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REVIEW

Early initiation of breast-feeding in Ghana: barriers and facilitators

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To explore why women in Ghana initiate breast-feeding early or late, who gives advice about initiation and what foods or fluids are given to babies when breast-feeding initiation is late. Qualitative data were collected through 52 semistructured interviews with recent mothers, 8 focus group discussions with women of child-bearing age and 13 semistructured interviews with health workers, policy makers and implementers. The major reasons for delaying initiation of breast-feeding were the perception of a lack of breast milk, performing postbirth activities such as bathing, perception that the mother and the baby need rest after birth and the baby not crying for milk. Facilitating factors for early initiation included delivery in a health facility, where the staff encouraged early breast-feeding, and the belief in some ethnic groups that putting the baby to the breast encourages the milk. Policy makers tended to focus on exclusive breast-feeding rather than early initiation. Most activities for the promotion of early initiation of breast-feeding were focused on health facilities with very few community activities. It is important to raise awareness about early initiation of breast-feeding in communities and in the policy arena. Interventions should focus on addressing barriers to early initiation and should include a community component.
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Introduction

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend that breast-feeding be initiated within 1 h of birth because early initiation stimulates breast milk production, increases uterine activity and may thus reduce the risk of heavy bleeding and infection. It also fosters mother–child bonding and increases the duration of breast-feeding.[1,2] Recent observational data from Ghana suggest that early initiation may also have an important impact on neonatal mortality.[3] Infants who were initiated to breast-feeding within 24 h of birth were significantly less likely to die in the neonatal period compared with those who were initiated after 24 h (adjusted odds ratio 2.44, confidence intervals: 1.73–3.43). A marked dose response of an increasing risk of neonatal mortality with an increasing delay in initiation from 1 h to day 7 was observed, and the results suggest that if all infants in the study area were breast-fed in the first hour 22.3% of all neonatal deaths could be prevented. The percentage of infants breast-fed in the first hour in the study area was 43%,[3] similar to the level estimated for the rest of Ghana (46%). Rates in some sub-Saharan countries are as low as 30%.[4]

Despite the inclusion of breast-feeding within an hour of birth in international child feeding recommendations,[1,2] much of the focus of breast-feeding advocacy, and research, has been on exclusive breast-feeding rather than on early initiation. The recent finding that early initiation could substantially reduce neonatal mortality[3] should result in more comprehensive efforts to increase the number of infants breast-fed within an hour of birth. Such efforts can only be effective if policies and guidelines are based on a solid knowledge of the barriers and facilitators for early initiation of breast-feeding. Formative research recognizes that different population groups view and make sense of the world in diverse ways, and includes methods that allow us to gain an insider's view of the barriers and facilitators to behaviors.[5,6] This paper describes the results of formative research to explore why women in Ghana initiate breast-feeding early or late; who gives advice about initiation; and what food/fluids are given to babies when initiation is late. To understand how any future breast-feeding policies could be implemented, data were also collected on the current breast-feeding policy environment in Ghana.

Methods

The study was conducted in Kintampo, a district in central Ghana. Kintampo district falls within the forest-savannah transitional ecological zone and has an estimated population of 147 000. The district is overwhelmingly rural and farming is the most important economic activity. Only the district town and 8 of the 149 villages have electricity and few can be reached by paved roads. There is

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one district hospital and seven health posts staffed by nurses. There is one private clinic run by a medical doctor and several private maternity homes.

Kintampo district falls within the ObaapaVitA study area. The ObaapaVitA trial is a large community-based, cluster-randomized, placebo-controlled trial exploring the impact of weekly vitamin A supplementation on maternal mortality. The trial started at the end of 2000 and now extends through four contiguous districts in the Brong Ahafo region of Ghana. All accessible villages in the four districts are included in the ObaapaVitA trial area and more than 100 000 women aged 15–45 years are under active surveillance and are visited at home every month for capsule delivery and data collection.

Data for this study were collected through 52 semistructured interviews with recent mothers, 8 focus groups with women of child-bearing age and 13 semistructured interviews with health workers, policy makers and implementers. The focus groups aimed to collect information on cultural norms related to breast-feeding and were conducted between March and May 2005 in four villages selected to reflect district differences in ethnicity, accessibility and size. The participants were selected by community leaders and the topics discussed included when breast-feeding is initiated, barriers to early breast-feeding, beliefs about giving colostrum and who influences breast-feeding initiation.

The semistructured interviews with recent mothers aimed to collect information about personal experiences and beliefs related to breast-feeding, and were conducted in June 2005. Mothers were selected for interview from the 246 women identified from the ObaapaVitA trial surveillance system as having given birth in the last 2 months. The surveillance system also provided socio-demographic and breast-feeding information, which was used to purposively select 52 mothers with a range of timing of initiation of breast-feeding and variations in factors that could be associated with timing (place of birth, parity and ethnicity). Each mother was interviewed and asked to describe her pregnancy and the birth. They were also asked when and what the baby was first fed and where they got advice about feeding.

The 13 semistructured interviews with health workers, policy makers and implementers were conducted in August 2006. Health workers were selected for interview if they had been a source of antenatal care (ANC) or delivery care for any of the recently delivered mothers in the semistructured interviews. The health workers constituted seven nurses and midwives from the district hospital, two private maternity homes and three health posts. Six policy makers and implementers were identified at the district, regional and national level by referrals from the District Health Management Team and the Nutrition Unit of the Ghana Health Services. The interviews with the policy implementers explored current breast-feeding policies and priorities, determined how policies and programs are developed and supported, and how information is passed down to the regional and district levels.

The focus groups and semistructured interviews with recent mothers were conducted in Twi, the local language, by trained fieldworkers. The focus groups were recorded and transcribed into English. In the individual interviews, the fieldworkers took field notes and converted these to detailed English transcripts (fair notes) at the end of each day. Interviews with health workers, policy makers and implementers were conducted by the lead researchers in Twi or English using the same procedure as in the interviews with recent mothers. Data collection was iterative, with the findings from the focus groups informing the design of the interviews with recent mothers and the findings of the interviews with recent mothers informing the interviews with health workers and policy implementers/makers. The focus groups and semistructured interviews were independently analyzed by the two lead researchers through the systematic identification and coding of themes. The findings were then discussed and consensus reached. Quotes presented in the results section are from the semistructured interviews unless otherwise stated. Quotes in the third person are from fieldworkers' notes and those in the first person reflect fieldworkers' verbatim notes.

Results

The results are presented in two sections. Section one describes barriers and facilitators to early initiating of breast-feeding. The data are drawn from all the respondent groups but focus is on the data from the 52 recent mothers, as these case histories provide insights into what women report actually doing rather than others' perceptions of their behaviors. The second section outlines the findings from the interviews with policy makers and implementers.

The 52 recent mothers were purposively selected to ensure a range of breast-feeding initiation timing and factors associated with timing were captured. The characteristics of the sample are shown in Table 1.

Reasons for delaying initiation

Lack of breast milk was the reason given by all 15 recent mothers who reported delaying initiation for more than 12 h. Seven of the 22 mothers who initiated between 1–12 h also gave lack of breast milk as a reason for not initiating earlier. The other reasons given for initiating between 1–12 h (illustrated in Box 1) were the performance of postbirth activities such as bathing of the baby or the mother, the baby sleeping after the birth or needing rest, the baby not crying for milk after birth and the mother needing to rest after the labor.

The reported reasons for delaying initiation were corroborated by the focus group and health worker interviews; however, women in the focus groups also reported feeding problems as a reason for delaying.

Women in the focus group discussions and the recently delivered mothers found it difficult to explain what they meant by not having enough milk and described many different issues: physical signs that

Table 1 Sample characteristics of the recently delivered women ($N = 52$)

Characteristics	*n (%)*
Age (in years)	
<20	13 (25)
21–30	17 (33)
31–45	22 (42)
Residence	
Urban	9 (17)
Rural	43 (83)
Education	
None	24 (46)
Primary school	10 (19)
>Primary school	18 (35)
Ethnicity	
Akan	27 (52)
Northern	25 (48)
Breast-feeding initiation	
Within an hour	15 (29)
1–12 h	22 (42)
13–24 h	6 (12)
More than 24 h	9 (17)
Place of delivery	
Hospital	19 (37)
Not hospital	33 (63)
Parity	
Prima gravida	14 (27)
Multi gravida	38 (73)

Box 1 Reasons for late initiation

Postbirth activities (four women)

She gave the breast to the child after she and the baby had bathed and she had some porridge to eat. (30-year-old woman who gave birth at home and breast-fed approximately 2 h after birth).

Baby needs rest or was asleep (two women)

It was her first child so it took a long time for her to push the baby out, a lot of elderly people had to assist her. Immediately the child was born the women bathed it with hot water, wrapped it and put it to sleep. The child was very weak and they told her not to touch her because it needed rest. (22-year-old woman who gave birth at home and breast-fed approximately 5 h after birth).

After the birth the nurse took the child and bathed it and then the child slept and she also slept. She waited for the child to wake up and then gave her the breast (24-year-old woman who gave birth at home assisted by a nurse and breast-fed approximately 4 h after birth).

Baby didn't cry for milk (two women)

After the birth the baby didn't cry (for milk), which meant that it was not hungry so she didn't feed him. She said that if the child had cried she would have put it to her breast earlier. (30–year-old woman who gave birth at home and breast-fed after approximately 12 h).

Women needed rest (seven women)

She started to breast-feed at 10.00 am as this was the time the delivery pains had reduced and she could sit to breast-feed the baby (38-year-old woman who gave birth at home and breast-fed after approximately 6 h).

She wanted to give the breast to the child the same day after birth but she was dizzy and weak from the birth and she needed rest so she waited until the next day (15-year-old woman who gave birth at the district hospital and breast-fed after approximately 9 h).

breast milk is absent or is insufficient, beliefs about colostrum and cultural beliefs about when breast milk arrives. The different meanings of not having enough milk are illustrated in Box 2. The belief that breast milk arrives on the third day after birth was particularly strong in the Northern ethnic groups.

Many of the recently delivered mothers who felt that they did not have enough milk to start breast-feeding performed actions to help increase their milk or to 'bring the milk in'. This included eating specific foods, massaging the breasts with shea butter and washing the breasts with herbs. Few of the women who reported insufficient milk could explain why they did not start breast-feeding with the little breast milk they felt they had; the only explanation given was that it would be unfair to give the baby an empty breast or one with not enough milk to satisfy the child.

Who made the decision about when to initiate breast-feeding varied. The traditional birth attendants (TBAs) or the midwife/nurse who assisted with the delivery often decided what happened to the newborn in the first hour after birth. When the TBA or the midwife took the baby away for bathing or to rest, breast-feeding initiation was delayed usually by a few hours. Once the baby was returned to the mother, TBAs or family members usually gave advice to *prima gravidas* 'My mother told me to put the child to my breast on the third day when the milk started coming. I haven't given birth before so I followed her advice' (20-year-old woman). Women who had delivered before were not usually given any advice 'I didn't get any advice this time because I was old enough to know what to do with my baby' (22-year-old woman who delivered at home and started breast-feeding approximately 54 h after birth).

In total, 35 of the recent mothers gave colostrum, 9 squeezed it out and 8 could not be classified due to a lack of information. As shown in Box 2, beliefs about colostrum delayed feeding among

Box 2 Not enough milk

Physical signs of absent or insufficient breast milk

She didn't give breast milk because there was none in her breast she squeezed and realized that nothing at all was coming out. She gave tinned milk for 2 days. The breast milk came in the evening of the second day. (20-year-old woman who gave birth at home and breast-fed approximately 41 h after birth)

The breast was flat and nothing came out of it (15-year-old woman who gave birth at home and breast-fed approximately 54 h after birth)

Beliefs about colostrum

She doesn't give the first breast milk to the baby on the first day after birth. She gives the breast milk to the baby the next day after birth when the first breast milk has mixed with the second breast milk. (focus group respondent).

She squeezed the first breast milk away until the white milk came because the former wasn't good. Then she breast-fed the baby with the white milk. (28-year-old woman who gave birth at home and breast-fed after approximately 48 h).

Beliefs about the timing of the arrival of breast milk

It is their (Northern ethnic group) belief that there is no milk in the breast when a woman gives birth, a woman has to eat hot food and drink warm water for 3 days before the breast milk comes in and that was what she did. (35-year-old woman who gave birth at home and breast-fed approximately 44 h after birth).

You have to give the breast to the baby to suck whatever is in the breast before the real milk will come (focus group respondent).

some mothers—these were mostly from the Northern tribes. The length of the delay varied between 10 h and 3 days.

Mothers who initiated breast-feeding between 1–12 h usually gave their babies nothing at all or water, and those who initiated after 12 h gave a variety of liquids including water, evaporated milk, water with bread, water mixed with shea butter, coconut water or milo (a malted chocolate drink). Most respondents felt that a child needed to be breast-fed by day 3–4 of birth or else the baby may get sick or even die. Out of the 38 women who had more than one child, 33 women initiated breast-feeding at similar times for all their children.

Facilitators for early initiation

A theme that emerged from the semistructured interviews and focus group discussions with the Bono tribes was that a woman should give the baby the breast to 'pull' soon after birth to encourage milk to come 'although there is no breast milk, you give the breast to the baby to suck and the milk will come' (28-year-old woman who delivered at home and was advised by aunt). Another potential

Box 3 Health facility delivery facilitates early initiation

The nurses said that she should give her breast to see if the baby will suck…. if the nurses hadn't asked her to feed the baby she wouldn't have minded until the baby began to cry. (40-year-old woman who delivered in the district hospital and breast-fed approximately 30 minutes after birth).

The nurse brought the baby to her and told her to start breast-feeding the baby, she wanted to have some rest but the nurse insisted that she fed the baby there and then. The nipple was hard and big so it was difficult for the baby to take the breast but the nurse stood on her to give the breast to the child… there was no milk in it as she could not feel anything coming out when the baby was sucking. She told the nurse but she said that she should put it in the baby's mouth and through that the milk will come. (19 -year - old woman who delivered in the district hospital and breast-fed approximately 30 min after birth).

facilitator to early initiation is that among the women who initiated late, there was a desire among many to breast-feed early 'she will breast-feed the baby immediately if only there is breast milk' (28-year-old woman who delivered at home and breast-fed approximately 9 h after birth).

Delivering at a health facility supported early initiation (see Box 3). 'When you deliver at the hospital they ask you to give the breast to the baby even if there is no breast milk in it' (focus group respondent). Among the interviewed mothers, only 1 of the 15 who initiated more than 12 h after birth delivered at a health facility, compared with 8 of the 22 who initiated between 1–12 h and 10 of the 15 who initiated in the first hour.

Advice on early initiation was given to 5 out of the 50 women who attended ANC and by the family and friends of 2 women, but was usually given only to first-time mothers. Although three out of five women who got advice at ANC started feeding within an hour of birth, only one gave advice from ANC workers as the reason for initiating early.

The policy environment

Five out of the six policy makers and implementers interviewed reported that the national policy promotes breast-feeding within half-an-hour to an hour of birth and all the implementers reported that early initiation was important. They reported, however, that to date policy implementation has focused on exclusive breast-feeding 'the message has not been balanced up to now and has focused on exclusive breast-feeding rather than when to start and finish; they (policy makers) got too excited about exclusivity to think of timing' (national-level breast-feeding policy implementer).

A lack of community-based strategies to promote breast-feeding was reported by all levels of policy makers. In Kintampo information about breast-feeding should be provided during ANC, delivery (if at a health facility), postnatal care and at child welfare clinics. Respondents reported that communities may also receive information about breast-feeding through a radio series called

'Healthy Happier Home' and through radio and television broadcasts during world breast-feeding week.

The policy implementers reported that policies are usually generated or modified based on WHO/UNICEF recommendations at workshops and through discussions in a forum such as the Baby Friendly Hospital Initiative Authority. These policies are then passed down to the regions through the twice-yearly regional review meetings. The national and regional respondents reported that WHO and UNICEF additionally fund policy implementation in some regions, but national-level respondents raised some concerns that 'for policy making they (WHO/UNICEF) do try to ensure national ownership, however when it comes to implementation there are sometimes problems as they (WHO/UNICEF) have districts they target which are not necessarily where Ghana Health Service wants to work' (national policy implementer).

At the regional level, changes in priority regions were reported as having a detrimental effect on the continuty of breast-feeding policy implementation. 'UNICEF funding for the Brong-Ahafo region has now stopped, as UNICEF is focusing on other regions; this has resulted in a shortage of funds for regional activities' (regional-level policy implementer).

The regional policy implementers reported that they send one copy of the policy documents to each district and hold workshops outlining the policy for the district-level implementers, who in turn hold workshops for health workers in their district. When there is no money for workshops, which is frequently the case, letters are sent out about the policy change. Dissemination between the regions and the districts was highlighted as a problem by all levels of implementers, 'from the regions down there are no properly defined dissemination channels' (national-level implementer), and no mechanism exists to check that guidelines reach their destination.

As the districts and regions devise their own budgets and priorities, the national implementers reported needing to lobby district-level officials, to ensure breast-feeding is set as a priority 'we can only appeal to the regions to adopt the policies and priorities—you need to call and be nice to them' (national-level implementer).

Materials such as posters and flip charts are also passed from national to regional to district to health facility level. At each level, a request often needs to be made before materials are assigned and district-level implementers and health workers may then need to make a trip to either the regional or district office to collect materials. Respondents reported that this multitiered system does not always function well (see Box 4). However, a national-level policy maker highlighted that, in one of the regions, the storekeeper for the region sends newsletters every month of items he has in store for the districts to make their request and felt that this initiative could be emulated by the other regions. None of the health centers or hospitals visited during the study had any written guidelines on breast-feeding policies. Few staff had attended workshops or trainings, and only one health center had materials that included a breast-feeding message (this was a safe motherhood flip chart). 'Currently, we give verbal messages without any flip charts or posters to aid the education' (district-level policy implementer).

Box 4 Problems with policy implementation

'Sometimes you find all the posters packed up in an office' (national-level policy implementer).

'Sometimes a few people are called for workshops but there is no feedback when they come back from those meetings. Instead of them organizing a mini-workshop for those of us who could not attend the workshop, they do not do that claiming that there is no money in the district. Sometimes letters are sent about new policies but how and when it should be implemented will not be stated' (district-level policy implementer).

'There is nothing for us to use. This is a challenge for us. Even posters are not available to us. I don't remember the last time we received some flip charts and posters'. (health worker).

Health workers' knowledge and practice

Despite the problems reported around the dissemination of breast-feeding information and materials and the focus of policy on exclusive breast-feeding, health workers' knowledge of the importance of early initiation was high. Health workers reported that they had been provided with information about initiation during their nursing or midwifery training and several advantages of early initiation were mentioned. These included that early initiation helps the uterus to contract, helps with the expulsion of the placenta, encourages the maternal–child bond, prevents postpartum bleeding, helps establish lactation and encourages milk flow, reduces the chance of the baby receiving prelacteal feeds, prevents hypoglycemia and softens the first stool.

Although many health workers identified early initiation as important, those who worked in ANC and postnatal care rarely reported providing information about initiation. Most health workers involved in ANC reported that they provide information based on the 16 topics (one of which is breast-feeding) listed in the maternal health record card. One topic is covered a month making it impossible for a woman to receive all the information they require even if they attend the number of ANC visits recommended by the Ghana Health Service. Respondents involved in child welfare clinics reported that because of staff shortages health education is rarely given.

Health workers involved in delivering babies reported promoting early initiation if the new mother had no problems related to the birth. Two of the four health workers involved in delivery reported asking the mother to breast-feed immediately after birth to encourage the placenta to detach, 'when the baby is delivered I cut the cord and wipe the baby with a dry towel, wrap it and place the

baby on the mother to encourage contractions. If the placenta comes out quickly before the cord is cut I still give the baby to the mum to breast-feed to help stop the bleeding. The baby breast-feeds for approximately half-an-hour after which I bath the baby and the woman goes home to bath' (health worker). The other two health workers reported that they waited for the placenta to be delivered and then usually let the mother and the baby rest for half-an-hour to an hour before asking her to breast-feed. They reported delaying breast-feeding because the mother and baby needed to bath or the mother needed to rest.

Health workers' and policy implementers' knowledge of constraints to early initiation

Most health workers and policy makers had good knowledge of why women do not initiate breast-feeding early and felt that the problem was mostly for those who delivered at home. Reported reasons for delayed initiation included women's beliefs that milk does not arrive for 3 days or that they do not have enough milk to start feeding, negative beliefs about colostrum, activities such as bathing, resting and eating, waiting for the placenta to be delivered and beliefs that the mother needs to rest after the birth. Health workers and policy makers also had a good knowledge of what newborns are given if breast-feeding is delayed.

Although all of the policy makers and implementers reported that mother's beliefs about not having enough milk are a perception rather than a reality, all but one health worker reported that lack of milk was actually a problem. All the health workers reported that when a woman does not have enough milk she should still initiate or continue breast-feeding to encourage milk to come, but should also improve her diet, take a lot of fluids or rest. One health worker reported that in such cases a mother should also use formula to supplement the baby's diet.

Discussion

This study used formative research to identify some important barriers and gaps in community and health worker practices and in policy implementation that need to be tackled if policies promoting the early initiation of breast-feeding are to achieve the neonatal mortality reductions suggested by recent studies.[3]

Any policies to promote breast-feeding initiation must address the poor knowledge among some women of the importance of the behavior, community perceptions about milk quantity and time of arrival and negative beliefs about colostrum. Such barriers have been identified elsewhere,[7–11] and much information and experience already exists on how to address these issues. For example, guidelines, training manuals and counseling cards already exist to address women's perceptions of a lack of milk.[12,13]

Although few intervention studies have focused on breast-feeding initiation, much can be learnt from experiences of promoting exclusive breast-feeding.[14–19] Strategies such as improving hospital practices, counseling, mother support groups and mass media campaigns are well developed, and the need for a comprehensive approach that includes both the health service and the community is recognized.[20] As reported during the interviews with policy makers and implementers, much of the focus of infant feeding policies in Ghana has been on exclusive breast-feeding and on health facilities. This focus needs to be broadened to include early initiation of breast-feeding and community-based approaches.

Data from interventions in Ghana are encouraging. A recent study in Ghana found that counseling at the prenatal and perinatal period helps with early initiation and establishment of exclusive breast-feeding.[25] Results from the Linkages project in Northern Ghana have shown that rates of early initiation can be improved with a comprehensive and well funded strategy, which included mass media, health worker training, supporting the Baby Friendly Hospital Initiative Authority, support groups, mass media and community mobilization.[10,21] However, we found little support of breast-feeding activities in the study district.

Many health workers are successfully encouraging early initiation, despite a lack of support. Efforts should be made to ensure that all health workers present at deliveries are skilled in supporting mothers in breast-feeding initiation and that they have the materials they need.

Materials and guidelines need to be provided by the district and the regional implementers in a more proactive manner and in sufficient quantities. Health workers' beliefs about lack of breast milk need to be addressed as they may compound women's beliefs about the importance of having enough milk before starting breast-feeding, making behavior change more difficult.

As most women attend ANC at least once during pregnancy, ANC may offer a good education channel but, as in other countries,[22] ANC appears to be a missed opportunity for health education. Problems with counseling during focused ANC have been found elsewhere in Ghana[23] and a study from Tanzania suggests that improving counseling during ANC requires substantial investment in human resources.[24]

Currently most breast-feeding promotion activities are facility focused and to increase coverage community strategies are needed. Community strategies to promote the early initiation of breast-feeding should not only target mothers but also those who influence behavior such as TBAs, grandmothers and other female relatives. In this study, these influencers were important as advice givers to first-time mothers, as breast-feeding behaviors are learnt from them, and because these influencers often had control over the baby in the first few hours of life. Interventions also need to include multiparous women, as there is sometimes an assumption that such women do not need support in breast-feeding. Messages on colostrum and the timing of the arrival of breast milk could be targeted to families of Northern tribes, as barriers related to these issues appear to be ethnicity specific.

This study uncovered several facilitators to the early initiation of breast-feeding. Women want to breast-feed early and beliefs exist among some ethnic groups that encourage early initiation, such as a belief that putting the baby to the breast encourages milk to come. The finding that initiation timing is often similar for all a woman's children means that women who may initiate late can be easily identified by asking them about their previous practices.

Conclusions and implications

Finding from this study suggest that it is important to raise awareness of the importance of early initiation of breast-feeding among mothers and those who assist with deliveries at home. The national breast-feeding programme has concentrated its efforts in the health facilities and the main attention has been placed on exclusive breast-feeding. Involving the community, especially gatekeepers like TBAs, grandmothers and mother-in-laws, in interventions to encourage early initiation is important.

Disclosure

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