0.034	0.001	0.354
<i>Improve diets of children/women</i>	50.2%	78.3%	68.7%	<0.001	<0.001	0.002
Key points for planning a homestead garden*						
<i>Proximity to home</i>	45.9%	43.0%	30.6%	0.452	<0.001	0.002
<i>Ease of watering</i>	62.9%	74.7%	63.7%	0.001	0.791	<0.001
<i>Plants that grow well in local conditions</i>	7.6%	8.9%	13.1%	0.549	0.027	0.027
<i>Plants that improve household nutrition</i>	5.9%	7.6%	6.5%	0.253	0.646	0.409
<i>Crops that bring in most income</i>	4.6%	9.5%	4.6%	0.001	0.916	0.006
<i>Protection from animals</i>	56.2%	60.8%	69.7%	0.249	0.001	0.026
<i>Available space</i>	10.1%	15.9%	14.4%	0.040	0.140	0.638
<i>Mean score: homestead garden planning points (0-7)</i>	1.9 (1.2)	2.2 (1.2)	2.0 (1.2)	0.006	0.291	0.055
Good poultry management practices *						
<i>Keep chicken inside a coop</i>	83.2%	85.4%	86.9%	0.266	0.158	0.534
<i>Provide quality food</i>	64.5%	67.9%	72.1%	0.322	0.012	0.119
<i>Vaccinate regularly</i>	13.9%	11.8%	15.0%	0.422	0.690	0.096
<i>Mean score: poultry management practices (0-3)</i>	1.6 (0.9)	1.7 (0.8)	1.7 (0.8)	0.529	0.042	0.093

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 7.6 Homestead gardening practices

	2017	2018	2019	P-value	P-value	P-value
	Mothers HFP areas N=986 Mean (SD)/%	Mothers HFP areas N=988 Mean (SD)/%	Mothers HFP areas N=988 Mean (SD)/%	2017/ 2018	2017/ 2019	2018/ 2019
<i>Vegetables growing in garden/roof/wall</i>	86.7%	87.6%	79.4%	0.633	0.007	0.001
<i>Vegetables growing in other land except garden/roof/wall</i>	NA	36.9%	37.4%			
<i>Distance vegetables grown from home (minutes) (among those growing, N=730, 735)</i>	2.9 (5.2)	2.7 (5.5)	2.6 (4.5)			
Arrangement of vegetable garden (among those able to observe, N=900, 908, 877)						
<i>All the garden is arranged into fixed plots</i>	2.1%	2.9%	8.9%			
<i>Some of the garden is arranged into fixed plots, but some is not</i>	19.2%	29.0%	27.1%			
<i>None of the garden is arranged into fixed plots</i>	68.6%	63.4%	59.9%			

	2017	2018	2019			
	Mothers HFP areas N=986 Mean (SD)/%	Mothers HFP areas N=988 Mean (SD)/%	Mothers HFP areas N=988 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Not able to observe	10.1%	4.7%	4.1%			
<i>Length of time vegetable production from homestead garden provides food to family (months) (N=900, 914, 928)</i>	5.8 (3.5)	6.2 (3.8)	7.1 (3.7)	0.122	<0.001	0.005
<i>Households with homestead gardens meeting minimum criteria</i>	7.7%	22.3%	22.1%	<0.001	<0.001	0.938
Nutrient dense vegetables cultivated by households in the previous year (anywhere)						
<i>Vitamin A rich</i>	23.9%	7.4%	6.3%	<0.001	<0.001	0.450
<i>Dark green leafy vegetable</i>	80.6%	88.2%	86.9%	<0.001	0.007	0.388
<i>Other vegetable</i>	90.6%	91.5%	91.4%	0.486	0.586	0.931
<i>All nutrient dense vegetable</i>	91.3%	93.0%	91.7%	0.125	0.794	0.250
<i>Nutrient dense vegetable cultivated by households in previous year</i>	8.2 (5.0)	9.9 (5.9)	11.6 (6.5)	<0.001	<0.001	<0.001
Crops/vegetables available, by observation (HFP: N=808, 862, 838)						
Vitamin A rich						
Orange Fleshed Sweet Potato	0.3%	0.4%	0.0%			
Pumpkin/squash/pumpkin shoot	54.0%	66.7%	69.2%			
Dark green leafy vegetables						
Broadleaf mustard	7.1%	5.8%	11.9%			
Colocasia	35.5%	36.0%	48.2%			
Other vegetables						
Chili	70.1%	72.3%	79.2%			
Snake gourd	10.5%	15.4%	16.6%			
Brinjal	38.6%	30.3%	33.3%			
Four season beans	26.4%	27.7%	29.2%			
Okra	26.2%	26.8%	23.8%			
Cowpea	21.5%	21.4%	29.5%			
Bitter gourd	21.0%	25.3%	28.9%			
Sponge gourd	11.8%	16.4%	19.5%			
Bottle gourd	14.4%	15.7%	16.8%			
Radish	12.8%	11.8%	21.5%			
Fruits						
Tomato	23.6%	21.1%	23.2%			
White tubers/roots						
Potato	4.1%	6.0%	9.2%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 7.7 Poultry ownership and management

	2017	2018	2019			
	Mothers HFP areas N=986 Mean (SD)/%	Mothers HFP areas N=988 Mean (SD)/%	Mothers HFP areas N=988 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Poultry ownership						
<i>Has at least 1 chicken</i>	42.9%	47.4%	43.4%	0.110	0.782	0.098
Number of chickens in the household (N=423, 468, 429)						
<i>Less than 5</i>	42.8%	37.6%	33.1%	0.144	0.013	0.211
<i>5 to 10</i>	33.8%	38.3%	39.2%	0.225	0.112	0.786
<i>10 and above</i>	23.4%	24.2%	27.7%	0.824	0.235	0.344

	2017	2018	2019	P-value	P-value	P-value
	Mothers HFP areas N=986 Mean (SD)/%	Mothers HFP areas N=988 Mean (SD)/%	Mothers HFP areas N=988 Mean (SD)/%	2017/ 2018	2017/ 2019	2018/ 2019
<i>Vaccination with New Castle Disease (among those who have any chicken, N=423, 468, 429)</i>	2.3%	1.3%	1.9%	<0.001	<0.001	0.588
Received a <i>Suaahara</i> chicken	16.6%	21.3%	14.5%			
Chicks hatched/regenerated using a <i>Suaahara</i> chicken (N=129, 210, 143)	13.3%	8.1%	10.0%			
Illness in poultry and management						
Any chickens sick in last 1 month (among those who have chicken, N=423, 543, 513)	19.2%	24.1%	19.7%	<0.001	0.306	0.098
Action for sick chickens (among those who had sick chickens, N=86, 131, 101)						
No actions	59.3%	46.6%	40.6%	0.135	0.008	0.299
Seek support from livestock service centers	15.1%	15.3%	23.8%	0.981	0.202	0.171
Poultry and production (N=423, 543, 513)						
Household produced eggs in last 1 month	54.9%	37.9%	47.6%	0.010	0.765	0.004
Number of eggs produced by household in last 1 month (among those who produced any, N=232, 206, 245)*	20.7 (15.7)	20.4 (16.1)	21.8 (21.0)	0.910	0.591	0.446
Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.						

Table 7.8 Income, selling, and use of revenue from crop outputs in the last 12 months

	2017	2018	2019	P-value	P-value	P-value
	Mothers HFP areas N=986 %	Mothers HFP areas N=988 %	Mothers HFP areas N=988 %	2017/ 2018	2017/ 2019	2018/ 2019
Vegetable sales in last 12 months among those that produced any (N=900, 914, 928)						
Sold any	22.9%	19.4%	21.8%	0.221	0.715	0.231
Income (in NPR) earned among those who sold vegetables (N=177, 197)						
0-1500	NA	28.3%	31.5%			
1501-5000	NA	40.7%	31.0%			
5001-9999	NA	6.8%	7.1%			
10000+	NA	24.3%	30.5%			
Use of revenue earned (N=206, 177, 197)						
Food security	60.7%	72.9%	65.5%			
Nutrient-dense food	16.0%	30.5%	19.8%			
Health/FP	13.6%	21.5%	22.3%			
WASH	43.7%	56.5%	55.8%			
Education	18.9%	20.9%	23.9%			
Saving	13.6%	19.8%	15.2%			
Buy clothes	9.2%	10.7%	22.3%			
Other	2.9%	3.4%	3.1%			

	2017	2018	2019			
	Mothers HFP areas N=986 %	Mothers HFP areas N=988 %	Mothers HFP areas N=988 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Vegetable sales in last 12 months among those that produced any (N=900, 914, 928)						
<i>Sold any</i>	22.9%	19.4%	21.8%	0.221	0.715	0.231
Income (in NPR) earned among those who sold vegetables (N=177, 197)						
0-1500	NA	28.3%	31.5%			
1501-5000	NA	40.7%	31.0%			
5001-9999	NA	6.8%	7.1%			
10000+	NA	24.3%	30.5%			
Use of revenue earned (N=206, 177, 197)						
Food security	60.7%	72.9%	65.5%			
Nutrient-dense food	16.0%	30.5%	19.8%			
Health/FP	13.6%	21.5%	22.3%			
WASH	43.7%	56.5%	55.8%			
Education	18.9%	20.9%	23.9%			
Saving	13.6%	19.8%	15.2%			
Buy clothes	9.2%	10.7%	22.3%			
Other	2.9%	3.4%	3.1%			
Crop (other than vegetable) sales in last 12 months among those that produced any (N=905)						
<i>Sold any</i>	NA	NA	15.6%			
Income (in NPR) earned among those who sold other crops (N=141)						
0-1500	NA	NA	14.2%			
1501-5000	NA	NA	28.4%			
5001-9999	NA	NA	12.1%			
10000+	NA	NA	45.4%			
Use of revenue earned						
Food security	NA	NA	58.2%			
Nutrient-dense food	NA	NA	25.5%			
Health/FP	NA	NA	27.0%			
WASH	NA	NA	52.5%			
Education	NA	NA	27.0%			
Saving	NA	NA	27.7%			
Buy clothes	NA	NA	19.2%			
Other	NA	NA	12.1%			
Crop (other than vegetable) sales in last 12 months among those that produced any (N=905)						
<i>Sold any</i>	NA	NA	15.6%			
Income (in NPR) earned among those who sold other crops (N=141)						
0-1500	NA	NA	14.2%			
1501-5000	NA	NA	28.4%			
5001-9999	NA	NA	12.1%			
10000+	NA	NA	45.4%			
Use of revenue earned						
Food security	NA	NA	58.2%			
Nutrient-dense food	NA	NA	25.5%			
Health/FP	NA	NA	27.0%			
WASH	NA	NA	52.5%			
Education	NA	NA	27.0%			
Saving	NA	NA	27.7%			
Buy clothes	NA	NA	19.2%			
Other	NA	NA	12.1%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 7.9 Total income, selling, and use of revenue from poultry outputs in the last 12 months

	2017	2018	2019			
	Mothers HFP areas N=986	Mothers HFP areas N=988	Mothers HFP areas N=988	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
	%	%	%			
Chicken sales in last 12 months						
Sold any	15.6%	18.5%	17.6%			
Sold any, among those with any chickens in the household (N=423, 468, 429)	33.6%	34.4%	35.9%			
Number of chicks/chickens sold in last 12 months	7.9 (163.1)	2.7 (34.0)	5.7 (73.8)			
Income (in NPR) earned among those who sold chickens (N=183, 199)						
0-1500	NA	22.4%	21.3%			
1501-5000	NA	52.5%	40.8%			
5001-9999	NA	16.4%	17.8%			
10000+	NA	8.7%	20.1%			
Use of revenue earned (N=154, 183, 174)						
Food security	59.1%	62.3%	65.5%			
Nutrient-dense food	24.7%	26.8%	17.8%			
Health/FP	14.3%	18.0%	25.3%			
WASH	44.2%	42.6%	52.3%			
Education	20.8%	15.9%	24.1%			
Saving	12.3%	17.5%	24.1%			
Buy clothes	9.1%	9.3%	14.9%			
Other	3.9%	2.2%	8.6%			
Animal/poultry (non-chicken) sales in last 12 months among those that produced any (N=905)						
Sold any	NA	NA	29.6%			
Income (in NPR) earned among those that sold any animal/poultry (N=268)						
0-1500	NA	NA	1.9%			
1501-5000	NA	NA	13.8%			
5001-9999	NA	NA	20.9%			
10000+	NA	NA	64.3%			
Use of revenue (N=268)						
Food security	NA	NA	53.4%			
Nutrient-dense food	NA	NA	17.5%			
Health/FP	NA	NA	22.4%			
WASH	NA	NA	42.2%			
Education	NA	NA	23.5%			
Saving	NA	NA	28.7%			
Buy clothes	NA	NA	25.8%			
Other	NA	NA	9.8%			
Egg sales in last month among those that produced any eggs (N=423, 543, 513)						
Sold any	4.3%	2.0%	3.1%			
Use of revenue (N=18, 11, 16)						
Food security	33.3%	54.6%	50.0%			
Nutrient-dense food	33.3%	18.2%	31.3%			
Health/FP	5.6%	0.0%	12.5%			
WASH	33.3%	45.5%	43.8%			
Education	16.7%	18.2%	18.8%			
Saving	NA	0.0%	6.3%			
Buy clothes	5.6%	0.0%	6.3%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These sub-indicators will not add to 100% as this question allowed for multiple responses to be provided

Table 7.10 Total income, selling, and use of revenue from HFP outputs (vegetables and chickens) in the last 12 months

	2017	2018	2019			
	Mothers HFP areas N=986 %	Mothers HFP areas N=988 %	Mothers HFP areas N=988 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Vegetable/chicken sales in last 12 months, among those that produced any (N=304, 307)						
Income (in NPR) earned						
0-1500	NA	20.7%	21.5%			
1501-5000	NA	44.4%	35.5%			
5001-9999	NA	13.5%	12.4%			
10000+	NA	21.4%	30.6%			
Use of revenue (N=316, 304, 307)						
Food security	62.7%	72.4%	67.4%			
<i>Nutrient-dense food</i>	21.8%	31.3%	20.9%	0.050	0.815	0.010
Health/FP	14.6%	21.4%	25.7%			
WASH	45.3%	52.0%	57.3%			
Education	21.5%	20.4%	26.4%			
Saving	8.9%	11.5%	9.8%			
Buy clothes	9.8%	11.8%	22.2%			
Other	1.9%	2.0%	2.0%			
Vegetable/chicken/egg sales in last 12 months, among those that produced any						
Use of revenue (N=321, 304, 311)						
Food security	62.6%	72.7%	66.9%			
<i>Nutrient-dense food</i>	22.7%	31.9%	21.5%	0.060	0.778	0.011
Health/FP	14.6%	21.4%	25.7%			
WASH	45.5%	52.0%	57.6%			
Education	21.5%	20.7%	27.0%			
Saving	8.9%	11.5%	10.0%			
Buy clothes	10.0%	11.8%	22.2%			
Other	1.9%	2.0%	2.3%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 7.11 Interactions of household heads with agriculture FLWs

	2017	2018	2019			
	All HH heads N=1894 Mean (SD)/%	All HH heads N=2142 Mean (SD)/%	All HH heads N=2129 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Met at all in last 6 months						
<i>Livestock extension worker</i>	25.6%	23.3%	23.7%	0.187	0.266	0.802
<i>Agricultural extension worker</i>	11.7%	8.9%	11.0%	0.005	0.563	0.073
Number of times met in last 6 months						

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=1894	All HH heads N=2142	All HH heads N=2129	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
Livestock extension worker (N=484, 499, 504)	2.0 (1.8)	1.9 (2.0)	1.8 (1.8)			
Agricultural extension worker (N=221, 191, 234)	2.5 (2.6)	1.8 (1.5)	1.8 (1.4)			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 7.12 Interactions of mothers with agriculture FLWs

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3637	Mothers N=3647	Mothers N=3646	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
Met at all in last 6 months						
<i>Livestock extension worker</i>	15.8%	15.7%	16.3%	0.904	0.733	0.656
<i>Agricultural extension worker</i>	7.3%	7.1%	6.7%	0.775	0.441	0.595
Number of times met in last 6 months						
<i>Livestock extension worker</i> (N=575, 572, 593)	1.6 (1.0)	1.4 (0.9)	1.5 (1.0)			
<i>Agricultural extension worker</i> (N=267, 260, 243)	1.9 (1.9)	1.7 (1.2)	1.6 (1.1)			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 7.13 Groups available in the community, as reported by male household heads

	2017	2018	2019	P-value	P-value	P-value
	Male HH heads N=1733	Male HH heads N=1792	Male HH heads N=1767	2017/ 2018	2017/ 2019	2018/ 2019
	%	%	%			
<i>Agricultural/livestock/fisheries producer group (including marketing groups but excluding HFP beneficiary group)</i>	19.7%	30.1%	37.6%	<0.001	<0.001	0.001
<i>Land/forest users' groups</i>	65.4%	74.3%	75.4%	<0.001	<0.001	0.517

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 7.14 Groups available in the community, as reported by mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3642	Mothers N=3648	Mothers N=3648	2017/ 2018	2017/ 2019	2018/ 2019
	%	%	%			
<i>Agricultural/livestock/fisheries producer group (including marketing groups but excluding HFP beneficiary group)</i>	19.8%	29.3%	38.2%	<0.001	<0.001	<0.001
<i>Land/forest users' groups</i>	59.5%	72.2%	74.7%	<0.001	<0.001	0.050

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 7.15 Participation and decision-making of household heads in agriculture related activities (among participants who stated a decision was made)

	2017	2018	2019	P-value	P-value	P-value
	Male HH heads N=1733 %	Male HH heads N=1792 %	Male HH heads N=1767 %	2017/ 2018	2017/ 2019	2018/ 2019
Participation on decision making process						
<i>Horticulture/high value crop farming</i>	45.8%	74.5%	68.3%	<0.001	<0.001	0.006
<i>Poultry and processing of milk and/or meat</i>	55.4%	60.9%	61.4%	0.001	<0.001	0.803
Horticulture/high value crop farming (N=788, 1335, 1206)						
Little to no input	2.0%	2.1%	3.0%			
Input into some decisions	23.7%	32.1%	37.8%			
<i>Input into most or all decisions</i>	74.2%	65.8%	59.2%	<0.001	<0.001	0.001
Decision making in poultry rearing and management (N=953, 1087, 1079)						
Little to no input	4.2%	5.5%	6.5%			
Input into some decisions	32.4%	43.1%	45.2%			
<i>Input into most or all decisions</i>	63.4%	51.4%	48.3%	<0.001	<0.001	0.184

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 7.16 Participation and decision-making of mothers in agriculture related activities (among participants who stated a decision was made)

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3642 %	Mothers N=3648 %	Mothers N=3648 %	2017/ 2018	2017/ 2019	2018/ 2019
Participation on decision making process						
<i>Horticulture/high value crop farming</i>	43.7%	75.7%	67.2%	<0.001	<0.001	<0.001
<i>Poultry and processing of milk and/or meat</i>	60.7%	65.8%	65.8%	<0.001	<0.001	0.979
Decision making in horticulture/high value crop farming (N=1579, 2759, 2452)						
Little to no input	7.5%	6.5%	7.4%			
Input into some decisions	40.3%	43.3%	49.1%			
<i>Input into most or all decisions</i>	52.3%	50.3%	43.4%	0.338	<0.001	<0.001
Decision making in poultry rearing and management (N=2187, 2392, 2388)						
Little to no input	7.8%	6.9%	7.0%			
Input into some decisions	35.6%	41.6%	42.5%			
<i>Input into most or all decisions</i>	56.6%	51.5%	50.5%	0.002	<0.001	0.534

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

8. Results: SBCC

Awareness of *Suaahara* and platforms used for behavior change, is the first step to achieving key outcomes. Among household heads, the prevalence of having ever heard of *Suaahara* increased from 30% in 2017 to 60% in 2019 ($P<0.001$) (Table 8.1) and among mothers from 41% in 2017 to 84% in 2019 ($P<0.001$) (Table 8.2). The percentage of household heads reporting to have ever received a home visit by *Suaahara* between 2017 and 2019 increased from 7% to 13% ($P<0.001$) (Table 8.1) and mothers from 9% to 21% ($P<0.001$) (Table 8.2).

Mothers reporting to having met an FCHV/HMG representative in the last 6 months rose from 69% in 2017 to 80% in 2019 ($P<0.001$), while household heads saw no significant change (Table 8.4 and Table 8.3) and ever visited at home increased from 50% in 2017 to 55% in 2019 ($P=0.040$) (Table 8.4), respectively. In the sub-group of mothers with children aged 0-2 years, there was significant change in the prevalence of mothers contacting FCHVs in the last month from 53% in 2017 to 61% in 2019 ($P<0.001$) (Table 8.4). The percentage of mothers reporting availability of an FCHV-facilitated group (HMG or other) in the community increased from 65% in 2017 to 83% in 2019 ($P<0.001$), while the percentage of mothers actively participating in the FCHV-facilitated group, among those who reported its existence, declined from 43% in 2017 to 30% in 2019 ($P<0.001$) (Table 8.5).

The prevalence of household heads participating in *Suaahara* activities has increased from 3% to 5% in 2019 ($P<0.001$), but overall remains incredibly low. However, about half of mothers reported to participate in *Suaahara* activities. Among them, the most common activity for participation in 2017, 2018, and 2019 was food demonstrations (Tables 8.6 and 8.7).

Radio ownership has declined to less than one in five household heads and even fewer mothers, and radio listenership at least once a month has similarly declined from 56% in 2017 to 51% in 2019 ($P=0.003$) among household heads (Table 8.8) with no real change among mothers (Table 8.9). Between 2017 and 2019, the percentage of household heads who had ever heard of *Bhanchhin Aama* increased from 21% to 44% ($P<0.001$) and the prevalence of having ever listened to the program increased from 15% to 28% ($P<0.001$). Among those who had ever heard of it, nearly two-thirds had listened and among those who have ever listened, 4 in 10 reported to listen monthly. We found similar trends although slightly higher, when limiting the sample to those who own a radio (Table 8.10). Among mothers, the prevalence of having ever heard of *Bhanchhin Aama* increased from 31% in 2017 to 68% in 2019 ($P<0.001$), having ever listened to the program increased from 22% in 2017 to 51% in 2019 ($P<0.001$), and listening once a month increased from 8% in 2017 to 20% in 2019 ($P<0.001$). Among mothers who have heard about the program, three-fourths reported to have ever listened to the program in 2019 and among those who ever listened, about 4 of 10 listen monthly (Table 8.11). In the 2019 survey, we asked mothers and household heads specifically about the device used to listen to *Bhanchhin Aama*, and the most common devices were their own household radio and their mobile phone (Table 8.10 and 8.11).

Almost all households now have mobile phone access, with mothers' sole personal ownership of a mobile phone having increased from 73% in 2017 to 88% in 2019 ($P<0.001$) and the prevalence of owning her smartphone similarly increased from 50% in 2018 to 57% in 2019 ($P<0.001$). The prevalence of mothers reporting having access to a smartphone increased from 52% in 2017 to 72% in 2019 ($P<0.001$) (Table 8.13). Among household heads, mobile phone sole ownership increased from 62% in 2017 to 84% in 2019 ($P<0.001$) and sole smart phone ownership from 44% in 2018 to 50% in 2019 ($P<0.001$) (Table 8.12). While very few mothers with children under two years reported receiving health/nutrition-related text messages on their own mobile in the last

month, the percentage increased from 2% in 2017 to 15% in 2019 ($P<0.001$), with the average number of texts being 2 in the last month (Table 8.16). An even fewer number of household heads reported receiving health/nutrition-related text messages on their own mobile in the last month, but the percentage increased from 3% in 2017 to 5% in 2019 ($P<0.001$) (Table 8.14).

Among household heads, reported availability of both credit/microfinance and civic/charitable groups increased significantly between 2017 and 2019, from 60% to 80% ($P<0.001$) and from 20% to 40% ($P<0.000$), respectively (Table 8.17). Mothers reported similar increases in availability as well (Table 8.18). By 2019, both mothers and household heads reported an average of 4 out of 7 groups available in the community (Tables 8.17 and 8.18).

Table 8.1 Awareness of Suaahara and interactions with FLWs among household heads

	2017	2018	2019	P-value	P-value	P-value
	All HH heads N=1894	All HH heads N=2142	All HH heads N=2129	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
Awareness						
<i>Ever heard of Suaahara</i>	29.6%	47.7%	60.3%	<0.001	<0.001	<0.001
Interpersonal communication: FLW exposure						
<i>Met Suaahara FLWs (e.g. field supervisor, community nutrition/WASH volunteer, village model farmer) in the last 6 months</i>	6.5%	10.0%	9.3%	0.010	0.056	0.465
No. of times met with Suaahara FLWs in the last 6 months (N=123, 218, 197)	1.5 (1.0)	1.8 (1.4)	1.7 (1.1)			
<i>Ever visited at home by Suaahara staff (Field Supervisor, community nutrition/WASH volunteer, etc.)</i>	6.8%	11.0%	13.3%	0.001	<0.001	0.102
Number of times visited at home by Suaahara staff in the last 6 months (N=128, 236)	0.9 (0.8)	1.2 (2.4)	1.0 (3.5)			
<i>Spoke with Suaahara staff during last visit (N=128, 236, 284)</i>	60.9%	69.1%	65.5%	0.090	0.410	0.351
<i>Ever contact with Suaahara staff outside of home/HMG</i>	4.0%	8.5%	10.9%	<0.001	<0.001	0.027
Number of times contact with Suaahara staff other than home visit or HMG meeting in last 6 months (N=76, 181, 232)	1.1 (1.2)	1.9 (6.7)	1.2 (4.6)			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 8.2 Awareness of Suaahara and interactions with FLWs among mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers N=3637	Mothers N=3647	Mothers N=3646	2017/ 2018	2017/ 2019	2018/ 2019
	Mean (SD)/%	Mean (SD)/%	Mean (SD)/%			
Awareness						
<i>Ever heard of Suaahara</i>	40.8%	69.8%	84.0%	<0.001	<0.001	<0.001
Interpersonal communication: FLW exposure						
<i>Met Suaahara FLWs (e.g. field supervisor, community nutrition/WASH volunteer, village model farmer) in the last 6 months</i>	10.8%	24.8%	32.2%	<0.001	<0.001	0.001

	2017 Mothers N=3637 Mean (SD)/%	2018 Mothers N=3647 Mean (SD)/%	2019 Mothers N=3646 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
No. of times met with <i>Suaahara</i> FLWs in the last 6 months (N=393, 904, 1174)	1.5 (1.0)	1.9 (1.3)	1.9 (1.4)			
<i>Ever visited at home by Suaahara staff (Field Supervisor, community nutrition/WASH volunteer, etc.)</i>	9.1%	19.8%	21.4%	<0.001	<0.001	0.411
Number of times visited at home by <i>Suaahara</i> staff in the last 6 months (N=330, 721, 779)	0.9 (0.7)	1.0 (2.2)	0.7 (0.9)	0.265	0.010	0.018
Length of time (weeks) since last visited at home by <i>Suaahara</i> staff (N=330, 721, 779)	16.7 (19.6)	24.7 (18.7)	29.7 (19.6)			
Length of time spent last time a <i>Suaahara</i> staff visited at home (minutes) (N= 330, 721, 779)	27.7 (28.0)	30.7 (26.6)	35.1 (30)			
Spoke with <i>Suaahara</i> staff during last visit (N=330, 721, 779)						
Self	87.3%	92.4%	95.6%	0.020	<0.001	0.020
Spouse	16.7%	14.3%	14.1%			
Mother/mother in law	22.1%	25.7%	26.2%			
Father/father in law	10.9%	6.9%	11.0%			
Another adult HH member	5.5%	4.6%	6.7%			
Another child HH member	0.9%	0.3%	1.3%			
Adolescent	2.1%	1.3%	1.8%			
<i>Spoke with any adult other than mother</i>	45.2%	42.0%	43.1%	0.367	0.568	0.693
<i>Ever contact with Suaahara staff outside of home/HMG</i>	9.5%	19.4%	34.9%	<0.001	<0.001	<0.001
Number of times contact with <i>Suaahara</i> staff other than home visit or HMG meeting in the last 6 months (N=346, 706, 1274)	0.7 (1.0)	1.1 (1.2)	0.9 (1.8)			
Length of time (weeks) since last contact with <i>Suaahara</i> staff other than home visit or HMG meeting (N= 346, 706, 1274)	41.6 (31.8)	24.6 (25.9)	28.5 (25.2)			
Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.						

Table 8.3 Interactions of household heads with FCHVs

	2017 All HH heads N=1894 Mean (SD)/%	2018 All HH heads N=2142 Mean (SD)/%	2019 All HH heads N=2129 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Met FCHV/HMG representative at all in last 6 months</i>	32.5%	34.4%	36.0%	0.270	0.059	0.381
No. of times met with FCHV/HMG representative in last 6 months (N=616, 737, 766)	2.3 (2.2)	2.3 (1.7)	2.2 (1.6)			
<i>Ever visited at home by FCHV</i>	35.5%	42.3%	40.0%	0.001	0.043	0.314

Number of times visited at home by FCHV in last 6 months (N=672, 906, 852)	1.7 (1.9)	1.5 (3.2)	1.3 (2.1)			
Spoke with FCHV during last visit (N=672, 622, 852)	46.9%	54.0%	57.6%			
<i>Ever contact with FCHV outside of home/HMG</i>	27.7%	29.0%	37.7%	0.550	<0.001	<0.001
Number of times contact with FCHV other than home visit or HMG meeting in last 6 months (N=524, 621, 803)	2.2 (3.8)	1.9 (5.0)	1.8 (5.1)			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 8.4 Interactions of mothers with FCHVs

	2017 Mothers N=3637 Mean (SD)/%	2018 Mothers N=3647 Mean (SD)/%	2019 Mothers N=3646 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Met FCHV/HMG representative at all in last 6 months</i>	69.0%	74.2%	80.2%	<0.001	<0.001	0.001
No. of times met with FCHV/HMG representative in last 6 months (N=2509, 2705, 2923)	2.7 (2.0)	3.0 (2.2)	3.1 (2.3)			
<i>Ever visited at home by FCHV</i>	50.4%	53.7%	54.8%	0.064	0.040	0.587
Number of times visited at home by FCHV in last 6 months (N=1832, 1957, 1998)	1.4 (1.5)	1.3 (1.3)	1.2 (1.3)			
Length of time (weeks) since last visited at home by FCHV (N=1832, 1957, 1998)	18.9 (26.3)	19.6 (23.1)	20.6 (24.3)			
Length of time spent last time FCHV visited at home (minutes) (N=1832, 1957, 1998)	18.5 (20.3)	19.3 (18.7)	19.2 (18.6)			
Spoke with FCHV during last visit (N=1832, 1957, 1998) *						
Self	93.5%	95.9%	96.9%			
Spouse	11.5%	12.4%	9.8%			
Mother/mother in law	29.6%	30.2%	29.8%			
father/father in law	7.1%	7.4%	8.3%			
Another adult HH member	3.5%	4.7%	5.7%			
Another child HH member	0.7%	1.2%	1.6%			
Adolescent	1.5%	1.2%	2.0%			
<i>Spoke with any adult other than mother</i>	42.1%	42.9%	40.4%	0.690	0.419	0.243
<i>Ever contact with FCHV outside of home/HMG</i>	44.1%	51.1%	60.4%	<0.001	<0.001	<0.001
Number of times contact with FCHV other than home visit or HMG meeting in last 6 months (N=1602, 1865, 2201)	2.0 (2.3)	2.1 (2.1)	1.9 (1.7)			
Length of time (weeks) since last contact with FCHV other than home visit or HMG meeting (N=1602, 1865, 2201)	11.3 (14.2)	12.1 (14.7)	13.1 (14.4)			
<i>Mother with a child aged 0-2 years who had contact with the FCHV in the previous month (N=1848, 1909, 1826)</i>	52.5%	58.5%	60.9%	0.002	<0.001	0.199

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 8.5 Participation in health mothers' groups

	2017 Mothers N=3642 %	2018 Mothers N=3648 %	2019 Mothers N=3646 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>FCHV facilitated group exists in the community</i>	64.6%	72.3%	82.7%	<0.001	<0.001	<0.001
<i>Active member of the FCHV facilitated group (N=2353, 2639, 3015)</i>	43.0%	37.7%	30.0%	0.002	<0.001	<0.001
Active member ever participated in HMG group (N=994, 905)	NA	90.0%	96.7%	NA	NA	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 8.6 Male participation in Suaahara activities, reported by household heads

	2017 All HH heads N=1894 %	2018 All HH heads N=2142 %	2019 All HH heads N=2129 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Any male household member participated in any Suaahara activity</i>	N/A	19.2%	21.6%	N/A	N/A	0.213
<i>Participation in Suaahara activities, other than group meetings</i>	2.6%	4.4%	5.0%	0.002	<0.001	0.438
Specific other activities						
Food demonstrations/Poshan Chhattari	1.5%	4.2%	4.6%			
Key life events	0.1%	0.5%	0.6%			
Triggering sessions	0.1%	0.1%	0.4%			
Day celebrations	0.2%	0.2%	0.1%			
Specific other activities, among those who participated in any (N= 50, 95, 106)*						
Food demonstrations/Poshan Chhattari	58.0%	87.5%	99.8%			
Key life events	2.0%	10.5%	11.3%			
Triggering sessions	2.0%	1.1%	7.6%			
Day celebrations	8.0%	4.2%	2.8%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 8.7 Male participation in Suaahara activities, reported by mothers

	2017 Mothers N=3637 %	2018 Mothers N=3647 %	2019 Mothers N=3646 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Any male household member participated in any Suaahara activity</i>	NA	18.1%	18.4%	NA	NA	0.868
<i>Participation in Suaahara activities, other than group meetings</i>	14.3%	31.3%	47.4%	<0.001	<0.001	<0.001
Specific other activities						
Food demonstrations/Poshan Chhattari	12.3%	30.7%	46.8%			
Key life events	0.4%	3.3%	5.2%			
Triggering sessions	0.1%	0.8%	3.3%			

	2017 Mothers N=3637 %	2018 Mothers N=3647 %	2019 Mothers N=3646 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Day celebrations	0.5%	1.3%	0.8%			
Specific other activities, among those who participated in any (N= 519, 1142, 1727) *						
Food demonstrations/Poshan Chhattari	86.1%	98.0%	98.7%			
Key life events	2.5%	10.6%	11.1%			
Triggering sessions	0.6%	2.6%	7.0%			
Day celebrations	3.3%	4.2%	1.6%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*Note: These results will not add to 100% as multiple responses were allowed for this question.

Table 8.8 Radio listening device ownership and use among household heads

	2017 All HH heads N=1894 %	2018 All HH heads N=2141 %	2019 All HH heads N=2129 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Radio listening device ownership						
None	NA	22.5%	14.3%			
Radio	NA	23.3%	18.2%			
Mobile phone	NA	46.5%	57.4%			
Both radio and mobile phone	NA	7.4%	9.9%			
Other	NA	0.3%	0.2%			
<i>Listen to the radio at least once a month</i>	<i>56.0%</i>	<i>45.0%</i>	<i>50.6%</i>	<i><0.001</i>	<i>0.003</i>	<i>0.001</i>

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 8.9 Radio listening device ownership and use among mothers

	2017 All HH heads N=3637 %	2018 All HH heads N=3647 %	2019 All HH heads N=3646 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Radio listening device ownership						
None	NA	18.1%	12.0%			
Radio	NA	15.7%	12.5%			
Mobile phone	NA	58.6%	65.1%			
Both radio and mobile phone	NA	7.4%	10.1%			
Other	NA	0.2%	0.3%			
<i>Listens to the radio at least once a month</i>	<i>44.9%</i>	<i>43.4%</i>	<i>48.0%</i>	<i>0.279</i>	<i>0.177</i>	<i>0.036</i>

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 8.10 Bhanchhin Aama (BA) exposure among household heads

	2017 All HH heads N=1894 %	2018 All HH heads N=2141 %	2019 All HH heads N=2129 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Exposure to BA						
<i>Ever heard of BA</i>	<i>20.7%</i>	<i>32.8%</i>	<i>43.8%</i>	<i><0.001</i>	<i><0.001</i>	<i><0.001</i>
<i>Ever listened to BA</i>	<i>15.3%</i>	<i>24.8%</i>	<i>28.3%</i>	<i><0.001</i>	<i><0.001</i>	<i>0.010</i>
<i>Listened at least once a month</i>	<i>5.6%</i>	<i>10.7%</i>	<i>11.1%</i>	<i><0.001</i>	<i><0.001</i>	<i>0.659</i>

	2017 All HH heads N=1894 %	2018 All HH heads N=2141 %	2019 All HH heads N=2129 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Voltage drop in exposure						
<i>Ever listened to BA among ever heard (N=391, 703, 933)</i>	73.9%	75.4%	64.6%	0.667	0.003	<0.001
<i>Listened at least once a month among ever listened (N=289, 530, 603)</i>	36.7%	43.2%	39.3%	0.067	0.484	0.194
Exposure, among those who owned radio listening devices* (N= 688, 1659, 1824)						
<i>Ever heard of BA</i>	31.7%	38.6%	47.9%	NA	NA	<0.001
<i>Ever listened to BA</i>	24.7%	29.4%	31.7%	NA	NA	0.157
<i>Listened at least once a month</i>	10.8%	13.7%	12.8%	NA	NA	0.493
Voltage drop, among those who own a radio listening device						
<i>Ever listened to BA among ever heard (N=218, 641, 873)</i>	78.0%	76.1%	66.3%	NA	NA	<0.001
<i>Listened at least once a month among ever listened (N= 170, 488, 579)</i>	43.5%	46.5%	40.4%	NA	NA	0.056
Listening to Bhanchhin Aama by device (N=238)						
HH radio	NA	NA	60.1%			
Someone else /HMG radio	NA	NA	5.9%			
Mobile phone	NA	NA	38.2%			
Facebook	NA	NA	0.8%			
Encourage anyone to listen to BA in last 1 month (N=530, 603)	NA	10.4%	10.5%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

*In 2017, questions related to access of specific radio listening devices were not asked; values are instead calculated based on household radio access. Due to the varied calculation, 2017 is not included in significance testing.

Table 8.11 Bhanchhin Aama (BA) exposure among mothers

	2017 Mothers N=3637 %	2018 Mothers N=3647 %	2019 Mothers N=3646 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Exposure to BA						
<i>Ever heard of BA</i>	31.1%	52.9%	67.5%	<0.001	<0.001	<0.001
<i>Ever listened to BA</i>	21.7%	39.0%	50.6%	<0.001	<0.001	<0.001
<i>Listened at least once a month</i>	7.9%	18.3%	20.0%	<0.001	<0.001	0.275
Voltage drop for exposure						
<i>Ever listened to BA among ever heard (N=1132, 1929, 2462)</i>	69.8%	73.8%	74.9%	0.125	0.027	0.559
<i>Listened at least once a month among ever listened (N= 790, 1424, 1845)</i>	36.3%	46.9%	39.5%	<0.001	0.165	0.001
Exposure, among those who owned radio listening devices (N=2986, 3207)						
<i>Ever heard of BA</i>	NA	58.1%	70.9%	NA	NA	<0.001
<i>Ever listened to BA</i>	NA	44.0%	54.4%	NA	NA	<0.001
<i>Listened at least once a month</i>	NA	21.8%	22.3%	NA	NA	0.797
Voltage drop, among those who own a radio listening device						
<i>Ever listened to BA among ever heard (N=1736, 2272)</i>	NA	75.6%	76.7%	NA	NA	0.570

	2017 Mothers N=3637 %	2018 Mothers N=3647 %	2019 Mothers N=3646 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Listened at least once a month among ever listened (N= 1313, 1744)</i>	NA	49.7%	40.9%	NA	NA	<0.001
Listening to Bhancchin Aama by device (N=613)						
HH radio	NA	NA	45.5%			
Someone else /HMG radio	NA	NA	7.2%			
Mobile phone	NA	NA	51.7%			
Facebook	NA	NA	0.8%			
Encourage anyone to listen to BA in last 1 month (N=1424, 1845)	NA	11.2%	12.3%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 8.12 Phone access/use among household heads

	2017 All HH Heads N=1894 Mean (SD)/%	2018 All HH Heads N=2141 Mean (SD)/%	2019 All HH Heads N=2129 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Household mobile phone access (N=1898, 3648, 3648)	96.4%	99.2%	99.4%			
Personal mobile phone ownership	61.5%	80.7%	84.3%	<0.001	<0.001	0.004
Access to a HH mobile	NA	72.2%	78.8%	NA	NA	<0.001
Personal smartphone ownership	NA	43.8%	49.5%	NA	NA	0.001
Smart phone access (own or HH member) (N=2242, 2617, 3626)	40.1%	35.8%	40.3%	0.005	0.926	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 8.13 Phone access/use among mothers

	2017 Mothers N=3642 Mean (SD)/%	2018 Mothers N=3647 Mean (SD)/%	2019 Mothers N=3646 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Personal mobile phone ownership	72.9%	83.5%	88.2%	<0.001	<0.001	<0.001
Access to a HH mobile	69.1%	61.9%	63.5%	<0.001	<0.001	<0.001
Personal smartphone ownership	NA	50.0%	56.5%	NA	NA	<0.001
Smart phone access (own or HH member) (N=2512, 3546, 3576)	51.7%	66.8%	71.8%	<0.001	<0.001	0.002

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 8.14 SMS exposure among household heads

	2017 All HH Heads N=1894 Mean (SD)/%	2018 All HH Heads N=2141 Mean (SD)/%	2019 All HH Heads N=2129 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Received any health/nutrition texts in last 1 month						
On own mobile (N=1167, 1728, 1795)	2.6%	2.0%	5.1%	0.380	0.005	<0.001
On HH mobile (N=1962, 1967)	NA	1.2%	4.7%	NA	NA	<0.001
Number of health/nutrition texts received in last 1 month						
Own mobile (N=36, 35, 88)	2.5 (1.3)	1.9 (1.3)	1.7 (1.0)	0.090	0.001	0.276
	2017	2018	2019	P-value	P-value	P-value

	All HH Heads N=1894 Mean (SD)/%	All HH Heads N=2141 Mean (SD)/%	All HH Heads N=2129 Mean (SD)/%	2017/ 2018	2017/ 2019	2018/ 2019
<i>HH member mobile (N=23, 84)</i>	NA	1.9 (1.2)	1.7 (0.9)	NA	NA	0.808
<i>Family member shared messages</i>	NA	87.0%	85.0%	NA	NA	0.808

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 8.15 SMS exposure among mothers

	2017 Mother N=2861 Mean (SD)/%	2018 Mother N=3046 Mean (SD)/%	2019 Mothers N=3217 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Received any health/nutrition texts in last 1 month						
<i>On own mobile</i>	2.0%	4.5%	11.7%	<0.001	<0.001	<0.001
<i>On HH mobile (N=2771, 2618)</i>	NA	0.9%	3.0%	NA	NA	<0.001
Number of health/nutrition texts received in last 1 month						
<i>Own mobile (N=55, 134, 377)</i>	2.7 (1.5)	2.0 (1.3)	1.8 (1.1)	0.001	<0.001	0.237
<i>HH member mobile (N=26, 73)</i>	NA	1.7 (0.8)	1.7 (0.9)			
<i>Family member shared messages</i>	NA	92.3%	93.7%	NA	NA	0.806

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 8.16 Phone ownership and SMS exposure among mothers of children 0-2 years

	2017 Mothers N=1848 Mean (SD)/%	2018 Mothers N=1909 Mean (SD)/%	2019 Mothers N=1826 Mean (SD)/%	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Personal mobile phone ownership</i>	69.9%	82.7%	88.3%	<0.001	<0.001	<0.001
<i>Personal smartphone ownership</i>	NA	50.5%	56.9%	NA	NA	<0.001
Received any health/nutrition texts in last 1 month						
<i>Own mobile (N=1476, 1579, 1612)</i>	2.2%	6.1%	15.4%	<0.001	<0.001	<0.001
<i>HH member mobile (N=1528, 1378)</i>	NA	1.4%	3.7%	NA	NA	0.101
Number of health/nutrition texts received in last 1 month						
<i>Own mobile (N=32, 94, 248)</i>	2.5 (1.1)	2.0 (1.4)	1.8 (1.2)	0.095	0.004	0.193
<i>HH member mobile (N=22, 48)</i>	NA	1.7 (0.8)	1.7 (0.9)	NA	NA	0.976
<i>Family member share messages to you</i>	NA	95.5%	94.1%			

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 8.17 Groups available in the community reported by male household heads

	2017 Male HH heads N=1733 %	2018 Male HH heads N=1792 %	2019 Male HH heads N=1767 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
<i>Credit or microfinance group/ cooperative</i>	59.4%	72.8%	80.2%	<0.001	<0.001	<0.001
<i>Civic or charitable group</i>	18.9%	25.2%	37.8%	0.001	<0.001	<0.001
<i>Other (e.g. HFOMC, ward committee, WASH CC)</i>	53.0%	48.1%	66.1%	0.117	<0.001	<0.001
<i>Number of groups available in community (N=7)</i>	3.1 (1.7)	3.7 (1.8)	4.3 (1.8)	<0.001	<0.001	<0.001
<i>Participation in credit or microfinance group/ cooperative (N=1029, 1305, 1417)</i>	28.4%	28.3%	17.9%	0.958	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 8.18 Groups available in the community reported by mothers

	2017	2018	2019	P-value	P-value	P-value
	Mothers	Mothers	Mothers	2017/	2017/	2018/
	N=3642	N=3648	N=3648	2018	2019	2019
	%	%	%			
<i>Credit or microfinance group/ cooperative</i>	65.2%	78.2%	83.8%	<0.001	<0.001	<0.001
<i>Civic or charitable group</i>	14.2%	3.3%	32.3%	0.530	<0.001	<0.001
<i>Other (e.g. HFOMC, ward committee, WASH CC)</i>	47.1%	46.7%	66.0%	0.893	<0.001	<0.001
<i>Number of groups available in community (N=7)</i>	3.1 (1.7)	3.6 (1.6)	4.3 (1.7)	<0.001	<0.001	<0.001
<i>Participation in credit or microfinance group/ cooperative (N=2376, 2854, 3056)</i>	45.9%	43.0%	32.2%	0.100	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

9. Results: GESI

GESI has many facets including empowerment, which in turn has many dimensions including group availability and participation, participation and decision-making. Similarly, GESI factors span various socio-economic and cultural domains, including one's socio-economic status (measured here by equity quintile), caste/ethnicity, and residency including remoteness (measured by urban/rural area and agro-ecological zones) and age (measured here by maternal age group). The empowerment findings related to the four thematic areas: nutrition, WASH, agriculture and SBCC have been presented in the respective sections. This section presents four sub-sections: 1) empowerment in non-agricultural domains for both male household heads and mothers; 2) *Suaahara*'s ten key behaviors disaggregated; 3) *Suaahara* promoted sixty contact points with the government health system; and 4) *Suaahara*'s reach through SBC approaches disaggregated.

9.1 Empowerment in non-agricultural domains

Participation among male household heads in wage and salary decision-making increased from 49% in 2017 to 60% in 2019 ($P<0.001$) but remained at about 30% for non-farm economic activities with no real changes. Among those that reported a decision being made, all household heads reported having input into most or all of the non-farm economic decisions, decreased from 86% in 2017 to 81% in 2019 ($P:0.038$) (Table 9.1). Overall, mothers had lower rates of participation in decision-making, but still saw significant increases from 2017 to 2019 in both non-farm economic decisions (13% to 16% ($P:0.001$)) and wage and salary employment (18% to 21% ($P:0.001$)). Among those that did report a decision, mothers, however, saw significant declines in having input into most or all decisions – for non-farm activities (69% to 58% ($P<0.001$)) and for wage and salary employment (86% to 77% ($P<0.001$)) between 2017 and 2019 (Table 9.2).

Table 9.1 Household heads' participation/ decision-making in non-agricultural household productive activities, among those who stated a decision was made

	2017	2018	2019			
	Male HH heads N=1733 %	Male HH heads N=1792 %	Male HH heads N=1767 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Participation in decision making						
<i>Non-farm economic activities</i>	27.5%	27.7%	29.4%	0.902	0.233	0.293
<i>Wage and salary employment</i>	48.5%	54.0%	60.4%	0.004	<0.001	<0.001
Decision in non-farm economic activities (N=477, 496, 519)						
Little to no input	1.3%	2.4%	1.5%			
Input into some decisions	12.6%	14.1%	17.7%			
<i>Input into most or all decisions</i>	86.2%	83.5%	80.7%	0.303	0.038	0.341
Wage and salary employment (N=840, 968, 1067)						
Little to no input	0.0%	0.1%	0.3%			
Input into some decisions	7.9%	9.4%	10.5%			
<i>Input into most or all decisions</i>	92.1%	90.5%	89.2%	0.312	0.084	0.466

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.2 Mothers' participation/ decision-making in non-agricultural household productive activities, among those who stated a decision was made

	2017 Mothers N=3642 %	2018 Mothers N=3648 %	2019 Mothers N=3648 %	P-value 2017/ 2018	P-value 2017/ 2019	P-value 2018/ 2019
Participation on decision making						
<i>Non-farm economic activities</i>	12.8%	16.0%	16.4%	0.003	0.001	0.710
<i>Wage and salary employment</i>	17.5%	20.5%	21.1%	0.010	0.001	0.587
Decision on non-farm economic activities (N=465, 582, 597)						
Little to no input	2.6%	7.0%	5.2%			
Input into some decisions	28.5%	37.6%	37.0%			
<i>Input into most or all decisions</i>	68.9%	55.3%	57.8%	<0.001	<0.001	0.441
Wage and salary employment (N= 636, 748, 768)						
Little to no input	0.3%	0.7%	1.4%			
Input into some decisions	13.8%	21.8%	21.7%			
<i>Input into most or all decisions</i>	85.9%	77.5%	76.8%	<0.001	<0.001	0.770

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

9.2 Suaahara's ten key behaviors, disaggregated

Findings related to Suaahara's key behaviors, disaggregated by socio-economic and demographic factors, are summarized here. It is important to remember that these are indicative trends of percentage point (pp) changes only, as the survey was not powered for this type of analysis and some sub-groups have quite small samples and thus, the change may be "real" but significance difficult to detect.

- **Maternal diet (among mothers of children aged 0-23.9 months):**

- The prevalence of maternal minimum dietary diversity (consuming foods from at least 5 of 10 food groups in the previous 24 hours) increased by 13pp overall between 2017 and 2019. An increasing trend was found among almost all sub-populations. The largest increases in prevalence of meeting the minimum dietary diversity between 2017 and 2019 were found among the lowest equity quintile by 25 percentage points (pp) (P:<0.001) and those living in the mountains by 30pp (P:<0.001). The highest equity quintile was the only group to see no significant change, and the lowest absolute prevalence was seen among *terai* populations at 34% (all other sub-populations ranged from 44%-71%) (Table 9.3).
- The prevalence of maternal egg consumption increased by about 8pp (P:<0.001) between 2017 and 2019. Similar increasing trends were found among all sub-groups, with the biggest changes being a 10pp increase among socially excluded (P:<0.001). The lowest absolute prevalence of consumption was among the lowest equity quintile at 7% (Table 9.4).
- The prevalence of meat consumption among mothers increased by 7pp (P:<0.001) between 2017 and 2019. Several sub-groups also had significant increases: 9pp for the lowest equity quintile (P:0.003), 10pp among social excluded (P:<0.001), 8pp among those residing in rural areas, and 10pp among those in hill districts (P:<0.001). Similar to egg consumption, the lowest equity quintile saw the lowest prevalence of consumption in 2019, at 29% (Table 9.5).

- **ANC visits:** The overall prevalence of mothers receiving at least 4 ANC visits increased between 2017 and 2019 by 9pp (P:<0.001). An increasing trend was found among all sub-populations, the majority significant. The largest significant increase in prevalence was a 12pp increase found among the 2nd lowest equity quintile (P:<0.001) and hill populations (P:<0.001).

Notably, the *terai* population saw no significant change and a lower absolute prevalence in 2019 at 30%, while the mountain and hill populations saw increases of 10pp (P:0.003) and 12pp (P:<0.001), with an absolute prevalence of 38% each (Table 9.6).

- **180 IFA during pregnancy:** The prevalence of mothers consuming 180 IFA during pregnancy saw no significant change between 2017 and 2019, remaining at 54% in 2019. Only a few sub-populations saw significant progress, among them the 2nd lowest equity quintile by 10pp (P:0.003) and mountain populations by 19pp (P:0.010). The agro-ecological zones saw significant variation, as the prevalence for both hill and *terai* populations were about 20pp lower than the mountain population in 2019 (Table 9.7).
- **Modern method of family planning** among mothers of children under 2 years of age did not change between 2017 and 2019. The overall prevalence of mothers using a modern method was 31% in 2019. No real changes were detected in sub-populations either, and prevalence in each ranged from 28%-33% (Table 9.8).
- **Child diet (among children aged 6-23.9 months)**
 - The prevalence of child minimum dietary diversity (consuming foods from at least 4 of 7 food groups in the previous 24 hours) increased by 11pp overall (P:<0.001) between 2017 and 2019, with the majority of sub-populations seeing significant gains as well. The largest gains were seen among the 2nd lowest equity quintile by 16pp (P:<0.001) and the mountain populations by 25pp (P:<0.001). All equity quintiles saw significant progress in meeting minimum dietary diversity other than the highest – however, this quintile remained at a higher prevalence overall than other quintiles in 2019. The other caste group also saw much less progress than the socially excluded and *Brahmin/Chhetri* groups, with no significant change in prevalence between 2017 and 2019 (Table 9.9).
 - Egg consumption prevalence among children increased by 12pp overall between 2017 and 2019, more than doubling in a two-year period. This sizeable progress was found among all sub-populations, the majority being significant. The largest increases in prevalence of egg consumption between 2017 and 2019 were found with 16pp among households in the second lowest equity quintile, 15pp among the socially excluded caste, 13pp among both urban and rural populations, and 17pp among children in the hills (all P:<0.001). The lowest equity quintile had the lowest absolute prevalence at 13% in 2019, but still doubled its value since 2017. Notably, *Brahmin/Chhetri* more than doubled its prevalence between 2017 and 2019 as well, despite cultural norms against egg consumption in this group. The *terai* population, while seeing significant progress, did not double its prevalence of consumption despite historical trends of having more food available in the region (Table 9.10).
 - Meat consumption prevalence among children aged 6-23.9 months increased by 5pp overall between 2017 and 2019 (P:<0.001). Only a few sub-populations saw a significant increase in consumption, among them the 2nd highest equity quintile by 7pp (P:0.024), the socially excluded caste groups and rural populations both by 8pp (P:0.001), and mountain and the mountain and hill populations by 9pp (P:0.04) and 7pp (P:0.002), respectively. Notably, meat consumption among the *terai* population saw the same lack of progress as egg consumption in the region (Table 9.11).
 - The prevalence of consumption of iron-rich foods among children aged 6-23.9 months increased between 2017 and 2019 overall by 6pp (P:<0.001). A similar trend was found among the majority of sub-populations. The largest increase in prevalence was 15pp (P:0.001) among mountain populations. All populations saw a prevalence of 85% or greater by 2019 (Table 9.12).

- **Sick child feeding:** The prevalence of feeding a child under 2 years of age more food during illness saw no real changes between 2017 and 2019 in the overall population. Similarly, no significant changes were seen in sub-populations (Table 9.13).
- **Exclusive breastfeeding:** The prevalence of exclusive breastfeeding of children under 6 months of age increased between 2017 and 2019, but these changes over time were insignificant (likely due to small sample size). A few sub-populations saw a significant change in this two-year period: the second lowest equity quintile by 20pp (P:<0.001), Brahmins/Chhetris by 18pp (P:0.001) and in the mountains by 33pp (P:<0.001) (Table 9.14).
- **Appropriate drinking water treatment** in households with children under two years increased in prevalence by 5pp between 2017 and 2019 (P:<0.001). The prevalence for this behavior matched this trend for many sub-populations. The largest significant increases overall found between 2017 and 2019 included a 9pp increase among the 2nd highest equity quintile (P:0.003) and a 8pp increase among Brahmin/Chhetri (P:<0.001). Among agro-ecological zones, both hill and *terai* populations saw significant increases of 7pp (P:0.002) and 4pp (P:0.081), respectively, while the mountain populations were an exception with no significant progress. This is likely due to market access issues of water treatment technology (Table 9.15).
- **Handwashing at all six critical times:** The prevalence for this key behavior among mothers with children under two years increased by 4pp (p:0.027) between 2017 and 2019. Very few sub-populations saw a significant change in the two-year period, among them mountain residents by 18pp (P:0.003), Brahmin/Chhetri caste/ethnic groups by 10pp (P:<0.001), among the 2nd highest equity quintile by 9pp (P:0.001) and urban populations by 5pp (P:0.025), . (Table 9.16).

A few additional variables were examined to understand progress by subpopulation:

- **Child minimum acceptable diet:** The prevalence of child minimum acceptable diet increased by 9pp overall (P:<0.001) between 2017 and 2019, with the majority of sub-populations seeing significant gains as well. The largest gains were seen in the mountain by 24pp (P:<0.001) and among the 2nd lowest equity quintile by 15pp (P:<0.001). All equity quintiles saw significant progress in in this indicator (Table 9.17).
- **Newborns receiving postnatal health check:** The prevalence of newborns receiving postnatal health check within 24 hours of birth increased by 10pp overall (P:<0.001) between 2017 and 2019, with the majority of sub-populations seeing significant gains as well. The largest gains were seen in the hills by 13pp (P:<0.001), among the 2nd lowest equity quintile by 11pp (P:<0.001) and Brahmin/Chhetri caste groups by 11pp (P:<0.001) (Table 9.18).
- **45 IFA during postnatal period:** The prevalence of mothers consuming 45 IFA during postnatal period saw no significant change between 2017 and 2019 in the overall population. Similarly, no significant changes were seen in sub-populations (Table 9.19).
- **Soap and water at hand washing station:** The prevalence of households having soap and water at a hand washing station increased by 25pp between 2017 and 2019 (P:<0.001) with the majority of sub-populations seeing significant gains as well. The largest significant increases included a 31pp in the mountains (P:<0.001), 29pp among urban residents and 28pp among the 2nd highest equity quintile (P:<0.001). (Table 9.20).

Table 9.3 Maternal minimum dietary diversity (consuming foods from at least 5 out of 10 food groups in previous 24 hours) among mothers of children aged 0-23.9 months

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	35.2%	1850	42.2%	1910	47.8%	1827	<0.001	<0.001	0.002
Equity quintile									
<i>Lowest</i>	26.6%	388	37.0%	343	51.9%	287	0.009	<0.001	0.006
<i>2nd lowest</i>	25.4%	528	37.6%	471	44.2%	425	0.520	0.007	0.050
<i>Middle</i>	38.4%	430	46.5%	488	44.9%	405	0.018	0.045	0.650
<i>2nd highest</i>	37.5%	389	41.8%	455	51.1%	536	0.205	<0.001	0.003
<i>Highest</i>	43.5%	115	55.6%	153	46.6%	174	0.038	0.640	0.100
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	31.1%	897	39.3%	992	43.3%	972	<0.001	<0.001	0.043
<i>Brahmin/Chhetri</i>	41.1%	740	47.1%	766	55.6%	673	0.040	<0.001	0.010
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	31.9%	213	36.2%	152	42.9%	182	0.373	0.014	0.159
Urban/rural residence									
<i>Urban</i>	34.9%	934	43.1%	951	48.4%	930	0.001	<0.001	0.060
<i>Rural</i>	35.5%	916	41.3%	959	47.3%	897	0.022	<0.001	0.009
Agro-ecological zone									
<i>Mountain</i>	41.2%	238	56.1%	237	71.0%	238	0.009	<0.001	0.056
<i>Hill</i>	37.8%	1018	43.3%	1090	50.3%	1017	0.027	<0.001	0.002
<i>Terai</i>	28.3%	594	34.5%	583	33.9%	572	0.031	0.034	0.814

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.4 Egg consumption among mothers of children aged 0-23.9 months

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	6.2%	1850	10.3%	1910	14.3%	1827	<0.001	<0.001	0.001
Equity quintile									
<i>Lowest</i>	1.2%	388	7.0%	343	7.0%	287	<0.001	0.001	0.989
<i>2nd lowest</i>	3.0%	528	9.3%	471	12.2%	425	<0.001	<0.001	0.202
<i>Middle</i>	7.7%	430	10.9%	488	16.5%	405	0.067	<0.001	0.010
<i>2nd highest</i>	12.6%	389	13.9%	455	16.8%	536	0.631	0.110	0.216
<i>Highest</i>	9.6%	115	16.3%	153	18.4%	174	0.125	0.021	0.668
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	5.4%	897	12.3%	992	14.8%	972	<0.001	<0.001	0.065
<i>Brahmin/Chhetri</i>	6.4%	740	8.6%	766	13.7%	673	0.123	<0.001	0.002
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	9.4%	213	13.8%	152	13.7%	182	0.189	0.147	0.983
Urban/rural residence									
<i>Urban</i>	6.0%	934	10.3%	951	14.5%	930	0.001	<0.001	0.006
<i>Rural</i>	6.4%	916	11.6%	959	14.1%	897	<0.001	<0.001	0.080
Agro-ecological zone									
<i>Mountain</i>	7.6%	238	11.8%	237	13.9%	238	0.094	0.027	0.337

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Hill</i>	6.1%	1018	11.1%	1090	15.2%	1017	<0.001	<0.001	0.003
<i>Terai</i>	5.9%	594	10.3%	583	12.8%	572	0.004	<0.001	0.229

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.5 Meat consumption among mothers of children aged 0-23.9 months

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	28.9%	1850	31.8%	1910	35.9%	1827	0.061	<0.001	0.010
Equity quintile									
<i>Lowest</i>	19.9%	388	22.2%	343	29.3%	287	0.422	0.003	0.046
<i>2nd lowest</i>	29.0%	528	31.6%	471	36.5%	425	0.389	0.019	0.130
<i>Middle</i>	31.2%	430	30.9%	488	35.8%	405	0.948	0.201	0.165
<i>2nd highest</i>	34.5%	389	35.6%	455	39.6%	536	0.737	0.096	0.217
<i>Highest</i>	32.2%	115	45.1%	153	33.9%	174	0.024	0.735	0.030
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	37.0%	897	41.5%	992	46.5%	972	0.069	<0.001	0.036
<i>Brahmin/Chhetri</i>	16.5%	740	19.5%	766	20.5%	673	0.145	0.059	0.624
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	38.0%	213	30.3%	152	35.7%	182	0.205	0.676	0.290
Urban/rural residence									
<i>Urban</i>	27.8%	934	33.8%	951	33.6%	930	0.008	0.016	0.925
<i>Rural</i>	30.0%	916	29.8%	959	38.2%	897	0.923	<0.001	<0.001
Agro-ecological zone									
<i>Mountain</i>	25.6%	238	30.0%	237	38.2%	238	0.203	0.003	0.056
<i>Hill</i>	28.4%	1018	32.6%	1090	38.2%	1017	0.042	<0.001	0.008
<i>Terai</i>	31.1%	594	31.1%	583	30.8%	572	0.972	0.900	0.023

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.6 Attended ANC at least four times

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	79.5%	1850	85.5%	1910	88.8%	1825	<0.001	<0.001	0.001
Equity quintile									
<i>Lowest</i>	76.3%	388	79.0%	343	84.3%	287	0.343	0.007	0.091
<i>2nd lowest</i>	72.9%	528	80.7%	471	85.1%	424	0.005	<0.001	0.088
<i>Middle</i>	83.5%	430	87.5%	488	91.4%	405	0.050	0.001	0.057
<i>2nd highest</i>	85.1%	389	91.4%	455	91.6%	535	0.001	0.004	0.923
<i>Highest</i>	86.1%	115	90.9%	153	90.8%	174	0.230	0.253	0.989
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	75.5%	897	83.5%	992	86.6%	972	<0.001	<0.001	0.043
<i>Brahmin/Chhetri</i>	83.9%	740	89.2%	766	93.6%	672	0.003	<0.001	0.001
<i>Others (Newar,</i>	80.8%	213	80.3%	152	82.9%	181	0.922	0.658	0.559

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Gurung/Thakali, Non-dalit Terai caste)</i>									
Urban/rural residence									
Urban	77.1%	934	82.7%	951	87.4%	928	0.004	<0.001	0.005
Rural	81.9%	916	88.1%	959	90.3%	897	<0.001	<0.001	0.100
Agro-ecological zone									
Mountain	82.8%	238	90.7%	237	91.6%	238	0.013	0.012	0.781
Hill	76.5%	1018	84.3%	1090	88.6%	1016	<0.001	<0.001	0.001
Terai	83.2%	594	85.6%	583	88.1%	571	0.282	0.027	0.234

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.7 Took at least 180 IFA tablets during pregnancy

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	52.4%	1835	59.1%	1899	53.9%	1820	<0.001	0.391	0.002
Equity quintile									
Lowest	48.8%	385	49.4%	342	49.1%	287	0.685	0.735	0.940
2nd lowest	46.2%	522	55.5%	465	55.8%	423	0.001	0.003	0.925
Middle	56.7%	427	61.7%	485	54.1%	405	0.140	0.465	0.021
2nd highest	58.8%	386	65.0%	454	56.2%	532	0.060	0.429	0.011
Highest	58.3%	115	66.7%	153	49.7%	173	0.170	0.127	0.003
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	48.7%	888	56.2%	982	52.1%	969	0.003	0.175	0.072
<i>Brahmin/Chhetri</i>	58.0%	736	63.5%	765	59.9%	670	0.018	0.509	0.164
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	48.3%	211	55.9%	152	41.4%	181	0.209	0.253	0.014
Urban/rural residence									
Urban	49.1%	928	55.6%	949	52.8%	925	0.002	0.164	0.215
Rural	55.7%	907	62.6%	950	55.1%	895	0.010	0.806	0.001
Agro-ecological zone									
Mountain	51.1%	237	64.8%	236	70.3%	236	0.010	<0.001	0.141
Hill	50.3%	1006	56.7%	1086	52.0%	1016	0.004	0.468	0.026
Terai	56.4%	592	61.4%	577	50.5%	568	0.090	0.040	0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.8 Use of modern method of family planning among mothers of children <2 years

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	30.5%	1850	30.3%	1910	30.7%	1827	0.892	0.944	0.819
Equity quintile									
Lowest	30.2%	388	26.0%	343	30.0%	287	0.230	0.955	0.245
2nd lowest	33.7%	528	30.6%	471	27.4%	425	0.290	0.065	0.314
Middle	30.0%	430	33.4%	488	31.6%	405	0.300	0.632	0.598

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>2nd highest</i>	28.3%	389	29.9%	455	33.2%	536	0.610	0.120	0.244
<i>Highest</i>	27.0%	115	30.7%	153	29.3%	174	0.500	0.641	0.802
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	33.6%	897	33.9%	992	34.5%	972	0.894	0.685	0.790
<i>Brahmin/Chhetri</i>	28.5%	740	26.1%	766	24.5%	673	0.332	0.107	0.460
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	24.9%	213	28.3%	152	33.0%	182	0.462	0.046	0.306
Urban/rural residence									
<i>Urban</i>	30.3%	930	29.1%	951	29.6%	930	0.600	0.702	0.872
<i>Rural</i>	30.8%	916	31.5%	959	31.9%	897	0.780	0.623	0.851
Agro-ecological zone									
<i>Mountain</i>	42.0%	238	40.1%	237	39.1%	238	0.700	0.445	0.811
<i>Hill</i>	28.7%	1018	28.0%	1090	30.2%	1017	0.740	0.488	0.227
<i>Terai</i>	29.1%	594	30.7%	583	28.0%	572	0.610	0.670	0.351

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.9 Child minimum dietary diversity (consuming foods from 4 out of 7 food groups in previous 24 hours) among children aged 6-23.9 months

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	46.7%	1385	53.5%	1460	57.5%	1396	0.001	<0.001	0.053
Equity quintile									
<i>Lowest</i>	41.9%	279	43.8%	258	54.5%	224	0.660	0.016	0.031
<i>2nd lowest</i>	42.4%	394	50.0%	348	58.4%	310	0.041	<0.001	0.070
<i>Middle</i>	49.1%	332	58.2%	380	57.4%	298	0.025	0.039	0.850
<i>2nd highest</i>	50.3%	290	58.5%	354	57.6%	424	0.044	0.047	0.766
<i>Highest</i>	60.0%	90	55.0%	120	60.0%	140	0.494	1.000	0.455
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	42.7%	667	50.9%	755	55.6%	742	0.006	<0.001	0.072
<i>Brahmin/Chhetri</i>	52.6%	559	58.3%	583	62.6%	522	0.051	0.005	0.232
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	42.8%	159	46.7%	122	47.3%	131	0.494	0.416	0.915
Urban/rural residence									
<i>Urban</i>	45.3%	704	50.3%	716	57.9%	710	0.101	<0.001	0.012
<i>Rural</i>	48.2%	681	56.6%	744	57.0%	686	0.001	<0.001	0.880
Agro-ecological zone									
<i>Mountain</i>	44.0%	175	56.4%	179	68.7%	185	0.026	<0.001	0.096
<i>Hill</i>	49.9%	762	55.5%	816	61.4%	765	0.027	<0.001	0.020
<i>Terai</i>	42.4%	448	48.8%	465	46.0%	446	0.087	0.256	0.395

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.10 Egg consumption among children aged 6-23.9 months

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	10.6%	1385	17.7%	1460	23.1%	1396	<0.001	<0.001	0.001
Equity quintile									
<i>Lowest</i>	5.4%	279	8.9%	258	13.4%	224	0.071	0.001	0.137
<i>2nd lowest</i>	7.9%	394	14.9%	348	24.2%	310	0.007	<0.001	0.003
<i>Middle</i>	12.1%	332	23.2%	380	24.2%	298	<0.001	<0.001	0.768
<i>2nd highest</i>	15.5%	290	20.9%	354	25.9%	424	0.101	0.001	0.139
<i>Highest</i>	17.8%	90	18.3%	120	25.0%	140	0.910	0.229	0.193
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	11.1%	667	20.9%	755	25.8%	742	<0.001	<0.001	0.029
<i>Brahmin/Chhetri</i>	8.2%	559	13.7%	583	19.5%	522	0.008	<0.001	0.010
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	17.0%	159	17.2%	122	21.4%	131	0.956	0.349	0.385
Urban/rural residence									
<i>Urban</i>	8.1%	704	15.9%	716	20.7%	710	<0.001	<0.001	0.022
<i>Rural</i>	13.2%	681	19.5%	744	25.5%	686	0.004	<0.001	0.014
Agro-ecological zone									
<i>Mountain</i>	13.1%	175	16.8%	179	23.8%	185	0.338	0.011	0.155
<i>Hill</i>	10.9%	762	20.2%	816	26.8%	765	<0.001	<0.001	0.002
<i>Terai</i>	9.2%	448	13.8%	465	16.4%	446	0.075	0.002	0.349

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.11 Meat consumption among children aged 6-23.9 months

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	17.9%	1385	24.0%	1460	23.3%	1396	<0.001	0.001	0.632
Equity quintile									
<i>Lowest</i>	17.6%	297	21.3%	258	21.4%	224	0.239	0.232	0.975
<i>2nd lowest</i>	18.0%	394	23.3%	348	23.6%	310	0.079	0.077	0.936
<i>Middle</i>	16.9%	332	25.3%	380	23.2%	298	0.010	0.047	0.587
<i>2nd highest</i>	17.6%	290	25.1%	354	25.0%	424	0.027	0.024	0.963
<i>Highest</i>	23.3%	90	25.0%	120	20.7%	140	0.780	0.616	0.426
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	24.4%	667	32.3%	755	32.3%	743	0.003	0.001	0.995
<i>Brahmin/Chhetri</i>	9.8%	559	13.7%	583	10.9%	522	0.022	0.521	0.150
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	18.9%	159	22.1%	122	21.4%	131	0.550	0.580	0.872
Urban/rural residence									
<i>Urban</i>	17.6%	704	24.3%	716	20.7%	710	0.002	0.169	0.092
<i>Rural</i>	18.2%	681	23.8%	744	26.0%	686	0.010	0.001	0.352
Agro-ecological zone									
<i>Mountain</i>	17.1%	175	27.9%	179	26.0%	185	0.007	0.040	0.622
<i>Hill</i>	18.9%	762	24.0%	816	25.8%	765	0.011	0.002	0.410

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Terai</i>	16.5%	448	22.6%	465	17.9%	446	0.032	0.622	0.115

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.12 Consumption of iron-rich foods among children aged 6-23.9 months

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	84.2%	1385	88.6%	1460	89.8%	1396	0.001	<0.001	0.300
Equity quintile									
<i>Lowest</i>	78.5%	279	88.9%	258	84.8%	224	0.020	0.105	0.985
<i>2nd lowest</i>	83.5%	394	85.3%	348	89.0%	310	0.470	0.042	0.210
<i>Middle</i>	84.9%	332	89.7%	380	91.3%	298	0.080	0.017	0.524
<i>2nd highest</i>	88.3%	290	92.9%	354	91.3%	424	0.060	0.222	0.349
<i>Highest</i>	88.9%	90	90.0%	120	92.1%	140	0.800	0.371	0.595
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	85.5%	667	89.1%	755	89.8%	743	0.050	0.021	0.688
<i>Brahmin/Chhetri</i>	83.7%	559	88.3%	583	89.9%	522	0.008	0.012	0.452
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	80.5%	159	86.9%	122	90.1%	131	0.166	0.008	0.397
Urban/rural residence									
<i>Urban</i>	83.5%	704	87.4%	716	89.9%	710	0.040	0.002	0.147
<i>Rural</i>	84.9%	681	89.8%	744	89.8%	686	0.010	0.014	0.995
Agro-ecological zone									
<i>Mountain</i>	76.6%	175	88.3%	179	91.9%	185	0.001	0.001	0.274
<i>Hill</i>	84.5%	762	88.7%	816	89.2%	765	0.010	0.019	0.794
<i>Terai</i>	86.6%	448	88.6%	465	90.1%	446	0.420	0.117	0.407

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.13 Feeding more to sick children <2 years

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	38.3%	744	37.5%	678	35.0%	744	0.750	0.191	0.335
Equity quintile									
<i>Lowest</i>	34.2%	187	28.8%	125	33.3%	123	0.260	0.871	0.380
<i>2nd lowest</i>	38.1%	231	38.9%	185	32.6%	190	0.850	0.265	0.169
<i>Middle</i>	45.2%	166	37.0%	165	36.7%	177	0.160	0.125	0.964
<i>2nd highest</i>	36.2%	130	42.8%	152	38.5%	200	0.240	0.669	0.424
<i>Highest</i>	36.7%	30	39.2%	51	27.8%	54	0.830	0.420	0.234
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	35.1%	370	35.3%	366	35.2%	401	0.977	0.995	0.982
<i>Brahmin/Chhetri</i>	42.7%	307	40.4%	275	36.6%	268	0.538	0.168	0.321
<i>Others (Newar, Gurung/Thakali,</i>	35.8%	67	37.8%	37	28.0%	75	0.855	0.308	0.377

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Non-dalit Terai caste)</i>									
Urban/rural residence									
Urban	36.6%	385	39.6%	356	33.9%	387	0.410	0.415	0.120
Rural	40.1%	359	35.1%	322	36.1%	357	0.180	0.304	0.775
Agro-ecological zone									
Mountain	38.8%	121	28.4%	95	34.2%	76	0.080	0.493	0.431
Hill	38.5%	444	39.3%	392	37.2%	425	0.830	0.711	0.557
Terai	37.4%	179	38.2%	191	31.3%	243	0.870	0.148	0.105

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.14 Practice of exclusive breastfeeding

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	62.9%	455	65.8%	450	68.9%	431	0.369	0.060	0.328
Equity quintile									
Lowest	67.9%	106	74.1%	85	73.0%	63	0.355	0.424	0.856
2nd lowest	58.8%	131	62.6%	123	79.1%	115	0.569	<0.001	0.007
Middle	67.7%	96	65.7%	108	62.6%	107	0.763	0.449	0.653
2nd highest	62.9%	97	70.3%	101	67.0%	112	0.248	0.544	0.621
Highest	44.0%	25	42.4%	33	52.9%	34	0.899	0.519	0.377
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	73.1%	223	71.7%	237	69.9%	229	0.761	0.473	0.655
<i>Brahmin/Chhetri</i>	51.4%	179	58.5%	183	68.9%	151	0.161	0.001	0.042
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	58.5%	53	63.3%	30	64.7%	51	0.643	0.533	0.909
Urban/rural residence									
Urban	59.4%	224	62.1%	235	66.8%	220	0.559	0.138	0.299
Rural	66.2%	231	69.8%	215	71.1%	211	0.432	0.226	0.773
Agro-ecological zone									
Mountain	55.6%	63	69.0%	58	88.7%	53	0.139	<0.001	0.003
Hill	65.9%	249	69.0%	274	70.2%	252	0.459	0.294	0.756
Terai	60.8%	143	56.8%	118	57.9%	126	0.501	0.617	0.855

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.15 Appropriate drinking water treatment among households with a child <2 years

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	13.5%	1846	19.7%	1909	19.2%	1826	<0.001	<0.001	0.757
Equity quintile									
Lowest	7.5%	388	7.9%	343	8.7%	287	0.860	0.594	0.746
2nd lowest	9.1%	528	11.7%	471	17.0%	424	0.180	0.001	0.028
Middle	20.6%	428	26.6%	488	21.7%	405	0.040	0.712	0.124
2nd highest	14.0%	387	24.9%	453	23.0%	536	<0.001	0.003	0.522

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Highest</i>	26.1%	115	32.7%	153	24.1%	174	0.280	0.734	0.169
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	12.1%	895	18.0%	991	17.1%	972	0.003	0.007	0.665
<i>Brahmin/Chhetri</i>	14.8%	738	22.1%	766	23.2%	672	0.001	<0.001	0.650
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	15.0%	213	18.5%	151	15.4%	182	0.301	0.920	0.439
Urban/rural residence									
<i>Urban</i>	11.2%	933	18.6%	951	16.4%	929	<0.001	0.009	0.290
<i>Rural</i>	15.9%	913	20.7%	957	22.1%	897	0.020	0.006	0.552
Agro-ecological zone									
<i>Mountain</i>	9.7%	237	14.8%	236	13.0%	238	0.130	0.264	0.592
<i>Hill</i>	17.2%	1016	24.6%	1089	24.1%	1016	0.001	0.002	0.834
<i>Terai</i>	8.6%	593	12.4%	583	12.9%	572	0.080	0.081	0.796

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.16 Practiced handwashing at all six times among mothers with a child <2 years

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	7.8%	1850	19.4%	1910	11.3%	1827	<0.001	0.027	<0.001
Equity quintile									
<i>Lowest</i>	5.2%	388	10.5%	343	12.9%	287	0.020	0.009	0.514
<i>2nd lowest</i>	6.4%	528	18.5%	471	15.8%	425	<0.001	0.001	0.337
<i>Middle</i>	8.8%	430	23.8%	488	11.1%	405	<0.001	0.364	<0.001
<i>2nd highest</i>	10.5%	389	21.3%	455	9.3%	536	0.002	0.643	0.002
<i>Highest</i>	9.6%	115	22.2%	153	4.6%	174	0.010	0.104	<0.001
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	7.0%	897	16.7%	992	7.4%	972	<0.001	0.821	<0.001
<i>Brahmin/Chhetri</i>	8.8%	740	24.4%	766	18.7%	673	<0.001	<0.001	0.072
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	7.5%	213	11.2%	152	5.0%	182	0.188	0.284	0.028
Urban/rural residence									
<i>Urban</i>	6.3%	934	17.3%	951	11.7%	930	<0.001	0.025	0.032
<i>Rural</i>	9.3%	916	21.5%	959	10.9%	897	<0.001	0.437	<0.001
Agro-ecological zone									
<i>Mountain</i>	7.1%	238	13.1%	237	24.8%	238	0.070	0.003	0.069
<i>Hill</i>	7.4%	1018	20.8%	1090	9.5%	1017	<0.001	0.195	<0.001
<i>Terai</i>	8.8%	594	19.2%	583	8.9%	572	0.010	0.956	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.17 Child minimum acceptable diet among children aged 6-23.9 months

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	37.5%	1385	45.7%	1460	47.2%	1396	<0.001	<0.001	0.456
Equity quintile									
<i>Lowest</i>	35.1%	279	35.7%	258	47.8%	224	0.172	<0.001	<0.001
<i>2nd lowest</i>	35.5%	394	44.3%	348	50.0%	310	0.293	<0.001	<0.001
<i>Middle</i>	38.0%	332	48.2%	380	47.0%	298	<0.001	<0.001	0.004
<i>2nd highest</i>	37.9%	290	51.1%	354	46.2%	424	0.032	<0.001	<0.001
<i>Highest</i>	50.0%	90	47.5%	120	43.6%	140	0.132	0.002	0.002
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	35.1%	667	43.6%	755	45.8%	742	0.002	<0.001	<0.001
<i>Brahmin/Chhetri</i>	41.3%	559	49.7%	583	51.3%	522	<0.001	<0.001	<0.001
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	34.0%	159	39.3%	122	38.9%	131	0.086	0.416	0.002
Urban/rural residence									
<i>Urban</i>	35.8%	704	42.5%	716	48.6%	710	<0.001	<0.001	<0.001
<i>Rural</i>	39.2%	681	48.8%	744	45.8%	686	0.002	<0.001	<0.001
Agro-ecological zone									
<i>Mountain</i>	37.7%	175	45.3%	179	61.2%	185	0.359	<0.001	<0.001
<i>Hill</i>	40.3%	762	47.8%	816	49.3%	765	<0.001	<0.001	<0.001
<i>Terai</i>	32.6%	448	42.2%	465	37.7%	446	0.046	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.18 Newborns receiving postnatal health check within 24 hours of birth

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	73.5%	1820	79.1%	1896	83.0%	1784	<0.001	<0.001	0.003
Equity quintile									
<i>Lowest</i>	58.3%	381	72.1%	341	68.8%	285	<0.001	0.003	0.348
<i>2nd lowest</i>	68.4%	522	69.8%	470	79.6%	416	0.656	<0.001	0.001
<i>Middle</i>	80.9%	424	82.2%	482	86.5%	391	0.611	0.061	0.084
<i>2nd highest</i>	84.4%	379	87.2%	454	87.8%	524	0.269	0.171	0.811
<i>Highest</i>	84.2%	114	89.3%	149	92.3%	168	0.265	0.033	0.374
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	72.1%	884	76.6%	985	79.8%	948	0.022	<0.001	0.113
<i>Brahmin/Chhetri</i>	75.8%	727	83.3%	760	87.2%	662	<0.001	<0.001	0.035
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	71.8%	209	74.2%	151	84.5%	174	0.611	0.002	0.009
Urban/rural residence									
<i>Urban</i>	70.2%	916	75.0%	943	80.6%	903	0.022	<0.001	0.004
<i>Rural</i>	76.9%	904	83.1%	953	85.4%	881	0.001	<0.001	0.184
Agro-ecological zone									
<i>Mountain</i>	67.7%	235	72.7%	234	78.2%	238	0.225	0.016	0.126
<i>Hill</i>	70.0%	996	76.7%	1081	82.5%	995	<0.001	<0.001	0.001

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Terai</i>	81.8%	589	86.1%	581	85.8%	551	0.066	0.117	0.923

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.19 Taken at least 45 IFA tablets during postnatal period, among those who take any

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	51.8%	1293	53.3%	1410	53.4%	1442	0.422	0.438	0.971
Equity quintile									
<i>Lowest</i>	44.4%	241	44.3%	226	51.2%	217	0.975	0.175	0.155
<i>2nd lowest</i>	52.2%	341	53.6%	343	53.9%	332	0.694	0.655	0.946
<i>Middle</i>	51.6%	322	55.2%	377	56.5%	322	0.332	0.235	0.726
<i>2nd highest</i>	58.0%	300	55.5%	346	52.2%	435	0.540	0.128	0.355
<i>Highest</i>	50.6%	89	57.6%	118	52.2%	136	0.308	0.787	0.388
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	47.8%	575	50.1%	696	51.3%	741	0.417	0.281	0.664
<i>Brahmin/Chhetri</i>	58.7%	569	57.2%	617	56.4%	562	0.599	0.436	0.774
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	40.9%	149	51.6%	97	52.5%	139	0.131	0.079	0.882
Urban/rural residence									
<i>Urban</i>	49.7%	622	46.6%	680	49.7%	712	0.244	0.988	0.194
<i>Rural</i>	53.8%	671	59.6%	730	57.0%	730	0.025	0.296	0.315
Agro-ecological zone									
<i>Mountain</i>	43.4%	152	43.0%	165	54.8%	186	0.945	0.077	0.041
<i>Hill</i>	50.3%	716	56.7%	838	54.6%	834	0.005	0.092	0.343
<i>Terai</i>	57.4%	425	50.6%	407	50.5%	422	0.059	0.065	0.967

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.20 Soap and water at hand washing station among households with children <2 years

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	37.7%	1846	47.3%	1908	63.3%	1826	<0.001	<0.001	<0.001
Equity quintile									
<i>Lowest</i>	16.8%	388	18.4%	343	40.4%	287	0.599	<0.001	<0.001
<i>2nd lowest</i>	23.3%	528	33.8%	471	50.7%	424	0.001	<0.001	<0.001
<i>Middle</i>	47.9%	428	53.7%	488	69.6%	405	0.112	<0.001	<0.001
<i>2nd highest</i>	56.5%	387	65.8%	453	74.8%	536	0.007	<0.001	0.004
<i>Highest</i>	73.0%	115	79.1%	153	81.6%	174	0.291	0.061	0.571
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	34.8%	895	45.5%	991	60.7%	972	<0.001	<0.001	<0.001
<i>Brahmin/Chhetri</i>	40.2%	738	47.8%	766	66.2%	672	0.008	<0.001	<0.001
<i>Others (Newar,</i>	41.3%	213	57.0%	51	66.5%	182	0.004	<0.001	0.043

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Gurung/Thakali, Non-dalit Terai caste)</i>									
Urban/rural residence									
Urban	33.9%	933	47.3%	951	62.7%	929	<0.001	<0.001	<0.001
Rural	41.6%	913	47.3%	957	64.0%	897	0.003	<0.001	<0.001
Agro-ecological zone									
Mountain	27.0%	237	33.9%	236	58.0%	238	0.100	<0.001	<0.001
Hill	35.6%	1016	47.2%	1089	62.2%	1016	<0.001	<0.001	<0.001
Terai	45.5%	593	53.0%	583	67.5%	572	0.028	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

9.3 Suaahara promoted 60 government health system contact points, disaggregated

The following are some of the significant differences found based on disaggregated analysis for indicators of SII promoted 60 GoN contact points. Again, it is important to remember that these are indicative trends only, as the survey was not powered for this type of analysis and some sub-groups have quite small samples

- **ANC:** The mean number of ANC visits among mothers of children under two years has increased from 4.2 in 2017 to 4.7 in 2019 (P:<0.001). Among all sub-populations, the mean increased between 2017 and 2019, with almost all changes being significant. By 2019, all sub-populations were above the recommended 4 visits. Notably, the highest equity quintile saw the highest average number of visits at 5.3 in 2019 (Table 9.21).
- **PNC**
 - The average number of PNC visits for mothers of children under two years within 24 hours of birth has decreased from 0.9 in 2017 to 0.8 visits in 2019 (P:<0.001). Most sub-population groups have seen a similar slight decrease between 2017 and 2019, and all changes have been statistically significant, potentially due to the small range of values between 0 and 1. No change more than 0.3 was seen in any sub-group (Table 9. 22).
 - The average number of PNC visits for children of mothers with children under two years within 24 hours of birth followed a very similar trend, seeing an overall change of 0.7 to 0.8 visits between 2017 and 2019 (P:<0.001). Fewer sub-populations saw real changes, unlike the mothers. All significant changes were from 0.7 to 0.8 visits, while *Brahmin/Chhetri* saw the highest absolute mean/significant change from 0.8 to 0.9 visits (P:<0.001) (Table 9.23).
- **GMP:** The mean number of GMP visits in the last 6 months among households with a child 0-2 years of age increased from 2.5 to 2.7 (P:<0.001) between 2018 and 2019 (data not collected in this way in 2017). Notably, the middle and second highest equity quintiles saw a 0.5 visit increase (P:<0.001), as well as those of other ethnicity (P:0.039). In 2019, those living in rural areas saw the highest mean number of GMP visits at 3.0 (<3 visits for all others), up from 2.7 (P:0.006) in 2018. Similarly, geographic variation was found: while mountain and hill-residing households had an average increase in 0.1-0.2 visits, those in the mountains in *terai* saw a significant increase of 0.5 visits (P:<0.001) (Table 9.24).
- **HMG:** The mean number of households with a child 0-2 years of age reported to have participated in HMG meetings in the last six months saw no real change. All sub-groups remained the same or saw slight increases/decreases, though the majority of changes were

insignificant. Only a significant increase was among the 2nd highest equity quintile, from 3.6 to 4.3 visits (P:0.011). The lowest absolute average attendance was among the highest equity quintile, with 3.1 average visits, compared to the rest of the sub-populations with 3.7-4.4 average visits in 2019 (Table 9.25).

Table 9.21 Sixty contact points: Mean ANC visits among mothers with children <2 years

	2017		2018		2019		P-value	P-value	P-value
	Mean	N	Mean	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	4.2	1850	4.5	1906	4.7	1823	<0.001	<0.001	<0.001
Equity quintile									
<i>Lowest</i>	4.0	388	4.0	341	4.4	287	0.870	0.005	0.012
<i>2nd lowest</i>	3.9	528	4.2	469	4.5	424	0.010	<0.001	0.012
<i>Middle</i>	4.4	430	4.6	488	4.7	405	0.210	0.074	0.526
<i>2nd highest</i>	4.5	389	4.9	55	5.0	534	0.003	<0.001	0.431
<i>Highest</i>	4.7	115	5.0	153	5.3	173	0.217	0.008	0.107
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	4.1	897	4.4	989	4.7	972	<0.001	<0.001	<0.001
<i>Brahmin/Chhetri</i>	4.3	740	4.6	766	4.8	672	0.003	<0.001	0.009
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	4.6	213	4.6	151	4.7	179	0.786	0.689	0.912
Urban/rural residence									
<i>Urban</i>	4.1	934	4.4	948	4.7	927	0.003	<0.001	0.001
<i>Rural</i>	4.3	916	4.6	958	4.8	896	0.002	<0.001	0.020
Agro-ecological zone									
<i>Mountain</i>	4.4	238	4.8	237	4.7	238	0.050	0.122	0.557
<i>Hill</i>	4.1	1018	4.3	1086	4.7	1016	0.020	<0.001	<0.001
<i>Terai</i>	4.3	594	4.6	583	4.9	569	0.001	<0.001	0.078

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.22 Sixty contact points: Mean PNC visits for mothers within 24 hours of birth, among mothers with children <2 years

	2017		2018		2019		P-value	P-value	P-value
	Mean	N	Mean	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	0.9	1412	0.8	1910	0.8	1827	<0.001	<0.001	0.028
Equity quintile									
<i>Lowest</i>	0.9	241	0.7	343	0.7	287	<0.001	<0.001	0.290
<i>2nd lowest</i>	0.9	378	0.7	471	0.8	425	<0.001	<0.001	0.004
<i>Middle</i>	1.0	362	0.8	488	0.8	405	<0.001	<0.001	0.086
<i>2nd highest</i>	1.0	329	0.9	455	0.9	536	<0.001	<0.001	0.965
<i>Highest</i>	1.0	102	0.9	153	0.9	174	0.008	0.007	0.903
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	1.0	667	0.8	992	0.8	972	<0.001	<0.001	0.252
<i>Brahmin/Chhetri</i>	0.9	583	0.8	766	0.9	673	<0.001	<0.001	0.074
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	1.0	162	0.8	152	0.8	182	<0.001	<0.001	0.108

	2017		2018		2019		P-value	P-value	P-value
	Mean	N	Mean	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
Urban/rural residence									
<i>Urban</i>	0.9	686	0.7	951	0.8	930	<0.001	<0.001	0.014
<i>Rural</i>	1.0	726	0.8	959	0.8	897	<0.001	<0.001	0.553
Agro-ecological zone									
<i>Mountain</i>	1.0	163	0.7	237	0.7	238	<0.001	<0.001	0.377
<i>Hill</i>	0.9	751	0.7	1090	0.8	1017	<0.001	<0.001	0.008
<i>Terai</i>	1.0	498	0.9	583	0.8	572	<0.001	<0.001	0.609

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.23 Sixty contact points: Mean PNC visits for children within 24 hours of birth, among mothers with children <2 years

	2017		2018		2019		P-value	P-value	P-value
	Mean	N	Mean	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	0.7	1820	0.8	1910	0.8	1825	0.001	<0.001	0.070
Equity quintile									
<i>Lowest</i>	0.6	281	0.7	343	0.7	287	<0.001	0.004	0.335
<i>2nd lowest</i>	0.7	522	0.7	471	0.8	424	0.691	0.001	0.007
<i>Middle</i>	0.8	424	0.8	488	0.8	405	0.921	0.406	0.369
<i>2nd highest</i>	0.8	379	0.9	455	0.9	535	0.324	0.561	0.674
<i>Highest</i>	0.8	114	0.9	153	0.9	174	0.566	0.202	0.602
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	0.7	884	0.8	992	0.8	972	0.043	0.013	0.423
<i>Brahmin/Chhetri</i>	0.8	727	0.8	766	0.9	672	0.002	<0.001	0.090
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	0.7	209	0.7	152	0.8	181	0.690	0.038	0.070
Urban/rural residence									
<i>Urban</i>	0.7	916	0.7	951	0.8	928	0.053	0.001	0.062
<i>Rural</i>	0.8	904	0.8	959	0.8	897	0.003	0.002	0.505
Agro-ecological zone									
<i>Mountain</i>	0.7	235	0.7	237	0.8	238	0.350	0.027	0.083
<i>Hill</i>	0.7	989	0.8	1090	0.8	1016	0.002	<0.001	0.015
<i>Terai</i>	0.8	589	0.9	583	0.8	571	0.103	0.725	0.251

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.24 Sixty contact points: Mean GMP visits in the last six months among mothers with children <2 years

	2018		2019		P-value 2018/ 2019
	Mean	N	Mean	N	
<i>Total</i>	2.5	1798	2.7	1727	<0.001
Equity quintile					
<i>Lowest</i>	2.5	318	2.3	276	0.177
<i>2nd lowest</i>	2.5	449	2.8	409	0.074
<i>Middle</i>	2.4	460	2.9	393	<0.001
<i>2nd highest</i>	2.3	423	2.8	502	<0.001
<i>Highest</i>	2.5	148	2.6	167	0.703
Caste/ethnicity					
<i>Socially excluded (Dalit Muslim, disadvantaged)</i>	2.4	931	2.7	930	0.003
<i>Brahmin/Chhetri</i>	2.6	734	2.9	654	0.028
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	1.9	133	2.4	163	0.039
Urban/rural residence					
<i>Urban</i>	2.2	878	2.4	876	0.012
<i>Rural</i>	2.7	920	3.0	871	0.006
Agro-ecological zone					
<i>Mountain</i>	2.2	226	2.4	219	0.488
<i>Hill</i>	2.7	1041	2.8	989	0.076
<i>Terai</i>	2.2	531	2.7	539	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.25 Sixty contact points: Mean HMG attendance in the last six months among mothers with children <2 years

	2018		2019		P-value 2018/ 2019
	Mean	N	Mean	N	
<i>Total</i>	3.7	446	3.9	424	0.309
Equity quintile					
<i>Lowest</i>	3.5	104	3.5	83	0.731
<i>2nd lowest</i>	3.8	126	4.2	109	0.314
<i>Middle</i>	3.9	108	3.7	109	0.743
<i>2nd highest</i>	3.6	93	4.3	107	0.011
<i>Highest</i>	3.2	15	3.1	16	0.218
Caste/ethnicity					
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	3.7	211	3.7	222	0.672
<i>Brahmin/Chhetri</i>	2.8	221	4.2	180	0.495
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	2.6	14	4.4	22	0.126
Urban/rural residence					
<i>Urban</i>	3.2	180	3.7	190	0.174
<i>Rural</i>	4.0	266	4.1	234	0.917
Agro-ecological zone					

	2018		2019		P-value 2018/ 2019
	Mean	N	Mean	N	
<i>Mountain</i>	3.2	71	3.3	79	0.081
<i>Hill</i>	3.8	288	4.0	262	0.172
<i>Terai</i>	3.8	87	4.4	83	0.167

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2018 and 2019, with the result presented in the P-value column.

9.4 *Suaahara* II coverage, disaggregated

The following are some of the key findings for reach of SII interventions, with disaggregated analysis by equity quintile (socio-economic equity); caste/ethnicity (social equity); urban/rural and agro-ecological zone of residency (geographic/distance equity), and mother's age (socio-demographic equity):

- **Any exposure:** The prevalence of mothers having ever heard of *Suaahara* saw great gains, with an increase of 44pp between 2017 and 2019 (P:<0.001). All sub-groups saw significant gains between 2017 and 2019 as well. Among the equity quintiles, each saw gains of more than 30pp, but the most progress was in the 2nd lowest equity quintiles with increases of 49pp (P:<0.001) in each. All caste/ethnicity groups saw an increase of 34pp or more, with the socially excluded caste group seeing the largest increase of 47pp (P:<0.001). While all geographic areas had large progress, the largest variation existed among agro-ecological zones – hill and *terai* populations saw increases of 48 and 42pp (P:<0.001). However, *terai* populations had a lower absolute prevalence than hill and *mountain* populations at 63% vs. 94% and 88%, respectively (Table 9.26).
- **FLW interaction:** The prevalence of mothers having met a SII FLW in the previous 6 months increased by 33pp between 2017 and 2019 (P:<0.001). Similar progress was seen across equity quintiles and caste/ethnicity groups, with the largest increase seen among the middle equity quintile at 39pp (P:<0.001). Variation by agro-ecological zone shows that the prevalence in the hill increased by 41pp and *terai* by 30pp (P:<0.001). However, the *terai* populations had the lowest prevalence (Table 9.27).
- **Community events:** There was a 36pp increase in mothers reporting to have participated in SII community events, other than group meetings (P:<0.001). Though all equity quintiles saw a similar prevalence of about half of mothers participating in *Suaahara* activities by 2019, an overall increase by more than 40pp was seen for the both lowest 2 equity quintiles between 2017 and 2019, indicating a much larger change over time than higher quintiles. For caste/ethnicity sub-populations, the most progress was found for the brahmin/chhetri caste group, with a 37pp increase. Similarly, geographic variation in progress was seen with the highest increases seen among urban residents with 37pp and among hill populations with 39pp (P:<0.001) (Table 9.28).
- **Bhanchhin Aama:** The prevalence of having ever heard of *Bhanchhin Aama* increased by 37pp between 2017 and 2019 (P:<0.001). This large gain was seen for all population sub-groups. Among the highest equity quintile, an increase by 38pp was found (P:<0.001), but the increase was at least 30pp for each lower equity quintile. The Brahmin/Chhetri caste group saw an increase of 37pp (P:<0.001), the highest among caste/ethnicity groups. Among the three agro-ecological zones, the biggest increase was seen in the mountain group with a 44pp increase over time (P:<0.001), while the hill and *terai* populations saw increases of 41pp and 26pp, respectively (P:<0.001). (Table 9.29). The overall change in those who ever listened to *Bhanchhin Aama* was by 30pp (P:<0.001) and the sub-population variation was like that already described for ever heard of the program. (Table 9.30).

- **SMS:** The prevalence of having received any health/nutrition SMS on their own mobile phone increased by 13pp between 2017 and 2019 (P:<0.001). This significant gain was seen in all sub-groups. All sub-populations saw an increase from 8-16pp (P:<0.001 for all except the highest equity quintile, P:0.002). The lowest absolute prevalence of receiving messages, however, occurred among the lowest equity quintile at only 12% of mothers. There was also some variation among caste groups, as other groups saw 18% of mothers receiving messages while the *Brahmin/Chhetris* and socially excluded groups saw 17% and 14%, respectively (Table 9.31).

Table 9.26 Ever heard of Suaahara (among mothers with children <2 years)

	2017		2018		2019		P-value	P-value	P-value
	Mean	N	Mean	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	39.3%	1848	70.3%	1909	83.4%	1826	<0.001	<0.001	<0.001
Equity quintile									
<i>Lowest</i>	42.4%	387	76.7%	343	88.2%	287	<0.001	<0.001	<0.001
<i>2nd lowest</i>	39.8%	528	77.1%	471	89.2%	425	<0.001	<0.001	<0.001
<i>Middle</i>	41.0%	429	72.3%	488	85.7%	405	<0.001	<0.001	<0.001
<i>2nd highest</i>	34.2%	389	60.4%	454	78.5%	535	<0.001	<0.001	<0.001
<i>Highest</i>	37.4%	115	57.5%	153	71.3%	174	0.001	<0.001	<0.001
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	35.2%	895	68.0%	991	82.1%	972	<0.001	<0.001	<0.001
<i>Brahmin/Chhetri</i>	47.2%	740	77.6%	766	90.9%	672	<0.001	<0.001	<0.001
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	29.1%	213	48.0%	152	62.6%	182	0.008	<0.001	<0.001
Urban/rural residence									
<i>Urban</i>	35.6%	933	67.2%	951	80.0%	930	<0.001	<0.001	<0.001
<i>Rural</i>	42.9%	915	73.3%	958	86.9%	896	<0.001	<0.001	<0.001
Agro-ecological zone									
<i>Mountain</i>	59.1%	237	88.1%	236	87.8%	237	<0.001	<0.001	0.229
<i>Hill</i>	45.7%	1017	80.8%	1090	93.8%	1017	<0.001	<0.001	0.00
<i>Terai</i>	20.6%	594	43.2%	583	63.1%	572	<0.001	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.27 Ever met Suaahara FLWs (among mothers with children <2 years)

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	14.7%	1848	34.7%	1909	48.0%	1826	<0.001	<0.001	<0.001
Equity quintile									
<i>Lowest</i>	17.6%	387	33.8%	343	45.0%	287	0.001	<0.001	0.015
<i>2nd lowest</i>	17.4%	528	37.6%	471	50.1%	425	<0.001	<0.001	<0.001
<i>Middle</i>	15.4%	429	40.6%	488	53.6%	405	<0.001	<0.001	<0.001
<i>2nd highest</i>	10.0%	389	29.5%	454	46.5%	535	<0.001	<0.001	<0.001
<i>Highest</i>	5.2%	115	24.2%	153	39.7%	174	0.001	<0.001	<0.001
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	15.3%	895	33.9%	991	51.2%	972	<0.001	<0.001	<0.001

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Brahmin/Chhetri</i>	15.0%	740	37.6%	766	47.0%	672	<0.001	<0.001	<0.001
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	10.8%	213	25.0%	152	34.6%	182	0.005	<0.001	0.003
Urban/rural residence									
<i>Urban</i>	11.3%	933	29.0%	951	45.2%	930	<0.001	<0.001	<0.001
<i>Rural</i>	18.1%	915	40.3%	958	51.0%	896	<0.001	<0.001	0.001
Agro-ecological zone									
<i>Mountain</i>	21.9%	237	52.1%	236	35.0%	237	<0.001	0.502	0.001
<i>Hill</i>	18.6%	1017	38.9%	1090	58.4%	1017	<0.001	<0.001	<0.001
<i>Terai</i>	5.1%	594	19.7%	583	35.0%	572	<0.001	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.28 Ever participation in *Suaahara* community activities, other than group meetings (among mothers with children <2 years)

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	12.2%	1848	32.8%	1909	48.0%	1826	<0.001	<0.001	<0.001
Equity quintile									
<i>Lowest</i>	13.7%	387	40.5%	343	57.5%	287	<0.001	<0.001	<0.001
<i>2nd lowest</i>	12.9%	528	39.3%	471	53.4%	425	<0.001	<0.001	<0.001
<i>Middle</i>	14.7%	429	32.4%	488	49.9%	405	<0.001	<0.001	<0.001
<i>2nd highest</i>	8.7%	389	26.7%	454	42.4%	535	<0.001	<0.001	<0.001
<i>Highest</i>	6.1%	115	15.0%	153	31.6%	174	0.050	<0.001	<0.001
Caste/ethnicity									
<i>Socially excluded (Dalit Muslim, disadvantaged)</i>	12.5%	895	34.2%	991	49.8%	972	<0.001	<0.001	<0.001
<i>Brahmin/Chhetri</i>	13.2%	740	33.7%	766	50.0%	672	<0.001	<0.001	<0.001
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	7.0%	213	19.1%	152	30.8%	182	0.006	<0.001	<0.001
Urban/rural residence									
<i>Urban</i>	9.1%	933	30.6%	951	45.9%	930	<0.001	<0.001	<0.001
<i>Rural</i>	15.3%	915	35.0%	958	50.1%	896	<0.001	<0.001	<0.001
Agro-ecological zone									
<i>Mountain</i>	20.3%	237	36.0%	236	45.2%	237	0.001	<0.001	0.126
<i>Hill</i>	14.2%	1017	39.5%	1090	52.8%	1017	<0.001	<0.001	<0.001
<i>Terai</i>	5.6%	594	19.0%	583	40.7%	572	<0.001	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.29 Ever heard of Bhanchhin Aama (among mothers with children <2 years)

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	31.1%	1848	54.0%	1909	67.9%	1826	<0.001	<0.001	<0.001
Equity quintile									
<i>Lowest</i>	27.4%	387	55.1%	343	67.9%	287	<0.001	<0.001	<0.001
<i>2nd lowest</i>	34.5%	528	55.8%	471	70.6%	425	<0.001	<0.001	<0.001
<i>Middle</i>	35.7%	429	61.5%	488	71.4%	405	<0.001	<0.001	<0.001
<i>2nd highest</i>	28.0%	389	48.0%	454	66.2%	535	<0.001	<0.001	<0.001
<i>Highest</i>	20.9%	115	39.9%	153	58.6%	174	0.002	<0.001	<0.001
Caste/ethnicity									
<i>Socially excluded (Dalit Muslim, disadvantaged)</i>	28.6%	895	50.8%	991	65.7%	972	<0.001	<0.001	<0.001
<i>Brahmin/Chhetri</i>	38.5%	740	61.0%	766	75.9%	672	<0.001	<0.001	<0.001
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	15.5%	213	40.1%	152	50.0%	182	<0.001	<0.001	0.003
Urban/rural residence									
<i>Urban</i>	25.7%	933	52.0%	951	67.6%	930	<0.001	<0.001	<0.001
<i>Rural</i>	36.5%	915	56.1%	958	68.2%	896	<0.001	<0.001	<0.001
Agro-ecological zone									
<i>Mountain</i>	35.0%	237	60.2%	236	78.5%	237	<0.001	<0.001	<0.001
<i>Hill</i>	37.2%	1017	65.6%	1090	78.4%	1017	<0.001	<0.001	<0.001
<i>Terai</i>	19.0%	594	29.9%	583	44.9%	572	0.003	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.30 Ever listened to Bhanchhin Aama (among mothers with children <2 years)

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	21.3%	1848	40.1%	1909	51.3%	1826	<0.001	<0.001	<0.001
Equity quintile									
<i>Lowest</i>	19.6%	387	40.2%	343	51.9%	287	<0.001	<0.001	<0.001
<i>2nd lowest</i>	22.6%	528	43.3%	471	53.2%	425	<0.001	<0.001	<0.001
<i>Middle</i>	24.5%	429	47.8%	488	51.9%	405	<0.001	<0.001	0.032
<i>2nd highest</i>	19.8%	389	33.3%	454	52.3%	535	<0.001	<0.001	<0.001
<i>Highest</i>	13.9%	115	25.5%	153	41.4%	174	0.020	<0.001	<0.001
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	18.2%	895	36.1%	991	48.4%	972	<0.001	<0.001	<0.001
<i>Brahmin/Chhetri</i>	27.8%	740	47.7%	766	58.9%	672	<0.001	<0.001	<0.001
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	11.3%	213	27.6%	152	39.0%	182	<0.001	<0.001	0.016
Urban/rural residence									
<i>Urban</i>	19.1%	933	37.4%	951	50.1%	930	<0.001	<0.001	<0.001
<i>Rural</i>	23.5%	915	42.7%	958	52.6%	896	<0.001	<0.001	<0.001
Agro-ecological zone									
<i>Mountain</i>	21.9%	237	46.6%	236	62.0%	237	<0.001	<0.001	<0.001

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Hill</i>	27.1%	1017	48.4%	1090	59.8%	1017	<0.001	<0.001	<0.001
<i>Terai</i>	10.9%	594	22.0%	583	31.8%	572	<0.001	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

Table 9.31 Received health/nutrition SMS on own mobile phone in last month (among mothers with children <2 years)

	2017		2018		2019		P-value	P-value	P-value
	%	N	%	N	%	N	2017/ 2018	2017/ 2019	2018/ 2019
<i>Total</i>	2.2%	1476	6.1%	1579	15.4%	1612	<0.001	<0.001	<0.001
Equity quintile									
<i>Lowest</i>	1.1%	269	2.5%	245	11.8%	237	0.172	<0.001	<0.001
<i>2nd lowest</i>	1.5%	395	3.6%	394	13.6%	369	0.293	<0.001	<0.001
<i>Middle</i>	2.4%	371	9.2%	412	16.5%	364	<0.001	<0.001	<0.001
<i>2nd highest</i>	3.6%	335	7.1%	382	17.0%	482	0.032	<0.001	<0.001
<i>Highest</i>	1.9%	106	7.5%	146	17.5%	160	0.131	0.002	0.003
Caste/ethnicity									
<i>Socially excluded (Dalit, Muslim, disadvantaged)</i>	1.6%	693	5.2%	786	13.8%	848	0.002	<0.001	<0.001
<i>Brahmin/Chhetri</i>	2.9%	619	7.4%	672	16.9%	623	<0.001	<0.001	<0.001
<i>Others (Newar, Gurung/Thakali, Non-dalit Terai caste)</i>	1.8%	164	4.1%	121	18.4%	141	0.086	<0.001	<0.001
Urban/rural residence									
<i>Urban</i>	1.9%	745	5.0%	794	14.8%	817	<0.001	<0.001	<0.001
<i>Rural</i>	2.5%	731	7.1%	785	16.0%	795	0.002	<0.001	<0.001
Agro-ecological zone									
<i>Mountain</i>	0.5%	187	1.6%	184	11.5%	208	0.359	<0.001	<0.001
<i>Hill</i>	2.7%	817	7.7%	945	18.8%	933	<0.001	<0.001	<0.001
<i>Terai</i>	1.9%	472	4.4%	450	10.4%	471	0.046	<0.001	<0.001

Note: Italics indicates that statistical testing was done to test the differences found in this indicator's results in 2017, 2018, and 2019, with the result presented in the P-value column.

10. Program Implications

This section presents a discussion, based on the key results from the 2019 annual survey and meetings with thematic program teams, intended to guide programmatic efforts in 2020. While the methodology and sampling for all three surveys were the same, the randomly chosen samples in 2018 and 2019 were slightly better off than those sampled the previous years, evidenced by a consistently rising and significant mean equity quintile score, and both the mothers and household heads were more educated. Interestingly, household structure in the last two years was consistent, with only half of all households having an extended structure, about one-quarter of households being nuclear (mother with child and/or husband only) and nearly one in five mothers residing alone with the child. These key socio-economic and demographic issues should be kept in mind when interpreting results.

Maternal and Child Nutrition:

Nutrition indicators saw tremendous progress between 2017 and 2019. The prevalence of nearly all ideal breastfeeding and complementary feeding practices has increased substantially over time. Maternal dietary indicators also increased between 2017 and 2019 including the prevalence of mothers meeting minimum dietary diversity; eating more during pregnancy than usual; and consumption of eggs and other animal source foods.

Areas for improvement and focus, especially during home visits and community events, include:

- Sick child feeding;
- Consumption of eggs, dairy and meat/fish and decrease consumption of biscuits, sweetened drinks, etc.;
- Eating more during pregnancy and lactation than usual;
- Knowledge on appropriate dietary practices including:
 - Ability to accurately define exclusive breastfeeding and report, when asked, the exact age to stop exclusive breastfeeding;
 - When each complementary food should be introduced
 - That sick children should be given more food than usual;
- Engaging household heads in child feeding decision-making to help ensure that men also take ownership and responsibility for improving child dietary practices.

Additionally, the disaggregated analyses show that the following prioritization is needed:

- Increasing knowledge of dietary diversity among mothers, as well as the importance of egg and meat consumption among children, in *terai* areas;
- Promoting the importance of egg and meat consumption among mothers, particularly among those in the “other” caste/ethnicity group;
- Promotion of exclusive breastfeeding among those in the highest equity quintile.

Water, Sanitation, and Hygiene

Progress on many key WASH indicators was found between 2017 and 2019 in intervention areas including prevalence of appropriate drinking water treatment practices, frequency of drinking water treatment, soap and water availability at a handwashing station and washing hands at six critical times. The prevalence of households with soap and water at a handwashing station progressed by over 20pp between 2017 and 2019. Additionally, the prevalence of drinking water treatment practiced in households steadily increased between 2017 and 2019. However, overall values remain low. Some key examples include: the prevalence of appropriate drinking water treatment, observed in the household, remains very low overall; less than one-quarter of mothers reported to always treat drinking water. Several appropriate handwashing practices, including

before cooking/preparing food, before eating, and before feeding children remain as major gaps. Appropriate menstrual hygiene management practices remained low, with only a quarter of mothers using commercial/disposable pads.

Measurement challenges also abound. For example, to measure drinking water treatment knowledge we ask mothers and household heads to name appropriate drinking water treatment methods. Almost all do name at least one appropriate method, but the majority also name an inappropriate method, the most common being to strain with a cloth. It is nearly impossible to know, however, if they pair these methods or alternate between them which creates huge variations in our understanding of their understanding.

Areas for improvement and focus, especially during home visits and community events, include:

- Improving two key behaviors: household drinking water treatment and handwashing with soap and water at six critical times;
- Improving our FLW and household knowledge on:
 - Appropriate drinking water treatment methods (knowing which methods correct, which methods are incorrect, and WHY it is important)
 - Frequency of appropriate drinking water treatment (knowing that varying the practice by season or any other factor is inappropriate) should be always
 - Handwashing before cooking/preparing food, before eating, before feeding a young child, and after handling animals/livestock is necessary and how it can help to decrease disease;
- Engagement of male household heads, particularly for decisions in purchase of water treatment supplies.

Additionally, the disaggregated analyses show that the following prioritization is needed:

- Increasing access and availability of WASH products, perhaps via local shops, especially in mountain areas;
- Improving handwashing with soap and water at six critical times particularly in *terai* and hill areas.

Health and Family Planning Services

Several health service indicators improved significantly between 2017 and 2019 in intervention areas. These included: mothers receiving at least 4 ANC visits during pregnancy and being weighed during their visit; and an increased prevalence of skilled birth attendant at delivery, receiving breastfeeding support in the first hour after birth, and receiving PNC care for both the mother and child within 24 hours. Both GMP participation and prevalence of growth being interpreted and discussed with caretakers has improved but remains low. Not even one in five children who suffered from diarrhea were given ORS and Zinc by a health worker/FCHV. Interestingly, among mothers that sought treatment for their child's diarrhea, over two thirds went to a health worker/FCHV at a facility or treated at home. There has been no substantial progress on low birth weight or child illness (diarrhea or acute respiratory illness (ARI) related).

The prevalence of non-pregnant mothers using any modern method of family planning increased slightly between 2018 and 2019, and progress is being made overall in doing anything to delay/avoid pregnancy. However, the overall prevalence of using a modern method remains low at roughly one-third. While almost everyone could identify a modern method of family planning, knowledge of other HTSP messages such as birth spacing and pregnancy after miscarriages/abortions was remarkably low (less than one in five) among both mothers and household heads.

Areas for improvement and focus, especially during home visits and community events, include:

- Health worker and FCHV actions:
 - Provision/recommendation of ORS and Zinc for a child who has diarrhea;
 - Recommending IFA during ANC and PNC;
- Knowledge at the health facility and FCHV level related to the importance of:
 - ORS and Zinc being given to children with diarrhea;
 - GMP (especially P - promotion), quality interpretation of growth progress in child health card, and appropriate counseling during GMP visits;
- Household participation in attending GMP monthly for children 0 to 2 years;
- Knowledge among all household adults (particularly household heads) regarding:
 - Exact number of ANC visits, PNC visits, and IFA tablets needed
 - Key HTSP messages, particularly birth spacing and pregnancies after miscarriages/abortions;
- Encourage male adult household members to contribute to child healthcare decisions.

Additionally, the disaggregated analyses show that the following prioritization is needed:

- Increasing access to antenatal care and promoting at least 4 antenatal care visits for pregnant mothers, in mountain, hill, and particularly in *terai* areas;
- Improving access to IFA tablets during pregnancy and decreasing the occurrence of stock-outs in clinics and pharmacies;
- Participation in attending GMP monthly for children 0-2 years particularly in the mountain and hill areas;
- Encouraging HMG attendance among the “other” caste/ethnicity groups.

Agriculture/Enhanced Homestead Food Production

Progress on agriculture-related indicators was found between 2017 and 2019 in EHFP intervention areas including increases in the prevalence of household food security, but for many key indicators the absolute values remain low. The majority of household heads owned some kind of agricultural land, and there was an increase in households having a kitchen/EHFP garden; and overall, an increase in those gardens meeting minimum criteria established *a priori*. There was an increase in prevalence of households cultivating dark green leafy vegetables, but no change in other nutrient-dense vegetables. Nearly two of three of these gardens did not have crop plotting and the production only provides food for the family for half of the year.

Overall, there was no significant change among those selling surplus vegetables, and prevalence of egg sales declined slightly among those that produced them. Additionally, there was a significant decline in reported availability of EHFP beneficiary groups – 2019 presented less reported availability than the initial level in 2017.

Participation in decision-making increased significantly for male household heads and mothers for horticulture and for poultry and milk/meat processing alike. However, both saw significant declines in having input into decision-making for horticulture and poultry rearing/management.

Areas for improvement and focus, especially during home visits and community events, include:

- Increased awareness and participation in HFP groups;
- Increased knowledge on the benefits of homestead gardening to improve diet, particularly among mothers;
- Awareness of the importance of vaccinating poultry regularly (New Castle specifically) and greater adoption of actions to prevent and treat chicken illness;

- Work with VMFs and EHFP households to remind them of the importance of interactions with new 1000-day households;
- Continued increases in diversity of vegetables produced and egg production;
- Increased production of surplus and selling it to generate income.

Finally, all adult household members should be encouraged to increase input into agriculture-related decisions.

SBCC

The time it takes to roll-out and scale-up implementation can be seen in the SBCC indicator progress between 2017 and 2019. Exposure to *Suaahara* among mothers and household heads has increased tremendously. Nearly all households have now heard of SII, but gains have also been made in the prevalence of households having met a SII FLW in the last 6 months; ever being visited at home by a SII FLW; and ever having met an FS outside of a home visit or HMG meeting. Similarly, there was an overall increase in participation in non-group SII activities, with almost half of women in 2019 up from less than one in five in 2017. To date, however, participation by men remains limited.

Reported exposure to FCHVs among mothers and having received a home visit by an FCHV in the previous 6 months among all household adults increased significantly. Similarly, more mothers reported that an FCHV-led group exists in the community, but the prevalence of participation dropped significantly.

Regarding SII mass media efforts, awareness of *Bhanchhin Aama* saw significant increases. Nearly half of all household heads and over two thirds of mothers have heard of the program. Interestingly, the prevalence of those that ever listened to the program among those that have ever heard of it decreased significantly for all household adults. Nearly all households now own mobile phones and more than two out of three households own a smart phone.

Areas for improvement and focus, especially during home visits and community events, include:

- Household member participation in HMGs should be encouraged by SII, particularly as an opportunity to meet with other mothers and learn about health and nutrition beyond SII;
- FS/CNV focus on men and other family members during home visits and encourage their participation in SII events (e.g. key life events, triggering sessions, and day celebrations);
- Need continued focus in all platforms to increase awareness of BA, but also to motivate listenership on a regular basis;
- Promotion of other means of listening to *Bhanchhin Aama*, including using a mobile phone or watching the recordings on Facebook at one's own convenience, during HMG meetings, etc.;
- Continued enrollment of mobile numbers (not just mothers) to increase the reach of the SMS campaign.

GESI

In addition to the GESI-focused factors for each of the thematic areas integrated above, some additional GESI insights were found in the three rounds of surveys, particularly by conducting disaggregated analysis by equity quintile (socio-economic inequity), caste/ethnicity (social inequity), and urban/rural and agro-ecological zone (geographic inequity), and to understand how sub-groups have progressed on key indicators such as SII's ten key behaviors (ORS/zinc given to sick children is a key behavior, but was omitted in this report due to small sample sizes). While the absolute value varies by sub-group and specific behavior, the prevalence improved for several

sub-groups for the following 10 key SII behaviors between 2017 and 2019. The following describes specifically where increases/decreases were non-significant for the two-year period, and thus indicates on which populations the *Suaahara II* teams could focus their efforts.

1. Maternal diet
 - a. Minimum dietary diversity: equity quintile (highest increased from 44% to 47%)
 - b. Egg consumption: equity quintile (second highest increased from 13% to 17%); caste/ethnicity (other increased from 9% to 14%)
 - c. Meat consumption: equity quintile (middle increased from 31% to 36%); agro-ecological zone (*terai* stayed at 31%);
2. ANC visits (at least 4): equity quintile (highest increased 86% to 91%); caste/ethnicity (other increased from 81% to 83%);
3. 180 IFA during pregnancy: only 3 significant increases (second lowest equity quintile, mountain and *terai* agro-ecological zones); all others remained the same or changed non-significantly;
4. Modern method of family planning: equity quintile (range of change between 0%-6%); and caste/ethnicity (Brahmin/Chhetri dropped from 29% to 25%, socially excluded remained at 34%); urban/rural (urban remained at 30%, rural at 31% to 32%); agro-ecological zone (all moved by 2% or less);
5. Child diet
 - a. Minimum dietary diversity: equity quintile (highest remained at 60%), caste (other increased from 43% to 47%), agro-ecological zone (*terai* increased from 42% to 46%)
 - b. Egg consumption: equity quintile (highest increased from 18% to 25%); caste/ethnicity (others increased from 17% to 21%)
 - c. Meat consumption: equity quintile (only middle and second highest significant, others increased by 2%-6%); caste/ethnicity (Brahmin/Chhetri and other only 1%-2% increase); urban/rural (urban 18% to 21%); agro-ecological zone (*terai* 1% increase)
 - d. Iron rich foods: equity quintile (lowest and two highest increased then decreased, net increase of 3-6%); agro-ecological zone (*terai* increased 87% to 90%); mother's age (only 25-29 saw significant change, other groups 3%-6% increase);
6. Sick child feeding: no significant change;
7. Exclusive breastfeeding: equity quintile (middle increased from 75% to 84%, and highest increased from 56% to 74%);
8. Drinking water treatment: equity quintile (lowest, middle, and highest saw only 1-2% change); caste/ethnicity (others remained the same at 15%); agro-ecological zone (mountain increased 10% to 13%, *terai* increased 9% to 13%);
9. Handwashing at six critical times: all non-significant change other than urban/rural (urban increased 6% to 11%) and agro-ecological zone (mountain increased 7% to 19%).

11. Annexes

Annex 1 Field Staff Selected for Data Collection

	Number of field staff collected (N=72) Mean (SD)/%
Field work experience	
Years of experience (mean, SD)	5.1 (3.6)
<i>Suaahara II</i> (2018)	12.5%
<i>Suaahara II</i> (2017 and 2018)	44.4%
Others (AFSP, Palika, NDHS, KAP/Kawach)	38.9%
None	4.2%
Education	
MA	23.6%
BA	52.8%
Others (IA, PCL, CMA, ANM)	23.6%
Gender	
Male	29.2%
Female	70.8%

SN	Origin District	Language spoken other than Nepali	Education	Years of field work experience	Field work experience
1	Dhanusha	Maithali, Awadhi	MA	13	<i>Suaahara II</i> (2017 & 2018)
2	Jhapa		MA	9	<i>Suaahara II</i> (2017 & 2018)
3	Jhapa	Hindi, Awadhi, Maithali	IA	15	<i>Suaahara II</i> (2018)
4	Morang		B. Ed.	15	NDHS, Poshan, Palika
5	Gorkha		B.Ed	7	<i>Suaahara II</i> (2017 & 2018)
6	Dang	Tharu, Hindi	IA	16	<i>Suaahara II</i> (2017 & 2018)
7	Sindhuli		BA	7	<i>Suaahara II</i> (2017 & 2018)
8	Rautahat		BA	7	<i>Suaahara II</i> (2017 & 2018)
9	Rautahat		B.Ed.	16	<i>Suaahara II</i> (2017 & 2018)
10	Lamjung		BBS	7	<i>Suaahara II</i> (2017 & 2018)
11	Sindhupalchowk		BBS	7	<i>Suaahara II</i> (2017 & 2018)
12	Okhaldhunga		BA	9	<i>Suaahara II</i> (2017 & 2018)
13	Okhaldhunga		IA	11	<i>Suaahara II</i> (2017 & 2018)
14	Lamjung		BA	4	<i>Suaahara II</i> (2017 & 2018)
15	Baitadi	Hindi, Doteli	MA	3	<i>Suaahara II</i> (2017 & 2018)
16	Sindhuli		B.Ed.	8	<i>Suaahara II</i> (2017 & 2018)
17	Baitadi		M.Ed.	5	<i>Suaahara II</i> (2017 & 2018)
18	Nuwakot		B.Ed.	4	NDHS, FFP, Hariyo Ban
19	Kathmandu	Newari/Hindi	IA	7	<i>Suaahara II</i> (2018)
20	Nuwakot		BA	4	AFSP/Palika
21	Jhapa		BA	6	NDHS/ Others
22	Nuwakot		B.Ed.	5	<i>Suaahara II</i> (2017 & 2018)
23	Lalitpur	Hindi	M.Ed.	6	<i>Suaahara II</i> (2017 & 2018)
24	Bardiya	Tharu, Hindi	BA	4	<i>Suaahara II</i> (2017 & 2018)
25	Bhaktapur	Hindi	IA	6	<i>Suaahara II</i> (2017 & 2018)
26	Dhading		BPH	4	<i>Suaahara II</i> (2017 & 2018)
27	Dolakha	Hindi	B.Ed.	5	<i>Suaahara II</i> (2017 & 2018)
28	Kathmandu		IA	4	<i>Suaahara II</i> (2017 & 2018)
29	Banke	Awadhi, Hindi	BA	3	<i>Suaahara II</i> (2017 & 2018)

30	Kathmandu		IA	3	<i>Suaahara II</i> (2017 & 2018)
31	Dang	Tharu	B.Ed.	3	<i>Suaahara II</i> (2017 & 2018)
32	Kathmandu		BSW	3	<i>Suaahara II</i> (2017 & 2018)
33	Dhanusha	Bhojpuri	IA	10	<i>Suaahara II</i> (2017 & 2018)
34	Bardiya	Tharu, Hindi	M.Ed.	4	<i>Suaahara II</i> (2017 & 2018)
35	Gorkha		MA	4	<i>Suaahara II</i> (2017 & 2018)
36	Sindhupalchowk		BA	3	<i>Suaahara II</i> (2017 & 2018)
37	Nuwakot		B.Ed.	5	<i>Suaahara II</i> (2017 & 2018)
38	Dang	Tharu	BA	5	<i>Suaahara II</i> (2017 & 2018)
39	Kavre		M.Ed.	5	<i>Suaahara II</i> (2018)
40	Dang	Tharu	IA	4	<i>Suaahara II</i> (2018)
41	Kanchanpur	Doteli, Hindi	MA	5	<i>Suaahara II</i> (2018)
42	Syangja	Hindi	B.Sc.	3	<i>Suaahara II</i> (2018)
43	Kailali	Tharu/Hindi	B. Ed.	5	<i>Suaahara II</i> (2018)
44	Palpa	Tharu	BA	5	<i>Suaahara II</i> (2018)
45	Morang	Hindi, Awadhi, Maithali	MA	4	<i>Suaahara II</i> (2018)
46	Gulmi		MA	5	Palika
47	Jhapa		BA	3	Palika
48	Kailali	Tharu, Awadhi	IA	2	Palika
49	Kathmandu		BA	3	Palika
50	Kailali	Bhojpuri, Awadhi	BA	6	Palika
51	Jhapa		M.Ed.	5	Others
52	Kathmandu		M.Ed.	1	Others
53	Kathmandu		BA	1	Others
54	Bhaktapur		BA	2	Others
55	Lalitpur		BA	5	KAP/Kawach
56	Banke	Hindi	MA		
57	Horkha	Hindi	IA	5	KAP/Kawach
58	Gorkha		IA	2	Others
59	Taplejung		BA	1	Others
60	Kavre		PCL		
61	Kathmandu		BA	2	Others
62	Jajarkot	Hindi	ANM	3	Others
63	Bhaktapur		BPH	2	Others
64	Kathmandu		ANM	3	Others
65	Kavre		BPH	2	Others
66	Morang	Maithali	IA	2	Kawach
67	Bhaktapur		MA	4	Others
68	Morang	Tharu, Hindi, Maithali	BA	1	Education
69	Ilam	Hindi	MA		
70	Siraha	Maithali, Bhojpuri	CMA	1	Palika
71	Kailali	Tharu, Maithali, Bhojpuri	BA	2	Others
72	Khotang	Hindi	M.Ed.	1	Others

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