Volume 5, Number 1, May 2013

Federal Democratic Republic of Ethiopia
Ministry of Health

Quarterly Health Bulletin

POLICY AND PRACTICE

INFORMATION FOR ACTION

Better Information
Better Decision
Better Health

Better, Bigger, Faster: Working Together Towards the Achievement of the Millennium Development Goals

IN THIS EDITION

- **Editorial –** Information for evidence-based decision making: from policy to practice.
- **Health Extension Programme -** Implementation of the Health Development Army: challenges, perspectives and lessons learned with a focus on Tigray's experience.
- **Health Sector Development Programme -** Countdown to 2015: the performance of the health sector in the second year of HSDP IV (EFY 2004).
- **Health Sector Development Programme -** Countdown to 2015: challenges and perspectives in achieving the health-related Millennium Development Goals in Ethiopia.
- **Innovation in health -** Introducing the National Mental Health Strategy (2012/13 to 2015/16): making access to mental health care in Ethiopia a reality.
- **Innovation in health -** Option B+: a new approach to elimination of Mother to Child Transmission of HIV in Ethiopia.
- **International perspective -** Ethiopia: a success story of good health at low cost.
- **Harmonization:** Millennium Development Goals Performance Fund: an important step towards harmonization and alignment.
- **Regional experiences:** Community Health Information System for family-centered health care: scale-up in Southern Nations, Nationalities and People's Region.
- **Health news**

Federal Democratic Republic of Ethiopia
Ministry of Health
Quarterly Health Bulletin

POLICY AND PRACTICE
INFORMATION FOR ACTION

Editor-in-Chief
Noah Elias
Acting Director of the Policy and Planning Directorate (PPD),
Federal Ministry of Health (FMOH)

Co-ordinator of the Editorial Office
Sandro Accorsi
Technical Advisor at the PPD/FMOH

Editorial Board

Kesetebirhan Admasu
Minister
Federal Ministry of Health

Addis Tamire
Chief of Office of the Minister
Federal Ministry of Health

Teodros Bekele
Director General, Health Promotion and Disease Prevention
Federal Ministry of Health

Noah Elias
Acting Director of the Policy and Planning Directorate
Federal Ministry of Health

Mekdim Enkossa
Technical Advisor at the Grant Management Unit
Federal Ministry of Health

Sandro Accrosi
Technical Advisor at the Policy and Planning Directorate
Federal Ministry of Health

Editorial Office
Policy and Planning Directorate (PPD),
Federal Ministry of Health
P.O. Box 1234
Tel. +251 115 535938
Fax +251 115512691
E-mail: moh@ethionet.et
www.moh.gov.et

The named authors alone are responsible for the views expressed in this publication; these views do not necessarily reflect the view of the Federal Ministry of Health.

INFORMATION FOR EVIDENCE-BASED DECISION MAKING: FROM POLICY TO PRACTICE

Kesetebirhan Admasu[1]

[1]Minister, Federal Ministry of Health.

Reliable and timely health information is an essential foundation of public health action, especially when resources are limited and must be allocated optimally to improve efficiency, effectiveness and quality in health care delivery. In this perspective, the Quarterly Health Bulletin "*Policy and Practice"* is an important tool for evidence-based action by documenting new strategies, innovative experiences, effective interventions as well as emerging and persistent challenges still to be addressed, thereby bridging the gap between policy and practice.

In this edition, the first article is published under the section *"Health Extension Program": "Implementation of the Health Development Army: challenges, perspectives and lessons learned with a focus on Tigray's experience*". It describes the progress in implementing the Health Development Army (HDA), with a special focus on the experience initiated in Tigray, then expanded in all agrarian regions, to develop women-centered one-to-five network. In particular, HDA formation in Tigray has brought progress in promoting healthy lifestyles and improving access to health services, with a vision of taking the community as a potential producer of health, instead of as a mere consumer of medicines and curative services.

Two "twin articles" are published under the section "*Health Sector Development Programme*", analysing the performance of the health sector, and its contribution towards the achievement of the Millennium Development Goals (MDG), including also the comparison of Ethiopia's achievements with the performance found in other sub-Saharan African (SSA) countries.

The first article under this section is "*Countdown to 2015: the performance of the health sector in the second year of HSDP IV (EFY 2004)*", that gives an overview of the planned activities, main achievements and key challenges encountered in 2011/12 GC (EFY 2004) by comparing the performance across regions and achievements against targets. Of note is the fact that performance, as measured by key service indicators, was not uniform across programs: interventions that can be routinely scheduled, such as antenatal care, had much higher coverage than those that rely on functional health systems and 24-hour availability of clinical services, such as skilled care at birth. These mixed results highlight that, although interventions needed to control disease and to avert much of the burden of maternal and child morbidity and mortality are known, they require a functioning health system to have an effect at the population scale.

The second article published under the section *"Health Sector Development Programme"* is "*Countdown to 2015: challenges and perspectives in achieving the health-related Millennium Development Goals in Ethiopia*". On the basis of key population-based indicators, it describes the progress towards the attainment of the health-related MDGs by comparing the achievements against targets as well as against performance observed in other SSA countries. In general, Ethiopia seems on track to meet most health-related MDGs, showing better performance than other SSA countries. However, there are major challenges still to be addressed - such as low coverage in skilled and emergency care at birth, and limited integration of prevention of mother to child transmission (PMTCT) of HIV and maternal care services - in order to achieve MDGs.

It is important to note that these "within and across" analyses provide explanations regarding differences in outcomes as well as hints on how to speed the pace of change observed in the past into dramatically faster progress during the remaining period of the Health Sector Development Programme (HSDP) IV, whose end in 2014/15 corresponds to the deadline of the quantitative, time-bound framework of accountability of the MDGs.

Under the section *"Innovation in health"*, two articles aims at describing new strategies and innovative approaches to address public health problems. The first article - "*Introducing the National Mental Health Strategy (2012/13 to 2015/16): making access to mental health care in Ethiopia a reality"* - describes the innovative strategy in place in Ethiopia, whose aim is to address the mental health needs of all Ethiopians through quality, culturally competent, evidence-based, equitable and cost-effective care. The strategy mandates

that mental health be integrated into the primary health care system. In accordance with the overall strategic plan of the Federal Ministry of Health (FMOH), the strategy promotes a decentralized approach, in which mental health services are integrated at all levels of the health system, therefore ensuring that those in need have access to the services as close to their home as possible and in the least restrictive environment.

The second article under the section "*Innovation in health"*, "*Option B+: a new approach to elimination of Mother to Child Transmission of HIV in Ethiopia*", shows an example of innovative strategy to address the issue of low PMTCT coverage, whose aim is to have an impact on both mother and child outcomes, by preventing a child from being infected, saving mother's live and reducing orphanhood with a vision of an HIV free new generation.

Of note is the fact that not only must policy-making be evidence-based, it must also be forward-looking and result-oriented, recognizing that careful planning and skilled management can achieve good results even where financial resources are limited. Under the section "*International perspective"*, the article "*Ethiopia: a success story of good health at low cost*" shows that Ethiopia is an example that low-income countries can attain good health at low cost if there is a sustained political will and commitment to provide innovative policies, strategies and programs, as recently documented in the book "*Good health at low Cost - 25 year on"* published by *the London School of Hygiene and Tropical Medicine.*

Health has moved in recent years from under-investment, to single disease focus, and now to increased funding, harmonization between government and partners, and systemic approach. Policy dialogue and governance have also improved over time. In particular, a critical step towards "One Budget" is the establishment of the MDG Performance Fund (PF) to facilitate resource pooling in order to finance the HSDP IV priorities. Under the section "*Harmonization"*, the article "*Millennium Development Goals Performance Fund: an important step towards harmonization and alignment*" provides an update of the functioning of the MDG PF managed by the FMOH according to the government's procedures, with an increasing number of partners contributing to the fund.

Under the section "*Regional Experiences*", the article "*Community Health Information System (CHIS) for family-centered health care: scale-up in Southern Nations, Nationalities and People's Region (SNNPR)*" describes the roll out of CHIS in SNNPR that was completed within two years. This family-centered health information system has been designed for the health extension worker to manage and monitor her work in educating households and delivering an integrated package of promotive, preventive and basic curative health services to families. Such "bottom–up" approach focused on local priorities, integrated into the current health activities, and based on sustainable data collection systems, may ensure immediate and practical benefits in terms of increased efficiency, effectiveness and quality in service delivery.

The section "*Health News*" provides an update of the activities and initiatives in the health sector, including new programmes, latest achievements and upcoming events.

These articles show that health information is much more than collecting figures. Data have no value in themselves; value and relevance come after data management and analysis - the process whereby data are transformed into information and knowledge for action. In this way, this bulletin helps translate policy into practice, engage every stakeholder in policy-to-practice processes, and document what works, what does not and why, with the aim to increase performance in the health sector and improve population health according to the motto "*better information, better decision, better health*".

THE IMPLEMENTATION OF THE HEALTH DEVELOPMENT ARMY: CHALLENGES, PERSPECTIVES AND LESSONS LEARNED WITH A FOCUS ON TIGRAY'S EXPERIENCE

Kesetebirhan Admasu[1]

[1]Minister, Federal Ministry of Health.

Summary

The government of Ethiopia has put the establishment of a functional Health Development Army (HDA) as a top priority. The HDA is regarded as the key vehicle that would help Ethiopia achieve its ambitious Health Sector Development Programme's targets. HDA refers to an organized movement of the community through participatory learning and action meetings. The organization and mobilization of the HDA started in 2010/11. In the first year of implementation, two different approaches were used to organize the community, namely women-centred HDA and a mixed group HDA (mainly male and female heads of households). The women-centred HDA was implemented in Tigray, while the other agrarian regions (Amhara, Oromiya and SNNPR) set up a mixed group HDA.

This article aims at describing the implementation of the HDA with a focus on Tigray's experience in order to share lessons learned and guide future HDA scale-up across regions of Ethiopia.

1) Introduction

During the late 1970's, Ethiopia adopted Primary Health Care (PHC) as the national strategy to achieve equitable access to health services by all people of the country. However, the principles of PHC, as outlined in the Alma Ata Declaration, were not translated into national policies and strategies. Following the change of government in 1991 and subsequent development of the national Health Policy in 1993, the Government of Ethiopia formulated a long term development strategy for the health sector: the Health Sector Development Programme (HSDP). Its first phase (HSDP I) was launched in 1997 and, despite the gains obtained during its implementation, reviews of the HSDP I highlighted the challenges in achieving universal PHC coverage and revealed that the necessary basic health services had not reached the rural population. Therefore, in recognition of these challenges, the accelerated expansion of PHC coverage was initiated during the HSDP II (2002/03-2004/05). In this context, based on the experience of the "Model Family Initiative" developed in Tigray (Barnabas et al., 2009), a community-based health care delivery system, named "Health Extension Programme" (HEP), started during HSDP II (Temiess, 2008), with full implementation during HSDP III (2005/06-2009/10) and HSDP IV (2010/11-2014/15) (FMOH, 2012a).

HEP is an innovative community-based strategy to deliver preventive and promotive services and selected high impact curative interventions at community level (FMOH, 2007). It brings community participation through creation of awareness, behavioural change, and community organization and mobilization. It also improves the utilization of health services by bridging the gap between the community and health facilities through the deployment of Health Extension Workers (HEWs). The main objective is to improve access to essential health services provided at village and household levels (FMOH, 2005), contributing to the improvement of the health status of the families, with their full participation, using local technologies and the skill and wisdom of the communities.

In this context, and with the aim to promote participatory community engagement and adoption of healthy lifestyles, with particular emphasis on improving uptake of critical maternal and newborn health services, a major initiative undertaken by the Ethiopian Government is the implementation of the Health Development Army (HDA). The organization and mobilization of the HDA started in 2010/11. In the first year of implementation, two different approaches were used to organize the community, namely women-centred HDA and a mixed group HDA (mainly male and female heads of households). The women-centred HDA was implemented in Tigray, while the other agrarian regions set up a mixed group HDA. The objective of the HDA is to consolidate the gains that were made as a result of the roll out of HEP and promote community ownership of the programs. The HDA provides an unprecedented platform to engage the community in the planning, implementation, monitoring and evaluation of health interventions at the

community level and beyond. Through the HDA, up to 3 million volunteers will be mobilized nationally to work alongside the HEWs in supporting families adopt healthy behaviour.

This article aims at describing the experience in HDA formation, with a special focus on Tigray's experience, and presenting achievements as well as challenges encountered in its implementation in order to share lessons and guide future scale-up across regions of Ethiopia.

2) The Health Development Army

What is Health Development Army?

HDA refers to an organized movement of the community through participatory learning and action meetings. Organizing a functional HDA requires the establishment of health development teams that comprise of up to 30 households residing in the same neighbourhood. The health development team is further divided into smaller groups of six members, commonly referred as one-to-five networks. The leaders of the health development teams and the one-to-five networks are selected by the team members. The main criteria for selection of the leaders are being a model family and trust by the members in mobilizing the community. The formation of the health development teams and the one-to-five networks is facilitated by HEWs and the kebele administration.

How does the HDA work?

Once the groups are formed through a participatory engagement of the community, the leaders go through an intensive 7 to 10 days training program. The training emphasises on improving utilization of high impact maternal and newborn health services. In a kebele of 1,000 households, averages of 150 leaders are expected to go through the training program. The training is facilitated by HEWs with a support from the PHC unit and the woreda (district) health office.

The HDA is designed to accomplish the following critical tasks:

1. Identify locally salient bottlenecks that hinder families from utilizing key services and implementing the HEP and prioritize those that they want to address as a team;
2. Come up with feasible strategies to address these problems;
3. Implement the strategies; and
4. Evaluate their activities.

The HDA does also involve larger community meetings involving the entire kebele residents. These larger public conferences provide the platform to share prioritized bottlenecks and strategies, and share best practices. These meetings are led by the kebele administrator with support from the HEWs.

Why HDA?

The HDA is designed to improve the implementation capacity of the health sector. It presents an unprecedented opportunity to engage the community in the identification of local challenges, strategies to address them, and evaluate the implementation of HEP. It can also be used to easily scale up best practices from one part of the country into another. With effective implementation of HDA, it will be possible to consolidate the gains and transform the health system of Ethiopia.

What is the role of the leadership in HDA?

The Government of Ethiopia has put the establishment of a functional HDA as a top priority. The HDA is regarded as the key vehicle that would help Ethiopia achieve its ambitious HSDP targets. Therefore, a coordinating body at each level of the system has been established to monitor the implementation of HDA. The members of the coordinating body are drawn from relevant sectors such as agriculture, education, water, women affairs, social protection, etc. (FMOH, 2012b). The body is chaired by the administrator or the deputy administrator and the health sector serves as the secretary. The coordinating body meets every month to review the performance of the HDA with special emphasis on maternal and newborn health outcomes. Furthermore, this body is mandated to set up teams that will do on site data verification on quarterly basis.

3) Implementation of the Health Development Army

As described above, women-centred HDA was set up in Tigray, while the other regions established HDA with mixed groups. In Tigray, 124,520 model women were mobilized in 2011 as volunteers to lead the one-to-five networks. Nearly 25,000 health development teams were also established. In Amhara, Oromiya, and SNNP, 2.1 million models (predominantly men) were mobilized as one-to-five network leaders. They were also organized in 69,000 health development teams.

In the majority of the regions including Tigray, the leaders have gone through intensive training programs and were engaged in identifying bottlenecks that hamper the implementation of HEP in their villages. During problem identification, emphasis was given to cultural and attitude-related bottlenecks. The models were also engaged in identifying challenges in terms of acquiring skills and supplies to implement interventions of the HEP. After they completed the training, the leaders were encouraged to work with their team members in identifying attitude, skill and supply bottlenecks, prioritize the problems and come up with the strategies to

Table 1. *Results of women-centered one-to-five network in Tigray Region.*

ACTIVITY	ADVANTAGE OF WOMEN-CENTERED ONE-TO-FIVE NETWORK	RESULTS
Dissemination of health messages	Women groups provided a better platform to disseminate sexual and reproductive health messages than the mixed groups	Heath messages disseminated
Promotion of use of health services	The women groups have helped in identifying pregnancies early and linking the pregnant women to have early ANC.	Health service utilization increased
Involvement in decision making	The participation of married women in the health development teams was much higher in Tigray and hence leading to better involvement and decision making regarding their health	Participation improved
Openness of discussion	Women were observed to freely discuss issues in Tigray more than in areas with the mixed groups.	Communication improved

address them. The strategies have to be captured in a plan and specific tasks should be assigned to team members. They are also expected to identify group actions and include them in the plan.

The one-to-five networks are expected to meet every week, while the larger health development team meets once every fortnight. Furthermore, they have to review their performance against their plan and evaluate each other on monthly basis. They give grades like A, B, and C for top, middle and poor performers, respectively. A performance report including the grades has to be collated at the health development team level and sent to the HEWs.

4) Observations from a rapid supervision

A team composed of high level officials from the Ministry of Health and Regional Health Bureaus had paid a visit to selected woredas of Tigray, Amhara, Oromiya and SNNP Regions in late 2011. During the visit, as in indicated in Table 1, the women-centred HDA in Tigray were disciplined in having regular meetings, identifying salient problems in the local context, proposing and implementing the strategies to address the problems. They were also ranking each woman based on the implementation of the HEP. We have observed better participation of married women in the women groups in Tigray than in the other regions.

During the visit, we have also observed innovations introduced by the women groups that have started to positively influence place of child birth in Tigray. Below are some examples:

1. Preparation of porridge in health facilities: there is a deep rooted cultural belief in Tigray that would require a mother to eat porridge after giving birth. If the mother does not have access to porridge, it is believed that evil things could happen to either the mother or the newborn. Hence, women prefer to give birth at home. There the HDA has started to prepare porridge in health facility if a woman from their team is in labor.
2. Traditional ambulance: in Tigray the terrain poses a significant challenge. The HDA came up with a locally made stretcher and had also organized the youth to carry a laboring mother to the nearby health facility or major road where the regular ambulance could be accessed.
3. Monthly conferences with all pregnant women in the village: the HDA has played a critical role in commencing a monthly conference with all pregnant women facilitated by HEWs and midwives from the PHCU. The conferences are used to improve peer-to-peer support.
4. Dialogue with traditional birth attendants (TBA): since the majority of TBAs are women, they were easily convinced to take the labouring mothers to health facilities instead of home delivery.

It is worth noting that the establishment of HDA in Tigray has played an important role in driving behavioral change, adopting healthy lifestyles and improving access to health services, in particular maternal and child services.

The trend in performance of key indicators observed in Tigray over the past years, as compared to that found at the national level, may provide evidence of early results of HDA implementation. In particular, skilled care at birth is considered as the single most important intervention for reducing maternal mortality, and the mobilization of HDA has been performed intensively in order to increase demand for, and improve access to, maternal services.

The comparison of the trend in percentage of skilled care at birth observed in Tigray (in red line) with that at the national level (in blue line) during the period EFY 2000-first nine months of the EFY 2005 shows that, while it has fluctuated around 17-20% over the past 3 years at the national level, it has steadily increased in Tigray,

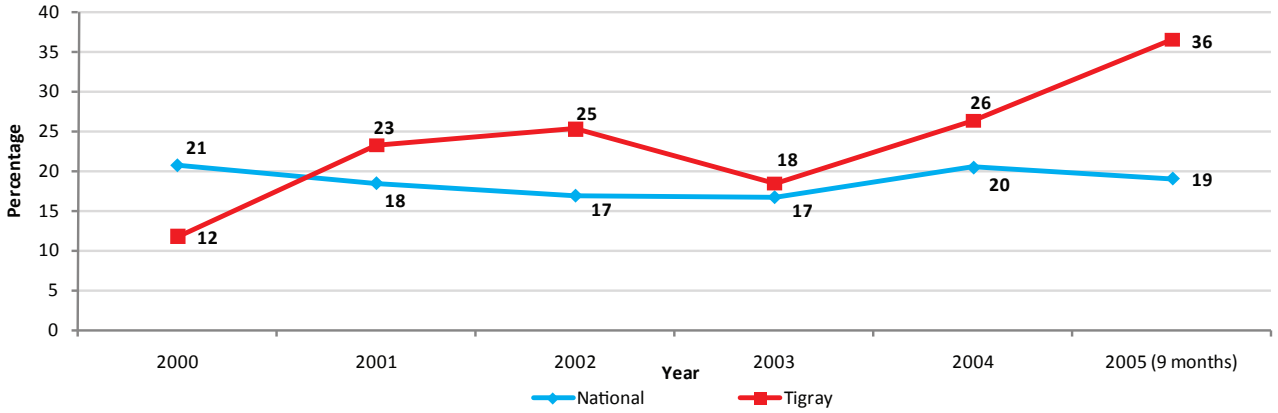


Figure 1. *Trend in percentage of deliveries assisted by skilled health personnel in Tigray (red line) and at the national level (in blue line) (EFY 2000-first 9 months of the EFY 2005).*

doubling from 18% in EFY 2003 to 36% in first nine months of the EFY 2005 (Figure 1).

The promotion of counselling and testing for the prevention of mother to child transmission (PMTCT) of HIV is an important aspect towards the integration of HIV and maternal services. The comparison of the percentage of pregnant women counselled and tested for PMTCT in Tigray and at the national level during the period EFY 2002-first nine months of the EFY 2005 shows a rapid increase in Tigray over the past 3 years (from 44% in EFY 2003 to 67% in the first nine months of the EFY 2005) while a slower increase has been observed at the national level in the same period (Figure 2).

From the experience in Tigray, the engagement and commitment of key stakeholders was crucial for the early success story:

- Religious leaders: they influence health service utilization, especially maternal health services, and their involvement in discussion fora at kebele level helps improve the work of HDA and increase health service utilization;
- Traditional birth attendants: they influence health service utilization, especially delivery in health facility, and their involvement in the HDA network is crucial to promote assisted deliveries;
- Development partners and civil societies: they should be well informed on the purpose of HDA and on how they can help its implementation; and
- Political leaders: the commitment of the political leadership including the regional president is one of the key factors driving the success of HDA in Tigray.

5) Conclusion

The women-centred HDA in Tigray has resulted in a sharper increment in the uptake of high impact maternal and neonatal health interventions as compared to the national average. The women groups have also come up with innovations to address local challenges. The exponential increment in the number of volunteers in each kebele presents an unprecedented opportunity to reach out to every member of the community. The HDA, therefore, enhances the capability of Ethiopia's flagship program, the HEP. The participatory nature of HDA provides a forum for women to develop a common

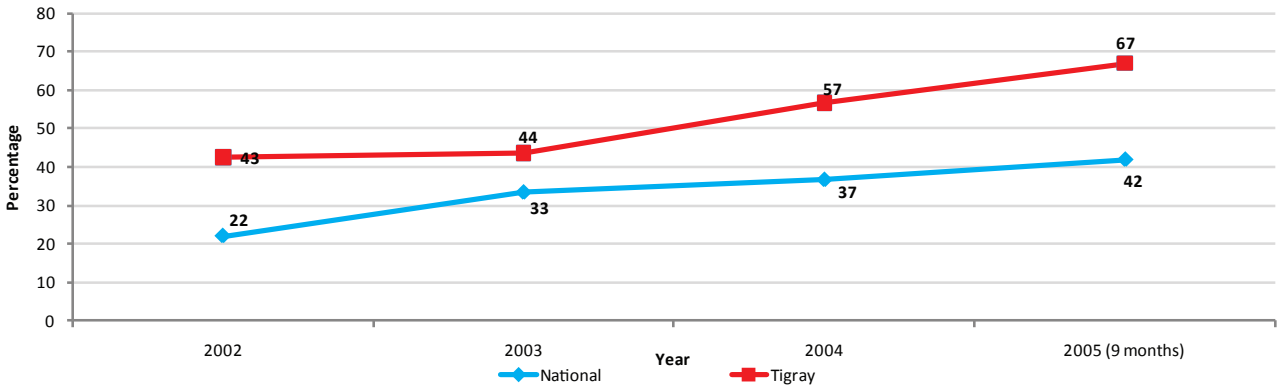


Figure 2. *Trend in percentage of pregnant women counselled and tested for PMTCT in Tigray (red line) and at the national level (in blue line) (EFY 2002-first 9 months of the EFY 2005).*

understanding of the HEP.

Based on the experience in Tigray Region, recommendations may be summarized as follows:

- The commitment of the top political leadership is absolutely critical for the success of HDA;
- The women-centred HDA is the preferred option to scale up best practices in the health sector;
- Supportive supervision and close monitoring of the HDA network should be done in a structured way, at regular intervals, and at all levels;
- Experience sharing forum needs to be organized once in a year in all regions; and
- Clearly defining the roles of development partners and civil societies and rallying them to support the HDA need to be given due attention.

In conclusion, Ethiopia's road map to achieving Millennium Development Goals still faces a number of hurdles, but the progress made to date demonstrates that the vision for universal access to affordable health care can become a reality.

References

Barnabas, G.A., Berhe, A., Accorsi, S., 2009. Implementation of the Health Extension Programme: promoting best practices in Tigray. Policy and Practice, 2(2): 3-11. Federal Ministry of Health, Addis Ababa.

FMOH, 2005. Essential health service package for Ethiopia. Federal Ministry of Health, Addis Ababa.

FMOH, 2007. Health Extension Program in Ethiopia. Profile. Federal Ministry of Health, Addis Ababa.

FMOH, 2012a. Annual performance report of HSDP IV. EFY 2004 (2011/12). Federal Ministry of Health, Addis Ababa.

FMOH, 2012b. Special Bulletin, 14th Annual Review Meeting 2012: best practices, progress updates, initiatives, and articles. Federal Ministry of Health, Addis Ababa.

Temiess, W., 2008. Health Extension Program in Ethiopia: towards better access to health services for rural poor. Policy and Practice, 1(1): 3-9. Federal Ministry of Health, Addis Ababa.

COUNTDOWN TO 2015: THE PERFORMANCE OF THE HEALTH SECTOR IN THE SECOND YEAR OF HSDP IV (EFY 2004)

Noah Elias[1] and Sandro Accorsi[2]

[1] Acting Director of the Policy and Planning Directorate (PPD), Federal Ministry of Health (FMOH)
[2] Italian Cooperation Technical Advisor at PPD/FMOH.

Summary

Ethiopian Fiscal Year (EFY) 2004 marks the second year of the fourth phase of the Health Sector Development Programme (HSDP IV) and this article gives an overview of the planned activities, main achievements and key challenges encountered in the year in accordance with three Strategic Themes: (i) Health Service Delivery and Quality of Care; (ii) Leadership and Governance; and (iii) Health Infrastructure and Resources.

Concerning the Health Extension Program, the organization and mobilization of the Health Development Army was expanded to all agrarian regions in EFY 2004 to promote safe health practices at the community level, with a total of 2,002,841 one-to-five networks being already established at the national level.

Concerning maternal and child health services, an increase was observed between EFY 2003 and EFY 2004 for antenatal and postnatal care coverage (from 82.2% to 89.1% and from 42.1% to 44.5%, respectively) as well as for the percentage of deliveries attended by skilled health personnel (from 16.6% to 20.4%), while the percentage of clean and safe deliveries (by Health Extension Workers) declined from 14.7% to 13.2% in the same period. Pentavalent 3 vaccine coverage was stable (84.7% in EFY 2003 and 84.9% in EFY 2004), whereas measles vaccine coverage and full immunization coverage declined from 81.5% to 79.5% and from 74.5% to 71.4%, respectively, in the same period.

With respect to prevention and control of communicable diseases, encouraging results were achieved in HIV/AIDS control, with a combination of stable HIV prevalence, sustained prevention efforts and increased antiretroviral therapy coverage. Despite the increase observed in EFY 2004, the Prevention of Mother to Child Transmission (PMTCT) coverage was still low (25.5%), highlighting the need for integration of maternal and PMTCT services.

Concerning malaria prevention and control, a three-pronged approach was implemented, consisting of early diagnosis and effective treatment, selective vector control and epidemic prevention and control. With the distribution of over 6.2 million Long-Lasting Insecticide-treated Nets, their cumulative number reached about 45.8 million in EFY 2004. A total 3,384,589 malaria cases were reported in EFY 2004, out of which 1,793,832 (53.0%) were confirmed by laboratory.

A TB prevalence survey was conducted in EFY 2003-04, showing a TB prevalence (all forms) of 240 per 100,000 population, that was lower than the previous model-based estimate (585 per 100,000 population); on the basis of these new estimates, the Case Detection Rate (all forms) was 72%; furthermore, the TB success rate and the TB cure rate showed an increase from 82.5% in EFY 2003 to 90.6% in EFY 2004 and from 66.5% to 68.2% in the same period, respectively.

This article tries to address the critical question of how to speed the pace of change observed in the past into dramatically faster progress during HSDP IV period, whose end in 2014/15 corresponds to the deadline of the quantitative, time-bound framework of accountability of the Millennium Development Goals (MDG). The past experience of achievements and challenges provides important hints to guide policies, strategies and programmes to be implemented in the next years with the support of all partners in order to achieve MDGs by 2015.

1) Introduction

Ethiopian Fiscal Year (EFY) 2004 marks the second year of the fourth phase of the Health Sector Development Programme (HSDP IV) (FMOH, 2010) and this article gives an overview of the planned activities, main achievements and key challenges encountered in the year in accordance with three Strategic Themes: (i) Health Service Delivery and Quality of Care; (ii) Leadership and Governance; and (iii) Health Infrastructure and Resources. This article is derived from the EFY 2004 Performance Report presented at the Annual Review Meeting (ARM) held in Bahir Dar in October 2012 (FMOH, 2012a). In particular, monitoring HSDP IV implementation is based on a core set of sector-wide indicators that provide a comprehensive picture of sectoral performance, with explicit statement of planned targets and measurement of actual achievements. The analysis is based on performance comparison across regions and trend analysis over time, as well as on measurement of the level of achievement of the targets set for the year in the Annual Core Plan.

2) Health service delivery and quality of care

This Strategic Theme comprises of the services provided by the Health Extension Program (HEP), maternal and newborn health services, child health services, national nutrition program, prevention and control of communicable and non-communicable diseases, public health emergency preparedness and response, and quality of health services.

2.1) Health Extension Program

The Ethiopian Government has put the implementation of Health Development Army (HDA) among its top priorities in order to attain HSDP and Growth and Transformation Plan as

well as health Millennium Development Goals (MDG). The organization and mobilization of the HDA started in Southern Nations, Nationalities and People's (SNNP) and Tigray Regions in EFY 2003 and was expanded to all agrarian regions in EFY 2004 to capacitate families who are lagging behind in terms of adopting safe health practices. Two strategies were applied on HDA formation: one is women-centered one-to-five network development, called Women Development Groups (WDG), and the other comprises of women and men one-to-five network adopted from the experiences of the agricultural sector. Overall, a total of 2,002,841 one-to-five networks were established at national level. In urban areas, the HDA formation started in EFY 2004 by preparing planning documents and endorsing them at council level, while the focus in pastoralist areas was on mass mobilization using the mobilization documents endorsed by the respective regional cabinets.

Concerning one of the major components of health extension packages, hygiene and environmental sanitation, the number of households with latrine was 15,083,779 in EFY 2004, with a coverage of 84.1%, short of the 93% target set for the year.

2.2) Maternal and newborn health services

The Government of Ethiopia is committed to achieve the MDG5 to improve maternal health, with a target of reducing Maternal Mortality Ratio (MMR) by three-quarters over the period 1990 to 2015 (UN, 2000). Accordingly, the FMOH has implemented multiple high impact interventions at both facility and community levels to address the 3 delays in: (i) seeking appropriate medical care for an obstetric emergency; (ii) reaching an appropriate emergency obstetric and neonatal care facility; and (iii) receiving adequate care when the facility is reached. In order to address the first delay, the work of organizing and mobilizing the HDA at all levels is being performed intensively in order to promote behavioural change as well as to ensure the implementation of all health extension packages in the communities so that they can produce and sustain their own health, including maternal health. To solve the shortage of transportation facilities, out of the planned 840 ambulances, 372 were distributed to regions and have started to provide the needed service at woreda level, while the procurement of the remaining ambulances is underway. Furthermore, in order to address the issue of financial barriers, the FMOH has initiated free maternity service at hospital level. To solve the bottleneck related to inadequate capacity for timely intervention, several activities are in progress, including training of human resources, provision of adequate drugs, medical supplies and equipment, as well as equitable placement of adequate number of health professionals in health facilities.

Furthermore, another target of MDG 5 is to achieve, by 2015, universal access to reproductive health services, including access to safe, affordable and effective methods of contraception (UN, 2000). It has been documented that contraceptive use can have an impact in reducing maternal mortality by averting more than half of maternal deaths.

Achieving good maternal health requires quality reproductive health services and a series of well timed interventions to ensure women's safe passage to motherhood. For monitoring purposes, a set of key indicators were selected: each one represents a link of the continuum of care and is connected with other dimensions of health and health systems. A measure of contraception - Contraceptive Acceptance Rate (CAR) - is presented as a tracer of reproductive health. Antenatal Care (ANC) coverage provides a measure of access to the health system and is critical to identify maternal risks and improve health outcomes for the mother and the newborn. Measures of coverage of skilled care at birth and birth attendance by Health Extension Workers (HEW), as well as Postnatal Care (PNC) services, are critical elements of the continuum of care. Human Immunodeficiency Virus (HIV)-related indicators are included to emphasize the need towards a more holistic approach to health care, and to promote further integration of the Prevention of Mother to Child Transmission (PMTCT) of HIV and maternal health services. These indicators are summarized in Table 1 showing, for each indicator, EFY 2004 baseline, performance and target, as well

Table 1. *Maternal Health Indicators (EFY 2004 baseline, performance and target and HSDP IV target).*

Indicators	EFY 2004 Baseline	EFY 2004 Performance	EFY 2004 Target	HSDP IV Target (EFY 2007)
Antenatal care coverage	82.2%	89.1%	85.1%	90.0%
Percentage of deliveries attended by skilled health personnel	16.6%	20.4%	37.7%	62.0%
Clean and safe delivery coverage (percentage of deliveries attended by HEWs)	14.7%	13.2%	40.0%	38.0%
Postnatal care coverage	42.1%	44.5%	60.1%	78.0%
Contraceptive acceptance rate	61.7%	60.4%	76.5%	82.0%
Percentage of pregnant women counselled and tested for PMTCT	33.4%	36.7%	68.0%	83.0%
Percentage of deliveries of HIV-positive women who received a full course of ARV prophylaxis	9.3%	25.5%	53.0%	77.0%

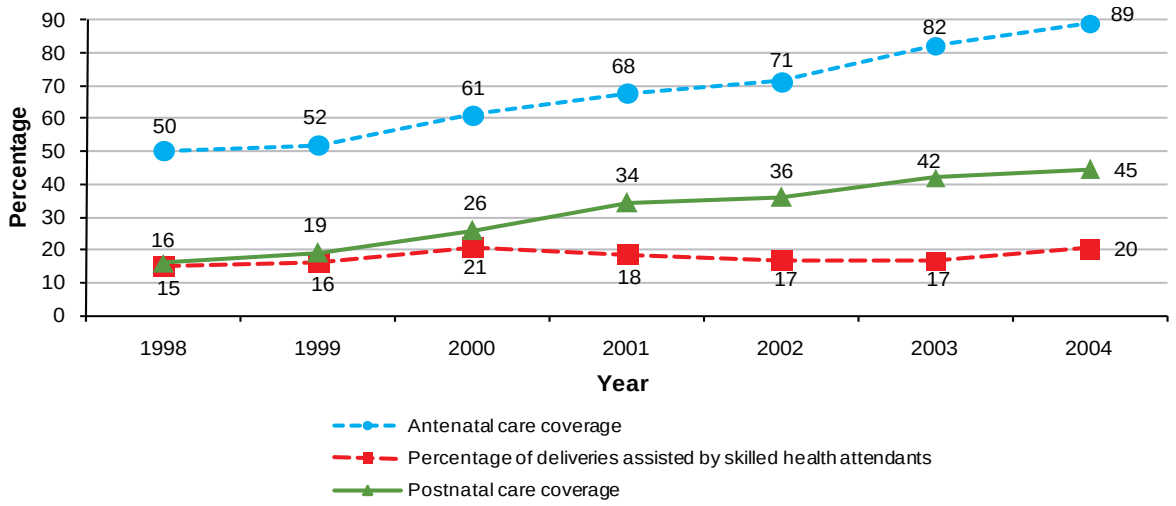


Figure 1. *Trend in antenatal care coverage, percentage of deliveries assisted by skilled health personnel and postnatal care coverage (EFY 1998-2004).*

as the overall HSDP IV targets set for EFY 2007. The trend over time is shown in Figure 1.

Skilled attendance at birth is the most important intervention in reducing maternal mortality and one of the MDG indicators to track national effort towards safe motherhood. The percentage of deliveries assisted by skilled health personnel increased from 16.6% in EFY 2003 to 20.4% in EFY 2004, below the target of 37.7% set for the year. There was wide variation across regions, ranging from 8.4% in Benishangul Gumuz to 67.1% in Harari (Figure 2A). Conversely, a decline was observed in the clean and safe delivery service coverage (by HEWs) from 14.7% in EFY 2003 to 13.2% in EFY 2004, below the target set for the year (40.0%). The coverage ranged from 0.1% in Afar to 27.8 % in SNNP (Figure 2B).

ANC coverage showed an increase from 82.2% in EFY 2003 to 89.1% in EFY 2004, with wide variation across regions, ranging from 30.9% in Afar to 100% in Tigray, Harari, and Addis Ababa (Figure 3A). There was also an increase in PNC coverage from 42.1% in EFY 2003 to 44.5% in EFY 2004, below the target set for the year (60.1%). The highest coverage was observed in Dire Dawa (60.2%), whereas the lowest one was found in Afar (3.2%) (Figure 3B).

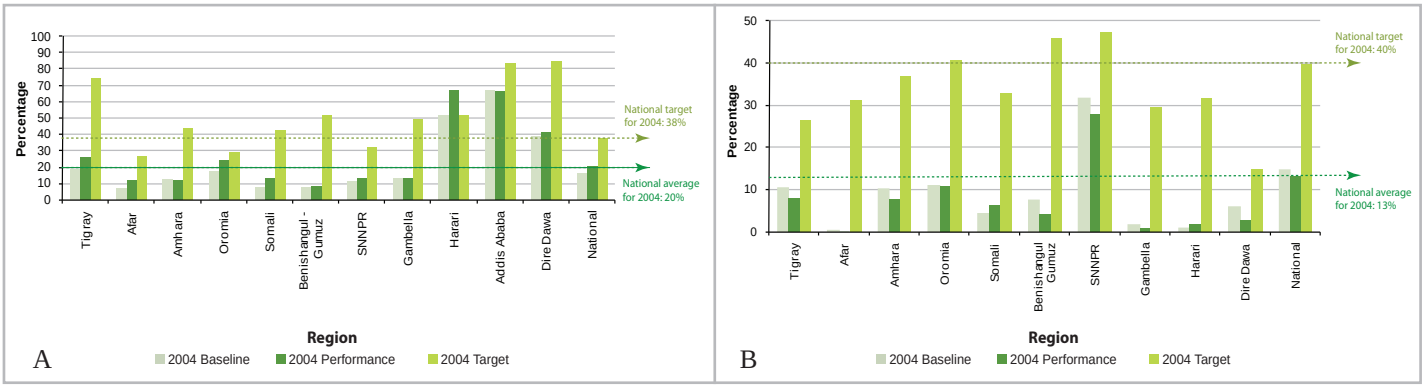


Figure 2. *Comparison of EFY 2004 baseline, performance and target of the proportion of deliveries attended by skilled health personnel (2A) and by HEWs (clean and safe delivery service coverage) (2B) by region.*

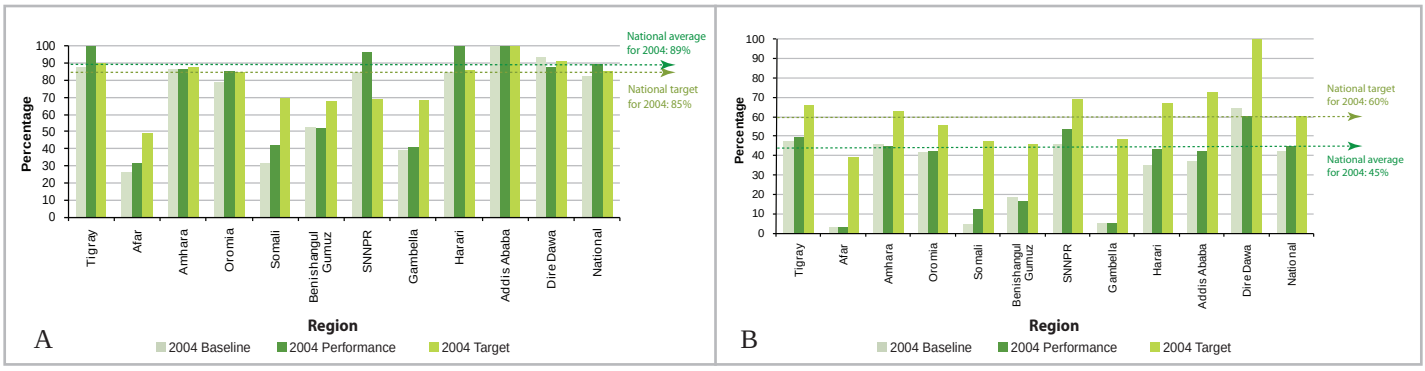


Figure 3. *Comparison of EFY 2004 baseline, performance and target of the antenatal care coverage (3A) and postnatal care coverage (3B) by region.*

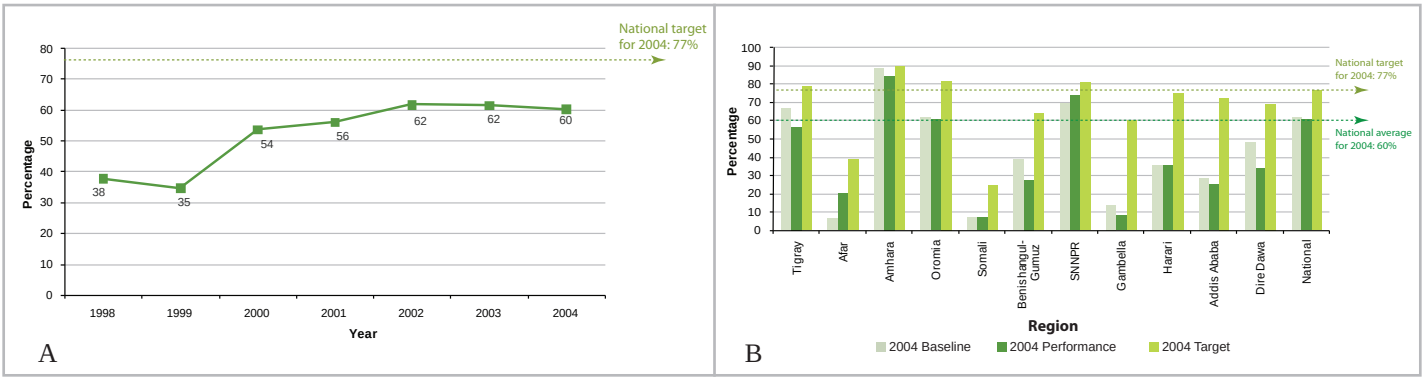


Figure 4. *Trend in contraceptive acceptance rate (EFY 1998-2004) (4A) and comparison of EFY 2004 baseline, performance and target by region (4B).*

CAR is a tracer of reproductive health service performance, and is one of the service indicators used to measure progress towards the achievement of MDG5. CAR slightly decreased from 61.7% in EFY 2003 to 60.4% in EFY 2004, below the target of 76.5 % set for EFY 2004 (Figure 4A). Wide variations were observed across regions, with the lowest rate (6.9%) being reported from Somali Region, and the highest one (84.7%) from Amhara Region (Figure 4B).

2.3) Child health services

In order to achieve MDG 4 (to reduce child mortality with a target of reducing U5MR by two thirds over the period 1990-2015) (UN, 2000), several activities were articulated in HSDP IV, including strengthening routine immunization, expanding community and facility-based Integrated Management of Neonatal and Childhood Illnesses (IMNCI), establishing newborn corners and neonatal intensive care units, capacity building on program management for child health services, strengthening HEP, and implementing locally relevant and effective child health interventions in pastoralist areas.

2.3.1) Immunization

Immunization is one of the most cost-effective public health interventions for reducing child morbidity and mortality, and immunization coverage is one of the key indicators used to monitor progress towards the achievement of MDG4. Pentavalent 3 vaccine coverage slightly increased from 84.7% in EFY 2003 to 84.9% in EFY 2004, while there was a decrease in measles vaccine coverage from 81.5% to 79.5%, and in full immunization coverage from 74.5% to 71.4%, in the same year (Table 2). The trend over time is shown in Figure 5.

Table 2. *Immunization Coverage Indicators (EFY 2004 Baseline, Performance and Target and HSDP IV Target)*

Indicators	EFY 2004 Baseline	EFY 2004 Performance	EFY 2004 Target	HSDP IV Target (EFY 2007)
Pentavalent 3 Vaccine Coverage	84.7%	84.9%	89.0%	96.0%
Measles Vaccine Coverage	81.5%	79.5%	88.0%	90.0%
Full Immunization Coverage	74.5%	71.4%	85.0%	90.0%

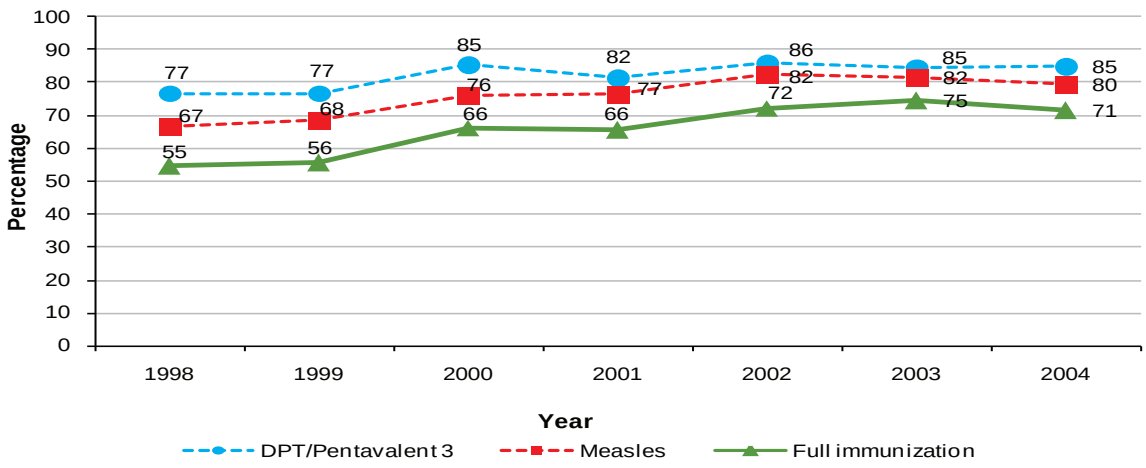


Figure 5. *Trend in DPT/Pentavalent 3 immunization coverage, measles immunization coverage and percentage of fully immunized children (EFY 1998-2004).*

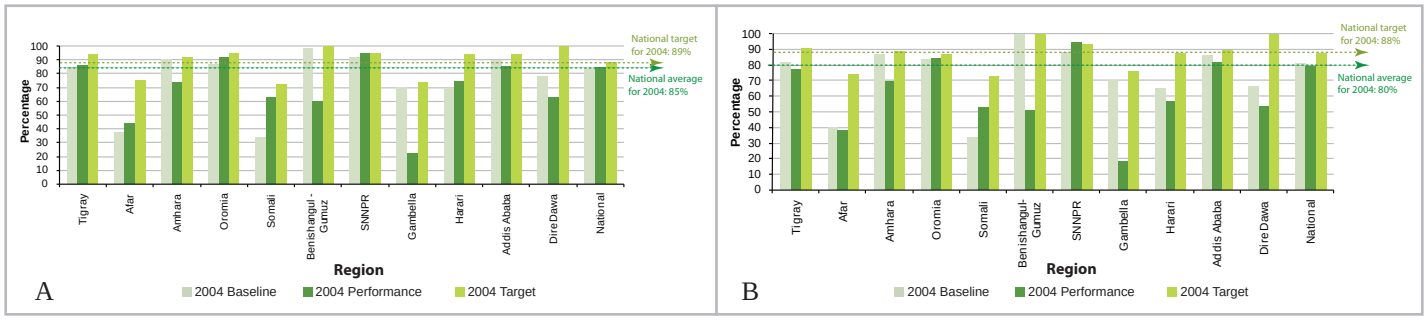


Figure 6. *Comparison of EFY 2004 baseline, performance and target of Pentavalent 3 immunization coverage (6A) and measles immunization coverage (6B) by region.*

Pentavalent 3 coverage slightly increased in EFY 2004 to 84.9%, short of the target (89.0%) set for the year. The highest coverage (94.9%) was found in SNNPR and the lowest one in Gambella (22.3%) (Figure 6A). All regions performed below the target set for the year.

Similarly, the regional distribution of measles immunization coverage showed that SNNP was the best performing region (94.4%) and Gambella performed the least (18.5%) (Figure 6B). SNNP was the only region performing above the target set for the year.

2.3.2) Integrated Management of Neonatal and Childhood Illnesses

IMNCI is the strategy to improve the quality of management of childhood illnesses, linking preventive and curative services so that programs, such as immunization, nutrition, and control of malaria and other infectious diseases, are implemented in an integrated manner. IMNCI aims to reduce death, illness and disability, and to promote improved growth and development among children under five years of age. The number of HCs providing IMNCI increased from 1,720 at the end of EFY 2003 to 2,030 at the end of EFY 2004.

2.4) National nutrition programme

In EFY 2004, a total of 10.7 million children aged 6-59 months received the first dose of Vitamin A supplementation, with a performance below the last year achievement of 12.5 million due to delay in implementing the program in some regions. The overall coverage of vitamin A supplementation in EFY 2004 was 91.7%, below the target set for the year (99.7%). In EFY 2004, the de-worming coverage for children 2-5 years of age (19.8%) was much lower compared to EFY 2003 performance (over 100%); this decrease was due to problems in procuring Albendazole, so that many regions were unable to conduct de-worming of children as planned.

The Community Based Nutrition Program is one of the key components of the Ethiopian National Nutrition Program, and is currently implemented in 228 woredas. An improvement in nutritional status has been observed over time in the four big regions (Tigray, Amhara, Oromia, and SNNP), with a progressive reduction in underweight prevalence among children under two years of age in the past four years (Figure 7).

2.5) Prevention and control of communicable diseases

MDG 6 is to combat HIV/AIDS, malaria and other diseases. Target 7 is to have halted by 2015, and begun to reverse, the spread of HIV/AIDS, while target 8 is to have halted by 2015, and begun to reverse, the incidence of malaria and other major diseases (UN, 2000).

2.5.1) HIV/AIDS prevention and control

As it had been in the previous phases of HSDP, HIV/AIDS is one of the top priorities of HSDP IV. Progress in

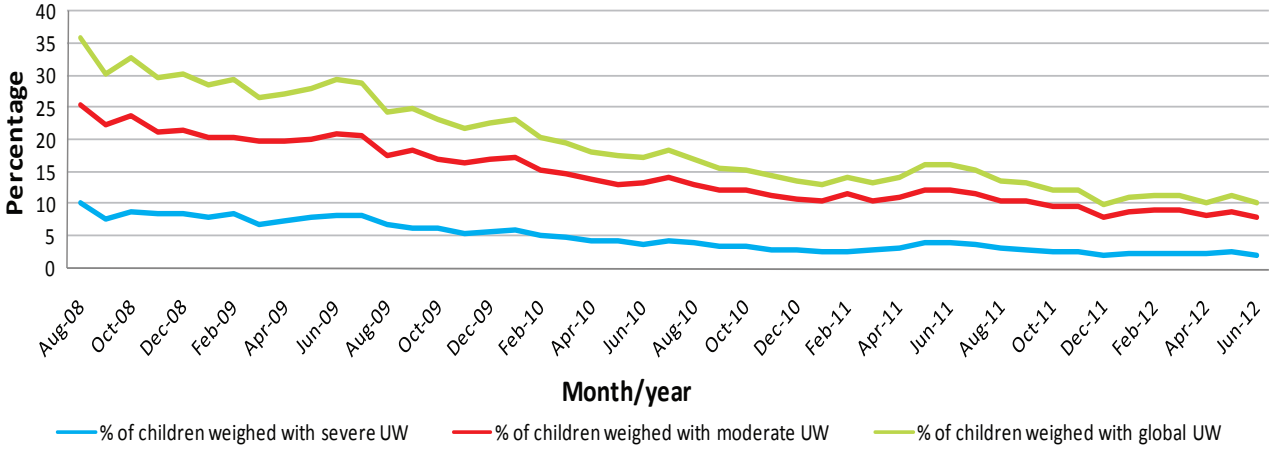


Figure 7. *Trend in percentage of underweight children under two years of age in CBN woredas (2008-2012 GC).*

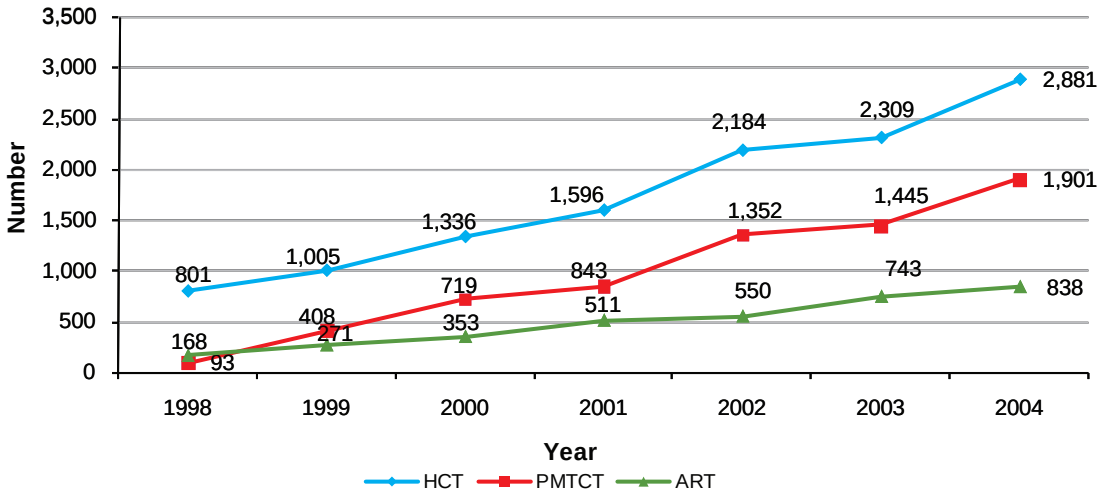


Figure 8. *Trend in the number of facilities providing HCT, PMTCT and ART services (EFY 1998- 2004).*

prevention and control of HIV/AIDS achieved so far, as well as challenges still to be addressed, are presented on the basis of key service indicators.

There was a steep increase in the number of facilities providing HIV Counselling and Testing (HCT), PMTCT and Antiretroviral Therapy (ART) services in the EFY 1998-2004 period (Figure 8): in particular, the increase was from 2,309 in EFY 2003 to 2,881 in EFY 2004 for HCT, from 1,445 to 1,901 for PMTCT, and from 743 to 838 for ART in the same period.

The number of HCT services increased from 9,448,880 in EFY 2003 to 11,294,426 in EFY 2004 (Figure 9A), above the HAPCO-revised target (10,145,800) set for the year at the national level. There were variations across regions, with eight regions (Amhara, Oromia, Somali, SNNP, Gambella, Harari, Addis Ababa, and Dire Dawa) increasing the number of clients using HCT in EFY 2004 and six regions (Amhara, Oromia, Somali, SNNP, Harari, and Dire Dawa) achieving their regional target set for the year (Figure 9B).

A total of 9,775 HIV-positive mothers received PMTCT prophylaxis in EFY 2004, which was above the EFY 2003 performance (8,365), but far below the target set for the year (38,405). It is worth noting that, on the basis of 2011 Ethiopia Demographic and Health Survey (EDHS) estimates (CSA, 2011), the target population of those in need of PMTCT was also adjusted, and the combination of the new estimate of the target population with the increase in number of HIV-positive mothers who received PMTCT led to an increase in PMTCT coverage from 9.3% in EFY 2003 to 25.5% in EFY 2004 (still below the target of 53% set for the year). Of note is the fact that, although decreasing, the gap between ANC and PMTCT coverage is still large, and related bottlenecks should be addressed in the framework of the integration of ANC and other maternal health services (in particular skilled care at birth) with PMTCT services. In EFY 2004, the three regions showing the highest number of HIV-positive mothers provided with PMTCT prophylaxis were Amhara (2,786), Oromia (2,024), and Addis Ababa (1,639), while the least number was seen in Somali (19) and Afar (43) (Figure 10).

A linear increase was observed in the number of People Living With HIV/AIDS (PLWHA) ever enrolled, ever started and currently on ART over the past years (Figure

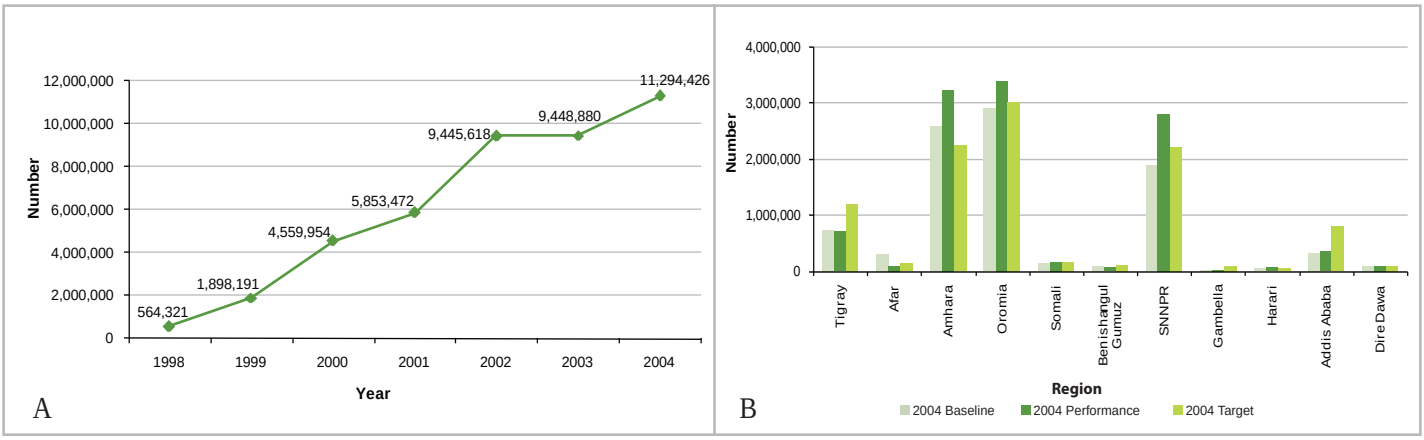


Figure 9. *Trend in the number of clients using HCT (EFY 1998- 2004) (9A) and comparison of EFY 2004 baseline, performance and target by region (9B).*

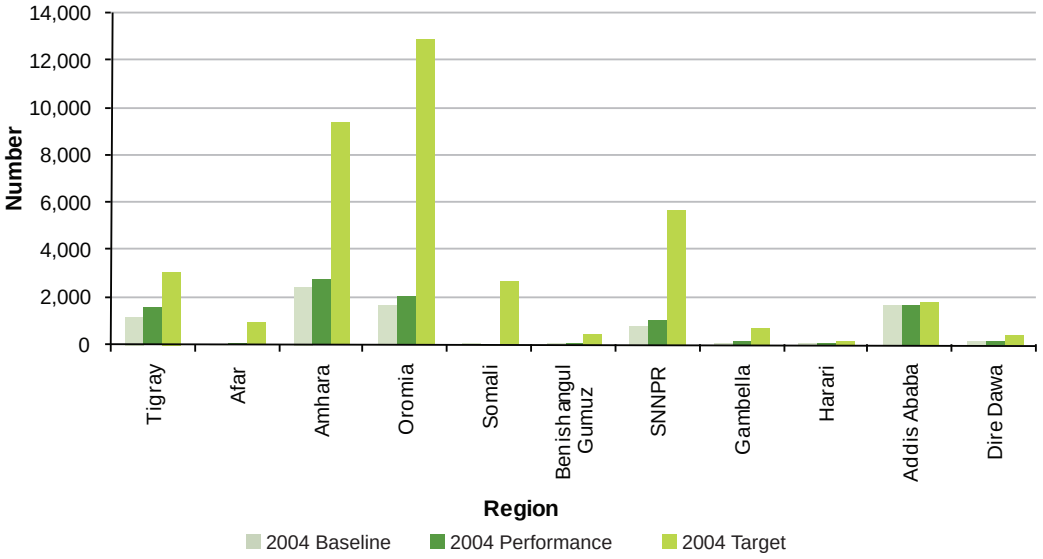


Figure 10. *Comparison of EFY 2004 baseline, performance and target of the number of HIV-positive mothers provided with PMTCT prophylaxis by region.*

11A), reaching 666,147 PLWHA ever enrolled in HIV/AIDS care, 379,190 PLWHA ever started, and 274,708 PLWHA currently on ART in EFY 2004. Concerning the latter ones, wide differences were observed across regions, with Addis Ababa showing the highest increase (from 54,667 in EFY 2003 to 63,108 in EFY 2004) overcoming the regional target (Figure 11B). Based on the new estimates of ART needs, the ART coverage was 58.9% in EFY 2004, which is above the average in sub-Saharan African countries (49%).

2.5.2) Malaria prevention and control

Efforts were made to speed the procurement and distribution of Long-Lasting Insecticide-treated Nets (LLIN) for provision to new households as well as for replacement purposes, with 6,260,000 LLINs being distributed in EFY 2004 (below the target of 12,699,493), reaching the cumulative total of 45,776,866 (Figure 12). Concerning vector control, the plan was to implement Insecticide Residual Spraying (IRS) in 6,000,000 households in EFY 2004; however, 4,383,819 households were sprayed, with a performance below EFY 2003 achievement (4,636,787) and the target set for the year (6,000,000). In EFY 2004, the total number of laboratory confirmed plus clinical malaria cases was 3,384,589, with a monthly pattern showing an increase in the first half of EFY 2004 (reaching 354,713 cases in Tahisas), followed by a decrease in Tir (232,361) and a progressive increase in the last five months of the year (with a peak of 423,531 cases in Sene) (Figure 13). Out of the total 3,384,589 malaria cases reported in EFY 2004, 1,793,832 (53.0%) were confirmed by laboratory, out of which 1,061,242 (59.2%) were *Plasmodium falciparum* and 732,590 (40.8%) were *Plasmodium vivax*.

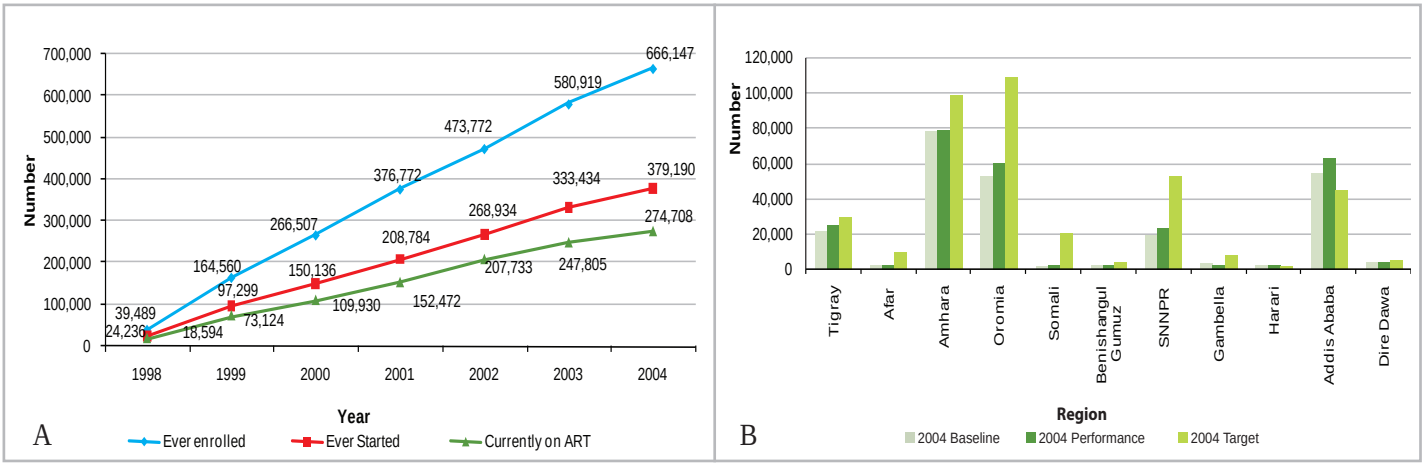


Figure 11. *Trend in the number of PLWHA who accessed HIV chronic care (EFY 1998- 2004) (11A) and comparison of EFY 2004 baseline, performance and target of the number of PLWHA who are currently on ART by region (11B).*

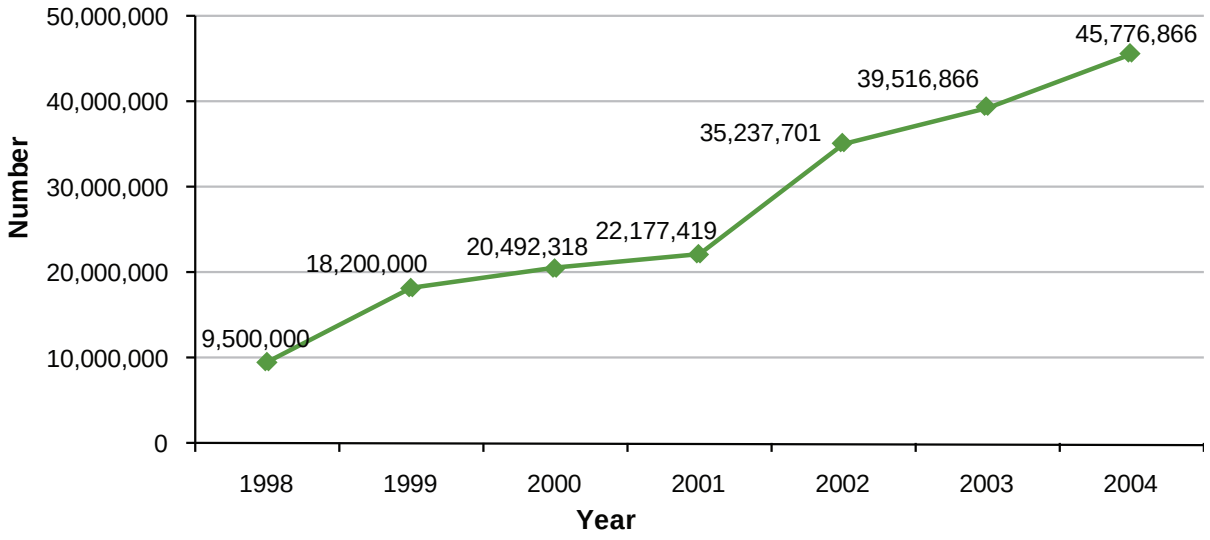


Figure 12. *Trend in the cumulative number of long-lasting insecticide-treated nets distributed (EFY 1998-2004).*

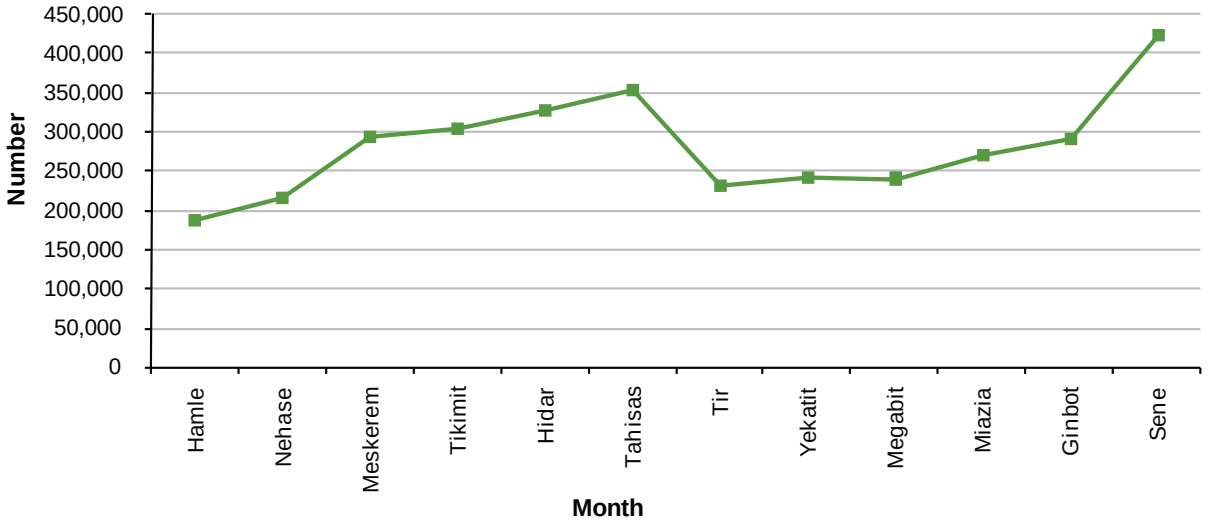


Figure 13. *Trend in laboratory confirmed plus clinical malaria cases by month (EFY 2004).*

2.5.3) Tuberculosis prevention and control

Concerning TB control, a major challenge observed over the past years was the low Case Detection Rate (CDR) (36.8% in EFY 2003), far below the international standard (70%). However, this low CDR was calculated on the basis of estimates of incidence rate of smear-positive TB cases derived from models developed by the World Health Organization (WHO) (WHO, 2010). A TB prevalence survey was conducted in EFY 2003-04 to produce actual estimates in the country, showing a TB prevalence (all forms) of 240 per 100,000 population, that was lower than the previous model-based estimate (585 per 100,000 population). According to the new WHO recommendation, CDR was calculated for all forms of TB and, on the basis of the new results from TB prevalence survey, the estimation of CDR increased to 72%, above the target of 70%. TB treatment success rate showed an increase from 82.5% in EFY 2003 to 90.6% in EFY 2004 (above the target of 89% set for the year), while TB cure rate increased from 66.5% to 68.2% in the same period (below the target of 80% set for EFY 2004). The trend over time in TB treatment success rate and TB cure rate is shown in Figure 14.

Large variations in TB treatment success rate were seen across regions, with the highest performance being observed in Tigray, Benishangul-Gumuz, and Gambella Regions (Figure 15A). All regions, except Amhara, Harari and Dire Dawa, improved their performance in EFY 2004. Concerning TB cure rate, the best performance was found in Addis Ababa (87.2%), while four regions (Tigray, Oromia, Harari, and Dire Dawa) decreased their performance in EFY 2004 with respect to EFY 2003 (Figure 15B).

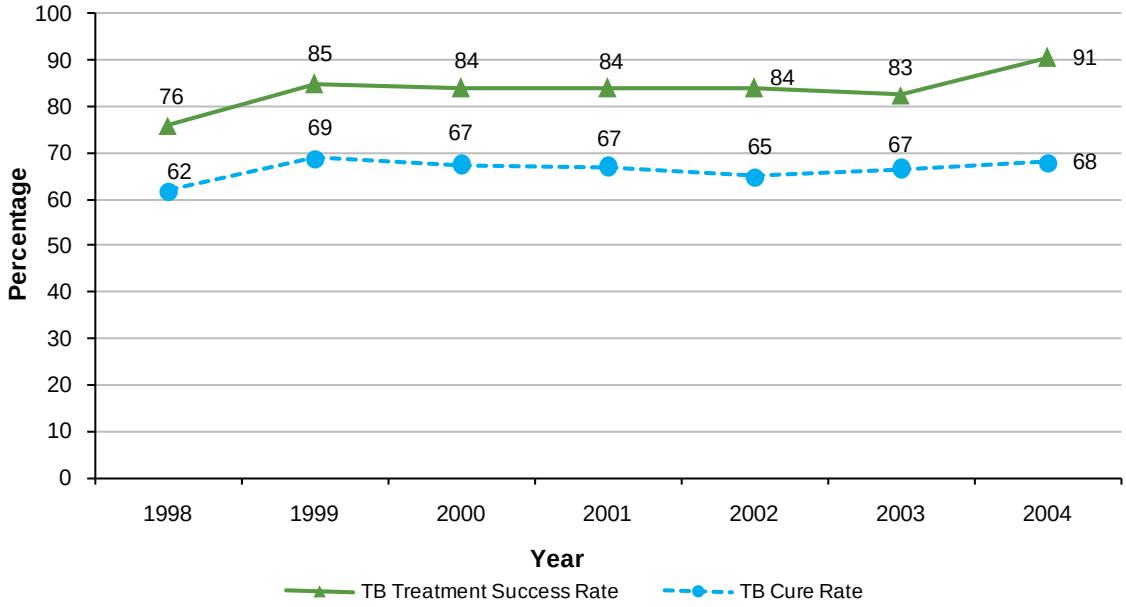


Figure 14. *Trend in TB treatment success rate and TB cure rate (EFY 1998-2004).*

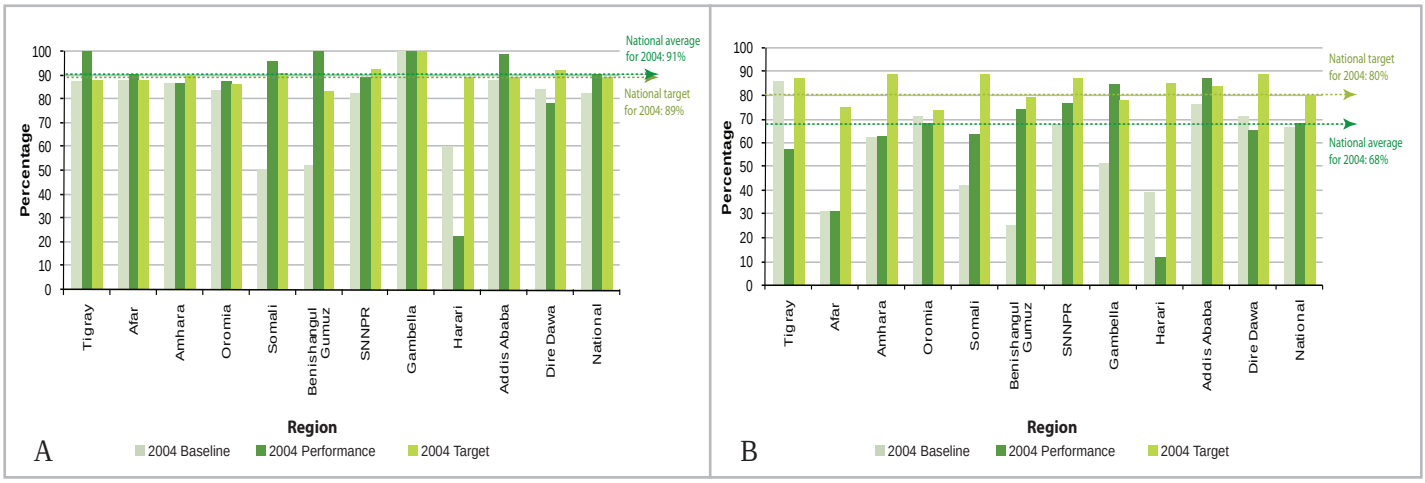


Figure 15. *Comparison of EFY 2004 baseline, performance and target of the TB treatment success rate (15A) and TB cure rate (15B) by region.*

2.5.4) Prevention and control of neglected tropical diseases

The multi-year Integrated Strategic Plan for the Control/ Elimination/Eradication of Neglected Tropical Diseases (NTD) (including dracunculiasis, onchocerciasis, lymphatic filariasis, leishmaniasis, schistosomiasis, soil transmitted helminthes, trachoma, and podoconiosis) was finalized in EFY 2004. Most of these diseases are either preventable through mass drug administration and proper sanitation, or treatable through systematic case finding and management. Concerning the Guinea Worm (GW) eradication program, there was a decline in GW cases reported in EFY 2004, with nine cases being reported from Gambella Region and two imported cases from SNNPR.

2.6) Public health emergency preparedness and response

For the epidemic prone diseases under surveillance, the number of cases reported in EFY 2004 was as follows: 596 Acute Watery Diarrhoea (AWD) cases, with a peak in Meskerem (national Case Fatality Rate –CFR- of 0.8%) (Figure 16A); 12,422 suspected measles cases, with a peak in Tir (CFR=0.3%) (Figure 16B); 443,579 suspected dysentery cases (CFR=0.001%); 933 suspected meningococcal meningitis cases (CFR=2.5%); and 1,281 suspected anthrax cases (CFR=2.7%). In EFY 2004, there was zero report of cases of Severe Acute Respiratory Syndrome, Rift Valley Fever, Viral Hemorrhagic Fever, and Yellow Fever. Furthermore, no polio cases were reported in EFY 2004, with Acute

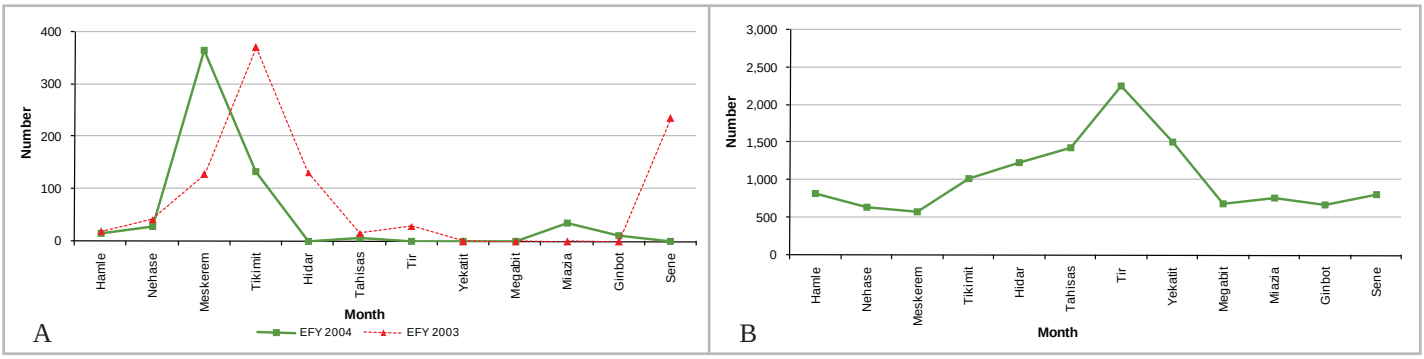


Figure 16. *Trend of acute watery diarrhoea cases (16A) and measles cases (16B) by month in EFY 2004.*

Flaccid Paralysis non-polio rate being estimated at 2.8 per 100,000 children under 15 years, above the WHO standard.

2.7) Prevention and control of non-communicable diseases

Non-Communicable Diseases (NCD) are becoming an increasingly important public health problem as epidemiological transition is progressing in Ethiopia.

Several activities were carried out in EFY 2004, with a major focus on mental health. According to the HSDP IV plan to integrate mental health service into the routine health service delivery system, training was provided to health professionals to expand mental health services at the primary health care level. Furthermore, the implementation of the mental health Gap Action Programme is underway aiming at integrating mental health into primary health care in selected regions (Amhara, Tigray, Oromia, and SNNP). The FMOH and the Ministry of Education have also revised the curriculum to upgrade the psychiatric nursing program to level 3 and its implementation will start in EFY 2005.

Finally, a 5 year strategic framework for the prevention and control of major NCDs was developed and endorsed, and FMOH is currently developing the National Plan of Action on major NCDs, such as cardiovascular diseases, diabetes, cancer, and chronic respiratory diseases.

2.8) Quality of health services

In relation to quality of health services, all hospitals are implementing the new Hospital Reform Implementation Guideline. The "Ethiopian Hospitals Alliance for Improving Quality" has been established. In EFY 2004, to improve and strengthen the referral system, Referral Implementation Guideline and Service Directory were also prepared. Forty six vehicles were procured for the use of blood bank services at regional level, and, as already mentioned, 372 ambulances were distributed to regions.

3) Leadership and governance

The Leadership and Governance chapter comprises of evidence-based planning, monitoring, evaluation, policy formulation and implementation. It also includes the development and implementation of a regulatory framework.

One of the major planning activities performed during EFY 2004 was the finalization of the Woreda-based Core Plan for EFY 2005 (FMOH, 2012b). Furthermore, at the end of EFY 2004, the newly re-designed Health Management Information System (HMIS) was implemented in 116 hospitals (93%) and in 2,402 HCs (80%), with an improvement with respect to the EFY 2003 performance (75% and 69%, respectively); however, EFY 2004 achievement was below the target set for the year to cover all facilities in the country. Furthermore, electronic HMIS (eHMIS) reporting module has been implemented in all health facilities in Addis Ababa and Harari; in hospitals and woreda health offices in Tigray; in six woreda health offices, two hospitals and seven HCs in three zones of Oromia as well as in seven zones, 71 woredas, two special woredas and one city administration in SNNPR. Mobile Health (mHealth) initiative has been started in EFY 2004.

Community Health Information System has been designed and is being implemented in order to support the development of HEP; so far, 3.9 million household heads (25.0%) have family folders.

The regulatory system has been strengthened and a number of activities related to Inspection and Quality Control of "Products", "Premises", "Professional Practice" and "Food Products" had been accomplished. Different types of guidelines on procurement, drug donations, list of emergency drugs, and disposal of spoiled food products were prepared, including 39 health facility standards. Import permits were given for 2,945 pharmaceuticals and 525,386.4 metric tons of food, and export permits given for 337 pharmaceuticals and 80,470.8 metric tons of food and related products. A total of 17 specialized hospitals, 220 health institutions, and 801 health related facilities were inspected; furthermore, 1,059 graduated health professionals (out of the planned 3,720) were registered and licensed at federal level.

4) Health infrastructure and resources

This Strategic Theme includes construction and equipping of health posts (HP) and HCs, human capital and leadership, pharmaceutical supply and services, and resource mobilization and utilization.

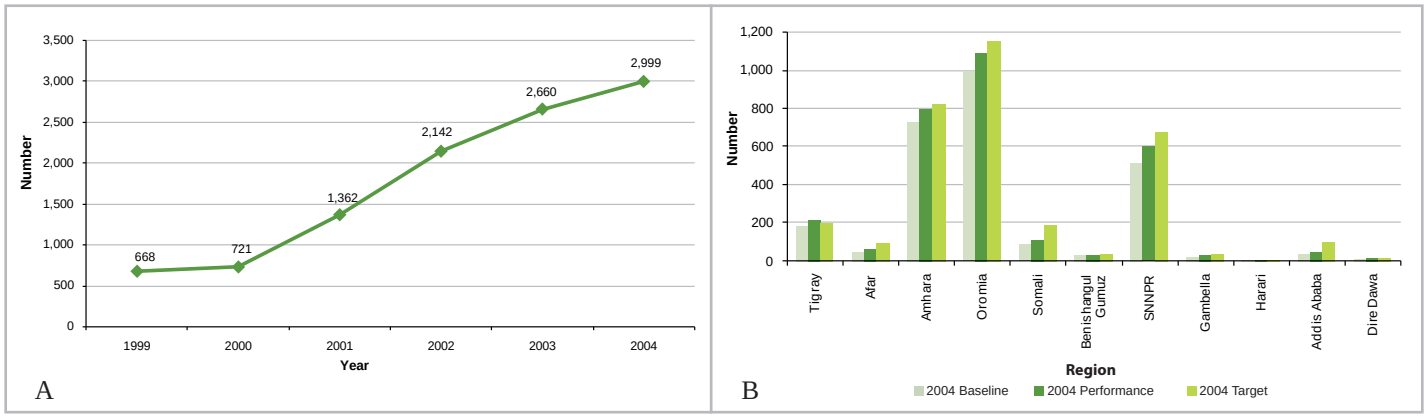


Figure 17. *Trend in the cumulative number of health centers available (EFY 1999-2004) (17A) and comparison of EFY 2004 baseline and performance by region (17B).*

4.1) Construction and equipping of Health Posts

There is a linear increase of the cumulative number of constructed HPs in the past years. In EFY 2004, a total of 573 new HPs were constructed, making a cumulative number of 15,668 HPs. A total of 2,268 HPs were equipped with necessary materials.

4.2) Construction of Health Centers

To achieve universal primary health care coverage, it was planned to construct a cumulative total of 3,329 HCs at the end of EFY 2004. Accordingly, the number of newly constructed and completed HCs in EFY 2004 was 339 that made the cumulative number of HCs to 2,999 (in EFY 2003 it was 2,660) (Figure 17A). Oromia was the region with the highest number of completed health centers (HC) (1,085) (Figure 17B).

The total number of hospitals available in EFY 2004 was 125, while ongoing construction of 129 hospitals was reported by six regions (Amhara, Oromia, Benishangul Gumuz, SNNPR, Gambella, and Dire Dawa).

4.3) Human capital and leadership

With respect to the upgrading program to level IV for HEWs, out of the planned 3,000, only 1,367 trainees (45.6%) have started training using the regular curriculum, out of whom 208 have completed their training and are awaiting occupational evaluation.

There are currently 244 Integrated Emergency Surgery Officer (IESO) trainees under training in five universities, while the first batch of 40 IESOs have graduated in EFY 2004 and are deployed at primary hospitals. In addition, 50 trainees are under training at three new universities (15 in Wello, 20 in Adama, and 15 in St Paul's Millennium Medical College) making the total under training as 294. It was planned to train 5,600 midwives in three rounds: during the first round, a total of 1,558 midwives have graduated, while 1,746 have been enrolled during the second round (above the planned 1,585). In the first round training program of Level 5 nurse anaesthetists, an intake of 101 trainees was achieved at the five health science colleges.

At the end of EFY 2004, 8,060 medical students are under training in 22 universities/medical colleges.

4.4) Pharmaceutical supply and services

Out of the planned procurement of pharmaceuticals and medical equipment worth ETB 5.20 billion, the Pharmaceutical Fund and Supply Agency (PFSA) procured pharmaceuticals worth ETB 4.97 billion. Pharmaceuticals and medical equipment worth ETB 6.6 billion (above the plan of 6.0 billion) were distributed. Training on stock and distribution management, rational drug use and on how to prepare list of essential drugs and equipment was provided to 2,380 health workers drawn from 120 hospitals and 880 HCs. Training on Integrated Pharmaceuticals Fund and Supply Management Information System was provided to 4,338 professionals drawn from health facilities. On an average, 60% of the construction work of the 17 large and medium stores has been completed.

4.5) Resource mobilization and utilization

FMOH has been facilitating the implementation of health care financing reform in 2,241 health facilities (90 hospitals and 2,151 HCs) in seven regions and two city administrations.

A Grant Management Unit has been established under the Finance and Procurement Directorate of the FMOH. Implementation of the new grant management system has started, and a Grant Management Manual has been developed and shared to regions and agencies.

4.5.1) Health insurance

FMOH has been implementing Community Based Health Insurance (CBHI) pilot program in thirteen pilot woredas of four regions (Tigray, Amhara, Oromia and SNNP). It also facilitated the endorsement of health insurance legal frameworks and operational manual

and tools as well as the establishment of the National Health Insurance Agency. Technical support and capacity building trainings were provided for the health facilities and CBHI schemes, together with regular supportive supervision, review meetings and various workshops at all levels. Concerning the Social Health Insurance (SHI), in EFY 2004 the FMOH finalized the SHI implementation regulation, and submitted it to the Council of Ministers for endorsement. Besides, an assessment was made to design organizational structure and duties and responsibilities of various posts and a proposal was submitted to government for approval.

4.5.2) Per capita allocation on health

In EFY 2004, the percentage of total budget allocated in the health sector at regional level was 9.13%, which was lower than in EFY 2003 (10.03%). In EFY 2004, the per capita health allocation was ETB 74.27, showing an increase with respect to EFY 2003 (ETB 49.01).

One of the sources of finance for the health sector is assistance from development partners (DPs). In EFY 2004, the resource mapping exercise has been expanded to capture planned spending in much greater detail and its results were communicated to respective stakeholders. Comparison between commitment and disbursement of donors' funds shows that in EFY 2004 a total of USD 409.35 million was committed by DPs for public modalities, and a total of USD 411.00 million (100.4%) was disbursed. A total of USD 105.35 million was disbursed to the MDG Performance Fund (PF), more than doubling the EFY 2003 disbursement (USD 40.44 million). The MDG PF has also increased as a proportion of total DP disbursements, having accounted for 25.6% of disbursed amounts in EFY 2004 as opposed to 9.6% in EFY 2003.

5) Conclusion

This article gives an overview of the planned activities, main achievements and key challenges encountered in the year in accordance with three Strategic Themes: (i) Health Service Delivery and Quality of Care; (ii) Leadership and Governance; and (iii) Health Infrastructure and Resources.

The most urgent challenge to be addressed is to reduce maternal mortality and morbidity. To this end, efforts were made to promote the demand as well as to increase the coverage of safe motherhood services, with a strategy of combining prenatal care (focusing on maternal risks and the prevention and treatment of complications) and improved access to emergency obstetrical care, ensuring a continuum of care during pregnancy and delivery and after birth. In particular, an increase in coverage for antenatal and postnatal care as well as for skilled care at birth was observed in EFY 2004; however, although increasing, the percentage of deliveries assisted by skilled birth attendants (which is considered as the single most important intervention for reducing maternal mortality) was still very low (20% in EFY 2004).

With respect to prevention and control of communicable diseases, encouraging results were achieved in HIV/AIDS control, with a combination of stable HIV prevalence, sustained prevention efforts and increased ART coverage, heralding the possibility of attaining MDG6. However, although increasing, PMTCT coverage was still low (25% in EFY 2003), reflecting the inadequate access to PMTCT services as well as their insufficient integration with maternal services.

Concerning malaria prevention and control, a three-pronged approach has been implemented, consisting of early diagnosis and effective treatment, selective vector control and epidemic prevention and control.

Good progress has been achieved also in TB control, with the CDR (all forms) being estimated at 72% (above the international standard of 70%) on the basis of the results of the TB prevalence survey conducted in the country in 2010/11. Concerning treatment outcomes of smear-positive pulmonary TB cases, TB treatment success rate was estimated at 91% in EFY 2004 (above the international standard of 85%), while TB cure rate was estimated at 68% in the same period (below the international standard of 85%). Ethiopia is therefore on track to achieve TB targets for MDG 6; however, further efforts are needed to ensure good laboratory capacity and availability of trained laboratory staff, especially in peripheral health facilities, to perform sputum-smear examination during treatment.

In general, health service coverage has improved over time, but the performance has not been uniform across programs. Interventions that can be routinely scheduled, such as antenatal care and immunization, had much higher coverage than those that rely on functional health systems and 24-hour availability of clinical services, such as skilled care at birth. Therefore, increasing service coverage and strengthening health systems are interrelated, and cost-effective interventions that can avert much of the burden of maternal and child disease and death require functioning health system to have an impact at the population scale. In this perspective, further efforts are needed to address inadequate skilled care at birth and low PMTCT coverage.

Progress has been made in developing partnership and increasing resource mobilization and utilization towards the achievement of MDGs. Concerning harmonisation, a critical step towards "One Budget" has been the establishment of the MDG PF to facilitate resource pooling in order to finance the priorities under the HSDP, with an increasing number of DPs joining MDG PF (from 5 in EFY 2003 to 8 in EFY 2004): as a result, the total amount disbursed to MDG PF by DPs more than doubled

in EFY 2004, reaching USD 105 million.

This article tries to address the critical question of how to speed the pace of change observed in the past into dramatically faster progress during HSDP IV period, whose end in 2014/15 corresponds to the deadline of the quantitative, time-bound framework of accountability of MDGs. The past experience of achievements and challenges provides important hints to guide policies, strategies and programmes to be implemented in the next years with the support of all partners in order to achieve MDGs by 2015.

References

CSA, 2011. Ethiopia Demographic and Health Survey 2011. Central Statistical Authority, Addis Ababa and ORC Macro, Calverton.

FMOH, 2010. HSDP IV. Health Sector Strategic Plan 2010/11-2014/15. Federal Ministry of Health, Addis Ababa.

FMOH, 2012a. Annual Performance Report of HSDP IV. EFY 2004 (2011/12). Federal Ministry of Health, Addis Ababa.

FMOH, 2012b. HSDP IV Woreda-Based Annual Core Plan. EFY 2004 (2013/14). Federal Ministry of Health, Addis Ababa.

UN, 2000. United Nations Millennium Declaration: resolution adopted by the General Assembly. 55/2. Sept 18, 2000. United Nations, New York. www.un.org/millennium/declaration/ares552e.pdf [accessed March 2013].

WHO, 2010. Global tuberculosis control. World Health Organization, Geneva.

COUNTDOWN TO 2015: CHALLENGES AND PERSPECTIVES IN ACHIEVING THE HEALTH-RELATED MILLENNIUM DEVELOPMENT GOALS IN ETHIOPIA

Noah Elias[1] and Sandro Accorsi[2]

[1] Acting Director of the Policy and Planning Directorate (PPD), Federal Ministry of Health (FMOH)
[2] Italian Cooperation Technical Advisor at PPD/FMOH.

Summary

Recent population-based surveys provide updated estimates of key Millennium Development Goals (MDG) indicators, giving an overview of progress and challenges in achieving the health-related MDGs in Ethiopia. In particular, a consistent decline was observed in under 5 mortality rate (from 217 to 88 per 1000 live births between 1990 GC and 2011 GC) and in infant mortality rate (from 133 to 59 per 1000 live births in the same period), being on track to achieve MDG4 by 2015 GC. This decline was much steeper than the downward trend found in sub-Saharan Africa (SSA).

Maternal mortality ratio (MMR) was estimated at 871, 673, and 676 deaths per 100,000 live births in 2000, 2005 and 2011 Ethiopia Demographic and Health Surveys, respectively. Because of the high degree of sampling variability and the large (and overlapping) confidence intervals around MMR estimates, it is not possible to reach any firm conclusion about MMR trend; however, these results clearly show that further efforts are needed to decrease the huge burden of maternal mortality in Ethiopia. In SSA progress was also slow, off-track to meet the MDG5.

A general increase in coverage of key MDG-related interventions for disease control (MDG6) has been observed over time. Encouraging results have been achieved in HIV/AIDS control, with combination of relatively low HIV prevalence (1.5%), sustained prevention efforts and increased antiretroviral therapy coverage (58.9% in 2011/12 GC, above the average in sub-Saharan African countries). Good progress has also been achieved in malaria control, with 2011 Malaria Indicator Survey showing an improvement in insecticide residual spraying coverage, use of malaria case-management services and malaria knowledge, while challenges were still to be addressed in ensuring availability and use of long-lasting insecticide-treated nets. Results from the TB prevalence survey carried out in 2010/11 GC shows a TB prevalence (all forms) of 240 per 100,000 population which is much lower than previous WHO estimates from models (585 per 100,000), making it possible to achieve the TB target for MDG6.

Ethiopia implemented pro-poor policies and performed better than other sub-Saharan African countries for most MDG indicators, making substantial progress towards the achievement of MDGs. These “within and across” analyses provide explanations regarding differences in outcomes as well as hints on how to speed the pace of change observed in the past into dramatically faster progress in order to achieve MDGs by 2015.

1) Introduction

The UN Millennium Declaration was signed by world leaders in 2000 GC, establishing eight Millennium Development Goals (MDGs) for development and poverty eradication (UN, 2000). Three of the eight MDGs are directly related to health: (i) MDG4 to reduce child mortality; (ii) MDG5 to improve maternal health; and (iii) MDG6 to combat HIV/AIDS, malaria, and other major diseases. Recent population-based surveys provide updated estimates of key MDG indicators, giving an overview of the progress towards MDGs in Ethiopia. This article aims at describing achievements and challenges in this regard, and at comparing Ethiopia’s performance with the performance observed in other sub-Saharan African (SSA) countries. It analyzes also the factors underlying patterns and trends of health-related MDG indicators, showing similarities between Ethiopia and SSA countries as well as peculiarities of Ethiopia in progressing towards MDGs.

2) Material and Methods

Impact indicators, such as under 5 mortality rate (U5MR), infant mortality rate (IMR), and maternal mortality ratio (MMR), are derived from the three rounds of the Ethiopia Demographic Health Survey (EDHS) carried out in 2000 GC (CSA, 2001), 2005 GC (CSA, 2006) and 2011 GC (CSA, 2011). Concerning disease control, additional impact indicators are derived from the National Population-Based Tuberculosis Prevalence Survey (FMOH and EHNRI, 2011) and the 2011 National Malaria Indicator Survey (EHNRI, 2012). Patterns and trends of health-related MDG indicators in Ethiopia were analyzed, and compared with the performance in other SSA countries according to the 2011 UN MDG report (UN, 2011), therefore using consistent timeframe for different data sources.

Table 1. *Comparison of estimates of MDG indicators from EDHS 2000, 2005 and 2011 in Ethiopia.*

INDICATOR	EDHS 2000	EDHS 2005	EDHS 2011	PERFORMANCE
Under 5 Mortality Rate (U5MR) (per 1000 live births)	166	123	88	⇧
Infant Mortality Rate (IMR) (per 1000 live births)	97	77	59	⇧
Neonatal Mortality Rate (NMR) (per 1000 live births)	49	39	37	⇧
Maternal Mortality Ratio (MMR) (per 100,000 live births)	871	673	676	*
Contraceptive Prevalence Rate (CPR) (%)	8	15	29	⇧
Total Fertility Rate (TFR)	5.9	5.4	4.8	⇧
Exclusive breastfeeding under 6 months (%)	38	49	52	⇧
Prevalence of anaemia among women (%)	NA	27	17	⇧
Knowledge of HIV/AIDS among women (%)	77	90	97	⇧
Knowledge of HIV/AIDS among men (%)	92	97	99	⇧

* No firm conclusion about MMR trend (see text on page 23).

3) Results

According to the EDHS results in 2000 GC (CSA, 2001), 2005 GC (CSA, 2006) and 2011 GC (CSA, 2011), there was an improvement in most health-related MDG indicators in Ethiopia, with MMR showing a decrease between 2000 and 2005 GC, and remaining roughly stable in 2011 GC (Table 1).

3.1) Millennium Development Goal 4

Population-based indicators measuring the progress towards the achievement of MDG 4 were estimated in 2011 EDHS. A decline was observed in U5MR from 217 to 88 per 1000 live births between 1990 GC and 2011 GC. The decrease in U5MR observed in Ethiopia was much steeper than the downward trend found in SSA, where it declined from 180 per 1000 live births in 1990 GC to 129 per 1000 live births in 2010 GC (UN, 2011) (Figure 1). The comparison between the actual trend in Ethiopia (in green bold line) and the trend necessary for meeting MDG 4 by 2015 GC (in green dotted line) shows that Ethiopia is on track towards the achievement of MDG4; furthermore, Ethiopia's performance is better than the average in SSA countries (in red bold line).

Similar trends were observed for IMR in Ethiopia and SSA. In particular, IMR decreased from 97 deaths per 1,000 live births in the 2000 EDHS to 59 in the 2011 EDHS. On the other hand, even though Neonatal Mortality Rate (NMR) decreased from 49 deaths per 1,000 live births in 2000 EDHS to 39 deaths per 1,000 live births in 2005 EDHS, it has since remained stable at 37 deaths per 1,000, as reported in the 2011 EDHS.

3.2) Millennium Development Goal 5

While the baseline for MMR (990 deaths per 100,000 live births in 1990 GC) is derived from models, three subsequent rounds of EDHS provide more recent MMR

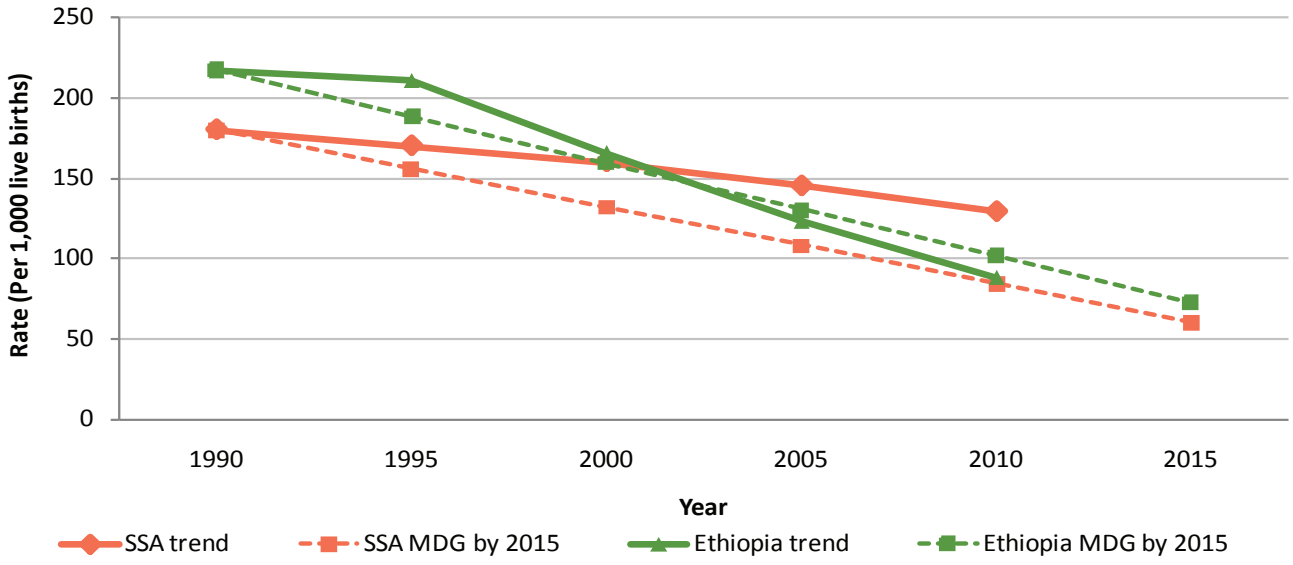


Figure 1. *Comparison of trend in under 5 mortality rate (per 1,000 live births) in Ethiopia (in green) and in sub-Saharan Africa (in red): actual trends during the period 1990-2010 GC (in bold lines) and trends necessary for achieving MDG 4 by 2015 GC (in dotted lines).*

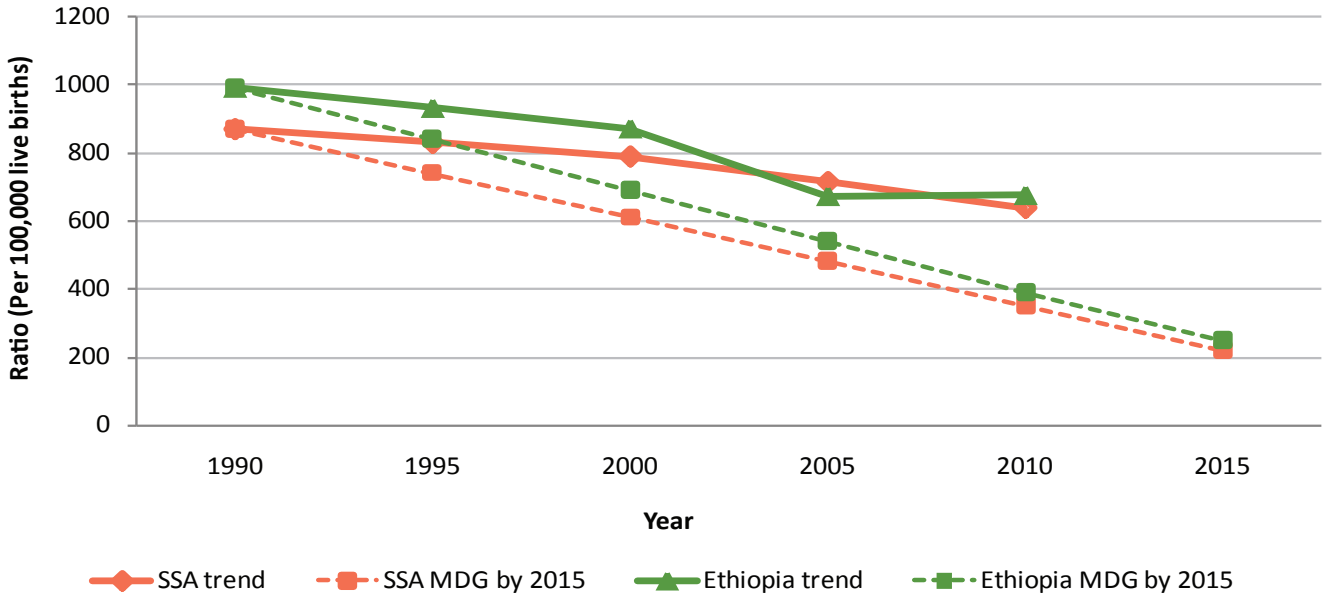


Figure 2. *Comparison of trend in maternal mortality ratio (per 100,000 live births) in Ethiopia (in green) and in sub-Saharan Africa (in red): actual trends during the period 1990-2010 GC (in bold lines) and trends necessary for achieving MDG 5 by 2015 GC (in dotted lines).*

estimates: 871 deaths per 100,000 live births (with 95% Confidence Interval -CI- between 703 and 1,039) in 2000 GC (CSA, 2001), 673 deaths per 100,000 live births in 2005 GC (with 95% CI between 548 and 799) (CSA, 2006), and 676 deaths per 100,000 live births in 2011 GC (with 95% CI between 541 and 810) (CSA, 2011). Because of the high degree of sampling variability and the large (and overlapping) confidence intervals around MMR estimates, there is uncertainty about change in MMR between 2000 GC and 2011 GC, and it is not possible to reach any firm conclusion about MMR trend. However, these results clearly show that further efforts are needed to decrease the huge burden of maternal mortality in Ethiopia. In SSA progress was also slow, from 870 per 100,000 live births in 1990 GC to 640 in 2010 GC, off-track to meet the MDG5 (UN, 2011) (Figure 2).

It is worth noting that a different MMR estimate was published by the World Health Organization (WHO) in the 2012 World Health Statistics (350 deaths per 100,000 live births) (WHO, 2012a), that was based on models. While the actual estimate (from EDHS) is used for country-level monitoring and planning as well as for national reporting, model-based estimate is rather used for international comparisons and global reporting by international organizations. Therefore, FMOH is currently using the actual MMR estimate from 2011 EDHS (676 deaths per 100,000 live births) for planning and monitoring purposes as well as for policy making, in order also to stress the urgent need for accelerated interventions to decrease maternal mortality in Ethiopia.

Furthermore, another target of MDG 5 is to achieve, by 2015 GC, universal access to reproductive health, including access to safe, affordable and effective methods of contraception (UN, 2000). Concerning family planning, results from EDHS show an overall increase in contraceptive prevalence rate (CPR) from 8.1% in 2000 EDHS (CSA, 2001) to 28.6% in 2011 EDHS (CSA, 2011) (Figure 3A). While both rural and urban areas showed a consistent increase over time (Figure 3B), a five-fold increase in CPR was observed in rural areas (from 4.3% in 2000 EDHS to 23.4% in 2011 EDHS), with urban areas increasing from 35.6% to

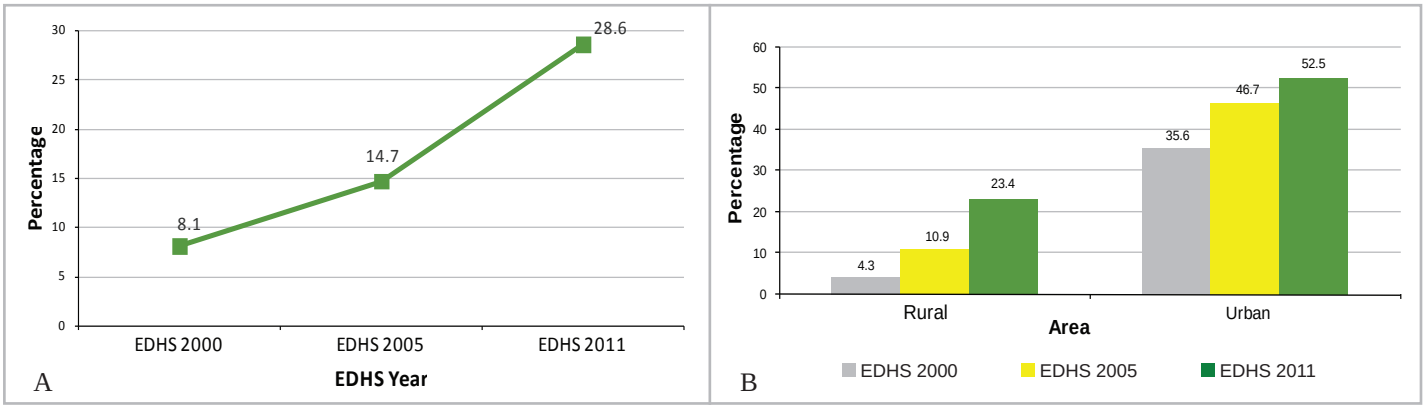


Figure 3. *Trend in contraceptive prevalence rate (3A) and distribution by area (3B) (EDHS 2000-2011).*

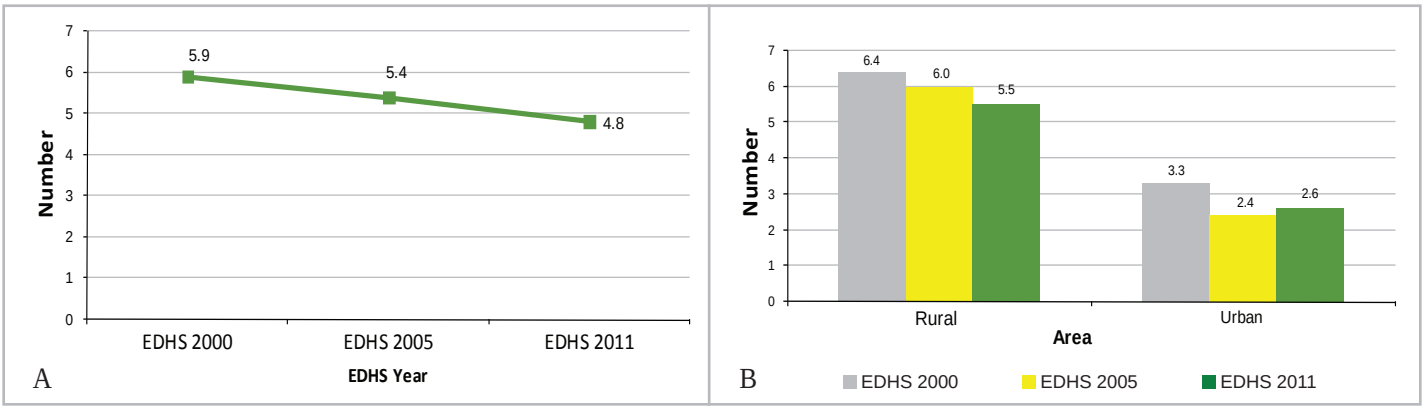


Figure 4. *Trend in total fertility rate (4A) and distribution by area (4B) (EDHS 2000-2011).*

52.5% (+47.5%) in the same period. Of note is the fact that the steepest increase in rural areas was observed between 2005 EDHS and 2011 EDHS, when CPR more than doubled in only six years (from 10.9% to 23.4%), with a reduction in unmet needs for family planning from 35.8% to 27.5% in rural areas and from 33.8% to 25.3% at the national level in the same period. An overall decline in total fertility rate (TFR) was observed from 5.9 in EDHS 2000 to 4.8 in EDHS 2011 (Figure 4A), with the steepest decline being observed in rural areas (from 6.4 in EDHS 2000 to 5.5 in EDHS 2011) (Figure 4B). Of note is the fact that, while an upward fluctuation was observed in urban areas between EDHS 2005 (2.4) and EDHS 2011 (2.6), rural areas showed a consistent decline in TFR (from 6.0 to 5.5) in the same period.

Women are increasingly empowered to use their preferred contraceptive method, with over 5.6 million women of reproductive age currently using contraception. The fertility transition in Ethiopia is already advanced in urban areas, showing the lowest fertility rate as compared to urban areas in Eastern and Southern Africa (ESA), with Addis Ababa being the only city in ESA with below replacement fertility after the 1990's GC (TFR=1.5 from 2011 EDHS) (Teller and Hailemariam, 2011). Therefore, patterns in Ethiopia are characterised by high, but declining, fertility in rural areas, and low fertility in urban areas. These patterns are different from those observed in SSA, the region with the highest maternal mortality and lowest skilled care at birth, where women continue to have the lowest level of contraceptive prevalence (22%), with little progress reported since 2000 GC (UN, 2011).

3.3) Millennium Development Goal 6

HIV/AIDS

According to 2011 EDHS, the adult HIV prevalence (age 15-49) is 1.5% (1.9% among women and 1.0% among men) (CSA, 2011): this estimate is lower than the previous "Single Point Estimate" based on projections (2.4% in 2010/11). Concerning sex-related patterns, the HIV prevalence in women is consistently higher than in men in all age groups from 15-19 to 30-34 years, with an increase with age reaching the peak (3.7%) in the 30-34 age group, while, among men, the peak (3.0%) is reached in the 35-39 age group; in older ages, similar downward patterns of HIV prevalence are observed in both sexes (Figure 5). In particular, HIV prevalence was 0.2% in women aged 15-19 and 0.9% in those aged 20-24

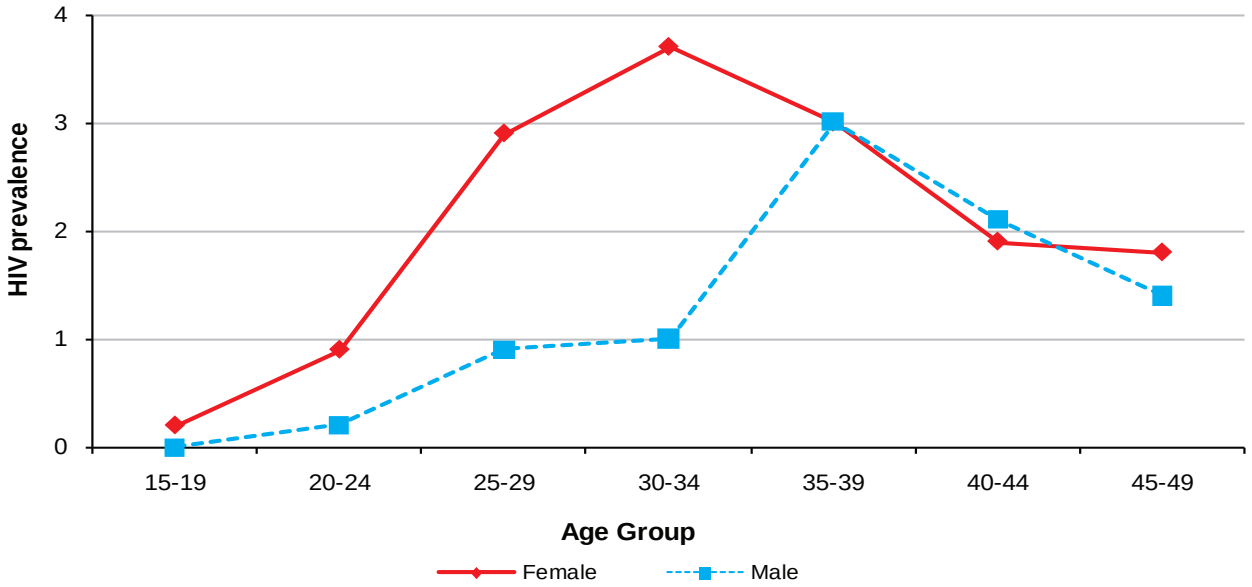


Figure 5. *Distribution of HIV prevalence by sex and age group (2011 EDHS).*

years (CSA, 2011). In sub-Saharan Africa, in 2010 GC the average adult HIV prevalence was 5.0%, while it was 3.3% in women aged 15-24 years (UNECA et al., 2012).

Concerning HIV/AIDS related knowledge, attitudes, and behaviour, a general improvement was observed in Ethiopia: for example, there was an increase in percentage of women and men who have heard of AIDS from 90% to 97% and from 97% to 99%, respectively, between 2005 EDHS and 2011 EDHS, showing that HIV/AIDS awareness is universal in Ethiopia. Knowledge of HIV prevention methods has also increased: according to the 2005 EDHS, 35% of women knew that HIV could be prevented by using a condom and by limiting sexual partners; this compares with 43% in EDHS 2011. Similarly, this percentage increased among men from 57% in 2005 EDHS to 64% in 2011 EDHS.

Tuberculosis

Concerning TB control, a major challenge observed over the past years was the low Case Detection Rate (CDR) (36.8% in 2010/11), far below the international standard (70%). However, this low CDR was calculated on the basis of incidence estimates derived from models developed by the World Health Organization (WHO, 2010a). A TB prevalence survey was conducted (FMOH and EHNRI, 2011) to produce actual estimates in the country, showing levels that were much lower than the previous model-based estimates: for example, the TB prevalence (all forms) was 240 per 100,000 population, that was less than the previous model-based estimate (585 per 100,000 population). According to the new WHO recommendations, CDR was calculated for all forms of TB and, on the basis of the new results from the TB prevalence survey, the estimation of CDR increased to 72%, above the target of 70%. Concerning treatment outcomes of smear-positive pulmonary TB cases in the cohort, TB treatment success rate showed an increase from 82.5% in 2010/11 GC to 90.6% in 2011/12 GC (above the target of 89% set for the year), while TB cure rate increased from 66.5% to 68.2% in the same period (below the target of 80% set for 2011/12 GC).

Malaria

Concerning MDG 6 (target 8 for malaria), good progress has been achieved in malaria control. A three-pronged approach has been implemented, consisting of early diagnosis and effective treatment, selective vector control and epidemic prevention and control. In particular, Artemisinin-based Combination Therapy (ACT) has been used as first line treatment for *Falciparum Malaria*, complemented with the distribution of Long-Lasting Insecticide-treated Nets (LLIN) for provision to new households as well as for replacement purposes (reaching the cumulative total of 45,776,866) (FMOH, 2012) as well as with Insecticide Residual Spraying (IRS) of households in selected areas. Progress in malaria control was documented in the past years: for example, the 2007 Malaria Indicators Survey (MIS) showed a steep rise in LLIN use (FMOH, 2008), while a decrease in malaria morbidity and mortality was observed in a survey of Ethiopian facilities in 2007 GC (WHO, 2008).

According to 2011 MIS, improvements were observed in IRS coverage, use of malaria case-management services and malaria knowledge, while challenges were still to be addressed in ensuring availability and use of LLINs (EHNRI, 2012). In particular, according to 2011 MIS, the percentage of households sprayed in the last 12 months preceding the survey increased from 20.0% in MIS 2007 to 46.6% in MIS 2011. It was also reported that 19.7% of U5 children living in areas <2000m had suffered from a fever in the two weeks preceding the survey (24.0% in MIS 2007), with 51.3% of these children seeking medical attention within 24 hours of onset of fever. The percentage of U5 children who took anti-malaria drug within 24 hours of the onset of fever in MIS 2011 (32.6%) showed an increase compared to the MIS 2007 (11.9%), indicating improvement in access as well as use of malaria case-management services. Concerning the percentage of women living in areas <2000m who reported mosquito nets as a prevention method for malaria, an increase was observed from 38.2% in 2007 to 63.4% in 2011. However, further efforts are needed to strengthen availability and use of LLINs. In fact, according to 2011 MIS, 38.2% of U5 children slept under a net in the night before the survey (41.5% in MIS 2007). Considering only households that owned at least one net, 64.5% of children U5 slept under a net in the night before the survey (60.2% in MIS 2007). The comparison of population at malaria risk protected by Insecticide Treated Nets (ITN) or IRS across sub-Saharan African countries shows Ethiopia's rank between 50% and 80% (Figure 6) (WHO, 2012b).

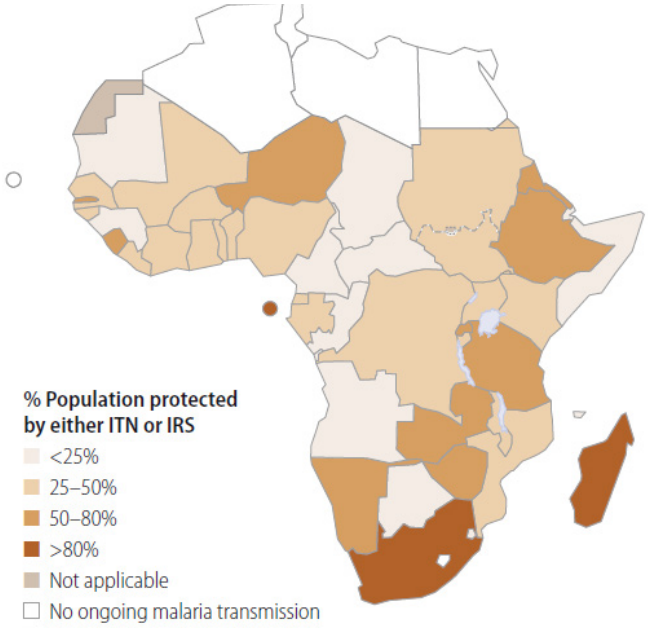


Figure 6. *Distribution of population at malaria risk protected by ITN or IRS across countries in sub-Saharan Africa in 2011 (2012 World Malaria Report).*

4) Discussion

Recent evidence suggests that, based on current trends, many low-income countries are unlikely to achieve the health MDGs by 2015 GC (UN, 2011). This is despite the fact that there are a growing number of cost-effective interventions, as well as increasing international assistance for specific disease control programmes (IHME, 2011). By focusing on specific performance measures, these programmes have sometimes not fully dealt with broad system failures. Yet such failures seem to be behind the inadequate progress made on several key targets of MDGs. There is growing consensus that a primary bottleneck to achieving MDGs in low-income countries is health systems that are too fragile and fragmented to deliver the volume and quality of services to those in need (Travis et al., 2008). Major shortfalls are identified in the health workforce, lack of donor coordination, inadequate resource mobilization, and weak information systems as critical challenges to achieving MDGs.

Countries that are on track in achieving MDGs share several factors in common (Rohde et al., 2008): implementation of an integrated package of community and primary curative and preventive care, development of district management systems, strong political leadership, coordination and harmonization across partners and government agencies, effective use of information and financial resources, participation of beneficiary communities and intersectoral collaboration. Overall, given the multi-sectoral nature of health, it is important that relevant sectors such as water and sanitation, education, agriculture, transport and social welfare mainstream health into their sectoral policies to assist in achieving health MDGs. This can be successfully achieved through integration of health equity in the overarching framework for national development and poverty reduction (UN and AUC, 2008).

It is for this reason that the Health Sector Development Program (HSDP) in Ethiopia is focusing on high-impact and cost-effective health interventions as well as on health systems strengthening and intersectoral collaboration in order to achieve the dual goals of improving the health status of the population and reducing health inequalities (FMOH, 2010a). The key strategy is the implementation of the Health Extension Program (HEP), with over 34,000 health extension workers (HEW) being already trained and deployed in health posts, therefore reaching the complete coverage of the country, with two HEWs in each "kebele". HEWs are the first point of contact of the community with the health system, delivering integrated preventive, promotive and basic curative health services, with a special focus on maternal and child health. The aim is to ensure continuity of care throughout the lifecycle (adolescence, pregnancy, childbirth, postnatal period, and childhood) and also between places of care giving (households and communities, outpatient and outreach services, and clinical-care settings), having wide implications for the achievement of MDGs in Ethiopia. Results are already apparent: for example, HEWs contributed to promoting behavioural change and implementing family planning services, with rapid improvements in CPR and TFR in rural areas over the past years (FMOH, 2012). Of note is the fact that contraceptive use contributes also to improvements in maternal, newborn and infant health by preventing unintended or closely spaced pregnancies as well as pregnancies in very young women, which can be risky. It has been estimated that contraceptive use may avert more than half of maternal deaths (Ahmed et al., 2012) and a large proportion of maternal deaths can be prevented at moderate cost through these highly effective interventions in Ethiopia (Gilmore and Gebreyesus, 2012)

Furthermore, the implementation of the Health Development Army (HDA) is underway through the establishment of women-centered one-to-five network to promote women as leaders in driving behavioural change and expanding safe health practices at community level, with a vision of taking the community as a potential producer of health, instead of as a mere consumer of medicines and curative services. Overall, a total of 2,002,841 one-to-five networks have been established at the national level (FMOH, 2012).

Health has moved in recent years from under-investment, to single disease focus, and now to increased funding, harmonization between adequate government and partners, and systemic approach. International assistance and global initiatives are now supporting the control of communicable diseases in ways that are consistent with the national strategic plan for health development, therefore contributing to strengthening local health systems. Policy dialogue and governance have also improved over time, encompassing ability to be committed to accountability and responsive to population needs.

As a result, Ethiopia is making substantial progress towards the achievement of MDGs, which is a challenging task because the country is poor, ranking 174 out of 187 on the UNDP Human Poverty Index (UNDP, 2011a), with 39% of the people living below the income poverty line (UNDP, 2011b). Furthermore, the per capita health expenditure is estimated at USD 16.09 in the last National Health Accounts (FMOH, 2010b), which is far below the minimum per capita spending of USD 34 recommended in 2001 GC by the WHO Commission on Macroeconomics and Health for providing basic health care services in developing countries (WHO, 2001). Even higher estimates have been published in the 2010 WHO World Health Report, stating that low-income countries will need to spend a little more than USD 60 per capita by 2015 GC to reach the health-related MDGs (WHO,

2010b). In this difficult context, not only must policy making be evidence-based, it must also be forward-looking and result-oriented, recognizing that careful planning and skilled management can achieve good results even where financial resources are limited. For example, on the basis of the evidence that NMR accounts for 42% of U5MR and has been stagnant between 2005 EDHS and 2011 EDHS, and with aim of saving newborn lives and achieving MDG4 by 2015 GC, interventions have been carried out across the different levels of the health referral system. These interventions include development of community-based newborn care (FMOH, 2013), implementation of integrated community case management of common childhood illnesses (with training of 881 facilitators, 3,540 supervisors, and 22,700 HEWs in 2011/12 GC), and establishment of newborn corners in health centers, neonatal units in rural hospitals and neonatal intensive care units in tertiary hospitals (FMOH, 2012). In conjunction with the above activities, FMOH is addressing the 3 delays that account for high MMR: (i) in seeking appropriate medical care for an obstetric emergency; (ii) in reaching an appropriate emergency obstetric and neonatal care facility; and (iii) in receiving care when the facility is reached. Therefore, activities are underway to remove the bottlenecks hampering access to safe motherhood services, such as harmful traditional beliefs and practices, poor infrastructure, shortage of transportation facilities, and inadequate care at health facilities (FMOH, 2012). These integrated cost-effective and high-impact interventions are expected to reduce NMR, U5MR and MMR, therefore contributing to the achievement of MDG 4 and 5 by 2015 GC.

In general, it is worth noting that performance in achieving MDGs was not uniform across programs in Ethiopia: interventions that can be routinely scheduled, such as immunization, had much higher coverage than those that rely on functional health systems and 24-hour availability of clinical services, such as skilled care at birth. These mixed results highlight that, although interventions needed to control disease and to avert much of the burden of maternal and child morbidity and mortality are known, they require a functioning health system to have an effect at the population scale.

Concerning MDG4, a consistent decline was observed in U5MR, with children doubling their life expectancy over the past 20 years; however, sustained efforts are needed for further reduction of NMR. Further efforts are also needed to increase skilled birth attendance coverage and speed the progress in MMR reduction in order to achieve MDG5 by 2015, while rapid improvements were observed towards the achievement of universal access to reproductive health, including access to safe, affordable and effective methods of contraception. Concerning MDG6, good progress was observed in controlling HIV/AIDS, TB and malaria; however, it is urgent to strengthen control activities to curb the recrudescence of malaria cases as well as to increase PMTCT coverage and TB cure rate. Demographic transition is characterized in Ethiopia by slowly declining population growth rates and rapidly declining child mortality, with low urban fertility and very high, but decreasing, rural fertility. These patterns show that health and development relationships are complex, contextual and dynamic, and, despite very limited financial resources, inadequate infrastructure and widespread poverty still prevailing in the country, Ethiopia is becoming another example of "good health at low cost" at the international level (Balabanova et al., 2011).

In conclusion, Ethiopia implemented pro-poor policies and performed better than other SSA countries for most MDG indicators. These "within and across" analyses make it possible to explain differences in outcomes as well as to provide hints on how to speed the pace of change observed in the past into dramatically faster progress in order to achieve MDGs by 2015 GC.

References

Ahmed, S., Li, Q., Liu, L., Tsui, A.O., 2012. Maternal deaths averted by contraceptive use: an analysis of 172 countries. Lancet, 380:111-25.

Balabanova, D., McKee, M., Mills, A., 2011. "Good health at low cost: 25 years on. What makes a successful health system?". The London School of Hygiene and Tropical Medicine, London.

CSA, 2001. Ethiopia Demographic and Health Survey 2000. Central Statistical Authority, Addis Ababa and ORC Macro, Calverton.

CSA, 2006. Ethiopia Demographic and Health Survey 2005. Central Statistical Authority, Addis Ababa and ORC Macro, Calverton.

CSA, 2011. Ethiopia Demographic and Health Survey 2011. Central Statistical Authority, Addis Ababa and ORC Macro, Calverton.

EHNRI, 2012. Ethiopia national malaria indicator survey 2011. Ethiopian Health and Nutrition Research Institute, Addis Ababa.

FMOH, 2008. Ethiopia national malaria indicator survey 2008. Federal Ministry of Health, Addis Ababa.

FMOH, 2010a. HSDP IV. Health Sector Strategic Plan 2010/11-2014/15. Federal Ministry of Health, Addis Ababa.

FMOH, 2010b. Ethiopia's fourth National Health Accounts 2007/08. Federal Ministry of Health, Addis Ababa.

FMOH, 2012. Annual Performance Report of HSDP IV. EFY 2004 (2011/12). Federal Ministry of Health, Addis Ababa.

FMOH, 2013. Community based newborn care implementation plan. Federal Ministry of Health, Addis Ababa.

FMOH and EHNRI, 2011. First Ethiopian national population based tuberculosis prevalence survey. Federal Ministry of Health and Ethiopian Health and Nutrition Research Institute, Addis Ababa.

Gilmore, K., Gebreyesus, T.A., 2012. What will it take to eliminate preventable maternal deaths? Lancet, 380:87-8.

IHME, 2011. Financing global health 2011: continued growth as MDG deadline approaches. Institute for Health Metrics and Evaluation, Seattle.

Rohde, J., Cousens, S., Chopra, M., Tangcharoensathien, V., Black, R., Bhutta, Z.A., Lawn, J.E., 2008. 30 years after Alma-Ata: has primary health care worked in countries? Lancet, 372: 950-61.

Teller, C., Hailemariam, A., 2011. The demographic transition and development in Africa. The unique case of Ethiopia. Springer, London.

Travis, P., Bennett, S., Haines, A., Pang., T., Bhutta, Z., Hyder, A.A., Pielemeier, N.R., Mills, A., Evans, T., 2008. Overcoming health-systems constraints to achieve Millennium Development Goals. Lancet, 364: 900-906.

UN, 2000. United Nations Millennium Declaration: resolution adopted by the General Assembly. 55/2. Sept 18, 2000. United Nations, New York. www.un.org/millennium/declaration/ares552e.pdf [accessed March 2013].

UN, 2011. The Millennium Development Goals Report 2011. United Nations, New York.

UNDP, 2011a. Human Development Report 2011. Sustainability and equity: a better future for all. United Nations Development Programme, New York.

UNDP, 2011b. Ethiopia. HDI values and rank changes in the 2011 Human Development Report. Sustainability and equity: a better future for all. United Nations Development Programme, New York.

UN and AUC, 2008. Assessing progress in Africa towards the Millennium Development Goals. MDG Report 2008. United Nations Economic Commission for Africa and African Union Commission, Addis Ababa.

UNECA, AUC, ADBG and UNDP, 2012. Assessing progress in Africa towards the Millennium Development Goals. MDG Report 2012. United Nations Economic Commission for Africa, African Union Commission, African Development Bank Group and United Nations Development Program, Addis Ababa.

WHO, 2001. Macroeconomics and health: investing in health for economic development. World Health Organization, Geneva.

WHO, 2008. Impact of the scale-up of anti-malarial interventions measured using health-facility based data in Ethiopia. Preliminary report. Global Malaria Programme Department, HIV, TB and Malaria Cluster. World Health Organization, Geneva.

WHO, 2010a. Global tuberculosis control. World Health Organization, Geneva.

WHO, 2010b. The World Health Report. Health systems financing. The path to universal coverage. World Health Organization, Geneva.

WHO, 2012a. World Health Statistics. World Health Organization, Geneva.

WHO, 2012b. World Malaria Report. World Health Organization, Geneva.

INTRODUCING THE NATIONAL MENTAL HEALTH STRATEGY (2012/13 TO 2015/16): MAKING ACCESS TO MENTAL HEALTH CARE IN ETHIOPIA A REALITY

Tedla W. Giorgis[1]

[1]Advisor at Federal Ministry of Health.

Summary

The National Mental Health Strategy (2012/13 - 2015/16) was developed with extensive input from a wide range of stakeholders. As a result, this is a strategy for action which is workable in our setting and has the support of those who will play a critical part in its implementation. The goal of this strategy is to address the mental health needs of all Ethiopians through quality, culturally competent, evidence-based, equitable and cost-effective care. The strategy mandates that mental health be integrated into the primary health care system. In keeping with the overall health services development plan of the Federal Ministry of Health, the strategy promotes a decentralized approach in which mental health services are available at all levels of the health system. It also ensures that those who require services have access to treatment as close to their home as possible and in the least restrictive environment. The strategy also subscribes to the following mandates to assure the delivery of effective and quality services by:

- Integrating mental health into the existing primary health care delivery system, making use of existing resources and coordinating these efforts so as not to establish parallel structures of care;
- Creating a monitoring and evaluation system to implement and regulate mental health care;
- Defining mental health indicators to be collected and analyzed and use the results for informed planning and decision making;
- Conducting an audit and updating the essential list of psychotropic drugs;
- Organizing, launching and supporting anti-stigma campaigns to educate about the causes and treatments of mental disorders;
- Developing close inter and intra-sectoral working relationships to plan and coordinate programs;
- Developing legislation to protect the human rights of the mentally ill; and
- Working with professional associations and academic institutions to promote quality training and care.

Particular attention is given to vulnerable populations such as the severely mentally ill, those with substance abuse disorders, children and adolescents, persons living with HIV/AIDS, women, people in prisons, victims of violence and abuse, persons with epilepsy and the elderly. The strategy has been costed using a state-of-the-art tool developed as part of the WHO's mental health Gap Action Program, with planned periodic performance monitoring and quality improvement activities.

1) Introduction

The development of the National Mental Health Strategy for Ethiopia represents the Federal Ministry of Health's (FMOH) commitment to address Ethiopia's needs for accessible, effective, sustainable, and affordable mental health services (FMOH, 2012a). The FMOH recognizes the significant contribution of mental health towards the well-being and functioning of an individual. Like any other health condition, persons suffering from mental illness and/or substance abuse should be able to access care that promotes their timely recovery, at the same time as promoting social inclusion and countering stigma, discrimination and human rights abuses. It is with these fundamental precepts in mind that the strategy was developed.

It is worth noting that mental illnesses account for 13% of the global burden of disease, and addressing them is crucial for improving the overall health of the population and achieving the Millennium Development Goals (MDG). In fact, mental health is important for MDG 4 (reducing child mortality). In Ethiopia, maternal depression is associated with increased risk of infant diarrhoea (Ross et al., 2010) and child mortality (Deyessa et al., 2010), as well as poorer infant cognitive development (Hadley et al., 2008). In other low-income countries, untreated maternal depression is an important risk factor for child undernutrition (Patel et al., 2004). Maternal depression also leads to increased health problems in the mother, making it relevant to MDG 5 (improving maternal health). Following childbirth, at least one in 20 women in Ethiopia are affected by depression and 50% of depressed women admit to have suicidal thoughts (Hanlon et al., 2010). Maternal depression needs to be addressed as part of safer motherhood initiatives: in

Box 1. *Challenging some myths about mental illnesses and mental health care in Ethiopia.*

Myth: A person who has had mental illness can never lead a normal life.
Fact: Most people with mental illnesses can recover and resume normal activities; they can even go on to lead more enriched and accomplished lives.

Myth: People with mental illnesses can't hold jobs.
Fact: On the contrary, many are productive employees, business owners, and contributing members of their communities.

Myth: Mental health care is expensive.
Fact: The medications needed to reduce substantial suffering from mental illness are amongst the cheapest available medications. See below for costing mental health care.

Myth: Mental illnesses are luxury of the West.
Fact: Well-conducted studies from Ethiopia have shown clearly that mental illness is found in Ethiopia, at levels comparable to those seen in the West. This shouldn't be a surprise: the risk factors for mental illness are very common in low-income countries (poverty, domestic violence, alcohol and khat use). Even with the strong social cohesion seen in Ethiopian communities, the struggles of daily life put people at risk for mental illnesses.

Myth: Traditional healers provide the best care for mental illnesses.
Fact: There is no evidence to support this in the case of severe mental illness. For severe and chronic mental illnesses what the evidence tells us is that medication is almost always necessary, complemented by psychosocial support.

Myth: Mental illnesses are too complicated and health workers don't have time or interest.
Fact: Mental illnesses are commonly found in chronic illnesses (such as HIV/AIDS and TB), and affect maternal and child health. They add to disability and increased mortality. People with undetected depression may attend health services repeatedly, complaining of various physical symptoms, and using up a lot of time because the correct diagnosis is not made and the appropriate treatment initiated.

Myth: Mentally ill people are too dangerous to treat in regular health centres.
Fact: The majority of people with mental illness are not violent. In fact, people with mental illness are much more likely to be the victims of violence than the perpetrators.

Ethiopia, prolonged labour was more common in women who were depressed (Hanlon et al., 2009). Depression is also important for MDG 6 (combating HIV/AIDS, malaria and other diseases). HIV/AIDS is commonly complicated by depression. In Ethiopia, over one-third (38%) of people receiving antiretroviral therapy are estimated to be suffering from undetected depression (Deribew et al., 2010). When depression is present in persons living with HIV/AIDS and/or tuberculosis, quality of life is reduced, adherence to medication is impaired and survival is decreased.

Mental health problems are strongly associated with poverty, making them relevant to MDG 1 (eradicating extreme poverty and hunger). Persons with severe mental illness and their families are amongst the poorest in society. Ethiopian studies have shown strong associations between depression, bipolar disorder, schizophrenia and unemployment and poverty (Alem et al., 2009; Kebede et al., 2006; Mogga et al., 2006). Families of persons with severe mental illness report that financial strain is the biggest burden they face (Shibre et al., 2003). Maximising child mental health is vital for MDG 2 (achieving universal primary education) and, given the increased burden of depression in women, often related to experience of intimate partner violence (Deyessa et al., 2009), mental health has an important role to play in MDG 3 (promoting gender equality and empowering women).

In the Box 1, facts concerning mental illnesses and mental health are summarized, refuting myths that are widespread in the population.

2) The National Mental Health Strategy: rationale, objectives, plan, and cost

Key features of the National Mental Health Strategy are outlined by answering questions and addressing issues frequently raised about mental health in Ethiopia.

Why do we need a National Mental Health Strategy?

Mental illnesses are common in Ethiopia, they are associated with a high burden due to disability and mortality, they constitute important, but largely unrecognized, barriers to achieving the MDGs, and, despite the existence of affordable and effective treatments, fewer than one in 10 of the most severely affected people ever receive the treatment they need. In order to begin to meet the mental health needs within Ethiopia, a coordinated and sustained effort is required. FMOH recognizes the significant contribution of mental health towards the well-being and functioning of an individual. It is with this fundamental precept in mind that this strategy was developed.

How was the strategy developed?

This strategy is the result of the information gathered during the stakeholder interviews and consultative

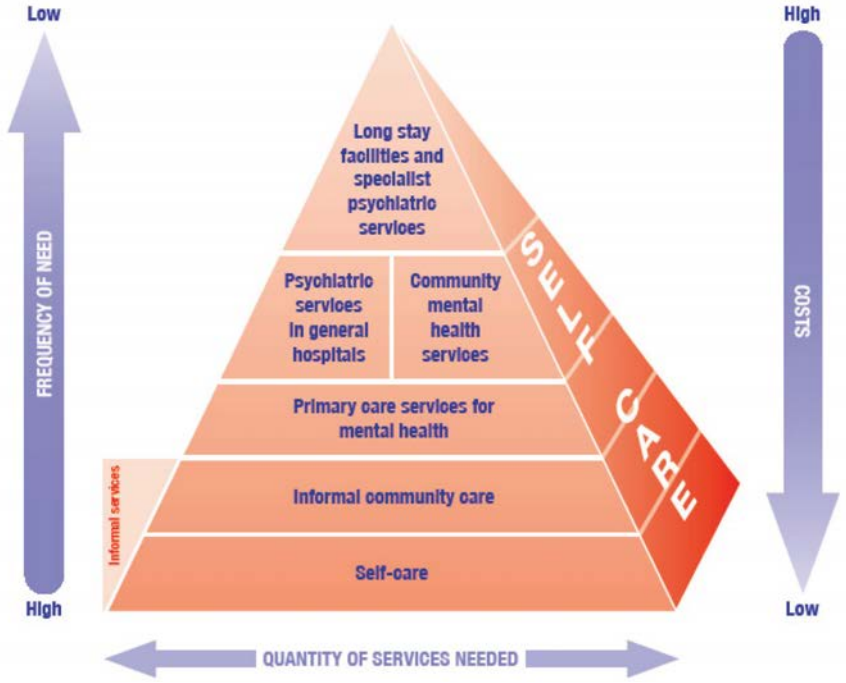


Figure 1. *WHO's optimal mix of services for mental health care.*

meetings with the FMOH's technical working group for mental health, and a number of local and international organizations. This process of consultation and interviewing served to engage stakeholders in the process of developing the strategy and to solicit support, as it is recognized that they will be key to its effective implementation.

What does the strategy set out to achieve?

The overall aim of the strategy is to provide quality mental health services to the people of Ethiopia that are accessible, free or affordable, equitable, efficient and effective, through the integration of mental health into primary health care, while focusing on priority disorders and vulnerable groups.

Specifically, the objectives of the strategy are to:

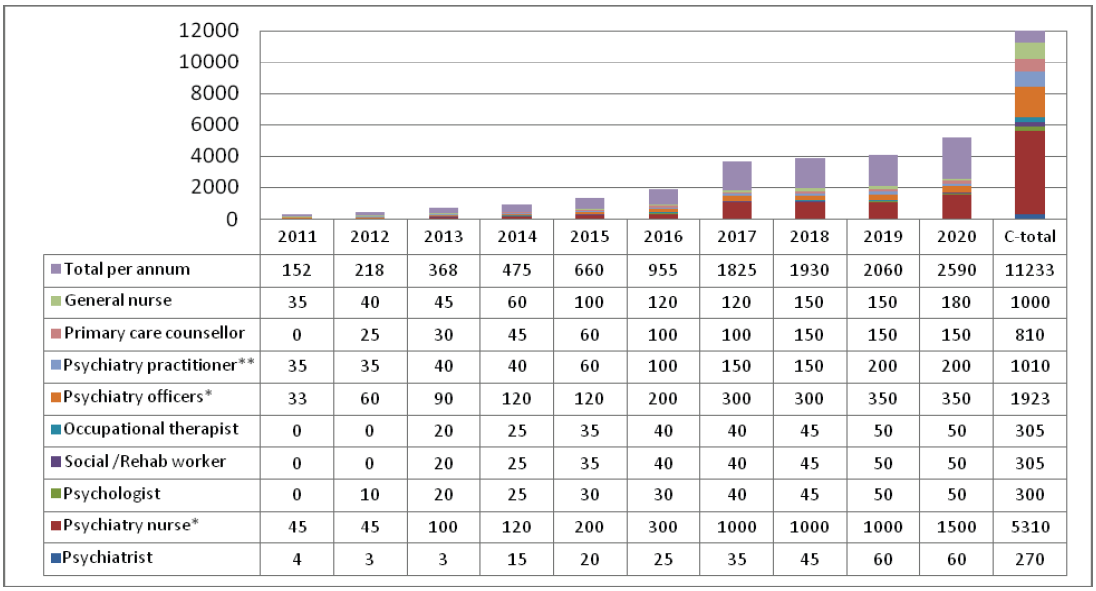
1. ensure that people with mental illness have access to treatment in their communities and as close to their home as possible;
2. enable all health workers to identify, monitor and manage priority mental illnesses and substance abuse disorders;
3. provide special services to vulnerable groups with specific needs;
4. allow those with both physical and mental health-related needs to be treated in a seamless and comprehensive manner;
5. increase the proportion of persons with severe mental illness who remain in care by using case-management principles;
6. provide rehabilitative services to prevent and/or minimize secondary or tertiary handicaps;
7. promote collaboration with community-based organizations, faith-based organizations, and non-government organizations to maximize social functioning and reintegration into society; and
8. help to reduce the stigma and discrimination associated with mental disorders and substance misuse problems.

How will the strategy seek to achieve its objectives?

The key approach underpinning the strategy is the integration of mental health care into all levels of general health care, from the health extension programme, through health centres and primary hospitals, up to regional and national hospitals. Supporting the delivery of mental health care in these general health settings will be specialist mental health professionals. This follows the WHO's recommendations for the "optimal mix of services to deliver mental health care" in low- and middle-income countries (WHO and Wonca, 2008; WHO, 2008) (Figure 1).

Which vulnerable groups have been identified for particular attention?

The following groups have been identified as particularly vulnerable with respect to mental illness, and/or disadvantaged when trying to access mental health care: the severely mentally ill (psychosis, bipolar disorder), persons with substance use disorders, children and adolescents, perinatal women and mothers, persons living with HIV/AIDS, people in prisons, victims of violence and abuse, the elderly and people with epilepsy. Special provisions are outlined within the strategy in order to try to meet the needs of these vulnerable groups.



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	C-total
Total per annum	152	218	368	475	660	955	1825	1930	2060	2590	11233
General nurse	35	40	45	60	100	120	120	150	150	180	1000
Primary care counsellor	0	25	30	45	60	100	100	150	150	150	810
Psychiatry practitioner**	35	35	40	40	60	100	150	150	200	200	1010
Psychiatry officers*	33	60	90	120	120	200	300	300	350	350	1923
Occupational therapist	0	0	20	25	35	40	40	45	50	50	305
Social /Rehab worker	0	0	20	25	35	40	40	45	50	50	305
Psychologist	0	10	20	25	30	30	40	45	50	50	300
Psychiatry nurse*	45	45	100	120	200	300	1000	1000	1000	1500	5310
Psychiatrist	4	3	3	15	20	25	35	45	60	60	270

Figure 2. *Projected expansion of specialist mental health care professionals to support scale-up of mental health care.*

What human resources are needed to scale up mental health care?

Training general health workers to deliver mental health care can only work if it is also associated with an expansion of the specialist mental health workforce at all levels. Additional specialist mental health professionals are needed to train general health workers, provide supportive supervision and mentoring to ensure sustainable and good quality care, manage complex cases and help to co-ordinate and advocate for mental health care.

The necessary expansion of the mental health workforce is illustrated in Figure 2 (based on estimates from the Ethiopia mental health Gap Action Programme working group (mhGAP-Ethiopia Working Group, 2010). This is an area where there has already been substantial activity, with an increase in the number of public sector psychiatrists from just 12 (in 2003) to over 40 (in 2013). Expansion of psychiatric practitioners, psychiatric nurses and psychologists is also underway.

What will it cost to deliver mental health care?

Using the WHO's costing tool (Chrisholm, 2011), the cost of scaling up mental health care in Ethiopia for a range of mental disorders has been estimated. The kinds of services that could be delivered under different levels of resource commitment are shown in Table 1. It is clear that a relatively modest increase in the cost associated with the 'BEST' scenario (when compared to the 'BASIC' scenario) will allow for better treatment coverage, with a wider range of interventions and for a larger number of disorders.

3) Conclusion

The mental health strategy is critical to the development of Ethiopia's health system. Mental health is an integral component of any efficient, well-functioning structure of health care. The strategy is not only for the chronically mental ill – who often represent a small part of the population – but also for the many people who suffer from common mental disorders and substance abuse (FMOH, 2012a).

The mental health strategy builds on the existing momentum for improving mental health care which is already evident in Ethiopia. For example, FMOH is currently completing the construction of a state-of-the-art hospital specializing in mental health care and will be establishing a National Institute of Mental Health to oversee the co-ordination of mental health activities across the country (FMOH, 2012b). A number of higher learning institutions have established academic graduate degree programs to develop mental health professionals. FMOH is also collaborating with the World Health Organization (WHO) as one of the six pilot sites for the implementation of mental health Gap Action Programme (mhGAP) focused on scaling up of mental health services.

Successful realization of the strategy will need to harness the efforts of many different institutions, agencies and individuals. Each has an important part to play; for example:

- **Resource mobilization**: comparatively, in light of the substantial contribution of mental illnesses to the disease burden in the world (13%) in general, and in Ethiopia in particular, this strategy provides WHO costing estimates for scale-up of mental health care and a range of ways that various funders can contribute.
- **Non-governmental organizations**: they need to be fully engaged in the development of activities and have much to offer by supporting the recovery and rehabilitation of persons with mental disorders in the community and least restrictive settings.
- **Academic institutions**: they can provide vital support in the training of mental health professionals

Table 1. *Cost of scaling up mental health care services according to "basic" and "best" scenarios.*

BASIC Scenario			BEST Scenario		
Disorder	**Intervention**	**Target Coverage**	**Disorder**	**Intervention**	**Target Coverage**
Depression	Medication + basic psychosocial	30%	Depression	+ psychological therapies	40%
Postnatal depression	Medication + basic psychosocial	20%	Postnatal depression	+ psychological therapies	20%
Psychosis	Medication + basic psychosocial	75%	Psychosis	As for basic	80%
Bipolar disorder	Medication + basic psychosocial	50%	Bipolar disorder	As for basic	75%
Epilepsy	Medication + basic psychosocial	80%	Epilepsy	As for basic	80%
			Alcohol	Detoxification Brief interventions	35%
				Relapse prevention with medication	20%
			Suicide	Basic psychosocial care	40%
			Dementia	Assessment, diagnosis, advice and follow-up + medications	30%
			Developmental disorders	Assessment, diagnosis and advice	30%
			Child behavioural disorders	Assessment, diagnosis and advice	10%

BASIC Scenario			BEST Scenario		
Year	**Total cost (USD)**	**Per person (USD)**	**Year**	**Total cost (USD)**	**Per person (USD)**
2012/2013	5,528,737	0.07	2012/2013	6,728,809	0.08
2013/2014	5,846,617	0.07	2013/2014	7,389,362	0.08
2014/2015	6,512,901	0.07	2014/2015	8,486,902	0.09
2015/2016	7,351,989	0.08	2015/2016	9,866,846	0.11
TOTAL	**USD 25,240,244**		**TOTAL**	**USD 32,471,919**	

and provide evidence-based information about the most clinically and cost effective ways of delivering care that is culturally competent.

This strategy sets out a clear and evidence-based plan for scaling up mental health care in Ethiopia in order to address an important public health problem: in fact, according to WHO, "There is no health without mental health". We hope that all stakeholders will be involved in working to make this strategy a reality and improving the lives of many afflicted by mental illness in Ethiopia.

References

Alem, A., Kebede, D., Fekadu, A., Shibre, T., Fekadu, D., et al., 2009. Clinical course and outcome of schizophrenia in a predominantly treatment-naive cohort in rural Ethiopia. Schizophrenia Bulletin, 35: 646-654.

Chisholm, D., 2011. WHO mhGAP costing tool for mental, neurological and substance use disorders. World Health Organization, Geneva.

Deribew, A., Tesfaye, M., Hailemichael, Y., Apers, L., Abeba, G., et al., 2010. Common mental disorders in TB/HIV co-infected patients in Ethiopia. BMC Infectious Diseases, 10: 201.

Deyessa, N., Berhane, Y., Alem, A., Ellsberg, M., Emmelin, M., et al., 2009. Intimate partner violence and depression among women in rural Ethiopia: a cross-sectional study. Clinical Practice and Epidemiology in Mental Health 5: doi:10.1186/1745-0179-1185-1188.

Deyessa, N., Berhane, Y., Emmelin, M., Ellsberg, M.C., Kullgren, G., et al., 2010. Joint effect of maternal depression and intimate partner violence on increased risk of child death in rural Ethiopia. Archives of Disease in Childhood, 95: 771-775.

FMOH, 2012a. National Mental Health Strategy 2012/13-2015/16. Federal Ministry of Health, Addis Ababa.

FMOH, 2012b. Annual performance report of HSDP IV. EFY 2004 (2011/12). Federal Ministry of Health, Addis Ababa.

Hadley, C., Tegegn, A., Tessema, F., Asefa, M., Galea, S., et al., 2008. Parental symptoms of common mental disorders and children's social, motor, and language development in sub-Saharan Africa. Annals of Human Biology, 35: 259-275.

Hanlon, C., Medhin, G., Alem, A., Tesfaye, F., Lakew, Z., et al., 2009. Impact of antenatal common mental disorders upon perinatal outcomes in Ethiopia: the P-MaMiE population-based cohort study. Tropical Medicine and International Health, 14: 156-166.

Hanlon, C., Medhin, G., Alem, A., Araya, M., Abdulahi, A., et al., 2010. Sociocultural practices in Ethiopia: association with onset and persistence of postnatal common mental disorders. British Journal of Psychiatry, 197: 468-475.

Kebede, D., Alem, A., Shibire, T., Deyassa, N., Negash, A., et al., 2006. Symptomatic and functional outcome of bipolar disorder in Butajira, Ethiopia. Journal of Affective Disorders, 90: 239-249.

mhGAP-Ethiopia Working Group, 2010. Mental Health Gap Action Programme in Ethiopia: final document. Federal Ministry of Health, Addis Ababa.

Mogga, S., Prince, M., Alem, A., Kebede, D., Stewart, R., et al., 2006. Outcome of major depression in Ethiopia: population-based study. British Journal of Psychiatry, 189: 241-246.

Patel, V., Rahman, A., Jacob, K.S., Hughes, M., 2004. Effect of maternal mental health on infant growth in low income countries: new evidence from South Asia. British Medical Journal, 328: 820-823.

Ross, J., Hanlon, C., Medhin, G., Alem, A., Tesfaye, F., et al., 2010. Perinatal mental distress and infant morbidity in Ethiopia: cohort study. Archives of Disease in Childhood, in press.

Shibre, T., Kebede, D., Alem, A., Negash, A., Deyassa, N., et al., 2003. Schizophrenia: illness impact on family members in a traditional society - rural Ethiopia. Social Psychiatry and Psychiatric Epidemiology, 38: 27-34.

WHO, 2008. Mental Health Gap Action Programme (mhGAP): scaling up care for mental, neurological, and substance use disorders. World Health Organization, Geneva.

WHO and Wonca, 2008. Integrating mental health into primary care. A global perspective. World Health Organization and World Organization of Family Doctors, Geneva.

OPTION B+: A NEW APPROACH TO ELIMINATION OF MOTHER TO CHILD TRANSMISSION OF HIV IN ETHIOPIA

Abdissa Kurkie[1], Emiamrew Sisay[2] and the National PMTCT Technical Working Group

[1] Director of the Urban Health Promotion and Disease Prevention (HPDP) Directorate, Federal Ministry of Health (FMOH)
[2] PMTCT Focal Person at HPDP/FMOH.

Summary

Vertical transmission of HIV occurring during pregnancy, labour, delivery or breastfeeding remains a major global public health problem, with an estimated 390,000 children still acquiring HIV from their mothers in 2010, out of whom over 90% in sub-Saharan Africa. To prevent vertical transmission of HIV, different strategies are available: Option A, Option B and Option B+; while the first two strategies aim to prevent mother-to-child transmission with impact only on child outcomes, Option B+ aims to have an impact on both mother and child outcomes, by preventing a child from being infected, saving mother's live and reducing orphanhood with a vision of an HIV free new generation.

In Ethiopia, the roll out of Option B+ has started in 2013, taking advantage of the "Option A platform" developed in 2012, upon which Option B+ is built. It will be implemented in three phases over a 12 months period in all sites providing prevention of mother to child transmission services.

1) Introduction

Vertical transmission of HIV occurring during pregnancy, labour, delivery or breastfeeding remains a major global public health problem (UNAIDS, 2011a), with an estimated 390,000 children still acquiring HIV from their mothers in 2010, out of whom over 90% in sub-Saharan Africa (WHO, UNAIDS, UNICEF, 2011). This is despite the fact that the use of antiretroviral drugs during and after pregnancy is a proven intervention to virtually eliminate the risk of HIV transmission to infants, as evidenced in high-income countries where new childhood infections are now almost non-existent (Townsend et al., 2008; McKenna and Hu, 2007).

To prevent vertical transmission of HIV, different strategies are available (WHO, 2012): Option A, Option B and Option B+ (Table 1); while the first two strategies aim to prevent mother-to-child transmission with impact only on child outcomes, Option B+ aims to improve both survival in HIV-infected mothers and children. In particular, Option B+ is a "test and treat" strategy in which HIV-positive pregnant women start antiretroviral therapy (ART) regardless of their Cluster of Differentiation 4 (CD4) cell count and are maintained on treatment for life. In a recent programmatic update, WHO has encouraged countries to consider Option B+ (WHO, 2012).

In Ethiopia, it is estimated that 38,404 HIV-positive pregnant women need Prevention of Mother to Child Transmission (PMTCT) in 2012 (EHNRI and FMOH, 2012), while the PMTCT coverage is currently estimated around 28% in 2013 (FMOH, 2013a). Half of the new HIV infections are the result of Mother to Child Transmission (MTCT) (FMOH, 2013b).

Looking at the outstanding results achieved in Malawi (Fasawe et al., 2013) and Rwanda, and on the basis of the review of scientific studies, Option B+ approach has recently been endorsed by the Ethiopian Federal Ministry of Health (FMOH) as the preferred means to prevent HIV transmission to the infants, save mothers' lives and reduce orphanhood in Ethiopia.

This article aims at describing the decision process leading to the shift to Option B+ in Ethiopia, as well as the plan for its implementation and the expected results in terms of improving the health of both children and mothers.

2) Implementation of Option B+ in Ethiopia

In the context of Ethiopia with low access to CD4 testing, and low levels of ART in treatment-eligible women with Option A, Option B+ represents a cost-effective strategy not only for preventing new HIV infections among infants, but also for improving the survival of HIV-infected mothers. To ensure successful implementation of Option B+, the FMOH is using a phased approach, prioritizing sites providing PMTCT services. Key considerations that guided the operational plan include: (i) wide variations in HIV prevalence within the country, ranging between 4.2% in urban areas and 0.6% in rural areas (with an average HIV prevalence of 1.5% at the national level); (ii) planned integration of maternal, neonatal and child health (MNCH) services with ART services; and (iii) additional demands on the procurement and supply chain management due to the shift to Option B+ (UNICEF, 2013).

Table 1. *Options for prevention of mother-to-child transmission of HIV (WHO, 2012).*

	Woman receives:		
	Treatment (for CD4 count ≤350 cells/mm³)	**Prophylaxis (for CD4 count >350 cells/mm³)**	**Infant receives:**
Option A[a]	Triple ARVs starting as soon as diagnosed, *continued for life*	*Antepartum*: AZT starting as early as 14 weeks gestation *Intrapartum*: at onset of labour, single-dose NVP and first dose of AZT/3TC *Postpartum*: daily AZT/3TC through 7 days postpartum	Daily NVP from birth until 1 week after cessation of all breastfeeding; or, if not breastfeeding or if mother is on treatment, through age 4–6 weeks
Option B[a]	*Same initial ARVs for both*[b]*:*		Daily NVP or AZT from birth through age 4–6 weeks regardless of infant feeding method
	Triple ARVs starting as soon as diagnosed, *continued for life*	Triple ARVs starting as early as 14 weeks gestation and *continued intrapartum and through childbirth if not breastfeeding or until 1 week after cessation of all breastfeeding*	
Option B+	*Same for treatment and prophylaxis*[b]*:*		Daily NVP or AZT from birth through age 4–6 weeks regardless of infant feeding method
	Regardless of CD4 count, triple ARVs starting as soon as diagnosed,[c] *continued for life*		

Note: "Triple ARVs" refers to the use of one of the recommended 3-drug fully suppressive treatment options. For the drug abbreviations in the table: AZT (azidothymidine, zidovudine [ZDV]); NVP (nevirapine); 3TC (lamivudine).

[a] Recommended in WHO 2010 PMTCT guidelines

[b] True only for EFV-based first-line ART; NVP-based ART not recommended for prophylaxis (CD4 >350)

[c] Formal recommendations for Option B+ have not been made, but presumably ART would start at diagnosis.

In particular, Option B+ will provide better opportunities for complete integration of ART in the MNCH set up: the antenatal care provider continues to provide primary care to mother and infant, including prescribing and monitoring ART, until risk of MTCT has passed (following weaning from breastfeeding). In this context, referral and linkage to an ART site is strongly considered in the following cases: (i) either mother or infant is ill and requires care beyond the capacity of the highest qualified provider within the facility; (ii) for long term care and treatment following cessation of breastfeeding (except if mother is expecting another pregnancy soon or if accessing the nearest ART site is difficult); and (iii) if infant tests positive for HIV.

Dried blood spot testing for early infant diagnosis of HIV should be done by trained health care provider in the MNCH unit. Continuity of care is maintained from antenatal until post-weaning period, which is expected to improve infant testing at 6 weeks and at cessation of breastfeeding as well as improve post-partum uptake of family planning services. Of note is the fact that update and basic training based on the need of the health professionals will be conducted in each region.

The roll out of Option B+ has already started in 2013, taking advantage of the "Option A platform" developed in 2012, upon which Option B+ is built (FMOH, 2013b). It will be implemented in three phases over a 12 months period in all PMTCT sites co-located with ART sites and PMTCT-only sites that meet the minimum required standard:

- Phase I: the focus is on (i) PMTCT sites co-located with ART sites; (ii) stand-alone PMTCT sites located in urban areas; and (iii) other hot spots; sites having experience with Option A will be shifting to Option B+ in the first four months.
- Phase II: the focus is on (i) PMTCT sites located in peri-urban areas with relatively higher HIV prevalence; (ii) new PMTCT sites capable to start the service; and (iii) PMTCT sites previously without mentoring support.

- Phase III: the focus is on (i) remaining stand-alone PMTCT sites; and (ii) new sites starting the provision of PMTCT services.

The minimum required standards for implementing Option B+ in health facilities include: (i) availability of human resource; (ii) availability of mentorship/ supervision; (iii) availability of infrastructure, drugs/ supplies and mentoring tools.

In particular, the standards for shifting to Option B+ include:

- availability of human resources: the minimum qualification to provide Option B+ is diploma level nursing or midwifery plus successful completion of comprehensive MNCH/PMTCT training package plus update training in Option B+ or the revised comprehensive MNCH/PMTCT training that incorporates the competencies required for provision of Option B+ care and treatment. The mix of staff required for implementation of Option B+ will be any of the following: midwives, clinical nurses, health officers and physicians. The number of staff required to implement Option B+ will depend on the caseload per facility; therefore, flexibility in staffing is required to accommodate patient loads.
- mentorship/supervision: implementation of Option B+ approach provides an opportunity to accelerate the process of shifting mentorship from partner to government system. During phase I of the roll out of Option B+, half of the facilities will get mentorship support from higher level government facilities. The mentors are well versed in PMTCT and ART, and they are provided with appropriate training materials and a short orientation training, so that they can rapidly deliver standardized targeted trainings in decentralized settings. This will prepare health care workers currently implementing Option A for the transition to Option B+.
- availability of infrastructure, drugs, supplies and mentoring tools: ART drugs, rapid HIV test kits, dried blood spot kits, supplies required for CD4 sample transport and other related supplies should be assured; moreover, revised monitoring and evaluation tools, including registers that accommodate Option B+ changes, should be availed to the health facilities for the successful implementation of Option B+.

3) Implications of Option B+ in Ethiopia

In the Ethiopian context, where access to CD4 count is limited, and therefore targeted initiation of HIV-infected pregnant women on ART based upon CD4 results is unlikely to be successful, this approach represents a cost-effective policy option to prevent a child from being infected, save mother's live and reduce orphanhood. In particular:

- Starting ART at the time of diagnosis regardless of CD4 level avoids delay in initiation (and lost to follow-up while waiting for CD4 results), and benefits areas with resource constraints.
- Adopting the single fixed drug regimen (TDF/3TC/ EFV) and ensuring continuity of ART for life have clinical and programmatic advantages, and are expected to improve adherence and retention of newly diagnosed HIV-positive pregnant women.
- Avoiding intermittent use of ART by HIV-positive mothers in subsequent pregnancies decreases the risk of ART drug resistance.
- Using a single triple-drug fixed dose combination tablet to be taken once daily greatly simplifies ART treatment as well as procurement, monitoring and follow up, reducing the burden of using multiple regimen.

Integrating HIV services in the context of "eliminating new infections among children and keeping their mothers alive" in Ethiopia, as the new Global Plan on mother-to-child transmission elimination recommends (UNAIDS, 2011b), results in favorable outcomes for both mothers and infants while still yielding cost-effective results. The Health Development Army (HDA) plays a crucial role in creating awareness and changing health seeking behavior at community level.

Meanwhile, cost remains a major concern when comparing Option B+ with the other strategies: in fact, Option B+ is expensive because of additional drugs, human resources and other health system expenditures (Coutsoudis et al., 2013). However, the experience in Malawi shows that, although Option B+ would require more financial resources initially, it would save societal resources in the long-term, representing a strategic option to simplify and integrate HIV services into MNCH services (Fasawe et al., 2013). Although currently ART medications are subsidized by the government and are dispensed free of charge in health facilities, thorough financial assessment and capacity building should be put in place in this regard. There are also concerns related to ART drug resistance that might occur especially if there is lack of adherence to the regimen. Furthermore, since mothers with HIV-positive tests (but not yet sick) will directly go into treatment under Option B+, there is concern about continuity of follow-up, retention of HIV+ mothers and response to ART drugs.

4) Conclusion

Option B+, the provision of life-long ART to all HIV-positive pregnant and breastfeeding women, is an innovative approach to simplify service delivery and improve maternal and infant outcomes (UNICEF, 2012). There is a shift in the PMTCT paradigm, which is no longer viewed as a time-limited intervention around

pregnancy and breastfeeding, but it is reconceived as ART-for-life regimen. This shift has wide implications in terms of integrating MNCH programmes and ART programmes to support alternative service delivery models, build integrated skills for health professionals, and address infrastructural constraints.

The successful implementation of this program rests on the capacity of overcoming many obstacles to increase access, especially in rural Ethiopia and at primary care level, with a vision of an HIV free new generation (FMOH, 2013b).

References

Coutsoudis, A., Goga, A., Desmond, C., Barron, P., Black, V., Coovadia, H., 2013. Is Option B+ the best choice? The Lancet, 381: 270-271.

EHNRI and FMOH, 2012. HIV related estimates and projections for Ethiopia-2012. Ethiopian Health and Nutrition Research Institute and Federal Ministry of Health, Addis Ababa.

Fasawe, O., Avila, C, Shaffer, N., Schouten, E., Chimbwandira, F., et al., 2013. Cost-Effectiveness analysis of Option B+ for HIV prevention and treatment of mothers and children in Malawi. PLoS ONE, 8(3): e57778.

FMOH, 2013a. Performance Report. First nine months of EFY 2005 (2012/13). Federal Ministry of Health, Addis Ababa.

FMOH, 2013b. Draft operational plan for PMTCT Option B+ in Ethiopia. Federal Ministry of Health, Addis Ababa.

McKenna, M.T., Hu, X.H., 2007. Recent trends in the incidence and morbidity that are associated with perinatal human immunodeficiency virus infection in the United States. Am J Obstet Gynecol, 197: 810-816.

Townsend, C.L., Cortina-Borja, M., Peckham, C.S., de Ruiter, A., Lyall, H. et al., 2008. Low rates of mother-to-child transmission of HIV following effective pregnancy interventions in the United Kingdom and Ireland, 2000-2006. AIDS, 22: 973-981.

UNAIDS, 2011a. Outlook report: 30 years into the AIDS epidemic. Joint United Nations Programme on HIV/AIDS, Geneva.

UNAIDS, 2011b. Global Plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive. Joint United Nations Programme on HIV/AIDS, Geneva.

UNICEF, 2012. A business case for options B and B+ to eliminate mother to child transmission of HIV by 2015. United Nations Children's Fund, New York.

UNICEF, 2013. Briefing Note. Ethiopia launches Option B+. United Nations Children's Fund, Addis Ababa.

WHO, 2012. Use of antiretroviral drugs for treating pregnant women and preventing HIV infection in infants. Programmatic update 2012. World Health Organization, Geneva.

WHO, UNICEF, UNAIDS, 2011. Progress report 2011: Global HIV/AIDS response. Epidemic update and health sector progress towards universal access. World Health Organization, United Nations Children's Fund, Joint United Nations Programme on HIV/AIDS, Geneva.

ETHIOPIA: A SUCCESS STORY OF GOOD HEALTH AT LOW COST

Della Berhanu[1]

[1]Country Coordinator in Ethiopia of "Informed Decision for Actions" (IDEAS) - London School of Hygiene and Tropical Medicine.

Summary

Ethiopia, despite being a low-income country, has achieved major improvements in health over the last 20 years. The recently published "Good health at low cost" mentions Ethiopia as a country worthy of this title. It is necessary to understand how Ethiopia has, with limited resources, improved health over the last two decades. In this article, using the World Health Organization's six building blocks, a system analysis is provided to identify strengths and weaknesses within the health system. Furthermore, we compare Ethiopia's performance to other African countries with similar Gross Domestic Product (GDP) per capita.

Strengthening the heath system to improve health outcomes has been a major component for Ethiopia's observed success. Compared to other sub-Saharan African countries, Ethiopia, though having a lower GDP per capita, has performed better in key health indicators, including reducing under 5 mortality. However, despite an increase in per capita spending over the years, Ethiopia still spends insufficient amounts to provide quality health care. This has implications on the country's ability to meet health-related Millennium Development Goals such as reduction of maternal mortality. Furthermore, the financing of the health sector is largely donor-dependent, indicating the need for more sustainable sources.

Overall, despite the many challenges, Ethiopia is an example that low-income countries can attain good health at low cost if there is a sustained political will and commitment to provide innovative programs, strategies and policies.

1) Introduction

Over the last two decades Ethiopia has made major strides in improving its health system, among other things, by strengthening Primary Health Care (PHC). Several publications have highlighted Ethiopia's success, including the recent book "Good health at low cost - 25 year on" published by the London School of Hygiene and Tropical Medicine (Balabanova, Mckee and Mills, 2011), a follow up to the 1985 report commissioned by Rockefeller Foundation with a similar title (Halstead, Walsh and Warren, 1985).

It is well known that, in general, health indicators improve in countries with higher gross domestic product (GDP). However, wide ranges of outcomes are found in countries with similar GDP as well as large differences in GDP are found across countries with similar outcomes: under 5 mortality rate may be taken as an example (Figure 1). The question addressed in the initial report was: "Why do some poor countries, compared to others with similar levels of income, attain better health outcomes?" By taking four low income countries (Sri Lanka, Costa Rica, China and Kerala in India) that have attained major health achievements, the 1985 report investigates the multiple determinants of health and their distribution within these populations (Halstead, Walsh and Warren, 1985). "Good health at low cost - 25 years on", published in 2011, focuses on the question "What makes a successful health system?". In addition to an update on the original four countries, five new ones (Bangladesh, Ethiopia, Kyrgyzstan, the Indian state of Tamil Nadu and Thailand) that have significantly improved health outcomes are analysed to identify key factors that have contributed to their successes (Balabanova, Mckee and Mills, 2011).

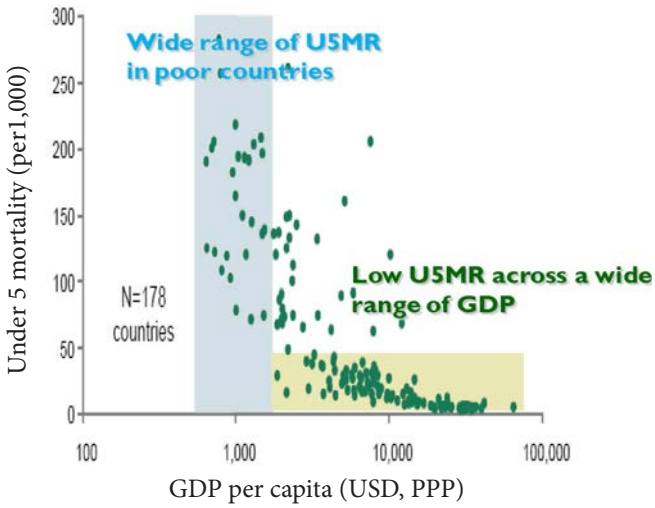


Figure 1. *Distribution of countries by under 5 mortality rate and gross domestic product (GDP).*

In the years leading to the publication of the 1985 report, civil war and famine were some of the major problems facing the country. Ethiopia was far from being listed as a country that had achieved good health at low cost. This changed with the coming of a new government in 1991 and, among other things, the drafting of the 1993 Health

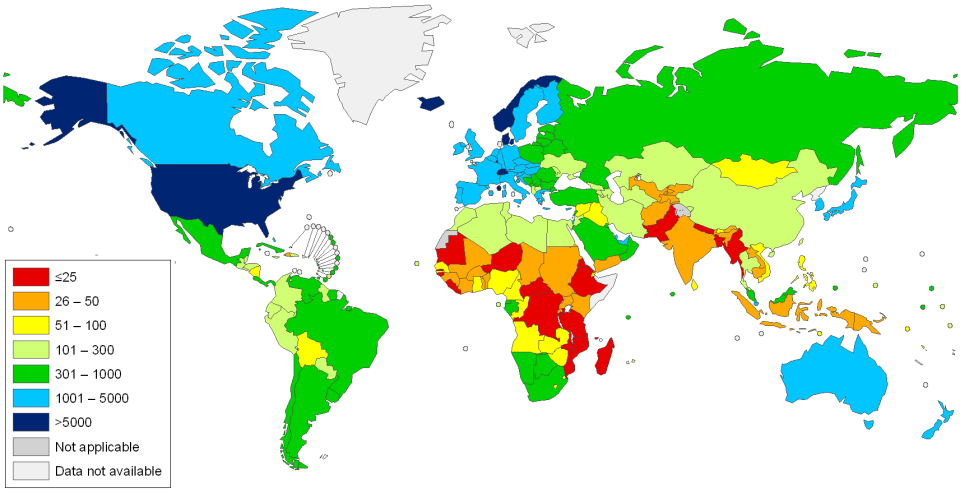


Figure 2. *Distribution of per capita expenditure on health in the world (WHO, 2011).*

Policy and the establishment of the health sector strategic plan called the Health Sector Development Plan (HSDP). The HSDP is a 20-year plan to address the major health challenges facing the country (FMOH, 2010a).

Despite the low GDP per capita and inadequate per capita expenditure on health in Ethiopia (16 USD) (Figure 2), what factors have contributed to the country's success? By drawing from the book "Good health at low cost - 25 years on" and other publications, this article provides a health system analysis to identify strengths of the Ethiopian health system, as well as gaps that, if addressed, can serve to further improve health outcomes. This article also examines how Ethiopia has performed over the last 20 years when compared to four other sub-Saharan African countries with similar GDP per capita.

2) System analysis

The Ethiopian Government recognizes that health system matters and the Federal Ministry of Health (FMOH) has taken numerous measures to strengthen the country's health system. Using the World Health Organization's (WHO) framework with six building blocks (Figure 3), this section assesses some of these measures and how they have influenced Ethiopia's health system performance over the past two decades (WHO, 2007).

Good Governance

The Plan for Accelerated and Sustained Development to End Poverty (PASDEP) (MOFED, 2006) and its successor Growth and Transformation Plan (GTP) (MOFED, 2010) instituted by the Ethiopian Government are comprehensive national socio-economic development plans that guide sectoral strategies, including that of the health sector. PASDEP and GTP recognise that improving health is a major component of alleviating poverty and provide a unique opportunity for the effective participation of government, development partners and private sector. Indeed the HSDP has resulted from such a participation (FMOH, 2010a). In this context, with the endorsement of the "HSDP Harmonization Manual" by the Ethiopian Government and Development Partners in 2007, the country's process of alignment and harmonization has made good progress. In the framework of the International Health Partnership (IHP), and following the signature of the Global Compact in 2007, Ethiopia was the first country to sign a country-specific IHP Compact with its development partners in 2008, with the aim of scaling up the country's efforts to achieve the health MDGs by accelerating the implementation of HSDP (FMOH, 2008) (Figure 4).

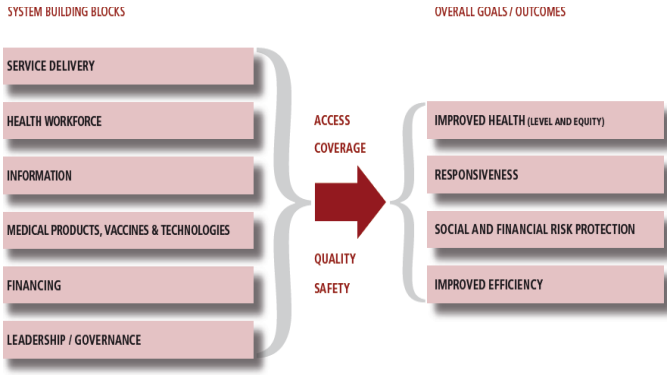


Figure 3. *Building blocks of health systems (WHO, 2007).*

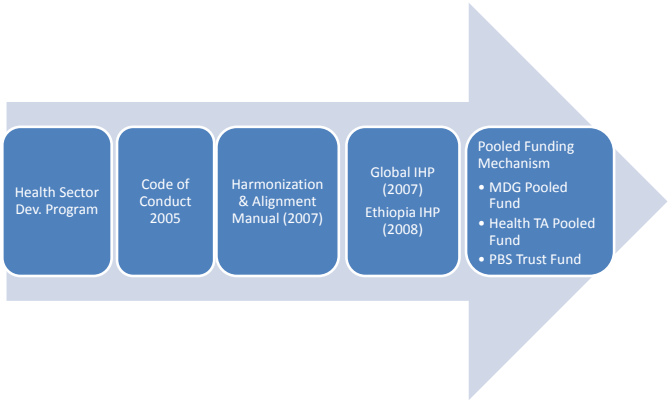


Figure 4. *The progress in alignment and harmonization in Ethiopia.*

The key principle underpinning the process of harmonization and alignment is the establishment of "One-Plan, One-Budget and One-Report" to provide predictable funding in support of results-oriented national plans and strategies (FMOH, 2010a).

According to the "One-Plan" principle, the HSDP was developed by the FMOH and Development Partners as a single programme framework for coordinating health sector action. On the basis of the five-year HSDP targets and the performance achieved in the previous year, a comprehensive annual plan is developed, setting the targets for key health programmes at all levels to be achieved in the following year (FMOH, 2010a).

Financing

Harmonized financing procedures have been put in place, including Health Pooled Fund, Protection of Basic Services and MDG Performance Fund (PF). In particular, a critical step towards "One Budget" is the establishment of the MDG PF to facilitate resource pooling in order to finance the priorities under the HSDP IV (FMOH, 2010a). In this framework, a Joint Financing Arrangement for the MDG PF was approved and signed by the FMOH and Development Partners. As of 2012, eight signatories of the IHP+ Compact participated in the MDG Performance Fund: Department for International Development (DFID), Spanish Cooperation, Italian Cooperation, Irish Aid, Australian Aid, United Nations Population Fund (UNFPA), United Nations Children's Fund (UNICEF), and WHO.

To track the health care expenditures and flow of resources in the health system, the FMOH has used the National Health Accounts (NHA) system. Information generated from the NHA shows that 40% of the total Ethiopian health budget comes from international organizations, while households account for 37% and government's sources for 21% (FMOH, 2010b). These organizations are encouraged to continue funding the health sector due to their inclusion, participation and shared ownership in HSDP, as well as the Government's observed transparency, accountability and effectiveness in the management and use of funds (Balabanova, Mckee and Mills, 2011).

Information system

A harmonized and unified Health Management Information System (HMIS) was developed with a single reporting channel according to the "One-Report principle". Implementation of this principle requires assembling data from different programs into an integrated channel from which all derive their information. The strategy is to develop a routine and systematic collection of data, integrated into information to support management decision-making. Therefore, HMIS reform focuses on the capture, storage, analysis and interpretation of data for local decision-making in a decentralized health system, with structures, processes and organizational culture developed to the extent that performance and accountability are encouraged (FMOH, 2010c). The development of the Health Information System (HIS) roadmap is under way, integrating different population-based data sources (i.e., census, vital registration, surveys etc.) and service-based data sources (i.e., HMIS, laboratory information system, logistics management information system, human resources information system, etc.). The vision is to ensure availability of timely, complete and accurate health and health-related information from an integrated data repository and use this information for evidence-based decision making at all levels.

Service Delivery

One of the national goals set by the Ethiopian Government is to provide universal PHC coverage. The Health Extension Program (HEP) was launched in order to achieve this goal, with a focus on preventive, promotive and basic curative services at the community level. The HEP is a community-based health service delivery program introduced in 2003 with the philosophy that, if the right knowledge and skill are transferred to households, they can enhance and maintain their own health (FMOH, 2007). At the core of the HEP is the training and deployment of over 35,000 Health Extension Workers (HEWs) who are posted in rural communities to provide primary health care at health post and household levels. To date the government has built 15,668 health posts. To further achieve universal PHC coverage the government has also constructed 2,999 health centers and another 449 are under construction. When finished this would bring the total to 3,448 health centers, fulfilling the number required to reach universal PHC coverage (FMOH, 2010a). In addition to the HEWs, the HEP also relies on the Health Development Army (HDA). The HDA aims to promote healthy lifestyles and change health seeking behavior at community level. HDA relies on 1 to 5 networking of females, among whom a leader is chosen by the community to lead five households. The HEP as a whole is the main avenue for bringing key maternal, neonatal and child health interventions to the community.

Health Workforce

The current physician/population ratio in Ethiopia is one per 36,158, which is much lower than the WHO standard of 1 per 10,000. To address this shortage in medical doctors, over the years the government has increased the number of medical schools in the country and has also introduced a new curriculum. Enrollment of medical students is on the rise; currently there are 22 universities

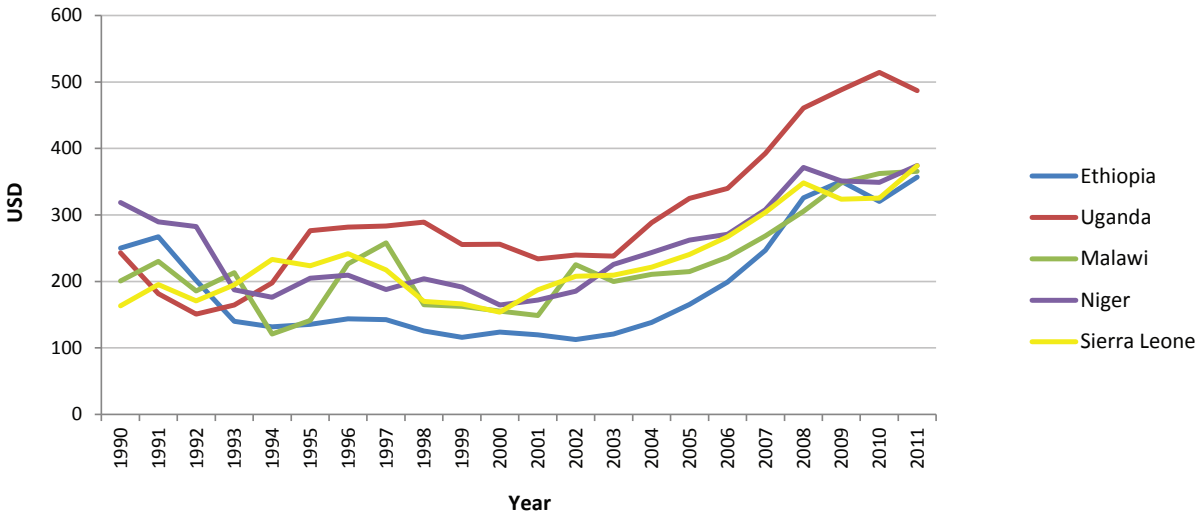


Figure 5. *Gross domestic product per capita (Constant 2000 USD).*

and medical colleges training 8,060 students. In addition to the challenges of training sufficient numbers of physicians, Ethiopia also faces problems of retention. As such, the government has also focused on the concept of "task shifting", which is the process of appropriately moving tasks to less specialized health workers. The FMOH has designed the Integrated Emergency Surgery and Obstetrics (IESO) training as a three years master program. A total of 294 IESO students are being trained in 8 universities around the country. IESO trainees are more likely to stay in the country and contribute to the reduction of maternal mortality. The first batch of 40 graduates is now providing IESO in primary hospitals. Furthermore an Accelerated Midwifery Training is underway. In heath facilities where physicians are not available, nurses and health officers are also trained to perform some of the duties once carried out by medical doctors (FMOH, 2012).

Medical Supplies

The Pharmaceuticals Fund and Supply Agency (PFSA) was formed to ensure the supply of essential drugs, medical supplies and equipment. To procure and distributes drugs and pharmaceuticals, PFSA has developed an Essential Pharmaceuticals List, which is periodically updated using the Ethiopian Essential Health Services Package and the Standard Treatment Guidelines. Use of this list ensures that the procured and distributed drugs are essential and meet the needs of the health care delivery system. Under the mandate of the PFSA, the Integrated Pharmaceutical Fund and Supply Management Information System was developed. This is a single health commodities reporting and distribution system allowing supplies to flow from central to regional PFSA hubs, and then to health facilities. A computer based pharmaceutical supply management system has been established in 10 PFSA hubs and 256 health facilities (FMOH, 2010). Nationally, PFSA has several hubs within 160 kilometers from health facilities, from where it distributes commodities and supplies.

3) Ethiopia's health achievements as compared to other countries with similar GDP

Ethiopia's economy has also been growing steadily over the last decade (9-14% growth per annum), however,

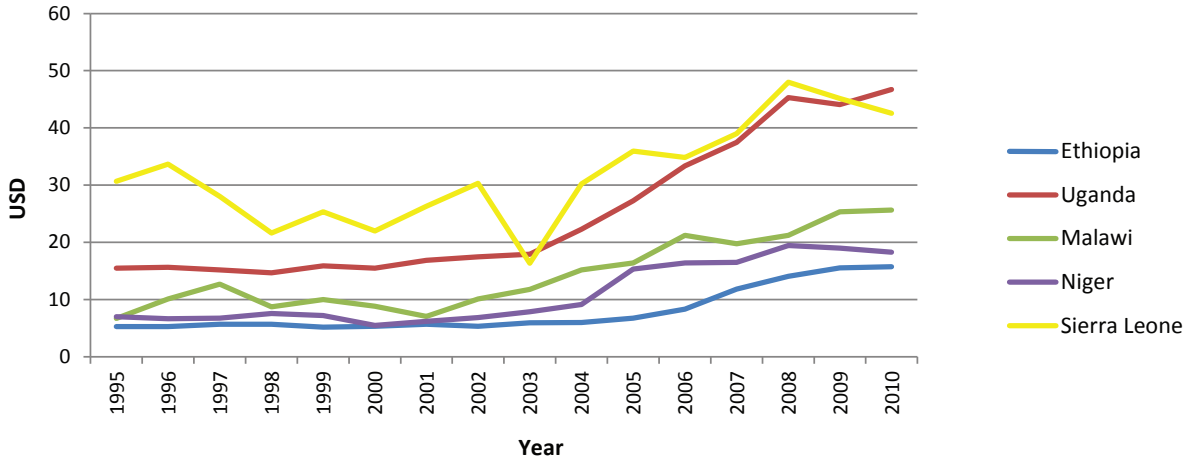


Figure 6. *Per capita expenditure on health in selected African countries with similar gross domestic product.*

its GDP per capita remains one of the lowest in the world (Balabanova, Mckee and Mills, 2011). A GDP comparison between Ethiopia, Uganda, Malawi, Niger and Sierra Leone shows that, even though Ethiopia has experienced high growth rate since 2004, it still lags behind the other four countries, with Uganda performing the best out of the group (Figure 5) (World Bank, 2011).

Furthermore, though the figure has been rising over the years, Ethiopia, compared to the same four countries, spends the least per capita on health (Figure 6), being among the countries with the lowest per capita health expenditure in the world (World Bank, 2011). The financing for Ethiopia's health sector is largely donor-dependent and households also spend a large amount of money out of pocket for general health and for specific diseases (FMOH, 2010b).

In spite of the country's limited resources, effort put into the strengthening of the health system has allowed Ethiopia to make significant progress towards meeting national goals as well as MDGs. For example, despite having a lower GDP per capita, over the past 20 years Ethiopia has performed better in reducing under 5 mortality than other sub-Saharan African countries with similar GDP (Figure 7) (World Bank, 2011). This reduction in under 5 mortality has also been seen throughout the different regions of the country (Balabanova, Mckee and Mills, 2011).

4) Conclusion

Despite ranking 173 out of 187 countries in the Human Development Index (UNDP, 2013), over the last 20 years, Ethiopia has achieved major successes in improving health outcomes. Good governance, political will, innovative programs and strategies, peace, stability and sustained commitment have all contributed to the strengthening of the country's health system.

Ethiopia's PASDEP and GTP have contributed to the formation of the HSDP in recognition that poverty cannot be alleviated without improving health. HSDP in turn involves all levels of the government, donors and civil society to ensure that health program development, implementation, monitoring and evaluation are based on inclusiveness, participation and accountability. To accelerate the achievement of the health-related MDGs, Ethiopia has also been working within the framework of IHP+ Compact. In terms of service delivery, the innovative HEP has been pivotal in providing PHC to Ethiopia's rural population. As part of the HEP, HEWs have played a major role in providing preventive, promotive and basic curative services at community level. The development of the HMIS has ensured that data are not used just for reporting, but also for informed decision making at the district level. The establishment of a systematized medical supply chain aims at improving the availability of essential drugs.

The way forward remains challenging. There is a need to make more resources available to provide quality health care. Progress needs to be made in providing adequately trained health professionals to meet the WHO standard for a developing country. Also, given the large share of resources that come from the international community, effort needs to be made to find more predictable sources of funding. Caution is also necessary to ensure the international partnerships focus on the countries health priorities. Ethiopian population would also largely benefit from prepayment mechanisms and health insurance, which are being implemented.

Ethiopia's impressive performance refutes an old public health maxim that a country must increase its wealth before it improves its health ("wealth before health"), providing an example of health achievements in a low-income country (good health at low cost). However, the performance is still inadequate in key areas, such as skilled care at birth, relying on functional health systems and 24-hour availability of clinical services. It is therefore necessary to further strengthen health systems.

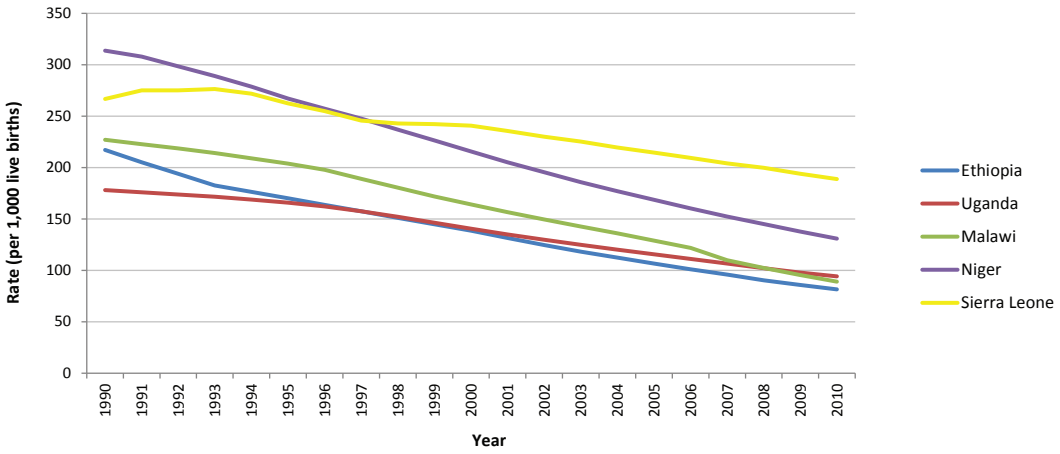


Figure 7. *Under 5 mortality per 1000 live births in selected African countries with similar GDP.*

References

Balabanova, D., Mckee, M., Mills, A. (eds), 2011. "Good health at low cost - 25 years on. What makes a successful health system?". London School of Hygiene and Tropical Medicine, London.

FMOH, 2007. Health Extension Program in Ethiopia. Profile. Federal Ministry of Ethiopia, Addis Ababa.

FMOH, 2008. Compact between the Government of the Federal Democratic Republic of Ethiopia and the Development Partners on scaling up for reaching the health MDGs through the Health Sector Development Programme in the framework of the International Health Partnership. Federal Ministry of Health, Addis Ababa.

FMOH, 2010a. Health Sector Development Programme (HSDP) IV. Federal Ministry of Health, Addis Ababa.

FMOH, 2010b. Ethiopia's fourth National Health Accounts 2007/08. Federal Ministry of Health, Addis Ababa.

FMOH, 2010c. Health Management Information System (HMIS)/Monitoring and Evaluation (M&E) Information use guidelines and display tools. HMIS Reform Team. Federal Ministry of Health, Addis Ababa.

FMOH, 2012. Annual Performance Report of HSDP IV. EFY 2004 (2011/12). Federal Ministry of Health, Addis Ababa.

Halstead, S., Walsh, J,, Warren, K., eds., 1985. Good health at low cost. Rockefeller Foundation, Bellagio.

MOFED, 2006. Ethiopia: building on progress. A Plan for Accelerated and Sustained Development to End Poverty (PASDEP) (2005/06-2009/10). Ministry of Finance and Economic Development, Addis Ababa.

MOFED, 2010. Growth and Transformation Plan. 2010/11-2014/15. Ministry of Finance and Economic Development. Addis Ababa.

UNDP, 2013. Ethiopia country profile: Human Development Indicators. United Nations Development Programme, New York. (http://hdrstats.undp.org/en/countries/profiles/ETH.html, accessed March 2013)

WB, 2011. World development indicators [online database]. World Bank, Washington. (http://data.worldbank.org/indicator, accessed March 2013)

WHO, 2007. Everybody's business. Strengthening the health system to improve health outcomes. WHO framework for action. World Health Organization, Geneva.

WHO, 2011. National Health Accounts Database, World Health Organization, Geneva.

MILLENNIUM DEVELOPMENT GOALS PERFORMANCE FUND: AN IMPORTANT STEP TOWARDS HARMONIZATION AND ALIGNMENT

Mekdim Enkossa[1]

[1]Technical Advisor at the Grant Management Unit, Federal Ministry of Health (FMOH).

Summary

In the framework of harmonization and alignment based on the principles of "One-Plan, One-Budget and One-Report", a critical step towards "One Budget" has been the establishment of the Millennium Development Goals Performance Fund (MDG PF). The MDG PF is a pooled funding mechanism managed by the Federal Ministry of Health using the procedures of the Government of Ethiopia to secure additional funds to the Health Sector Development Programme (HSDP). So far, a total of 326 million USD was disbursed for supporting underfunded priority areas of HSDP: Health Extension Program, maternal and newborn health services, child health services, control of communicable diseases and health systems strengthening. Ethiopia's MDG PF provides the opportunity for development partners to finance cost-effective activities which will bring sustainable results at a low administrative cost. A particular focus at the moment is to ensure improved access to maternal and newborn health services.

1) Introduction

Over the past decade, there has been growing consensus in the international community that increased aid must be accompanied by improved aid effectiveness through support for recipient-owned development strategies, increased use of national systems and more co-ordinated and predictable donor actions in order to achieve the Millennium Development Goals (MDG).

It is for this reason that leaders of the international and bilateral organizations, and representatives of donor and recipient countries gathered for high-level fora (in Rome in 2003, in Paris in 2005 and in Accra in 2008) on harmonization and alignment (OECD, 2009). They committed to taking action to improve the management and effectiveness of aid and to assessing concrete progress.

In particular, the Paris Declaration on Aid Effectiveness in 2005 (OECD, 2005) expressed the international community's consensus on the direction for reforming aid delivery and management to achieve improved effectiveness and results. It is grounded on five mutually reinforcing principles:

- *Ownership:* recipient countries exercise effective leadership over their development policies and strategies, and coordinate development actions.
- *Alignment:* donors base their overall support on recipient countries' national development strategies, institutions, and procedures.
- *Harmonization:* donors' actions are more harmonized, transparent, and collectively effective.
- *Managing for results:* managing resources and improving decision making for development results.
- *Mutual accountability:* donors and partners are accountable for development results.

Many factors have contributed to the improved health of Ethiopians. A huge and rapid increase in the number of health facilities and health workers contributed greatly to improvements in service delivery and health outcomes. In particular, the training and deployment – in a period of just six years - of over 35,000 Health Extension Workers (HEW) who receive government salaries was a particularly notable achievement. The number of midwives also increased rapidly, almost doubling from 1,244 in 2007 (FMOH, 2008a) to 2,404 in 2011 (FMOH, 2012).

Such radical change in the health sector required strong leadership from the Government of Ethiopia, with a consistent commitment to the large-scale expansion of cost-effective services. This leadership has received much attention internationally. In 2012, UNAIDS congratulated Ethiopian leaders for reducing the rate of new HIV infections among adults by 90% in 10 years. The Jimmy and Rosalynn Carter Humanitarian Award in 2011 praised the "government's commitment to improving health outcomes".

The Government of Ethiopia has consistently stated its preference for two particular forms of financial support – the MDG Performance Fund (MDG PF) and Component

1 of the Protection of Basic Services. Both these financing channels allow decisions about priorities to be made locally and provide opportunities to strengthen government management systems.

Governance of the MDG PF is described in the Joint Financing Arrangement (JFA) signed in 2009 by the Federal Ministry of Health (FMOH), Ministry of Finance and Economic Development (MoFED) and Development Partners (DP). In particular, the signatory DPs were as follows: Department for International Development (DFID), Irish Aid, Spanish Cooperation, United Nations Children's Fund (UNICEF), United Nations Fund for Population Activities (UNFPA), World Health Organization (WHO), Italian Development Cooperation (IDC), and the World Bank (WB). The same DPs (except WB) signed the revised JFA in 2011 (FMOH, 2011), with the addition of Australian Aid (AusAID), Netherlands Embassy and Global Alliance for Vaccines and Immunization (GAVI), while World Bank (WB) is in the process of joining it.

2) What is the Millennium Development Goals Performance Fund?

The MDG PF is a pooled funding mechanism managed by the FMOH using the procedures of the Government of Ethiopia (GOE) . In the framework of the Ethiopia International Health Partnership (IHP) Compact (FMOH, 2008b), it provides flexible resources, consistent with the "*One-Plan, One-Budget and One-Report*" principle, to secure additional finance to the Health Sector Development Programme (HSDP). It is the GOE's preferred modalities for scaling up DPs assistance in support to HSDP. The MDG PF is described in HSDP III (FMOH, 2005) and started working in 2007 with funds from GAVI for Health Systems Strengthening (HSS).

The JFA represents a common understanding between FMOH, MOFED, GOE and DPs and is neither an international treaty, nor is it intended to be legally enforceable (FMOH, 2009). It is adopted pursuant to and subject to bilateral agreements between the GOE and the signatory DPs for the purpose of contributing to the financing of the HSDP. As per the JFA, eligible expenditures are defined as areas within the MDG PF that are agreed annually between FMOH and DPs. These areas currently include the Health Extension Program (HEP), health service delivery (including maternal and child health), procurement of public health commodities and HSS.

The framework for the dialogue, governance and decision-making of the MDG PF is provided by the existing health sector coordination mechanism, which consists of a two tier collaborative governance system made up of the Joint Consultative Forum (JCF) and the Joint Core Coordinating Committee (JCCC). Therefore, the institutional arrangements for the MDG PF are fully integrated within the overarching sector planning and coordination structures. In addition, in September 2011, the FMOH and contributing DPs agreed to convene informal meetings specifically focused on the MDG PF in order to further strengthen the functioning of the Fund (FMOH, 2011).

2.1) Progress in the implementation of the Millennium Development Goals Performance Fund

2.1.1) Development Partners' contribution

A Financial Management Assessment (FMA) was done by independent consultants hired by GAVI, AusAID, Netherlands Embassy, Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and United States Agency for International Development (USAID). Based on the outcome of the FMA, the JFA was revised and signed by additional two partners: AusAID, and Netherlands Embassy. So far, a total of 326,320,587 USD

Table 1. *Contribution of development partners to the Millennium Development Goals Performance Fund by EFY.*

DEVELOPMENT PARTNER	CONTRIBUTION IN USD BY EFY					
	2001	2002	2003	2004	2005	Total
SPANISH AID	6,210,964	7,351,996	6,416,510	6,846,500	4,547, 543	31,373, 513
DFID	4,407,268	12,934,392	43,314,566	81,577,544	106,964,000	249,197,770
IRISH AID		1,924,660	2,217,960	3,484,285	2,447,777	10,074,682
UNFPA		1,000,000	1,000,000	995,189		2,995,189
WHO		664,303	300,969	698,773		1,664,045
UNICEF				500,000	1,000,000	1,500,000
IDC				3,793,853		3,793,853
AUSAID				7,445,900	12,561,360	20,007,260
NETHERLANDS					5,714,275	5,714,275
TOTAL	**10,618,232**	**23,875,351**	**53,250,005**	**105,342,044**	**133,234,955**	**326,320,587**

Table 2. *Areas of support funded by the Millennium Development Goals Performance Fund by EFY.*

AREAS OF SUPPORT	2001	2002	2003	2004	2005
HEALTH EXTENSION PROGRAM				8,111,456	4,907,400
MATERNAL HEALTH	5,572,500	4,050,735	15,700,000	22,568,000	71,431,158
CHILD HEALTH	5,045,731	4,318,614	9,563,000	8,070,932	14,357,011
INFRASTRUCTURE		7,000,000	7,000,000	8,000,000	
MEDICAL EQUIPMENT			11,000,000	23,253,939	31,800,000
COMMUNICABLE DISEASES		4,875,500		13,500,000	20,178,081
ACCESS TO ESSENTIAL DRUGS		6,845,097		8,000,000	
HEALTH CARE FINANCING		630,650	40,000	1,800,000	1,000,000
HMIS				7,300,000	2,300,000
HUMAN RESOURCES				11,326,700	3,273,850
GOVERNANCE			135,000	1,700,000	283,325
TOTAL	**10,618,231**	**27,720,596**	**43,438,000**	**113,631,027**	**149,530,825**

was disbursed (Table 1).

2.1.2) Implementation progress

As indicated in the JFA, the MDG PF is established to finance the gaps identified in the comprehensive plan. In accordance, urgent gaps to be financed by the MDG PF are identified in August every year by FMOH and presented for approval to the JCF. The specific activities were identified in line with the eligible expenditures stated on the JFA. The major areas funded through the MDG PF are indicated in Table 2.

3) Implementation status of MDG PF

MDG PF is used to fill the financial gap in most underfunded priorities of the sector. In particular, the MDG PF focused mainly on the following areas: (i) HEP; (ii) Maternal and newborn health; (iii) Child health; (iv) Communicable diseases; and (v) HSS that include infrastructure, strengthening human resources, equipping hospitals and health centers (HC), supporting governance, Health Care Financing (HCF) and Health Management Information System (HMIS). Accordingly, a separate plan was developed for the MDG PF at the beginning of each EFY. The plans were based on the annual woreda based plan and were part of the comprehensive plan. More than 90% of the MDG PF was used for procurement in bulk, adding value for money. The implementation of the MDG PF was reported to JCCC quarterly, and, after comments were received from JCCC members and contributing partners, final reports were compiled and sent to all contributors.

Health Extension Program

While equipping and furnishing health posts (HP) was done during HSDP III, continuous supply of consumables was needed for appropriate provision of services. Supply of consumables, support to pre-service HEP training and support for implementation of HEP, especially for emerging regions, have been funded from MGD PF.

Maternal and newborn health

In order to address the three delays in access to obstetrical care, transportation was strengthened through the procurement of ambulances, while provision of obstetrical care was supported through procurement of Emergency Obstetric and Neonatal Care (EmONC) drugs and supplies, procurement of EmONC equipment, and procurement of contraceptives. In order to strengthen the newborn health service, equipment for newborn corners enough for 2,000 health facilities are being procured. In addition, equipment for neonatal units and neonatal intensive care units (ICU) are being procured in EFY 2005.

Child health

In order to strengthen the child health program, the MDG PF has supported various activities such as trainings. However, the majority of funds goes to procurement of vaccines, cold room equipment and spare parts.

Communicable diseases

The MDG PF has been filling the resource gap in financing activities for controlling communicable diseases. Though these have been funded through major donors, like GFATM, there existed some gaps in procurement of long-lasting insecticide-treated nets (LLITN) and insecticide chemicals. In EFY 2004 and 2005, the major allocation from MDG PF was for procurement of a new larvicidal chemical, Bendiocarb.

Health System Strengthening

Under HSS, different areas were supported depending on the financial gap identified and the resources available

that were documented through resource mapping from different stakeholders. Concerning Human Resource Development (HRD), activities like Integrated Emergency Surgery and Obstetrics (IESO) training, New Medical Education Initiative, midwifery training, and anesthesia training were supported through procurement of equipment for teaching universities, availing funds to cover cost of trainings for trainees identified by regions.

The support to infrastructure was mainly to finalize the already started construction of HCs through various donors like GFATM and GAVI. Medical equipment for emergency services, like operation theatre and ICU, is being procured in order to improve the quality of the services. In addition, the MDG PF contributed to improve the availability of essential drugs in all facilities. This was done through availing fund for the revolving drug fund.

HCF was supported through availing funds for the general subsidy and for various trainings at all levels. HMIS scale up was one of the underfunded priority areas for FMOH, and was supported by MDG PF mainly to cover the expenses of trainings and printing of HMIS formats.

4) Conclusion

Health in Ethiopia has improved markedly in the last decade, with government leadership playing a key role in mobilizing resources and ensuring that they are used effectively. The Government of Ethiopia has shown clear preference for support to come through MDG PF. The advantages of the MDG PF are:

- Lower transaction cost: funds can be used quickly and flexibly, using streamlined administrative procedures. The MDG PF is managed at the operational level by government staff, and it has clear channel for approving funding decisions. One important transaction cost to government is the demand made by development partners on the time of health service managers and planners – individuals whose skills are in short supply.
- Prioritization*:* funds can be allocated to where they are most needed – high priorities which are receiving relatively little funding from other sources. The FMOH has a proven track record of prioritizing cost-effective basic services, notably HEP and, more recently, maternal and newborn health. This is one of the strongest arguments in favor of funding the government's preferred aid mechanisms – it allows resources to be allocated according to agreed national priorities.
- Use of government systems*:* funds are channeled through existing government systems and provide opportunities to strengthen these systems. Health service provision relies on the efficient functioning of a number of systems, including human resources, financial management, procurement and reporting.

  The most effective way to strengthen these vital government systems is to use them and hold them accountable.
- Predictability of funding: MDG PF facilitates the provision of reliable information on multi-year funding and disbursing these funds in a timely fashion.

The next steps are as follows:

- GAVI has disbursed its funds as per the agreed schedule on the bilateral Memorandum of Understanding (MOU).
- WB board has approved the Program for Results (P for R) for Ethiopia in February 2013. The P for R is signed by MoFED and WB, and the disbursement will be based on achievements of agreed disbursement linked indicators.
- European Union Delegation is working on a mechanism to join the MDG PF through the P for R.
- MDG PF will continue to focus on funding the underfunded priorities of the FMOH to reach the MDGs by the set deadline.

References

FMOH, 2005. HSDP III. Health Sector Strategic Plan 2005/06-2009/10. Federal Ministry of Health, Addis Ababa.

FMOH, 2008a. Health and health related indicators. Federal Ministry of Health, Addis Ababa.

FMOH, 2008b. Compact between the Government of the Federal Democratic Republic of Ethiopia and the Development Partners on scaling up for reaching the health MDGs through the Health Sector Development Programme in the framework of the International Health Partnership. Federal Ministry of Health, Addis Ababa.

FMOH, 2009. Joint Financing Arrangement between the Federal Democratic Republic of Ethiopia and Development Partners on support to the MDG Fund. Federal Ministry of Health, Addis Ababa.

FMOH, 2011. Joint Financing Arrangement between the Federal Democratic Republic of Ethiopia and Development Partners on support to the MDG Fund. Version II. Revised in December 2011. Federal Ministry of Health, Addis Ababa.

FMOH, 2012. Health and health related indicators. Federal Ministry of Health, Addis Ababa.

OECD, 2005. Paris Declaration on aid effectiveness, ownership, harmonisation, alignment, results and mutual accountability. Organisation for Economic Co-operation and Development, Paris.

OECD, 2009. Paris Declaration on aid effectiveness (2005) and the Accra Agenda for action (2008). Organisation for Economic Co-operation and Development, Paris.

COMMUNITY HEALTH INFORMATION SYSTEM FOR FAMILY-CENTERED HEALTH CARE: SCALE-UP IN SOUTHERN NATIONS, NATIONALITIES AND PEOPLE'S REGION

Kare Chewicha[1], Tariq Azim[2]

[1] Regional Health Bureau Head, Southern Nations, Nationalities and People's Region
[2] Chief of Party, John Snow Inc (JSI) HMIS Scale-up Project.

Summary

The Community Health Information System (CHIS) is a family-centered health information system designed for the health extension worker (HEW) to manage and monitor her work in educating households and delivering an integrated package of promotive, preventive, and basic curative health service to families. Initiated in October 2010, the roll-out of CHIS was completed in the Southern Nations, Nationalities and People's Region (SNNPR) within 2 years. Region's strong leadership coupled with community mobilization and involvement of partners ensured smooth implementation of CHIS, bringing about a positive change in the management of health services at community level. SNNPR is now starting to harvest the benefits of CHIS. The HEWs are using the system to target pregnant women and children for services, and with the tickler file system they are better equipped to identify defaulters. The managers at woreda, zonal and regional levels are able to access the health post data and using it for planning and monitoring.

The scale-up of CHIS has not been without challenges, including remoteness of some health posts with subsequent difficulty in ensuring regular supervisory visits and continuous support, and persisting parallel reporting systems with subsequent over-burden on HEWs. CHIS has a lot of potentials; however, it needs to be properly scaled-up, owned and used for realizing its potentials and ensuring its sustainability. This article aims at describing the scale-up of CHIS in SNNPR and documenting achievements and challenges, sharing lessons learned that can be useful in CHIS implementation in other regions.

1) Introduction

The Health Extension Program (HEP) is a package of preventive, promotive and basic curative services targeting households to improve the health status of families with their full participation (FMOH, 2007). In the context of HEP, the Federal Ministry of Health (FMOH) designed Family Folder as a comprehensive data collection tool for documenting family-centered HEP services provided by the Health Extension Workers (HEW) (FMOH, 2010).

The Family Folder is the central piece of the Community Health Information System (CHIS). The CHIS is a component of the reformed Health Management Information System (HMIS) designed by the FMOH according to the principles of standardization, integration and simplification to provide information for decision making (FMOH, 2008).

The FMOH puts high emphasis on implementing CHIS nation-wide. To that end, the FMOH is leading the CHIS roll-out in the country and has engaged various partners – mainly John Snow Inc (JSI)/MEASURE Evaluation HMIS Scale-up Project, Tulane University, Italian Cooperation and World Health Organization (WHO) - in supporting the scale-up in the regions.

By July 2012, CHIS was implemented in 3,952 Health Posts (HP) representing about 25% of the HPs in the country. Of them, 2,620 HPs were in the Southern Nations, Nationalities and People's Region (SNNPR), 1,170 in Oromia Region, 128 in Amhara Region and 34 in Dire Dawa (FMOH, 2012) By April 2013, 3,387 HPs in SNNPR are implementing CHIS. This article aims at describing the scale-up of CHIS in SNNPR and documenting achievements and challenges, sharing lessons learned that can be useful in CHIS implementation in other regions.

2) Design of the Community Health Information System

The initial design of Family Folder was done in 2008. However, in the absence of clear-cut implementation guidelines and training manuals, the efforts to scale-up the CHIS nation-wide faltered. In 2010, the FMOH set up a technical working group - comprising of John Snow Inc (JSI)/MEASURE Evaluation HMIS Scale-up Project, Tulane University, Italian Cooperation and WHO – that, under the lead of FMOH, conducted a pilot testing in two woredas in SNNP and Amhara Regions, and finalized the health extension supervisors training manual and implementation guideline (Lemma et al., 2010). The salient points that were determined from these experiences included procedures for numbering households, recording and updating folders, using a Master Family Index and a Field Book, and refining the tallying and reporting procedures (FMOH, 2010; Lemma et al., 2010).

According to the finalized CHIS guidelines, each family is provided with a Family Folder which is kept at the HP.

Information on household identification, family members and household characteristics such as availability of latrine, hand washing, waste disposal, drinking water facilities and long lasting insecticide treated bed-nets are recorded on the Family Folder. Health Cards and Integrated Maternal and Child Care Cards are kept inside the Family Folder.

The household identification is based on registration and numbering of all the households in the catchment area of the HP. Within a kebele, the household numbering is done village-wise. To facilitate easy identification of the household to which a person coming for service belongs to, a Master Family Index (containing list of household heads arranged in alphabetic order) is maintained at the HP.

In order to ensure recording and reporting of service data as well as health and disease data, the HEW also maintains a monthly tally sheet on which household numbers of the clients/patients who received services is recorded against the type of service provided.

During her field visit, a HEW is supposed to carry the Family Folders of the households she plans to visit. A Field Book is used for cases that are attended by HEW during the field visits or outreach for which the HEW did not carry any Family Folder.

3) Implementation of the Community Health Information System in Southern Nations, Nationalities and People's Region

SNNPR has 14 zones, 152 woredas, 4 special woredas, 1 Regional City Administration, 23 hospitals, 657 health centers, and 3,835 HPs. The Regional Health Bureau (RHB) is leading the CHIS implementation process in the region, with the support of MEASURE Evaluation HMIS Scale-up Project which is funded by USAID.

The scale-up process was initiated in October 2010 by providing orientation and sensitization of regional, zonal and woreda health managers. This was considered as the essential first step to ensure ownership and support for CHIS at all the levels of health administration within the region. A pool of facilitators in SNNPR was created by providing training of trainers (TOT) to Health Extension Program (HEP) coordinators from zonal health departments and woreda health offices and to HEW supervisors from the health centers. Since the HEP coordinators and HEW supervisors are the ones in charge of supervising HEWs, it was considered pertinent that they should be the ones in charge of training the HEWs (Figure 1). In this way the HEW supervisors and their managers would be able to provide relevant technical support to the HEWs during their subsequent supervisory visits.

Figure 1. *Training of Health Extension Workers.*

By November 2012, all the HEWs in 3,825 rural HPs in SNNPR have been trained and started implementing CHIS. The remaining 10 HPs are located in pastoral areas. CHIS implementation in those areas is pending FMOH decision on the design and operational guidelines for pastoral areas. Out of the 3,825 HPs in agrarian areas, 3,817 HPs have had submitted the monthly CHIS reports at least once after starting CHIS implementation. By April 2013, 3,387 HPs were continuing CHIS implementation, while the remaining HPs faced various difficulties to continue with the implementation. Some of the constraints faced include the remoteness of the HPs and thereby health centers being not able to carry out regular supervisory visits and provide continued support, difficulties in ensuring continued supply of printed tally sheets, emphasis by some agencies/ departments on continuing use of various service registers resulting in over-burden on HEWs, and some of the HPs not being fully functional yet. Among the root causes of such drop-out in CHIS implementation are high staff turnover and dwindling commitment of the health center and woreda health office managers to CHIS. To address these root causes, the Regional Health Bureau is providing CHIS re-orientation to the health center and woreda health office managers, along with refresher training of the HEWs. Secondly, a yearly supply of CHIS tally sheets is being printed and distributed to all the HPs in the region.

Involvement of the community

The first activity to initiate CHIS implementation was mobilizing volunteers from the community to conduct house to house visit, provide each household with a unique household number, and register the families on the Family Folder. For doing that, the woreda civil administration and kebele cabinet were involved by the HEWs.

In the words of one HEW in Butajira:

> *"After receiving the training, the first thing we did was to inform the kebele administration of the importance and use of the Family Folder. Next we trained four community health volunteers to help us with household numbering and collecting data on the Family Folders."* (MEASURE Evaluation, 2012a).

Another HEW stated that:

> *"We met with the cabinet, kebele administrator and village leaders and informed them about the CHIS training. The leaders gave directives to the community to cooperate and provide the necessary information."* (MEASURE Evaluation, 2012b).

These statements are reiterated by the Kebele Administrator of Agemsenado Kebele:

> *"We mobilized the community for data collection. We went ahead of the health extension worker to notify the community that household information collection is taking place and to be available."*

To ensure correct recording of family data on the Family Folder, which is in English, translation of the Family Folder was done in Amharic and printed on plain paper. Copies of these translated Family Folders were provided to the HEWs and the volunteers as a reference for easy recording of the family data of Family Folders. Data from the Family Folders were later used to prepare the Master Family Index and for compiling the kebele profile. The kebele profile provides summary information on number of households in the kebele, its population, age distribution, and households with latrines and safe drinking water.

The Family Folders are filed on a wooden shelf. They are arranged serially by household number and by village number. Family Folders belonging to families in one village are filed separately from those of other villages according to the village's identification number. Such filing helps in easy retrieval of the Family Folders. The Master Family Index, which is a village-wise list of the household heads in alphabetic order helps identify the household number of the family, and thereby retrieve the Family Folder from the shelf.

Use of Tally Sheet

The HEWs use a tally sheet for recording the services they provide daily (Figure 2). However, the recording in these tally sheets is not done in a conventional manner,

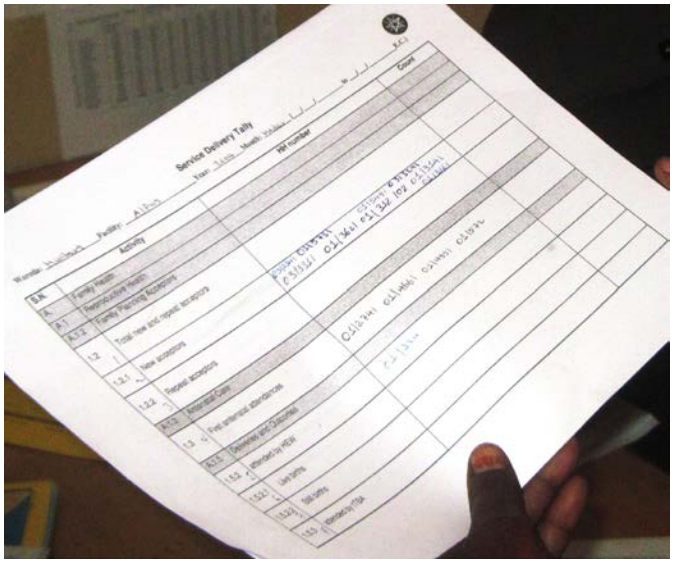


Figure 2. *Tally Sheet with household number recorded against the services provided.*

i.e. putting stroke marks for each client served. Rather, the household number of the client is written in the row against the service provided by the HEW. This has many advantages. By looking at the household numbers, the HEW can identify the households that received a particular service, e.g. antenatal care or pentavalent immunization. She can use that information to plan her follow-up visits. Supervisors can assess the data quality by cross-checking the recording on tally sheet with the health cards kept in the Family Folder by picking the Family Folders using the household numbers recorded on the tally sheet.

The Tickler File System

In places like Hadiya, where CHIS implementation started early, the HEWs introduced innovative ideas to separate out the household numbers of clients who needed follow-up services, like family planning or pregnancy care. In some HPs, the HEW had wall-hanging pouches made of cloth where they would put small pieces of paper with household numbers in different pouches marked as Family Planning, Pregnant Women, Immunization etc. Others were writing the household numbers of clients who need follow-up on their notebooks. In order to standardize this system of identifying the follow-up clients, a simple form of the Tickler File System was introduced (Figure 3).

The Tickler Box has twelve slots for twelve months of the year (Figure 4). The Health Cards of the clients who need follow-up are put in the month's slot according to the month when the follow-up service is due. With this system the HEWs are now able to review the cards of the clients who should be followed up during the current month and accordingly communicate with them either through community volunteers or house visits. If at the end of the month the health cards are

Figure 3. *Filing of Family Folders by village and Health Cards arranged in Tickler File.*

Figure 4. *Tickler Box.*

still remaining in that month's slot, the HEWs know the clients who have defaulted; therefore they can take appropriate measures to get to those clients.

Regarding this tickler file system, one HEW said:

> *"Previously we didn't know who would come and when for family planning services because of the workload, but now we know."* (MEASURE Evaluation, 2012c).

The results are apparent. For example, in Dilla-Zuria Woreda of Gadeo Zone, the HEWs are seeing the benefits of using the CHIS and the Tickler File System for reducing immunization drop-out. During the third quarter of 2004 EC, 842 infants received the first dose of pentavalent vaccine vis-à-vis 767 infants receiving their third dose, indicating a gap between the first dose and third dose. Since getting training organized by the Gadeo Zonal Health Department in collaboration with the SNNP RHB and the HMIS Scale-up Project, the HEWs in Dilla-Zuria Woreda could easily identify this dropping out of the children, reaching out to the households and advocating for continuity of care. As a result, in the Ethiopian month of Sene (June–July 2012) alone, 752 children were vaccinated by the HEWs with the first dose of pentavalent vaccine and 986 children received their third dose, indicating an improvement in vaccination services from the HPs (MEASURE Evaluation, 2012c). Analysis of the CHIS data for the months of Meskerem to Tir 2005 EFY entered in the electronic HMIS (eHMIS) system in SNNPR shows that about 48% of the pregnant women who had received their first antenatal visit at the HPs have returned for their fourth antenatal visit; 85% of women who had received their fourth antenatal visit at the HP have been also attended by HEWs during delivery, and 99% of these births attended by the HEWs are live births.

4) Discussion and Conclusion

The scale-up of CHIS in SNNPR is seen as a success story. Within the short period of about 2 years, the vast majority of the HPs in the region are implementing CHIS, using the Family Folders for targeting health services and regularly submitting monthly reports. A number of factors helped towards this achievement. The commitment of the RHB leadership was crucial and, under the RHB lead, support was provided by MEASURE Evaluation HMIS Project. Building consensus by FMOH on operational guidelines and piloting them in collaboration with other partners helped in standardizing the procedures for CHIS implementation. Advocacy at woreda civil administration and kebele council levels helped mobilize community volunteers to carry out household numbering and profiling. For the sustainability of CHIS, it is also important to strengthen the community ownership of, and demand for, CHIS in general, and Family Folders in particular. One approach to that end would be to further sensitize the kebele councils and woreda administrators on the importance and use of the Family Folders, especially in the context of the Health Development Army.

Important programmatic data is becoming available to the managers for monitoring and management decision making. For example, as mentioned above, data from HPs is available to show that a high percentage of women who are receiving their fourth antenatal visit by HEWs are also attended by HEWs during delivery. In the absence of availability of the previous years' data, comparisons are not possible for understanding any change in the performance of health services at community level. However, with CHIS in place, SNNPR has good baseline data for future use in planning and monitoring. In fact, during the EFY 2005 Woreda-based planning, SNNPR is able to directly access HP data using the eHMIS and use it for setting the indicator baselines.

The use of tally sheet, with recording of the household number against the services provided by the HEW, is proving very valuable in assuring data quality. The

supervisors are now able to cross-check the data recorded on the tally sheet with the records in the Family Folder. Another potential use of this recording household numbers on the tally sheet is that it can provide the list of children or mothers who have received a particular service in the past months. This can help the supervisors to visit the household and follow-up with the members regarding the services provided by the HEWs. If job-aides or service checklists are used by the HEWs for systematic check-up and treatment of childhood illnesses or pregnant women, the supervisor can identify those cases from the tally sheet and review the completed checklists for verifying quality of services provided.

The implementation of CHIS in SNNPR has not been without challenges. Developing skills of HEWs on how to properly record data on Family Folders and, in general, use the CHIS, has been a big challenge. One of the greatest hurdles to acquiring the skills by HEWs has been the language used in the Family Folder and the Health Cards. All these are in English and many of the HEWs are not comfortable with that. In response to this difficulty, the RHB translated the Family Folder and Health cards in Amharic and provided every HEW with a printed copy of the same. This has greatly enhanced their understanding of the system as a whole. Similarly, tally sheets were translated in Amharic and provided in adequate supply to every HP.

Continuation of parallel recording and reporting requirements imposed by various departments and partners is threatening the sustainability of CHIS. Various registers and reporting formats are still seen in many HPs, even though CHIS is able to provide the necessary data or be adapted to accommodate additional information needs. Other challenges in scaling-up CHIS were the difficult access to some health posts and the non-continuous supply of printed tally sheets.

One important aspect of CHIS implementation and sustainability is the access to electronic system for data entry, aggregation, transmission and analysis. Every HP generates a huge number of data every month and, multiplied by the number of HPs in a region, the amount of data that is generated by CHIS is simply not manageable manually. The eHMIS in SNNPR has proved to be very handy in allowing the program managers to access monthly data of every individual HP. The system also allows monthly comparisons and aggregation of data at the Primary Health Care Unit level which comprises of a health center and five to ten HPs.

The success of CHIS can be highlighted with the words of a HEW in SNNPR: *"CHIS has helped build trust in me (the HEW)"*. CHIS has lot of potentials; however, it needs to be properly scaled-up, owned and used for realizing its potentials and for its sustainability.

References

FMOH, 2007. Health Extension Program in Ethiopia. Profile. Federal Ministry of Health, Addis Ababa.

FMOH, 2008. Health Management Information System (HMIS)/Monitoring and Evaluation (M&E). Strategic plan for the health sector. Federal Ministry of Health, Addis Ababa.

FMOH, 2010. Health Sector Development Programme III. Annual performance report. EFY 2002 (2009/10). Federal Ministry of Health, Addis Ababa.

FMOH, 2012. Health Sector Development Programme IV. Annual performance report. EFY 2004 (2011/12). Federal Ministry of Health, Addis Ababa.

Lemma, I., Azim, T., Akalu, T., Kassahun, H., Lemecha G., Mesfin G., Accorsi S., Mamo D., 2010. Information tool for better health care in rural communities: making family folder operational. Health Bulletin Policy and Practice, 3(2): 27-34.

MEASURE Evaluation, 2012a. Fact Sheet Ethiopia 12-72. MEASURE Evaluation, Addis Ababa.

MEASURE Evaluation, 2012b. Health Management Information Systems for proper decision making (documentary on ETV). http://www.youtube.com/user/measureevaluation/videos (English version) (accessed April 2013).

MEASURE Evaluation, 2012c. Fact Sheet Ethiopia 12-76. MEASURE Evaluation, Addis Ababa.

Ethiopian Health Extension Worker awarded by Bill and Melinda Gates Foundation

Source – Federal Ministry of Health of Ethiopia
http://www.moh.gov.et

Bill and Melinda Gates Foundation awarded international prize to an Ethiopian Health Extension Worker, Tirihas Mebratu, for her outstanding performance in providing infant and maternal health services in Soloda Health Post in Adwa District (Tigrai Regional State). The prize for 2013 was presented to Tirihas in an event organized in the district where she works. She won the prize out of health professionals selected from 35 countries because of her best performances in delivering 16 health extension packages. She is also appreciated for her initiative of preparing training manuals to raise awareness of communities on health prevention and care.

This is also in recognition of the impressive results achieved by the Health Extension Programme in Ethiopia over the last years.

FMOH launched Community Based Newborn Care Program

Source – Federal Ministry of Health of Ethiopia http://www.moh.gov.et

A community-based newborn care national program was launched in Ethiopia on March 8, 2013. Speaking on the occasion, the Minister of Health, H.E. Dr. Kesetebirhan Admasu, said commendable results are registered in the efforts of the government to reduce newborn mortality in the country. He said also that the program will be implemented through health extension workers and health promotion forces.

Save the Children Ethiopia Director, Ned Olney, mentioned that, out of the 20 countries with the highest newborn mortality rates, 18 are in Africa. He said also that two thirds of the global newborn deaths are concentrated into ten countries and Ethiopia has the 6th highest number of newborn deaths.

UNICEF Representative in Ethiopia, Dr. Peter Salama, said that the global number of deaths among children under 5 has fallen to estimated 6.9 million in 2011 from around 12 million in 1990. He said also that the rate of progress in reducing under 5 mortality in Ethiopia has been even faster than that at the global level. This achievement was driven by political commitment, advances in science and technology, and improvements in health, nutrition and family planning services, particularly in rural areas.

The Chief of Health, AIDS, Population and Nutrition Office of USAID/Ethiopia, Elise Jensen, said that the rapid expansion of rural health services contributed greatly to the decline in child deaths. She said also that more than 30,000 health extension workers deployed to over 15,000 health posts significantly contributed towards the same purpose.

EHNRI hosted the 8th National TB Research Annual Conference

Source: Ethiopian Health and Nutrition Research Institute (EHNRI)
http://www.ehnri.gov.et/news

The Ethiopian Health and Nutrition Research Institute (EHNRI), in collaboration with the Federal Ministry of Health (FMOH), Tuberculosis Research Advisory Committee, and Addis Ababa City Administration Health Bureau, hosted the 8th National TB Research Annual Conference on 21 March 2013, commemorating also the World TB Day. The conference is aimed at raising awareness about Tuberculosis (TB) and creating coordinated responses to eradicating TB.

The Minister of Health, H.E. Dr. Kesetebirhan Admasu, said that TB and all its implications have been recognized as major public health problems for more than five decades and, for that reason, programs and strategies have been developed to prevent and control it. In addition to all these efforts to stop TB, the Government is committed to do everything possible to ensure that we win this fight.

The workshop was accompanied also with massive public awareness creation activities and media campaigns to reach the community at large in order to promote TB control programme. The workshop attracted all concerned stakeholders, ranging from health professionals, researchers, program managers, community development agencies, health workers, students, partners and government officers representing regional health bureaus, zonal health departments, district health offices, universities, health colleges and health facilities almost from all over the nation.

FORTHCOMING EVENTS

National Symposium on Neglected Tropical Diseases (June 12-14, 2013)

The National Symposium on Neglected Tropical Diseases (NTD) will be held in Addis Ababa from 12-14 June 2013, under the theme: "Integrate, scale up and sustain." The symposium seeks to launch the National NTD Master Plan, establish a platform for knowledge sharing and documentation of best practices in NTDs, and facilitate translating evidence to action. It will also be used to promote achievements in NTD control and elimination, and to strengthen the partnership among government, civil societies, the academia and development partners in the control and elimination of NTDs.

Objectives of the symposium are to:

- Endorse and launch the National Integrated Master

Plan for the prevention, control, and elimination/ eradication of NTDs;

- Review the current achievement, identify challenges, opportunities and set priorities for governments and relevant stakeholders in addressing NTDs;
- Enhance integrated management of NTDs and co-implementation;
- Reach consensus on priority actions and the roles and responsibilities of the various stakeholders; and
- Create effective coordination, partnership and resource mobilization mechanisms.

Third International Conference on Family Planning (November 12-15, 2013)

Source: International Family Planning Conference http://www.fpconference2013.org

The Federal Ministry of Health of Ethiopia and the Bill and Melinda Gates Institute for Population and Reproductive Health at the Johns Hopkins Bloomberg School of Public Health are jointly organizing the Third International Conference on Family Planning to be held in Addis Ababa, November 12-15, 2013.

The National Steering Committee for the 2013 conference was officially launched on February 1, 2013 at the Addis Ababa Hilton. The launch had over 70 people in attendance and was covered by several Ethiopian media outlets. The National Steering Committee is comprised of Ethiopian government organizations, donor groups, UN agencies, civil society organizations and the private sector. They will assist the Ethiopian Federal Ministry of Health for the preparation of the conference in November.

Published with the support of the Italian Cooperation