Executive Summary

IMPROVING HEALTH EXTENSION PROGRAM IN ETHIOPIA

Included:
- Description of a health system problem
- Viable options for addressing this problem
- Strategies for implementing these options

Not included: recommendations
This policy brief does not make recommendations regarding which policy option to choose

Who is this evidence brief for?
Policymakers, their support staff, and other stakeholders with an interest in the problem addressed by this evidence brief

Why was it prepared?
To inform deliberations about health policies and programmes by summarizing the best available evidence about the problem and viable solutions

What is an evidence brief for policy?
Evidence briefs for policy bring together global research evidence (from systematic reviews*) and local evidence to inform deliberations about health policies and programmes

*Systematic Review: A summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise the relevant research, and to collect and analyse data from this research

Full Report
The evidence summarised in this Executive Summary is described in more detail in the Full Report

This evidence brief was prepared by the Technology Transfer and Research Translation Directorate of the Ethiopian Public Health Institute.
Key messages

The problem

Low performance of some components of Health Extension Program (HEP)

Very few families were certified as model household compared to the targeted total coverage (Hailay 2010). The achievement of the major component of the package is still low. Thirty eight percent of households do not have any type of latrine (EDHS, 2011). More than three quarter of 12-23 month old children are not fully immunized. The contraceptive prevalence rate of 29% is far below the 66% target for 2015. Only 10% of deliveries were conducted by trained personnel, while the federal Ministry of Health’s target is to reach 60% by 2015 (FMoH-HSDP, 2011/12).

Important barriers to health extension program implementation include:

- Dissatisfaction among Health Extension Workers (HEWs)
- Poor Community uptake of the health extension program
- Limitations in designing the HEP package and its implementation strategies
- Inadequate pre-service training of health extension workers
- Inadequate supportive supervision and management
- Poor drug and medical equipment supply

Policy options:

Tailored intervention strategies, continuing education, strengthening managerial supervision, pay-for-performance, and community mobilization are potential strategies to address the low performance in health extension program in the country.

1. Tailored interventions to address identified barriers are more likely to improve health professionals practice than no intervention or the dissemination of guidelines. Therefore, tailored intervention strategies may improve the effectiveness of health extension workers.

2. Continuing educational meeting and workshop alone or combined with other interventions can improve health professionals practice and patient outcomes. Therefore, continuing education may improve health extension workers practice.

3. Managerial supervision may improve health extension workers practice and knowledge.

4. The effect of pay for performance on health extension program is uncertain.

5. Community mobilization probably improves communities’ uptake of health extension program.

- Given the limitations of the currently available evidence, there is a need for rigorous evaluative research prior to widespread implementation for all the options.

Implementation strategies:

A combination of strategies is needed to effectively implement the proposed options

Barriers to implementing all five options include lack of financial resources, lack of strategies and/or guidelines, lack of skilled human power and questionable sustainability.

Implementation strategies include the following: mobilisation of financial resources, designing clear strategies and guidelines, and integrating the options into the institutional structure.
The problem

The premise of health extension program is belief that access and quality of primary health care for communities can be improved through the transfer of health knowledge and skills to households. Accordingly, its main strategy is building the capacity of families to be “model households”. As per the old health extension implementation guide line model family was defined as ‘a family that implemented a minimum of 75% of the 16 packages after taking at least 75% of the 96 hours model family training’. The 2013 revised health extension implementation guide line of the ministry modified the model family training hours to sixty and the definition of model family to ‘a family that implemented all health extension packages concerning its family with the support and close supervision of health extension worker’ (FMoH2013). The expected changes to be a model household include visible changes in behaviour, for example, owning and using a latrine, proper hand washing, completing immunization schedules by eligible mothers and children, and accessing antenatal care by pregnant mothers (FMoH2003, Nejmudin2012).

The plan of the HEP is to qualify all households as model households within three years of the program based on diffusion of innovation theory (FMoH2003).

Even if the plan of the HEP is to qualify all households as model households within three years of the program; yet eight years after the program implementation the achievement is low due to under achievement of many components of the program (FMoH2012). Failure to achieve these targets will adversely affect progress towards achieving the Millennium Development Goals and the Growth and Transformation Plan of the country. The objective of this policy brief is to summarize the best available evidence describing the problem and potential solutions for addressing the ineffectiveness in some components of the health extension program in achieving its targets.

Size of the problem

In 2010, six years after the beginning of the HEP; approximately 4 million out of 16 million households (26%) had completed the model household training (FMoH2010). However, only 4.3% of households were certified as model households (Dest2010) which is very low compared to the total coverage. This is due to low achievement in some components of the target. For example, 38% of households did not have any type of latrine. Only 24% of 12-23 month old children were fully immunized (EDHS2011). The contraceptive prevalence rate of
29% is far below the 66% target for 2015. Only 10% of deliveries were conducted by trained personnel, while the FMoH's target is 60% by 2015 (FMoH2012).

Besides, only 56.8% of the HEWs have a work plan and the involvement of other stakeholders in its preparation is low (CNHDE 2007). According to the health extension program implementation guideline HEWs are expected to identify and prioritize the community’s health problems and develop a plan of action in collaboration with the members of the Kebele council after conducting a baseline survey (FMoH2007).

### Causes of the problem

Six causes are identified for the low performance of health extension program: dissatisfaction among health extension workers, poor community uptake of the health extension program, limitations in designing the HEP package and its intervention strategies, inadequate pre-service training of health extension workers, inadequate supportive supervision and management, and poor drug and medical equipment supply.

#### 1. Dissatisfaction among Health Extension Workers

Low salaries and high work load are some of the causes of dissatisfaction among HEWs. The majority (79%) of HEWs are not satisfied with their monthly salary (CNHDE2011). Besides the inconsistent remunerations across regions is also found to be source of dissatisfaction (Teklehaimanot2007).

About 75% of HEWs believe that they are overloaded with assigned task (CNHDE2011). The range of activities included in the sixteen health extension packages makes the health extension program too broad to be implemented by two HEWs. The size of villages and distances between sub-villages and households exacerbates this problem (Hailom2008). Though two HEWs are expected to cover 500 households; in reality the number of households covered is higher, ranging from 546 to 1119 (Seleshi2010, FMoH2003). In addition, development partners also use HEWs to execute their programs, creating heavier workloads for HEWs; although this integration may be desirable (Hailom2011).

The dissatisfaction of HEWs is shown by the high attrition rate. The Urban Health Extension Professionals (UHEPs) who are nurses have experienced approximately a 10% attrition rate. The Urban Health Extension Professionals are trained in clinical nursing and their competency assessment is based on their professional background. However, their duties as UHEPs are disease prevention and control and their career development is related to their clinical
background. Their career development is therefore not related to their duties as UHEP. As a result UHEPs leave the program and go to clinical practice seeking career development. Besides the expanding ratio of households to UHEP are among the contributing factors to high attrition rate among UHEP (USAID 2012).

2. Poor Community uptake of the health extension program

Geographical, socio cultural and economic factors affect communities’ uptake of the health extension program. Due to travel time between households and competing demands for family members’ time for farming activities, model family training is taking longer than anticipated (Hailom2011). The same problem is observed in the urban health extension program implementation where heads of households and spouses are not interested in model family training (Ababor 2011). According to the recently held Health & Demographic Survey of the country (Central Statistical Agency [Ethiopia] and ICF International. 2012), more than six women in every ten (61 percent) believe that a health facility delivery is not necessary, and three in every ten (30 percent) stated that it was not customary. Level of income is also known to affect the communities uptake of health extension program for example, construction of latrine which is mandatory to be certified as model family is negatively affected by low level of household income (Aweke2013).

Beside these health extension service provisions related factors also affect the community’s uptake of the health extension program. The community pays more attention to curative services and criticize the health extension program for lacking curative services (Zewdie 2011, Habtamu 2007). The low level of assistance during delivery by HEWs has resulted in diminished confidence in HEWs (Hailom2008).

3. Limitations in designing the HEP package and its implementation strategies

The design of the health extension package was based on an analysis of major disease burdens for most of the population (Nejmudin 2012). In urban areas, the intervention package was modified to focus on chronic health problems, environmental issues, etc. (Nejmudin 2012). However, evidence for the effectiveness of the package and its implementation strategy is lacking. For example in the previous health extension implementation guide, households are expected to be trained for 96 hours but the current guide reduced the training hour to 60 without pilot testing. Yet one health extension worker is expected to serve 250 households in addition to
other community health and health post services. (Community health services expected from HEWs include: school health service, delivering health education at community gathering while static health post services incorporate immunization, delivery, antenatal care, postnatal care, diagnosis and treatment of communicable diseases (malaria, parasitizes, and diarrhoea); but the effectiveness of these strategies were also not tested before their implementation.

On the other hand the program has not been well integrated in to facility based primary health care services (USAID 2012). Furthermore the strong cross sectoral linkage the UHEP needs are missing. Sectors such as land administration, youth affairs, women and children, water and sewage and municipal administration do not have a formal role in the implementation of the program although they control resources that contribute for the implementation of the program (USAID2012).

4. Inadequate pre-service training of Health Extension Workers

Almost all health extension workers currently on service provision (more than 30,000) were trained with the old curriculum which was developed in 2003. This curriculum was described as a large curriculum with a short training period (Hailom2008).

Health education and communication occupy a considerable amount of time of HEWs. However, it is only considered as a supportive course in this curriculum and given only 30 hours of training which accounts only 2% of the total training hours (FMoE2003). The curriculum prescribes 70% practical training; however, in almost all cases there were no facilities to give practical lessons. As a result 95% of the courses do not have practical training. In relation to field visits, supervision and responsibilities were not clearly defined and, therefore, the trainees did not have enough exposure to procedures they were supposed to carry out (CNHDE 2005). Shortage of teaching facilities and on-job training are still identified as constraints after seven years of the training (Zufan2011).

More than seventy eight percent of HEWs claimed the type of duties and responsibilities assigned to them requires more training than they had received (CNHDE 2011).

The basic professional preparations of the urban health extension professionals as well as the quality of in service training in terms of balance of theoretical and practical session, the initial number of trainees per class, have affected job satisfaction for the professionals (USAID 2012).
5. Inadequate supportive supervision and management

According to a manual by the ministry (FMoH2012) a monthly Primary Health Care Unit (PHCU) staff meeting that focus on skills, knowledge and supplies related to the HEP is expected to help the program. However, only 56% of the PHCU staffs reported that the PHCU meetings were held every month (SC4CCM 2013). The Ministry of Health has also reported supervision rendered to health extension workers is inadequate (FMoH2013). The short training that supervisors received is also considered inadequate to help the program (USAID2012).

6. Shortage of drug and medical equipment supply

Beside lack of supportive supervision health posts also have shortage of essential drugs and commodities such as vaccines, Oral Rehydration Salt (ORS) and palliative drugs. Some do not have delivery beds and health post equipments essential for maternal, newborn and child health care as per the health extension package requirement (Hilom2008). Only 20% of the health posts are equipped with 80% of the minimum set of medical equipments while one third (34%) of the health posts have 60%. Fifty eight percent of health posts are equipped with 60% of the minimum set of medical equipments necessary for delivery and newborn care services. Only about a quarter (24%) of the health posts are equipped with all the necessary minimum set of medical equipments for provision of immunization services at the health post as well as outreach services (CNHDE2011).

As per the study conducted by USAID on urban health extension program; the program has only received budgetary support in limited settings and amounts. Besides, there is lack of clarity as weather the kebele administration (lowest administration unit) or the health center is responsible for additional budget support (USAID2012).

Policy options

Although the health extension program is considered as the major pillar of the Ethiopian Health Sector Development Plan; the following underlying problems hinder the achievement of some of its targets: limitations in designing the HEP package and its implementation strategies, in-adequate pre- service training of HEWs, in-adequate supportive supervision and management, dissatisfaction among HEWs, poor community uptake of the program and poor drug and medical equipment supply. In line with these; five options addressing underlying causes of the
problem are proposed. These are a tailored intervention strategy, continuing education, strengthening managerial supervision, pay-for-performance, and community mobilization. Each of these options is described below. They are complementary options and it may be necessary to employ more than one of these options to adequately improve the effectiveness of the HEP.

**Policy Option 1**

**Tailored intervention strategies**

Tailored intervention strategies are strategies that are designed to achieve improvements in health care based on an assessment of determinants of practice (Baker 2010). Systematic tailoring entails (at least) three key steps: identification of the determinants of practice, designing implementation interventions appropriate to the determinants, and application and assessment of implementation interventions that are matched to the identified determinants (Wensing 2012). A tailored implementation strategy to improve the implementation of HEP would include a systematic approach to clarifying and prioritizing the main determinants of HEWs practice (beginning with those identified in the problem section of this policy brief) and identifying and selecting strategies to address those determinants (including the other options identified in this policy brief).

**Impact of tailored intervention**

We could not come across a systematic review on the effect of tailored intervention on performance of community health program in low income countries. However, a systematic review on impact of tailoring an intervention on changing health care professional’s behaviour in high and middle income countries found that: interventions tailored to address identified barriers are more likely to improve health workers practice than no intervention or the dissemination of guidelines (Garcia 2011).

➤ *Tailored intervention strategies may improve health extension workers practice.*
Policy Option 2

Continuing Education

Continuing education in this sense does mean educational meetings which include courses, conferences, lectures, workshops, seminars, and symposia. The meetings can be highly variable in terms of content, number of participants, the degree and type of interaction, length and frequency. Educational meetings and printed educational materials are the most common types of continuing education for health workers. It is commonly used for continuing health workers education with the aim of improving professional practice and, thereby, patient outcomes (O'Brien 2009).

Educational meetings can be highly variable in terms of content, number of participants, the degree and type of interaction, length and frequency (Flottorp2008).

Impact of continuing education

We were unable to find a systematic review on impact of continuing education on community health workers. However, a systematic review which mainly incorporates studies involving qualified health professionals has evaluated the impact of continuing educational meetings and workshop on improving professional practice and health care outcomes. It found that educational meetings alone or combined with other interventions can improve professional practice and health care outcome for clients (Flottorp2008, Forsetlund2009).

→ Continuing education may improve health extension workers practice.

Policy Option 3

Strengthening managerial supervision

Supervision includes overall range of measures to ensure that personnel carry out their activities effectively and become more competent at their work. In health system of low- and middle-income countries, supervision is generally viewed as one of the central tools for providing continuous training to less qualified health-care workers entrusted with clinical and managerial tasks for which they may or may not have formal training. Hence, the term
supportive supervision is often used in this context rather than control-oriented supervision (Flahault 1988).

**Impacts of managerial supervision**

A systematic review evaluated the impact of managerial supervision on improving the quality of primary health care. They found that managerial supervision may improve provider practices and knowledge compared with no supervision (Herrera 2011, Bosch 2011).

⇒ Managerial supervision may improve health extension workers practices and knowledge.

**Policy Option 4**

**Pay-for-performance**

A pay-for-performance system is a remuneration arrangement in which a portion of the payment received by health workers is based on performance assessed against a defined measure. The elements common to all pay-for-performance programs are (1) a set of targets or objectives that define what will be evaluated, (2) measures and performance standards for establishing the target criteria, and (3) rewards, typically financial incentives including the amount and the method for allocating the payments among those who meet or exceed the reward threshold (Jim 2006).

**Impact of pay-for-performance**

We are not able to find a systematic review on the effect of pay-for-performance on community health programs. However, we come across a systematic review of the impact of pay-for-performance on improving the delivery of health interventions in low income countries. They found that it is uncertain whether pay-for-performance improves provider performance, the utilization of services, patient outcomes or resource use in low- and middle-income countries (Herrera 2011, Witter 2012).

⇒ The effect of pay-for-performance on health extension program is uncertain.
Policy Option 5

Community mobilization

Community mobilization is a process of empowering people to organize themselves, recognize opportunities, identify their collective potential, and utilize available resources to realize a shared goal through unified action. Community mobilization strategies are diverse and may result in differing levels of intensity of engagement and ownership (Howard-Grabman2007; Rosato2008). Community mobilization requires an understanding of the social structure of local contexts (Hounton2009).

Impacts of community mobilization

We have not found a systematic review on the impacts of community mobilization on communities’ uptake of community health programmes such as the health extension program. However, a systematic review on the impact of community mobilization on reducing intrapartum-related deaths found that community mobilization probably increases the proportion of institutional deliveries & reduces fetal/neonatal mortalities. The effects of community mobilization depend on the intensity of the mobilization efforts (Lee 2009, Steinmann 2010).

Community mobilization probably improve communities’ uptake of health extension program.

Implementation considerations

Tailored intervention strategies, continuing education, strengthening managerial supervision, pay- for-performance and community mobilization are five potential solutions to improve the effectiveness of health extension program in Ethiopia. Implementing these options require other changes, including policy changes. Strategies for implementing the options should take advantage of factors that enable their implementation as well as addressing barriers.

Enablers of improving health extension program in Ethiopia include:

- Strong political commitment from the government
- Availability of sound health policy which give due attention to health promotion and disease prevention
- Well defined Health Sector Development Plan (HSDP)
- The establishment of ‘Health Development Army’ in order to support health extension program implementation in the country.
- Major funding opportunities from Governmental and Non-Governmental Organizations
- A number of global and local partners and civil society organizations working on health extension program.
- The number of health centre staffs and district officers is on the rise in Ethiopia

Evidence regarding barriers to all options and strategies to address them are summarized in the following tables:

**Table I- Barrier to all options and implementation strategies that address those barriers**

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Description</th>
<th>Implementation strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial resources</td>
<td>There may be insufficient financial resources to implement these options</td>
<td>Pilot study to evaluate the costs and cost-effectiveness of the options before full-scale implementation. Resource mobilization through coordination of governmental and non-governmental organizations.</td>
</tr>
</tbody>
</table>

**Table II- Barriers and implementation strategies for option 1: Tailored intervention strategies**

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Descriptions</th>
<th>Implementation strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check list or guidelines</td>
<td>There is no standardized Check list/and or guidelines to tailor the HEP intervention strategies</td>
<td>Design suitable check list and/or guidelines. A checklist, developed based on a systematic review can be used to structure the process (Signe2013).</td>
</tr>
<tr>
<td>Lack of skilled personnel</td>
<td>Tailoring the HEP intervention strategies need qualified human power</td>
<td>involving stake holders</td>
</tr>
</tbody>
</table>


Table III - Barriers and implementation strategies for option 2: Continuing education

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Description</th>
<th>Implementation strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategies and manuals</td>
<td>Absence of need based strategic guidelines and training manuals</td>
<td>Redesigning the national integrated refresher training manual based on formative assessment of the knowledge and skill gap of HEWs in different regions.</td>
</tr>
<tr>
<td>Access to educational materials</td>
<td>There is lack of training materials and reference books translated to local languages which HEWs easily can understand</td>
<td>Availing training materials prepared in local languages</td>
</tr>
<tr>
<td>Practical training</td>
<td>Continuing education may lack practical training which is very important for skill development</td>
<td>Arranging practical training sessions Integrating the training with the primary health care unit</td>
</tr>
<tr>
<td>Inadequate trainers</td>
<td>Getting enough number of trainers at national level may become a challenge</td>
<td>Delivering training of trainers for competent district and primary health care Unit staffs and involving stakeholders</td>
</tr>
<tr>
<td>Career development</td>
<td>Continuing education is not related to career development. This might demotivate HEWs</td>
<td>Career development of HEWs based on competency assessment (FMoH2014).</td>
</tr>
<tr>
<td>Training quality</td>
<td>Poor quality of refreshment courses (HEPCAS, 2012).</td>
<td>Using continuous quality improvement strategies like audit and feedback, educational outreach and professional development and (Flo).</td>
</tr>
</tbody>
</table>

Table IV - Barriers and implementation strategies for option 3: Strengthening managerial supervision

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Description</th>
<th>Implementation strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency</td>
<td>Health centre staffs may not have the required level of knowledge and skill of health extension components and supervision.</td>
<td>Delivering appropriate training on basics of supervision and the components of the package to all primary health care unit technical staffs and supervisors at all levels of management.</td>
</tr>
<tr>
<td>Motivation</td>
<td>Primary health care unit supervisors may not be motivated to carry their duties since there is no any additional payment for the supervision activities</td>
<td>Designing and implementing motivation scheme for health extension worker supervisors.</td>
</tr>
<tr>
<td>Transportation</td>
<td>There is shortage of transportation for</td>
<td>Strengthening the primary health</td>
</tr>
</tbody>
</table>
supervisory activities care unit (health centre) with the necessary transportation facilities.

| Lack of clear chain of command | HEWs are evaluated by *kebele* cabinet but the technical supervision is conducted by health centre. Due to this performance assessment of HEWs is not done properly. | Chain of command should be clarified |

| **Table V - Barriers and implementation strategies for option 4: Pay-for-performance** |
| --- | --- | --- |
| **Barriers** | **Description** | **Implementation strategies** |
| Strategies and/or guidelines | There are no strategies and or guidelines to implement pay-for-performance strategy | Design suitable strategies and guidelines (ACCESS2010). |
| Feasibility | Pay-for-performance may be perceived as impractical or difficult to implement | Pilot testing to assess the feasibility of pay-for-performance |
| Fiscal sustainability | Fiscal sustainability could be a challenge (Honda2006). | Carefully designed exit strategies consistent with pay-for-performance programme objectives (Honda2006). |
| Implementation capacities | Capacities for managing pay-for-performance schemes are weak in LICs. Countries may not be able to meet the additional administrative demands related to pay-for-performance (Herrera 2011, Witter 2012). | Preparing pay-for-performance implementation guidelines Organizational change and capacity building on pay-for-performance of the relevant bodies within the civil service There is growing evidence that pay-for-performance need to link to existing and complementary programmes to be effective (Herrera 2011, Witter 2012). |
| Over reporting of performance | Abuse of money allotted for HEWs who certified model households would be a possibility by over reporting model families | Putting an appropriate auditing mechanism in place (Herrera 2011, Witter 2012). |
| Cumbersome bureaucracy | Burdensome paperwork to pay-for-performance to HEWs may discourage HEWs | Minimizing paper work |
| Inadequate processes | Process of assessing model household is not adequate | design a processes and tools to facilitate appropriate and efficient assessment system |
| Unintended effects of pay-for-performance schemes | This may include: adverse selection (for example, excluding high-risk people from care in order to obtain better performance), gaming (i.e. inaccurate or false reporting) and distortion (i.e. ignoring important tasks that are not rewarded with incentives) | Supportive supervision and management |
Table VI- Barriers and implementation strategies for option 5 Community Mobilization

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Description</th>
<th>Implementation strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural barriers</td>
<td>Presence of a heterogeneous culture might necessitate culturally sensitive community mobilization strategies</td>
<td>Conduct formative research to understand local cultures, beliefs and practices and design suitable strategies and manuals addressing local cultures(ACCESS2010)</td>
</tr>
<tr>
<td>Sustainability</td>
<td>As activists are volunteers, a lack of accountability may mean that the sustainability of this option could be a challenge</td>
<td>Integrate community mobilization into institutional structures (ACCESS2010)</td>
</tr>
<tr>
<td>Burnout of health extension workers (CNHDE2011)</td>
<td>Health extension workers who could be key players in community mobilization are already overworked</td>
<td>Increasing the number of health extension workers and reducing the number of households they are responsible for. Using health development army strategy (FMoH2013)</td>
</tr>
</tbody>
</table>
Next steps

The aim of this policy brief is to foster dialogue and judgements that are informed by the best available evidence. The intention is *not* to advocate specific options or close off discussion. Further actions will follow from the deliberations that the policy brief is intended to inform. These might include, for example:

- Careful consideration of the need for tailored implementation strategies of health extension program
- Careful consideration of the need for continuing educational meetings and workshop
- Careful consideration of the need for managerial supervision
- Careful consideration of the need for pay-for-performance of health extension workers
- Careful consideration of community mobilization
- Monitoring and evaluation of the suggested policy options and implementation strategies
- Consideration of appropriate implementation strategies for each of the five options

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