Reproductive Health and Child Survival Baseline Survey (RHCSBS) USAID Intervention Area

Key Findings

Madagascar 2003-2004

This report presents the key findings of the Reproductive Health and Child Survival Baseline Survey (RHCSBS) in the USAID intervention area in Madagascar. The survey was conducted from November 2003 to March 2004 by the Department of Demography and Social Statistics (Direction de la Démographie et des Statistiques Sociales—DDSS) at the National Statistics Institute (Institut National de la Statistique—INSTAT. Funding was provided by the U.S. Agency for International Development (USAID) and technical assistance was provided by ORC Macro.

The survey was carried out simultaneously with the third Madagascar Demographic and Health Survey (MDHS-III). The survey's objectives were to collect, analyze, and disseminate demographic and health data in the USAID intervention area in Madagascar, with special emphasis on fertility, family planning, child mortality, maternal and child health, breastfeeding, and nutrition of women and children.

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About the RHCSBS

The Reproductive Health and Child Survival Baseline Survey (RHCSBS) is part of a series of USAID activities carried out in Madagascar from 1997 to 2004, through John Snow International (JSI)/Linkages, in the areas of poverty, health, development, and children's rights. The survey was carried out in the USAID intervention area, consisting of the two provinces of Antananarivo and Fianarantsoa. It was conducted by the Department of Demography and Social Statistics and the National Statistics Institute (INSTAT), with assistance from ORC Macro and funding from USAID. The survey objective was to provide detailed information for the intervention area on fertility, family planning, maternal and child health, the nutritional status of women and children, and infant mortality.

Fieldwork was carried out from November 2003 to March 2004, at the same time as the third Madagascar Demographic and Health Survey (MDHS-III). In all, 4,980 households, 5,193 women age 15-49, and 1,642 men age 15-59 were successfully interviewed. Statistically significant estimates can be calculated from the survey data for each province in the intervention area and for urban and rural areas.

Characteristics of the surveyed population in the intervention area

Like the overall Malagasy population, the population in the intervention area is disproportionately young. More than three-fourths (78%) live in rural areas. This is almost identical to the national level. Almost all women (96%) and men (97%) can read, compared with 71 percent and 75 percent, respectively, for the overall population.

Education levels are higher in the intervention area than for the national population: only 8 percent of women and 6 percent of men have no schooling. Nationally, these proportions are 22 percent and 16 percent, respectively. Eight percent of women and 9 percent of men finished high school, compared with 5 percent and 7 percent nationally. The proportions of women and men with no schooling are higher in rural areas than in urban areas (for women, 9% in rural areas and 3% in urban areas, and for men, 8% in rural areas and 1% in urban areas). Education levels are higher in Antananarivo province than in Fianarantsoa, where 10 percent of women and 9 percent of men have no schooling, compared with 6 percent and 5 percent respectively in Antananarivo.

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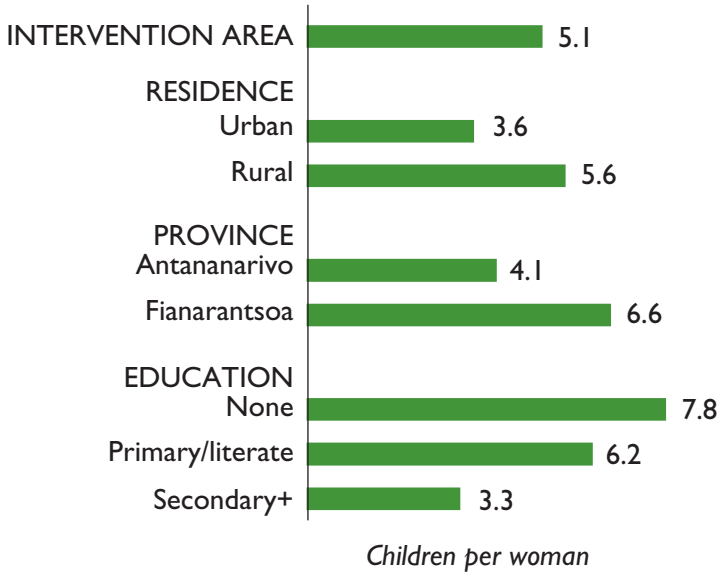
FERTILITY

Women's fertility remains high: currently, women give birth to an average of 5.1 children. This is comparable to the nationwide estimate from the MDHS-III (5.2). This fertility level varies greatly according to urban/rural residence (5.6 in rural areas compared with 3.6 in urban areas), province (6.6 for Fianarantsoa province compared with 4.1 in Antananarivo province), and women's education (women with at least a high-school education have 4.5 fewer children than those with no schooling).

Average number of children per woman
by province and place of residence, according to level of education



Teenage fertility

Because early pregnancy is associated with health risks, it is especially important to study fertility levels in the adolescent population. The survey information provides estimates for the proportion of women 15-19 who have begun childbearing.

At the time of the survey, 19 percent of women age 15-19 had begun childbearing; 18 percent had had a child and about 1 percent were pregnant with their first child. These percentages are much lower than the national levels observed in the MDHS-III.

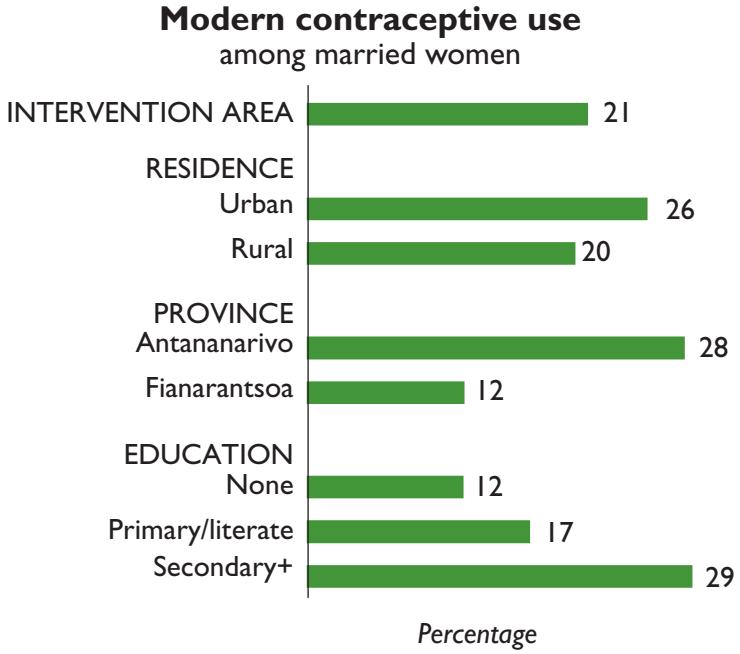
Early childbearing is higher in rural areas (21% compared with 13% in urban areas), in Fianarantsoa province (26%, compared with 13% in Antananarivo province) and among women with no schooling (29%, compared with 9% among women with a high-school education).

Family Planning

At the time of the survey, about one-third of married women (34%) used a method of family planning: 21% used a modern method and 13% used a traditional method. Injections are the most frequently used method (10%). Contraceptive prevalence is higher in the intervention area than in the country as a whole (34% and 27% for any method, and 21% and 18% for a modern method).

Modern contraceptive prevalence is more than twice as high in Antananarivo as in Fianarantsoa.

Women in Antananarivo province are more than twice as likely to use modern contraceptive methods than women in Fianarantsoa province (28% and 12%, respectively). Use of modern methods is more frequent in urban areas than in rural areas (26%, compared with 20%). Modern method usage rises with education levels: contraceptive prevalence varies from 12% among women with no schooling to 29% among women with at least a high-school education.



Information source

The great majority of non-users of family planning (91%) say they have never been visited by a field agent or discussed family planning. This is very similar to the national level (93%).

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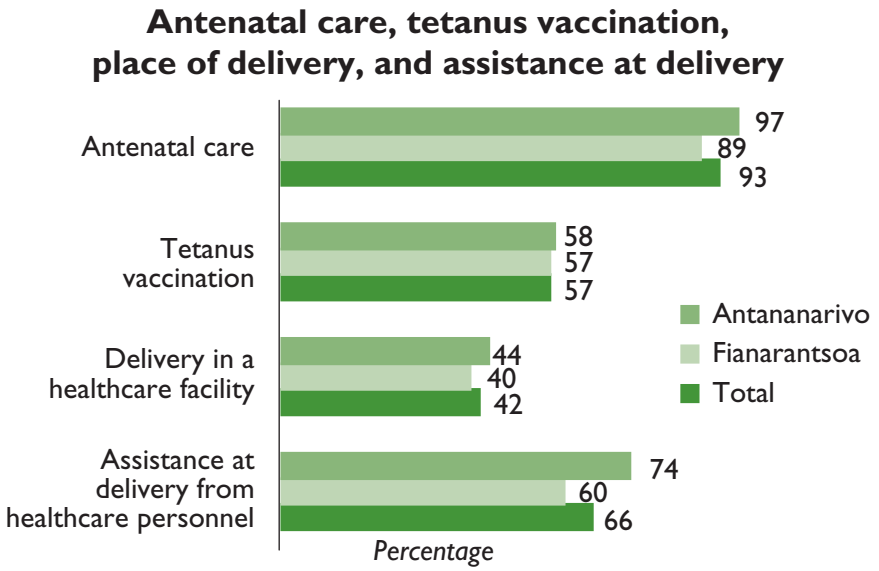
MATERNAL HEALTH

When women receive healthcare before, during and after pregnancy, and assistance at delivery from a healthcare professional, the risks of maternal mortality and morbidity are greatly decreased. Therefore, the survey collected data on antenatal and postnatal care and on delivery conditions from women who had given birth in the five years preceding the survey.

Antenatal care and tetanus shots

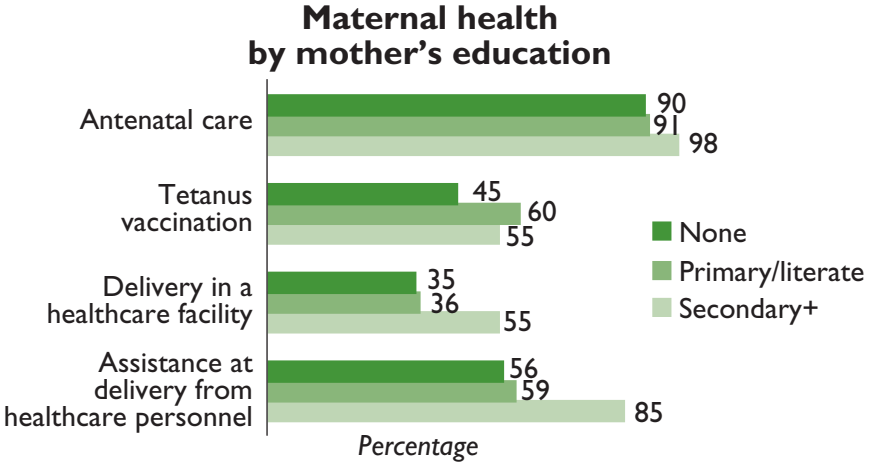
For almost all births in the five years preceding the study, women received antenatal care from a healthcare professional (93%, compared with 80% for Madagascar as a whole). Nurses and midwives provided almost three-fourths of these consultations (72%); doctors provided antenatal care for 22 percent of births. In addition, for more than half of births (57%), the mothers were at least partially vaccinated against neonatal tetanus.



The frequency of antenatal care was highest in Antananarivo province: 97 percent of women made antenatal visits, compared with 89 percent in Fianarantsoa province. However, tetanus vaccination levels, which were slightly higher than the national levels, were almost identical in the two provinces (58% and 57%, respectively).

Women with more education are more likely to receive antenatal care and tetanus vaccinations: women with no schooling were about three times less likely to make an antenatal visit than women with a high-school education. Also, 55 percent of women with a high-school education received at least one dose of antitetanus vaccine, compared with only 45 percent of women with no schooling.

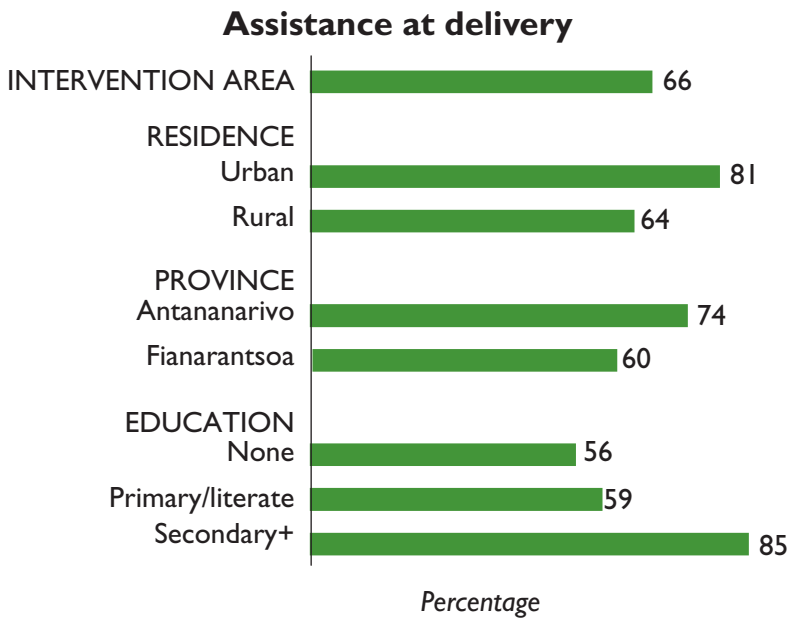
Tetanus coverage is slightly higher in urban than in rural areas (60% and 56%, respectively); however, there is practically no difference in the frequency of antenatal care (95% in urban areas and 93% in rural areas).



Delivery assistance and place of delivery

Less than half of births took place in a healthcare facility (42%). This is, however, higher than the national level (32%). Two-thirds of births were assisted by a healthcare professional (66%). Nationally, only 51 percent of births were assisted by qualified personnel.

Delivery conditions are better in Antananarivo province than in Fianarantsoa province. In Antananarivo, 44 percent of births took place in a public or private healthcare facility (compared with 40 percent in Fianarantsoa province), and three-fourths of women had qualified assistance at delivery, compared with only 60 percent in Fianarantsoa province.



Women in rural areas and those with no schooling are least likely to have assistance from healthcare personnel at delivery.

Postnatal care

Among women who did not deliver in a healthcare facility, 40 percent received postnatal care in the two days following delivery. This proportion is higher than that observed at the national level (32%).

Women in urban areas (45%) and those with a high-school education (45%) received postnatal care more often than those living in rural areas (39%) and those with no schooling (37%).

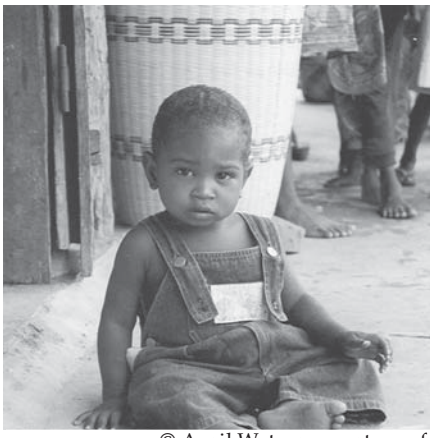
CHILD HEALTH

Vaccination coverage

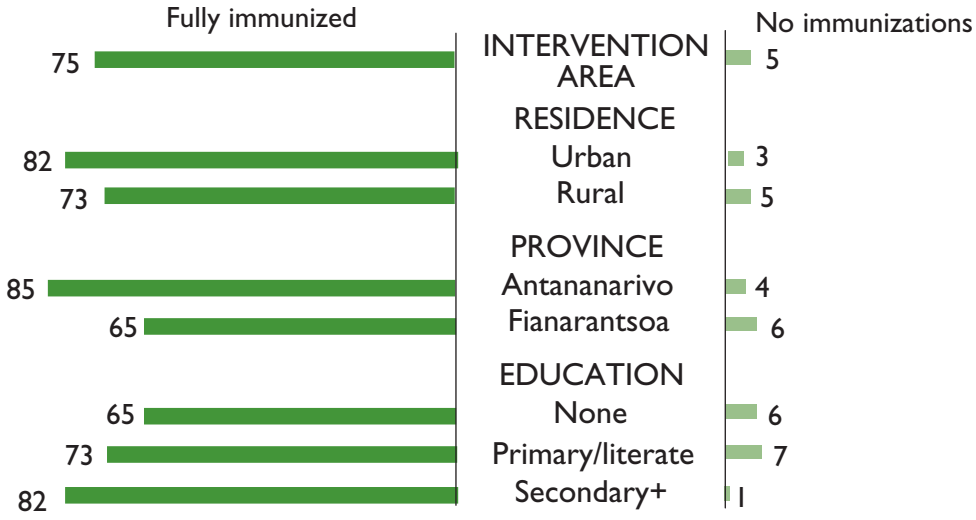
The RHCSBS collected data on immunization coverage for all children born in the five years preceding the study, including vaccinations against the target diseases in the Expanded Program on Immunization (EPI).

According to vaccination cards or mothers' declarations, about three-fourths of children age 12-23 months were fully immunized against the target EPI diseases. This is much higher than the national level (53%).

In spite of this high level of vaccination coverage, there are some socio-economic disparities. More girls than boys have all their vaccinations (78% and 71%). More children in urban areas are completely vaccinated (82%) than in rural areas (73%). Children in Fianarantsoa province are markedly less likely than those in Antananarivo province to have received all the EPI vaccinations (65% and 85%, respectively). In particular, only 68 percent were immunized against measles, compared with 86 percent in Antananarivo province. Vaccination levels are much lower among children whose mother has no schooling (65%) than among children whose mother has a primary-school education (73%) or a high-school education (82%).



EPI immunizations among children 12-23 months



Percentage of children who have received all EPI immunizations/no immunizations

Childhood illnesses and treatment

In developing countries, acute respiratory infections (ARI) and diarrhea are responsible for many childhood deaths. Mothers of children under 5 were asked if, in the two weeks before the survey, their child had had a cough, and if that cough had been accompanied by short, rapid breaths. They were also asked if their child had had one or more bouts of diarrhea in the two weeks before the survey. They were also asked about the treatment that the sick children received.

More than one in ten children (11%) had ARI symptoms in the two weeks before the survey, and 13 percent had a fever. These symptoms were particularly common among children 6-11 months (17% and 21%, respectively). ARI prevalence is slightly higher among children in rural areas than in urban areas (12% and 9%, respectively). Children in Fianarantsoa province had ARI symptoms slightly more often than children in Antananarivo (12% and 10%, respectively).

Among children with ARI symptoms or fever, less than half (46%) were taken to a healthcare facility for treatment. Among children whose mother has at least a high-school education, and in urban areas, more than half (52% and 57%, respectively) received treatment in a healthcare facility or by a healthcare provider. However, among children whose mother has no schooling, in rural areas, and in Antananarivo province, this proportion is lower (44%, 43% and 44%, respectively).

Almost one in ten children under 5 (9%) had diarrhea in the two weeks before the survey. Children age 6-23 months were most likely to have diarrhea (15%). The prevalence of diarrhea is higher in Fianarantsoa province than in Antananarivo province (11% and 7%, respectively). Two-thirds of children (66%) with diarrhea received more liquid than usual. However, in 10 percent of cases, children received less liquid than they normally would. Only 6 percent received more food than they are used to. In 57 percent of cases, they were even given less food than usual.

More than half of children with diarrhea received less food than usual.

Breastfeeding and the Nutritional Status of Women and Children

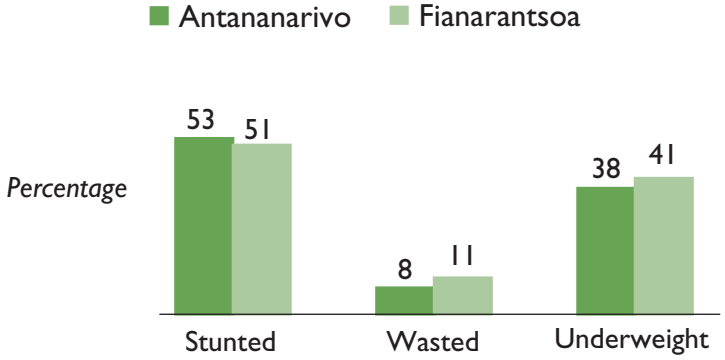
Feeding practices and children's nutritional status

In developing countries, malnutrition can account for more than half of infant mortality. From the first stages of childhood development, good nutritional practices are essential for child survival and healthy growth. Breastfeeding is one of the most effective nutritional practices to ensure children's health. The survey collected data on breastfeeding and children's feeding practices. In addition, in the household survey, children under 5 were weighed and measured.

Among children age 12-23 months, 71 percent are too short for their age, more than 10 percent are too thin for their height, and 55 percent are underweight.

Almost all children are breastfed (98%), regardless of sociodemographic characteristics. On average, children are breastfed for 23.5 months, more than two months more than the national average. However, only 71 percent of children were breastfed in the hour immediately after birth.

Children's nutritional status



Breastfeeding in the hour after delivery is most frequent in urban areas, in Antananarivo province, and among educated women. Assistance at birth and place of delivery have very little influence on early breastfeeding; 74 percent of children born in a healthcare facility were breastfeed in the hour after birth, versus 68 percent for those whose mother gave birth at home.

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UNICEF and WHO recommend that children should be exclusively breastfed for the first six months of life. At six months of age, children need complementary foods for healthy growth. A high percentage of children under six months are exclusively breastfed (85%). This is higher than the national level (67%). Between 6 and 9 months, more than four in five children (87%) receive complementary foods. This is more frequent than in the country as a whole, where only 78 percent of children age 6-9 months receive complementary foods.

Analyzing the height and weight data collected in the household survey allows children's nutritional status to be assessed.

More than half of children under 3 in the intervention area are stunted (52%), or too short for their age. This is higher than the national level (45%). Stunting is particularly common among children age 12-23 months (71%) and children in rural areas (53%).

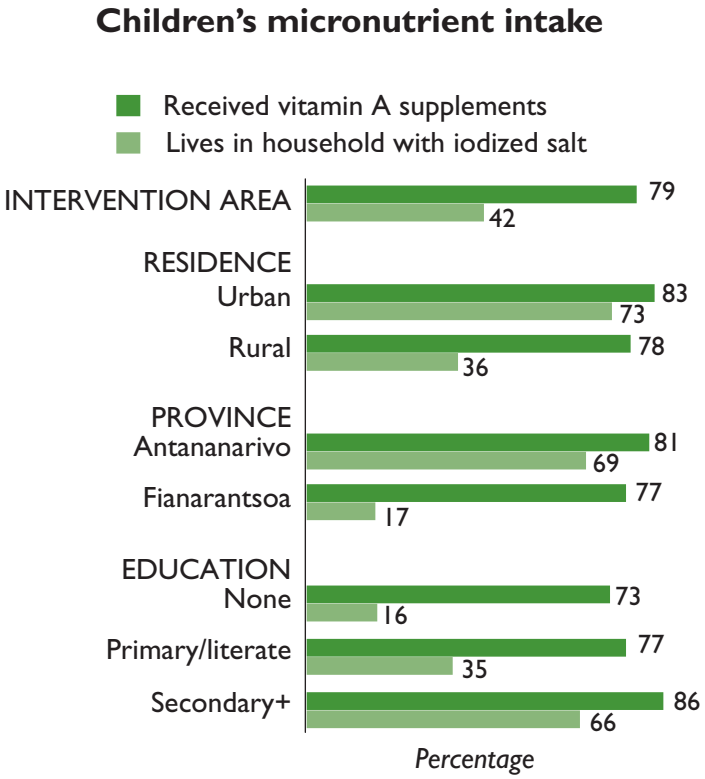
One in ten children (10%) are wasted, or too thin for their height. This is lower than the national level (14%). Wasting is slightly more common in Fianarantsoa province than in Antananarivo (11% and 8%).

A high percentage of children are underweight for their age (39%). This is slightly lower than the national level (42%). Children age 12-23 months are most likely to be underweight (55%).

Children's micronutrient intake

Among children under 3 who are the youngest in their family, more than three-fourths received vitamin A supplements. This proportion is higher in Antananarivo province than in Fianarantsoa province (81% and 77%). Children whose mother has at least a high-school education were more likely to receive vitamin A supplements than those whose mother has no schooling (86% and 73%).

Less than half of children live in households with iodized salt (42%). This proportion is lowest in rural areas (36%), in Fianarantsoa province (17%), and in households where the mother has no schooling (16%).



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Women's nutritional status

About one in five women (18%) is underweight, which indicates chronic malnutrition. This is almost the same as the national level (19%). Chronic malnutrition is more common among women age 15-19 (22%) and women age 40-44 (21%). Women in rural areas are more likely to be underweight than women in urban areas (19% and 15%). Women in Fianarantsoa province are more likely to be underweight than those in Antananarivo (22% and 15%).

Education level seems to influence women's levels of malnutrition, which vary from 26 percent among women with no schooling to 13 percent among women with at least a high-school education. On the other hand, slightly less than one in ten women (8%) is overweight. This level is higher among women age 40-49, those living in urban areas, among women with high levels of education, and those living in Antananarivo province.

More than one in five women in Fianarantsoa province suffers from chronic malnutrition.

Women's micronutrient intake

Three in ten women (29%) received vitamin A supplements within two months of giving birth. Women in Antananarivo province were more likely to receive vitamin A supplements than women in Fianarantsoa province (32% and 26%). More than half of women received no iron supplements during their last pregnancy. This proportion is higher—about 61 percent—in Fianarantsoa province, in rural areas, and among women with no schooling.

Just under half of women live in households with iodized salt (47%). Women in Fianarantsoa and women with no schooling are least likely to have iodized salt in their households (17%). By comparison, 74 percent of women in Antananarivo province have iodized salt.

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Child Mortality

In the five years preceding the survey, for every 1,000 children born, 58 died before their first birthday (infant mortality). For every 1,000 children that survived to their first birthday, 26 died before the age of 5 years (child mortality). Overall, for every 1,000 live births, 83 died before their fifth birthday (under-five mortality), or almost one in twelve children.

One in twelve children dies before their fifth birthday.

Mortality levels are higher in Fianarantsoa province than in Antananarivo province. For example, the infant mortality rate is 43 deaths per 1,000 live births in Antananarivo province, compared with 76 in Fianarantsoa province. Under-five mortality rates are 71 and 113, respectively, per 1,000 live births. Under-five mortality is 42 percent higher in rural areas (96‰) than in urban areas (68‰).

Children whose mother has no schooling have higher mortality rates than those whose mother has some schooling, particularly those whose mother has at least a high-school education. Infant mortality rates vary from 98 deaths per 1,000 births among children whose mother has no schooling to 37 deaths per 1,000 births among those whose mother has at least a high-school education. For under-five mortality, these rates are 154 deaths and 54 deaths, respectively, per 1,000 births.

KEY INDICATORS

	Intervention area	Antananarivo	Fianarantsoa
FERTILITY AND PROXIMATE DETERMINANTS OF FERTILITY			
Total fertility rate (average number of children)[1]	5.1	4.1	6.6
Women age 15-19 who are mothers or now pregnant (%)	18.8	12.9	25.7
Women age 15-49 who are married or living with a partner (%)	61.3	61.5	61.1
Median duration of breastfeeding (months)[2]	23.5	23.7	19.6
Married women who know about: —at least one contraceptive method (%)	94.7	97.6	90.5
Married women who currently use: —a modern method (%)	21.1	27.7	11.5
—any method (%)	33.6	44.8	17.4
MATERNAL AND CHILD HEALTH			
Births for which the mother received:			
—antenatal care from a health professional (%)[3]	93.1	96.9	89.0
—at least one dose of tetanus toxoid vaccine for her last pregnancy (%)[4]	57.1	57.7	56.5
—assistance at delivery from a healthcare professional (%)[5]	66.4	73.6	59.6
Children 12-23 months fully immunized (%)[6]	74.6	85.2	65.3
Children under 5 who had, in the two weeks preceding the survey:			
—diarrhea (%)	9.0	6.7	11.3
—fever (%)	12.5	14.3	10.7
—cough accompanied by short, rapid breaths (%)	11.2	10.3	11.9
—who were taken to a healthcare facility (%)[7]	45.7	44.3	47.1
Nutritional status of women and children			
—Women with chronic malnutrition (%)[8]	17.7	15.0	21.6
—Children under 3 who are:			
—stunted (%)[9]	51.8	52.6	51.0
—wasted (%)[10]	9.6	8.1	10.9
—underweight (%)[11]	39.3	37.7	40.8
CHILDHOOD MORTALITY			
Deaths per 1,000 births[12]			
—Infant mortality (before first birthday)	58.4	42.8	76.4
—Under-five mortality	83.2	71.2	112.5

[1] Average number of children that a woman at the end of her fertile life would have, under current fertility conditions
[2] Median number of months that children under 5 at the time of the survey had been breastfed
[3] Births in the five years preceding the survey for which antenatal care was received from a doctor or nurse/midwife
[4] Births in the five years preceding the survey
[5] Percentage of births assisted by a healthcare professional
[6] BCG, measles, and 3 doses of DPT and polio (not including dose given at birth)
[7] For children under 5 having had ARI and/or fever symptoms
[8] Women with a BMI under 18.5
[9] Low height-for-age; indicates chronic malnutrition
[10] Low weight-for-height; indicates acute malnutrition
[11] Low weight-for-age
[12] Rate for the intervention area refers to the 5 years preceding the survey; provincial rates refer to the 10 years preceding the survey