Why Traditional Birth Attendants are Still First Choices of Delivery Attendants for Pastoralist Communities of Afar, Ethiopia?

ABSTRACT

Background: Maternal and neonatal mortalities can be reduced if all women deliveries are attended by trained and skilled attendants that can provide Emergency obstetric care(EmOC). The main factors that determine the delivery place and attendants are distance to health facilities, trust on TBAs, cost related to direct and indirect medical costs, emergency nature of delivery which oblige mothers to deliver at home, lack awareness on high risk factors, service availability and confidence on health workers.

Methods and Findings: A qualitative assessment was conducted in Zone 3, of Afar regional state to collect information on determinants of delivery. Both in-depth interviews and Focus Group Discussions(FGDs) were used and TBAs, HEWs, and husbands were involved in the discussion. The main findings of the assessment are that almost all mothers deliver at home unless there is a compelling need to be referred to health facilities. TBAs are the most preferred birth attendants than HEWs and nurses assigned in health posts. TBAs are described as those with experiences, sympathetic to the mother, supportive and available anytime. They do not ask also a payment. The other factors which dictate the delivery place is the distance of health facilities coupled with no transport. As deliveries are also emergency, there is no time to go to the health facilities. Health workers maltreatment, negligence and abusive nature also hinder mothers to go to health facilities. The short duration of training of HEWs and being young also make the health posts underutilized. Mothers feel that HEWs have no experience in delivery and needs long years training to achieve that skill. Male health workers are not also preferred, if not totally rejected as skilled attendants by the community.

Conclusion: More trust on TBAs, low awareness on high risk factors, distance to health facilities and no transport associated with high indirect cost, health workers neglect and abusive nature, youngness of HEWs and short training, which they are labeled by the community having no skills are the major factors that make mothers to choose home delivery. These all factors should be taken into consideration in the future program designs.

INTRODUTION

Each year an estimated 225,000 mothers die due to interapartum related causes and about 904,000 neonatal deaths and 1.2 million stillbirths (1). Many of the deliveries in low and middle-income countries takes place at home with assisted by un trained birth attendants(2-6). Most of these deaths are occurring in low and middle income countries and can be averted if all women delivered in a setting where there is an Emergency Obstetric Care(EmOC) and life saving neonatal services can be given(1,8,9)Worldwide about 50 million women give birth annually at home without skilled care attendants(7).

The main reasons for home deliveries given by different studies are physical distance from health facilities, costs related to transport and medical, lack of awareness, taking delivery as normal event as a result there is no perceived need for looking trained attendants, and lack of time to reach health facilities because labour is emergency (2,10,11,12,13). The other factors are related to quality of care at health facilities such as cleanliness, getting the desired services, and provider-related factors(14,15,16).

One of the Millennium Development Goals(MDGs), achieving the goal of maternal health(MDG5) is a challenging target for Ethiopia. Ethiopia contributes for 50%of maternal deaths worldwide followed by India, Nigeria, Pakistan, Afghanistan and the Democratic Republic of Congo(17) . Ethiopia aims to reduce the maternal mortality ration to 218/100,000 while according the Demographic and Health Survey of 2005 report the maternal mortality ratio is 673/100,000(18). While there is an improvement in ANC, the attendance of delivery by skill attendants is still low(19).

Ethiopia has four tires of health care system whereby at broad base there is a primary health care unit with one health center and five satellite health posts. Health centers are staffed by nurses, and health officers. Health posts are run by two Health Extension Workers(HEWs) having a training of one year in health after high school graduation. In the case of Afar health posts have also a nurse in addition to HEWs. No surgical service is given at health centers . In the second layer there are district hospitals , third tire, regional hospitals and the fourth tire central referral hospitals. In the region there is one functioning hospital and even this hospital has no regular gynecologist or surgeon. Most of the referrals for emergency obstetric care, that cannot be managed by health centers is to Adama Hospital which is more than 100 kms from the study woredas. No road or transport for most of the pastoralist community and no ambulance service even from the health centers to hospitals. Each of the districts have one health center each staffed by nurses and health officers.

One of the main strategies of the country to increase deliveries by skilled attendants is deploying HEWs. Over 30,000 HEWs are deployed already and every *Kebele* has 2 HEWs. A recent published data showed that even though the country was aiming to increase the skilled labour attendance to 32% by the end of 2010, through HEWs, the target has not been achieved. The reason given is that HEWs lack the basic skill to provide EmOC and they are busy with so many responsibilities (20).

This study is designed to answer the determinants of delivery in pastoralist Afar Community of Ethiopia. The study result is aimed to improve future project designs.

METHODS

Sampling methods and study sites

This study was conducted in March, 2011 in three *woredas*(districts) of Zone 3, Afar Regional State of Ethiopia. The total population of Afar region according the 2007 national census is --- million and more than 90% the population are in the rural and----% are pastoralists. The pastoralist community of Afar are mobile seasonally for in search of food and water for their cattle. The majority of the population in the region belongs to Afar ethnic group and their language is Afargna.

Using purposive sampling methods, Traditional Birth Attendants(TBAs) in three *woredas* were selected. To get more through insight of the determinants of delivery in-depth interviews were also conducted with HEWS and FGD with husbands. The mothers side is covered by a quantitative study, which is presented separately. *Woreda* offices heads were also interviewed to get the opinion from the side of the health workers. The population of the three *woredas* is---.

Study population

In this study TBAs, HEWs, mothers and husbands were selected to provide the existing pictures about determinants of delivery , choice of delivery place and attendants. A total of 10 TBAs in the three *woredas* were identified by HEWs. TBA is defined by World health Organization(WHO) as " a person who assists the mother during childbirth and who initially acquired her skills by delivering babies herself or through apprenticeship to other traditional birth attendants"(21). A trained TBA is someone who received a short term training in knowledge and skills or modern delivery practices. In-depth interviews were conducted with TBAs and the main topics used for the interview were listed under Table 1 below. TBAs were taken as main informants since they played the major role in attending deliveries and have influence over the mothers for referrals. Three FGDs with husbands were also conducted to get the views on the factors that determine the choice of delivery places, and attendants preference.

HEWs and *woreda* health offices heads were also included in another in-depth interview to supplement the findings from TBAs regarding the place of choice of mothers for delivery and the preferred attendant as well as the reasons of choice. The guiding questions are presented in Table 1.The recruitment of TBAs, mothers and husbands was assisted by HEWs and community health animators.

Data Collection

The study has involved two methods of data collection, namely in-depth interviews with 10 TBAs , 4 HEWs, 3 religious leaders and one *woreda* health offices heads, 3 FGD with husbands. Indepth interviews were designed to get the perspectives of TBAs and HEWs on the first choice of delivery places, the preferred attendants, the reason for the choice , when mothers decide to go to health institutions and factors that hinder going to health facilities. In The FGD the same issues were explored and helped to get the group consensus on the determinants of deliveries from perspective of husbands as they have also a role in choosing the delivery place and birth attendants.

An indepth interview guiding questions were prepared initially (indicated in Table 1) and the indepth interviews with TBAs and HEWs were conducted by the main investigators (MM, A, S_). The FGDs were conducted by trained interviewers/facilitators who has previous experience conducting FGDs. Two facilitators was used for each discussion, one leading the discussion and the other taking notes of the discussion. A total of 18 in-depth interviews and 3 FGDs conducted in the three woredas. Informed consent was asked from all participants in advance and there was no refusal. The discussion with TBAs, and husbands was conducted with the local language using a translator. All the interviewers/facilitators were Amharic speakers, and used native Afargna translators. HEWs all speak Amharic and the discussion was direct without a translator.

Data Analysis

Each team of facilitator take notes in Amaric and later transcribed verbatim to English. The two facilitators then sit together and discuss the points captured, and make a note of the final agreed discussion points. The main researcher then made final transcription, whereby issues related to the themes of the study identified and analyzed. The analysis takes into consideration the frequency of points mentioned in the different discussions, specificity of the points whereby specific examples given related to the theme of the discussion, importance given by different groups and emotional expressions expressed. The data from all sources of respondents and methods (indepth interviewed and FGDs) then fitted with the main objectives of the study. Finally a framework developed based on the analysis result on the determinants of delivery place, choice of attendants and reasons for the specific choice. The framework designed shows the barriers and provides major recommendations for future action.

Table 1. Main topics used for the in-depth interviews and focus group discussions

Participants	Discussion points
Traditional Birth Attendants	- ANC attendance of mothers - Where does most of the pregnant women deliver? Why? - Who is the preferred choice of delivery attendant by mothers? - Is there any traditional practice during home delivery for the mother and neonate? - At what stage mothers call them to attend delivery? - Reasons for referral of mothers for health facilities - Factors hindering mothers going to health facilities for delivery - Knowledge of at least one of the five danger signs(severe headache, high fever, blurring of vision, convulsion, and vaginal bleeding) - Practices by TBAs in delayed labour, malpresentations, retained placenta, postpartum hemorrhage - Relationship with HEWs - Relationship of TBAs with health centers including acceptance when referred mothers and feedback - Payment for attendance of delivery by TBAs - Opinions to improve deliveries attended by skilled attendants
HEWs/Woreda Health Office Heads	- ANC attendance of mothers - Where does most of the pregnant women deliver? Why? - Who is the preferred choice of delivery attendant by mothers? - Is there any traditional practice during home delivery for the mother and neonate? - Reasons for referral of mothers for health facilities - Factors hindering mothers going to health facilities for delivery - Relationship with TBAs - Relationship of TBAs with health centers including acceptance - Opinions to improve deliveries attended by skilled attendants
Mothers and husbands	- ANC attendance of mothers

	- Where does most of the pregnant women deliver? Why? - Who is the preferred choice of delivery attendant by mothers? - Is there any traditional practice during home delivery for the mother and neonate? - Reasons for referral of mothers to health facilities - Factors hindering mothers going to health facilities for delivery - How do you describe the service you get in health centers? - How much you pay for TBAs? - Opinions to improve deliveries attended by skilled attendants

Ethical Consideration:

This an exploratory assessment for designing interventions for pastoralist communities in Afar and a permission was sought from the Afar Regional Health Bureau

RESULTS

All the discussants expressed that almost all women in the village delivery at home unless there is complication that warrants going to the health facilities. Traditional Birth Attendants (TBAs) are much preferred as delivery attendants than HEWs, or at times health professionals working in health posts. About six major areas that determines the choice of the delivery place and attendants came out in the discussions: 1) More trust and reliance on TBAs; 2) Psychological and physical support from TBAs and family members in home deliveries; 3) Emergency nature of delivery and distance to health facilities; 4) Feeling of neglect and mistreatment by health workers in health facilities; 5) Not wanting to be attended by male health workers; and 6) Indirect medical costs. The determinants of delivery and possible solutions are indicated under Figure 1 below.

1. **More trust and reliance on TBAs**

All participants including TBAs and husbands said that the families wants to try deliveries first by TBAs at home than immediately going to health centers. The reason given is that TBAs have long years of experience in attending deliveries and even they describe consistently that through generations deliveries was attended by TBAs and all the children in the village delivered by the TBAs. The minimum year of experience out of the 10 interviewed TBAs was 7 years. They all said that the mother is referred by the TBA to health centers or hospital if the labor lasts more than 12 hours, and some TBAs said if the lie is transverse. All TBAs said that they diagnose the presentation of the fetus. The referral is made by TBAs and in most cases they follow the mother to health centers. In Afar regional state there are two HEWs in every *Kebele* and in addition there is a nurse. While there are health posts in every *kebele* mothers still prefer TBAs more than the HEWs or the nurse. The reason given is that HEWs and the nurse are young and do not have as much experience as the TBAs. They do not have also any instrument that make them different from TBAs.

" *HEWs are young and they are trained for a short time, while most of the TBAs are older and much experienced. They have attended many deliveries and they have proved themselves. HEWs and nurse in health posts do not have any special skill or instrument to attend the delivery deferent from TBAs"*

2. **Psychological and physical support from TBAs and family members in home deliveries**

If the mother delivers at home all the family is there to attend the delivery and TBAs will be there until the mother delivers to giving comfort, advice and support. A female friend or family member also holds

the mother at the back during labour and delivery. TBAs also stay three days after delivery to assist the mother in feeding the neonate, and support in washing here cloth and feeding. TBAs and husbands described that at health centers, health workers do not give a comforting support as TBAs do and they will not be with the mother all the time. They said they come when the baby is approaching and the rest of the labor time the mother is alone. Even HEWs confirmed that mothers in the villages complain about these issues, rather they complain mistreatments and neglect by health workers. As a result mothers prefer to deliver at home by TBAs unless it is a must and referred by TBAs.

We have asked if there is a special ceremony during labour and delivery that mothers prefer home delivery, and all say there is no as such a ceremony during labour, delivery or after delivery that they miss if mothers deliver in health facilities. If the mother is weak to labour, they give her butter, gruel and flax, but they said they do not give for everyone.

3. **Delivery is emergency and most mother are distant to health facilities**

All invariably said that even if they wanted to go to the health center, most of the population is far and there is no transport. Delivery is an emergency and even there might not be a time to carry the mother to health facilities. In the discussions health posts are not considered as health institutions for delivery place having qualified health workers.

" *At times the baby comes fast and no time even to call the TBA residing in the same village let alone taking to health centers. It is a common experience that an elder neighbor obliges to attend deliveries because the baby was approaching to call a TBA. Two of the interviewed TBAs started attending delivery because of such incident without any apprenticeship as other TBAS. The only experience they had was they witnessed while they themselves delivered by TBAs previously. There is no means of transport also to take the mother and if the labour is prolonged or complications arise, the villagers carry to the health center and most die even before they reach to health centers or hospitals*"

4. **Feeling of neglect and mistreatment by health workers in health facilities**

All participants including TBAs, and husbands said that; health workers in health centers mistreat , neglect the mother and they do not stay with the mother as that of the TBAs while labouring. At times when the mother is in pain and screams, the health workers shout on the mother not to scream. They do not tell the progress and treat us as an object not as human being. It is only when it is a must and refered by a TBA that mothers and family decided to go to the health center. It is very rare to take health facilities as first choice.

" *Two TBAs said that health workers do not treat the mother well, not sympathetic and even they say that why do you shout because you know it already when you did sex*"

5. **Not wanting to be attended by male health workers**

In the discussions some said that there is no problem to be attended by male health workers but preferred a female birth attendant. Some said that they do not want to be attended by male health workers . HEWs said that mothers have a resentment to be attended by the male health workers and they have a belief that no one male should see their body except their husband. They hate also the per vagina exam at health facilities

" *A HEW told us that a husband took his wife to deliver at health center and a male nurse came in and asked her for per vaginal exam, the mother refused and runny away shouting at her husband how he brought her to be attended with a male*"

6. Indirect costs

The indirect medical costs such as transport, and expenses when staying in towns is mentioned as one hindering factors for not going to hospitals or health centers. Transport from the village to the *woreda* health center does not exist in most places and the mother has to be carried. But if the health centers refers for hospitals there are no ambulances and have to rent trucks or buses, which is expensive. The direct medical cost has not come out as an issue, either because it is free in the health center or only few mothers referred to hospitals. Hospitals give also free service if the mother is poor.

The general feeling came out in the discussion is that the local health centers capacity is limited and for difficult cases they are referred to hospitals which are more than 100 kms away and that is a challenge for a mother at emergency without ambulance service, enough money to hire a transport and going to a town far from their home and different from their culture.

Payment for TBAs is voluntary and not obligatory. Some pay US$0.5 to 1, some give them tobacco and others do not pay. We asked TBAs why they give free service and they said that in the village they are in the same clan and have the obligation to serve their relative. The other reason is that it is a god given skill and the mother is in hands of god and has the spiritual obligation to serve a mother in a difficult situation.

" *In our culture we live with support of each other. I am the clan member and the clan can oblige me to serve. If not I will be outcaste and I cannot survive alone*"

Knowledge of TBAs on Danger Signs During Pregnancy and Labour

Most TBAs said that if the lie is transverse or the hand comes first, they consider high risk. If the hand comes first they try to push up and if failed they refer. In case of transverse lie they refer. The other dangerous signs during labor they mentioned were that if the labor is prolonged for more than 2 days and the mother is weak to push.

All said that the major causes of maternal mortality are obstructed labour because of mal-presentation and narrowing of the vagina because of circumcision, and postpartum hemorrhage. They said that every woman in the child bearing age is circumcised and make a vertical incision during labour. For post partum hemorrhage in some areas they give some herb to stop and if not they refer the mother to health facilities.

Circumcision and re-stitch

All the discussants said that all women in the reproductive age group are circumcised. The circumcision is the infibulations type whereby after they cut the labia and stitched leaving only opening for urine and menses. During delivery the TBAs cut vertically with knife(*Gille*) the stitched scar to make a room for the delivery. In the previous times after delivery the incised part was re-stitched with a thorn by TBAs and the mother's thighs tied approximated for the wound to stay in approximation. The reason told us for the re-stitching is to make the vagina narrow for the husband. Because of the education on the harmful aspect

of circumcision, and the punishment by the government, the re-stitching and girls circumcision is said to be stopped. All the TBAs said that they refuse to re-stitch even if they are asked by the mother or husband.

" *A TBA said that I will not circumcise my child, because I have seen girls suffering in pain during urination and has to be helped with a chickens feather to dilate. She said also that Afar women do not enjoy sex because of the pain and it is with difficulty that we allow our men to have sex occasionally. She said we do not do sex often like the Amhara ethnic group. According to her, Amhara's do not circumcised and as a result they enjoy sex. Finally she said, even if my daughter does not get a husband from Afar because she is not circumcised, she will marry her to Amhara man. It is a also a suffering for the newly married couples to penetrate the narrow vagina in the first sex. The men even develop ulcer at the knee and elbow because of the friction as they are supported with their elbow and knee to penetrate the narrow vaginal orifice*"

As all said that re-stitching is not done currently in Afar, and they said that it is no more a reason at all not to deliver in health facilities.

DISCUSSIONS

The main finding of this study is outlined in the Figure 1 below in the form of a frame work and suggested recommendations for improvement. There is a high trust of TBAs in the community and the main reason is that the practice has been there for time immemorial and TBAs has proven that they can attend most deliveries without difficulty. TBAs are there at times of need at nearby and stay with the mother until delivered and then for three days after delivery. They give traditionally appropriate comfort, advice, and sympathize with the mother. The same findings are reported in Indonesia(2), and Uganda(22) whereby TBAs are preferred because they have more trust, respect and perceived skill to attend most deliveries. They see the importance of institutional delivery when they are referred by TBAs and the mother fails to deliver after long hours of labour.

The other major finding in this study is that mothers are comfortable to deliver at home at the hands of TBAs in the presence of families and friends. TBAs are mothers themselves, they know how to comfort the mother, she is always with the mother unlike the health facilities where they are left the mothers alone to labour, and a friend or family member is also there to support during laboring. These are the reasons for home delivery choice and TBAs in this community. Again in the same studies of Indonesia and Uganda(2,22), mothers gave similar reasons as that of our finding. In Uganda mothers complained about health workers as abusive, harsh and they neglect the patient(16, 22, 23). In case of Afar TBAs mentioned as one of the reasons for the mothers not going to health facilities and HEWs also repeated the concern of mothers towards health workers in health centers.

The other reason for choosing home deliveries is that deliveries are emergency and most mothers are far from the health facilities. They do not have the means of transport to reach fast to health facilities. Therefore because of lack of choice they call TBAs to attend the delivery. Studies in different countries (2,10,11,12,13,14,) have described the same reason for why mothers prefer home deliveries and TBAs. In association with this mothers/families besides the distance and lack of transport, they do not have the capacity to cover the transport cost and the cost of accommodation and food while they are in towns and

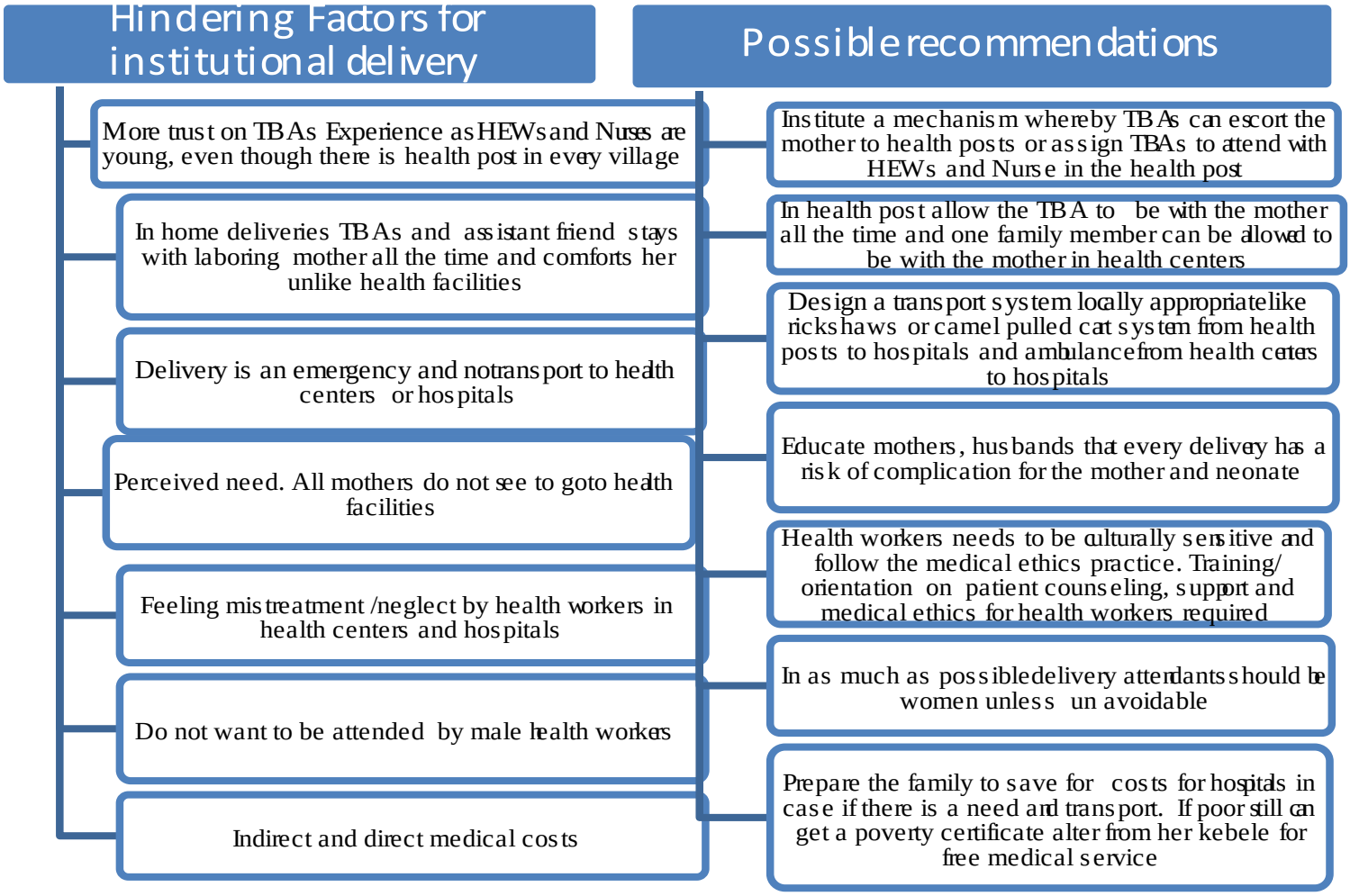
the direct medical costs(2,4,11, 14,15). As a result mothers do not go immediately to health facilities unless they failed to deliver at home or developed complications. Here in our study TBAs and mothers do not consider HEWs and nurses in health posts as better qualified than TBAs and they do not consult them. One of the reasons is that the age of HEWs, which are much younger than most TBAs and the duration of training of HEWs. HEWs are trained for 6 months to a year in Afar. Nurses in health posts are not also consulted because they do not see any special instrument to assist difficult labour.

The other issue raised is the male attendants in healthy centers. Most women do not reject as such but still others refuse to be seen by a male health worker. Even if most TBAs did not say it, from HEWs that mothers are not comfortable to be seen by male health workers.

Conclusion and Recommendation

1. There is more trust and reliance on TBAs and home deliveries: Training TBAs is one solution to improve their skill and knowledge. The other recommendation is that with the new HEW program, and health posts at each Kebele, it is possible to assign TBAs to attend deliveries with the HEWs and the nurse assigned there. It has two advantages that the mothers can deliver in a relatively clean environment and still the TBAs will be with them to comfort and assist in the delivery. It is also possible to allow a family member with mothers in health posts and health centers to comfort her during labour and delivery.
2. Mothers want the psychological and physical support from TBAs and families. As described above it is possible to schedule TBAs to be assigned in health posts to attend deliveries together with HEWs and nurse. At the same time a family member also can enter to the delivery room to support the laboring mother. In health centers in most cases TBAs accompany the mother when they refer and TBAs can be allowed to attend the mother with the health workers.
3. Distance to health facilities: As rightly described by all the discussants, delivery is an emergency and most mothers are far from health institutions. But with the expansion of health posts, if HEWs and nurses capacity built and confidence among the community created, this issue partly can be solved. For a mother who needs to be referred from health posts to health centers or hospitals, a village to health facility level transport system should be designed. One possibility is organize a rickshaw ambulance as most of the Afar land is plan and the cost of the rickshaw and its maintenance can be covered by the community. The other option is camel pulled cart system to serve as an ambulance. There need to be also a stand-by ambulance in all health centers to transport to hospitals. In the long run emergency surgeons need to be assigned in major health centers to avoid referrals to distant hospitals.
4. Feeling of neglect, abuse and mistreatment by health workers: This an area where it is under discussion in many forums and it is one finding that push mothers not to go to health facilities. One possible solution is organize trainings on medical ethics for health workers. It needs lobby at national label to enforce medical ethics courses for all health workers.
5. Mothers do not prefer male attendants: It might not be possible to avoid male from attending deliveries, but in as much as possible assign females as birth attendants in health facilities.
6. Indirect Costs: There is no one solution for this. May be advice the pregnant mother during her ANC visit to save some money for emergencies is one option and organizing ambulances mentioned under recommendation 3 above. In the long run if emergency surgeons deployed in major health centers some of the indirect costs can be avert.

   Figure 1: Frame work on determinants of institutional delivery and possible recommendations


Hindering Factors for institutional delivery
Possible recommendations
More trust on TBAs Experience as HEWs and Nurses are young, even though there is health post in every village
Institute a mechanism whereby TBAs can escort the mother to health posts or assign TBAs to attend with HEWs and Nurse in the health post
In home deliveries TBAs and assistant friend stays with laboring mother all the time and comforts her unlike health facilities
In health post allow the TBA to be with the mother all the time and one family member can be allowed to be with the mother in health centers
Delivery is an emergency and no transport to health centers or hospitals
Design a transport system locally appropriate like rickshaws or camel pulled cart system from health posts to hospitals and ambulance from health centers to hospitals
Perceived need. All mothers do not see to go to health facilities
Educate mothers, husbands that every delivery has a risk of complication for the mother and neonate
Feeling mistreatment /neglect by health workers in health centers and hospitals
Health workers needs to be culturally sensitive and follow the medical ethics practice. Training/ orientation on patient counseling, support and medical ethics for health workers required
Do not want to be attended by male health workers
In as much as possible delivery attendants should be women unless un avoidable
Indirect and direct medical costs
Prepare the family to save for costs for hospitals in case if there is a need and transport. If poor still can get a poverty certificate alter from her kebele for free medical service

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