

Nutrition Interventions

in Antenatal Care and Immediate Postnatal Care

FINDINGS FROM A BASELINE SURVEY IN BURKINA FASO

In Burkina Faso, maternal mortality remains high at 320 deaths per 100,000 live births, as does the neonatal mortality rate of 26 deaths per 1,000 live births. Anemia, a contributor to maternal mortality, is a significant public health problem affecting 50% of women of reproductive age. Among newborns, infants and young children, breastfeeding practices are suboptimal; 59.1% of mothers initiate breastfeeding within one hour of birth and 59% practice exclusive breastfeeding in the first six months (SMART survey, 2019).

In 2017, the government of Burkina Faso adopted the revised 2016 WHO antenatal care (ANC) guidelines that include a focus on maternal nutrition during ANC, and in 2019 the government developed the national directives for health workers to improve the effectiveness of ANC. Alive & Thrive is working in partnership with the Ministry of Health to strengthen the package of maternal nutrition interventions.

The International Food Policy Research Institute (IFPRI) is conducting implementation research to test the feasibility and effectiveness of strengthening a reinforced set of maternal nutrition and breastfeeding interventions during pregnancy and after birth. The interventions include: counseling on diet quality and increasing dietary diversity, daily iron-folic acid (IFA) supplementation and managing side-effects, weight gain, and breastfeeding; health system strengthening—training, coaching and supervision of health workers, encouraging strategic use of data, including for IFA stock assurance; and community activities that promote ANC and support maternal nutrition practices.

The study is designed as a two-arm cluster-randomized, non-masked trial, consisting of cross-sectional surveys at baseline and endline in Hauts-Bassins and Boucle du Mouhoun. This document presents the highlights of the findings from the baseline survey conducted in 2019 from 80 primary health care centers across the two regions.

FOCAL REGIONS IN BURKINA FASO

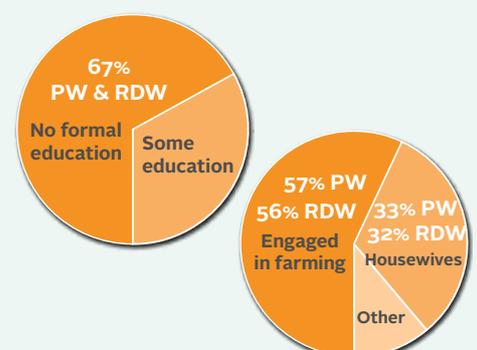


About the Survey and Sample

The survey consisted primarily of self-reported information from questionnaires conducted with pregnant women (PW), recently delivered women (RDW) who have children under 6 months of age, husbands of RDW, and service providers. It also included a multi-pass 24-hour recall for pregnant women, and anthropometric data from RDW. The sample included:



Pregnant and recently delivered women were on average 27 years old and married or living with a partner. Literacy was low; most had no schooling or formal education. Below are more statistics about the women surveyed.



Baseline Findings

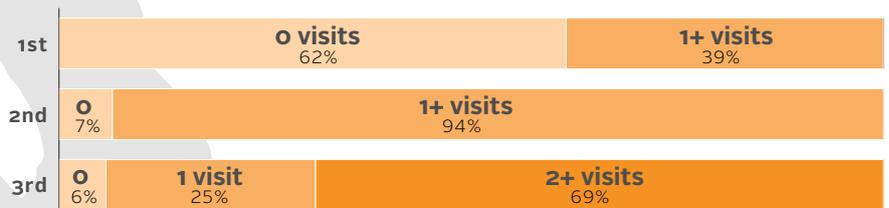
1. ANTENATAL CARE

Use of ANC

- Almost all recently delivered women went to the health facility for some ANC; two-thirds visited four or more times.
- All health facilities in the two regions offered ANC and most were equipped with supplies for providing ANC services and had sufficient staff.
- Most RDW did not start ANC until the second trimester.

67% of RDW attended 4 ANC contacts

ANC CONTACTS BY TRIMESTER

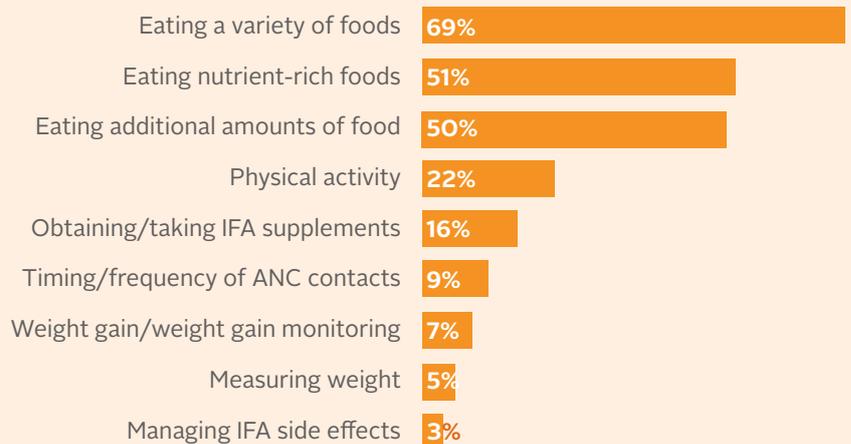


Nutrition counseling during ANC contacts

- Among recently delivered women, less than half received maternal nutrition counseling and only one-third received counseling on breastfeeding.
- Nutrition counseling focused on eating a variety of foods, including iron-rich foods, and consuming additional foods.

COUNSELING TOPICS

Percentage of RDW who received counseling on...

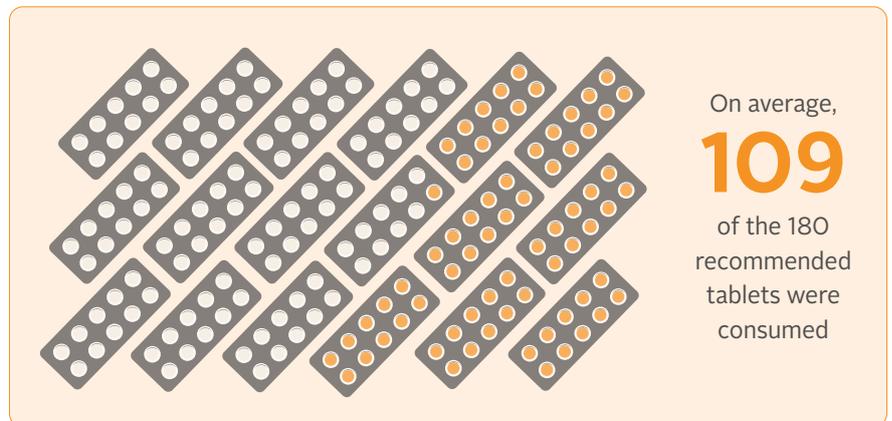


2. IRON-FOLIC ACID

IFA supplements

- Almost all recently delivered women reported that they consumed some IFA tablets while pregnant.
- The average number of tablets taken was 109 compared to the 180 tablets recommended.
- IFA is widely available at health facilities; only about 15% of health centers experienced shortages.
- Some of the women started taking IFA supplements too late while others stopped in the last trimester.
- Side effects from taking IFA supplements were an issue affecting one in four women.

99% of RDW consumed IFA tablets at some point in their pregnancy



1 in 4 experienced side effects after taking IFA

Messages received and knowledge about IFA supplements

- Most recently delivered women reported receiving information on the purpose of taking IFA tablets during pregnancy or being reminded to take IFA tablets during ANC.
- Most pregnant and recently delivered women knew the number of IFA tablets to take in a month.
- All nurse/midwives knew the recommendation to take 30 IFA per month, for six months and for an additional 1-2 months after birth.

MESSAGES ON IFA RECEIVED BY RDW DURING ANC

- 93%** Reminded to take 1 IFA tablet daily
- 68%** Received information on the purpose of taking IFA supplements
- 24%** Received information on how to manage side effects of IFA
 - 3%** Reminded to continue taking 1 IFA tablet/day for 42 days postpartum
 - 2%** Reminded to take 180 IFA tablets from 4th month of pregnancy until delivery

KNOWLEDGE RELATED TO IFA CONSUMPTION

	Pregnant women	Recently delivered
Aware of anemia	81%	79%
Aware that iron or IFA supplements prevent anemia	43%	40%
Knew the number of IFA tablets to take per month	82%	86%

3. MATERNAL DIET

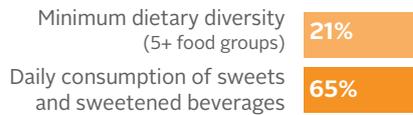
Diet diversity

- Dietary diversity was low among both pregnant and recently delivered women. Minimum diet diversity requires women to eat from 5 or more of the 10 food groups. On average, neither group achieved this target.
- Consumption of sweets and sweetened beverages was high, possibly displacing higher quality foods.

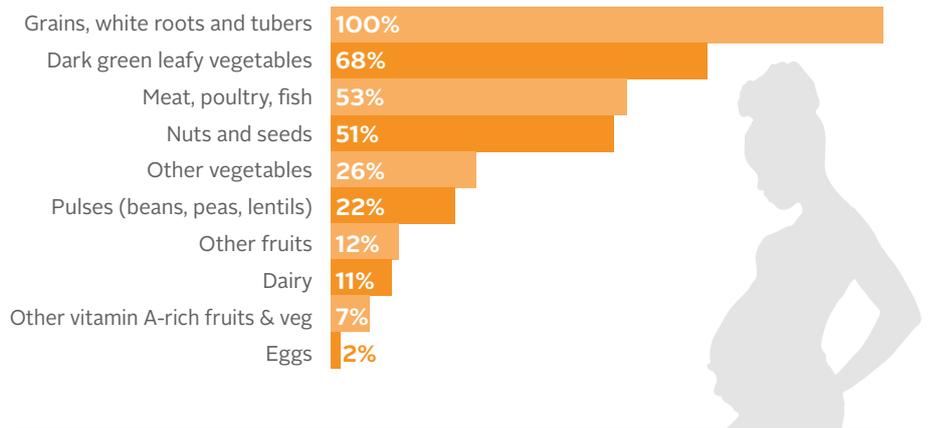
Types of foods consumed

- More than half of currently pregnant and recently delivered women consumed meat, poultry, or fish.
- About one fourth consumed pulses (beans, peas, lentils).
- Dairy and eggs were not commonly consumed.
- Consumption of fruits and vegetables was not common, except for dark green leafy vegetables.

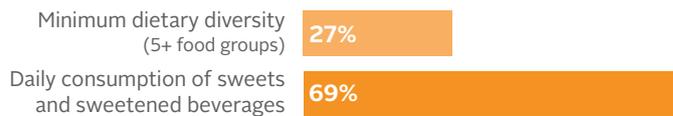
Pregnant women ate from **3.5** of 10 food groups



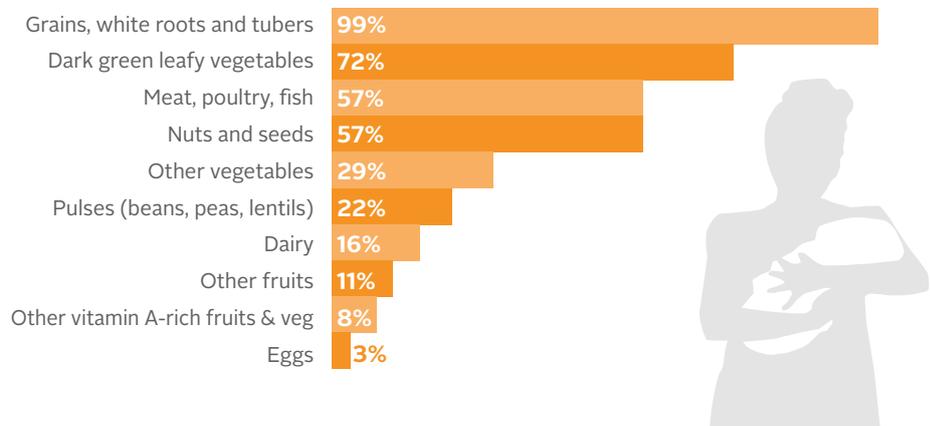
FOODS CONSUMED BY PREGNANT WOMEN



New mothers ate from **3.7** food groups



FOODS CONSUMED BY RECENTLY DELIVERED WOMEN



3. MATERNAL DIET (CONTINUED)

Knowledge of maternal dietary recommendations

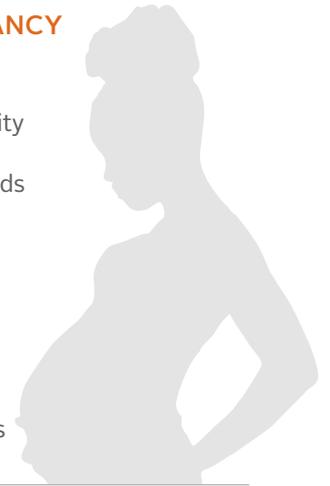
- Recently delivered women knew the importance of both dietary diversity and increasing the amount of food consumed during pregnancy.
- Many women knew the types of foods that make up a quality diverse diet.

Diet counseling received from nurses/midwives

- Despite the gaps in diet diversity and what women already knew, dietary counseling focused mostly on consuming meat and fish daily and dark green leafy vegetables.
- Messages on consuming foods, including milk/dairy, eggs, and other fruits and vegetables were less common.
- Consumption of unhealthy foods was not addressed.
- Very few women were told how many meals to eat per day.

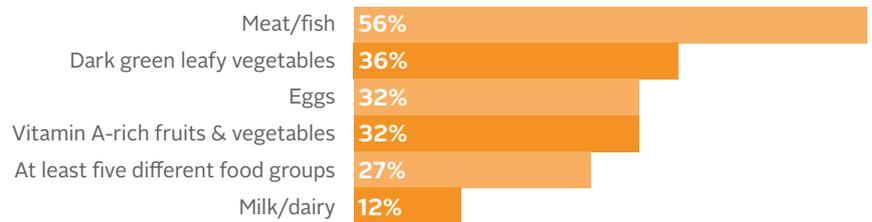
KNOWLEDGE OF DIET NEEDS DURING PREGNANCY AMONG RDW

- 96%** Knew the importance of increasing food quantity
- 92%** Knew the importance of eating a variety of foods
- 88%** Knew the importance of fruits and vegetables
- 83%** Could name an example of protein-rich foods
- 70%** Could name an example of iron-rich foods
- 27%** Could name an example of vitamin A-rich foods

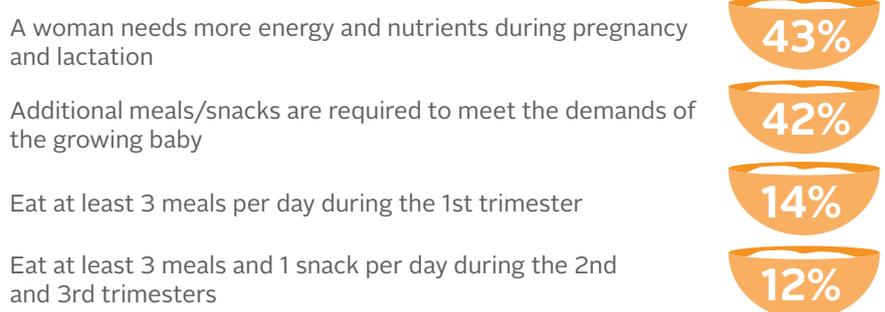


PROMOTION OF MATERNAL DIET BY NURSES AND MIDWIVES DURING ANC NUTRITION COUNSELING

Percentage of RDW who were advised to eat the following daily while pregnant:



Percentage of RDW who received the following messages during ANC:



4. PREGNANCY WEIGHT GAIN AND INFANT SIZE AT BIRTH

Infant size at birth

- Nearly all women delivered at a health facility with assistance from a nurse or midwife.
- C-section was very rare.
- Large or very large newborns were more common than small or very small newborns.

SIZE OF CHILD AT BIRTH*

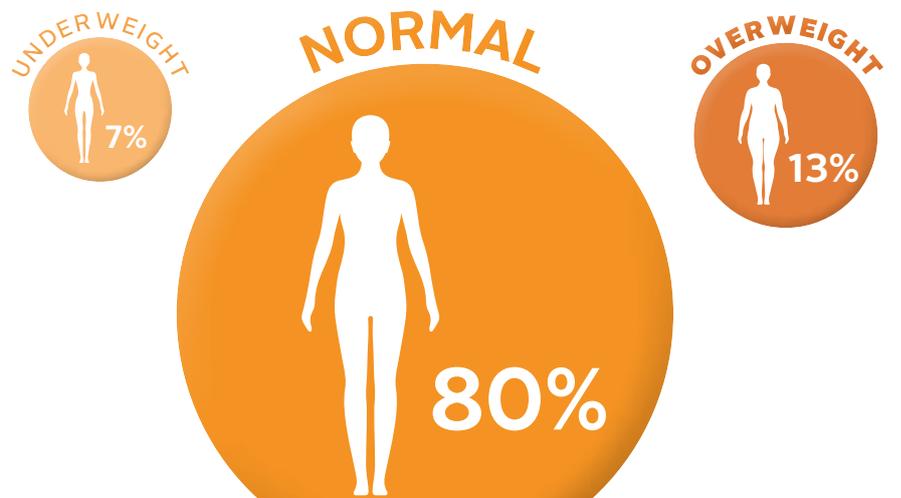


*Based on self-recall

BMI after pregnancy

- Most women had a normal BMI six months after delivery.
- Twice as many were overweight compared to underweight. Almost no women were stunted.

BMI OF WOMEN SIX MONTHS AFTER DELIVERY



Weighing during ANC

- Almost all RDW were weighed during their ANC contacts.
- Weighing started on average at 4.3 months of pregnancy and ended at the last ANC visit, rather than at delivery, making accurate estimates of gestational weight gain unlikely.

WEIGHING DURING PREGNANCY AMONG RDW*

98% of RDW reported being weighed during ANC

On average, women during pregnancy...

Were first weighed **4.3** months into the pregnancy (SD ±1.6)

Were weighed **4** times during pregnancy (SD ±1.4)

Gained a total of **5 kg** from the first weighing to the last (SD ±3)

*Based on self-recall among recently delivered women

4. PREGNANCY WEIGHT GAIN (CONTINUED)

Records of weight gain

- Existing records on weight gain were incomplete and not systematically maintained in health facility records.
- Most weights were recorded in Mother and Child Health cards and not in health facility registers.

Knowledge of recommended weight gain

- Not even half of nurse/midwives knew the recommendation to gain 10-12 kg during pregnancy.
- Almost no pregnant or recently delivered women knew the recommended weight to gain during pregnancy.
- Women thought 7 kg was the amount to gain.

Counseling on weight gain and physical activity

- Most RDW reported not receiving counseling or messages related to weight gain during ANC.
- Some women received messages on physical activity, most often related to rest and when not to carry out heavy work.

100% of RDW had their weight recorded during ANC*

Where weight was recorded:

95% Family Health Card

23% Health facility record/register

1% Other / Do not know



*Based on self-recall

KNOWLEDGE OF WEIGHT GAIN RECOMMENDATIONS AMONG NURSES/MIDWIVES AND WOMEN

	Nurses/ midwives	Pregnant women	Recently delivered
Knows that pregnant women should gain 10-12 kg	44%	7%	11%
Said pregnant women should gain this much during pregnancy:	8.3 kg (SD ±2.9)	7 kg (SD ±3.9)	7.2 kg (SD ±3.4)

COUNSELING DURING ANC ON WEIGHT GAIN AND PHYSICAL ACTIVITY AMONG RDW

87% Did not receive counseling on weight gain

43% Did not receive counseling on physical activity

33% Were advised to avoid heavy work and take 2 hours of rest after lunch during the 3rd trimester

30% Were advised to avoid heavy work and take 2 hours of rest after lunch during the 2nd trimester

4% Were advised to continue regular work during the 1st trimester

5. BREASTFEEDING AT BIRTH AND IN THE NEWBORN PERIOD

Early initiation of breastfeeding practices

- Less than half of recently delivered women initiated breastfeeding within 1 hour of birth.
- Half of the women were assisted with breastfeeding after delivery, mostly by nurses/midwives.

EARLY INITIATION OF BREASTFEEDING AMONG RECENTLY DELIVERED WOMEN

40% of women practiced early initiation of breastfeeding within 1 hour of birth

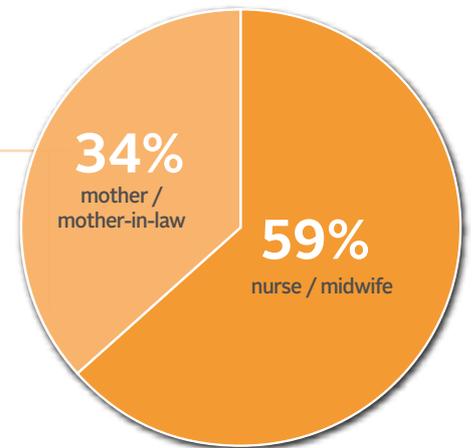


Prelacteal and other feeding other than breastmilk

- A few women put something in their baby's mouth—immediately after birth and within the first 3 days.
- Among those newborns that received something (other than colostrum) immediately after birth, more than half of the time the nurse/midwife assisted in doing so.

WHAT IS PUT IN BABY'S MOUTH AND BY WHOM?

12% of recently delivered women said their babies were given something other than colostrum immediately after birth by...



15% of recently delivered women gave something other than breastmilk within the first 3 days

Knowledge of Early Initiation of Breastfeeding

- Half the women did not know about putting the baby on the breast within 1 hour of birth.
- Not all knew about the benefits of colostrum.
- Virtually all nurses/midwives know the importance of EIBF and to feed colostrum.

KNOWLEDGE OF EIBF AMONG NURSES/MIDWIVES AND WOMEN

	Nurses / midwives	Recently delivered
Aware to put baby on breast within 1 hour after birth	98%	58%
Aware to feed colostrum	100%	87%
Know about benefits of colostrum	100%	70%



6. BREASTFEEDING YOUNG INFANTS

Exclusive breastfeeding practices

- Virtually all recently delivered women practiced breastfeeding although only two-thirds breastfed exclusively for the first 6 months.
- About one-third gave water in first 6 months.
- Almost none faced problems feeding their baby.

Virtually **ALL** women with infants below 6 months breastfed their babies



65%

Practiced exclusive breastfeeding



>30%

Gave water in the first 6 months



<5%

Faced problems feeding their baby

Knowledge of infant feeding

- Both recently delivered women and nurse/midwives knew recommended infant feeding practices.
- Women had better knowledge of some topics than nurse/midwives.

KNOWLEDGE OF BREASTFEEDING AMONG NURSES/MIDWIVES AND WOMEN

	Nurses / midwives	Recently delivered
Knew a mother can produce breastmilk even when she is not well fed	91%	5%
Knew to breastfeed whenever baby wants	83%	99%
Knew a sign of not getting enough breastmilk	50%	89%
Knew a way of assuring enough breastmilk	71%	66%
Knew not to give water to baby even when hot	1%	56%
Knew not to stop breastfeeding when pregnant	0%	50%
Knew not to stop breastfeeding when ill	1%	70%
Knew to start giving liquids at 6 months	93%	76%
Knew to start giving foods at 6 months	71%	46%

7. OTHER SUPPORT DURING PREGNANCY

Husbands' support

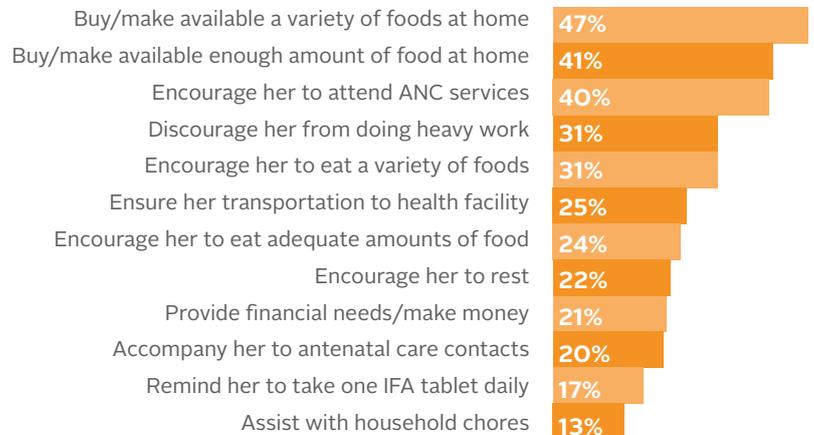
- Virtually all husbands supported their wives during pregnancy.
- Husbands' support included encouraging seeking ANC care and making a variety of foods available.
- Few husbands reported encouraging their wives to eat adequate amounts of food, reminding her to take IFA tablets, or assisting with household chores.

Husbands' knowledge

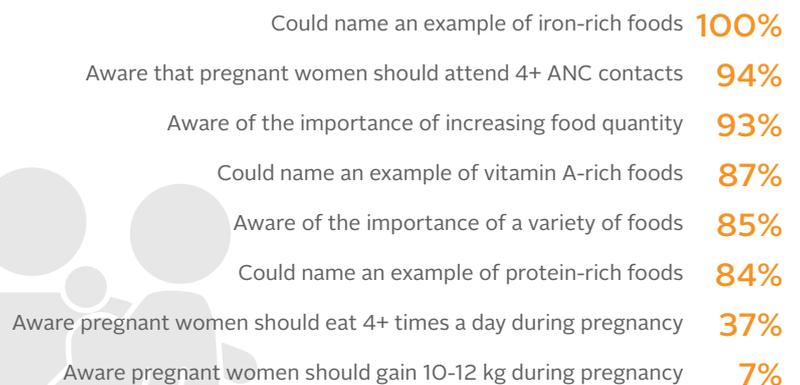
- Husbands knew the importance of consuming a variety of foods and increasing the amount of food during pregnancy.
- Husbands had less knowledge of the recommended 'weight gain during pregnancy'.

94% of husbands provided support to their pregnant wives

TYPES OF SUPPORT PROVIDED BY HUSBANDS

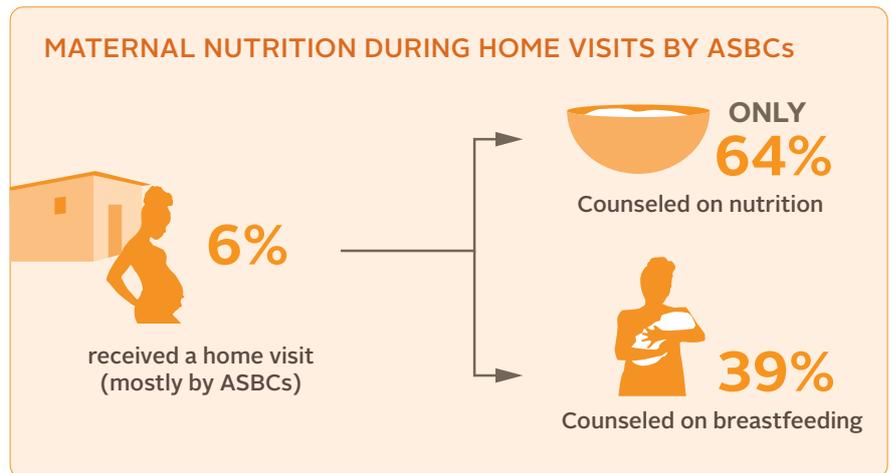


HUSBANDS' KNOWLEDGE OF MATERNAL NUTRITION



8. COMMUNITY SERVICES FOR MATERNAL NUTRITION

- The community-level health volunteers, called *Agents de santé à base communautaire* (ASBCs) are present in every village and play an important role in supporting ANC providers. They spend some of their time at a health facility and assist nurse midwives with counseling and measurements.
- Very few recently delivered women received a home visit from an ASBC during their last pregnancy, where not all were counseled on nutrition or breastfeeding.
- Community meetings or gatherings on maternal nutrition were also rare.



Only **8%** of recently delivered women attended a community meeting or gathering on maternal nutrition.

Conclusion

OPPORTUNITIES FOR ACTION

1. Based on where women seek care during pregnancy and for childbirth, the opportunity is ripe to strengthen maternal nutrition and breastfeeding interventions.
2. The findings showed that taking iron supplements during pregnancy is the norm in Burkina Faso. However, there is room for improvement about when to start and stop IFA supplementation and how many tablets to take during pregnancy.
3. The survey found that almost all pregnant women were weighed during ANC contacts. More information will be needed to determine how to effectively provide weight gain monitoring within the current ANC context and how to link results to appropriate counseling.

ANC TAKEAWAYS

- ▶ The baseline survey showed that ANC health facility services were well attended, but maternal nutrition and breastfeeding need to be strengthened in the existing services.
- ▶ There was a gap between the timing of the first visit and the recommended 8 contact points over the course of pregnancy (WHO, 2016). In communities where it may be difficult to seek more care in the formal health system, WHO recommends task shifting and expanding the role of lay health workers.
- ▶ The community platform is in place in Burkina Faso with the ASBCs promoting health-related behaviors for ANC. ASBCs are present in every village. This baseline found that they play an important role in supporting ANC at health facilities, spending three days per week assisting nurses/midwives with counseling and weight measurements at health facilities. Their knowledge of maternal nutrition is also relatively high. ASBCs offer an opportunity for increasing the number of contacts during pregnancy to support maternal nutrition and breastfeeding.

IFA TAKEAWAYS

- ▶ ANC providers and others should improve counseling of pregnant women on taking IFA from the first until the last trimester of pregnancy. The baseline found that some women started taking IFA supplements too late and stopped in the last trimester when iron is most important for the fetus. Despite that this baseline survey found that most women did not complain about side effects from IFA, managing side effects, especially during the last trimester, is needed to increase adherence during that critical time.
- ▶ Since women receive IFA free through ANC, increasing coverage of ANC during the first trimester of pregnancy is needed to help ensure IFA is available as well as ensuring that supplies are available. The baseline found insufficient tracking and recording of iron. Support to improve record-keeping and stock management and distribution is important to complement efforts to promote IFA consumption.

PREGNANCY WEIGHT GAIN TAKEAWAYS

- ▶ Weight gain counseling needs to be based on the BMI of the woman at the start of pregnancy. Given that many women do not start seeking ANC in the first trimester of pregnancy, this will be difficult to achieve unless pregnant women start seeking ANC earlier.
- ▶ In this sample, large or very large newborns were more commonly reported than small newborns. Anthropometric data showed that twice as many women were overweight than underweight and that almost no women were stunted. Coupled with the uncertainty about the BMI of women at the beginning of pregnancy, it is difficult to interpret this finding. However, to offer appropriate advice on weight gain—that can account for inadequate as well as excess weight gain—this lack of information needs to be addressed to develop an appropriate weight monitoring and counseling strategy during pregnancy.

4. The baseline survey found that maternal nutrition counseling, including maternal dietary counseling, was not a priority during ANC. The dietary counseling should center on missing elements of the woman's diet to increase its diversity and improve the overall quality.
5. The findings showed that breastfeeding counseling was not routinely provided during ANC. Less than half of women practiced EIBF—initiating breastfeeding within one hour of birth. Since health facility deliveries are almost universal, the context is set to promote and support increases in EIBF.
6. The survey found that virtually all husbands supported their wives during pregnancy. Husbands' engagement in their wives' pregnancies is a positive base to build on when addressing some of the more challenging maternal nutrition practices.

MATERNAL DIET TAKEAWAYS

- ▶ The survey found that the quality of pregnant women's diets was poor. Women mainly ate cereals and dark green leafy vegetables. A significant proportion of their diet also included unhealthy foods—sweets and sweetened beverages. Also, the survey found that dietary counseling, when it did occur, focused mostly on consumption of meat and fish daily and secondarily on consumption of dark green leafy vegetables—both categories of food that many women already consumed. Counseling needs to be increased overall and focused on encouraging the consumption of milk products and/or eggs, as well as dark yellow or orange fleshed fruit or vegetables every day, when feasible. Counseling should also focus on helping women and families identify specific, locally affordable seasonal foods.
- ▶ Despite their consumption patterns, women in the sample had good knowledge of the importance of maternal nutrition, the need to eat a variety of foods, to increase the quantity of food consumed, and to eat fruits and vegetables. In addition to a change in the substance of the counseling, new and more effective social and behavior change communications need to be developed for dietary messages and interpersonal counseling that will effect sustainable behavior change, rather than increasing information and knowledge.

BREASTFEEDING TAKEAWAYS

- ▶ A small percentage of mothers put something (i.e. prelacteal feeds) in the newborn's mouth after birth. In some cases nurses/midwives or mothers-in-law assisted them. Early newborn care practices, including EIBF, need strengthening among nurses/midwives. Promotion and support for EIBF among pregnant women also requires strengthening.
- ▶ Knowledge is not the gap for nurses/midwives; the survey found that essentially all nurses/midwives knew the importance of EIBF, to feed colostrum, and the need for exclusive breastfeeding during the first six months. Since provider knowledge was high, different strategies need to be developed to address the gap in ensuring EIBF and eliminating the provision of prelacteal feeding of any kind.

MATERNAL SUPPORT TAKEAWAYS

- ▶ Knowledge gaps may need filling for husbands. The findings showed that they knew the importance of a variety of foods, as well as increasing the quantity of food during pregnancy. They knew less about specific nutrition practices, such as types of nutrient rich foods, the protocol for IFA supplements, the benefits of additional contact points during pregnancy, and, as was the case for some women, the need to initiate breastfeeding within 1 hour.
- ▶ Husbands' support for wives during pregnancy is the norm in Burkina Faso. The support generally included encouraging ANC and making a variety of foods available, but lacked support in other important areas including encouraging wives to eat adequate amounts of food.



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