Study of the Working Conditions of Health Extension Workers in Ethiopia

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Abstract

Background: Ethiopia is well placed as a potential candidate for the Millennium Development Goals (MDGs) fast-tracking but the current 0.2/1000 human resource for health (HRH) clearly indicates the challenges ahead. However, there are also opportunities as the country has now launched an "Accelerated Expansion of Primary Health Care Coverage: 2005-2009" of which "The Health Extension Program (HEP)" is a major component".

Objective: The study focuses on the first batch of Health Extension Workers (HEWs) with the overall objective of assessing the working conditions of HEWs and their job satisfaction.

Methods: An in-depth field study was carried out on 60 HEW in 50 health posts (HP) from six regions, 23 zones and 27 woredas.

Results: There are challenges in harmonizing the staffing pattern at the HP level, guiding time-use, work schedule and relationship with the community. There are no clear guidelines on relationship with other health workers at the community level, on career structure, transfer, and leave of absences. Reporting and health management information system in general is weak.

Conclusion: Placing HEW at community level is a commendable undertaking but fulfilling favorable working conditions is an important challenge which is compounded by long distances and poor transportation and communication facilities. These issues are elaborated and possible responses discussed. [*Ethiop.J.Health Dev.* 2007;21(3):246-259]

Introduction

Ethiopia is well placed as a potential candidate for MDGs fast-tracking (1, 2). It has launched ambitious and accelerated development programs in health such as the Health Extension Program [HEP], the Accelerated Health Officers' [HO] training program. Human resources for health (HRH) are recognized as critical in achieving the MDGs (3, 4, 5). However, it is also recognized that HRH in Ethiopia as in many parts of the world, is in crisis (4, 6).

The minimum level of health workforce (MD, nurses and midwives) density required to achieve MDGs in Africa, for example, has been estimated at 2.5 per 1000 population. The current 0.2 per 1000 in Ethiopia clearly indicates the challenges ahead. Put simply, 'There is… insufficient human capacity in many developing countries to absorb, apply and make efficient use of the interventions being offered" through the various initiatives related to child survival, safe motherhood, HIV/AIDS, and malaria (7, 3). Countries with such extreme shortages need to increase rapidly the number of health workers particularly at the (rural) community level where the needs are greatest (3).

In trying to respond to the health care crisis, some programs started with the erroneous but appealing frontal and vertical attack neglecting, among others, the HRD aspects which are compounded by the HIV/AIDS crisis (8). There was also the additional challenge of emigration to richer countries. On the other hand, the situation also offers opportunities for responding to these problems because of the unprecedented mobilization of citizens concerned with HIV/AIDS and related issues and new funding institutions and initiatives (6).

In recent years, it has been increasingly recognized that getting HR policy and management 'right' has to be at the core of sustainable solution to health system performance (9, 4). The importance of this in the Ethiopian context for peripheral workers in particular has been amply demonstrated in relation to village health workers (10) and community health agents (CHA) (11).

Clearly, bridging the massive gap in HRH cannot await the lengthy education of doctors and nurses but must rather concentrate on briefly trained community-based workers, a solution that has been demonstrably effective in Africa and elsewhere (8); even though some argue that the evidence base for Primary health Care [PHC] (community level health workers) is, at best, questionable (12). The standard, selection and deployment of such cadre raises a number of ethical issues that must be clearly articulated but are not insurmountable (13). There is no magic bullet in human resources management (HRM); no single intervention is likely to provide a sustainable solution to all the workforce challenges. The need for workable policies in ability, motivation and opportunities (AMO) to maximize the contribution of the workforce is evident.

Evidence base for further development and monitoring and evaluation of policies and strategies is critical (7) and the Center for National Health Development-Ethiopia (CNHD-E) aspires to contribute to this through this and similar studies. HRH interventions, especially such a rapid scaling up as proposed in "The Accelerated

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Coverage of PHC in Ethiopia: 2005-2009" (14) and the "Accelerated Expansion of Health Officers Training in Selected Hospitals" (15), require political commitment, political management, strategic policy direction, coalition building, and generation of intelligence that can only be managed if good stewardship function is in place (7). This, previous and subsequent efforts in CNHD-E will attempt to foster and contribute to this stewardship not only through the 'generation of intelligence", but also through advocacy and mentoring based on them.

Working conditions, part of the broader HRM, are important in terms of creating the conditions for effective and efficient work, boosting morale of the workforce, reducing turnover and attrition (9). Creating adequate working conditions to ensure that workers are retained in a sustainable way is at the core of creating a sustainable health system (7).

HSDP-III recognizes incentive packages; trainings and career structures; participatory planning, monitoring and evaluation of sectoral activities; and dynamic and responsive organizational structure as appropriate institutional responses in HRH (15, 16). The Civil Service Reform Program (CSRP) introduced in February 2002 has a human resources management component which could be highly relevant to HEW concerns.

Ethiopia has launched 'An Accelerated Expansion of Primary Health Care Coverage' (14). This implies the training and deployment of over 30,000 HEW to man some 15,000 health posts (HP) by 2009. The importance of community-based health workers has been well recognized. "For any individual service transaction to be successful, there needs to be a frontline provider who is capable, who has access to adequate resources and inputs, and who is motivated to pursue an achievable goal" (17). But promising starts have often foundered on working condition issues. While resource constraint and the generally underdeveloped environment could explain part of the failure, it has been shown that *lack of attention to the details of working conditions* and to human resources (HR) management in general has been an important factor.

There were, in 2005, about 2800 HEW working for over 6 months in a number of woredas all over rural Ethiopia. In 2006 they will be over 9000. This study focuses on how the first batch, deployed in early 2005, have fared, the strengths and challenges in their work conditions and, based on our findings and international experience, indicate where strengthening, remedial measures and improved preparations are required. The sheer number of subsequent deployments, the high expectation from their deployment and the circumstances of the current democratization process are bound to give high resonance effect to any mishaps in the implementation of this innovative and potentially break-through process.

Previous studies (18, 19) have raised some concerns about the preparedness at the woreda and other levels to support the work of HEW. It was therefore important to assess conditions about a year later, once a number of HEW have been working in communities for about 9 months. Consequently, the overall objective of the study was to assess the working conditions of HEW and their job satisfaction (empowerment defined broadly and motivation) to date in order to recommend improvements for the future

More specifically, the study assessed the living conditions of HEW; housing and availability of certain amenities; conditions in the HP - building and facilities, equipment and furniture, and supplies; availability of reference/reading materials; conditions for salary and operational budget; working hours and other duties, rights/privileges; transportation and communication; administration, monitoring and supervision; relationship with communities; perceived accomplishments and future aspirations; and identify and disseminate good practices.

Method

This is the first study of HEW in the field. Knowledge and experiences on working conditions are very limited and there are virtually no previous studies on the subject. The study was, therefore, exploratory and essentially qualitative to pave the way for future more systematic (representative sample based) studies. The methods include:

Review of literature and documents

The literature on HRH in relation in particular to the current HRH crisis and community based health workers is large. The review, therefore, privileged Ethiopian literature and documents with emphasis on HEW.

In-depth field study

In-depth study was carried out in six regions (Amhara, Benishangul and Gumuz, Harari, Oromia, SNNPR and Tigray; 23 zones, 27 woredas, 50 HP and 60 HEW were interviewed using different sets of questionnaires (pre-tested in a woreda in Oromia) and visit to the sites. The selection of woredas was purposive in each region with the aim of making them as diversified as possible (different zones etc). In woredas, HPs were selected by random sampling. In each region, discussions were held with the RHB (mostly focal person), the Woreda Health Offices (WHOs) in the selected woredas and the HEW in the selected HP/kebeles. In addition, secondary information was collected on 86 other HP with HEW through the WHOs.

Characteristic of Respondents and Institutions Studied

Only 5 of the 60 HEW (8%) interviewed were born in the kebele of their current assignment. Another 10% were from neighboring kebeles while 52% were from urban areas. At WHOs level the Head and/or the focal person

for HEW filled the questionnaires. This was followed by discussion to complete and amplify the information. At regional level the relevant /focal persons in RHB and Technical and Vocational Education and Training (TVET) Commission were interviewed.

Results

The following one findings pertaining to resources at the HP.

Proximity to Administration /supervisory bodies

Distance of the HP/kebeles visited varied from 1 hour to seven hours by foot from the woreda capital and therefore from the WHOs; 81% were at more than 10 km from the WHOs. And while distance from the nearest HC was relatively shorter, 63 % are still at more than 10 km (Table 1).

Table 1: **Distance of HP from WHOs and HC**

Distance	WHOs		HC	
	Number	**%**	**Number**	**%**
1-4 km	2	3	2	4
5-9 km	9	16	18	33
10-14 km	10	17	9	16
15-19 km	16	28	13	24
20+	21	36	13	24
Total	**58**	**100**	**55**	**101**

Building, Equipment and furniture

The regions often classify HP as functional i.e. building completed and reasonably equipped and furnished or non-functional i.e. building not completed and/or not equipped or furnished.

HEWs have been posted both in functional and non-functional HP and in a number of cases in kebeles with no HP. In the later cases they often worked from the kebele office. HP buildings varied. All had corrugated iron roofs. Some (almost all in Tigray with two rooms and Harari with 3 rooms) are the standard cement block with cement floors. In most others, the most recent HPs are made of wood and mud and may have up to 4 rooms (Table 2).

Table 2: **Characteristics of HP in the study**

Building	Amhara	BG	Harari	Oromia	SNNPR	Tigray	Total	%
Wall material								
Bricks	-	-	-	1	-	-	**1**	1.8
Cement blocks (Bloquets)	-	-	4	7	5	2	**18**	32.1
Stone & cement	-	-	-	-	-	8	**8**	14.3
Stone & mud	-	3	-	-	-	-	**3**	5.4
Wood &mud	13	-	-	8	5	-	**26**	46.4
Water source								
Tap inside house	-	2	-	-	-	-	**2**	3.6
Tap outside house	2	1	-	3	2	-	**8**	14.6
Protected well/spring	8	-	2	5	8	7	**30**	54.5
Unprotected well/spring	3	-	2	5	-	1	**11**	20.0
River or lake/pond	-	-	-	1	-	2	**3**	5.5
Other	-	-	-	1[1]	-	-	**1**	1.8
Toilet facility								
None	7	-	-	1[2]	1	-	**9**	16.4
Pit private	-	-	2	7	-	1	**10**	18.2
Pit shared	6	3	2	7	9	9	**36**	65.5
Flush toilet	-	-	-	-	-	-	**-**	

[1] Collect rain [2] Damaged

Out of 56 who reported on light sources, 41% had none, another 41% used lantern and only 2 (4%) had electricity. For a purportedly 'health' facility, a number do not have/use neither protected source of water (25% in our sample) nor any latrine (10%) (Table 2). The possible impact of these on the credibility of the health messages conveyed by the HEW should not be underestimated.

Equipment and furniture procurement effort, as reported by the regions, is commendable. Almost all equipment and furniture for the available HP (e.g. SNNPR) seems to have been procured. However, distribution seems to be a problem as there were a number of empty HPs (e.g. one in Beni/G). In our sample, none had what could be

Table 3: **Number of HP with Selected Equipment &Furniture by Region (Total number of HP)**

Equipment & Furniture	Amhara (13)	BeniG (3)[1]	Harari (4)	Oromia (18)	SNNPR (10)	Tigray (10)	Total (%)
Child scales	7	1	-	11	3	6	28 (48)
Adult scales	4	1	-	11	3	3	22 (38)
Blood Pressure apparatus	8	1	1	13	4	6	33 (57)
First aid kits	5	2	-	7	2	5	21 (36)
Delivery kits	9	2	-	8	3	4	26 (45)
Examination table	5	2	-	13	3	5	28 (48)
Refrigerator	-	-	-	6	3	-	9 (16)
Chairs	9	1	-	13	10	10	43 (74)
Benches	4	1	-	13	9	10	37 (64)

[1] One HP did not have any equipment or furniture yet

adequate (according to FMOH standard [20]) equipment and furniture. Even where there are reasonable numbers of equipment, they are often not utilized or, in the case where there are senior health workers in the HP, not used by the HEW. In the case of delivery kits and couches, it they are not used because very few or no one comes for delivery at the HP even where there are nurses.

Staffing

HEP Implementation Guideline stipulates a staffing pattern of two HEW (and two guards) per HP. Actual staffing however varied a lot. While Amhara region adheres closely to the guideline, most other regions (Oromia, SNNPR, Tigray...) have opted for the placement of one HEW as a transitional arrangement until the full complement of HEW is available. Some regions (Oromia, BeniG, Harari...) assign one or two other health workers, mostly Junior Public Health Nurse (JPHN) in addition to HEW. This is usually as response to curative demand but often places the HEW in an ambivalent situation. There are also a number of community based workers (CHA, TBA, CBRHA, see Table 4).

Table 4: **Number of Other Health Workers in the Kebeles Studied by Region**

	Amhara	BeniG	Harari	Oromia	SNNPR	Tigray	Total
Health promoter	118	-	-	17[1]	105	-	240
Community Health Agent	52	-	1	6	10	36	105
Trained Traditional Birth Attendant	52	1	-	52	10	45	160
Community Based Reproductive Health Agent	21	-	-	62	9	14	106
Frontline/Primary Health Worker	-	-	-	-	2	1	3
Other:							
Junior PH Nurse	-	1	3	-	-	-	4
Senior PH Nurse	-	1	-	-	-	-	1
Health assistant	-	-	-	3	1	-	4
Malaria worker	-	-	-	17	-	-	17
Midwife	-	-	-	-	1	-	1

[1] Only one HP

Supplies

The supplies situation seems erratic at best. Some HPs have no supplies at all (Akuda, BeniG). Where there are supplies, some major items/drugs may be missing e.g. contraceptives (a number of HPs in Oromia, Amhara etc); oral rehydration salt (ORS) in a number of HP and/or anti-malarial drugs, CoArtem in particular (BeniG, Oromia –because considered unreliable at HP level). On the other hand the supply of malarial drugs in Tigray and Amhara is commendable. In some of the HP, available drugs may not be used by HEW because HEW do not feel competent to use them or are not allowed access to the drugs where there are senior health workers in the HP.

Reference and reading materials

The reference materials prepared by MOH are now available in almost all the HP visited. In many areas these materials are in English and, given the language problem, of limited use. Materials prepared by Carter Center, in even more advanced English, have reached TVETI but not yet the HPs. There are practically no other reading

materials at the HP level. They do not get any newspaper, newsletter or journal. Filing facilities being almost inexistent (only 5/50 of HP - 1/15 in Amhara, and 4/10 in Tigray – had filing cabinets) most are scattered haphazardly and had to be (painfully) retrieved for inspection by the study teams.

Transport and communication

None of the HP had any means of transport except in Harari and Oromia where two HP visited each had motorcycles. These were not however used by HEW but the nurses in the HP. One HP in Oromia has animal transport, mostly for use by health promoters. Seven HP in our sample had no access road while some 27 have only dry weather road. Of those reporting, some 25% had no access to public or private transport. Most HPs have no means of communication as telephone, post office etc are at quite a distance at most in the woreda capital (see Table 5). None had easy e-mail access. Few woredas, e.g. Northern Shoa, provide HEW with umbrellas and raincoats.

Table 5: **Distance of HEW from some Facilities**

How close are the following?*	Very close	Close	Far (%[1])
1. Food market	24	11	19 (35)
2. Post office	19	9	27 (51)
3. Primary school	46	7	2 (4)
4. Secondary school	10	18	13 (32)
5. HC	19	6	28 (53)
6. Hospital	11	13	28 (54)
7. Bus/Taxi service	19	8	26 (49)
8. All weather road	35	6	12 (23)
9. Dry weather road	45	1	3 (6)
10. Drinking water	41	7	5 (9)
11. Telephone booth	21	2	24 (47)
12. Milling house (facility)	32	12	9 (17)
13. Cooking fuel	25	12	16 (30)

*Very close= <30', Close+ 30-60', Far+ >60'
[1]Of those who have answered the question.

HP: Finance

Budget

Invariably, the HP does not know its budget. They are not told of the amount of recurrent operational budget they have for the year. They could ask routine supplies such as stationery, soaps etc and would be supplied as much as possible on ad hoc basis. HPs are competing for such items with HC in a very uneven and opaque field. Operational budget at the woreda level is very limited. There is no budget for program activities such as environmental health (EH), nutrition education.

Salary and per diem

All get their salaries regularly at the end of the month. All get the 381 Birr stipulated by MOH however, Amhara Region has decided to raise it to 426 (equivalent to assistant nurses or technicians) apparently on appropriate scale considerations. Salaries are collected most often at the woreda capital (80%) from the Woreda Administration Finance Office (73%) or from WHOs (7%). Some (3 in Amhara, 2 in SNNPR and 4 in Tigray) collect their salaries from the nearest health facility mostly HC. A few (2 in SNNPR and 1 in Tigray) collect it from the kebele office. All payments are made by the Woreda finance office. Most HEWs thus spend at least a day in the woreda capital each month. The WHOs could plan to use this opportunity partially for professional and/or administrative purposes. HEW get per diems for participation in some of the 'vertical' programs such as polio campaigns, trachoma control or de-worming and also when they attend meetings or workshops.

HEW: Work Routine

Work schedule/hours

Work patterns varied. Where there are two HEW, some alternate every day, one working in the HP and the other in the field. Some work, together, half a day, usually in the morning, in the health post and the other half in the field. Others work alternatively a number of scheduled days in HP and in the field. In one HP (Cherecher, East Harrighe) field/community work was only done on Saturdays, Sundays and holidays to accommodate busy farmers. SNNPR Guideline (21) prescribes 75% of time should be spent in the field. For 5000 people, one HEW does not have to spend more than half a day to cover HP visits including the paper work. A down-sized variant of this pattern is carried out when there is only one HEW. In cases where HEWs are placed with (PH) nurses, they are

confined to field work. Most HPs do not have formally developed work schedule and, what ever schedule there is, is rarely posted for consultation (by community, supervisors…). Only four HP in our study - Leka Dulecha, Mana, Gorogotu, and Ameya in Oromia had posted their program. In Gorogutu, the duties and responsibilities of HEW was also posted. Most of those who had written programs have not discussed these with either the relevant kebele officials or with WHOs let alone with the community at large. In Tigray and Amhara, the HEW focus on 50 selected, closely grouped households (HH) for what is called the 'Family Package' i.e. the whole HEP package. These HHs get intensive exposure (96 hours in Tigray) are evaluated at the end of the period, and if successful, 'graduate' and are given certificates. The HEW then move to the next batch of 'Family Package'. Those HH not included in the 'Family Package' are involved in a more toned down minimum package program. Most HEW claim very long hours of work including Sundays (e.g. Amhara, Oromia, Tigray).

Time utilization

Almost invariably, HEW indicate that the highest proportion of their time is spent on health education (more than 50% spent more than 30% of their time on health education) followed by environmental health (about a quarter estimated using 25% of their time for environmental health). Very little time is used for community documentation, family health and diseases control and prevention. In Community Documentation component, few have done the kebele census and rapid assessment they are expected to do. Some, as in Tigray and Amhara, have limited the community documentation work to the 'Family package' group (Dawa Chefe); others (e.g. Gedebo/Kobo) have done a survey of every 10^{th} households. Apparently, HEWs currently spend little time on Family Health (FH) and disease control and prevention (DCP) in spite of the fact that most spend quite a high proportion of their time in the HP. The findings are confounded by the fact that quite a number of HEWs, in Oromia in particular, work in HPs with Public Health Nurse (PHN) who handle most of the activities in these components. However, given the high proportion of time allocated to these components in the curriculum and the high expectation on the impact of these interventions towards achieving development goals, the situation merits close monitoring. On the other hand, environmental health (EH) and health education (HE) seem to be getting the due attention they merit.

Uniform

The situation regarding uniforms varies. Tigray and Amhara have decided to introduce uniforms, probably white gown for work in the HP and another color for field work but have not fully introduced them yet. Harari provides white gowns. In Oromia, some HP have white gown while others do not.

Living conditions of HEW

Housing

About 37% (22/60) of HEW in our sample live in one of the rooms of the HP (Tigray 40%, Amhara 53%, Harari all and some [22%] in Oromia), others (12%) in a separate unit in the compound of the HPs. In some cases, the kebeles provided housing, sometimes built for other purposes. Some (15/60 in our sample), were obliged to rent a house in the kebele. Rent varied from Birr 5 in one case in Tigray to Birr 50 in Oromia). There was even a case where the HEW commuted daily from her house in the nearest town. Most of the houses were a one room unit (54/58) often shared with the other HEW. They were mostly built of mud and wood in the traditional manner. Most were owned by the HP (24) or the kebele (19) or relatives (9). One in SNNPR owned her own house. Those in the HP shared the water and toilet facilities; those living in the community seem to adapt to the coping mechanisms of the community; for example, 25% it HEW used unprotected water sources and 13% had no toilet facility.

Access to information, amenities and ownership of essential furniture

HEWs have very little access to information. Most (38/50) have their own radio and almost all listen to radio quite often at neighbors. They have almost no access to newspapers or television. They do not get any professional information material (e.g. Newsletter). As some kebeles are distant from towns this could lead to a sense of complete isolation. Most of the kebeles are at considerable distance from the woreda capital (some over 7 hours walk). Of the visited HP for example, three each in Amhara and Oromia and two in SNNPR were over 20 km distance from the woreda capital; therefore, interaction with the WHOs and other offices is limited. Post offices, telephone, HC, hospital, food markets (for those commodities not available at community level), secondary school are often very far (Table 5). Road conditions differ. While almost all kebeles are accessible by, at least, dry weather roads, some kebeles are only accessible by foot in the big regions (e.g. Amhara, Oromia).

Administrative Issues

Organizational structure and accountability

To the question of "To whom are you directly responsible?" most HEW (36/60) answered WHOs (Table 6). A few (19/60) are responsible to the nearest health facility, mostly HC. Even fewer (12/60) said they were responsible to the kebele chairperson. This usually, except in one case in Oromia, meant dual responsibility as they also said they were responsible to the WHOs.

At WHOs level the position of the HEP seems to be evolving. All (except Mana and Bosset woredas) have a focal person in the WHOs, most often the environmental health technician on the team. Patterns of organization and responsibility varied including placing of the HEP

Table 6: **Hierarchical Accountability as reported by HEW**

To whom are you directly responsible?	Amhara	BeniG	Harari	Oromia	SNNPR	Tigray	Total (%)
The other HEW in HP	2	-	-	3	3	-	**8**
The kebele chairperson	6	-	-	-	1	5	**12**
The kebele Health Committee	-		-	-	-	-	**-**
The WHOs	13	2	4	11	4	2	**36**
Other:							
Nearest HC or clinic	4	-	-	-	5	10	**19**
Health Assistant	-	-	-	3	-	-	**3**
Junior nurse	-	1	-	1	-	-	**2**

directly under the Head of WHOs, or under the DPC desk or under Health Programs (Health Services and Training) desk. Some are studying the possibility of establishing an HEP unit on its own.

At the **kebele level**, conditions are even more fluid. In most, no clear link with kebele institutions have been established. Kebele Health Committees are supposed to guide health work at the community level (Health Policy and Strategy). This has been stressed in the HEP Guideline (20) however very few have established such committees. In our sample, only 25% of the kebeles (2 in Amhara, 7 in Oromia, 6 in SNNPR and 1 in Tigray) had health committees and of these only a handful met regularly. In some (3 in Amhara and 2 in SNNPR) HEW sit in the Kebele Council.

Most HEWs are not formally anchored in the kebele structure yet. Only 12 said they were responsible to the kebele chairperson. Most HEWs seem in fact to perceive the kebele officials as instruments for implementing/imposing (by administrative fiat) their programs on the community. In most cases the plan of the HP and the work program of the HEW seem to be drawn without clear notification let alone consultation at the kebele level.

Supervision/monitoring and logistics

Encouragingly, a lot of attention seems to be given to supervision at all levels. The data shows that 50% had 3 or more supervision visits in about 9 months and, on average, each HEW had 3 supervisions. Only the three HP in Beni/G, just started, and two each from Oromia and SNNPR had not had any supervision prior to our visit. Most supervision was by WHOs (over 80%), except a few supervisions by HC in SNNPR and a larger number in Tigray.

Supervisors mostly checked records (77%), checked stocks (65%), discussed work plan (58%), discussed work conditions and gave oral feed back (81%). But none gave written feedback.

Varied approaches are evolving. Some are working on the principle that only WHOs should be involved (e.g. Amhara, Oromia). Others tend to involve the closest health facilities, HC in particular (e.g. Tigray, SNNPR). Kebele officials are involved in supervision in some woredas. The Guideline (20) envisages (only) team supervision, with wide participation, coordinated by WHOs.

Relationship with other health workers

A number of community-level/based health workers exist in most kebeles: CHA, TTBA, CBRHA, malaria, trachoma agents, Health Promoters (mostly SNNPR and Amhara and a few in Oromia, Table 4). Most of these started as NGO projects or vertical programs with their own chain of command. The relationship between these workers and HEW are not clearly established yet. There is bound to be conflicts as HEWs become more seasoned unless duties and responsibilities are more clearly defined. In principle, there seems to be a consensus that the HEWs should at least have an oversight role. There are reports of CHA referring cases (malaria in particular) to HEW in Tigray. In some HPs, HEWs are placed with other health workers, mostly junior public health nurses (JPHN). Relationships in most of these cases are ambivalent with HEW excluded from any activity (even immunization) in the HP. In some of these cases, the HEW has no direct link with WHOs.

Table 7: **Perception of HEW of Their Living Standard Compared to Others**

Standard of living compared to:	Better	Comparable	Worse	DK	Total
Better-off farmers	19	8	27	5	59
Kebele officials	22	16	22	-	60
Teachers in kebele	11	20	25	4	60
Agricultural. Extension workers	5	14	26	11	56

Career structure, upgrading, promotion, transfer and rewards/CE

The **career structure** for HEW has not been formally established yet. The indication from interviews at different levels and the aspirations of the trainees (see below) is for upgrading into the nursing and environmental health categories. But how and at what level they will fit into this scheme has not been elaborated. The MOE strategy and curricula foresee discrete training paths for different vocational groups (nurse, environmental health, lab, x-ray, and pharmacy technicians) but has not envisaged HEW and how they will fit into this scheme (22, 23).

There is a high anticipation among HEW of **upgrading** their status soon (most say this has been promised during recruitment). Most expect this after two years of service. However, there does not seem to be any clear guidelines and preparation on this at any level. What are the requirements (years of service, quality of performance ...), how many would/could be upgraded each year, what would be the selection process, who would be involved in the selection, where will be upgrading training etc? This could be one of the most important challenges to the governance of HEP.

There are also no clear guidelines on **transfer** of HEW. Selection from the kebele in which they will be working after graduation which was assumed to guarantee a reasonably long service to the community at the kebele level, was flawed. A few HEW indicated preference to placement outside their kebele of origin; probably an inclination towards public employee status rather than a community worker. A system of **rewards** for commendable performance has not yet been formally established.

Reporting/administration documentation and HMIS

All HP send regular reports to WHOs many every two weeks (a number send weekly malaria reports) but all at least once a month. Some also report to the nearest HC/clinic (Tigray and SNNPR). Most HPs do not have a format for reporting; the RHB SNNPR has prepared and Amhara is finalizing one. The report is essentially routine and the HEWs rarely receive any feed back; only 7 out of 60 received oral feedback and none written feedback. Even though some HPs report a registry book in their supplies, registry of daily activities is hardly practiced. Thus reports are not based on routine source document and are difficult to verify. Reports are not sent to the kebele.

Referrals

HEWs report very few referrals. In total, about 40% in our sample have not reported any referral. Contact with HC/nearest health facility (HF) seems very weak. There are no referral forms and those who have sent referred patients use pieces of papers. Referral papers rarely confer any privilege. HEWs have not received any feedback on their referral from HF and very rarely from the patients. There is also no report of HC/hospitals referring patients to HEW for follow up.

The community

Community participation/expression

Communities are, in general, reportedly well disposed to HEW. 50% of the HPs reported that kebele officials are highly or very highly supportive of the program. However, there was none or poor cooperation in 20% of the kebeles. Communities readily participate in HP construction even though there are resistances in few places. However, there is very little participation of communities in planning and programming and management of HP/HEP in general (see management above). There have been very few complaints by the community, except for the absence of curative care (see below). Communities participate in HEP actively except for some reluctance during busy farming periods.

The 'curative' service challenge

Curative care is a pervasive request in almost all communities dictated by the long distance and high cost of traveling to HC or hospital. During one visit (Chiro), the study team found the community at a meeting in the HP and the dominant issue was the provision of curative services. The push for some/additional curative services is promoted by most WHOs. Even though provisions/logistics might be erratic HEW have started providing first aid, ORS and malaria drugs (including CoArtem in some and soon probably in all malarious areas). The additional demand seems to be for antibiotics and probably injections. Even though HEW may soon carry antibiotics as part of the Child Survival/community Integrated Management of Childhood Illnesses (IMCI) strategy, the demand for more/better curative services is a challenge to the HEP.

Delivery service

No delivery service by HEW is reported in the study woredas even though a number of HPs have delivery kits and couches (e.g. Amhara, Table 3. The only exception is a HEW in Mana who has carried out one home delivery).This may be related to the fact that very few deliveries (normal in particular) are brought to health facilities in general (most HC are under utilized in this respect). There is also competition from TBA in home delivery and, probably, most HEW do not feel confident enough to undertake delivery independently because of limited practice during the training.

Job satisfaction/motivation, future aspirations

Accomplishments

Most have been on the job for over 6 months and, therefore, in a position to assess their accomplishments:

Community Documentation appears to be a relatively weak link. Except for analysis and sending reports, most of the other jobs - preparing plan of action and maintaining stock in particular – seem to lag behind.

There is no hint that HEW are/will be involved in vital events (birth and death) registration even though HSDP II puts "register all births and deaths… involving community social organizations and churches" as targets for HEW (24).

In ***Family Health Care*** accomplishment in providing FP Services, Immunizing Children, and Enabling Mothers to Prepare Balanced Diet are considered high while nothing or very little has been accomplished in Providing Nursing Care, Employing Universal Infection Precaution, Providing Home Delivery and Providing Care to Children with Common Childhood diseases. In some regions, for example Tigray, immunization is not undertaken by HEW independently but as part of the outreach service of HC in which HEW collaborate. In ***Disease Prevention, Control and Environmental Health*** and ***Health Education*** almost all jobs get good accomplishment rating.

Empowerment

Most find their work fulfilling. Except for those who work under nurses in the HP, they work quasi-independently and take most decision on their own. All HEW interviewed are still highly motivated and continue to see their job as a mission to improve the health of the population.

Future aspirations

Very few expect to stay in the kebele of their present assignment or even as a health extension worker for more than two years. Only 16% expect to stay more than three years. The majority would like/expect to upgrade to nurse (about 70%) and the rest to environmental health. Few mention pharmacy technician, administrative positions and, interestingly, two mentioned upgrading to diploma in HEW. None chose move to private/NGO health services, working outside the health sector or stopping employed work altogether.

Discussion and Conclusions

HP Resources

In the context of poor transportation and communication systems, distance could have an important impact on logistics, monitoring/supervision, referral, and the overall motivation of the HEW. Good health service performance depends not only on the location, skills and motivation of staff, but also on the buildings, equipment and materials they require to do their job (25). It is, therefore, important to complete HP before the arrival of the HEW or, at least, as soon as possible there after since it could impact on effective work and the motivation of HEW. It should also be seen as a measure of the commitment of the woreda and kebele officials and the community. Facility is only the first step to effective coverage. It is of little value if it does not have the appropriate equipment (26). While variation and the perceived low quality of some of the buildings might not matter in the short run, availability of the minimum standard of equipment and furniture is critical both for motivation of the HEW and acceptance/perception of the communities. Repeated shortage/lack of equipment and supplies, as observed in this study and confirmed in HSDP II evaluation (5), could lead to under-use of HEW with ensuing problems. Measures taken in procurement at the regional level are commendable but all, the WHOs in particular, should ensure that the items effectively reach the HP. The standard is one HP for a kebele of 5000 inhabitants but there are a number of kebeles with much less and others with much more people. In our sample, while two-third of the kebeles had a population between 2500 and 7500, 7% had less than 2500 and 26% more than 7500. How should these be addressed, through the creation of specific health kebeles? This seems unlikely, since it will only add to the confusion and overhead. An alternative might be to create subunits (nucleus HC) as in Tigray. The better way to address this problem might be to place a minimum of 2 HEW in any kebele and additional one HEW for each additional 2500 population. This seems the more plausible approach (SNNPR is already developing strategies along this line) even though there is a potential over-staffing of the smaller, those with less than 3000 people, kebeles.

Another important characteristic is the inadequacy of staffing of WHOs. On average, the WHOs studied had only 5 **technical staff**. The implication of this understaffing in terms of the management of the woreda health services should not be under-estimated.

The rapid expansion of HP (and consequently HC) is bound to strain **equipment maintenance and repair capabilities** in the sector. Measures should be taken immediately to build commensurate capacity in this field.

The placement of senior health workers (J/APHN) with HEW in the HP seems to alleviate the demand for curative care but raises a number of questions for more thorough studies and decisions. A first question is whether this is sustainable. In some regions where this is more widely practiced, their placement is only seen as a transition arrangement; what will be the implication (acceptable to the community) of their eventual withdrawal?

Continuous availability of basic supplies, drugs and vaccines in particular, is a defining criterion for the effectiveness, efficiency, acceptability and overall sustainability of HEP but has been a major problem in the Ethiopian health system (5, 24). Immediate measures should be taken to ensure adequate availability and sound

management of these supplies in anticipation of the greater demand of servicing over 15,000 HP.

Reference materials are important and the effort so far is commendable but more adapted versions might be required. More importantly, upgrading, new and improved approaches and technologies should be introduced through more flexible formats (such as Newsletters and leaflets).

It has not been possible to obtain estimates of kebele sizes. A previous study (19) gives estimates varying from 8 km² in densely populated areas to 53 km² in others. However, distances are bound to be considerable in most (of the less densely populated) kebeles. Distances from the woreda capital/WHOs or the nearest HC are bound to be great (WMS 2000, WB 2004). Thus the need for a means of transport and communication for HEW is clear. It might be reasonable to accept that in most of the remote highland areas travel will only be on foot for sometime to come (11, 27). Given the rapid evolution in information, communication technology [ICT] (28, 29) in the country, strategic thinking on alternatives in communications (two-way radios, mobile phones etc) should be initiated as of now. The Ethiopian Telecommunication Corporation has plans to reach all woredas (Woreda-Net, Rural Connectivity) and all kebeles in the next 5 years (2, 30).

HP Finance

No HP knows its budget. Even at the WHOs level, there is no clear indication of what the operating budget for HP is. If all operational budgets are to be derived from the community, this should be clearly articulated and the necessary guidelines, rules and regulations established. Otherwise, it will be clearly very difficult to prepare work plans. The possibility of introducing community-based health financing schemes (CBHF: cost recovery, community insurance etc) could be explored. The proposed HEP FUND might go some way in meeting this need (16).

Woreda level budgets are small. The target to allot 15% or more of the woreda expenditure to health (24) has not been reached in any region. HP are competing from this small envelop. This is compounded by the perception at the woreda level that there is 'donor' fund for health activities (5). The budgeting process merits a closer scrutiny. HEP entails a major shift of resources to rural areas in terms of salaries. This should be matched by a comparable. This will contribute significantly to the policy position (31) of shifting resources to rural areas.

The salary level and regular payment seems adequate and is appreciated by the HEW. Though a more through economic study might be needed, HEW seem to attain a reasonable income level by rural standards with their salary, various per diem and housing (where provided). Variable remuneration among regions should be avoided. Inconsistent remuneration patterns have been shown to be disincentives in other contexts too (32).

Almost all HEW spend, at least, one day in the woreda capital to collect their salary. WHOs should explore the possibility of using these occasions for a programmed contact with HEW (e.g. 2-3 hours) in order to give feedback on reports, in-service training and discuss work plans.

HEW Work Routine

While variations in work schedule should be expected because of the differing local conditions, some principles should be adhered to. For example, each HP/HEW should develop its own work plans. These should be prepared as much as possible in consultation with kebele officials/ the community and WHOs or, at least, these bodies should be duly notified. Then, the agreed upon work plan should be posted in the HP.

Health Education (HE), quite understandably, occupies a considerable amount of the time of HEW. It is, therefore, important to ensure adequate time and attention to knowledge and skill development in health education during their training. However, HE, one of the triumvirate of public health interventions, is only considered a 'Supportive Course' in the curriculum and given only 30 hours of training or 2% of the total training hours; much less than math or English (75 hours each, civics or introduction to IT (50 hours each) and entrepreneurship (80 hours, [33]). Notably, Environmental Health seems to fare well because most direct supervisors are environmental health technicians and act as coaches. Overall, it is important to closely monitor trends in Community Documentation, FH and DPC and take measures to promote them. There seems to be no common format for community documentation. MOH should lead in developing one with core/mandatory info and with flexibility for local adaptation. This could go a bit beyond lay reporting and include simple data on, birth and death and population movement registration. Central guidelines would ensure collection and comparability of core data. Local (Butajira, Dabat and Jimma) and international experiences in community level data collection should be reviewed.

Living conditions of HEW

Housing is very important in motivating HEW and in, possibly, lengthening their stay in the communities. The trend in our sample is encouraging. Those kebeles who have not done so to date should be encouraged to provide housing in or very close to the HP compound.

Availability of safe water supply and toilet facilities (pit latrine) is very important not only as basic need, but also because of the wrong message conveyed to the community by their absence in or near the HP and/or the

residence of the HEW. Making these available should be the priority of priorities. Most HEW live in remote isolated areas. This isolation could have a negative effect on the quality of work and motivation of HEW. The possibility of preparing a newsletter dedicated to HEW to periodically present news on exemplary activities, innovations, problems and solutions, best practices, new developments etc should be explored [central or regional level e.g. problem of language; content, format, periodicity etc]. It would be also important to encourage all HEW to have a radio even though the impact of the media to date is limited (34). Owning some property could be important in improving their living conditions and also motivating and anchoring them in the kebeles. The possibility of providing them with a small credit for installation should be explored.

Administrative Issues

Inputs (buildings, equipment, supplies, human resource...) are not enough, how they are planned, allocated, organized, and managed determines cost-effectiveness and sustainability. At the WHOs level, while the final organizational arrangement has to be flexible to take account of local conditions and resources, the tendency to leave HEP to a focal person alone should be rectified. It must be understood that all desks, teams and experts have a role in HEP in their respective competence and responsibilities. The focal unit, team or person's role should be, essentially, to facilitate and coordinate information flow and actions.

The importance of active participation of the community in its own development, including the choice of priorities, objectives and actions to be taken for health through a functioning community organization has been recognized since the early 1970s. HSDP II emphasized "establishing kebele health committees and mobilizing the people for all types of health activities…" But this has in practice remained illusive (27, 35, 36). In the meantime, the participation of HEW in the Kebele Council should be strongly promoted so as to strengthen the health agenda and ensure inter-sectoral measures. Through this and other means, the HEW should be prompted to ensure a high level of effective community participation. A priority continuing education (CE) theme could be principles and practices of community participation.

Proper monitoring/supervision is critical for a successful community-based program. In developing countries, where many health workers work alone or in small groups in remote sites, the supervisor may represent the only link to the larger health system. The paramount need is for better supervision at the woreda level.

Lack of meaningful supervision is a perennial problem of the Ethiopian health system (11, 20, 37) and continues to date (5). Practical training in supervisory skill (as part of the leadership training) will be required. The possibility of upgrading selected HEW as supervisors should be explored. Since this is a critical issue, it is advisable to undertake some operational research and discuss its findings in a highly participatory process before up-scaling. The relationship of HEW with other community based health workers is critical for improved coverage and, hopefully, improved quality of services.

The Guideline is mute on the subject of relationship with other community based health workers. The SNNPR Guideline specifically put all community-based health workers under the 'guidance' of HEW but in practice, a number of problems are reported. While local conditions and the status of the different stakeholders, e.g. NGOs, might dictate the details in each woreda and kebele, there should be a guideline on the major principles of such relationships: coordination of and ultimately responsibility for all health work in the kebele is the mandate of the HEW; they should therefore be in a position to get all the necessary information and the communication line to fulfill these functions. Such a guideline should be prepared as soon as possible with the active participation of all stakeholders

The lack of an appropriate system for deploying and managing health workers has been a chronic problem in the recent past. There is a great need to institute such a system as soon as possible and following it through (38). Clear and properly/transparently implemented/enforced **career structure** plays a critical part in the motivation and retention of staff (25). Immediate clarification on the career structure will have an important impact on the motivation of HEW and future planning including promotion and upgrading. This should include not only the conditions and paths of upgrading, but also the evolution over time of those who remain HEW. **Transfer** of HEW could be a delicate issue. Because the selection was flawed for the first intake in almost all regions (18) and the inherent difficulty of finding qualified candidates at the kebele level coupled with the relatively high level of education and the youthfulness of HEW, transfer requests are bound to become major concern in the future.

Reward system for excellent performance has not been instituted. It could be that there are some initiatives at the woreda and kebele levels. Modest, recognition of a few HEW regularly at the regional and central levels could have a major impact on their motivation. Continuing education could also be built into the reward system. Overall, a manual on HEW workforce management should be developed and applied consistently and transparently. **Reporting** is an essential management tool but has to be used effectively. There is need to prepare a format for reporting containing core elements but flexible enough to accommodate local variations and new events/actions. A registry of activities should be instituted in all HP to serve as a base for reporting.

Feedback should be ensured not withstanding overburdened and understaffed WHOs. The **referral** arrangement should be seen as a serious issue. The process seems to be handicapped by constraint in physical and material resources (long distance, poor roads, scarcity or high cost of public transport…). HSDP II underscored "establishing a referral service system for sick persons between the HEW and the nearest health facilities" as an important strategy (24). However the system has still many weaknesses (5, 16). Admittedly conditions (transport and communication in particular) are not conducive but the basis for a clear link between the different levels of care should be laid as of now. There should be commitment at all levels to start the referral system rolling and achieve a two way flow. To this end, formats for referral with inbuilt mechanism for feedback should be prepared; clear incentives for the population to use the referral system as, for example, indicated in the Heath Care and Financing studies should be initiated and continuous orientation and sensitization of the relevant staff on referral should be undertaken.

The community

In the final analysis the effectiveness of HEW will hinge on their relationship with the community (32). Experience elsewhere shows that the greater the participation of the community, the greater the acceptance and use of services and the lesser the demand for expensive curative services. There is overwhelming evidence that community participation in the design and implementation of health sector and inter-sectoral activities have a significant impact on success and sustainability (26, 27). Community participation is also an important element of staff motivation especially in rural areas. Some of the complaints from the communities, e.g. involvement during peak farming periods, could be avoided if communities are involved in program development. Experience in community involvement in Ethiopia (37) and elsewhere (32) should be assessed in mapping the way forward.

In the condition where HEW is the only health care provider for kilometers, the preventive/curative dichotomy seems untenable. If communities are involved in the decision making process, the demand for curative services would be inevitable. The only circumstances in which African governments should play a key role in the provision of curative care arise where efficiency considerations require provision of curative and preventive care together: this occurs almost exclusively at the lowest levels of the health care systems (39). This does not mean that all community demands have to be met but, with clear discussion of the implications (cost etc), these are amenable to reasonable proportion (within the essential care package for example). Particular attention should be paid in areas where health stations (HS) (which gave curative care) are downgraded to HP as there is a real possibility of uproar from the community. Some have placed junior nurses in HP. The long term perspective and the resource implications of this approach as compared to in-service/continuing education of HEW, does not make it a feasible alternative. Others give training and continuing education on new introductions and expand the curative role of HEW. There are also considerations of creating intermediate level curative services between the HC and the HP. These will be units encompassing 3-5 kebeles manned by a nurse. However, such an intermediate unit will only add an additional layer (and the resulting management burden) without resolving the problem as long as there is a HP at the kebele level since people will continue to expect a 'reasonable" package of curative care from the HP. Further analysis of current experience is warranted but graduated inclusion of selected procedures with the appropriate (in-service) training, through HEW, seems the most likely avenue. Experience elsewhere (40, 41) attests to the cost-effectiveness of such approach. There is, for example, an international (41) and national (43) strategy for introducing antibiotics for child pneumonia. Drugs could be introduced as part of the implementation of the Essential Drugs Policy. Mechanism for selecting and introducing new and appropriate technologies (e.g. rapid diagnostic techniques (RDT), dip-sticks etc [42]) should be instated. Donor funding plus cost-recovery both to ensure efficient use and generate resources for sustainability should be initiated. Concurrently, intensive health education should be given to the population on appropriate drug/injection use (most of the abuse is antibiotics and injection [44]) and strengthen supervision to ensure focus on preventive and promotive work and avoid abuses.

Reduction of **maternal mortality**, one of the main goals of HSDP and MDGs, has remained illusive to date. 'Professionally' attended delivery is considered an important factor in reducing maternal mortality. HEW could/should - given the appropriate training/retraining and support – play an important role in this connection. Measures should be taken to increase the competence and confidence level of both HEW and the community on the delivery skills of the HEW. Operation/action research on delivery practices and determinants including TBA, home deliveries etc should be undertaken to understand delivery care seeking behavior in the communities and design appropriate responses to improving delivery services and to recommend on options for effective interventions by HEW. Measures should also be taken to increase the awareness and service seeking behavior of the population.

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