Report No 41644-BI

Republic of Burundi
Health Financing Study

September 30, 2008

Human Development Department
Sector Unit III
Africa Region

Ministry of Public Health
and the Fight against HIV/AIDS
Republic of Burundi

Document of the World Bank

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AKNOWLEDGEMENTS

This Health Financing Study is a joint product of the Ministry of Public Health and the Fight against HIV/AIDS in Burundi and the World Bank.

The Burundi MOPH team was headed by Mr. Cyprien Baramboneranye (*Directeur Général des Ressources*), and was composed of Mr Sosthène Hicuburundi (*Economiste, Cellule de Planification*), and Ms. Anne-Marie Niyonzima (*Directrice du Budget, DGR).*

From the World Bank side, Ms. María Eugenia Bonilla-Chacín coordinated the over-all work. The World Bank team was composed of Mr. Marc Nene, Ms. Laurence Lannes, Ms. Veronique Hubert, Ms. Monsterrat Meiro-Lorenzo, and Mr. Pamphile Kantabaze. Invaluable comments and suggestions were received from peer reviewers: Ms. Maureen Lewis and Ms. Agnes Soucat as well as members of the Burundi country and the World Bank Human Development teams including Mr. Alassane Sow, Mr. Jean-Pascal Nganou, Ms. Carolina Monsalve, and Ms. Hannah Nielsen. The team worked closely with Ms. N. Rabarijohn (UNICEF), Ms. S. Villeneuve (UNICEF), and Mr. N. Walelign (UNICEF). The study was done under the guidance of Lynne Sherburne-Benz, Sector Manager, John Elder, Acting Sector Manager, and John McIntire, Country Director. The study also counted with the collaboration of many donors and NGOs supporting the health system in Burundi as they provided the data that made possible this study. Finally, the study benefited from comments received during two workshops in Bujumbura (October 29th-November 2nd, 2007 and September 18th, 2008) where the results of the study were presented and discussed.

This study counted with the financial support of the Belgian Poverty Reduction Partnership Program (BPRP).

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ACRONYMS

ACT	Artesunate-Amodiaquine Combination Treatment
AIDS	Acquired Immune Deficiency Syndrome
CAM	*Carte d'Assurance Maladie*
CAMEBU	*Centrale d'Achat des Médicaments Essentiels du Burundi*
CBO	Community Based Organizations
CHUK	University Hospital Center of Kamenge
CNLS	*Conseil National de Lutte contre le SIDA*
COSA	*Comité de Santé*
COGE	*Comité de Gestion*
CSO	Civil Society Organization
CPSD	*Cadre de concertation des Partenaires pour la Santé et le Développement*
DAC	Development Assistance Committee (OECD)
DFID	UK Department for International Development
DG	*Directeur Général*
DGR	*Direction Générale des Ressources*
DPS	*Direction des Programmes de Santé*
DHS	Demographic and Health Survey
ECHO	European Commission Humanitarian Aid Office
EPI	Enlarged Programme of Immunization
FBU	*Franc Burundais*
FED	*Fonds Européen de Développement*
FP	Family Planning
GAVI	Global Alliance for Vaccines and Immunization
GDP	Gross Domestic Product
GF	Global Fund
GNI	Gross National Income
GVC	Italian Cooperation
HIPC	Heavily Indebted Poor Country
HIV	Human Immunodeficiency Virus
ICRC	International Committee of the Red Cross
IDA	International Development Agency
IMR	Infant Mortality Rate
IMF	International Monetary Fund
INSS	*Institut National de Sécurité Sociale*
LFI	*Loi de Finances Initiale*
LFR	*Loi de Finances Révisée*
MDG	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MinFin	Ministry of Finance
Min SIDA	Presidential Ministry for the Fight Against HIV/AIDS

MMR	Maternal Mortality Rate
MOPH	Ministry of Public Health
MPDR	*Ministère de la Planification, du Développement et de la Reconstruction*
MSF	*Médecins sans Frontières*
MSP	*Ministère de la Santé Publique et de Lutte contre le Sida*
MTEF	Medium Term Expenditure Framework
NGO	Non-Governmental Organization
ODA	Official Development Assistance
OECD	Organization of Economic Co-operation and Development
OOP	Out-of-pocket payment
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Treatment
OTB	*Ordonnateur Trésorier du Burundi*
PATSBU	*Programme d'Appui Transitoire au Secteur de la Santé Burundais*
PEMFAR	Public Expenditure Management and Financial Accountability Review
PETS	Public Expenditure Tracking Survey
PHB	Provincial Health Bureau
PHC	Primary Health Care
PSPII	*Projet Santé et Population II*
NHDP	*Plan National de Développement Sanitaire*
QUIBB	*Questionnaire Unifié des Indicateurs de Base du Bien-être*
QUID	*Questionnaire Unifié sur les Indicateurs de Développement*
REGIDESO	*Régie de Production et Distribution d'Eau et d'Electricité*
SSA	sub-Saharan Africa
SWAp	Sector-Wide Approache
TB	Tuberculosis
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Program
UNFPA	United Nations Fund for Population Activities
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WB	World Bank
WDI	World Development Indicators
WHO	World Health Organization

EXECUTIVE SUMMARY

During the conflict, public expenditure on health drastically decreased weakening the health system at a time when needs were growing. With increasing peace and stability in the country, foreign aid and public resources allocated to the sector have started to increase. However, health authorities still face the challenge of mobilizing extra resources to reverse the damage to the health system and to progress towards achieving the Millennium Development Goals (MDGs). Nevertheless, more resources allocated to the sector will not necessarily improve health outcomes, especially for the poor, if weaknesses in public expenditure management and inefficiencies in the allocation of resources for the sector are not reduced. These challenges become more acute in the context of the presidential measure of eliminating user fees for deliveries and for child health services.

Background

1. **Despite recent improvements, the health status of the population has not reached the levels prevalent before the 1993 crisis.** One out of every six infants does not survive his first birthday and one out of every five his fifth. In addition, more than 40% of children are chronically malnourished. Maternal mortality is also high, much higher than the average in sub-Saharan Africa of 920 maternal deaths per 100,000 live births.

2. **Communicable diseases such as malaria, diarrhea, respiratory infections, and the compounding effect of malnutrition are the major causes of mortality and morbidity in the country**, especially among children. These diseases can be prevented or cured at a relatively low cost. HIV/AIDS also constitutes a serious health and development challenge in the country, with an adult prevalence rate of about 3.3%.

3. **About a third of the population does not receive health care when in need, mainly due to financial barriers to access health services.** During the conflict, both foreign aid and government expenditure in the sector decreased. Due to these expenditure cuts and in order to increase funds, the government initiated a cost-recovery mechanism in all health facilities. This policy allowed these facilities to finance some of their running costs. However, as household income also decreased and as exemption and waiver mechanisms were not functioning, financial barriers to access health services remain the main barrier to access health services.

4. **With increased peace and stabilization in the country, the Government is committed to reverse the damage that more than a decade of conflict generated in the health of the population and to ensure a sustainable development of the health system.** This commitment is reflected in the country's Poverty Reduction Strategy Paper (PRSP) and in the National Health Development Plan (NHDP) whose main objectives are to: (i) reduce maternal and neonatal mortality; (ii) reduce infant and child mortality and morbidity; (iii) reduce the prevalence of communicable and non-communicable diseases; and (iv) reinforce the performance of the national health system.

5. **In accordance with the NHDP, in May 2006 the President announced the elimination of user fees for health services offered to children under five and women during delivery.** This presidential decree was aimed at improving maternal and child health by increasing financial access to health care. This measure has indeed increased utilization of health services among the beneficiaries but delays in the reimbursement to facilities that offer these services have created some difficulties.

6. **Despite this measure, the coverage of many high impact child and maternal health interventions (e.g. ITN, full vaccination, ORT in case of diarrhea) remains low.** Many of these interventions were provided "free" of charge before May 2006, but they have remained underfunded.

7. **With the current level of health indicators, it is unlikely that the country will reach the health related MDG and NHDP goals** without significant additional efforts and resources to overcome major challenges of the health system such as insufficient and unequally distributed health care personnel, stock-outs of drugs and supplies, and the low quality of the services offered.

8. **The shortage of qualified medical personnel is one of the main bottlenecks in the delivery of health services.** Not only are qualified health care personnel scarce, but they are also unevenly distributed favoring Bujumbura and leaving poorer areas underserved. About 80% of doctors and 50% of nurses are thought to be concentrated in Bujumbura which is the region with the lowest poverty level and where only 10% of the population lives. During the conflict, many qualified medical personnel left the rural areas or the country altogether for security reasons. But at the moment, the main reasons behind these shortages are low production and an inadequate remuneration system for these personnel.

9. **The quality of health services is not only affected by the insufficient number of qualified personnel, but also by common stock-outs of pharmaceuticals and other medical supplies.** There is also evidence of poor technical quality of the services offered. Finally, health services are the public services with the lowest level of satisfaction; most of this dissatisfaction is due to the cost of services.

Health Expenditure

Sources of Funds for Health

10. **Expenditure on health in Burundi remains low, mainly due to very low Government expenditure in the sector.** Based on data collected for this study, in 2006, total health expenditure (THE) in Burundi was estimated to be in a range of US$ 14.5- 18.5 per capita. This estimate is less than half the sub-Saharan Africa (SSA) average and lower than THE in other post conflict countries like Rwanda. Most of this expenditure is financed by foreign assistance which is the source of about 50% of it. In 2006, government expenditure on health[1] was only about US$ 1 per capita, one of the lowest in SSA. The private sector financed the rest, mainly through household out-of-pocket (OOP) expenditure.

[1] Government expenditure on health is defined as the expenditure managed by the Ministry of Public Health, the Presidential Ministry for the Fight against HIV/AIDS, and the expenditure for the University Hospital Center of Kamenge, which is managed by the Ministry of Education.

11. **During the conflict, government expenditure on health drastically decreased, not just due to lower government revenues but also due to a decreased share of the budget allocated to the sector.** By the year 2000, less than 3% of government expenditure was allocated to health care, representing about US$ 0.58 per capita. In 2006, thanks to the enhanced Heavily Indebted Poor Countries (HIPC) Initiative, government resources allocated to the sector increased significantly, representing about 7% of the total budget or about US$ 2 per capita.

12. **Despite this large increase in the health sector budget, government expenditure on health (commitment based) did not increase as much in 2006.** This was mainly due to delays in the disbursement of HIPC resources and to budget execution problems at the Ministry of Public Health[2] (MSP in French) level. As consequence, that year health expenditure only represented 4% of total Government expenditure, about US$ 1 per capita; remaining one of the lowest if not the lowest in SSA.

13. **In 2007, the health sector budget was reduced by about 23%.** That year budget execution progressed significantly, partly due to simplifications in the mechanism to reimburse facilities for the "free" services offered to children under five and women during delivery. In addition, an important share of these funds was used to pay commitments made in 2006. By July 2007, many budget lines had already been used. More resources for the sector were expected during a budget revision, but this revision did not take place creating serious difficulties to the MSP to fulfill some of its responsibilities.

14. **Foreign assistance has financed an important share of the health system.** In 2005, donors' overall assistance to the health sector was about US$ 9.05 per capita (US$ 7.85 per capita without emergency assistance)[3]. In 2006, this assistance was US$ 8.65 per capita (US$ 7 per capita without emergency assistance). In 2007, this assistance reached US$ 8.99 per capita.

15. **As pre-payment mechanisms only cover a very small percentage of the population, in Burundi most private health expenditure is out-of-pocket expenditure.** Based on a household survey (QUIBB) implemented in early 2006, before the presidential measure on user fees was announced, household OOP expenditure represented about 5.6% of total household expenditure or about US$ 8.6 per capita. This large OOP on health together with high poverty rates resulted in large financial barriers to access health care. It is not clear how this expenditure changed after the presidential measure of May 2006 as user fees in public and confessional facilities are only part of total household OOP health expenditure. In addition, as children under five and women during delivery are the only beneficiaries of this policy, OOP should still represent an important share of total health expenditure.

16. **A sustainable and steady increase in government resources allocated to the health sector is fundamental to improve health outcomes in the country.** An increase in total public funds can finance the sector in a more predictable and sustainable manner than other sources of funds. This increase can also leverage more external resources for the sector. Releasing the budget in a timely manner will also be essential as an increase in the budget alone will not be sufficient if these resources are not spent.

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[2] While the study was completed, there were two ministries (Ministry of Public Health and Ministry for the Fight Against HIV/AIDS). Afterwards, these two ministries were merged into one, the MSPLS.

[3] In the data collected on foreign assistance, it was not always possible to differentiate commitments from actual expenditure. Therefore, these numbers should be considered an upper bound for this expenditure. Assuming that the execution rate of these resources is similar to that in neighboring Rwanda (76%), the estimated lower bound for foreign aid would be US$ 6.6 per capita.

Efficiency and Equity in the use of resources

17. **Public resources for the health sector have been used, in general, according to the priorities set in the PRSP and the PNDS; but there is room for improvement.** A large share of the budget goes to high level hospitals and in particular to one hospital in the capital city. In a country where the majority of the population lives in rural areas and where the main causes of illness and deaths can be prevented or treated at lower levels of care, this is not the most equitable and efficient use of very limited resources. Similarly, in 2006 about 16% of the health sector budget went to the fight against one disease, HIV/AIDS. This epidemic is a real health and development challenge for the country and resources will still be needed to fight this epidemic. However, without a functioning health system there will not be as much progress in the fight against this disease. Thus, as adult prevalence is 3.3% and given the large resource constraints and the epidemiological profile of the country, a discussion is needed to ascertain whether this is the best use of the limited resources available for health. All this said this situation changed after 2007 when the funds for HIV/AIDS dramatically decreased, as the country was not selected for the seventh round of the Global Fund. It is important to continue funding the fight against this epidemic but in a more predictable and sustainable manner to avoid losing the gains already achieved. These resources whenever possible should be used to strengthen the health system so it can better support the fight against HIV/AIDS.

18. **Most foreign aid for the sector is extra-budgetary which makes it difficult to keep track of the levels and uses of these funds.** There are many challenges surrounding foreign aid which limits its effectiveness. For instance, donor funds are unpredictable and highly volatile; it is therefore difficult for the sectoral ministries to plan and budget activities. Similarly, this unpredictability and volatility coupled with the low maturity of external assistance to health also introduce major challenges to the sustainability of activities that are being financed as is the case of HIV/AIDS funding discussed above.

19. **Inequality in the distribution of donor funds is also a major issue in the sector.** The majority of donors and NGOs work in a limited number of provinces and as a result funding for the sector has been distributed very unequally across provinces. In 2006, while Ruyigi province received US$ 6 per capita in foreign aid, Mwaro received only US$ 0.1. Donors and NGOs usually finance very different programs and thus foreign aid has also been unequally distributed across strategic objectives. This is mainly due to single-issue funds and single-issue projects; for instance, in 2006 a third of all donor funds to the sector were allocated to the fight against HIV/AIDS. This last tendency might be changing, but not as a consequence of a better distribution of funds for the sector but due to a large drop in funds for HIV/AIDS.

20. **All these issues raised by foreign assistance highlight the urgent need for better coordination in the sector to increase the efficiency of external assistance.** By financing a strategy for the entire country and not for specific provinces, donors can ensure a better distribution of resources for the sector. Similarly, by financing the sector in a more predictable manner and for longer periods, donors can help the sector achieve better outcomes. In this regard, the Government and partners are working towards a sector wide approach (SWAp) to support the health sector. This process is based on the premise that all partners will support a single and comprehensive health strategy, will agree to a common plan of action, and will work together towards harmonizing procedures. All these activities will lessen some of the inefficiencies and inequities in the distribution of donor support to the sector.

21. **Finally, to avoid inefficiencies in the internal distribution of resources for the sector it will be also essential to have a transparent account of all funds earmarked for health.**

Regardless of whether all resources are included in the SWAp, it is important to have a transparent account of all funds financing the sector as well as the uses of these funds to allow the Government and all its partners to achieve an optimal allocation of resources.

Fiscal Space for Health

22. **More resources for the sector will be needed for the country to significantly progress towards the MDGs. However, the options to increase fiscal space for health are limited.** Debt relief offers the largest prospects, especially after the country reaches the HIPC completion point. These resources are meant to be used for PRSP priority sectors, including health. But there is no pre-set amount earmarked for any sector and thus the share that will go to health will depend on the Government's commitment to this sector, not just reflected in the original budget allocation but also in the total amounts that will be finally disbursed.

Public Expenditure Management at the Ministry of Public Health

23. **Increasing resources to the sector will not necessarily improve health outcomes, especially for the poor, unless the inefficiencies in the allocation of resources, mentioned above, and the weaknesses in public expenditure management (e.g. weaknesses in budget planning, monitoring, and execution) are lessened.** To improve budget management in the MSP a General Directorate of Resources (DGR in French) was created in 2006 in time to manage HIPC funds. The DGR has strengthened the capacity of the MSP to manage resources but weaknesses still remain.

24. **The MSP faces many challenges concerning budget planning.** Budget preparation is fragmented. There is thus a need to consolidate the budget preparation not just in terms of recurrent and capital expenditure but also in terms of sources of funds: HIPC, ordinary resources, and eventually donor funds. It is also important for planning purposes to generate a consolidated account of all donor funds supporting the sector and progressively institutionalize National Health Accounts. The development of a Medium Term Expenditure Framework (MTEF) and the entire SWAp will facilitate this process. Finally, there is a need to build capacity for budget planning at different levels of the MSP, particularly at the provincial level.

25. **Concerning budget execution and monitoring, the MSP faces also many challenges.** First, the long delays of the Ministry of Finance to disburse HIPC funds limit considerably the execution of the budget. Second, delays in the reimbursement to facilities offering the "free" package of services have been drastically reduced but not completely eliminated and thus many facilities still experience difficulties to pay suppliers and the salary of contractual staff. In this regard, an estimate of the real cost of the policy to offer "free" services to women and children under five is urgently needed. Otherwise it is not possible to know if the budget allocated to this policy is sufficient to reimburse all facilities. It is also necessary to define more clearly the package of services according to priorities and resource availability. Third, the ministry has some difficulties in the preparation of procurement documents; this is partly due to cumbersome and centralized procedures but also to weak capacity to process all these documents. Finally, there is a need to improve the capacity of the DGR to monitor all expenditure benefiting the health sector and not just expenditure financed out of domestic resources.

26. **On the positive side, to help guide budget execution, the MSP prepares a budget execution plan for HIPC resources.** This plan could be improved by including all sources of funds, by prioritizing expenditures, and by including a commitment plan with a chronogram for the fiscal year.

Expenditure Management at the Health Facility Level

27. **The management of resources at the health facility level, and especially at the level of health centers, varies considerably across provinces.** In general, facilities do not produce regular budget or budget execution reports. Most facilities manage two bank accounts, one for revenues collected through services and another for revenues collected through the sale of pharmaceuticals. Facilities in general have flexibility in the management of the first account. The resources from this account are used for small recurrent costs such as payment of contractual personnel, maintenance, etc. The management of the pharmaceutical account is more restricted and often escapes from the health center management. Some provinces had functioning drug revolving funds; however, many of these funds were affected by the loss of revenue that followed the presidential measure of 2006. Although drugs were donated to respond to this policy, some of these drugs were not adapted to the targeted beneficiaries.

28. **In many instances, part of the revenues collected by facilities was sent to the Provincial Health Bureaus to cover some of their running costs.** This practice reduces the benefits the facilities can obtain from collecting own revenues as it limits the amount of resources they can reinvest to improve the quality of services. In any case, this practice diminished after the presidential measure of 2006 as facilities' revenues decreased and the reimbursement from the central level was largely delayed.

Implications of the Presidential Measure to Eliminate User Fees for health services offered to children under five and women during delivery

29. **One of the main policy changes in the health sector to improve maternal and child health and to diminish financial barriers to access health care was the presidential measure of May 2006.** Although there has not been an evaluation of this measure, it is thought to have significantly increased health service utilization among the beneficiaries. However, to maintain this higher level of utilization and to increase the effective coverage of these services to a larger share of the population will require additional efforts and additional human and financial resources. This makes more urgent the need to confront the challenges described above.

30. This study estimated that to achieve a 60% effective coverage by 2010 of high impact health interventions included in this "free" package of services about US$ 10 per capita would be needed. This represents about 70% of total health expenditure in 2006 or about 1.3 times total public expenditure on health (government expenditure plus foreign aid). Increasing the effective coverage of these interventions to 80% of the targeted population by the year 2010 will require US$ 13 per capita. These results have thus the following implications:

- The presidential measure of May 2006 was a measure to stimulate the demand of services among women during delivery and children under five. However, the measure was taken before the services were available for the entire population as not all medical personnel or the equipments and supplies needed were in place. As consequence, the increase in effective coverage of this package of services cannot take place immediately. This will take time and additional resources to not only stimulate demand but also to create the needed supply of services (e.g. graduate new qualified medical personnel, re-train existing personnel, invest in refurbishing and equipping health facilities, etc.). Decisions should then be taken regarding the phasing of this measure. These decisions need to take into account the government's budget constraint and its capacity to produce and hire new qualified personnel. This will also require a

prioritization of expenditure to decide what needs to be done first given the resources currently available. There is also a need to find different ways to mobilize more resources, both internally and externally, as well as improving the execution rate of the resources already available.

- Infrastructure and equipment represent more than 50% of the estimated costs of increasing the effective coverage of the "free" package of services. This high cost of infrastructure is a consequence of the poor condition of the majority of existing health facilities which often lack the necessary equipment to effectively deliver these services.

- The remuneration of health care personnel, in contrast, represents about 12% of the total costs. Simulations of the extra cost of increasing salaries of health care personnel show that in certain instances the cost of increasing salaries is relatively low although not insignificant. For instance, doubling the salary of general practitioners will increase the total cost of offering the "free" package of health services to 60% of the beneficiaries by an additional US$ 0.06 per capita. Doubling the salary of nurses in the same scenario implies a cost increase of US$ 1.06 per capita. As health care personnel represents a small percentage of the total government officials[4], improving their remuneration, especially increasing incentives to work in underserved areas, might not represent a heavy fiscal burden. However, as this might create demands in other sectors[5], this measure is politically difficult.

- The "free" package of services includes essentially individual clinical care interventions. Changing maternal, newborn and child health and nutrition outcomes in Burundi will require an emphasis on preventive actions. Individual clinical care is important to avoid maternal and child deaths. However, the biggest gains in terms of child survival can be made through actions to improve infant and young child care and feeding practices and care of sick children at household and community level accompanied by delivery of high impact preventive interventions such as immunization, vitamin A supplementation, deworming, and insecticide-treated nets (ITNs). The large attention given to the "free" package of clinical services might lessen attention to these other interventions that can be provided at the community level or through outreach services. Many of these interventions are already provided "free of charge" to the beneficiaries but they have been underfunded and thus the coverage of some of them is still very limited. This study estimated that a community based package of interventions coupled with an outreach package will have the same impact as the "free" package of service on child survival but would cost less than half of it. Unfortunately, in the case of maternal survival the former package has only a marginal effect.

[4] Health care personnel represent less than 5% of the country's civil servants and less than 3% of all government officials (including policy and military).
[5] Teachers for instance represent 34% of government officials and 64% of all civil servants.

Main Recommendations

1. Total Government allocation to the health sector needs to increase in a sustainable manner for the country to significantly improve health outcomes.
2. But more resources might not result in better outcomes if these resources are not fully spent. It is therefore more important to ensure that the entire budget allocated to health is fully and regularly disbursed by the Ministry of Finance.
3. Continued efforts to strengthen financial management at the sectoral ministries will also help improve the execution of the budget. At the moment, weaknesses in procurement and public expenditure management have also limited the execution of the budget.
4. To ensure the effectiveness in the use of donor funds, their unpredictability, unequal distribution, and volatility need to be reduced. The recent coordination efforts led by the Ministry of Public Health and the work towards a sector wide approach are important steps in this regard. This will ensure that all partners support an integrated health strategy for the entire country. Similarly, an MTEF to support the SWAp is expected to lessen the variability and unpredictability of donor funds by making more transparent the sources and uses of funds in the sector in a specific time period.
5. Given the burden of disease in the country and given that most of the population lives in rural areas, more funds should be allocated to basic services, mainly primary health services and first referral hospitals.
6. At the moment, as more resources are flowing directly to the health facilities, there is a need to increase community participation in their management to ensure transparency and accountability in the use of these funds. This could be achieved by revitalizing the Health Committees (COSA) and Management Committees (COGE) to help manage resources at the health facility level and ensure some degree of transparency.
7. As the supply of health services was not completely assured before the May 2006 measure took place, its implementation will need to be phased taking into consideration budget and personnel constraints.
8. The package of services offered free of charge to women during delivery and children under five includes essentially clinical interventions. However, the biggest gains in terms of child survival can be made through actions to improve infant and young child care and feeding practices and care of sick children at household and community level accompanied by delivery of high impact preventive interventions such as immunization, vitamin A supplementation, deworming, and insecticide-treated nets (ITNs). More funds and attention should go to these interventions.

INTRODUCTION

31. The purpose of the Burundi Health Financing Study is twofold: to support the Government's strategy to transition from emergency humanitarian response to a sustainable development of the health system; and to serve as the analytical base for a new World Bank support program in the health sector. These two elements are developed below:

32. **Support the Government's strategy to transition from the emergency humanitarian response to a sustainable development of the health system.** The Government aims at developing a sector wide approach with its development partners. As part of this approach it is necessary to develop a medium term expenditure framework agreed by all partners. The first step will then be to have a better account of all flow of funds to the system as well as their sources and uses. This study aims precisely at collecting and analyzing all needed health budget/expenditure data. It also aims at simulating the cost of alternative packages of health services, particularly the cost of the "free" package of services for women during delivery and children under five. This cost simulation will help assess the different implications of the presidential measure of eliminating user fees, not just financial implications but also in terms of human resources and others. In addition, as new resources in the health sector will not be able to provide the desired impact if these resources are not completely absorbed, the study also aims at identifying budget management bottlenecks that will need to be reduced or eliminated.

33. **Serve as the analytical base for the new World Bank project in the sector.** At the moment, a World Bank team is working on a new program to support the health sector in Burundi. Among other things, the program aims at supporting the delivery of an essential package of health services. This study aims at clearly identifying the sources of funds that are already financing some of these services, and therefore it would help identify the financial gaps.

34. Based on this purpose the Burundi Health Financing Study's main objectives are to:

- Identify all sources of funds to the health system both public and private.
- Analyze the efficiency and equity of the allocation of funds for the sector.
- Identify public expenditure management bottlenecks that hinder the execution of the budget and recommend mechanisms for reducing or eliminating major bottlenecks in expenditure management; and
- Simulate the financial cost of the package of services offered free of charge to children under five and women during delivery and assess the implications of this package.

35. This study is composed of four chapters. The first chapter gives an overview of the health sector in Burundi: national health plans and policy; health outcomes; health care access and utilization; and system constraints regarding human resources, availability of drugs and supplies, and the quality of the services provided. The second chapter identifies the different sources of funds for the sector and analyses the equity and efficiency in the distribution of these funds. This chapter is followed by a chapter that evaluates budget expenditure management at different levels of the MSP. The last chapter simulates the cost of extending the coverage of different packages of services in particular the package of services, included in the May 2006 presidential measure.

This final chapter also examines the financial, human resources, and other implications of this presidential measure.

BACKGROUND

HEALTH POLICY AND PLANS

36. **Reversing the damage that more than a decade of conflict generated in the health of the population and assuring a sustainable development of the health system is a priority of the Burundian health authorities.** The Forum of the General States of Health (Forum des Etats Généraux de la Santé) that took place in Bujumbura from May 31st to June 4th, 2004 started a reflection process between the Government and its development partners on the main weaknesses and challenges of the health system and possible ways to overcome them. This process culminated with the adoption of a new National Health Policy 2005-2015 adopted in October 2004 and a National Health Development Plan 2006-2010 in December 2005. These policy documents set the health development strategy of the country and pave the way for the transition from emergency response activities to a sustainable development of the system. These documents take into account international commitments taken by the government such as the Millennium Development Goals for health.

37. These documents are anchored in the country's Poverty Reduction Strategy adopted in 2006 as well as the Interim Poverty Reduction Strategy completed in November 2003. **Two of the four strategic priorities of the PRSP are directly related to the health sector.** These four priorities are to: (i) improve governance and security; (ii) achieve equitable and sustainable growth; (iii) develop human capital by improving the quality of social services; and (iv) reinforce the fight against HIV/AIDS.

38. In accordance with the PRSP, the vision of the National Health Policy is that "by the year 2015 Burundi will enjoy sustainable peace, socio-political stability, and economic growth that will allow all citizens to have access to basic health services through different individual and community mechanisms and under the strengthened stewardship of the Ministry of Health".

39. **To implement the national policy, the National Health Development Plan was drafted with ample participation.** The main objectives of this plan are to: (i) reduce maternal and neonatal mortality; (ii) reduce infant and child mortality and morbidity; (iii) reduce the prevalence of communicable and non-communicable diseases; and (iv) reinforce the performance of the national health system. The NHDP specifies a number of strategies and indicators for each of these objectives; however, the baselines for many of these indicators are not available and in some cases the goals or targets to achieve by the year 2010 are not clear (Annex 1 shows the list of NHDP objectives, strategies, and indicators). In addition, the action and strategies in the NHDP are not prioritized making difficult the use of this document for planning purposes. To solve this issue, the Government is currently working on a more focused health program for 2007-2009.

40. **The NHDP aims at developing a sector wide approach to achieve its goals and a better coordination among all health partners.** To implement a SWAp the Government and its partners would not only have to agree to a comprehensive sector strategy such as the NHDP but also to an expenditure program that captures most or at least all significant contributions to the

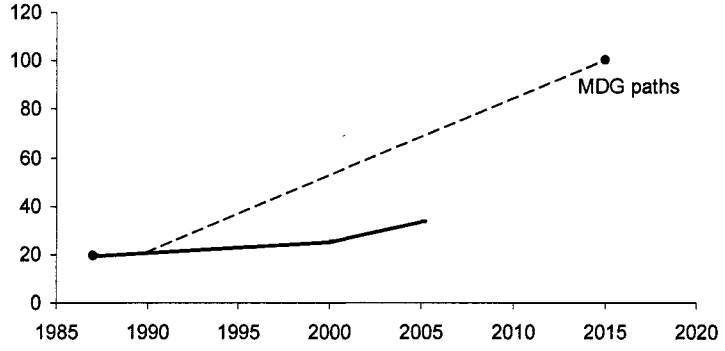
sector: a Medium Term Expenditure Framework. At the moment, there is a high commitment from both the donor community and the Government towards this sector wide approach. Much progress has been achieved to support a common strategy to operationalize the NHDP through a more focused health program. However, work is still needed to account for all external support, to draft an operational MTEF, to design a monitoring and evaluation strategy, and to harmonize processes among partners.

HEALTH OUTCOMES

41. Ten years of conflicts brought devastating effects on the health of the population. With increasing peace and stabilization there have been improvements, but many health indicators have not reached the levels prevalent before the conflict. This section gives an overview of the health status of the population in view of the health objectives set by the NHDP.

42. **Limited evidence shows that maternal mortality in the country is high.** A model estimate from 2005 shows that the maternal mortality rate in the country was about 1,100 per 100,000 lives births (WHO, UNICEF, UNFPA and WB, 2008). This rate is larger than the estimated average for sub-Saharan Africa of 920. However, it is lower than the rates in other post-conflict situation countries such as Rwanda and Sierra Leone, and lower than other neighboring countries such as Tanzania (see Table 1). Without reliable estimates of maternal mortality it is difficult to measure progress in achieving this goal. However, the percentage of births attended by skilled personnel, one of the MDGs indicators for maternal mortality, can give us an idea of the progress achieved so far. The dark line in the graph below shows the trend in the percentage of births attended by skilled personnel and the dashed line the path that the country needed to follow to achieve the MDG target of 100% skilled attended births. As seen in the graph, the percentage of skilled attended births has increased but it is far from the path needed to achieve the MDG by the year 2015. In May 2006, the Government eliminated user fees for deliveries. This measure is thought to have increased the percentage of skilled attended births; unfortunately, data are not yet available.

Figure 1: Percentage of birth attended by skilled health personnel, Burundi, 1987-2005

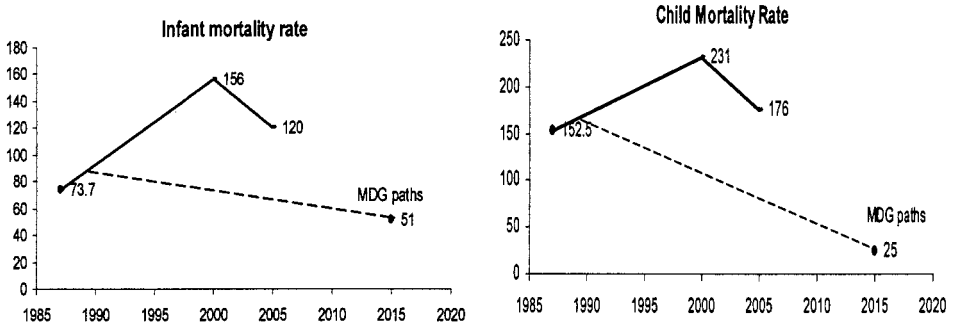


Source: DHS 1987, MICS 2000, MICS 2005.

43. The risk of a maternal death increases the more children women have. Burundi has one of the highest total fertility rates in SSA. Burundian women have on average almost 7 children during their reproductive years (Table 1). The country's contraceptive rate is low; the MICS 2005 found that only 9% of married women or women in unions used any type of contraceptive method and only 7.5% a modern method.

44. **Child mortality increased significantly during the conflict and although there are signs of improvements, the current mortality rate is still much higher than that prevalent before the conflict of 1993.** One of the objectives of the NHDP is to reduce infant mortality and morbidity. As seen in the graphs below, infant mortality drastically increased with the start of the conflict. In 2000, about one out of every six infants did not survive his first birthday and one out of every four his fifth. By 2005, one in every eight infants died before his first birthday and more than one in every six his fifth. Despite these improvements child mortality in the country is still very high when compared to the SSA average in 2003 (172 per 1000)[6] and, as seen in the graphs, the country is still far from track of meeting the MDG by the year 2015.

Figure 2: Trends in infant and child mortality rates, Burundi



Source: DHS 1987, MICS 2000, MICS 2005.
Note: The MDG baseline is 1990, but the only data available was from 1987. The data on infant and under five mortality for 1987 correspond to the period (1982-1987).

45. **Infant and child mortality in the country are higher than the SSA average although they are lower than in other post-conflict situation and poor countries.** As seen in the table below, in 2005 infant and child mortality in the country were comparatively higher than other countries in SSA; however, these mortality rates were lower than in other post-conflict situation countries such as Rwanda, Sierra Leone, DRC, and Liberia.

Table 1: Health outcomes indicators in SSA countries

	U5M per 1000	IMR per 1000	MMR per 100,000 live births	Moderate and severe stunting % 0-59 months	Total Fertility rate (2007)
Benin	150	89	840	31	5.46
Burkina Faso	191	96	700	39	6.38
Burundi	190	114	1100	57	6.81
Chad	208	124	1500	29	6.66
DRC	205	129	1100	38	6.71
Ghana	112	68	560	30	3.90
Kenya	120	79	560	30	4.97
Liberia	235	157	1200	39	6.78
Madagascar	119	74	510	48	4.94
Niger	256	150	1800	40	7.56
Rwanda	203	118	1300	41	5.25
Sierra Leone	282	165	2100	34	6.48
SSA	169	101	920	38	
Tanzania	122	76	950	38	4.51

[6] http://www.childinfo.org/areas/childmortality/

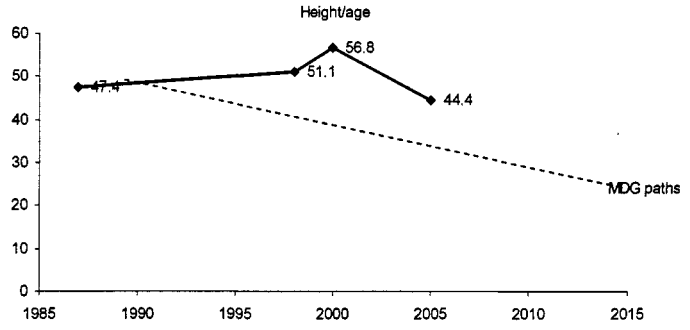
Uganda	136	79	550	39	7.11

Source: www.childinfo.org.
Note: data for U5M, MMR and IMR is for 2005; stunting data is for more recently available data (in the case of Burundi data on stunting is from MICS 2000). Data on total fertility rate is from UNFPA: State of World Population 2007.

46. **Communicable diseases and the compounding effect of malnutrition are the major causes of mortality and morbidity in the country**. Malaria, respiratory infections, and diarrhea are the main causes of deaths and illness for children under five. These diseases can be prevented or cured at a relatively low cost as will be discussed in the last chapter.

47. **Malnutrition rates are also very high, although there are signs of improvement**. Even before the start of the crisis, malnutrition rates in Burundi were high. In 1987, about half of all children under five were stunted, a measure of chronic malnutrition. As seen in the graph, the percentage of children stunted increased throughout the 1990s. The last survey from 2005 shows an improvement on children's nutritional status although still two out of every five children are stunted. Often malnutrition is not caused by insufficient availability of food but by household behaviors and practices that can be changed through information, education, and communication campaigns. Some of the healthy practices that can prevent malnutrition are very limited in the country. For instance, only 37% of children under five with diarrhea receive any oral rehydration treatment (MICS, 2005).

Figure 3: Trends in chronic malnutrition, Burundi



Source: Health Sector Note 2006

48. **As seen in Table 1, Burundi in the year 2000 had the highest rate of malnutrition in all SSA countries.** Although the situation has improved in the last years malnutrition rates are still very high in absolute terms and when compared with other similar countries.

49. **The NHDP also aims at reducing the burden of communicable and non-communicable diseases, particularly, malaria, TB, and HIV/AIDS.** Although there are no reliable estimates, malaria is thought to be the main cause of mortality and morbidity in the country. Data from the EPISTAT 2004 show that more than a third of all children and adult consultations in health centers were due to suspected malaria, similarly about a third of all registered deaths in hospitals were also caused by it.

50. **HIV/AIDS also represents a difficult health and development problem in the country.** The last national sero-prevalence survey of 2002 found overall adult prevalence of 3.2%; in urban areas the prevalence is 9.4%, in semi-urban 10% and in rural areas 2.5% (MPDR and UNDP 2003). UNAIDS estimations for 2006 indicate an adult prevalence (15-49 years) rate of 3.3%.

Additionally, these estimates show that there are about 150,000 people living with the disease and about 120,000 orphans in the country due to the epidemic. Finally, tuberculosis, often associated with HIV/AIDS, has progressed steadily in the last years and today is responsible for an important share of adult deaths in the country.

Table 2: HIV and AIDS estimates for 2005

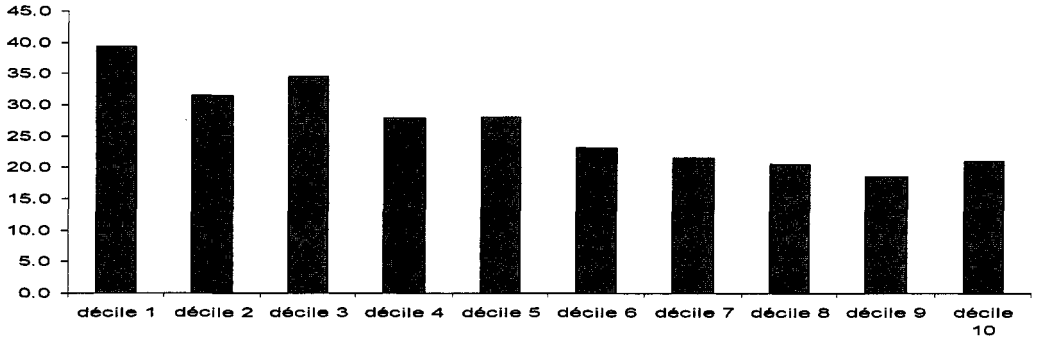
	1.Estimated number of people living with HIV	2. AIDS Deaths	3.Orphans due to AIDS	4. Trend of HIV prevalence (%) in young (15–24) pregnant women in capital city			
	Adults and children 2005	Deaths in adults and children 2005	Orphans (0–17) currently living 2005				
Global	38 600 000	2 800 000	15 200 000				
Sub-Saharan Africa	24 500 000	2 000 000	12 000 000				
Burundi	150 000	13 000	120 000	2000	12.6	2004	8.6
DRC	1 000 000	90 000	680 000	...	...	...	...
Kenya	1 300 000	140 000	1 100 000	...	...	...	...
Rwanda	190 000	21 000	210 000	2001	9.8	...	...
Uganda	1 000 000	91 000	1 000 000	2000	8.5	2005	5.2
United Republic of Tanzania	1 400 000	140 000	1 100 000	2000	7.5	...	...

Source: 2006 Report on the global AIDS epidemic, UNAIDS/WHO, May 2006.

ACCESS AND UTILIZATION OF HEALTH SERVICES

51. **About a third of the population does not receive health care when in need.** Data from the QUIBB 2006 survey indicate that 28% of the people reporting an illness or injury in the four weeks before the interview did not visited a health care provider. The poor were the least likely to receive care when sick or injured. As seen in Figure 4, among the poorest 10% of the population 39% of those sick or injured did not receive health care; in contrast, among the richest 10% of the population only 21% of those with an illness or injury did not.

Figure 4: Percentage of people ill or injured in the last four weeks that did not receive health care when in need, across consumption deciles, Burundi, 2006



Source : QUIBB 2006

52. During the conflict Government expenditure on health and foreign aid drastically decreased. Due to these large expenditure cuts and in order to increase funds the government initiated a cost-recovery mechanism in all health facilities. This policy allowed these facilities to finance some of their running costs. **However, as household income also decreased and as exemption and waiver mechanisms were not functioning, financial barriers remained the main barrier to access health services.** As seen in Table 3, the cost of health services is the main reason why 28% of people with an illness or injury did not receive health care when in need. Indeed, 78% of the people with an injury or illness indicated that the cost of health services was the main reason for non-utilization. Only about 2% of the population mentioned the distance to the facility as a reason for non-utilization.

Table 3: Reasons for not receiving health care when in need, Burundi, 2006

	Has been ill or injured
(%)	
not necessary	11.1
too expensive	77.9
too far	1.8
long waiting time	0.7
not well trained personnel	0.4
lack of drugs	1.1
Other	7.0
Total	100

Source: QUIBB 2006

53. **To improve maternal and child health through improving financial access to health care, in May 2006 the President announced the elimination of user fees for health services delivered to children under five and women during delivery**. This measure is applied in public health facilities and in facilities managed by faith-based organizations that have an agreement with the MSP. The exact list of health care interventions that are meant to be delivered free of charge is not completely clear. For children under five the measure includes the exoneration of payment for the following services offered in health centers and first referral hospitals: all outpatient visits, drugs included in the national list of essential drugs prescribed and distributed in the health facility, lab test prescribed and given in the facilities, and all other nursing, medical and chirurgical services. For women during delivery the measure includes the exoneration of payment for the following services offered in health centers and first referral hospitals: all health care linked to delivery, accommodation, tests, drugs included in the national list of essential drugs prescribed and distributed by the health facilities, C-sections, and hospitalizations.

54. Although there has not been an evaluation of this measure, it is thought to have substantially increased the utilization of health services among the beneficiaries.

55. **Even before the May 2006 measure was announced, some high impact maternal and child health interventions, mainly preventive ones (e.g. vaccinations, ITNs, and others), were not subject to user fees but, as they have remained underfunded, their coverage is still low.** For instance, as seen in Table 4 only 8% of children under five sleep under an insecticide treated bed net, only 23% of children with diarrhea receive Oral Rehydratation Treatment (ORT) or increased fluids and continued feeding, and only 45% of children are fully vaccinated. In addition, the poor are less likely to be covered by any of these health interventions. For instance, while only 5% of children in the poorest 20% of households sleep under an ITN, 19% of children leaving in the richest 20% of households do. Similarly, while 73% of mothers in the poorest wealth quintile are protected against tetanus, almost 80% of mothers in the richest quintile are

protected. Antenatal care is the only interventions in the table with large coverage and no difference among income levels; however, as will be described later on, the quality of this service is low.

Table 4: Coverage of different high impact health interventions across wealth quintiles, Burundi, 2005

	Full Vaccinations	Received ORT or increased fluids AND continued feeding	Children sleeping under an ITN	% of mothers protected against tetanus	% of pregnant women receiving ANC one or more times during pregnancy
Poorest	40.5	21.9	4.6	73.2	96.7
II	47.1	18.9	5.3	78.0	95.9
III	41.7	19.8	5.8	73.5	96.4
IV	51.7	29.8	7.6	76.3	96.7
Richest	45.6	26.9	19.1	79.1	95.9
Total	45.3	23.1	8.3	76.0	96.3

Source: MICS 2005

HEALTH SYSTEM CONSTRAINTS[7]

56. **To improve the performance of the health sector, the fourth goal of the NHDP, the health authorities face important challenges.** The conflict and the continued underfunding of the sector weakened the delivery system. The chronic deficit of qualified medical personnel and stock out of drugs and supplies were (and still are) common. This section will look at some of these challenges by examining the status of health human resources, the availability of drugs and supplies, and other issues related to health service quality.

Human Resources

57. **The shortage of qualified health personnel is one of the main bottlenecks in the delivery of quality services.** This scarcity affects different types of health personnel. In the year 2003[8], there were 343 doctors (22 gynecologists, 27 surgeons, 12 internists, and 13 pediatricians), 2101 nurses and assistant nurses, 157 lab technicians, 99 sanitation technicians, 14 dentists, and 68 pharmacists. Other sources of data show even lower numbers of some qualified medical personnel. For instance, the Department of Human Resources[9] (*Direction des Ressources Humaines* or *DRH)* of the Ministry of Public Health estimates that there are 221 doctors, 946 qualified nurses, 80 pharmacists, 45 midwives, 98 lab technicians, and 1557 auxiliary nurses. With three doctors and thirteen qualified nurses per 100,000 people, the number of doctors and nurses per population is among the lowest in the region. There is also a shortage of public health specialists and managers of health care services which might hinder in the short term the Government's health reform efforts. The National Health Development Plan reported a deficit of about 26 public health specialists, and 58 health service managers. There is also a large deficit of pharmacists as well as laboratory technicians.

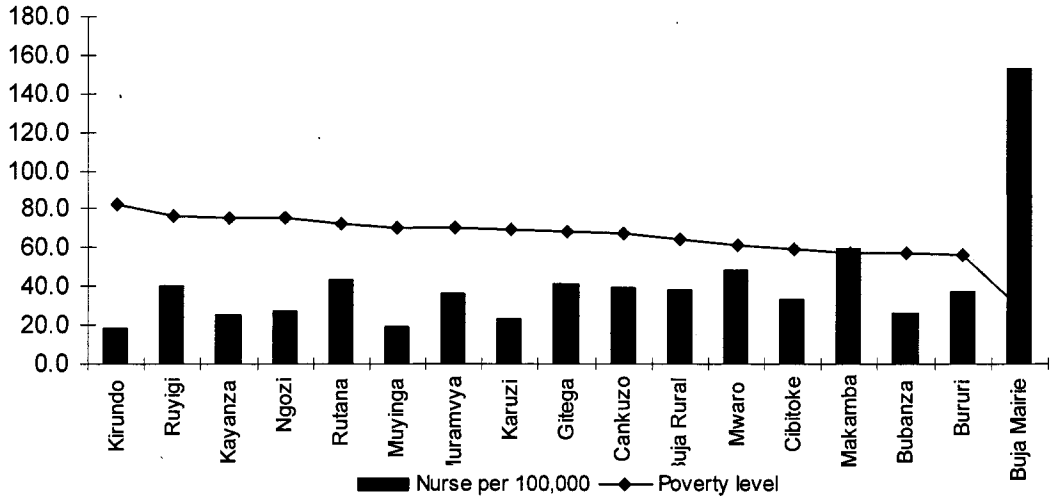
[7] This section borrows heavily from the Ministère de la Santé Publique and World Bank 2006 Burundi Health Sector Note.

[8] The source of these numbers is the Observatoire de l'Action Gouvernementale 2003.

[9] Information presented by Director of the department of Human Resources during health partners' joint mission in Bujumbura in October 24th, 2007.

58. **Not only are health personnel scarce, but they are also unevenly distributed favoring Bujumbura and leaving the poorest areas underserved.** In 2003, it was estimated that 80% of the doctors and 50% of the nurses were concentrated in Bujumbura[10]. Similarly, data from the DRH show that 42 out of 87 doctors (52%) working in the public sector work are in administrative positions at the central level of the Ministry of Public Health in Bujumbura. Partial data on health care personnel also indicate large disparities in the distribution of health care personnel across provinces. The figure below compares the number of nurses per capita across provinces with an estimated percentage of poor people in each province. As can be seen in the figure, there are large regional differences in the availability of nurses, the city of Bujumbura has the largest number of nurses per 100,000 people. Similarly, often the poorest regions are the ones with the lowest number of nurses per population. For instance, Kirundo, Kayanza, and Muyinga, the provinces with the fewest nurses per capita are also some of the poorest provinces. This regional imbalance is more marked in the case of doctors.

Figure 5: Number of nurses per 100,000 inhabitants across provinces and estimated percentage of people living in poverty across provinces



Source: Data on nurses comes from the MOPH Department of Human Resources data base on personnel 2006 and it also includes nurses working on administrative tasks. This data is not exhaustive as it includes mainly personnel under the ministry payroll. Data on poverty levels is based on an analysis of the QUIBB 2006 survey.

59. During the conflict, many qualified health personnel left the rural areas or the country altogether for security reasons. **In addition, the country is not producing enough physicians to meet its needs.** Until recently, the Medical School in Bujumbura was the only institution preparing general doctors. This school had produced, on average, about 20 doctors per year, which is not sufficient to meet the needs. The situation is partly improving as the number of students has recently increased, although not the number of professors. Despite these improvements, the NHDP estimates that there is a deficit of 250 physicians in the country, including both general and specialized. At the current rate of graduation this deficit will not be eliminated in the near future. At the moment, three private universities (Ngozi, Mwaro, and Great Lakes) have started to train doctors; however, their first graduates are expected in about three to four years. More importantly, the diplomas of these future graduates have not been accredited or validated so far. Although the deficit of qualified nurses is larger than that of doctors, the situation in terms of production is not as critical. There are three public and five private schools

[10] Idem.

preparing auxiliary nurses (A3); three public schools preparing qualified nurses (A2) and one preparing licensed nurses (A1). However, there is only one school preparing laboratory technicians and thus it will take many years to prepare all needed lab technicians.

60. **However, the current shortage and the unequal distribution of personnel is mostly due to an inadequate remuneration system, as incentives are not provided to hire and retain personnel, particularly in underserved areas.** These incentives are not only limited to salaries but also to career development, working conditions, and others. Concerning the remuneration level, by 2005 the salary of a general doctor had received only three nominal increases in more than a decade (Côté, 2005). Between 1989 and 2001 the starting salary (base salary + housing benefits) of a general doctor increased about 50%. However, during that period inflation increased about 374%. This situation has started to change in part due to two civil servant salary increases one of 10% in 2001 and another of 16% in 2006. In addition, a 34% increase in allowances will become effective in 2008.

61. **Despite recent salary increases, high skilled health personnel can find better remuneration outside the country or working for either donors or NGOs.** Donors have paid and in some cases continue to pay salaries and/or allowances to some public service doctors working outside Bujumbura. This has often created disincentives as personnel doing the same work received different remuneration. For instance, doctors receiving civil servant salaries worked side by side doctors receiving much higher salaries paid by donors. To eliminate the scarcity some donors have also sent doctors, such as China, Cuba, Nigeria, and Egypt.

62. **Salaries for health care personnel are low in absolute numbers but they are similar to other poor countries in the region as multiples of GDP per capita.** As seen in the table below after the 34% increase in allowances, the salary of qualified health personnel in Burundi as multiple of per capita GDP will be similar to that of countries in the region.

Table 5: Health care personnel salaries as multiple of GDP per capita in SSA countries

Country	General practitioner	Diploma Nurse
Burkina Faso	7.3-23.5	4.2-13.5
Burundi	10.8	4.2-9.6
Cameroon	4.7	1.7
Chad	10.3-18.8	5-10.6
DRC	1.8-2.40	
Ethiopia	18.3-30	11.7-27
Kenya	17	6,9
Mauritania	5.67-9.45	3.2-5.7
Niger	10.6-20.8	5.3-12.0
Zambia	22,6	5,4

Source: Burundi calculations were based on total remuneration of health care personnel including the increase in allowances that will become effective in January 2008. The other countries data are from WB Human Development, Africa Region, and Country Status Reports. For Zambia and Kenya : WDI, *Country case study on health workforce financing and employment in Kenya* (forthcoming) and Zambia report on human resources for health (forthcoming).

63. **Increasing the remuneration level might not change the distribution of health care personnel if no incentives are given for personnel to work in underserved areas.** The Government is currently trying to generate incentives to all medical personnel through

performance based agreements and through payments of "*primes d'éloignement*" for doctors that accept to be posted in some district hospitals.

64. **Nevertheless, after the 34% increase in allowances, changing the remuneration level, including increasing incentives to serve outside Bujumbura, will be challenging.** With this new increase in allowances, the wage bill will represent about 11% of GDP, one of the largest wage bills in the region (PER, forthcoming). This leaves the authorities very little room for maneuver. Nevertheless, health care personnel represent a very small share of the total civil servants in the country and some incentives or increased compensation in this sector could be possible if these measures do not produce pressures in other sectors. The personnel of the Ministry of Health represent less than 5% of all civil servants in the country and less than 3% of all government officials, including the police and the military. A limited increase in the compensation might not represent, in relative terms, a large fiscal burden. However, if this increase creates pressures in other sectors this will not be fiscally sustainable. For instance, teachers represent more than 34% of all government officials (64% of public servants); while the police and the military represent about 17% and 26% respectively. A possible way around these issues is through the use of contractual staff that could serve in underserved areas; linking these contracts with performance targets might also bring other quality improvements.

Availability of Drugs and Supplies

65. **The continued supply and distribution of pharmaceutical products to health facilities is not guaranteed.** In 2005, a survey[11] that randomly sampled 20% of health care facilities in 10 provinces found a large percentage of facilities with stock-outs of pharmaceutical products. For instance, in only 39% of facilities sampled gentamicine was available. Health facilities managed by faith-based organizations or "*agréé*" were more likely to have the drugs and supplies available than public facilities and private for profit facilities (Table 6).

Table 6: Percentage of health care facilities with pharmaceutical products available across type of facility ownership, Burundi 2005

	Public	Agréé	Private	TOTAL
Artésunate+Amodiaquine	77.4	91.3	40.0	75
Quinine oral	82.3	95.7	60.0	82
Les deux médicaments	69.4	91.3	33.3	69
Benzylpénicilline	66.1	60.9	46.7	62
Quinine injectables	59.7	82.6	73.3	67
Chloramphenicole	43.5	43.5	40.0	43
Gentamycine	33.9	39.1	60.0	39
Sérum glucosé	67.7	69.6	73.3	69
Sérum physiologique	32.3	43.5	46.7	37
Lactate de Ringers/IV liquides	48.4	47.8	66.7	51
Diazépam	46.8	73.9	80.0	58

Source: Ministère da la Santé Publique, 2005. « Evaluation de la prise en charge des cas de paludisme dans les structures de soins conformément au nouveau protocole de traitement antipaludique ».

66. **After the presidential measure of May 2006, large stocks of pharmaceuticals were donated to both public facilities and those managed by faith-based organizations.** An evaluation made on January 2007 on the utilization and distribution of the drugs donated by

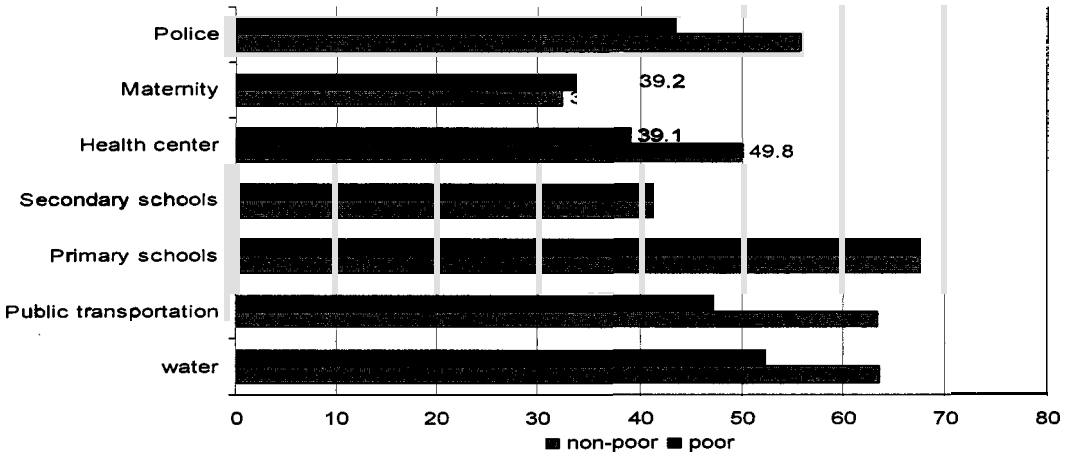
[11]Ministère de la Santé Publique. 2005. « Evaluation de la prise en charge des cas de paludisme dans les structures de soins conformément au nouveau protocole de traitement antipaludique »

ECHO also found stock-outs of some drugs and supplies (WHO and MOPH, 2007). In hospitals, this evaluation found stock outs of Amoxicycline (30% of hospitals), syringes (30%), gloves (30%), serum glucose (30%). In public health center the same evaluation found the following stock outs: Amoxicycline sirop (59% of health centers), ORS (30%), Metronidazole sirop (28%) tablets (22%), Paracetamol 250 mg (26%) and 100mg (24%), and Promethazine tablets (20%).

Low Quality of the Services Offered

67. **Other indicators also corroborate the low quality of the services offered.** In 2003, *Médecins sans Frontières* (MSF) surveyed 1,383 patients of Primary Health Care (PHC) services in rural areas, stratifying the sample by type of user-fee policy in place.[12] Data from the three samples of patients indicate that only one in every ten patients received a clinical examination when visiting a PHC facility; less than 45% was offered a diagnostic; and in less than 40% of the cases their temperature was taken. The same survey found that in all samples, on average, a consultation lasted less than seven minutes. Similarly, the MICS 2005 survey found than among women that received antenatal care only 8% had a blood sample taken, 47% had their blood pressure measured, and only 6% had a urine sample taken.

Figure 6: Satisfaction with public health services, Burundi, 2004



Source: Poverty Assessment forthcoming using data from perception of poverty survey 2004

68. **Health services have the lowest satisfaction rates among all public services in the country.** The Perception of Poverty survey 2004 showed that less than 50% of Burundians were satisfied with primary health care centers and less than 40% with maternity hospitals. These are the lowest rates received by any other public service on which information was collected. In the case of primary health care centers, the poor are less likely to be satisfied with them, while in the case of maternity hospitals the poor are slightly more likely to be satisfied[13].

69. **The cost of services is the major cause of dissatisfaction with health services, followed by ineffective treatments, long waiting time, and lack of drugs.** The QUID 2002 survey collected information on utilization of health services, satisfaction with these services, and reasons for dissatisfaction. About 60% of patients that visited any health facility were satisfied with the services received. Among those users that were not satisfied, three out of every five

[12] Health facilities were selected randomly (with probability proportional to population size in the surrounding area) and households within 5 km were sampled.
[13] This survey did not collect information on the reasons why people were not satisfied with services.

mentioned high cost as the main reason for their dissatisfaction. The situation should have changed since May 2006 as both children under five and women during childbirth are exempted from any payment. One out of every five complained about the ineffectiveness of treatment and lack of drugs in the facilities. A similar percentage of people complained about the long waiting time. The latter is not surprising; the 2003 MSF survey reported that the median waiting time in the three different samples was about an hour and a half.

HEALTH EXPENDITURE

70. This section examines the trends, sources, and uses of funds for the health sector in Burundi. In particular, it examines the distribution of funds for the sector and issues concerning each source of funds: Government, donors, and private out-of-pocket expenditure.

Government Expenditure on Health

71. This section examines trends in Government's health expenditure from 2001 to 2007. The analysis is mainly focused on the Ministry of Public Health and to a lesser extent on the Presidential Ministry for the Fight against HIV/AIDS (Min SIDA in French). In this analysis, public expenditure on health has been defined as all expenditure managed by the MSP, Min SIDA, and expenditure linked to the University Hospital Center of Kamenge (CHUK in French) which is under the responsibility of the Ministry of Education. These ministries are not the only financing agents managing government's resources for health. However, it was not possible to identify with the data available the resources that other ministries allocate exclusively for health activities.

72. This section analyzes public expenditure from government own resources. Although a portion of donor funds for the sector are registered in the budget, the Ministry of Finance (MinFin) does not monitor this expenditure and thus only information on projections is available. The present analysis is based on data from the Ministry of Finance but the data are complemented with information from the MSP, the World Health Organization (WHO), and the International Monetary Fund (IMF).

Trends in Government expenditure on health

73. **Government expenditure on health drastically diminished during the years of conflict as government revenues and the share of the budget allocated to health decreased.** The political crisis starting in 1993, the three year embargo imposed after 1996, and the fall in the price of coffee brought large reductions in the country's GDP. As seen in table below, the country's GDP decreased more than 25% between 1992 and 1996. Public expenditure on health was then drastically reduced; but not only due to the government's reduced revenue base but also due to a smaller share of the budget allocated to the sector. Before the crisis, more than 4% of total government expenditure was earmarked for the health system. Since 1996, less than 3% of government expenditure went to health care. By 2000, the government spent less than one dollar per capita on health; less than half the per capita amount that it used to spend before the crisis.

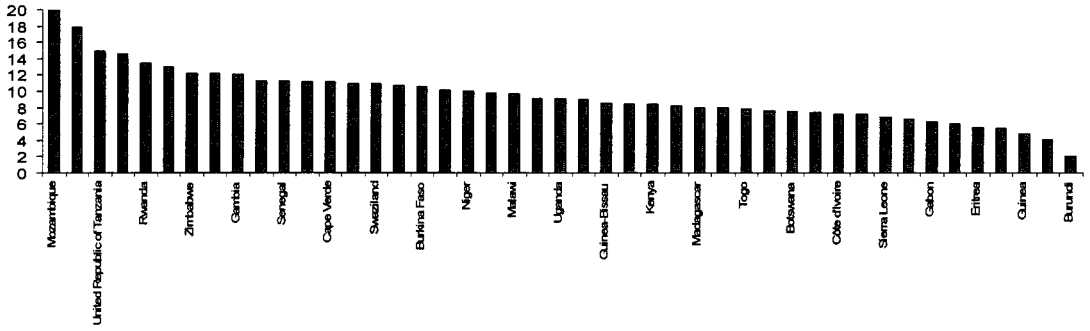
Table 7: Government financial indicators, Burundi, 1992-2000

	GDP nominal (billions FBU)	GDP Real (base year=1994)	Revenue (in billion FBU)	Revenue Real	Grants (in billion FBU)	Grants real	Health exp. (in % of total exp.)	Health exp. (in billions of FBU)	Health exp. real	Health exp. in US$ per capita
1992	225.6	258.1	38.2	43.7	19.4	22.2	4.4	2.6	3.0	2.17
1993	227.9	245.1	39.8	42.8	20.7	22.3	4.4	3.0	3.2	2.10
1994	233.3	233.3	42.2	42.2	5.7	5.7	3.6	2.1	2.1	1.38
1995	249.9	216.7	44.1	38.2	9.1	7.9	3.1	2.0	1.7	1.30
1996	272.6	198.7	42.3	30.8	6.1	4.4	2.5	1.9	1.4	1.00
1997	337.3	199.4	46.5	27.5	10.3	6.1	2.9	2.1	1.2	0.93
1998	400.2	212.4	68.5	36.3	3.6	1.9	2.6	2.5	1.3	0.85
1999	455.5	210.2	74.0	34.1	11.4	5.3	2.3	2.7	1.2	0.72
2000	511.1	208.3	98.3	40.1	15.8	6.5	2.3	2.8	1.2	0.58

Source: IMF and WB staff calculations based on IMF and WB data.
Note: the health expenditure in this table includes expenditure that was included in the national budget, regardless of the sources of the resources. For instance, expenditure on IDA grants and credits are included.

74. **By 2002, Burundi was the sub-Saharan African country with the lowest expenditure on health as percentage of total Government expenditure.** In the first years of the period under examination (2001-2005), the budget and expenditure[14] on health as percentage of GDP and as percentage of total Government budget and expenditure remained constant at about 1% and 3% respectively (see Table 8 and Table 9). As seen in the graph below, this was the lowest expenditure on health out of total government expenditure in the region.

Figure 7: Public expenditure on health out of total Government expenditure, 2002



Source: WHO statistical information system

75. **Government expenditure on health markedly increased after 2005 but it is still among the lowest in the region.** With peace and stabilization in the country, things have started to change; especially since 2006 when the country started to benefit from the enhanced Heavily Indebted Poor Countries Initiative. That year the budget allocated to health more than doubled reaching 3% of total GDP and about 7% of total Government budget (Table 8). The actual

[14] Information on actuals is based on commitments as information on payments was not fully available.

expenditure on health increased but not as much as the budget due to some difficulties in executing that year's budget. However, despite all these increases, the total resources allocated and spent on health are still very low. In that year, budget allocations to the health sector out of domestic resources reached about US$ 2 per capita, twice as much as the average of the previous decade. However, actual expenditure in 2006 was only US$ 1 per capita (Table 9).

76. **The increased allocations to heath care showed the Government's commitment to two of the PRSP priorities:** improving the quality of social services and reinforcing the fight against HIV/AIDS. The total budget allocation for the health sector increased by 277% in real terms, while the total Government budget increased only by 36% (see Table 8). The HIPC allocation increased the Min SIDA budget by 2511% that year, and the MSP budget by 246%. The MSP received 75% of all HIPC resources for health and Min SIDA the remaining 25%.

Table 8: Trends in Government budget for health (real and nominal), 2001-2007

	2001	2002	2003	2004	2005	2006	2007
Total health budget, in millions of FBU (current prices)	4288	4753	4724	6077	6326	24613	19865
Total health budget, in millions of FBU (constant 2001 prices)	4288	4673	4164	4943	4414	16624	12850
Total health budget as % of total Government budget	3%	3%	3%	3%	2%	7%	6%
Total health budget as % of GDP	1%	1%	1%	1%	1%	3%	2%
Annual rate of growth of health budget (real)		9%	-11%	19%	-11%	277%	-23%
Annual rate of growth of health budget (nominal)		11%	-1%	29%	4%	289%	-19%
Annual rate of growth of total budget (real)		26%	-7%	13%	-2%	36%	-8%
Annual rate of growth of social sector budget (real)		0%	10%	13%	3%	109%	-2%
Health budget in FBU per capita (constant 2001 prices)	635	668	578	673	589	2,176	1,649
Annual rate of growth of per health budget (real)		5%	-13%	16%	12%	269%	-24%
Per capita health budget in US$.	1	1	1	1	1	2	Nd
Total budget in millions of FBU (current prices)	138,942	177,405	184,172	225,443	256,788	360,975	347,917
Total budget in millions of FBU (constant 2001 prices)	138,942	174,429	162,324	183,379	179,174	243,808	225,048
Note [15]:							
GDP in billions FBU (constant 2001 prices)	521.5	544.7	538.1	564.1	569.2	598.4	631
GDP in billions FBU (market prices)	550	584.6	644.2	731.5	860.8	934.6	1,029.40
GDP Annual rate of growth (real term)		4%	-1%	5%	1%	5%	5%
GDP deflator (base = 2000)	105.5	107.3	119.7	129.7	151.2	156.2	163.1

[15] Ministry of Finance in Burundi and IMF, World Economic Outlook data base, April 2007.

Population in millions	6.75	7	7.2	7.344	7.491	7.641	7.794
Exchange rate FBU/ US$ (period average)	830	931	1083	1101	1082	1029	Nd

Source: Ministry of Finance and World Bank estimation

Table 9: Trends of public expenditure on health (commitment base), 2001- 2006

	2001	2002	2003	2004	2005	2006
Public expenditure on health as % of total public expenditure.	3%	3%	3%	2%	2%	4%
Public expenditure on health as % of GDP	1%	1%	1%	1%	1%	1%
Rate of growth on public expenditure on health (real) in %.		6%	-9%	14%	-10%	85%
Annual rate of growth on public expenditure on health (nominal), in %.		8%	2%	24%	5%	91%
Annual rate of growth of public expenditure (real), in %		13%	-2%	22%	-8%	15%
Public expenditure on health in per capita FBU (constant 2001 prices)	630	642	570	640	562	1,018
Public expenditure on health in per capita US$	0.8	0.7	0.5	0.6	0.5	1.0
Annual rate of growth public spending on health per capita, real term.		2%	-11%	12%	-12%	81%
Public expenditure on health MSP and AIDS in FBU per capita (current prices)	546	553	498	570	500	920
Public expenditure on health MSP and AIDS per capita in US$	0.7	0.6	0.5	0.5	0.5	0.9
Total government expenditure in billions FBU (current prices)	138.9	160.0	174.5	231.2	247.1	293.6
Total government expenditure in billions FBU (constant 2001 prices)	138.9	157.3	153.8	188.0	172.4	198.3

Source: Ministry of Finance and World Bank estimations

77. **The resources allocated to the health sector also increased as a proportion of total expenditure to the social sectors.**[16] During the crisis, the resources allocated to health decreased not only as share of total expenditure but also as a share of the social sectors expenditure. However, this trend also changed after 2006 thanks to HIPC resources. As seen in Table 10, the total budget of the MSP increased from an average of 13% of the social sectors budget in the previous five years, to 18% in 2006. In contrast, the budget from Min SIDA increased from almost nothing to about 4%.

Table 10: Share of allocated resources in social ministries out of total budget in the social sector, Burundi, 2001 - 2007

	2001	2002	2003	2004	2005	2006	2007
Min National Education	74%	82%	84%	83%	85%	75%	80%
Min SIDA		0%	0%	0%	0%	4%	2%
Min Public Health	14%	14%	12%	13%	11%	18%	15%
Ministère action sociale et de la promotion de la femme	1%	2%	1%	1%	1%	0%	0%
Min à la réinsertion et a la réinstallation des déplacés et des rapatriés	7%	0%	1%	1%	1%	0%	0%
Min. of Youth, Sports, and Culture	2%	1%	1%	1%	1%	1%	2%
Min artisanat, de l'Enseignement des Métiers et de l'alphabétisation	0%	2%	2%	2%	2%	0%	0%

[16] In this analysis the social sector budget is the budget of the following ministries: Education, Youth and Sports, Reinsertion and Repatriation, National Solidarity, Fight against HIV/AIDS, Public Health, Handicraft (*Artisanat*), and Craft and Alphabetization.

Min. of National Solidarity	0%	0%	0%	0%	0%	2%	2%
Budget allocation to health as percentage of budget allocation to all social sectors	16%	17%	14%	14%	12%	23%	18%
Budget allocation to health, real annual rate of growth		9%	-11%	19%	-11%	277%	-23%
Budget allocation to social sectors, real annual rate of growth		0%	10%	13%	3%	109%	-2%

Source: Ministry of Finance and World Bank estimations

Agencies managing Government funds for health

78. **The MSP is the main financing agent managing Government resources to the health sector but not the only one.** As there are no National Health Accounts in the country, it is not possible to have a complete estimate of total public resources allocated to the sector. With the data available we can only identify as health expenditure the expenditure managed by the MSP, Min SIDA, and a small part of Min Education expenditure. These three ministries manage most Government resources for health; however, this is still an underestimation as other ministries such as Defense, Interior, Public Administration, and National Solidarity[17] also have expenditure on health. Nevertheless, based on the data available, MSP manages more than 80% of the funds allocated to health, followed by Education until 2005 and by Min SIDA after that year. The MSP is likely to manage the large majority of funds going to health, but of course the actual share will be smaller once expenditure of the remaining ministries are taken into account.

Table 11: Health sector budget across ministries, shares, 2001-2007

	2001	2002	2003	2004	2005	2006	2007
Min Public Health budget as share of total health budget	87%	83%	85%	87%	87%	80%	80%
Min SIDA budget as share of total health budget		3%	3%	2%	2%	16%	12%
Min Education (CHUK) budget as share of budget on health.	13%	14%	13%	10%	11%	5%	7%
Total	100%	100%	100%	100%	100%	100%	100%

Source: Ministry of Finance and World Bank estimations

79. The health funds managed by the Ministry of Education finance subsidies and equipment for the University Hospital Center of Kamenge. **This hospital budget represents a disproportionally large share of government budget to the sector, equivalent to about 12% of the total resources allocated to the MSP in the last years.** The recurrent budget allocated to this hospital has been equivalent to more than 40% of the total subsidies allocated to the 17 hospitals under management autonomy (see table below). In a country where the main causes of mortality and morbidity can be prevented and treated at lower levels of care and where most of the population lives in rural areas, this represents an inefficient and unequal allocation of resources. This unequal allocation is also apparent when compared to health care utilization patterns. Data from the QUIBB 2006 survey indicates that the majority of the population (57%) uses public health centers when sick or injured. In contrast, only 11% of people visited a public hospital while the rest visited a private provider.

[17] Ministry of Defense, *Direction des services de santé de l'armée*; Ministry of Interior, *Direction des services de santé de la Police*; Ministry of Public Administration and Social Security, *Mutuelle de la fonction publique (MFP); Institut national de sécurité sociale (INSS)*; and Ministry of National Solidarity, *Fonds Social et Culturel.*

Table 12: Recurrent budget allocated to public hospitals (FBU million), MSP and Min Education, Burundi 2004-2007

	2004	2005	2006	2007
Total recurrent budget allocated to hospitals with management autonomy in the MSP in million FBU (current prices)	822	850	1,113	1,276
Recurrent budget allocated to the CHUK under the Min Education in million FBU (current prices)	497	542	775	976
Total recurrent budget allocated to public hospitals in million FBU (current prices)	1,319	1,392	1888	2,252
Recurrent budget allocated to CHUK as share of total recurrent budget allocated to hospitals in %	43%	38%	41%	43%
Total recurrent health budget	5,373	5,655	21,422	16,443
Recurrent budget allocated to these hospitals as percentage of total health recurrent budget	25%	25%	9%	14%

Source: Ministry of Finance and World Bank estimations

80. The main causes of mortality and morbidity in the country and especially among children under five can be prevented and treated through high impact health interventions that can be delivered at community level or in primary health care facilities. In the case of maternal mortality, access to basic and comprehensive emergency obstetric care is also important. This care can be provided in primary health care facilities and in first referral hospitals. However, as shown in the table above, a large share of the budget is allocated to higher levels of care. In Burundi, the majority of hospitals with managerial autonomy are not first referral hospitals but second or third referral hospitals. As seen in Table 12, these hospitals used to receive as much as 25% of the total recurrent allocation to health before 2006. After that year and thanks to HIPC funds the situation started to change. In 2006 and 2007, the budget allocation to those hospitals represented 9% and 14% of the total recurrent allocation to the sector.

81. **Similarly, resources allocated to the fight against HIV/AIDS represented in 2006 16% of domestic resources allocated to health care, or equivalent to 20% of the budget of the MSP**. Even though resources will still be needed to fight this epidemic; without a functioning health care system there will not be as much progress in this fight. In consequence, and given the large resource constraints and the epidemiological profile of the country (adult HIV/AIDS prevalence is about 3.3%), a discussion is needed to ascertain whether this is the best use of the limited resources available for health.

Structure of MSP budget

82. **Between 2001 and 2005 almost all budget allocations to the MSP were used for recurrent costs, mainly salary payments.** During this period, more than 90% of the entire budget from domestic resources was used for running costs. Most of this expenditure was earmarked for the payment of personnel remunerations. Salaries represented about 40% of the recurrent budget. This is however a large underestimation of the total expenditure on personnel. Subsidies to hospitals and other autonomous agencies (Public Health Institute, the Center for Blood transfusion) represented the second largest recurrent expenditure during this period; an important share of these subventions is also used to pay personnel remunerations. However, there is no centralized account on how the autonomous agencies use these resources.

Table 13: Evolution of recurrent and capital budgets out of Government funds, 2001-2007, in %

	2001	2002	2003	2004	2005	2006	2007
Ministry of Public Health							
Recurrent budget as percentage of total budget	92	96	96	91	92	86	81
Salaries	46	43	42	36	35	16	36

goods and services	27	27	27	33	19	64	30
Subventions	27	30	30	31	46	20	34
Capital budget as percentage of total budget	8	4	4	9	8	14	19
Total	100	100	100	100	100	100	100
Presidential Ministry for the fight against HIV/AIDS							
Recurrent budget as share of total budget	-	24	37	40	41	95	100
Capital budget as share of total budget	-	76	63	60	59	5	0
Total		100	100	100	100	100	100

Source: Ministry of Finance and World Bank estimations

83. **As seen in a previous section, despite such a large share of the budget earmarked for salaries, salary levels remained low.** As consequence, many donors paid or complemented the salaries of some public health workers to improve their availability especially outside Bujumbura.

84. **Despite a relatively large share of resources earmarked for pharmaceuticals, medical supplies, and the maintenance of facilities, in absolute numbers, the amounts are still insufficient.** Indeed, the central level is supposed to cover the running cost of the Provincial Health Bureaus (PHB) and of the facilities attached to them. Previously, PHB received a small budgetary allocation to cover the costs of gas, wheels, and others. They have stopped receiving this allocation although now they can request from the central level of the MSP these resources in kind. Nevertheless, these resources are limited and do not cover the needs of the PHB let alone those of the health facilities under their supervision.

85. During the conflict and as consequence of the insufficient resources allocated to the health sector, the MSP started a cost recovery policy for the large majority of the services and pharmaceuticals provided in public facilities. The revenues collected through user fees allowed facilities to finance some small recurrent costs such as maintenance and the salaries of support personnel. In many provinces, the PHB retained a percentage of the facilities' resources to cover part of the PHB running costs. In May 2006, some of these fees were eliminated. However, the reimbursement to facilities for free services was largely delayed in 2006 due to a highly cumbersome reimbursement system. This delay created difficulties for health facilities as their revenues decreased and they were thus not able to pay for some of their running costs. Similarly, facilities stopped the payments to the PHB.

86. Autonomous hospitals must cover their running cost out of their own revenues, which includes the subsidies received from the central level. Delays in reimbursements also affected hospitals whose debts with suppliers such as CAMEBU (*Centrale d'Achat des Médicaments Essentiels du Burundi*) and the REGIDESO increased.

87. **Thanks to the HIPC initiative in 2006, the resources allocated to non-salary recurrent costs markedly increased. That year goods and services represented about 60% of total recurrent expenditure.** Although part of the HIPC resources has been used to create incentive payments to health personnel and to hire needed professionals, most of these resources have been used to increase payments for other running costs. For instance, the reimbursement to health facilities for the services offered free of charge includes payment for the medical supplies used when offering the services.

88. **The flow of pharmaceuticals follows a slightly different pattern.** There is a budgetary line in the MSP to subsidize drugs and medical supplies. In 2006, that line included about FBU 700 million. But this line is not enough to cover all needs. Most facilities have financed part of their pharmaceutical needs with revenues collected from pharmaceutical sales. In some provinces,

there are functioning drug revolving funds that helped facilities maintain and improve their stocks. In addition, facilities have benefited from large pharmaceutical donations including recent donations from ECHO and DFID to help implement the policy to eliminate user fees for women during delivery and children under five. But even before this measure was implemented, donors supported the procurement of some supplies such as vaccines (EPI/UNICEF), condoms (FP), ORS (UNICEF), ACTs (GF), and others.

89. In some years the MSP budget included a subsidy to the CAMEBU. The CAMEBU is an autonomous agency, but for a few years it was not able to cover all its costs.

HIPC resources

90. **HIPC funds for the MSP constitute an important source of additional resources, representing about 53% of the total budget of the MSP in 2006 and 48% in 2007.** These resources allowed the MSP to implement the policy of offering services free of charge to women during delivery and to children under five.

Table 14: Breakdown of MSP HIPC funds, Burundi, 2006-2007

	2006			2007*		
	Recurrent spending	Capital spending	Total spending	Recurrent spending	Capital spending	Total spending
MSP HIPC Budget in millions FBU	9,844	484	10,329	4,925	2,775	7,700
MSP HIPC Expenditures-Commitment base in millions FBU	3,093	3,709	3,130	1,193	2,096	3,289
MSP HIPC Execution rate, in %	31%	8%	30%	24%	76%	43%
MSP execution rate (commitments base) in %	57%	4%	50%	13%	16%	14%
MSP HIPC budget annual variation, nominal term in %				-50%	473%	-25%
MSP HIPC commitments annual variation, nominal terms in %				-61%	5552%	5%
Share of MSP HIPC credit to total HIPC credit in %			74%			76%
Share of HIPC budget to total MSP budget	58%	18%	53%	38%	93%	48%

Source: Ministry of Finance and World Bank estimations

* Expenditure for 2007 only include commitments done up to May 31st of that year.

91. **In 2006, the MSP faced many challenges in the management of HIPC resources.** Before 2006, the budget of the MSP was mainly composed of personnel remuneration. Most investment expenditure was financed and often managed directly by donors and therefore the MSP had little recent experience in resource management. There are several reasons that explain the low execution rate of HIPC allocations in 2006. First, the Ministry of Finance largely delayed the disbursement of these funds that year; disbursements only started after June. There were also many delays in the reimbursements to health facilities for the services offered to women during delivery and children under five. Additionally, there were problems in the preparation of tender offers for large procurements, as will be detailed in the next chapter.

92. **As consequence of the delays in the utilization of HIPC resources in 2006, in 2007 the HIPC allocation to the MSP was reduced.** The total HIPC allocation to the MSP was reduced by about 25% in the 2007 budget. MinFin promised to re-visit these allocations during the revision of the budget; however, the budget was never revised.

93. **The execution of HIPC funds has markedly improved this year, 2007.** The mechanism to reimburse facilities for the payment of "free" services was largely simplified by efforts from both the MSP and MinFin. As a consequence, by July 2007 the budget line for the reimbursement of services was almost finished (98%). This high execution rate was partly due to the use of this budget line to pay for arrears from 2006. Other budget lines have also been almost completely used but in many cases this was also due to the use of these lines to pay arrears from 2006. For instance, the investment allocation has been used to pay advances for large commitments made in 2006. The HIPC resources allocated to MSP in 2006 that were not used were not re-allocated to the ministry in 2007 as their HIPC allocation in the initial budget was reduced.

94. **As the budget was not revised and the MSP did not receive the extra resources agreed previously with MinFin, the ministry has had serious difficulties in fulfilling some of its responsibilities.** As mentioned before, both the budget line for the payment of "free" services, as well as part of resources for investments were used mainly for the payment of arrears of 2006. As the revision of the budget never took place the ministry currently has serious cash constraints. In addition to these budget lines, MinFin had also agreed to add FBU 1.5 billion in the revised budget to ensure the stock of drugs to replace DFID pharmaceutical donation. These resources are a condition to complete the DFID grant.

95. **It is not clear if the resources allocated to the reimbursement of "free" services will be enough to cover the cost of the entire program.** Even if MinFin would have added the extra FBU 1.5 billion to a revised budget, it is not clear if these resources would have been enough to cover the reimbursement of all services delivered.

96. **In general, the distribution of HIPC funds could be improved to better follow the priorities set by the PRSP and the NHDP.** A large share of the budget was allocated to the reimbursement of facilities for services offered "free" of charge to women and children. These resources allowed an increase in utilization of health services. Some of these resources were used to create payment incentives and to recruit health personnel to work in underserved areas. However, some of the resources did not follow the set priorities. For instance, at the end of 2006 a large share of the HIPC resources that were not committed was used to buy 72 vehicles instead of being used to pay arrears to the facilities offering "free" services. Similarly, some of the biases in the allocation of resources continued, such as large expenditure in one hospital or in a disease specific program.

Budget Execution

97. **With the exception of 2006, the budget execution rates of the MSP have been high.** Before benefiting from HIPC resources, salaries constituted the largest share of the MSP budget. Salary execution rates were generally high. The only year when the ministry had significant problems in executing its budget was 2006 for the reasons explained above. It is however important to note that there are large differences between the data from the MSP and from the Ministry of Finance regarding the execution rate (commitment base) that year. The MSP data shows much larger execution rates. Part of the difference is due to commitments made by the MSP and signed by MinFin at the end of the year that MinFin did not classify as commitments

for 2006. MinFin did this to avoid increasing domestic arrears as they considered that the execution of these commitments would take place in 2007.

Table 15: Trends of MSP spending execution rate (commitment base), in %, 2001 -2006

	2001	2002	2003	2004	2005	2006
On MSP recurrent spending	99	97	100	96	96	57
salaries	99	97	101	101	102	97
Goods and services	96	99	100	88	79	36
Subsidies	100	95	100	98	99	95
On MSP capital spending	102	99	66	81	82	4
On MSP total spending	99	97	99	94	95	50
Note:						
Total Government capital spending execution rate	72	81	88	95	89	96
Total Government recurrent spending execution rate	102	91	95	103	96	86

Source: Ministry of Finance and World Bank estimations

External Assistance to the Health Sector

Donor funds in Burundi

98. **The decade of conflicts and civil war during the 1990's was characterized by a massive withdrawal of external assistance to Burundi (see Table 7 in previous section).** From 1992 to 2000, grants to Burundi registered in the budget decreased, in real terms, from FBU 22.2 million to FBU 6.5 million.

99. **From 2000 onwards, with the stabilization of the country, aid flows progressively increased.** Net Official Development Assistance[18] (ODA) to Burundi increased from US$ 227 million in 2003, to US$ 362 million in 2004 and US$ 365 million in 2005 (Figure 8)[19]. During the same period, Burundi benefited from rapid growth and increasing public and private financing. As a result, ODA as a percentage of gross national income (GNI) dropped from 55.9% in 2003 to 46.8% in 2005.

100. **In 2005, the overall ODA per capita flowing to Burundi was a little over the average for Sub-Saharan Africa countries.** Burundi received approximately US$ 48 per capita in 2005 while SSA countries received on average US$ 46.

101. **Although the country gets more external assistance per capita than the average of SSA countries, it gets less aid than other post-conflict countries.** In 2005, Sierra Leone received US$ 62 per capita, Rwanda US$ 64, and Liberia US$ 72. As external assistance to Burundi is transitioning from emergency to development assistance, it is not clear whether this relatively high level of overall external financing will be sustainable. At the moment, half of all funds Burundi receives from external assistance are for emergency purposes.

[18] According to the OECD Development Assistance Committee (DAC), ODA is made of "grants or loans to countries and territories on Part I of the DAC List of Aid Recipients (developing countries) which are: (a) undertaken by the official sector; (b) with promotion of economic development and welfare as the main objective; (c) at concessional financial terms. In addition to financial flows, Technical Co-operation (q.v.) is included in aid. Grants, Loans and credits for military purposes are excluded".

[19] OECD-DAC data. Country at a glance.

102. **There are many donors active in social sectors as well as in infrastructure, agriculture or emergency assistance.** In 2004-2005, the main donors in Burundi were the European Union, the World Bank and the United States of America (Figure 8).

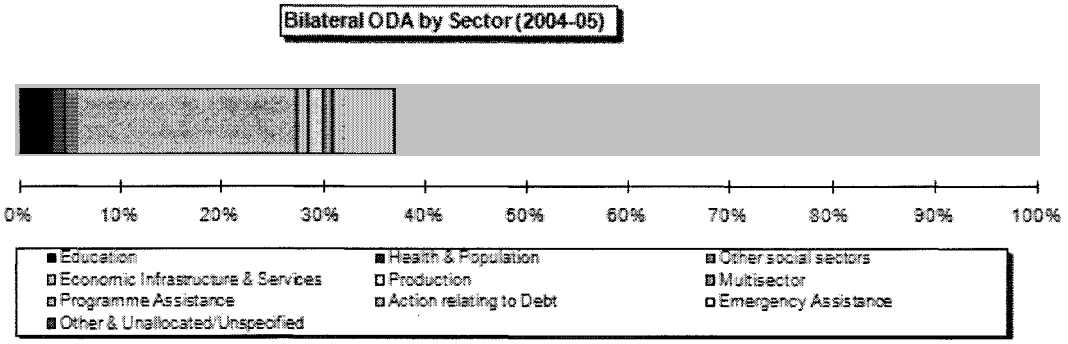
Figure 8: ODA flowing to Burundi (2003-2005)

Burundi

Receipts	2003	2004	2005
Net ODA (USD million)	227	362	365
Bilateral share (gross ODA)	50%	51%	47%
Net ODA / GNI	39.4%	55.9%	46.8%
Net Private flows (USD million)	- 1	- 2	7

For reference	2003	2004	2005
Population (million)	7.0	7.3	7.5
GNI per capita (Atlas USD)	90	90	100

Top Ten Donors of gross ODA (2004-05 average)		(USD m)
1	EC	77
2	IDA	58
3	United States	49
4	France	43
5	SAF & ESAF	30
6	Belgium	24
7	Netherlands	23
8	United Kingdom	12
9	Norway	11
10	Global Fund (GFATM)	11



Sources: OECD, World Bank.

Source: OECD DAC, country at a glance.

103. **Several aid modalities coexist which makes it difficult for the Government of Burundi (GoB) to track external resources, to plan and budget activities, and to know the exact uses of those resources.** Most development assistance in Burundi is off-budget. Aid modalities in Burundi include in-kind aid, official loans and grants under various modalities including budget support and donors' aid, managed directly by the donor or by autonomous agencies or disbursed via national and international NGOs, foundations, or churches.

External assistance to the health sector in Burundi

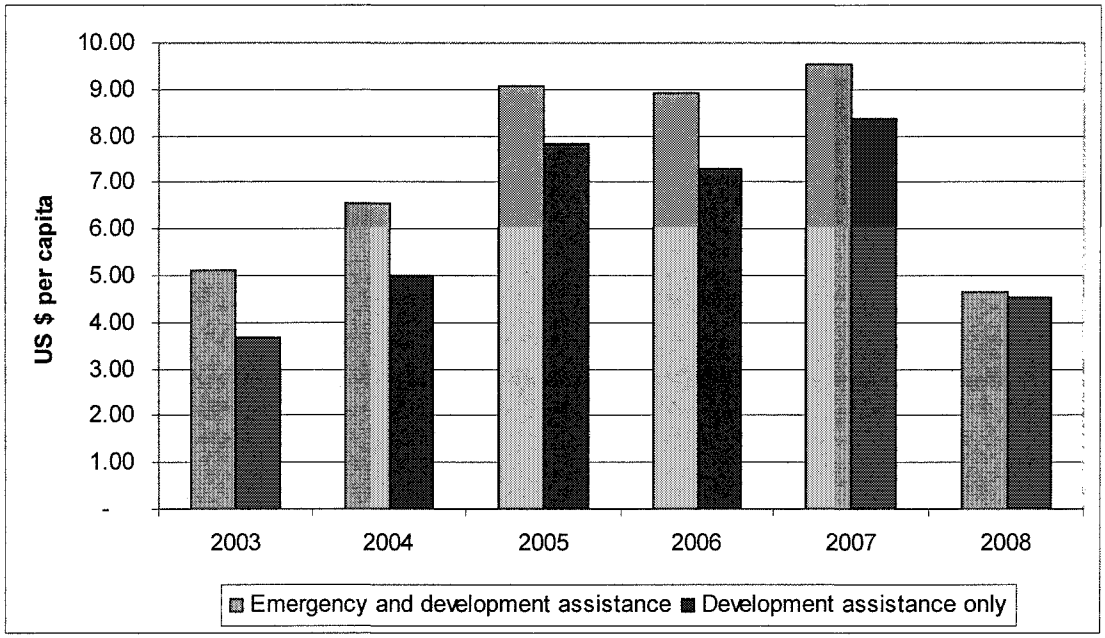
104. **The Ministry of Public Health worked jointly with the World Bank in the preparation of different instruments to collect data on external assistance to the health sector.** These instruments included a questionnaire to collect information from donor agencies on the amount of resources provided to the sector (see Annex 2) and a questionnaire to NGOs on the total amount of resources they have spent in the sector and the sources and uses of these funds (see Annex 3). The information collected was complemented with other sources of data such as donors and NGOs annual reports. This information was then organized in a single database. The following analysis and conclusions are based on the data collected.

105. **Burundi has at least 15 donors (see list in Annex 8) financing the health sector, generally disbursing funds via more than 30 NGOs (see list in Annex 9).** In 2006, the main donors were: ECHO (emergency assistance), World Bank, EU, UNICEF and Global Fund; and the major NGOs working in the sector were: Médecins Sans Frontières, Health Net International TPO, CORDAID and IMC (see Annex 4).

106. **As for overall external assistance to Burundi, external assistance to the health sector is transitioning from emergency to a more sustainable assistance.** As a result of peace and stabilization, donors and NGOs that formerly withdrew from Burundi in the 1990's are progressively coming back while emergency NGOs are diminishing their activities.

107. **The share of development assistance in overall external assistance to the health sector has been increasing since 2003.** Development aid represented 72% of total external assistance to the sector in 2003, 76% in 2004, 87% in 2005, 81% in 2006, 87% in 2007 and is projected to represent 97% in 2008 (Figure 9).

Figure 9: Evolution of development assistance and emergency assistance to the health sector per capita (2003-2008)



Source: Authors' estimations based on the data base on external financing of the health sector in Burundi.

108. **Donors are the main source of health financing in Burundi.** Based on the data collected for this study, the rest of the world's contribution to the health sector reached US$ 8.63 per capita in 2006 (including emergency assistance)[20]. Development assistance on health (excluding emergency assistance) reached US$ 7 per capita[21].

109. **External assistance flowing to the health sector is difficult to capture as it is mainly off-budget.** In 2006, 82% of external assistance (from donors and international NGOs) to the health

[20] Source: authors' estimations. These estimations include donors and international NGOs' funds and may be overestimated as it is difficult to distinguish commitments from disbursements.
[21] Idem.

sector was extra-budgetary[22]. Most of the resources actually flow through national and international NGOs, foundations, churches or are in-kind aid. Technical assistance, emergency response and direct procurement of pharmaceuticals provided by donors are examples of off-budget donor assistance to the sector that are difficult to capture.

110. **Part of the external assistance to the sector is registered in the national budget.** However, as mentioned before, the government does not monitor or register any expenditure financed through donor funds. If this assistance registered in the budget is not spent, it is then added to the budget of the following year.

111. In the health sector, only IDA financing is registered in the budget law. Table 16 shows the difference between the budget line for the Second Health Population Project (PSPII) and the amounts actually released by the World Bank. **This information can illustrate the difficulties of the Government to both predict the resources they can realistically spend as well as their weakness in absorbing foreign aid.**

Table 16: Comparison between budget line for PSPII and effective disbursement from World Bank to PSPII (2003-2006)

	2003	2004	2005	2006
in US$				
Effective disbursement of WB to PSPII	489,750	2,908,653	4,928,653	1,036,861
Budget law line PSP II	36,570	8,738,486	8,621,933	

Source: 2003 to 2006 Budget Laws and World Bank.

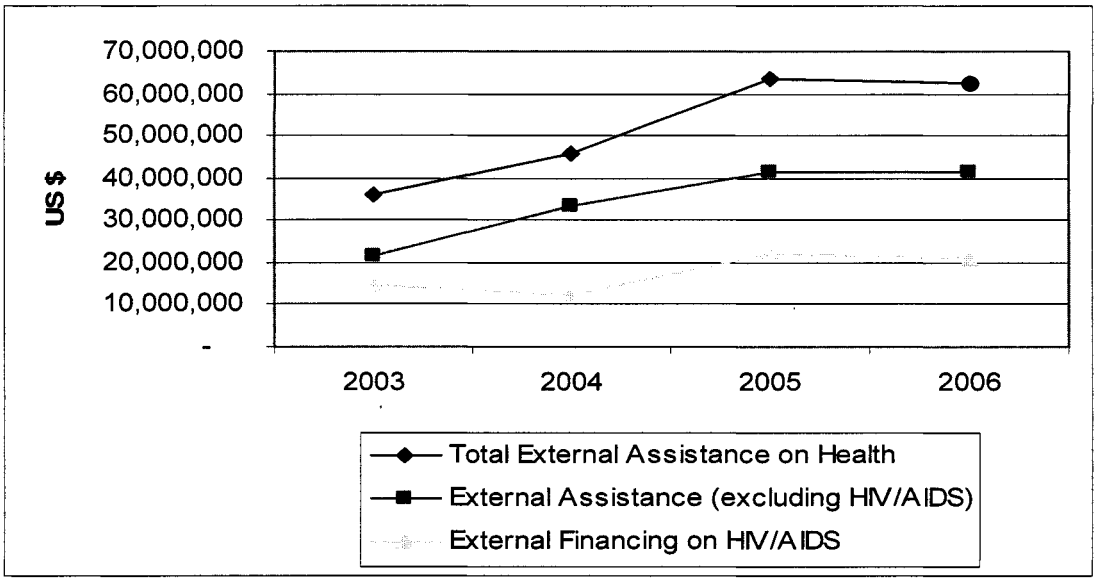
112. **From 2003 to 2005[23], external assistance to the health sector, particularly HIV/AIDS financing (Figure 10), progressively increased. This assistance, from both donors and NGOs, decreased slightly in 2006.** The share of HIV/AIDS programs in overall health sector financing is even more important when looking exclusively at development assistance (i.e. excluding emergency assistance provided by ECHO, ICRC and MSF). According to the data collected for this study, HIV/AIDS financing was increasing at a more rapid pace than the other activities of the health sector. In 2005, donors' overall assistance on health including emergency assistance represented US$ 9.05 per capita (US$ 7.85 without emergency assistance) out of which US$ 3.15 were for HIV/AIDS (i.e. 35% of overall external assistance on health and 40% of development assistance). In 2006, donors' assistance amounted to US$ 8.65 per capita (US$ 7 without emergency assistance), out of which US$ 2.8 were for HIV/AIDS (i.e. 32% of total external assistance on health or 40% of development assistance). This trend in HIV/AIDS funding changed drastically, as the country was not selected for the seventh round of the Global Fund and as the WB project closed. These two donors, the Global Fund and the World Bank, are the main sources of HIV/AIDS financing. They usually provide funds to the government's SEP/CNLS. This financing agency then sub-contracts to health services providers, mainly national and international NGOs. Out of 30 NGOs currently operating in the health sector in Burundi for

[22] Off-budget resources are the resources that were not included in the *Loi portant fixation du budget général révisé pour l'exercice 2006.*

[23] This increase may be related to missing data. However, OECD-DAC data for total ODA flowing to Burundi gives indication that ODA has been progressively increasing in the past years.

which data are available, 10 implement only HIV/AIDS activities and 11 implement HIV/AIDS activities and other health activities[24].

Figure 10 : Trends in external assistance on health (donors and international NGOs) including emergency assistance



Source: Authors' estimations based on the data base on external financing of the health sector in Burundi.

Projections of external assistance to the health sector

113. **Projections for the period 2007-2008 follow past trends of donors and NGOs assistance to health.** Projections are incomplete but trends can nevertheless be observed (Table 17). At the moment, projections for 2007 are a little bit higher than the 2006 level both for development and emergency assistance. According to available data, US$ 63 million are committed for 2007 by the rest of the world, of which 8 million are for emergency assistance, but only US$ 32.5 million are committed for 2008 (of which less than US$ 1 million for emergency assistance). Finally, external assistance from the rest of the world to HIV/AIDS programs is expected to drop from 2007 onwards (from US$ 2.8 per capita in 2006 to US$ 1.4 per capita in 2007 and US$ 1.1 in 2008).

Table 17 : Projections of external assistance to health (including HIV/AIDS) with and without emergency assistance

	2005		2006		2007 (proj.)		2008 (proj.)	
	Total	Development Assistance	Total	Development Assistance	Total	Development Assistance	Total	Development Assistance
Rest of the world (million US$)	63.4	54.9	60.4	49.1	63.0	55.0	32.5	31.6
Rest of the world (US$ per capita)	9.1	7.8	8.6	7.0	9.0	7.9	4.6	4.5

[24] Authors' calculation based on the data base on external financing of the health sector in Burundi.

National NGOs (million US$)	0.0	0.0	1.9	1.9	3.7	3.7	0.0	0.0
National NGOs (US$ per capita)	0.0	0.0	0.3	0.3	0.5	0.5	0.0	0.0
Dépenses totales de santé (million US$)	63.4	54.9	62.4	51.0	66.7	58.7	32.5	31.6
Dépenses totales de santé (US$ par habitant)	9.1	7.8	8.9	7.3	9.5	8.4	4.6	4.5

Source: authors' calculation based on the data base on external financing of the health sector in Burundi.

Allocation of external assistance to the health sector

114. **Most external assistance from donors and NGOs flowing to the health sector is allocated to recurrent expenditures.** In 2006, out of US$ 25 million allocated to health for which we have data classified between recurrent and capital, US$ 19.5 million were allocated to recurrent expenditures and only US$ 5.5 million to capital expenditures.

115. **A large share of external assistance is allocated to human resources[25].** Although the database on aid flowing to the health sector does not allow a comprehensive overview on uses of funds for health, some examples of donors and NGOs that provided rather comprehensive data, can be illustrative (Annex 10). In 2006, human resource costs represented one third or more of Belgium, European Union, MSF and CCM expenditures and half of ICRC expenditures. Training sessions, information, education and communication activities and pharmaceuticals are usually the second and third main source of expenditures.

116. **HIV/AIDS has been the main vertical program financed by external partners in Burundi.** The data available show that most health expenditures are earmarked to HIV/AIDS programs, mother and child health, nutrition programs and emergency care to refugees.

117. **Most donors and NGOs usually focus on one or two main strategic objectives.** In the case of the World Bank, funds are either used to finance HIV/AIDS related activities through the Multisectoral HIV/AIDS project or to finance other health activities. DFID finances mainly HIV/AIDS as well as mother and child health programs; UNDP and most of the NGOs operating in the health sector in Burundi exclusively finance HIV/AIDS programs.

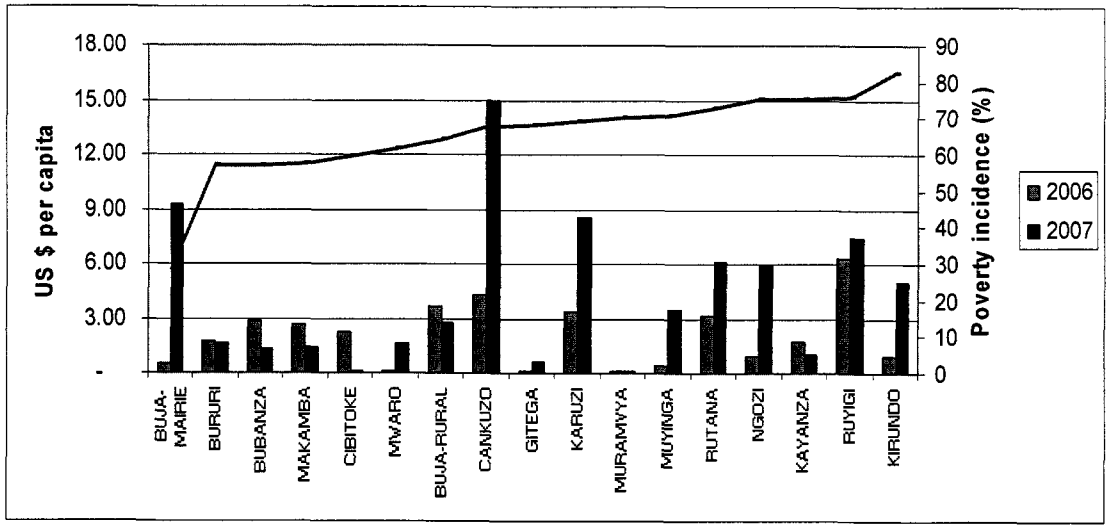
Issues raised by external assistance to the health sector

Geographical distribution

118. **Donor and NGO assistance to the health sector is unequally distributed among regions in Burundi.** In 2006, there was an unequal allocation of external resources to the health sector with per capita spending varying from US$ 0.1 per capita in the least funded province (Mwaro) to US$ 6.3 in the highest funded (Ruyigi)[26]. Inequalities seem to be even growing over time (Figure 11) and are not likely to disappear in the near future as many donors have made pledges to support particular regions in the near future.

[25] Conclusions based on the analysis of selected donors and NGOs active in the health sector in Burundi.
[26] Authors' calculation based on the data base on external financing of the health sector in Burundi.

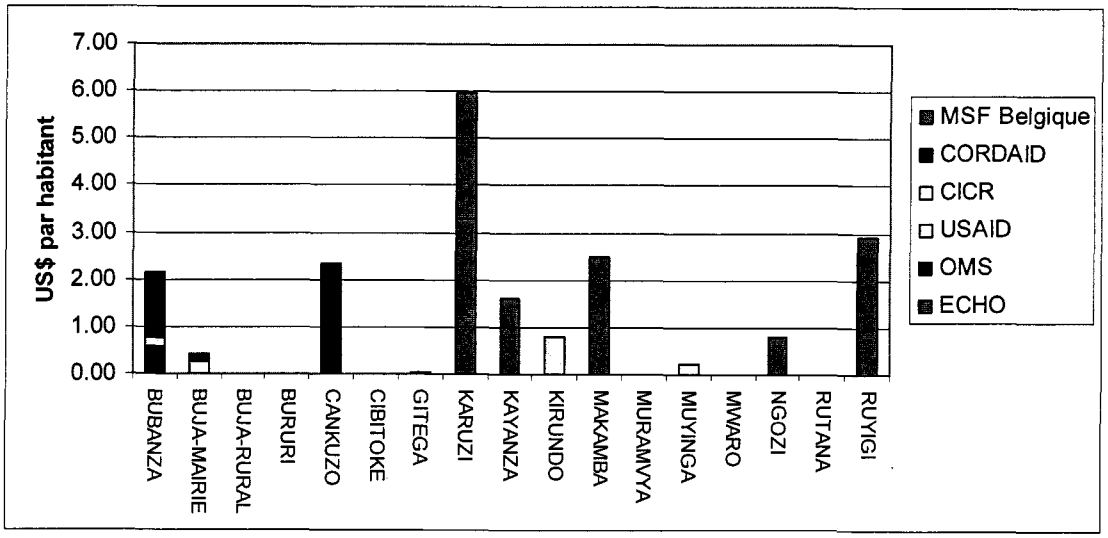
Figure 11: Distribution of external assistance to the health sector (2006-2007)



Source: authors' calculation based on the data base on external financing of the health sector in Burundi.
Note: This figure is based on indicative data. It takes into account available data given by donors and NGOs on the distribution of resources among provinces.

119. **This unequal distribution is due to donors concentrating their support in specific geographical zones.** Donors and NGOs are usually active in a limited number of provinces; in addition, the type of support varies considerably across donors. Figure 12 provides geographical distribution of external assistance of three main donors and three main NGOs active in Burundi in 2006; representing 28% of total foreign assistance to the sector. Half of the provinces receive nothing or almost nothing from these six main donors or NGOs while four provinces receive US$ 2 to 3 per capita. Karuzi, the highest funded province, receives US$ 6. However, as Karuzi is mainly financed by donors and NGOs providing emergency assistance, one may wonder if external assistance to Karuzi will be sustained in the coming years.

Figure 12: Geographical distribution of external assistance to health for selected donors and NGOs (2006)



Source: authors' calculation based on the data base on external financing of the health sector in Burundi

120. **NGOs, because of their limited human and financial capacities, are usually working in a smaller number of provinces than donors.** CCM is working in only one province, Action against Hunger in two provinces while European Union is financing five regions, ECHO seven and WHO is supporting all provinces.

Vertical funding

121. **The distribution of donor funds by strategic objective is also affected by inequalities mainly because of single-issue funds and single-issue projects.** Burundi benefits from several large disease initiatives such as the Global Fund for AIDS, tuberculosis and malaria and the Global Alliance for Vaccine and Immunization (GAVI). Despite the bias that single-issue funds might create they also offer needed additional resources to improve health outcomes. These resources whenever possible should be used to strengthen the health system in general as the fight against any of these diseases depends on a system with adequate drugs, personnel, equipment, facilities, etc.

122. **The development of vertical programs and global initiatives increases the fragmentation of the sector and goes against the objectives of harmonization and alignment.** Although these new sources of health financing represent a great opportunity to increase the resources flowing to the sector and to address health issues in the country, they also represent a burden on the country's system. Vertical financing increases absorptive capacity problems in a country in which institutions and management capacities are generally weak. It also emphasizes financing distortions as global health initiatives may prevent funds from flowing to the sector's priorities. In Burundi, in 2006, one third of total health expenditures financed HIV/AIDS programs, one third financed other vertical programs and only one third contributed to finance the health system as a whole.

Predictability

123. **External assistance to the health sector is volatile and unpredictable.** Donor funds are in general difficult to predict. At the moment, the data available indicates a decrease in funds in the coming years. However, partly this is due to some donors' difficulty to know the exact amount of their future support. Adding to this unpredictability, donor funds are usually volatile as consequence of the variability in the exchange rates or due to political decisions of the donor agency. For instance, between 1997 and 2000 the Burundian Franc depreciated on average 27% in relation to the US dollar. At the same time, the US dollar depreciated about 7% in relation to the Euro. Partly as consequence of these changes, donor funds in those years went from representing about 50% of total funds for the sector to less than 10% (Gottret et al. 2006).

124. **As most donor funds are extra-budgetary and hard to predict, it is difficult for GoB to have a clear picture of the uses of funds in the sector and to plan and budget activities for the coming years.**

125. **In line with international commitments such as the one agreed by the G8 in the Gleneagles Summit, external assistance to Burundi is expected to increase in the coming years.** However, forecasts available to date do not show this trend. On the contrary, given the data collected from donors and NGOs, external assistance is expected to decrease from 2007 onwards which demonstrates that even for the current year, government and donors don't have comprehensive information on planned activities.

126. **The lack of predictability and the low maturity of external assistance to health also introduce major problems of sustainability of activities that are being financed.** As most of the resources going to the health sector can only be planned on a very short-term basis and last for at most four years, it is not possible to know, for example, if there will be enough resources to finance the recurrent costs induced by an investment in the health sector or to sustain existing activities.

Low execution rate of external financing

127. **Burundi faces many challenges that slow down the execution of overall external assistance or reduce the efficiency of funds disbursed.** According to an OECD-DAC 2006 survey on monitoring the Paris Declaration in 34 selected developing countries including Burundi[27], the country is still experiencing large capacity constraints after a decade of conflicts, particularly to absorb new finance and to design and implement pro-poor economic reforms. Although there is a system in place for coordinating external assistance that includes structures dealing with formulation, sectoral issues, implementation and reporting, the OECD-DAC survey states that "the government would do well to take more leadership over development assistance coordination". Serious donor concerns also remain over the quality of Burundi's public financial management and procurement systems[28]. On the Burundian side, the uncoordinated donor missions, the lack of harmonization of donors' procedures and the lack of alignment on the country's priorities are lamented. Finally, the OECD-DAC survey laments the weak quality of available data and the total absence of mutual assessment although mechanisms exist.

128. **Execution of donor funds seems to be a major problem in the health sector in Burundi.** Although there is no available data to compare donors' commitments with their disbursements, partial information from donors and NGOs implementation reports show that disbursements are sometimes delayed[29].

129. **Some NGOs did not receive the resources committed by donors to implement the activities agreed upon.** For example, in its 2006 annual report, ABUBEF states that out of US$ 40,000 committed by one donor, only US$ 22,000 were disbursed in time, and out of US$ 50,000 committed by another agency, only US$ 11,000 were disbursed. On the contrary, ABUBEF received financial support from CARE and FHI although their financial assistance was not forecast in the budget approved in 2006.

Necessary move towards better donors coordination

130. **As the health system of Burundi is moving from emergency response to sustainable development of the system, there is an increasing need to better coordinate external assistance and to align it with GoB priorities and national health policies.** The health

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[27] 2006 Survey on monitoring the Paris Declaration, Country Chapter, Burundi, OECD-DAC.

[28] Under the World Bank's Country Policy and Institutional Assessment (CPIA) for 2005, which assesses the quality of budgetary and financial management, Burundi's public financial management (PFM) systems receive a rating of 2.5. This is significantly lower than the average of 3.2 for all International Development Association Borrowers.

[29] According to the last implementation report of the PATSBU (« Evaluation finale du programme d'appui transitoire au secteur de la santé burundais PATSBU » - Burundi, Lettre de marché n°2006/126249, 11/23/2006), 54% of the funds didn't reach the beneficiaries. At the end of the program, most pharmaceuticals and equipments were not available and construction and rehabilitation were not done. According to this report, 80% of the funds disbursed were actually used to finance salaries and bonuses. Similar issues affect WB funding to the sector (see Table 16).

authorities have recently made significant progress in the coordination of donor support to the sector. In this regard, a framework for donor coordination in the sector (*Cadre de concertation des Partenaires pour la Santé et le Développement* or *CPSD* in French) has been recently created and is functioning well.

131. **To better coordinate aid flows and to increase the efficiency of external assistance, the Government and partners are working towards a SWAp to support the health sector**. This process is based on the premise that all partners will support a single and comprehensive health strategy, will agree to a common plan of action, and will work together towards harmonizing procedures. All these activities will lessen some of the inefficiencies and inequities in the distribution of donor support to the sector. During October 23-31 2007, the first joint partner's mission for the heath sector took place in Bujumbura. The success of this process will be crucial to solve many issues raised in the health sector by uncoordinated donor aid.

Private Expenditure on Health

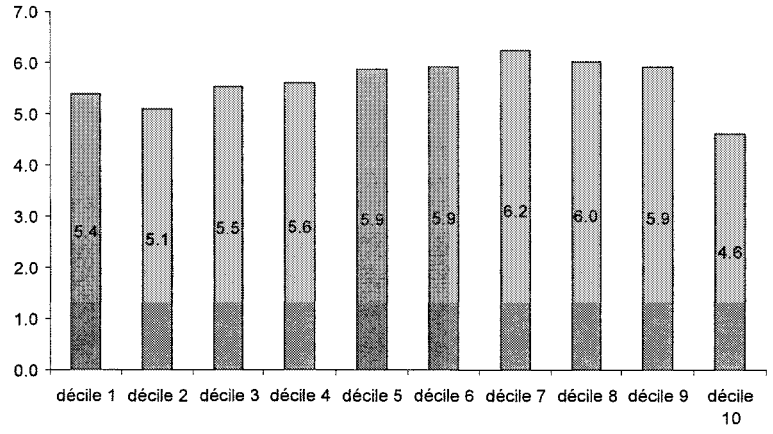
132. **As public expenditure on health decreased with the start of the crisis, households had to increase their expenditure to offset this reduction.** However, as household income levels also decreased and existing exemption and waiver mechanisms were not functioning properly, the increase in out-of-pocket expenditure on health increased financial barriers to access these services as was explained earlier.

133. **Most private expenditure on health is OOP as pre-payment mechanisms cover a very small percentage of the population.** There is a pre-payment program for health services, the *Carte d'Assurance Maladie* (CAM); but, due to lack of funds and design problems this program almost disappeared. The CAM was put in place in 1984 to improve access to health care among the population in the informal sector. Today many provinces have officially eliminated these cards and in those where it still operates they cover a small percentage of the population; this percentage varies considerably across provinces. There is also a social insurance mechanism that covers people working in the public administration. La *Mutuelle de la Fonction Publique* (MFP) is a compulsory social insurance for all public servants and thus it only covers a very small percentage of the population. The government contributes 6% of the total payroll and the employees 4%. This insurance covers all consultations, hospitalizations, and some pharmaceuticals. The person insured contributes 20% for generic drugs and 30% of the hospitalizations and non-generic drugs.

134. **By early 2006, the burden of health expenditure for Burundian families was very high.** The 2006 QUIBB survey collected information on health expenditure from a national representative survey of 7132 households. This survey estimated an annual per capita OOP expenditure on health of about FBU 8871, equivalent to US$ 8.6 per capita. The survey data also indicate than on average Burundians spend about 5.6% of their total consumption on health. In other low income countries in the region, such as Madagascar and Ethiopia, this percentage is only 1%[30]. As seen in the graph below, the burden of health expenditure was comparatively lower among the richest ten percent of the population.

[30] Source: Ethiopia Health, Nutrition, and Population Country Status Report (WB, 2004) and Madagascar Health Sector Public Expenditure Review (Madagascar Ministère de la Santé Publique and WB, 2006). The data from these two countries refers to the share of health expenditure out of total household expenditure and not out of total per capita household expenditure, but the differences should not be large.

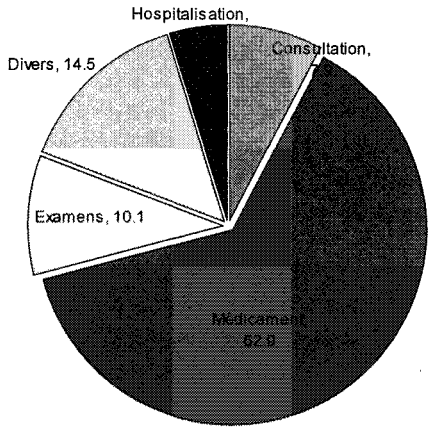
Figure 13: Household out-of-pocket expenditure on health out of total expenditure on health, Burundi, 2006



Source: Estimations based on data from the QUIBB 2006 survey. Households here are ranked from poorest to richest. The first decile is the poorest decile, decile 10 the richest.

135. **Expenditure on pharmaceuticals represents the largest share of OOP health expenditure.** As seen in the graph below, on average, pharmaceuticals represent about 63% of total expenditure on health, followed by "miscellaneous" costs (14.5%) which mainly include transport costs.

Figure 14: Categories of health expenditure, Burundi, 2006.



Source: Estimations from the QUIBB 2006 survey

136. **With this pattern of health expenditure, many households risk falling into poverty or deeper into it as consequence of catastrophic health expenditure.** Estimates using the QUIBB 2006 data show that one in every three households spends between 5% and 10% of their total expenditure on health. More worrisome still, as many as 11% of Burundian households spend between 10% and 25% of their annual consumption on health care and about 1% more than a quarter. Poorer households are more likely, to have health expenditures representing more than 5% of their total annual expenditure. As seen in the graph, half of the poorest 10% of households

spend more than 5% of their total consumption on health care; while among the richest 10% of households only a quarter of households spend more than 5% of their total consumption on health care.

137. **This situation has started to change as the country has received extra funds through debt relief and external aid**. The May 2006 presidential measure to eliminate user fees for some services, financed by HIPC funds, is thought to have increased utilization of health services. There has not been a formal evaluation of the effect of the measure and thus it is not possible to know for sure its effect on OOP expenditure. However, if the Government is able to fully reimburse facilities for the services offered "free" of charge, this measure might have also reduced OOP. Nevertheless, user fees in public facilities are only part of these OOP payments which include payments for transport, opportunity costs, and payments for private providers. In addition, this measure only benefits part of the population. For instance, children under five represented about 17% of the total QUIBB sample and were responsible for at least 19% of total OOP expenditure. Given the large proportion living under poverty level, health expenditure is likely to still represent a large expenditure burden for households and thus it should still represent a large barrier to access health care.

Total Expenditure on Health

138. As expenditure on health from both public and private sources might be overestimated, it is more appropriate to give a range for THE in Burundi. For instance, at the moment, part of the information on donor funds is based on projections and not necessarily on expenditure. If we assume a donor funds' execution rate similar to that of Rwanda, where from 2002-2005 the execution rate of donor funds was 76.4 %[31], we can then assume a lower bound of US$ 6.6 for rest of the world's assistance.

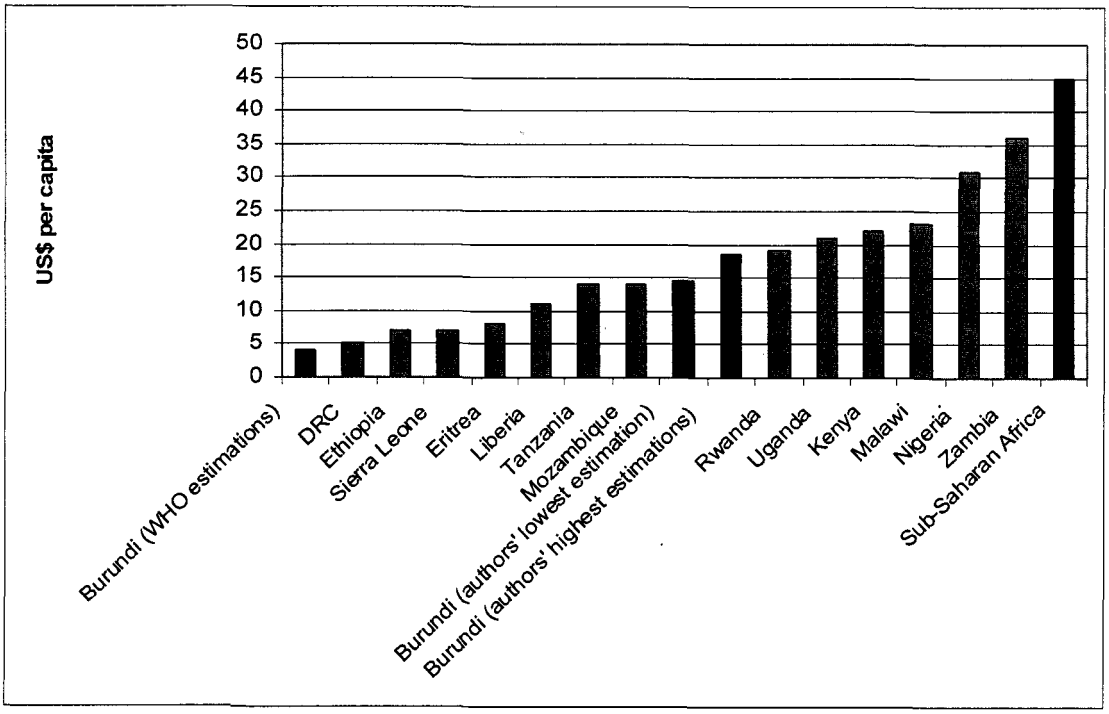
139. **Despite recent increments in domestic and foreign resources, health expenditure continues to be low in absolute numbers and when compared to similar countries in the region.** In 2006, public expenditure on heath and foreign aid in Burundi was in the range of US$ 7.6-9.7[32]. Donors and international NGOs provided the largest share of these resources (US$ 6.6-8.7), about 90% of the total. This is one of the largest per capita official development assistance in the region and it is much higher than the SSA average (in 2003 the per capita ODA for health in SSA was only about US$ 5.8[33]). But as government expenditure on health is very low the total public expenditure on health (from public sources and from the rest of the world) is not as high. As seen in Figure 15 the highest end of our estimated THE range is lower than the average per capita total expenditure in SSA; while the lower end is also lower than that of Rwanda. The highest end is close to the level of Rwanda. The figure also shows the WHO estimate for that same year which is a much lower estimate. However, as there has not been any NHA in the country, this number is likely to be an underestimation as most donor funds are extra-budgetary and, before the data collected for this study, there was no account of total donor expenditure for the sector.

[31] République de Rwanda, Ministère de la Santé Publique & European Commission. 2006. Revue des Dépenses Publiques du Secteur de la Santé. Report written by Guy Scorraille, J. Nachtigal, and J. Munyenpenda.

[32] Authors' calculation based on the data base on external financing of the health sector in Burundi

[33] WHO, World Health Statistics 2006.

Figure 15: Total health expenditure per capita in selected SSA countries (2005)



Source: WHO, NHA database and authors' estimations for Burundi.
Note: the estimation for Burundi is for 2006.

140. Concerning expenditure from private sources of funds, there is no data on OOP after the presidential measure to eliminate user fees for deliveries and services to children under five so it is not clear how OOP changed. Experience from Uganda where user fees were eliminated for primary health care services shows that catastrophic expenditure among the poor did not change after user fees were eliminated but they significantly decreased among the non-poor (Xu et al. 2006). In the case of Burundi, if we assume that the reimbursement to health facilities for the services they now offer "free" of charge diminished total OOP, total OOP expenditure should then be below US$ 8.6. Before the presidential measure, health care for children under five represented at least 19% of total OOP or a minimum of US$ 1.5; it is not clear how much OOP was due to deliveries but we will assume US$ 0.5 per capita based on a rough estimation[34]. This can give us a possible range for OOP expenditure on health between US$ 6.6-8.6. In addition, in 2006 national NGOs contribution to the sector reached US$ 0.3 per capita.

141. **In summary, total expenditure on health in Burundi is in a range of US$ 14.5-18.5.**

[34] Assuming 372,027 deliveries that year (data from PNSR), and only 25% skilled attended and 5% of total by C-section. The OOP for normal delivery was assumed to be the median cost of spending two nights in a CDS under cost recovery (MSF data) and the cost of a C-section of FBU 150,000 as mentioned in Cordaid.

Fiscal Space for Health

142. **To increase fiscal space[35] for health expenditure governments have few alternatives.** They can increase revenues through tax measures, reallocate from other priorities, borrow resources, receive grants, or they can use their power of seignorage[36] (Heller, 2005).

Table 18: International comparisons on fiscal revenues, early 2000s.

	Total revenue as % of GDP	Tax Revenue as % of GDP
Region		
Sub-Saharan Africa	19.7	15.9
Income Level		
Low-income countries	17.7	14.5
lower-middle-income countries	21.4	16.3
Upper-middle-income countries	26.9	21.9
High-income countries	31.9	26.5

Source: Gottret et al. 2006. Health Financing Revisited.

143. **Burundi has a relatively high tax base and thus it will be very difficult to generate fiscal space through more taxes or even through improvements in the tax administration.** In the last few years, Burundi's tax revenue has been about 18% of GDP. This tax revenue is higher than the averages in SSA and in low income countries (see Table 18 and Table 19). The tax code will be revised as the country joins the East African Community. This might temporarily decrease revenues as tax rates are likely to decrease; but, as export volumes increase, the total revenue is expected to increase from 2008 onwards (see Table 19). Regarding improvements in the tax administration, there might be some room for increasing revenues as the tax code has an excessive number of tax exemptions (see forthcoming PEMFAR).

144. Increasing revenues in the country is tightly linked with future economic growth. Although available economic projections indicate relatively high levels of growth in the next years, income growth in the recent past has been low. In any case, per capita income growth will remain limited due to Burundi's high population growth rate (3.7% in 2006[37]), the highest in SSA.

Table 19: Macroeconomic Indicators, Burundi

	2000-05	2006	2007	2008	2009	2010	2011
	average	Prel.			Projections		
Real GDP growth rate	1.7	5.1	3.6	4.5	5	5	5
Inflation (GDP-deflator)	9.5	3.7	9.5	7.5	7	7	6
Total revenue (excl. grants) % of GDP	20	19	18.1	19.2	19	19	19.2
Tax revenue	18.5	17.4	16.9	17.8	17.7	17.7	17.6
Non-tax revenue	1.5	1.6	1.1	1.4	1..3	1.2	1.2

Source: World Bank, IMF, own calculations. Macro-framework used for PEMFAR (forthcoming)

[35] Fiscal space is the availability of budgetary room that allows governments to provide resources for a purpose without any prejudice to the sustainability of its financial position (Heller, 2005).
[36] The power of seignorage is the capacity of having the central bank print money to lend it to the government.
[37] World Development Indicators. 2006.

145. **Reallocations from other sectors in the near future will also be difficult.** As consequence of the recent conflict, military spending increased to the detriment of social sectors. Thanks to the demobilization and reintegration of ex-combatants as well as other peace and stabilization activities, this spending has been decreasing significantly since 2000. However, expenditure in the national police has rapidly increased due to higher numbers of police staff and to the harmonization of their salary structure with that of the military (forthcoming PEMFAR). Nevertheless, there is some room for reallocations in the medium term as the demobilization proceeds and the number of police effectives decreases. For instance, by December 2006, about 21,000 soldiers have been demobilized and the objective for 2007 is to demobilized 27,000 soldiers. Similarly, the medium term governments' objective is to reduce the police force from about 18,000 to 15,000 people.

146. **Debt relief and grants might offer the largest possibility to increase public resources for health.** More borrowing, the other side of debt relief, is another option but again these resources will eventually have to be re-paid and the capacity of the country to continue borrowing is very limited. Nevertheless, Burundi has started to benefit from the enhanced HIPC initiative and substantive debt relief will be granted once the country reaches the completion point. In the interim period, mid 2005-end 2006 the country benefited from about US$ 26 million per year (about US$ 36 million in 2006), but this aid will increase to an average of US$ 46 million per year from 2007-2039 (IMF and World Bank, 2005). These resources are to be used in poverty related sectors, including health care. There is no pre-set amount earmarked for any sector and thus the share that will go to health will depend on the Government's commitment to this sector, not just reflected in the original budget allocation but also in the total amounts that will be finally disbursed. As explained before, in 2006 the budget for the sector increased significantly, but not so much the expenditures due to late disbursements of these funds and to other budget execution problems. In 2007, the budget allocation actually declined. Concerning other grants, the projections available so far do not show an increase in extra-budgetary funds.

147. **Finally, even if more resources are allocated to the sector this will not necessarily improve health outcomes, especially for the poor, unless additional measures are taken.** There are many reasons why a higher budget allocation alone might not make a significant difference on health outcomes. First, the resources might not be disbursed in time by the Ministry of Finance or the budget might not be fully executed by the sectoral ministries as was the case in Burundi in 2006. Second, even if resources are disbursed and the budget executed, these resources might not benefit the poor the most. International experience shows that often the better off urban population benefits more from public health expenditure. In the case of Burundi, there are indications that a disproportionally large amount of resources allocated to the sector benefit hospitals, especially one hospital in the capital city where the better off 10% of the population lives. Third, even if resources are meant to benefit the poor the most, they might not reach their intended beneficiaries. Currently, the Government of Burundi is implementing a Public Expenditure Tracking Survey (PETS) which will allow identifying leakages of public resources in the health sector. Finally, even if the resources arrive they might not necessarily improve the quality of the services offered if there are vacancies, if personnel absenteeism is common, or if the resources are mismanaged. The lack of qualified medical personnel is an issue that needs immediate attention in the country as discussed in other sections. To improve the management of resources at the facility level, not only would there be a need for more supervision from the MSP but also more community involvement in the management of facilities, especially primary health care facilities as will be discussed in the next chapter.

PUBLIC EXPENDITURE MANAGEMENT

148. **Despite recent budgetary increases, total expenditure on health remains low and its level will depend not only in the capacity of the MOPH to mobilize more donor funds but also in its absorptive capacity.** For instance, the deficit of qualified medical personnel could hinder in the short run the absorption of resources intended to increase the coverage of health services. But these bottlenecks could also be related to budget management issues such as issues with budget planning and execution that could also hinder the absorption of new resources. This chapter will examine the latter.

Budget Planning

149. **Recognizing the need to improve the management of resources, the Ministry of Health created last year a *Direction Générale des Ressources* (DGR) to manage both financial and human resources.** This Direction is in charge of the preparation of the consolidated budget of the ministry. For planning purposes, the MSP has a *Cellule de Planification*[38] that supports the *Directeur Général de la Santé*, the *Directeur des Programmes de Santé*, and the DGR. The entire team (DG, DGR, DP, and the *Cellule de Planification*) is at the moment drafting a health plan for 2007-2009. Although in general the team has the skills needed for planning, it could benefit from training on costing of health programs.

150. **The MSP faces many challenges in the preparation of its budget**. The budget preparation starts when the Ministry of Finance sends a letter to all sectoral ministries. This letter does not include a budget ceiling to guide the ministries. In the MSP, all Provincial Health Bureaus and all health programs and departments are supposed to prepare their own budget plans. There is low capacity for budget preparation at these levels of the ministry, especially at the Provincial Health Bureaus. As a result, these budget plans are often not linked to the sector strategies or objectives and budget allocations are not prioritized. Once these plans are ready, they are sent to the DGR which then prepares the consolidated budget of the Ministry.

151. At the central level of the Ministry (DGR with some help from the *Cellule de Planification*), the consolidated budget is linked to the sectoral policies and objectives and some expenditures are prioritized. However, the budget preparation at this level also confronts some challenges:

1. The budget preparation is fragmented. The budget for HIPC resources is prepared separately from the rest of the budget. Additionally, recurrent and investment budgets are not consolidated at the sectoral ministry level which means that the projects' running costs are not always integrated into the programmatic budget[39].

[38] There are two economists working at the cellule.
[39] IMF Report 07/46, January 2007.

2. There is no consolidated account of donor funds flowing to the sector. Although each health program knows what they receive in external aid, the central level does not have complete information on donor funds. This limits the ministry's capacity to plan and prepare a comprehensive budget as the majority of external funds are not registered in the budget law.
3. Donor funds are highly uncertain.
4. There is limited capacity to calculate the costs of health plans.
5. At the DGR, the few people with the skills to prepare budgets are currently overwhelmed with other functions. For instance, the same people in charge of budget preparation are responsible to check all the invoices sent by the facilities for the reimbursement of the "free" services. The same people also sign and send the letter to the *Ordonnateur Trésorier du Burundi* (OTB) for the release of funds to all these facilities (there are about 500 facilities in the country).
6. Finally, the difficulties that the Ministry of Finance faces in predicting annual revenues create a challenge for the MSP in the preparation of their annual budget. For instance, as seen in the table below the difference between the original budget law and the revised law can be large. In 2006, the allocations for the sector increased by about 5%, but the allocations for capital expenditure actually diminished.

Table 20: Annual rate of change on MSP spending between Initial Budget Law (LFI) and Revised (LFR)

	2006		
	LFI	LFR	variation
Current budget in millions FBU	15,405	16,986	1,581
Capital budget in millions FBU	3,296	2,666	-630
Total budget in millions FBU	18,702	19,653	951
Annual rate of change, nominal term, in%			**5%**

Source: Ministry of Finance and World Bank estimations

Recommendations

1. Consolidate budget preparation not just in terms of recurrent and capital expenditure but also in terms of sources of funds: HIPC, ordinary resources, and eventually donor funds.
2. Generate a consolidated account of all donor funds supporting the sector and progressively institutionalize National Health Accounts. The development of an MTEF and the entire SWAp will facilitate this process and will also lessen the uncertainty of donor support to the sector.
3. Build capacity at different levels of the MSP for budget planning. At the central level, there is also a need to improve capacity to cost health programs.

Budget Execution and Monitoring

152. The ministry also faces the following challenges and opportunities related to budget execution:

1. Long delays of the Ministry of Finance to disburse funds and especially HIPC funds.

2. To better plan the use of HIPC funds, the MSP prepares an execution plan for these resources.
3. The delays in the payment to the facilities for the reimbursement of "free" services have been drastically reduced. To be reimbursed the facilities have to write invoices for the inputs used in delivering services to women and children under five. When this policy was first put in place, these invoices had to go through a very cumbersome control system where the Provincial Health Bureaus, the central level of the Ministry and then the Ministry of Finance checked these invoices before approving their payment. Needless to say, there were long delays and by March 2007 many facilities had only received partial payment. This situation has improved considerably as the Ministry of Finance has started to make advanced releases to the MSP who now makes the final control and sends a notification to the OTB for payment of these invoices[40]. One challenge remains; it is not clear what the total cost of this policy is and whether there are enough resources to pay for it. For instance, by June 2007, more than 98% of all resources budgeted for this policy had already been paid (these resources were also used to pay for last year's arrears though).
4. The ministry has some difficulties in the preparation of procurement documents. The DGR does not have the number of staff or the capacity to prepare all these documents. The long and cumbersome procedures in place for large procurements also create further complications and delays.
5. The ministry has very limited personnel to monitor large expenditures (e.g. construction, rehabilitation, etc.). No monitoring is done of the expenditure financed and managed by donors.
6. It is not clear whether there are significant leakages of resources in the health sector. At the moment, the government is implementing a Public Expenditure Tracking Survey to estimate the magnitude of this issue.

Recommendations

1. The budget execution plan the MSP prepares for HIPC resources could be improved by prioritizing expenditures and by including a commitment plan with a chronogram for the fiscal year. This execution plan should include all resources and not only the budget for HIPC resources.
2. An estimate of the real cost of the policy to offer services "free" of charge to women and children under five is urgently needed. Otherwise it is not possible to know if the budget allocated to this policy is sufficient. It is also necessary to define more clearly the package of services according to priorities and resource availability.
3. There is a need to improve the capacity of the DGR to monitor all expenditure benefiting the health sector and not just expenditure financed out of domestic resources.

[40] These notifications to the OTB are signed by the *Directeur Général des Ressources* and the *Directeur du Budget* of the MSP and by the *Directeur Général du Budget et de la Comptabilité Publique* of the Ministry of Finance.

Resource Management Issues at Health Facility Level[41]

153. **Not only do primary health care facilities receive funds from upper levels of the Ministry of Public Health, but they also collect their own revenues from the health services they provide.** The salaries of most health care workers are paid by the Ministry of Public Administration, Labor, and Social Security (*Ministère de la Fonction Publique et de la Sécurité Sociale*), although some contractual staff are paid by the facilities own revenues. The facilities also received some drugs and supplies from the Provincial Health Bureaus. Finally, since May 2006, after the presidential measure to eliminate user fees for children under five and mothers during childbirth, facilities are supposed to be reimbursed by the central level for the services they provide "free" of charge. In addition to these resources, facilities charge for services to patients not covered by the presidential measure.

154. **The management of resources at the PHC facility level varies considerably across provinces and often escapes from the Government public expenditure monitoring mechanisms.** Facilities do not produce regular budget or budget execution reports. Most facilities have two bank accounts, one for medical "acts" and another for pharmaceuticals. The majority of health centers have flexibility in the use of the funds collected in the "acts" account. These resources are often used to cover running costs, including the payment of salaries of some contractual personnel such as the case of security staff. In contrast, the management and use of resources from the pharmaceutical account is more restrictive and often escapes from the health center. For instance, in Ngozi only the BPS can withdraw resources from these accounts.

155. **Community participation in the management of health facilities is still limited.** In a case study of three provinces (Gitega, Rutana, and Ngozi), only in one, Rutana, the community has ample participation in the management of these resources (see Annex 11). This province received some support from the EU in resource management at the facility level. In this province, facility revenues are managed by a Management Committee (*Comité de Gestion* or COGE in French) which is part of the Health Committee (*Comité de* Santé or COSA in French) where the community is largely represented. In each health center there is an administrator who is chosen by the community and who reports to the COSA, and therefore to the community. The salary of this administrator is financed by the health center.

156. **Some revenues collected at the facility level are sent to the Provincial Health Bureaus or to communal structures.** For instance, in certain provinces the health centers must send part of their revenues to the PHB to cover part of their running costs. In the province of Gitega, PHC centers were supposed to send 10% of their revenues to the BPS; in Ngozi, they were supposed to send 20% of the revenues from the sale of pharmaceuticals to the BPS. This year, as many facilities were not reimbursed in time for the services offered "free" of charge, they stopped sending part of their revenues to the BPS. This practice reduces the benefits to the facilities from their own revenues as it limits the amount of resources it can reinvest to improve the quality of services.

Recommendations

1. There is a need to increase community participation in the management of health services. This could be achieved by revitalizing the Health Committees (COSA) and

41 This section is based on a case study of three provinces (Rutana, Ngozi, and Gitega) done as background of the Burundi Health financing study (see Annex 11).

Management Committees (COGE) to help manage resources at the health facility level and ensure some degree of transparency.

SIMULATION OF THE COST AND IMPACT OF THE PRESIDENTIAL MEASURE TO ELIMINATE USER FEES FOR HEALTH SERVICES OFFERED TO CHILDREN UNDER FIVE AND WOMEN DURING DELIVERY

157. The objective of this chapter is to evaluate the implications of the presidential measure of May 2006 of eliminating user fees for health services offered to children under five and women during delivery. As described in this chapter, the supply of health services in Burundi is still limited; in consequence, the measure to eliminate user fees on its own will not be enough to significantly increase the effective coverage of the targeted interventions. Reinforcing the supply of services as well as creating and stimulating their demand will be necessary in such a context. This chapter will precisely look at the financial, material and human resource implications of the provision and utilization of the interventions included in the presidential measure.

Methodology

158. **The cost and impact estimations presented in this chapter were carried out with the assistance of a tool known as the Marginal Budgeting for Bottlenecks (MBB).** The MBB is a planning tool developed by UNICEF and the World Bank that allows estimating costs and impacts of health interventions[42]. By linking health inputs to outcomes, this tool helps rationalize budget decisions and thus optimize outcomes. The data used in these simulations were collected or validated with the help of relevant program managers or departments within the Ministry of Public Health including the Department of Reproductive Health, the Direction of the Fight Against Infectious and Deficiency Diseases, the National Tuberculosis and Leprosy Control Program, the Expanded Program on Immunization (EPI), the Integrated Child Disease Management Program (PCIME), the National Institute of Public Health, the Department of Water and Sanitation, etc.

159. **The estimated costs represent the total costs required for reinforcing the supply of health services and for creating or stimulating their demand.** They include the investment and recurrent costs (old and new) necessary to improve the level of performance of the health system. The methodology used starts by identifying major bottlenecks that limit the delivery and utilization of high impact health interventions. Shortages of human resources, of drugs and supplies, inadequate access to health services, as well as issues concerning household behavior are analyzed. Once this is done, the inputs required for reducing or eliminating these bottlenecks and implementing corrective measures are estimated. The estimated costs thus reflect the costs of obtaining an effective coverage of the interventions included in the "free" healthcare measure. In summary, the unit costs used may be classified into the following categories: (i) human resources (salaries and incentives); (ii) transport costs; (iii) materials; (iv) drugs and supplies; (v) infrastructure and equipment; (vi) demand stimulation; (vii) performance bonuses; (viii) communication for behavioral change; (ix) subsidies; and (x) monitoring and evaluation.

[42] See annex 12 for details.

160. **The concept of effective coverage used in this chapter refers to the proportion of the target population that effectively receives or utilizes a given intervention in accordance with scientifically-accepted quality norms and standards.** For example, in the fight against malaria, the effective coverage for the use of impregnated mosquito nets among children under five refers to the proportion of children under five who are in possession of an impregnated mosquito net and who actually sleep every night under this net.

161. **The methodology used for estimating the impact of scaling up the package of "free" health services calculates the expected reductions in infant, child, and maternal mortality and morbidity from specific diseases brought about by an increase in the effective coverage of health interventions included in this package.** The statistics on the effectiveness of the interventions used in the MBB impact model derive primarily from international reviews such as the 2003 and 2005 Lancet series on child and newborn survival respectively, the Cochrane systematic reviews and the 2005 British Medical Journal series dedicated to maternal and neonatal health.

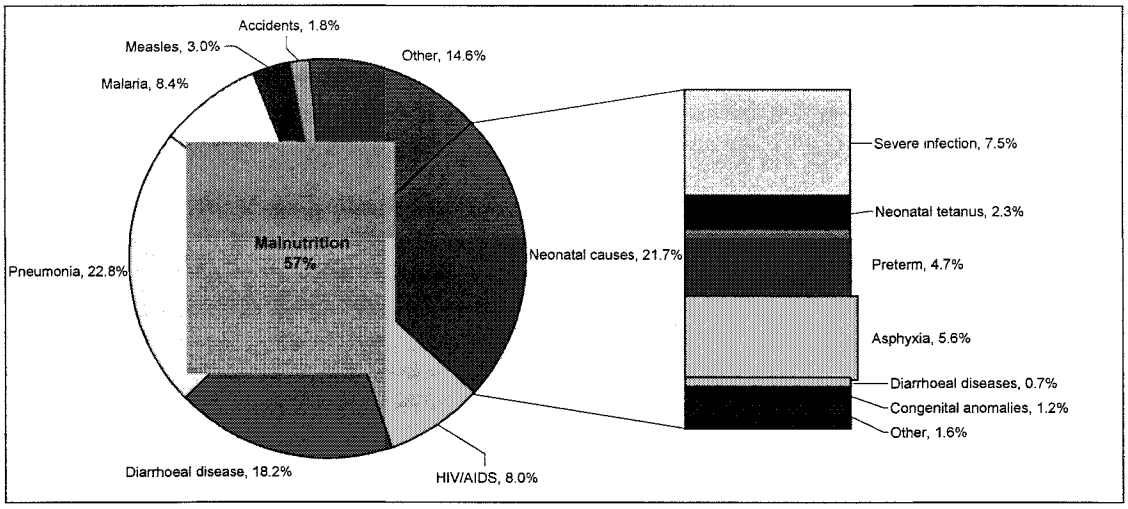
Results

Which interventions are included in the presidential measure to eliminate user fees?

162. The President announced in May 2006 the elimination of user fees for deliveries and for health services to children under five. To evaluate the financial implications of this measure and the potential impact of the resulting increase in service coverage, it is important to define in detail the content of the "free" package of services. While obstetrical services included in the measure are relatively easy to identify, this is not the case for curative care offered to children under five. The interventions in this case are not clearly defined and could extend to services to treat communicable and non-communicable diseases as well as nutritional deficiencies.

163. The package of "free" services used for these cost simulations was not exhaustive. However, the interventions included are already provided in the country's health facilities. In addition, these interventions are effective in confronting the major causes of mortality and morbidity among children under five in the country. Figure 16 shows the main causes of mortality among children in Burundi. These data are also used to estimate the potential impact of the health interventions included in this simulation.

Figure 16: Causes of mortality among children under five, Burundi, 2000



Source: OMS, Child Health and Epidemiology Reference Group (CHERG)

164. The package of maternal and child health interventions used as basis for the analysis is shown in Table 21. The table also shows the conditions that each intervention intends to alleviate. Some interventions, like assisted delivery by qualified health personnel, can improve the condition of both children and women.

Table 21: Health interventions affected by "free" healthcare and used for cost estimates

Interventions	Causes of child mortality										Causes of maternal mortality							
	Asphyxia	Preterm	Tetanus	Severe infection	Congenital anomalies	Diarrheal diseases	Pneumonia	Measles	Malaria	HIV/ADIS	Neonatal causes	Hemorrhage	Puerperal infection	Eclampsia	Labor obstruction	Abortion complications	Malaria	Anemia	Tetanus
Skilled delivery	X	X	X	X								X	X						X
BEOC (Basic Emergency Obstetric Care)	X	X	X	X								X	X	X	X				
Comprehensive CEOC (Comprehensive Emergency Obstetric Care)[43]	X	X	X	X								X	X	X	X	X			
Resuscitation of newborn babies suffering from asphyxia at birth	X																		

[43]The Basic Emergency Obstetric Care (BEOC) refers to the following six basic functions: (i) parenteral antibiotics, (ii) parenteral oxytocics, (iii) parenteral sedatives/anticonvulsants, (iv) manual extraction of the placenta, (v) uterine revision, and (vi) assisted vaginal delivery. As regards CEOC, in addition to the six basic BEOC functions, this refers to blood transfusions and Caesareans (UNFPA, 2003).

Interventions	Causes of child mortality										Causes of maternal mortality						
	Asphyxia	Preterm	Tetanus	Severe infection	Congenital anomalies	Diarrheal diseases	Pneumonia	Measles	Malaria	HIV/ADIS	Neonatal causes	Hemorrhage	Puerperal infection	Eclampsia	Labor obstruction	Abortion complications	Malaria	Anemia	Tetanus
Management of neonatal infections				X															
Antibiotics for U5 pneumonia							X												
ART for children with AIDS										X									
Antibiotics for diarrhea and enteric fevers						X													
Vitamin A – treatment for measles								X											
Artemisin-based Combination Therapy for children									X										
Universal emergency neonatal care (asphyxia aftercare, management of serious infections, management of the VLBW infant)	X	X		X							X								

Source: Adapted from the MBB Technical Guide (forthcoming)

165. **Two scenarios were envisaged for the simulations: a scenario to increase the effective coverage of these interventions to 60% of the target population and another one to 80%[44].** Data on the current coverage of these interventions are scarce and thus is not easy to estimate the increase in coverage required to achieve the defined targets. However, the MICS 2005 survey provides some of the information required such as the percentage of births taking place in health facilities (28.5%) and the percentage of children under five suffering from pneumonia and for which care was sought from a qualified provider (37.8%). These two indicators, whose values are much lower than 60% or 80%, were used during the exercise as indirect indicators of the demand for healthcare by women during delivery and by children under five. These values were used to estimate the baseline coverage of other interventions of the package.

[44] The universal coverage hypothesis (at least 95% effective coverage) of the interventions presented has been explored but the simulation results were not of such a nature so as to change the conclusions of the cost analyses.

The issue of human resources

166. **The poor availability of quality human resources constitutes one of the major challenges the country faces to guarantee the effective coverage of the interventions included in the presidential measure.**

167. **To estimate personnel shortages, the norms defined by the MSP[45] at different levels of the health pyramid were compared with the actual number of various categories of health professionals.** These estimated shortages linked to an assessment of the potential sources of training/recruitment of health personnel allowed a definition of various policy scenarios to overcome these shortages and to ensure the optimal delivery of services. The analysis below only includes health centers, district hospitals, and regional hospitals. *This analysis takes the national health norms as given without making any judgment on them. However, given the current situation regarding human resources, a national discussion on the practicability of these norms and a possible revision might be needed. It is also necessary to discuss a realistic time frame to achieve these norms.*

Table 22: Health personnel shortages according to the MSP norms

Professional category	Current number	Current availability (per 1 million inhabitants)	Objective[46] (per 1 million inhabitants)	Level of fulfillment of requirements
A1 and A2 Nurses	946[a]	126	537	24%
A3 Nurses	1557[a]	208	703	30%
Paramedics	208[b]	21	260	8%
General practitioners	112[b]	15	21	71%
Specialists	95[b]	13	24	54%

Source: [a] Director of Human Resources, presentation on human resource management issues in Burundi in October 2007 during a joint donor. [b] National Health Development Plan.

168. The data in Table 22 show the shortages in nursing and paramedical personnel (laboratory and radiology technicians, and others.) Currently, only 24% of the requirements for qualified nurses (A1 and A2) are fulfilled, implying a need for 3079 additional staff to overcome this shortage. In the case of unqualified nurses, only 30% of the requirements are fulfilled. The situation appears relatively better for general practitioners and specialists where the requirements, as per the MSP standards, are fulfilled in 71% and 54% respectively if we only consider the health pyramid levels mentioned earlier. However, 52% of the doctors working in the public sector have administrative positions in Bujumbura[47] and do not provide direct services to users. Therefore, our figures on the fulfillment of the norms regarding doctors are underestimated. In the case of paramedics, only 8% of the requirements, as established by the national norms, are fulfilled.

[45] MSP, WHO (2007) Health norms for the implementation of the 2006-2010 PNDS in Burundi.
[46] The document of National Health Norms for the Implementation of the 2006-2010 PNDS in Burundi (final version, June 2007) defines the heath norms in terms of the number of personnel per health facility. The document also provides the target population for each health facility category. This information enables to translate these norms in terms of personnel per million inhabitants.
[47] Director of Human Resources, presentation on human resource management issues in Burundi in October 2007 during a joint donor mission.

169. In the absence of detailed information on the production capacity of the country's health training schools and the annual rate of loss (retirement, death, brain drain), it is difficult to estimate the years needed to overcome this shortage if we rely entirely on training within the country. For the purpose of this simulation, it was assumed that it would be necessary to cover the human resource requirements by at least 60% in 2010, the final year of the National Health Development Plan, to achieve an effective coverage of 60% of the interventions included in the "free" package of services, or 80% in the case of the 80% scenario.

Table 23: Additional personnel requirements in 2010 according to the assumptions of the achievement rates of the MSP norms

Professional category	Current number	Additional personnel requirements in 2010 to 60% of the achievement rate	Additional personnel requirements in 2010 to 80% of the achievement rate
A1 and A2 nurses	946 [a]	1669	2541
A3 nurses	1557 [a]	1870	3013
Paramedics	208 [b]	1109	1531
General practitioners	112 [b]	--	27
Specialists	95 [b]	20	59

Source: [a] Director of Human Resources, presentation on human resource management issues in Burundi in October 2007 during a joint donor. [b] National Health Development Plan.

170. By 2010, the additional requirements for qualified nurses for a projected population of 8.9 million people are estimated to be 1669 and 2541 respectively for the 60% and 80% coverage scenarios. For unqualified nurses, the additional requirements for the two scenarios are 1870 and 3013. For paramedics, to achieve 60% of the MSP norms would entail 1109 additional staff. To achieve 80% of the norms, 1531 additional paramedics would be required. As mentioned earlier, the situation is less alarming in the case of doctors. In the case of general practitioners, currently 71% of the norms are already achieved and thus no additional personnel are required with exception of those needed to replace outgoing personnel so as to maintain the current level. For the second scenario, the need for general practitioners is estimated at 27. The figures for specialists are 20 and 59 respectively. These figures on doctors will need to be increased by an additional 42 to overcome the shortage created by the number of doctors working in administrative positions in Bujumbura.

171. **In summary, it would be necessary to triple the number of qualified nurses available by 2010 to achieve 60% of the MSP norm and quadruple this number to achieve 80% of the norm.** Similarly, it would be necessary to double or triple the number of unqualified nurses. Regarding paramedic, it would be necessary to multiply the current number by eight or by ten to achieve 60% and 80% of the norm. For doctors, it will be necessary to increase the current number of general practitioners by about 25% by 2010 to achieve 80% of the norm and the number of specialists by about 20% and 60% respectively to achieve 60% and 80% of the MSP norm.

Will Burundi have these personnel available by 2010?

172. Several solutions are conceivable to improve the availability of health personnel and to ensure the delivery of the services included in the presidential measure, in particular, assisted delivery, and basic and comprehensive emergency obstetric care.

173. The Government has envisaged the retraining of unqualified nurses (A3 category) to become A2 nurses. The methods for this retraining have not yet been clearly defined. The analysis that follows does not take any judgment on this measure. However, given the current situation regarding human resources, a national discussion on the practicability of this measure might be needed.

174. **The above measure would imply the retraining and conversion of more than 1500 A3 nurses into A2 nurses, significantly increasing the pool of qualified nurses and would virtually allow the achievement of almost 60% of the MSP norm by 2010.** This measure will bring about a progressive elimination of A3 nurses but this gap will need to be also covered for the country to reach the national norms. The country has several training schools for unqualified nurses whose courses would also need to be adapted to train A2 qualified nurses. According to the Department of Human Resources, Burundi has around twelve paramedical schools (5 public and 7 private including the Universities of Ngozi and Mwaro). These establishments produce around 600 unqualified nurses each year[48]. However, the availability of teaching staff and the investment requirements could constitute a major bottleneck to the rapid and effective adaptation of the programs. Nonetheless, without prejudging the absorption capacities of trained personnel and the dynamics of the labor market, the country would have sufficient production capacity for qualified nurses to satisfy the specified norms. While the due date of 2010 may seem somewhat ambitious, the year 2015 seems to be more reasonable if the required investments are made early enough and if the methods of retraining are clearly defined and followed.

175. The situation appears to be far more complex regarding laboratory and health technicians. According to the Health Sector Note[49], the country trains approximately **40 laboratory and health technicians each year. All things being equal, Burundi would need approximately 27 years to reach 60% of the MSP norm and 38 years to meet 80% of the norm.** The country cannot rely on its internal production capacity to overcome this shortfall by 2010. To make the health facilities fully functional, the country must find the means to solve this situation. An alternative would be retraining one category of existing personnel to rapidly reduce this shortfall.

176. According to the 2006-2010 PNDS, the Bujumbura Faculty of Medicine trains around 20 general practitioners each year and offers some specialization cycles in conjunction with several French universities[50]. If we assume that four extra years will be required to train doctors in gynecology-obstetrics, pediatrics, general surgery or internal medicine, and that half the outgoing class follows these specializations, **it would take five years to train 20 specialists and to cover 60% of the needs specified by the MSP norms.**

177. **Apart from producing new doctors, brain drain remains a major issue to be resolved to make the district and regional hospitals functional and to assist them in ensuring efficient care.** In the case of doctors, the shortfall could be rapidly absorbed if appropriate incentives are in place to hire and retain the personnel in underserved areas, to reverse the tendency to migrate, and to facilitate the return of expatriate personnel. The financial implications of a salary increase for medical personnel are discussed in more details later on.

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[48] Health Sector Note, 2006.

[49] Idem.

[50] Private universities have also been training doctors and soon the first graduates will be available. However, their diplomas have not been certified and thus the analysis was based on the graduates from Bujumbura only.

178. **The country has also benefited from donor programs that have brought foreign doctors to work in the country.** For example, the Gitega regional hospital has several Chinese specialist doctors financed mainly by the Chinese Government. All these efforts can help the country to have the needed doctors to reach at least 60% of the norms by 2010.

179. **The estimations presented above are based entirely on the norms established by the Ministry of Public Health and do not judge their adaptability to the current country context.** These norms are necessary for planning and they can guide the national health policy. However, the design of these norms should take into account a realistic assessment of the needs in terms of human resources (personnel profiles and level of services), the work load of the personnel, and the capacity of the country to generate the conditions needed to ensure that the personnel is hired and retained in health facilities.

Cost and impact of the different assumptions on coverage

Table 24: Expected impacts of each scenario and the per capita cost

	Reduction of neonatal mortality	Reduction of infant-juvenile mortality	Reduction of maternal mortality	Annual per capita cost
Scenario I (60%)	32%	30%	61%	10.8 US$
Scenario II (80%)	43%	40%	82%	13.0 US$

180. **Increasing the effective coverage of the package of maternal and infant health interventions defined earlier to 60% would potentially reduce maternal mortality by about 61%, neonatal mortality by 32% and child mortality by 30%.** This, at a total cost of US$ 10.8 per capita per year by 2010, of which US$ 0.7 per capita per year would be for administrative services and technical support. Achieving 80% effective coverage would imply a potential 82% reduction in maternal mortality, a 43% reduction in neonatal mortality and a 40% reduction in child mortality. This, at a total cost of US$ 13.0 per capita per year by 2010, of which US$ 0.9 would be for administrative services and technical support. These estimated costs represent the expenditure levels to be achieved by 2010 to reach the specified coverage level. They represent the recurrent costs and the necessary investments annualized over the planning period 2007-2010.

181. **In absolute terms, these figures imply a total expenditure of US$ 234 million over the next five years to achieve 60% coverage of the interventions included in the "free" package of services.** This excludes the financial resources required to maintain, or even increase the coverage of preventive interventions such as children's vaccinations, the use of insecticide-treated mosquito nets by children and pregnant women, prenatal care, etc. To attain the objective of 80% effective coverage, the financing requirements are estimated at about US$ 279 million during the 2007-2010 period.

182. Estimates from previous chapters indicate that total expenditure on health in Burundi in 2006 was between US$ 14.5 and US$ 18.5 per capita. Public expenditure on health (donors and Government) was estimated between US$ 7.6 and US$ 9.7 per capita. **These figures suggest that it would be necessary to allocate the total Government budget and all donor support to activities linked to the "free" clinical package to achieve about 60% coverage of the beneficiaries and achieve a potential 30% reduction in child mortality and a 61% reduction in maternal mortality between 2007 and 2010.** The cost of achieving 80% coverage of the

"free" package is significantly greater than the public resources available. The Government will therefore need significant additional resources to increase the coverage of this package of services.

183. **Phasing the investment required over a longer period of time, beyond 2010 or 2015, will be necessary given the current resource constraint.** The total amount to rehabilitate the system and to cover a larger proportion of the target population is only indicative of the investment and running costs required. The implementation period may thus be re-defined by the national experts. The definition of the implementation period should take into account the macroeconomic situation of the country and its capacity to mobilize more resources for the sector.

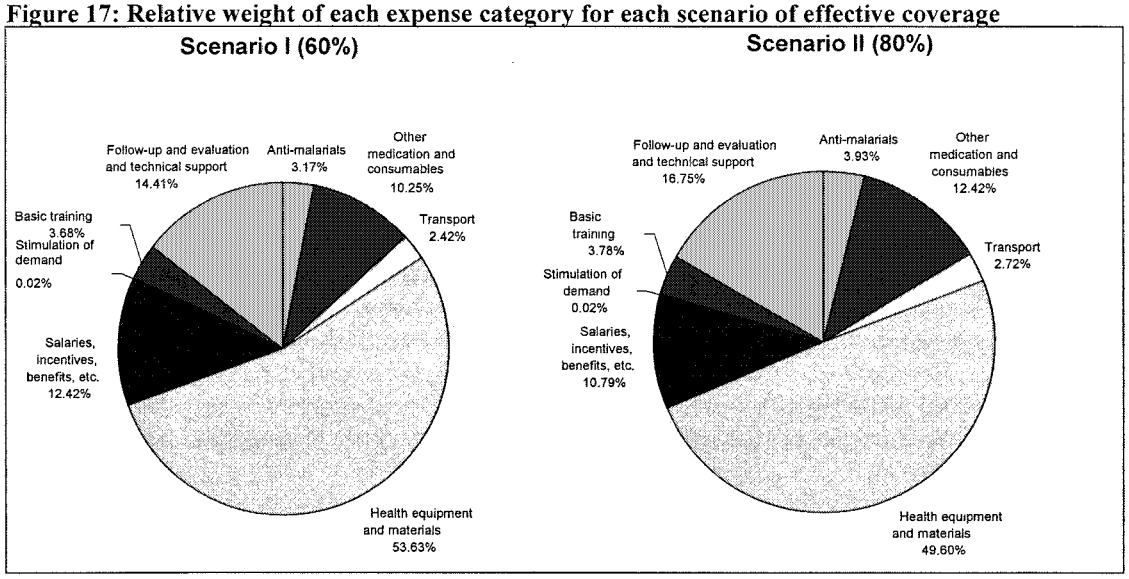
Table 25: Allocation of the financing requirements by expense category (in US$ thousands)

Category	Scenario I (60%)	Scenario II (80%)
Antimalarials	7 403	10 961
Other medication and consumables	23 936	34 612
Transport	5 659	7 589
Infrastructure and equipment	125 244	138 264
Human resources (salaries, incentives, benefits, etc.)	29 013	30 094
Promotion + creation of demand	43	51
Basic training	8 592	10 525
Follow-up, evaluation and technical and institutional support	33 663	46 689
Grand Total	**233 553**	**278 786**

184. Table 25 shows the estimated costs of delivering the "free" package of services disaggregated across expenditure category. **Infrastructure and equipment represent the most significant expense item in the two scenarios**, with approximately 54% of the expenses (US$ 125 million) in the 60% coverage scenario and about 50% of the expenses (US$ 138 million) in the 80% scenario. As indicated earlier, the expenditure profile which is dominated by infrastructure and equipment is explained by the need to bring the health system to the level needed to make the services available to beneficiaries across the country. The limited information obtained from a health facility survey carried out in 2006 (health map) suggests that less than 40% of the health centers have the necessary equipment for providing effective and quality BEOC[51]. The data for hospitals were not available but anecdotal evidence of the condition of hospital infrastructure suggests a need for considerable rehabilitation of some hospitals. These costs do not only include the investment costs for improving equipment and infrastructure, but also the operating and maintenance costs which accompany the running of these establishments. We assume that the revitalization of the existing health establishments would be sufficient to meet the demand generated by the presidential measure. Therefore these costs do not include the construction of new health facilities.

[51] A set of equipment deemed essential to BOEC management was identified and the health centers in possession of half this set were considered to be satisfactory. The availability of the equipment analyzed included an aspirator bulb, an episiotomy kit, a delivery kit, an obstetrical stethoscope, etc. Approximately 37.5% of the health centers analyzed were in possession of half of this equipment.

Figure 17: Relative weight of each expense category for each scenario of effective coverage



185. **Monitoring and evaluation activities as well as technical support from the provincial level to the districts and health facilities, or from the district to the facilities constitute the second largest expense item.** This category represents 14% and 17% of the total cost of the implementation of the "free" package of services at 60% and at 80% effective coverage respectively. The cost of these activities is estimated at about US$ 34 million in the 60% scenario and about US$ 47 million in the 80% coverage scenario. The relatively significant weight of this expenditure item can be explained by the need for training and for raising the standard of health personnel particularly in BEOC and CEOC but also in clinical IMCI which is still in an experimental phase. The reinforcement of the EPISTAT health information system forms an integral part of this category.

186. **Drugs and supplies, including antimalarials and antiretrovirals for children, also represent a significant cost of the implementation of the "free" healthcare measure.** Maintaining drug revolving funds for essential drugs in health facilities represents an important part of the system's reinforcement. The cost of the initial training of healthcare providers appears relatively marginal in relation to the total cost of the "free" healthcare package. This cost is estimated at just over US$ 8.5 million if we wish to meet 60% of the norms regarding nursing staff and at around US$ 10.5 million to meet 80% of the norms. However, these costs do not include investment costs needed to reinforce the production capacities of the training institutes.

187. **Lastly, the salaries, incentives and various benefits to medical personnel represents the fourth largest expense item, with just over 12% of the total costs in the 60% scenario and under 11% in the 80% scenario.** The remuneration costs are relatively low when compared to other expenditure items such as infrastructure and equipment. The level of salaries and various bonuses used for the purpose of this simulation are markedly different from the actual average remuneration currently received by health care personnel. The base salary used for this cost estimation was provided by the Director of Human Resources of the Ministry of Public Health. To this base salary, the level of allowances announced to take place starting January 2008 was added. As indicated in Table 26, the increase in the various bonuses and benefits contribute substantial additional charges which, in the majority of cases, constitute almost two times the

base salary[52]. These figures do not include family allowances, which amount to approximately US$ 1.4 per child per month, up to a maximum of 3 children and US$ 1.8 per month per spouse, nor travel allowances of around US$ 8.0 per official per month.

Table 26: Base salaries and various bonuses and allowances use for the cost estimations

Professional Category	Base salary[53] (monthly in US$)	Housing allowance (monthly in US$)	Risk premium: 30% of the base salary (monthly in US$)	Basic allowance (monthly in US$)	Total (monthly in US$)
A1 Nurses	30	45	9	14	98
A2 Nurses	21	27	6	10	63
A3 Nurses	15	18	4	6	43
General practitioners	39	45	12	14	110
Specialists	48	45	14	14	121

Source: Department of Human Resources of the MSP.

188. **The personnel remuneration cost of delivering the "free" package of services is estimated at US$ 29 million in the 60% coverage scenario and at US$ 30 million in the 80% scenario.** The salary amounts used for this cost estimate are already higher than the salaries received by medical personnel in Burundi today. However, they appear relatively insufficient to effectively accompany the redeployment effort and the retention of medical personnel. For instance, the remuneration level in Rwanda is two to four times higher than in Burundi depending on the professional category concerned (see Table 27). To increase the incentives for qualified personnel to work in underserved areas, the Government has already allocated bonuses of about US$ 450 to doctors posted in 14 district hospitals outside Bujumbura that remained closed. This bonus is for a period of one year and is being financed through HIPC funds.

189. **To assess the financial implications of a salary increase of medical personnel, we have carried out various simulations by doubling, tripling or quadrupling the salaries.** The amounts in question are relatively small compared to the total cost of the package but implementing such a measure is politically difficult. The Ministry of Health workers are part of the civil service. As a result, it is difficult to increase the salaries of one category of civil servants without creating demands from other sectors such as that of education or the army where the number of civil servants is much higher and where a wage increase would have a significant impact on the overall wage bill. One option to solve this issue would be to have contractual staff and sign performance contracts. Another option would be to sign performance contracts with civil servants. The basic salaries of these personnel would fall within the jurisdiction of the civil service and would follow the same salary scales. However, the portion of salaries concerning performance bonuses would be administered by the Ministry of Health.

Table 27: Comparison of health care personnel remuneration in Rwanda and Burundi

Professional Category	Burundi	Rwanda	Ratio Rwanda / Burundi
A1 Nurses	98	296	3.0
A2 Nurses	63	176	2.8
General Practitioners	110	491	4.5
Specialists	121	707	5.8

[52] The level of allowances and premiums before January 2008 was much lower.
[53] Includes the 15% increase applied since July 2006.

190. **As indicated by the simulations in Table 28, an increase in the salaries of doctors by a factor of 2, 3 or 4 to accompany the policy of personnel retention and their redeployment in the field would generate a marginal increase in the total cost of scaling up the "free" maternal and child health package.** To double the salaries of general practitioners and specialists, as estimated in Table 26, would only require additional financing of about US$ 0,06 per capita being just under US$ 2 million for the 2007-2010 period in the 60% scenario and US$ 0.07 per capita being just over US$ 3 million in the 80% scenario. When considering the most optimistic scenario which seeks achieving 80% of the MSP personnel norms and an 80% coverage of the interventions, tripling doctors' salaries would require additional US$ 0.11 per capita or US$ 3.5 million for the 2007-2010 period. Tripling the salaries of general practitioners and quadrupling those of specialists was estimated at around US$ 0.13 per capita or just over US$ 4.1 million under the most optimistic scenario.

Table 28: Financial implications of an increase in doctors' salaries (US$ thousands)

	60%Scenario		80%Scenario	
	US$ per capita	(US$ thousands)	US$ per capita	(US$ thousands)
Human resources (salaries, incentives, benefits, etc.)	0.89	29 013	0.93	30 094
Additional resources required to double the salaries of doctors	0.06	1 973	0.07	2 078
Additional resources required to triple the salaries of doctors	0.10	3 350	0.11	3 503
Additional resources required to triple the salaries of general practitioners and to quadruple those of specialists	0.12	4 008	0.13	4 166

191. **Regarding nursing staff, the amounts in question are higher even though the salaries are lower than those of doctors. The number of staff affected by such measure (in excess of 2,500) is considerable when compared to that of doctors (barely more than 200) such that the financial needs rapidly become significant.** To better understand the financial implications of an increase in nurses' salaries, the analysis was carried out including in the package of services preventive services which were "free" of charge before the presidential measure such as vaccination, the distribution of insecticide-treated mosquito nets, and others. In the case of nurses, the simulations ought to have extended beyond the "free" clinical health package as this category of personnel is used at various levels and across a range of service delivery methods. A detailed analysis of the delivery of these diverse services in addition to the "free" package of curative services is detailed later. As indicated in Table 29, under the less optimistic scenario (60% effective coverage and a 60% achievement rate of personnel norms), to double the salaries of qualified and unqualified nurses would, in addition to the expenditure required to cover the salaries presented in Table 26, requires about US$ 0.69 per capita or just over US$ 22 million for the 2007-2010 period. To triple the salaries of nursing staff under the same scenario, the Government will need to spend an additional amount of about US$ 1.24 per capita or about US$ 40 million between 2007 and 2010. Under the most optimistic scenario, these figures will be in the region of US$ 0.74 per capita or US$ 24 million and US$ 1.32 per capita or US$ 43 million respectively to double and triple nurses' salaries. The salary simulations were done separately for doctors and nurses for methodological reasons. However, it would not be advisable to increase the remuneration of one category of personnel and not the other; especially given that nurses provide most of the services available and given their scarcity.

Table 29: Financial implications of an increase in nurses' salaries (US$ thousands)

	60% Scenario		80% Scenario	
	US$ per capita	(US$ thousands)	US$ per capita	(US$ thousands)
Human resources (salaries, incentives, benefits, etc.)[54]	1.06	34 507	1.11	35 851
Additional resources required to double the salaries of nurses	0.69	22 442	0.74	24 198
Additional resources required to triple the salaries of nurses	1.24	40 393	1.32	42 951

Community and population health interventions and child health

192. The major component of the "free" package of services relates to health care for children under five. As detailed earlier, the provision of the child health interventions included in Table 21 at a 60% effective coverage would reduce child mortality by 30% at a cost of US$ 10.8 per capita per year between 2007 and 2010. Effective coverage of 80% for the same interventions would reduce child mortality by 40% at a cost of US$ 13 per capita per year over the same period.

193. **It would be important to know if similar or better results can be obtained with a different package of services given the high estimated costs of the "free" package.** Indeed, the knowledge accumulated through experience in several low and middle income countries suggests that some community, household, and population health interventions would enable a substantial reduction in child mortality using relatively inexpensive technology. The Lancet series on child and neonatal survival offer an overview of different effective health interventions that can be offered at relatively low cost in a development context. Most of these interventions can be provided through outreach or scheduled clinical care or through community-based interventions as is the case of vaccinations, ITNs, exclusive breastfeeding, and others.

194. **At the moment, Burundi does not have a community health development strategy but the Government is aware of the approach and intends to make it an essential pillar in its health system.** The community health workers (CHWs) are generally only used within the scope of the extension of clinical activities at community level such as the fight against tuberculosis or HIV/AIDS. These activities are not well coordinated and create considerable distortions in the healthcare system. As no formal and standard remuneration for the CHWs exists, the more lucrative programs benefit from their service in detriment of less well-financed ones.

195. **At the moment, some population based interventions offered through outreach or through scheduled clinical services have a relatively high coverage in Burundi.** Although, as explained in a previous chapter, their quality is not always assured. For instance, the MICS 2005 survey indicates that 67.9% of children have been vaccinated against measles and at least 96 % of births have benefited from one or more pre-natal care visits. However, these services which were free of charge before May 2006 have remained underfunded and thus some of these services have very low effective coverage. For instance, the same survey indicates that only 45% of children in the appropriate age are fully vaccinated. Similarly, the contraceptive prevalence rate remains low; only 7.5% of married women 15 to 49 years use a modern contraceptive method.

[54] Represents the human resource expense items (salaries, incentives, benefits, etc.) as part of a cost estimate which includes the free maternal and infant healthcare package, as well as other preventive interventions already provided free of charge prior to the measure of free health care.

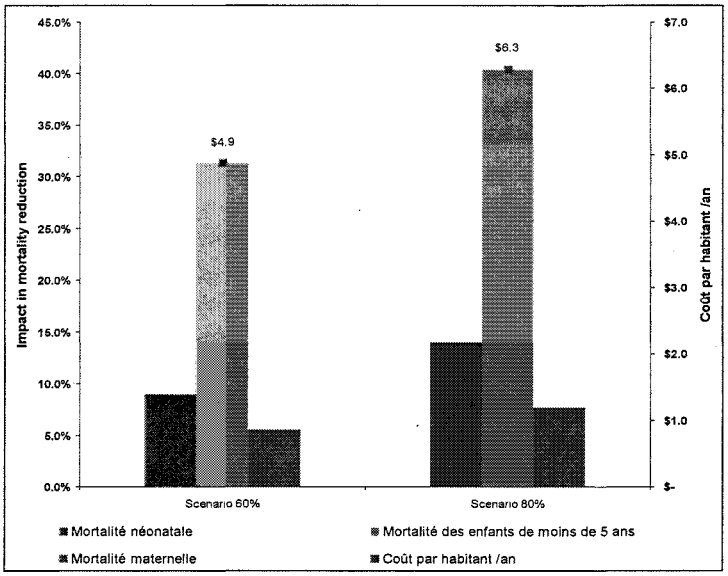
196. **As in the "free" package of services, the estimated costs of the community and population-based package of services include the investment costs required to develop a community health program and the recurrent costs required to reach 60% to 80% coverage levels.** The training of the CHWs is included in the cost simulation. An integrated approach was assumed for this training where various fields of responsibilities are taught. For instance, the training sessions on the management of child diseases are assumed to be integrated. The same applies for training sessions on communication activities for behavioral change such as advice on nutrition or the use of impregnated mosquito nets. The costs associated with the motivation and supervision of the CHWs are also included. Table 30 lists the community and population-based interventions used for this simulation. This package is not exhaustive and may be revised and adapted in accordance with Burundi's specific context and with the national policy trends. For instance, whether or not to authorize CHWs to administer cotrimoxazole to children within the scope of community management of pneumonia and dysentery, which are two of the major causes of child mortality in Burundi. This is a decision that the Government must take regarding the community health development.

Table 30: Community and population-based health care package

Community-based health interventions
Use of long-lasting impregnated mosquito nets by children under 5 and pregnant women
Hand washing by child caretaker
Clean delivery and cord care
Early breastfeeding up to 5 months
Extended breastfeeding up to 24 months
Complementary feeding from 6 months
Oral rehydration therapy (new formula) in the case of diarrhea
Artemisin-based combination therapy for malaria management
Management of acute respiratory infections and dysentery through the use of antibiotics
Population-based health interventions
Family Planning
Pre-natal care
Tetanus vaccinations to pregnant women
Intermittent Presumptive Treatment (IPT) for pregnant women
PMTCT (testing and counseling, AZT + sd NVP and infant feeding counseling)
Cotrimoxazole prophylaxis for HIV + mothers
Extended Program on Immunization (measles, BCG, pentavalent, polio)
Vitamin A supplementation

197. **As indicated in Figure 18, 60% coverage for each of the interventions in the community and population-based package would potentially reduce child mortality by about 31% at a cost of US$ 4.9 per capita per year from 2007 to 2010 (of which US$ 0.7 per capita would be for management costs and technical support).** However, this package would not have a significant impact on the maternal mortality ratio, just slightly over a 6% decrease. In the 80% coverage scenario, the community health package would reduce child mortality by about 40% at a cost of US$ 6.3 per capita per year (of which US$ 0.9 would be for management costs and technical support). Maternal mortality would only decrease by 8% in this scenario. Indeed, high-impact interventions for maternal survival such as BEOC and CEOC are not included in this package and cannot be delivered at this level since they require the presence of qualified health personnel such as nurses, obstetricians, etc.

Figure 18: Impact and cost of family-oriented community-based services



198. We can conclude, based on a comparison between the results of the free package of services and that of the community based package, the following:

a. **Regarding children health, the community and population-based package appears to be more cost-effective than the "free" package of services.** In the two simulation scenarios (effective coverage of 60% and of 80%) for the two service packages (community/population and clinical) we can expect a similar impact on child survival. As mentioned earlier, under the most optimistic effective coverage scenario, both packages will bring about an approximate 40% reduction in child mortality. However, the costs of implementing these two packages are very different. The cost of implementing the "free" package is estimated at about US$ 13 per capita for the 80% coverage scenario, whereas the community/population package would cost about US$ 6.3 for the same level of coverage. These results suggest that the development of a community health program together with improvement in population based services is the best alternative for substantially reducing child mortality at a reasonable cost.

b. **The impact of the community/population package on maternal mortality is insignificant even if the cost of this package is less than that of the "free" clinical package.** As mentioned earlier, and as recaptured in Table 31, the "free" clinical package would potentially enable a 61% reduction in maternal mortality in the 60% effective coverage scenario and of 82% in the 80% effective coverage scenario, this is mainly due to BEOC and CEOC which are included in this package.

Table 31: Comparison of the "free" clinical package and the community and population-based healthcare package

	child mortality	Maternal mortality	Per capita cost/year
60% "free" clinical package	30%	61%	10.8 US$
60% Community package	31%	6%	4.9 US$
80% "free" clinical package	40%	82%	13.0 US$
80% Community package	40%	8%	6.3 US$

199. **The above results suggest that Burundi could, at a relatively low cost, undertake the implementation of a community health program that would facilitate rapid progress in child survival.** This approach would ensure the management of the principal causes of death in children at community level. However, the need to reduce maternal mortality requires not losing sight of the reinforcement of the healthcare delivery system that could take place gradually by first revitalizing Health Centers and district hospitals to enable them to practice caesarians and to cope with the demand created by the community-based activities.

Conclusion and policy implications

200. **To achieve an effective coverage of 60% of the health interventions included in the package of "free" services, the country would need to allocate about US$ 10 per capita per year in a four year period. This can result in a 30% reduction in child mortality and a 60% reduction in maternal mortality.** However, this represents about 70% of total health expenditure in the country in 2006 and about 1.3 times total public expenditure on health (including foreign aid). In a more optimistic scenario of reaching an effective coverage of 80% in 2010, the Government wound need to spend about US$ 13 per capita per year to achieve an infant mortality reduction of about 40% and a maternal mortality reduction of about 80%.

201. **Given the large resource constraints the country faces, it is necessary to re-examine the implementation period of the investments necessary to revitalize the health system to achieve these objectives.** A horizon larger than 2010 and even 2015 will be needed. This phasing decision should take into account the Government's budget constraint and the capacity of the country to produce, hire, and retain the needed health care personnel. Additionally, the capacity to mobilize additional resources (both internal and external) and to utilize them will also be important to ensure the effective implementation of the measure to eliminate user fees to children under five and women during delivery.

202. The large amounts of estimated resources needed to increase the effective coverage of the "free" package of services are partly based on the personnel norms defined by the Ministry of Public Health. These cost estimations did not judge the pertinence of these norms but given the scarcity of personnel, they might need some revision. This revision should be based on a realistic assessment of the system's needs in terms of human resources (personnel profiles and level of services), the work load of the personnel, and the capacity of the country to generate the conditions needed to ensure that the personnel is hired and retained in health facilities.

203. **Infrastructure and equipment represent about half of the total estimated cost of increasing the coverage of the package of "free" services.** In contrast, the remuneration of personnel represents about 12% of the total cost. The simulations suggest that an increment of the remuneration of the health personnel in certain cases can represent only a small share of the total cost of the package. However, as a measure to increase remuneration could generate pressures in other sectors to also increase them this measure can be politically difficult to implement.

204. **The "free" package of services is essentially a clinical package of services. Nevertheless, the most important gains in terms of child survival can be achieved with community-based interventions (e.g. ITN usage) combined with population-based ones (e.g. children vaccinations).** These interventions could potentially have the same impact that the clinical package but at a much lower cost. However, this package only has a marginal impact on maternal survival.

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ANNEXES

Annex 1: National Health Development Plan 2006-2010: Objectives and Indicators

Objectif Général	Objectifs spécifiques	Strategies	Indicators
Reduce maternal and neonatal mortality	Reduce the maternal and neonatal mortality rate by 30%	Improve the availability of quality obstetrical services in health centers and hospitals: reinforce human resources, furnish them with essential equipment Improve the accessibility of obstetrical care services: implement a subvention fund for C-sections and complicated births, expand the system of reference and counter-reference	Maternal mortality rate Neonatal mortality rate % of hospitals with 24h complete chirurgical capabilities % of C-sections done/expected C-sections % births attended by skilled personnel Contraceptive prevalence rate Proportion of pregnant women sleeping under an ITN Adolescent pregnancy rate
	Reduce the pregnancy and births related morbidity rate by 2010	Improve the quality of pre-natal and post-natal care consultations Expand the community-based family planning activities Prevention of malaria for pregnant women Reduction of adolescent pregnancies	
Reduce infant and child mortality and morbidity	Achieve and/or maintain the immunization coverage of 85% by 2010	Improve the EPI logistic Improve the quality of EPI services Reinforce the capacity of health personnel Intensify the immunization activities in the health sectors with low coverage	Infant mortality rate Child mortality rate % of health centers without stock-outs of vaccines % of one year old children fully immunized % of health centers with >= 2 nurses trained by EPI % of health sectors with >80 coverage rates in BCG, DPT, et VA % of health centers that implement the IMCI approach Global acute malnutrition prevalence rate % of underweight children under five
	Ensure that all health facilities implement the integrated management of childhood illnesses approach by the year 2010	Train providers and communities Supply IMCI kits Increase community awareness of IMCI Subsidize curative care for children under five	
	Reduce by 25% the prevalence of acute malnutrition		
Reduce the prevalence of communicable and non-communicable diseases	Reduce by 25% the incidence of malaria by the year 2010	Reinforce malaria preventive measures Improve the provision of care for malaria in health facilities and at community level	Malaria prevalence rate VIH/SIDA prevalence rate % of children under five and pregnant women sleeping under an ITN Hospital mortality rate linked to malaria % of health centers with PMCT integrated in PNC % of AIDS patients receiving ARV STI incidence rate Pulmonary TB detection rate TB patients cure rate
	Reverse by 2010 the HIV/AIDS epidemiological trend	Intensify preventive activities Improve the provision of medical and psychosocial care of PLWHA Reinforce the epidemiological surveillance system of HIV/AIDS/STI	
	Increase the smear positive pulmonary TB detection rate from 45% to 70% and the cure rate from 36% to 85% by the	Improve the smear positive TB detection activities Improve the curative rate of detected TB patients	

	year 2010		
Reinforce the performance of the national health system	Increase the availability and the quality of the health personnel by the year 2010	Design and implement a human resource development policy Implement mechanisms of stabilization and incentive for the health personnel Improve the management of human resources	% of health centers and hospitals meeting the health personnel norms % of health personnel with supplementary remuneration % of health sectors with effective plans of on-the-job training % of health sectors with functioning and complete health infrastructure according to the norms % of health centers and hospitals with the needed equipment to offer their minimum package of services % of non-functioning equipment repaired in an acceptable time % of health center-months without an stock-out of essential drugs National health budget as percentage of GDP Rate between the total health budget and the national health budget Health sector budget execution rate % of health centers with identified and subsidized indigents % of health sectors with a functioning team of officers % of formative and integral supervisions completed by the Provincial
	Improve the geographical coverage by the year 2010	Build and rehabilitate health infrastructure Improve the health equipment and infrastructure Implement infrastructure and equipment management mechanisms	
	Improve the availability and accessibility of essential drugs and supplies in all health facilities in the country	Legislation and reglementation of the pharmaceutical sector Promotion of the local pharmaceutical industry Improve the geographical and financial accessibility of quality essential drugs Promote the rational use of drugs	
	Increase the needed financial resources and improve its efficacy, its technical and allocative efficiency, and its equity by the year 2010	Increase the national budget allocated to health Look for complementary and additional funds for the sector Improve the management of available financial resources Increase the financial access to health care, especially for the disadvantage	
	Improve the quality of services and of the health system in general	Support the health sector reforms to achieve a total quality management Reinforce the efficiency of the health services and programs	
	Reinforce the Ministry capacity in its stewardship and coordination role	Coordinate all the partners of the public and private sector, and the internal and external stakeholders Implement by 2010 a functional system of response to emergencies and catastrophes	

Source: National Health Development Plan 2006-2010.

Annex 2: Questionnaire for Donors

Bailleurs de Fonds: Appui au Système de Santé Burundais

Nom de l'Organisation : .....

Veuillez préciser l'unité monétaire utilisée :.....

1. Fonds d'appui au secteur santé

#	Titre du projet/ programme et description sommaire	Agence d'exécution par ex. (MSP Administration, BPS, ONG, etc.)			2003	2004	2005	2006	Proj. 2007	Proj. 2008
1			Total							
			(1) par niveau du système	Administration centrale						
				Bureaux provinciaux de santé						
				Hôpitaux de province et de secteur						
				Hôpitaux spécialisés et de 2ème niveau de référence						
				Centres de santé						
			(2) par nature	Travaux de génie civil (construction, réhabilitation.....)						
				Renforcement de capacités (par ex. séminaire, ateliers, formations, bourse d'étude etc.)						
				Équipement médical (y compris ambulances)						
				Équipement non-médical (véhicule, matériel et mobilier de bureaux)						

				produits pharmaceutiques, fournitures médicales et autres consommables						
				carburant, matériel et consommables de bureau, entretien						
				Eau, électricité, téléphone, fax, internet, etc.						
				Appui aux salaires du personnel (par ex. primes, salaire de personnel contractuel, etc.)						
				Autres (préciser) :.....						

Note: * Il faudrait s'assurer que le montant total (1) = total (2)

** Vous pouvez ajouter d'autres lignes que vous jugez nécessaires

2. Distribution géographique de l'appui

Province	2003	2004	2005	2006	Proj. 2007	Proj. 2008
BUBANZA						
BUJA-MAIRIE						
BUJA-RURAL						
BURURI						
CANKUZO						
CIBITOKE						
GITEGA						
KARUZI						
KAYANZA						
KIRUNDO						
MAKAMBA						
MURAMVYA						
MUYINGA						
MWARO						
NGOZI						
RUTANA						

RUYIGI						
Appui au niveau national						
Total (4)						

3. Est-il possible de donner les projections des appuis au secteur pour les années à venir au delà de 2008 :

.....

Nom du correspondant :.....
Fonction du correspondant :.....
Tel du correspondant :.....
e-mail du correspondant :.....

Nous vous prions de remplir les tableaux dans un format électronique (Microsoft Excel si possible) au plus tard le 15 avril 2007 et les envoyer à :

Annex 3: Questionnaire for NGOs

ONG: Appui au Système de Santé Burundais

Nom de l'Organisation : .....

Veuillez préciser l'unité monétaire utilisée :.....

1. Fonds d'appui au secteur santé

#	Titre du projet/ programme et description sommaire			2003	2004	2005	2006	Proj. 2007	Proj. 2008
		Total							
		(1) par niveau du système	Administration centrale						
			Bureaux provinciaux de santé						
			Hôpitaux de province et de secteur						
			Hôpitaux spécialisés et de 2ème niveau de référence						
			Centres de santé						
		(2) par nature	Travaux de génie civil (construction, réhabilitation.....)						
			Renforcement de capacités (par ex. séminaire, ateliers, formations, bourse d'étude etc.)						
			Équipement médical (y compris ambulances)						
			Équipement non-médical (véhicule, matériel et mobilier de bureaux)						
			produits pharmaceutiques, fournitures médicales et autres consommables						
			carburant, matériel et consommables de bureau, entretien						
			Eau, électricité, téléphone, internet, fax, etc.						

			Appui aux salaires du personnel (par ex. primes, salaire de personnel contractuel, etc.)						
			Autres (préciser) :.....						
		(3)Source de financement (préciser)	Source 1 :.....						
			Source 2 :.....						
			Source 3 :.....						
			Source 4 :.....						

Note: *Il faudrait s'assurer que le montant total (1) = total (2)=total (3)

** Vous pouvez ajouter d'autres lignes que vous jugez nécessaires

2. Distribution géographique de l'appui

Province	2003	2004	2005	2006	Proj. 2007	Proj. 2008
BUBANZA						
BUJA-MAIRIE						
BUJA-RURAL						
BURURI						
CANKUZO						
CIBITOKE						
GITEGA						
KARUZI						
KAYANZA						
KIRUNDO						
MAKAMBA						
MURAMVYA						
MUYINGA						
MWARO						
NGOZI						

RUTANA **RUYIGI**						
Appui au niveau national						
Total (4)						

3. Est-il possible de donner les projections des appuis au secteur pour les années à venir au delà de 2008 :

.....

Nom du correspondant :.....
Fonction du correspondant :.....
Tel du correspondant :.....
E-mail du correspondant :.....

Nous vous prions de remplir les tableaux dans un format électronique (Microsoft Excel si possible) au plus tard le 15 avril 2007 et les envoyer à :

Annex 4: Summary table from the data base on external financing to the health sector in Burundi (in US$): Total assistance.

	2003	2004	2005	2006	2007 (projection)	2008 (projection)	2009 (projection)
1. Reste du Monde (bailleurs et ONG internationales)	**35,958,222**	**45,909,134**	**63,398,528**	**60,434,397**	**62,969,226**	**32,454,829**	**15,312,500**
1bis. Reste du Monde (US$ par habitant)	**5.13**	**6.56**	**9.05**	**8.63**	**8.99**	**4.63**	**2.19**
Banque mondiale	5,081,894	11,069,351	20,501,177	10,965,948	5,266,319	9,000,000	10,000,000
Belgique	586,798	779,508	332,269	209,833	2,645,593	2,270,483	-
Suisse	-	-	79,832	19,992	2,915,500	2,832,200	-
DFID	2,092,223	2,534,957	3,430,423	1,915,770	7,886,758	532,827	-
ECHO	10,217,175	10,401,084	7,295,063	9,379,367	6,436,820	830,997	-
FNUAP	950,000	950,000	1,683,421	1,635,457	1,683,333	-	-
Fonds Mondial paludisme	-	4,825,540	7,047,205	4,809,371	-	-	-
Fonds Mondial tuberculose	-	-	595,366	874,561	718,916	-	-
Fonds Mondial VIH/SIDA	7,640,076	3,043,738	4,425,626	4,859,459	-	-	-
France (à travers financement des ONG)	-	-	550,550	251,964	-	-	-
GAVI	-	-	112,623	159,270	3,903,600	3,474,000	1,200,000
Japon	-	-	-	-	5,500,000	1,500,000	-
OMS	-	-	-	1,639,023	1,779,167	1,779,167	1,779,167
PNUD	378,657	698,594	665,519	616,667	616,667	-	-
UNICEF	2,961,638	586,912	2,326,907	5,967,183	6,103,365	-	-
Union Européenne	3,975,176	3,154,457	2,579,267	4,049,998	6,811,451	6,811,451	-
USAID	1,783,348	1,726,776	3,943,403	3,084,269	2,388,023	2,333,333	2,333,333
ACF	-	138,833	153,833	452,264	-	-	-
ACORD	-	-	-	213,183	-	-	-
ADRA	-	-	-	-	40,869	-	-
AJC SIDA	-	-	-	11,543	93,415	-	-
CARE	17,500	17,500	17,500	50,369	25,364	-	-
CCM	-	-	-	83,017	112,859	-	-
CED CARITAS	-	-	-	-	246,552	-	-
CICR	-	442,063	107,076	153,121	51,358	-	-
Concern Worldwide Burundi (financement irlandais)	60,069	138,120	135,633	104,919	206,125	-	-
CORDAID (FP + financement néerlandais)	-	-	886,868	944,989	1,874,539	1,090,372	-
ESTHER	-	-	-	789,601	789,601	-	-
Family Health International	-	-	-	195,609	195,609	-	-
FUCOS	36,866	37,554	-	62,170	-	-	-
GVC	-	-	736,248	736,248	-	-	-
Health Net International TPO	-	304,736	793,943	1,477,630	2,044,019	-	-
Handicap International	-	-	-	852,392	-	-	-
IMC	-	-	1,060,687	860,687	-	-	-
JRS	-	-	419,473	524,035	137,139	-	-
LVIA	-	112,454	203,850	30,171	14,811	-	-
MSF Belgique (FP + financement irlandais)	-	-	1,076,521	1,831,435	1,460,730	-	-
PSI	-	-	-	262,900	170,845	-	-
World Vision International (financement total)	176,804	4,946,956	2,238,244	359,983	849,879	-	-
2. Privé (ONG nationales)	**-**	**-**	**-**	**1,919,587**	**3,723,275**	**-**	**-**
2bis. Privé (US$ par habitant)	**-**	**-**	**-**	**0.27**	**0.53**	**-**	**-**
ABC MAV	-	-	-	-	198,469	-	-
ABS	-	-	-	172,302	1,945,000	-	-
ABUBEF	-	-	-	65,492	-	-	-
CEPBU	-	-	-	480,247	560,046	-	-
Nouvelle Espérance	-	-	-	915,307	1,019,760	-	-
OAP	-	-	-	11,262	-	-	-
SWAA	-	-	-	274,978	-	-	-
3. Dépenses du reste du monde+dépenses privées (US$)	**35,958,222**	**45,909,134**	**63,398,528**	**62,353,985**	**66,692,502**	**32,454,829**	**15,312,500**
3bis. Dépenses du reste du monde + dépenses privées (US$ par	**5.13**	**6.56**	**9.05**	**8.90**	**9.52**	**4.63**	**2.19**

Note: To avoid double counting in the data base, attention was paid to the financing agency and not to the executing agency. For instance, UNICEF is both a financing and executing agency. Therefore, the amounts recorded in the data base under the name of UNICEF include UNICEF own resources but do not include funds from ECHO, EU, USAID, Belgium, Japan, WHO and GAVI. These funds are included in the data base under the name of ECHO, EU, USAID, Belgium, Japan, WHO and GAVI respectively.
As far as NGOs financing is concerned, the same methodology was used to avoid double counting: only NGO's own resources were registered as NGOs funds. Most NGOs are executing donors' funds and these funds were recorded under each donor.

Annex 5: Summary table from the data base on external financing to the health sector in Burundi (in US$): Assistance to HIV/AIDS activities.

	2003	2004	2005	2006	2007 (projection)	2008 (projection)	2009 (projection)
1. Reste du Monde (bailleurs et ONG internationales)	**14,624,783**	**12,460,795**	**22,041,181**	**19,676,281**	**9,683,000**	**8,000,000**	**6,000,000**
1bis. Reste du Monde (US$ par habitant)	**2.07**	**1.78**	**3.15**	**2.80**	**1.37**	**1.14**	**0.86**
Banque mondiale	**4,692,144**	**6,286,467**	**12,809,346**	**9,929,087**	**6,199,836**	**8,000,000**	**6,000,000**
Belgique	-	-	-	-	-	-	-
Suisse	-	-	79,832	-	-	-	-
DFID	2,092,223	2,092,223	2,092,223	-	-	-	-
ECHO	-	-	-	-	-	-	-
FNUAP	-	-	-	-	-	-	-
Fonds Mondial paludisme	-	-	-	-	-	-	-
Fonds Mondial tuberculose	-	-	-	-	-	-	-
Fonds Mondial VIH/SIDA	7,640,076	3,043,738	4,425,626	4,859,459	-	-	-
France (à travers financement des ONG)	-	-	-	-	-	-	-
GAVI	-	-	-	-	-	-	-
Japon	-	-	-	-	-	-	-
OMS	-	-	-	350,174	-	-	-
PNUD	-	422,519	616,667	616,667	616,667	-	-
UNICEF	-	-	-	-	-	-	-
Union Européenne	163,475	163,475	38,249	38,249	-	-	-
USAID	-	-	-	781,889	2,092,468	-	-
ACF	-	-	-	18,096	-	-	-
ACORD	-	-	-	213,183	-	-	-
ADRA	-	-	-	-	40,869	-	-
AJC SIDA	-	-	-	11,543	93,415	-	-
CARE	-	-	-	32,869	-	-	-
CCM	-	-	-	-	-	-	-
CED CARITAS	-	-	-	-	246,552	-	-
CICR	-	-	-	-	-	-	-
Concern Worldwide Burundi (financement irlandais)	-	-	-	-	-	-	-
CORDAID (FP + financement néerlandais)	-	-	-	41,702	-	-	-
ESTHER	-	-	-	789,601	789,601	-	-
Family Health International	-	-	-	195,609	195,609	-	-
FUCOS	36,866	37,554	-	62,170	-	-	-
GVC	-	-	336,409	336,409	-	-	-
Health Net International TPO	-	-	-	544,916	-	-	-
Handicap International	-	-	-	129,716	-	-	-
IMC	-	-	-	-	-	-	-
JRS	-	-	122,351	128,044	137,139	-	-
LVIA	-	-	-	-	-	-	-
MSF Belgique (FP + financement irlandais)	-	-	-	-	-	-	-
PSI	-	-	-	166,900	170,845	-	-
World Vision International (financement total)	-	414,820	1,520,479	330,000	-	-	-
2. Privé (ONG nationales)	**-**	**-**	**-**	**1,580,865**	**3,412,427**	**-**	**-**
2bis. Privé (US$ par habitant)	**-**	**-**	**-**	**0.23**	**0.49**	**-**	**-**
ABC MAV	-	-	-	-	198,469	-	-
ABS	-	-	-	172,302	1,945,000	-	-
ABUBEF	-	-	-	10,994	-	-	-
CEPBU	-	-	-	196,023	249,198	-	-
Nouvelle Espérance	-	-	-	915,307	1,019,760	-	-
OAP	-	-	-	11,262	-	-	-
SWAA	-	-	-	274,978	-	-	-
3. Dépenses du reste du monde+dépenses privées (US$)	**14,624,783**	**12,460,795**	**22,041,181**	**21,157,146**	**12,996,427**	**8,000,000**	**6,000,000**
3bis. Dépenses du reste du monde + dépenses privées (US$ par ha	**2.07**	**1.78**	**3.15**	**3.02**	**1.86**	**1.14**	**0.86**

Annex 6: Summary table from the data base on external financing to the health sector in Burundi (in US$). Expenditures by province.

	2003	2004	2005	2006	2007 (projection)	2008 (projection)	2009 (projection)
BUBANZA	797,535	794,328	1,123,008	1,772,531	1,114,433	1,090,372	-
BUJA-MAIRIE	39,366	172,672	1,281,792	1,581,395	4,758,215	1,500,000	-
BUJA-RURAL	32,535	71,560	1,246,125	2,785,179	1,954,922	1,363,824	532,827
BURURI	-	66,309	906,656	908,273	1,242,552	400,000	400,000
CANKUZO	795,035	630,891	976,321	1,355,541	3,969,054	1,702,863	-
CIBITOKE	827,570	702,451	586,169	1,033,641	360,108	37,500	37,500
GITEGA	-	66,309	17,184	1,062,210	772,615	400,000	400,000
KARUZI	2,500	4,549,910	2,994,092	2,503,833	3,792,686	1,702,863	-
KAYANZA	-	-	100,930	907,085	544,916	1,166,667	1,166,667
KIRUNDO	364,645	278,575	1,915,339	1,384,449	3,048,352	2,270,483	-
MAKAMBA	-	-	124,005	676,049	903,195	-	-
MURAMVYA	-	22,103	130,354	41,565	52,315	37,500	37,500
MUYINGA	2,500	3,002,884	2,021,150	846,318	2,009,742	1,204,167	1,204,167
MWARO	-	-	-	30,065	400,000	400,000	400,000
NGOZI	-	66,309	403,002	1,096,753	4,087,600	2,832,200	-
RUTANA	795,035	652,995	1,426,449	1,190,885	1,707,917	1,702,863	-
RUYIGI	795,035	687,736	528,521	1,964,884	2,232,516	1,702,863	-

Annex 7: References used for the construction of the data base on external assistance to the health sector in Burundi

1. **Donors**

- World Bank

Aide-Mémoire de la Mission de suivi de la Banque Mondiale du 14 octobre au 21 octobre 2005. Second Health and Population Project; Preparation of the Third Health and Population Project; Preparation of the health sector note.
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- Belgium

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- Switzerland

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- DFID

Questionnaire sent by the MSP and the WB and completed by DFID.
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- ECHO

Humanitarian Aid to vulnerable population groups in Burundi. Global Plans 2004, 2005, 2006. European Commission.
List of commitments/contributions and pledges to projects not listed in the Appeal as of July 11, 2007. Compiled by OCHA for 2005 and 2006 on the basis of information provided by donors and appealing organizations. Financial Tracking Service, Tracking Humanitarian Aid Flows.

- UNFPA

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- Global Funds Malaria

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- Global Funds to fight HIV/AIDS

Questionnaire sent by the MSP and the WB and completed by the Global Funds to fight HIV/AIDS.
Annual reports of the CNLS.

- Global Funds Tuberculosis

Questionnaire sent by the MSP and the WB and completed by PNLT.

- France

List of commitments/contributions and pledges to projects not listed in the Appeal as of July 11, 2007. Compiled by OCHA for 2005 and 2006 on the basis of information provided by donors and appealing organizations. Financial Tracking Service, Tracking Humanitarian Aid Flows.

- GAVI

Questionnaire sent by the MSP and the WB and completed by GAVI.
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- Japan

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- World Health Organization

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- UNDP

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- UNICEF

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- European Union

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- USAID

USAID Data Sheet for FY 2005 and FY 2006.
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2. **NGOs**

- Association Burundaise pour la Prise en Charge des Malades Vulnérables du VIH/SIDA (ABC MAV)

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- Alliance Burundaise contre le SIDA (ABS)

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- Association Burundaise pour le Bien Etre Familial (ABUBEF)

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- Association de Coopération et de Recherche pour le Développement (ACORD)

Annual report 2006. January 2007. Bujumbura.

- Action Contre la Faim (ACF)

Annual report 2006.

- Adventist Development and Relief Agency (ADRA)

Report on 2006 activities. April 2007. Bujumbura.

- Association Jeunesse Chrétienne contre le SIDA (AJC-SIDA)

Report on 2006 activities and action plan 2007. March 2007. Bubanza.

- CARE

Annual report 2006. February 2007.

- Comitato Collaborazione Medica (CCM)

Questionnaire sent by the MSP and the WB and completed by CCM.
Report on 2006activities. March 2006.

- CED Caritas Burundi

Annual report 2006. February 2007.

- Communauté des Eglises de Pentecôte (CEPBU)

Annual report 2006 and action plan 2007.

- International Committee of the Red Cross (ICRC)

Questionnaire sent by the MSP and the WB and completed by ICRC.

- Catholic Organization For Relief And Development Aid (CORDAID)

Annual report 2006. January 2007.
Programmation de l'intervention CORDAID au Burundi. First draft. March 2005.

- Concern Worldwide Burundi

Questionnaire sent by the MSP and the WB and completed by Concern Worldwide Burundi.

- Ensemble pour une Solidarité Thérapeutique En Réseau (ESTHER)

Questionnaire sent by the MSP and the WB and completed by ESTHER.

- Family Health International (FHI)

Questionnaire sent by the MSP and the WB and completed by FHI.

- Force des Universitaires Contre le SIDA (FUCOS)

Report on 2006 activities.

- Gruppo Volontaria Civil (GVC)

Annual report 2006. February 2007.

- Health Net International Transcultural Psychosocial Organization (HNI TPO)

Annual report 2006. December 2006.

- Handicap International

Annual report 2006.

- International Medical Corps (IMC)

Questionnaire sent by the MSP and the WB and completed by IMC Kirundo and IMC Muyinga.
Annual report 2006. February 2007. Bujumbura.

- Jesuit Refugee Service (JRS)

Annual report 2006 for health activities.

- Association Internationale des Volontaires Laïcs (LVIA)

Questionnaire sent by the MSP and the WB and completed by LVIA.

- Médecins Sans Frontières Belgique (MSF Belgique)

Questionnaire sent by the MSP and the WB and completed by MSF.

- Nouvelle Espérance

Annual report 2006.

- Organisation d'Appui à l'Auto-Promotion (OAP)

Annual report 2006. March 2007. Bujumbura.

- Population Services International (PSI)

Report on 2006 activities and activities planned for 2007.

- Association des femmes africaines face au SIDA (SWAA)

Annual report 2006. February 2006. Bujumbura.

- World Vision International Burundi (WVIB)

Questionnaire sent by the MSP and the WB and completed by World Vision International Burundi.

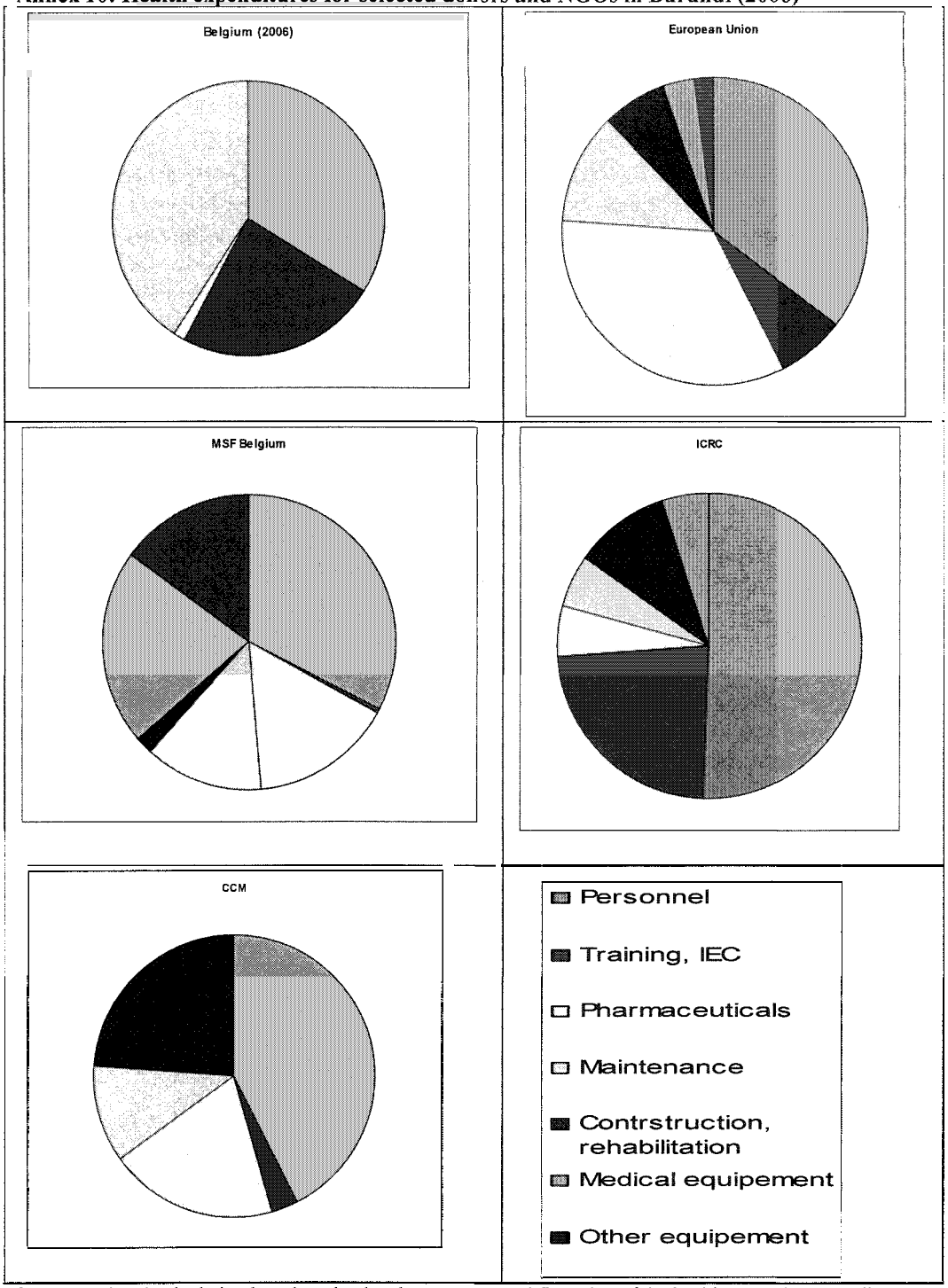
Annex 8: Donors listed in the database of external resources flowing to the health sector in Burundi

- World Bank
- Belgium
- Switzerland
- DFID
- ECHO
- UNFPA
- Global Funds Malaria
- Global Funds HIV/AIDS
- Global Funds Tuberculosis
- France
- GAVI
- Japan
- World Health Organization
- UNDP
- UNICEF
- European Union
- USAID

Annex 9: NGOs listed in the database of external resources flowing to the health sector in Burundi

- Association Burundaise pour la Prise en Charge des Malades Vulnérables du VIH/SIDA (ABC MAV)
- Alliance Burundaise contre le SIDA (ABS)
- Association Burundaise pour le Bien Etre Familial (ABUBEF)
- Association de Coopération et de Recherche pour le Développement (ACORD)
- Action Contre la Faim (ACF)
- Adventist Development and Relief Agency (ADRA)
- Association Jeunesse Chretienne contre le SIDA (AJC-SIDA)
- CARE
- Comitato Collaborazione Medica (CCM)
- CED Caritas Burundi
- Communauté des Eglises de Pentecôte (CEPBU)
- Comité International de la Croix-Rouge (CICR)
- Catholic Organization For Relief And Development Aid (CORDAID)
- Concern Worldwide Burundi
- Ensemble pour une Solidarité Thérapeutique En Réseau (ESTHER)
- Family Health International (FHI)
- Force des Universitaires Contre le SIDA (FUCOS)
- Gruppo Volontaria Civil (GVC)
- Health Net International Transcultural Psychosocial Organization (HNI TPO)
- Handicap International
- International Medical Corps (IMC)
- Jesuit Refugee Service (JRS)
- Association Internationale des Volontaires Laïcs (LVIA)
- Médecins Sans Frontières Belgique (MSF Belgique)
- Nouvelle Espérance
- Organisation d'Appui à l'Auto-Promotion (OAP)
- Population Services International (PSI)
- Association des femmes africaines face au SIDA (SWAA)
- World Vision International Burundi (WVIB)

Annex 10: Health expenditures for selected donors and NGOs in Burundi (2006)



Source: authors' calculation based on the data base on external financing of the health sector in Burundi.

Annex 11: Case study: budget management at different levels of the Ministry of Health

A. Introduction

a. Context

After 1993, Burundi's public expenditure on health decreased sharply, negatively affecting the functioning of the health system. Households had to increase their expenditure to offset this reduction. However, as household income levels are low and existing exemption and waiver mechanisms were not functioning properly, the increase in out-of-pocket expenditure on health has created large financial barriers to access these services.

With peace and stabilization in the country, the government started to receive additional resources. The international community has returned and the country has benefited from debt relief through the Heavily Indebted Poor Countries Initiative. Thanks to HIPC resources the budget of the MSP increased significantly after 2005; in 2006 alone the budget increased by 80%.

Before benefiting from the HIPC initiative, salaries constituted a large share of the MSP's budget. Thanks to HIPC funds, the MSP must now manage a much higher level of resources. This creates a challenge to the MSP who is currently facing difficulties to execute its budget. This is partly due to weaknesses in planning and management of resources, particularly in the procurement of goods and services. In addition, the recent presidential measure to eliminate user fees for services provided to women during delivery and children under five has created more management difficulties for the MSP. Recognizing the need to improve the management of resources, the Ministry of Health created a *Direction Générale des Ressources* (DGR) but the insufficient number of human resources has limited its efficacy.

b. Objectives

This case study was conducted in the context described above and has three objectives: (i) to understand the flow of resources to different levels of the Ministry of Public Health; (ii) to assess the constraints faced in the management of these resources; and (iii) to propose corrective measures to reduce these constraints.

c. Methodology

These case studies were based on guided interviews[55] with health personnel in three provinces: Rutana, Gitega, and Ngozi (see the questionnaires and the list of persons interviewed). In each province, the provincial *Médecin-chef*, the Financial and Administrative Directors of the *Bureaux Provinciaux de Santé* (BPS), the *Médecin Directeur* of the Regional Hospital or District Hospital, and the titular of a health center were interviewed. These interviews took place the last week of March 2007.

The specific objectives of these interviews were to better understand: (i) the flow of resources at provincial and health facilities levels; (ii) the planning process and the preparation of the budget at provincial and health facilities levels; (iii) constraints in executing the budget at these levels; and (iv) the impact of the presidential measure to eliminate user fees for children

[55] These interviews were conducted by Ms Euphrasie Ndihokubwayo from MSP, Ms Maria Eugenia Bonilla-Chacin and Mr Marc Nene from the World Bank. This study was made with support from Mr Cyprien Baramboneranye and Mr Jean-Paul Nyarushatsi from MSP.

under five and women during delivery. The information collected during the visits to the three provinces was complemented with guided interviews with key personnel in the Ministry of Finance and at the central level of the MSP.

The selection of the provinces was based on the need to identify differences in resource management processes between provinces receiving some external support and those not receiving any. One province, Rutana, received support through an EU project; a second province, Gitega, has not received any major support; and finally, Ngozi has recently started to receive support from the Swiss Cooperation and had previously received support from the World Bank financed PSP II project.

B. Resource flow

There are four main resource flows from the central level of government to the BPS and health facilities. These four resource flows are used for the payment of personnel, non-salary recurrent costs excluding drugs, investment costs, and pharmaceuticals and medical supplies. All these four flows follow the government's public expenditure processes.

a. Salaries and bonuses

The salaries of civil servants are paid directly by the *Ministère de la Fonction Publique*. Besides civil servants, health facilities recruit contractual staff for technical, administrative, or support purposes. Usually, the salaries of contractual staff are paid out of the health facilities' own revenues.

Hospitals with managerial autonomy receive a budget allocation from the Ministry of Finance for their functioning. These allocations are usually small and mainly cover salaries.

The salaries of health care personnel paid by the *Fonction Publique* are low and have proven insufficient to provide incentives for personnel to work outside Bujumbura, especially in remote areas. As consequence, partners to the health sector have paid for salaries and bonuses to health care workers. However, these salaries and bonuses have been controversial. They are often many times higher than the salaries paid in the public sector and have thus created a large disincentive for personnel paid by the *Fonction Publique* and working along side those receiving salaries and bonuses from partners. These salaries and bonuses varied considerably between partners and between provinces and even within a province. For instance, in the provincial hospital of Rutana, doctors paid through external assistance received about US$ 3,000 per month while those paid by the *Fonction Publique* received less than US$ 100. In Ngozi hospital, specialists paid through external assistance earn about Euro 1,500 and general practitioners Euro 300 while civil servants receive much less. To compensate physicians paid by the *Fonction Publique,* this hospital gives them bonuses but these bonuses are not sufficient to cover the difference.

b. Non-salary recurrent costs

BPSs receive resources from the central level to cover their running costs as well as the running costs of the health facilities under their supervision. These funds are usually insufficient in relation to the needs. Each BPS submits a request to the MSP for office supplies, commodities, maintenance, etc. but it often does not get what it had asked for.

Until recently the *Bureaux Provinciaux de Santé* received a small budget allocation for recurrent costs but they had limited flexibility in the use of these resources as they could only be used for specific budget categories (fuel, generator, wheels, etc.). Since 2006, these resources are not directly allocated to the BPS; the MSP now has to provide all the resources needed in kind. Additional resources from HIPC funds are now available for the functioning of BPSs and health facilities but they are entirely managed at the central level of the Ministry of Health.

Hospitals with managerial autonomy must cover their running costs with their own resources.

c. Investment costs

Investment costs of all the health facilities, including hospitals, are mainly financed through donors' support. Part of these resources are directly managed by donors or executing agencies, usually international NGOs. Another part of this support is managed by Project Execution Units (*Unités d'Exécution de Projet*) in the MSP; as was the case of the PSP II project financed by the World Bank.

Investment costs financed by donors often escape the government's expenditure chain and mainly follow donors' monitoring procedures.

d. Pharmaceuticals

There is a specific budgetary line in the Ministry of Health budget to finance pharmaceuticals and medical supplies through CAMEBU. In 2006, this budgetary line reached FBU 700 million. However, this line is not sufficient to cover all the needs of the health facilities in the provinces; therefore, BPSs buy some pharmaceuticals from the CAMEBU with the revenue collected by health centers.

Health facilities also receive drug donations. For instance UNICEF has distributed essential drugs. It has also distributed, thanks to ECHO financing, drugs, delivery kits and caesarean section kits to respond to the presidential decree to eliminate user fees for children under five and women during delivery. However, some of these pharmaceuticals do not correspond to needs. For instance, pharmaceuticals adapted to children under five were not provided in the kits. Although CAMEBU was responsible for the distribution of all these drugs, the first stock of drugs and kits donated by ECHO was managed separately from other drugs and supplies. Health facilities had to manage two different drug stocks, one for deliveries and children under five and another for all other purposes. The management of these two stocks was difficult to handle and inefficient. DFID has also provided large quantities of pharmaceuticals to respond to the May 2006 presidential measure; by March 2007 these drugs were starting to be distributed to health facilities. The management of DFID donation has been integrated with the rest of the pharmaceuticals.

Hospitals with managerial autonomy finance most of their pharmaceuticals with their own revenues but they also benefit from ECHO and DFID donations.

In the visited provinces, the pharmaceutical chain, the flow of resources to buy pharmaceuticals and the way revenues from the sale of pharmaceuticals are managed are neither standardized nor clear. Health facilities buy pharmaceuticals to the BPS when they are not provided by UNICEF/ECHO or DFID donations. The BPS replenishes its stock thanks to the

MSP budgetary line for pharmaceuticals and to the revenues collected selling these pharmaceuticals to health facilities.

However, there is no harmonized price policy for services provided or for pharmaceuticals. The BPS sells pharmaceuticals to health centers with some benefit, varying from a province to another. For instance in Rutana, where drug revolving funds have been established, the BPS buys pharmaceuticals from the CAMEBU at 100% of their price and sells them back to the health centers with a 5% margin. Finally, health centers sell the drugs to users with a 15% margin. This system is supposed to ensure the sustainability of the revolving fund for pharmaceuticals. However, now that some services are provided "free" of charge, these drug revolving funds have experienced some difficulties.

e. Revenues of health facilities

To compensate for the decrease in health facility revenue caused by the presidential decree of May 2006, the central level of the MSP instituted a mechanism to reimburse facilities for services delivered "free" of charge. The reimbursement is made by the MSP who checks all the invoices sent by each health facility. The reimbursement is financed by HIPC funds and is directly sent to the health facilities' bank account. The government's delay to reimburse these invoices caused significant difficulties to health facilities as they could hardly cover their running costs, such as salaries of contractual staff, maintenance, supplies, and, in hospitals with managerial autonomy, utilities. By March 2007 many hospitals had large and increasing debts with REGIDESO, the water and electricity company.

Parallel to this top-down flow from central to lower levels, there is a bottom-up flow of resources from health facilities to higher levels of MSP. Part of the revenues collected by health centers, essentially from drugs and services provided, goes to the BPS or to communal structures. However, as mentioned above, the management and the use of these resources widely vary across provinces and escape from the government's monitoring mechanisms for public expenditure. For instance, in some provinces, health centers must send part of their revenues to the BPS to cover part of the BPS running costs. In Gitega province, health centers used to send 10% of their revenues to the BPS. In Ngozi, the BPS used to retain 20% of the revenues health facilities collected from the sale of pharmaceuticals. With the presidential measure to eliminate some user fees, these practices have stopped as the facilities' revenues markedly declined.

In general, facilities' own resources are managed more transparently in health centers where communities are largely involved in the management process through Health Committees (COSA) and Management Committees (COGE). In the three visited provinces health facilities usually have two bank accounts, one for the revenues collected from the sale of drugs and another for the revenues collected from the services or "acts". Most health centers have flexibility in the use of the funds collected in the "acts" account. These resources are often used to cover running costs, including the payment of salaries of some contractual staff such as security personnel. In contrast, the management and the use of resources from the pharmaceutical account are more restrictive and often escape the control of the health center. For instance, in Ngozi, only the BPS can withdraw resources from this account. In Gitega, the revenues from the pharmaceutical bank account are managed by the Titular Nurse of the health center and the Communal Administrator without any community participation. Before, in this province, all these revenues were sent to the communal government. Among the three provinces visited, Rutana, which benefited from EU support, is the only province where the community is fully involved in the management of the revenues collected by health centers. In this province, the revenues of facilities are managed by a Management Committee which is part of the Health Committee in which the community is

largely represented. In each health center, an administrator elected by the community reports to the COSA, and therefore to the community. The salary of this administrator is paid by the health center. The revenues collected on the pharmaceutical bank account constitute part of the facility's drug revolving fund; this fund was functioning relatively well before the presidential measure of 2006.

C. Budget preparation process

The overall budget preparation process is centralized but fragmented across type of expenditure and source of financing. The budgetary process starts in June-July when the Ministry of Finance sends a letter to all sectoral ministries. As the letter sent by the Ministry of Finance does not provide a budget envelop, the preparation of a realistic budget is difficult at best. Furthermore, recurrent and investment budgets are not consolidated at the sectoral ministry level which means that the projects' running costs are not always integrated to the programmatic budget[56]. During July and August the budgetary bargaining across sectors takes place.

At the level of the MSP, each programme, department, BPS and autonomous hospital prepares a budget plan for non-salary running costs and sends it to the *Direction du Budget (*in the *Direction Générale des Ressources)* which is responsible for the preparation of the consolidated MSP budget. However, these budget plans are seldom taken into account by the Ministry of Finance and the budget from the previous year is often reproduced with a 10% increase. As far as HIPC resources are concerned, budget planning takes place after the budget allocations are known. In other words the MSP prepares an expenditure plan for HIPC resources once the budget is approved.

The MSP faces several challenges during budget preparation. At lower levels of the ministry, especially at BPS level there is low capacity for budget preparation. As a result, their budget plans are often not linked to the sector's strategies or objectives and budget allocations are not prioritized. At the central level of the Ministry (DGR with some help from the *Cellule de Planification*), the consolidated budget is linked to the sectoral policies and objectives and some expenditures are prioritized. However, the budget preparation at this level also faces challenges:

1. Budget preparation is fragmented. The budget for HIPC resources is prepared separately from the rest of the budget. Additionally, recurrent and investment budgets are not consolidated at the sectoral ministry level which means that the projects' running costs are not always integrated to the programmatic budget[57].
2. There is no consolidated account of donor funds flowing to the sector. Although each health program knows what it receives from external assistance, the central level does not have complete information on donor funds. This limits the ministry's capacity to plan and prepare a comprehensive budget as most external assistance is not registered in the budget.
3. External assistance is unpredictable.
4. There is limited capacity to estimate the cost of health plans.
5. At the DGR the few persons with skills to prepare budgets are overwhelmed with other functions. For instance, the same people in charge of budget preparation are responsible to check all the invoices sent by the facilities for the reimbursement of "free" services. The same people also sign and send the letters to the *Ordonnateur Trésorier du Burundi*

[56] IMF Report 07/46, January 2007
[57] IMF Report 07/46, January 2007

(OTB) for the release of funds to all these facilities (there are about 500 facilities in the country).

D. Budget execution

Budget execution is low due to the centralization of public procurement and to delays in the disbursement of funds. The MSP receives monthly allocations of funds from the Ministry of Finance for its recurrent expenditure. Expenditure larger than FBU 2 million must go through public procurements managed by the Ministry of Finance. Sectoral Ministries only prepare the procurement documents but the entire process is driven by the Ministry of Finance. The MSP, as other sectoral ministries, also has some difficulties to prepare procurements documents. The DGR does not have sufficient staff with skills to prepare all these procurement documents. Because of the difficulties and delays caused by this cumbersome procedure for large procurements, the responsibility to manage the procurement process is being decentralized towards sectoral ministries. Another challenge the MSP confronts when executing its budget is the limited number of personnel to monitor large expenditures (e.g. construction, rehabilitation, etc.). No monitoring is done of the expenditure financed and managed by donors. Finally, in 2006 the delays of the Ministry of Finance to disburse HIPC funds also negatively affected the budget execution of the MSP. For instance, in 2006, HIPC funds were only allocated to the MSP in July causing large payments delays.

The expenditure chain within the MSP is submitted to several controls and faces many constraints leading to large delays in the budget execution process. Until recently, a large part of the MSP budget was used to pay salaries leaving very little for other expenditures. The MSP therefore has limited experience in the management of public resources. Since 2006, with the HIPC funds, the budget of the ministry has significantly increased. That year the MSP had difficulties in executing the new increased budget.

The low budget execution in 2006 was then mainly due to the following:

- The new procedures designed to manage HIPC funds took a long time to be implemented and as consequence the disbursement of these funds were markedly delayed.

- The expenditure plans are prepared very late in the year. For instance, the expenditure plan for HIPC funds in 2006 was finished in April. In 2007, the expenditure plan was finalized in March.

- In 2006, procurement documents were given by the MSP to the Ministry of Finance in June but the latter took a long time to process them due to changes in the *Direction des Marchés Publics*. In the end, procurement documents were approved in December.

In order to better plan the use of HIPC funds, the MSP prepares an execution plan for these resources. This budget execution plan could be improved by prioritizing expenditures and by including a commitment plan with a chronogram for the fiscal year.

To improve resource management, the MSP created last year a *Direction Générale des Ressources* to manage both financial and human resources. This Direction is in charge of the preparation of the consolidated budget of the ministry. Its efficacy remains limited as it lacks

human resources. For planning purposes, the MSP has a *Cellule de Planification* that supports the *Directeur Général de la Santé*, the *Directeur des Programmes de Santé*, and the DGR. The entire team (DG, DGR, DP, and the *Cellule de Planification*) is at the moment drafting a health plan for 2007-2009. Although in general the team has the skills needed for planning, it could benefit from building capacity to cost health programs.

A system was put in place by the Ministry of Health to compensate facilities for the loss of revenue generated by the presidential initiative to eliminate user fees for women during delivery and children under five. For a facility to be compensated for these "free" services it needs to send as "proof" an invoice for each of the services provided and a photocopy of the identity document of the beneficiary.

Until May 2007, the procedure to check the invoices sent by health facilities for the reimbursement of "free" services was cumbersome and led to long reimbursement delays. Each health facility had to send to the BPS invoices for the inputs used to deliver these services. The BPS checked these invoices and consolidated them by health facility before sending them to the central level of the Ministry for further control. After the MSP had checked all the invoices, they were sent to the Ministry of Finance for final approval and payment. This cumbersome procedure explains the large delays in payment to facilities. By March 2007, only a few hospitals were reimbursed for the expenditures made during the three months following the presidential measure. Many health centers hadn't received any payment and were severely affected by the decrease in revenue this measure created.

Three propositions were formulated to further alleviate the procedure:

- Each BPS could send one note to the *Ordonnateur Trésorier du Burundi* for payment of all facilities in the province instead of a note for each health facility sent by the Ministry of Finance.

- The Ministry of Finance could make regular advance releases to the MSP and each BPS could withdraw funds from these releases when presenting a declaration of credit.

- Change from payment of inputs ex-post to pre-payment of services. Each health facility could receive a small initial allocation based on estimations of the quantity of services delivered to women and children. This amount would be renewed regularly after the facilities present invoices justifying the use of the funds. This procedure could be difficult to implement as most health centers do not have much experience in budget management.

The government of Burundi chose to combine the first two propositions presented above. The Ministry of Finance decided to provide advance releases to the MSP for the payments of services offered to children under five and women during delivery. As consequence, **by May 2007, the situation had improved considerably and delays in the payment of invoices were drastically reduced**. It was agreed that the Ministry of Finance would send monthly advances of FBU 150 million and that the MSP would send, for each health facility, a note to the OTB that would be signed by the *Directeur Général des Ressources*, the *Directeur du Budget* and the *Directeur Général de la Comptabilité Publique* in the Ministry of Finance. This has considerably facilitated the payments to health facilities even if some payment arrears remain. For instance, there are still invoices in the Ministry of Finance waiting to be paid and the MSP is still waiting for old invoices from health facilities.

In order to accelerate the payment of these invoices, the MSP sent to each BPS a manager exclusively responsible for the reimbursement of "free" services.

Despite these improvements, the MSP still needs to resolve the issue of the sustainability of the measure of "free" services. Although we still ignore the financial cost of this measure, it seems necessary to better define the services that can be provided "free" of charge and to estimate their cost. In addition, the monthly releases from the Ministry of Finance to the MSP won't be sufficient to cover the cost of all the invoices sent by the health facilities as there are large arrears from the previous year. By the end of May, 80% of the budgetary line for the payment of these services was already used.

E. Province specific observations

a. Rutana province

There are two hospitals in Rutana province and thirty two health centers, twenty five public, four private for profit, and three private non-for-profit known as "*agréés*". These health centers are located in the six communes of the province, each commune having on average five health centers. Each health center is in charge of a population varying from 4,000 to 12,000 inhabitants and has either four or two nurses depending on whether the health center provides housing accommodation or not.

Rutana province benefited from the European Union support through PATSBU project that was financed by the 9th European Development Fund (EDF).

Resource flow and management in Rutana's BPS

The Provincial health bureau in Rutana receives funds from several sources including the national budget, development partners such as the European Union, GTZ, the NGO International Medical Corps (IMC), and from the sale of pharmaceuticals to the province's health centers. As far as the budget preparation and execution are concerned, the BPS in Rutana, as all other BPSs, is supposed to have managerial autonomy but in reality it does not have direct control over its budget. The BPS orders equipments to the MSP for its functioning and receives them in kind. Under the PATSBU project financed by the 9th EDF, the BPS was preparing an action plan with a budget but now it only prepares an annual action plan.

Salaries, bonuses and other running costs

The salaries of the BPS staff are paid directly by the *Fonction Publique*. In addition to the payment of salaries, the BPS usually receives a three-month allocation of FBU 625,000 from the Ministry of Finance to cover its running costs but these funds are sent irregularly. For instance, they hadn't received these funds for almost one year. Furthermore, these funds are allocated to very specific budget categories and reallocations by the BPS are not allowed.

As mentioned above, the BPS also receives small equipment and supplies from the MSP for its functioning. These equipments and supplies must also be sent to the health centers upon their request. Development partners also provide supplies to the BPS and health centers.

Pharmaceutical chain

The BPS in Rutana has a pharmacy whose initial stock was financed by the European Union through PATSBU project. The BPS buys pharmaceuticals to the CAMEBU at 100% of their price and sells them back to the province's health centers with 5% benefit. The benefit collected selling pharmaceuticals is used to replenish the stock at the BPS level.

In addition to these drugs, the BPS also receives drug donations. The BPS distributes them to health centers to cover the needs of children under five and women during delivery in the context of the implementation of the presidential measure on "free" services. However, these pharmaceuticals are not always adapted to the needs of the beneficiaries. For instance, pharmaceuticals in pediatric form are often missing in the kits. As a consequence of this inadequacy between needs and available supplies, the BPS sometimes accumulates debts with the CAMEBU.

Resource flow and management in Rutana provincial hospital

The provincial hospital in Rutana has managerial autonomy. It has one general practitioner, who is also the *Médecin Directeur*; thirty two nurses; five A2 and twenty seven A3; eight administrative staff, two contractual staff; and twenty four support staff, thirteen contractual. The communities' involvement in the management of hospital activities is led by COGE whose members are: the physician in charge of the BPS, the hospital Director, the staff association and community representatives.

Under the EU PATSBU project the hospital had in addition two general practitioners and one surgeon. These physicians were directly paid by external assistance with a salary of about US$ 3,000 per month.

The hospital prepares an annual action plan with budget estimates and receives a global budget from the government to cover its non-salary running costs. Except for the salaries of contractual staff that are paid with hospital's own resources, salaries are directly paid by the *Fonction Publique*. The hospital own revenue is also used to provide incentives to the personnel through bonuses varying across staff categories.

In the case of pharmaceuticals, the drug revolving fund created under the PATSBU project was working relatively well and has allowed the hospital to avoid drug stock-outs. Stocks are replenished through the CAMEBU. However, the hospital at the moment of the visit seemed to have financial difficulties to buy some pharmaceuticals. The provincial hospital of Rutana also benefits from drug donations from development partners.

Effect of the presidential measure for "free" services

According to the *Médecin Directeur* of the hospital, after the presidential measure the hospital, occupation rate has been above 100%. The human resource shortage is even more acute now that the demand for health services has drastically increased. Drug donations to confront the increase in demand are often irregular and not adapted to the needs of beneficiaries.

The hospital is facing important financial difficulties due to the decrease in revenue produced by the May 2006 measure and to large delays in the reimbursement of the invoices.

Resource flow and management in Gitaba health center

Gitaba health center has four A3 nurses, one *aide-soignante*, a COGE manager chosen by the community, and four support staff. As all other health centers in the province, Gitaba health center has a health committee and a Management Committee. It is worth noticing that this health center did not benefit from EDF support to the province.

Salaries and other running costs

The nurses and the *aide-soignante* are directly paid by the *Fonction Publique*. The salary of the COGE manager is paid by the health center out of the facility's own funds. The health center's revenue is also used to cover some non-salary running costs. The support staff is paid by the *commune* following an agreement between the Governor and the BPS.

The health center also receives, if requested, small equipment and supplies from the BPS for its functioning.

Revenues and pharmaceuticals

The health center buys its pharmaceuticals from the BPS which sells them with a 5% margin compared to the indicative price given by the CAMEBU. The health center then sells them to the population with a 15% margin above the CAMEBU indicative price. The health center therefore retains a benefit of 10%. Pharmaceuticals for children under five and pregnant women are sent for free by the BPS upon request.

In the health center, the manager is responsible for the pharmacy. The titular nurse provides health services and writes prescriptions for patients who then visit the COGE manager to buy or, in some cases, to get pharmaceuticals free of charge.

The health center has two bank accounts: one "acts" account for the revenues collected for the services offered and one account for revenues collected selling pharmaceuticals. As said above, the revenues from the "acts" account are used to pay the salary of the COGE manager and to cover other running costs. The cost of services offered to children under five and women during delivery is supposed to be reimbursed by the MSP but until March 2007 Gitaba health center had not receive any payment.

Effect of the presidential measure for "free" services

The number of children under five receiving care in the health center drastically increased since the May 2006 presidential measure but the health center's revenues significantly decreased as children under five and women during delivery represent the large majority of the patients attending the health center. As other health centers in the province, Gitaba health center has financial difficulties caused by the delays in the reimbursement of the "free" services. In some health centers, the salary of the COGE manager hasn't been paid for months.

According to the heads of the health center, the returns of refugees, of people formerly displaced and of former combatants, as well as the large number of poor people have also decreased the facility revenue.

b. Gitega Province

Gitega province has four health sectors (*secteurs sanitaires*); each of them has a hospital. In addition to these hospitals, the province has a regional hospital and forty four health centers. The province effectively moved towards the district system in June 2007 with a *Médecin chef* responsible for each district. As said before, Gitega province didn't receive any significant support from development partners but since November 2006 with a contractual scheme the NGO Health Net TPO has provided direct support to some health centers in Kibuye sector; this support has included rehabilitation, drug donations, and performance based bonuses.

Resource flow and management in Gitega BPS

There are thirty three people working in the BPS in Gitega. However, according to the *Médecin Directeur* there is a surplus of about 20 people. The main team of the BPS would therefore be made of the Director, the Manager, the three provincial coordinators (health, reproductive health, and PNLT), four Heads of Sector, one person in charge of the health information system, one nutrition focal point and one manager for the pharmacy.

The BPS receives resources from the government, from development partners such as ECHO, UNICEF, WHO, UNFPA, the NGO Health Net TPO and from the province's health centers.

As far as the budget is concerned, the BPS in Gitega has an operational plan for 2007 with a budget prepared after the MSP had sent a note in December 2006 providing the budget framework. Before this year, the BPS had an operational plan from 2003.

Salaries, bonuses and other recurrent costs

The salaries of the thirty three people working in the BPS in Gitega are paid by the *Fonction Publique*. In addition to the payment of salaries, the BPS receives subsidies from the government to cover non-salary running costs. However, between April 2006 and December 2006, the BPS didn't receive any financial resources but only in kind resources. The MSP directly pays for some running costs such as invoices for telephone, water, electricity, car insurances for the BPS's vehicles and fuel.

In addition to the support from the government, the BPS receives resources from the health centers that send to the BPS 10% of the revenues collected. These resources are used to cover the BPS's running costs. However, after the presidential measure on "free" services, the health centers have not been able to send these funds any more.

Development partners such as UNICEF and WHO provide support to the province, either through projects such as the community based Nutrition Pilot Project financed by UNICEF, or through drug donations.

Resource flow and management in Gitega Hospital

Gitega hospital is a regional hospital with 250 beds, 188 of which are functional. It has managerial autonomy since 1996. It has ten physicians, three from Burundi and seven from China; seventy three nurses, thirty two A2 and forty one A3; and one hundred ninety two

administrative and support staff. The hospital infrastructure and equipment are in very poor condition. The hospital has neither an ambulance nor a resuscitation service and most of the buildings are in urgent need of rehabilitation.

On the administrative side, the hospital has a Board of Directors (*Conseil de Direction*) and an Administrative Board (*Conseil d'Administration*) appointed by presidential decree. The Administrative Board meets every three months and is composed of one President who is the *Médecin-directeur* of the BPS, one Deputy-President from the MSP, one Secretary who is the Hospital Director, one community member elected by the community administrators, one hospital staff, one person from the local administration, and one medical representative.

As far as the budget is concerned, the heads of the hospital prepare a budget plan which must be approved by the Administrative Board before being sent to the MSP and then to the Ministry of Finance for budget bargaining. However, these budget plans are often not taken into account and the budget is generally the same as the previous year with a 10% increase. However, during the budget execution, the additional 10% are not always made available.

Salaries, bonuses and other running costs

Gitega hospital receives an annual budget of FBU 142 million from the government to cover its running costs. This subsidy is essentially used to pay the salaries of Burundian physicians. The amount of these salaries, which increased by 20% with the move towards managerial autonomy, isn't fixed by the hospital but by the *Fonction Publique*. The amount of bonuses given to the personnel is also determined by the government.

The revenues from service delivery are also used to pay running costs and part of the salaries. The salaries of the Chinese physicians are directly paid by the Chinese government but the government of Burundi pays for their housing.

Gitega hospital faces important financial difficulties since its managerial autonomy in 1996. These difficulties were intensified by the decrease in revenue caused by the measure on "free" services and the delays in the reimbursement of invoices. By the end of March 2007, the hospital had only been reimbursed for the services offered "free" of charge between May and August 2006. This exacerbated previously existing hospital debts. For instance, the debt accumulated by the hospital to the REGISESO since 1996 reaches almost FBU 60 million.

Pharmaceuticals

Gitega hospital mainly buys pharmaceuticals from the CAMEBU. If some pharmaceuticals are not available in CAMEBU, an authorization from the MSP is required to buy pharmaceuticals from other suppliers.

To help in the implementation of the presidential measure on "free" services, the hospital received an initial stock of drugs of FBU 25 million through the BPS but this stock is insufficient to face the demand for services from children under five and pregnant women.

Impact of the presidential measure on "free" services

The measure on "free" services was followed by a drastic increase in demand for health services although the hospital's capacities were not strengthened to face it. The staff (for instance in the maternity ward) and infrastructures (available beds) are insufficient to meet the demand. As

said before, the delay for the reimbursement of invoices increased the hospital's financial difficulties and debts. In addition to its debt to REGIDESO, Gitega hospital owes about FBU 50 million to several pharmaceutical suppliers, including CAMEBU.

Resource flow and management at the health center level in Bukirasazi

During the mission's visit the health center was distributing insecticide-treated nets to children under five and pregnant women. The large number of beneficiaries and the work burden the distribution represented for all the staff didn't allow a complete interview with the titular nurse.

The mission then visited a health center connected to a hospital managed by the Methodist church. This health center seemed to work well and was waiting for an agreement with the government to implement the measure on "free" services. The health center had stopped implementing it as the MSP was not reimbursing the invoices for the services delivered. In addition, this hospital was supposed to start playing the role of a district hospital a few weeks after the mission's visit.

c. Ngozi Province

Ngozi province is divided in three health districts that are already functional. The province has four hospitals, including the Ngozi regional hospital, and forty seven health centers, thirty three public, seven private and seven "agréés". Since September 2006, the province benefits from the support of the Swiss cooperation for the decentralization process and the development of health districts. The staff in the districts is made of one district *Médecin-chef* (in the three districts these posts are currently occupied by nurses), one nurse coordinating the health information system, one nurse managing the district pharmacy and two support staff.

Resource flow and management at the BPS level in Ngozi

The BPS in Ngozi is composed of the *Médecin Directeur* of the province, a manager, two persons in charge of the pharmacy, one provincial coordinator, one coordinator for reproductive health, one coordinator for PNLT, one coordinator for the health information system, two secretaries and four security staff.

The BPS receives resources from different sources, namely the government, development partners such as WHO, UNICEF, DFID, Swiss Cooperation and health centers of the province. As far as budget is concerned, the BPS prepares an annual action plan with objectives and a provisional budget and sends them to the MSP but there is no budget bargaining before the budget is allocated by the central level.

Salaries, bonuses and other running costs

As in other BPSs, the salaries of the personnel of the BPS in Ngozi are directly paid by the *Fonction Publique*. In addition to the payment of salaries and to the payment of the invoices for water, electricity, and telephone, the government gives to the BPS a subsidy of FBU 325,000 every three months. However, according to the *Médecin Directeur* of the BPS, this subsidy

wasn't received last year. It was given in 2007 but through specific budgetary lines for expenditures such as generators, fuel, and others. Besides the three-months budgetary line of FBU 325,000, the MSP mainly provides in kind support for the functioning of the BPS such as office supply, wheels, record books, etc. These supplies are furnished once the BPS has submitted a request but often the BPS does not receive all the items requested.

In addition to the support from the government, the BPS generally receives resources from the province's health centers. They send 20% of their revenues from the sale of some pharmaceuticals to the BPS. However, since the presidential measure on "free" services, health centers don't send resources to the BPS any more.

Pharmaceutical chain

There are no drug revolving funds in Ngozi. According to the head of the BPS, the pharmacy of the BPS buys pharmaceuticals to the CAMEBU thanks to an annual subsidy provided by the government. Then, health centers furnish themselves at the BPS after submitting a request for all pharmaceuticals, including those covered by the presidential measure of May 2006. As mentioned above, health centers send to the BPS 20% of their revenues earned selling pharmaceuticals. The other 80% were originally supposed to go on a bank account where they would accumulate at the end of each year to help create a revolving fund in health centers in the future. However, as the subsidy for pharmaceuticals sent by the MSP was insufficient, these funds were partially used to replenish the BPS's stock of pharmaceuticals.

To help with the implementation of the presidential measure for "free" services, UNICEF provided drug donations financed by ECHO to the BPS to cover the last three months of 2006. Drug donations from DFID are also expected in 2007. To face the increase in demand, the BPS sometimes needs to run into debts with the CAMEBU.

Impact of the presidential measure for "free" services

At the level of the BPS, the control and compilation of the invoices sent by health facilities take a long time for the staff and also require additional office supplies. However, the delays for the reimbursement of these invoices are mainly due to the slow administrative process at the central level.

Resource flow and management at the hospital level in Ngozi

The hospital in Ngozi is a regional hospital with 222 beds. The hospital provides the following services: surgery, gynecology and obstetrics, pediatrics, neonatology, resuscitation and intensive care, emergency care, dentistry and otorhinolaryngologic services. There are fourteen physicians working in the hospital, six of them are specialists (pediatrician, obstetrician, surgeon, cardiologist, dentist, otorhinolaryngologist); 103 nurses, three with a license, two A1 nurses, twenty three A2 nurses, sixty nine A3 nurses and six nurses trained at work.

Ngozi hospital was built in 1935 and rehabilitated in 2005 thanks to the second Health and Population project financed by the World Bank (*Projet Santé Population II*). It now benefits from the support of the Pro-Africa Foundation financed by the Italian Cooperation which pays most of the salaries and some equipment. On the administrative side, the hospital has a Direction Committee and a Management Committee but it has no Administrative Board. The Ngozi hospital sends a monthly report to the accounting authority (*Cour des Comptes*) and to the Ministry of

Finance. Similarly, in order to have the MSP replenish its bank account, the hospital has to send a report to the MSP with a copy to the Ministry of Finance.

The hospital has a financial deficit, mainly due to debts generated by the delays in reimbursements for the services provided to the Beneficiaries of the *Carte d'Assurance Maladie* and of the presidential measure of 2006.

Salaries, bonuses and other running costs

The hospital in Ngozi receives funds from several sources. It benefits from FBU 7 million monthly allocations from the MSP. The hospital has autonomy in the management of these resources. As mentioned above, the replenishment of the bank account is made after the monthly report is submitted. In addition to this subsidy, the hospital earns revenues from its activities and is supported by the Foundation Pro-Africa. It also benefited from drug donations from other development partners such as UNICEF, ICRC and DFID.

The salaries of the hospital staff are paid by the MSP, the Foundation Pro-Africa and the hospital itself. For instance, the salaries of the six specialists are paid by the Foundation whereas four general practitioners are paid by the *Fonction Publique* and four directly by the hospital. However, to reduce the differences in remuneration, the hospital provides incentives and night duty bonuses to the staff of FBU 32,500 and FBU 30,000 respectively. The Foundation also provides a monthly bonus of FBU 20,000 to all the staff. Specialists and general practitioners paid by the Foundation earn respectively Euro 1,500 and Euro 300.

In the context of the implementation of the presidential measure for "free" services, the hospital in Ngozi benefited from the reimbursement of invoices for services delivered to children under five and women during delivery from May 2006 to September 2006. The delays in the reimbursement of these invoices have had a negative effect on the functioning of the hospital.

Effect of the presidential measure for "free" services

The hospital in Ngozi is facing a significant increase in demand for health services since the presidential decree on "free" services. To meet this demand, as the invoices are not reimbursed in time, the hospital sometimes runs into debts with the CAMEBU and other suppliers. Stock-outs are frequent since May 2006. Although the hospital had a previous debt with the REGIDESO, this debt increased considerably after the presidential measure on user fees. Since May 2006, the hospital has an FBU 3 million debt.

Resource flow and management at the health center level in Rukeco

The Rukeco health center is located 12 kilometers from the BPS. This health facility has three nurses, one A2, who is the titular nurse, and two A3; the health center also has 3 support staff. On the administrative side, the health committee was recently established. Before this, the titular nurse managed directly all facility resources.

Salaries and other running costs

Except for the salaries of the two security personnel, the staff salaries are directly paid by the *Fonction Publique*. The health center also receives support from the BPS such as small materials for its functioning. In addition, the health center finances its running costs with the

revenue collected through the delivery of some services. The facility's own revenue is mainly used to pay for the salaries of the security personnel and some maintenance costs. The health center keeps all the revenues collected from services or "acts". However, for any withdrawal from its "acts" account, the health center needs first to have an authorization from the *Médecin Directeur* of the BPS.

Invoices for services delivered to children under five and pregnant women are sent each month to the BPS. However, when the interview took place in March 2007, the health center hadn't received yet any payment.

Pharmaceuticals

As mentioned above, the health center submits to the BPS all request for pharmaceuticals. Pharmaceuticals that are not concerned by the presidential measure are sold to patients at the CAMEBU's price and all revenues collected are sent to a bank account. The BPS withdraws 20% from this bank account to finance part of its running costs. The other 80% are accumulated each year and are supposed to support the creation of a drug revolving fund in the future.

In this health center, drug stock shortages are more related to the limited capacity to manage the stocks than to financial difficulties. The Titular Nurse pointed out that it was difficult to monitor the drug stock as they had too much work to do.

Effect of the presidential measure for "free" services

This measure was followed by a decrease in revenues and therefore the facility had difficulties to cover some running costs such as maintenance.

List of persons interviewed

Health Province	Institution visited	List of persons interviewed	Function
	Ministry of Finance	M. Donatien Bwabo Mme. Béatrice Hamenyayo	Président Cellule d'Appui aux réformes des finances publiques Directeur du Budget
	Ministry of Public Health	Mme. Anne Marie	Directeur du Budget
Rutana	Provincial Bureau in Rutana Rutana Hospital Gitaba Health Center	Dr Antoine SINDAYIGAYA M. NDITIJE Melchiade Dr NIYONGABO M. BUTOYI Jean Marie M. NIJIMBERE Patrice	Directeur du BPS Gestionnaire du BPS Directeur de l'hôpital Gestionnaire de l'hôpital Titulaire du CDS
Gitega	Provincial Bureau in Gitega Gitega Hospital Kibuye Hospital Bukirasazi Health Center	Dr Georgette NDIHOKUBWAYO Dr Fidèle NIYONKURU M. BIGIRIMANA Pascal Mme NIYONIZIGIYE Hélène Mme NDIKUBWAYO Françoise	Directeur du BPS Directeur de l'hôpital Titulaire du CDS et de l'hôpital Gestionnaire Titulaire du CDS
Ngozi	Provincial Bureau Ngozi Hospital Rukeco Health Center	Dr Innocent NKURUNZIZA M. NGENZEBUHORO Jean Marie M. MBONIMPA Joris Mme MBONIMPA Gonzague M. NDAYISABA Libère	Directeur du BPS Gestionnaire du BPS Gestionnaire de l'hôpital Chef de Nursing Titulaire du CDS

Questionnaires used during the interviews

Indicative questionnaire for the case studies: Bureaux provinciaux de santé :

BPS : _____

1. **Characteristics of the Bureaux provinciaux de santé:**
   1.1. Number of health facilities under the responsibility of the BPS. How far on average are the centres de santé (CdS) from the BPS? Are there health districts already functioning in this province?

   1.2. How many people are there working in the BPS; briefly what are their main responsibilities?

   1.3. Who is the person or persons in charge of the planning, preparation, and execution of the BPS budget? What is his/her level of education and training? Have they recently received any training on resource/budget management?

2. **Flow of funds to the BPS**:
   2.1. Which are the sources of funds managed by the BPS: government budget, donors, NGO? Not need to know the exact amounts but just an idea of who pays for what.

   2.2. Does the BPS manage a bank account?

   2.3. Does the BPS manage their entire budget? (or parts of it, such as salaries, are already set by the central level).

   2.4. What is the responsibility of the BPS in terms of ensuring the distribution of pharmaceuticals to the CdS?

2.5. What are the uses of the resources managed at the BPS (e.g. own functioning, to buy pharmaceuticals and supplies, transfers to the CdS).

2.6. In case the BPS transfers resources to the CdS, how are these resources, both financial and in-kind (salaries, drugs, supplies, etc.), sent to the facilities? Do personnel from the BPS goes to the CdS to deliver the goods? Do personnel from the CdS collect it at the BPS? Is there any other mechanism? Does the BPS have a vehicle to do this? Do the CdS have vehicles?

3. Budget Planning and Preparation

3.1. Does the BPS prepare its own budget?

3.2. How is the budget for the BPS prepared? What information is taken into account in this preparation? Is there a pre-set mechanism to prepare it? Or do the BPS bases the budget estimations on previous budgets?

3.3. How is the total amount of resources going to each CdS, if any, determined? Is there a pre-set formula? Or is the budget determined by previous budget levels?

3.4. Does the BPS receive inputs from the CdS in the preparation of their budgets?

3.5. Does the central level send the BPS a "ceiling" for their budgets? What type of information if any is sent to the BPS from the center to prepare the budgets? In case of questions is there somebody from the central level or regions they can contact?

3.6. What is the calendar for the preparation of the budget: when does the BPS starts preparing the budget? When is the first draft sent to the central level? How has the system changed since the introduction of program budgets?

3.7. Are the BPS draft budgets taken into account in the preparation of the national budget? Do they receive any feedback from the center regarding their budget and whether or not they received the amount they have asked for?

4. **Budget execution**

4.1. Could you describe the "chaine de dépenses" du BPS et CdS?

4.2. How is the budget execution monitored?

4.3. What are the problems the BPS confronts regarding budget execution? What are the constraints they face?

4.4. Have these constraints changed since the introduction of the presidential decree to eliminate the user fees for children under five and mothers?

4.5. In their views, how can these constraints be eliminated?

Indicative questionnaire for the case studies: Hôpital

Hôpital : _____

1. **Questions particular to the hospital**

   1.1. How many people are there working in this hospital? How many doctors? How many nurses? How many administrative workers? How many of others?

   1.2. Are there vacancies? How many and for how long have there been vacancies? Why?

   1.3. What services are provided in this facility?

   1.4. Has the facility had any stock-out of drugs and supplies in the last month? Which drugs and/or supplies? (e.g. anti-malarial, vaccines, syringes, etc.)

   1.5. Does the facility have all needed equipment?

   1.6. Does the facility have running water, electricity, phone or radio?

   1.7. Does it have a car or motorbike?

   1.8. Notes on the facility condition:

2. **Flow of funds to the hospital**:

2.1. Which are the sources of funds received by the hospital: central level, donors, own resources, others? Who pays for salaries, for drugs and supplies, for equipment, for maintenance?

2.2. Are the payments for salaries on time? How does the staff receive their salaries?

2.3. Are drugs, supplies, and equipment received on time? Why or why not?

2.4. What are the constraints faced by the facility to receive payments and supplies in time? How do they think these problems could be solved?

2.5. Does this hospital manage its own budget or does it receive all payments in kind. Is this a hospital with administrative autonomy?

2.6. Who manages this budget? Is the community involved in the management of the budget?

2.7. What are the resources in this budget use for? How much flexibility the facility has to use this budget?

2.8. Does this hospital manage its own bank accounts?

2.9. How has the flow of funds changed since the presidential decree to eliminate user charges? How have the sources of funds changed? How has the management of these funds changed? What are the new constraints the facility faces?

2.10. Has this facility received any support on resource management? From which agency?

Indicative questionnaire for the case studies: Centre de Santé (CdS)

Centre de Santé : _____

1. Questions particular to the CdS

1.1. How far is it from the BPS?

1.2. How many people are there working in this CdS?

1.3. Are there vacancies? How many and for how long have there been vacancies? Why?

1.4. What services are provided in this facility?

1.5. Has the facility had any stock-out of drugs and supplies in the last month? Which drugs and/or supplies? (e.g. anti-malarial, vaccines, syringes, etc.)

1.6. Does the facility have all needed equipment?

1.7. Does the facility have running water, electricity, phone or radio?

1.8. Does it have a car or motorbike?

1.9. Has the facility received any supervisory visit from the BPS in the last month? When was the facility last supervised?

1.10. Notes on the facility condition:

2. **Flow of funds to the CdS**:

2.1. Which are the sources of funds received by the CdS: central level, BPS, donors, own resources, others? Who pays for salaries, for drugs and supplies, for equipment, for maintenance?

2.2. Are the payments for salaries on time? How does the staff receive their salaries?

2.3. Are drugs, supplies, and equipment received on time? Why or why not?

2.4. What are the constraints faced by the facility to receive payments and supplies in time? How do they think these problems could be solved?

2.5. Does this CdS manage its own budget or does it receive all payments in kind.

2.6. Who manages this budget? Is the community involved in the management of the budget?

2.7. What are the resources in this budget use for? How much flexibility the facility has to use this budget?

2.8. Do the CdS manage bank accounts?

2.9. How has the flow of funds changed since the presidential decree to eliminate user charges? How have the sources of funds changed? How has the management of these funds changed? What are the new constraints the facility faces?

2.10. Has this facility received any support on resource management? From which agency?

Annex 12: MBB Methodology[58]

The MBB approach, supported by a spreadsheet, was designed by UNICEF and the World Bank and assists in streamlining the programmatic and budgetary choices in the health sector. As a tool, it makes it possible to link the inputs to the impacts in the health sector.

The approach used starts with the identification of systemic obstacles limiting the transition at the level of health interventions. Six major dimensions of the health systems are analyzed in order to determine the constraints: (i) the logistics and supply chain for medication and supplies; (ii) human resources; (iii) physical accessibility to the health services; (iv) the demand for services by the populations; (v) adherence to the healthcare system; and (vi) the technical and organizational quality of the health services.

The hypotheses of the removal of these obstacles, which are informed by the strategies to be implemented, enable the evaluation of the effective level of coverage of the interventions that may be expected from the reinforcement of the health system. The effective coverage of an intervention being defined as the proportion of the target population of this intervention that effectively uses the intervention concerned in accordance with the accepted quality standards.

a. Identification of high-impact interventions

The second article[59] of the 2003 Lancet series dedicated to child survival carried out a review of the state of scientific knowledge on the interventions enabling the reduction of mortality attributable to each of the principal causes of death amongst children under five (diarrheal diseases, acute respiratory infections, measles, malaria, HIV/AIDS, asphyxia among newborn babies, preterm, neonatal tetanus and neonatal infections). The authors' analyses focused in particular on the preventative or curative interventions, which tackle the immediate causes of infant-juvenile mortality and which may be implemented through the health sector in low- or middle-income countries. In total, 23 interventions were identified and classified according to their proven effectiveness. The effectiveness data of these interventions were derived from prior meta-analyses or systematic reviews carried out by the authors and members of the Bellagio Study Group.

The second article of the 2005[60] Lancet series dedicated to the survival of newborn babies enabled the identification of nine additional interventions to improve the survival of babies during the first 28 days of life, thus increasing the number of high-impact neonatal and infant health interventions to 32.

As regards maternal health and within a logic of continuity of healthcare from intra-uterine life up until adulthood, a set of interventions with proven effectiveness on the principal causes of maternal death (post-partum hemorrhage, puerperal infections, Eclampsia, distocia, abortion complications, malaria, anemia, tetanus, non-specific causes and others) were identified from the database on the Cochrane randomized controlled trials which is available on line, the WHO library on reproductive health and the 2005 British Medical Journal series dedicated to

[58] This annex is based on MBB technical guide (forthcoming).
[59] Jones G, Steketee R, Black RE, Bhutta ZA, Morris SS, and the Bellagio Child Survival Study Group. How many child deaths can we prevent this year? Lancet 2003; 362: 65-71.
[60] Darmstadt GL, Bhutta ZA, Cousens S, Adam T, Walker N, de Bernis L. Evidence-based, cost-effective interventions: how many newborn babies can we save? Lancet 2004; 365: 977-88.

cost-effective interventions to achieve the MDGs. Table 21 presents these high-impact interventions and the causes of mortality which they are able to reduce.

We note from Burundi's health strategy and policy documents that several of these interventions were retained by the country to improve the state of health of the population. Table32 summarizes some of these interventions identified on a global level and which are in place in Burundi. These interventions were organized according to their method of delivery and in sub-packages to optimize their delivery.

Table32: High-impact interventions organized by service delivery method

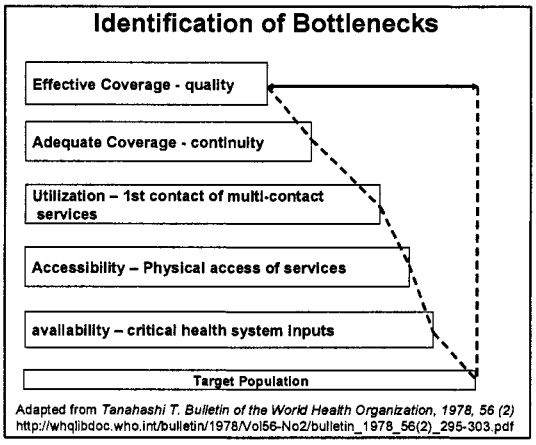
Interventions	In place in Burundi?
1. Family oriented community based services	
1.1 Family Preventive/WASH Services	
Insecticide treated mosquito nets for under five children	Yes
Quality of drinking water	Yes
Use of latrines	Yes
Washing of hands by mothers	Yes
1.2 Family neonatal care	
Clean delivery and cord care	Yes
Early breastfeeding and temperature management	Yes
Universal extra community-based care of LBW infants	No
1.3 Infant-juvenile feeding	
Breastfeeding for children 0-5 months	Yes
Complementary feeding	Yes
1.4 Community management illnesses	
Oral Rehydration Therapy	Yes
Community based malaria treatment of children with ACT	No
Antibiotics at community level for pneumonia	No
2. Population oriented schedulable services	
2.1 Preventive care for adolescents and adults	
Family planning	Yes
Preconceptual folate supplementation	No
2.2 Preventive pregnancy care	
Antenatal care	Yes
Detection and treatment of asymptomatic bacteriuria	No
Prevention and treatment of sideropenic anemia during pregnancy	Yes
Intermittent Presemptive Treatment (IPT) for pregnant women	Yes
2.3 Prevention and treatment of HIV/AIDS	
PMTCT (testing and counseling, AZT + sd NVP and infant feeding counseling)	Yes
Condom use	Yes
Cotrimoxazole prophylaxis for children of HIV + mothers	Yes
2.4 Preventive infant-juvenile care	
Measles immunization	Yes
Hib immunization	Yes
Hepatitis B immunization	Yes
Zinc preventive	No
3. Individual oriented clinical services (constantly available)	
3.1 1 Clinical primary level skilled maternal & neonatal care	
Skilled delivery care	Yes
Antibiotics for Preterm/Prelabor Rupture of Membrane (P/PROM)	Yes
Detection and management of (pre)Eclampsia (Mg Sulphate)	Yes
Management of neonatal infections at PHC level	Yes
3.2 Primary Health Centre care	
Antibiotics for U5 pneumonia	Yes
Vitamin A treatment for measles	Yes
Artemisinin-based Combination Therapy for children	Yes
ART for children with AIDS	Yes
ART for pregnant women with AIDS	Yes
DOTS for TB	Yes
3.3 Clinical first referral illness management	
3.3.1 Clinical maternal and neonatal second referral illness management	
Basic emergency obstetric care (B-EOC)	Yes
Clinical management of neonatal jaundice	Yes
3.3.2. Care at first referral level	

Management of complicated malaria (2nd line drug)	Yes
Management of first line ART failures	Yes
3.4 Clinical first referral illness management	
3.4.1 Clinical maternal and neonatal second referral illness management	
Comprehensive emergency obstetric care (C-EOC)	Yes
3.4.2. Clinical second referral illness management	
Management of 2nd line ART failures	Yes
Management of multi-drug resistant TB	Yes

b. Identification of the systemic obstacles and definition of the limits of the coverage

Identification of the systemic obstacles

The methodology used by the MBB to identify the systemic obstacles and to evaluate the coverage attainable after having removed these obstacles, is based on the Tanahashi[61] framework. This framework for analysis uses five or six indicators which each measure a critical dimension of the health service delivery process and which reflect the complex interactions between the supply and the demand for health services. This process starts with the evaluation of the availability of medication and basic supplies at different levels of the health pyramid and concludes with an evaluation of the effective coverage of a given intervention. This effective coverage is defined as the proportion of the target population of an intervention which effectively uses this intervention according to the required standards and quality with the expectation of a biological impact. Between these two phases, the following are also analyzed in a successive manner: the availability of human resources compared with the coverage standards defined by the country, geographical accessibility, also in comparison with the standards, the initial use or first contact of a service which requires the user's compliance for the expected impact, and lastly, the ongoing use thereof (adequate coverage).



Adapted from *Tanahashi T. Bulletin of the World Health Organization, 1978, 56 (2)* http://whqlibdoc.who.int/bulletin/1978/Vol56-No2/bulletin_1978_56(2)_295-303.pdf

In a perfectly efficient system, each input is translated into an output. This assumption thus enables the assessment of the performance of the healthcare systems by measuring their capacity to translate the inputs into outputs. The limiting factor to the performance of this system, still referred to as a "bottleneck", is the weak link in the chain of factors determining effective coverage.

Box 1: Determinants of coverage for the identification of bottlenecks

Availability health system inputs such as drugs, vaccines, supplies, and/or human resources;

Accessibility of people to health services: this includes the presence of trained human resources at community level, villages reached at least once a month by outreach services, and time taken to reach a facility providing basic and emergency obstetric and neonatal care services. The service points (market or facility) have to be physically accessible to users, i.e. at a reasonable physical distance and unhindered by obstacles;

[61] Tanashi T. "Health service coverage and its evaluation", Bulletin of the World Health Organization, 1978.

Utilization of health care services which can be proxied by the first use of multi-contact service (e.g. first antenatal contact or measles immunization). Utilization indicates the members of the catchment population actually using the service when it is available;

Continuity (adequate coverage) in utilization of services or adherence: this determinant indicates the extent of achievement compared to optimal contacts and services (e.g. the percentage of children receiving three doses of Diphteria-Pertusis-Tetanus vaccine or the percentage of women receiving three antenatal contacts). Thus, this indicator documents the continuity of care and compliance;

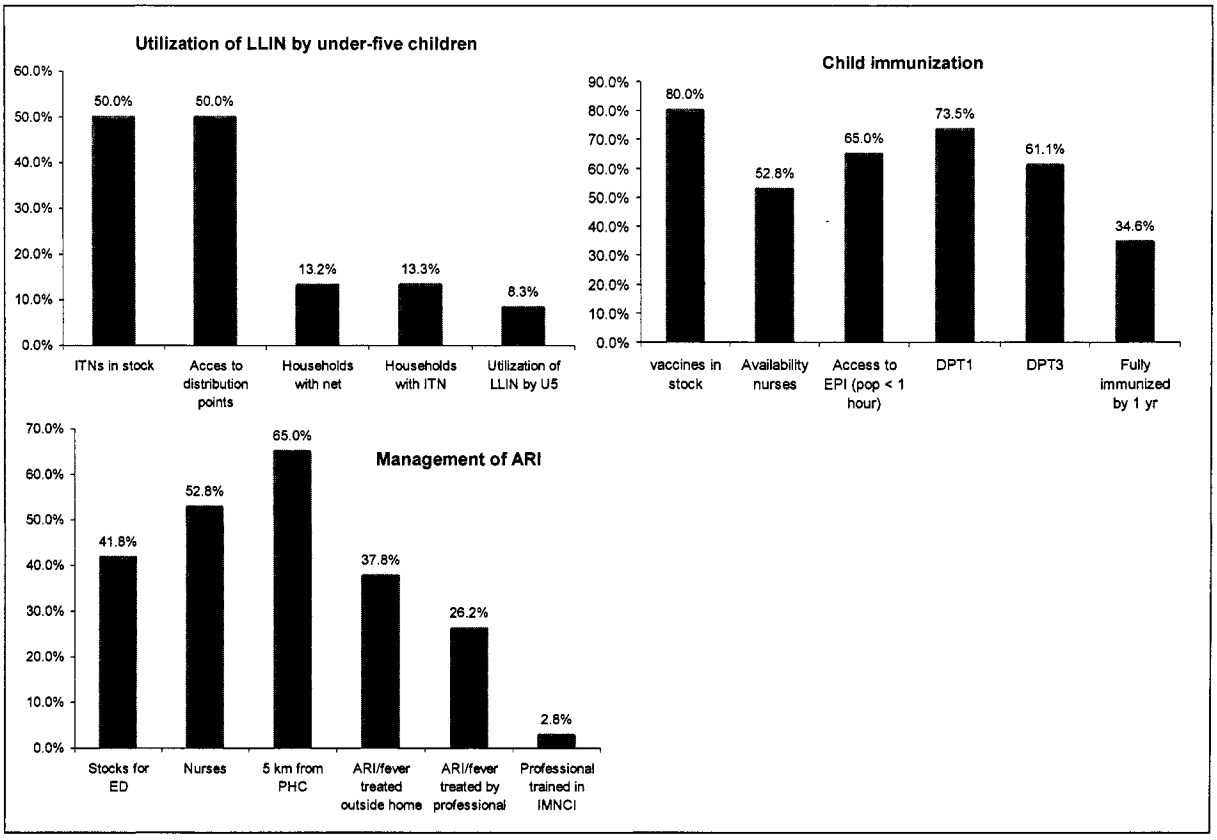
Quality (effective coverage) of the service provided or received: this indicator measures the quality of care by assessing the skills of the health workers, their ability to examine the beneficiary, diagnose, provide the requisite interventions, use the equipment appropriately and advise appropriately. The quality coverage also means that potential users are using the services in a correct and effective matter.

These determinants are sequential and the health care delivery system bottlenecks are identified by examining the gaps among the five determinants and finding the weakest link in the service delivery chain.

The exercise is conducted for each mode of service delivery and for each sub-package identified in Table32 in order to identify the bottlenecks and to propose corrective measures to improve the efficiency of the healthcare system, which in turn enables the transition of essential health interventions.

The figure below illustrates the case of Burundi for the use of impregnated mosquito nets by children under the age of five, the vaccination of children and the control of acute respiratory infections amongst children at the level of health centers. The graph indicating the use of mosquito nets suggests that at community level, the bottlenecks are located at the level of availability of commodities and utilization thereof. The underlying causes of these bottlenecks, which include financial barriers, the lack of information and certain beliefs of the populations, are fully analyzed in the *Note Sectorielle de la Santé*. For the advanced strategy activities and the clinical care provided at the level of *formations sanitaires*, the graphs suggest that the major bottlenecks are the human resources constraints and the poor demand for care although these are available and physically accessible. The data from the QUIBB survey suggests that only 65% of the population live within a reasonable distance from a *formation sanitaire*, which may constitute a constraint if the objective it to achieve universal coverage of health services. The loss rate between the first and second doses of DTC and the poor rate of comprehensive vaccine coverage, suggest significant constraints on the healthcare demand side.

Figure 19: Determinants of coverage for three interventions



Definition of the limits of the coverage

The limits of the coverage are defined as the maximum level of effective coverage that would arise from the removal of one or several identified constraints, taking into account the actual level of efficiency of the healthcare production system. The objective of this approach is to capture the various elasticities[62] which link the different dimensions of the healthcare system mentioned previously and to anticipate the variation of one dimension in relation to another. In a practical way, this approach seeks to anticipate by what percentage would, for example, the use of impregnated mosquito nets amongst the population increase, if accessibility were improved. This approach enables the evaluation of the levels of coverage that one could obtain if the constraints relating to demand and supply were removed.

By assumption, the MBB uses elasticities of 1 between the different dimensions of the healthcare system. This implies for example, that a 25% increase in the geographical accessibility of a service (it could be a question of increasing the portion of the population living within a radius of 60 minutes of a *formation sanitaire* from 65% to more than 80%), would lead to a 25% passive increase in the initial use of this service, which would then lead to a 25% increase in the continuous use thereof and finally to effective coverage of 25%. This chain reaction will result in achieving the effective coverage objectives expected at the close of an investment program for reinforcement of the health system by improving the critical dimensions such as human resources,

[62] In economics, elasticity is a measure of the relative variation of one variable compared with another.

the availability of working capital for medication, the demand for healthcare, the technical quality of the services, etc.

For each of the packages presented above, two cases or scenarios were applied. Scenario I or Scenario 60% corresponds to a conservative reduction in the bottlenecks identified (between 50% and 70%) in order to bring the effective coverage of the interventions to at least 60%. Then, the more optimistic Scenario II or Scenario 80% corresponds to a reduction in the bottlenecks identified (between 70% and 90%) in order to bring the effective coverage of the interventions selected to at least 80%.

c. Impact assessment

The method for assessing the impact of increased coverage of the interventions utilized by the MBB is based on the model developed by the authors of the second article of the 2003 Lancet series dedicated to child survival. The method for calculating the impact of the interventions makes use of the following five principal parameters: (i) the actual coverage of the intervention concerned, (ii) the objective of coverage or limits of coverage, (iii) the effectiveness of the intervention on the causes of mortality of the population concerned, (iv) the affected portion of the population concerned, and (v) the portion attributable to death due to this condition in the population concerned.

The use of this method requires knowledge of the principal causes of death among children under five and among pregnant women and the respective loading attributed to each of these causes. The figures on the causes of death amongst children under five in Burundi and their allocation were obtained from the Child Health and Epidemiology Research Group (CHERG) of the WHO. The data on the causes of death among pregnant women in Rwanda was used as a substitute for Burundi.

The following box gives an example of how the MBB estimates the impact on under-five mortality ate of an increased utilization of Long-Lasting Insecticidal Nets (LLIN) by children under the age of five

Impact of long-lasting insecticidal nets utilization on under-five morality rate (I_{U5MR}):

Formula:

I_{U5MR} = *[(Coverage Increase × Effectiveness) / (1-Baseline coverage × Effectiveness)] × % U5MR due to malaria*

Effectiveness = *Efficacy × Affected fraction*

Parameters:

Efficacy of long-lasting insecticidal nets:	75%
Affected fraction:	100%
Baseline coverage of long-lasting insecticidal nets:	8.3%
Target coverage:	60%
Proportion of U5MR attributable to malaria:	8%

The WHO CHERG data suggest that, in Burundi, malaria is responsible for 8% of the death of children under the age of five. The MICS 2006 data also suggest that 8.3% of under-five children regularly sleep under a LLIN. For the simulations, we assumed an increase to 60% of the effective coverage in order to reach the Abuja target. Since the LLIN are effective in 75% of the cases for any child under the age of five, the affected fraction is 100%. Using the formula above, we estimate that LLIN utilization by under-five children could reduce the under-five mortality rate by 3%. The impact (mortality reduction) of several interventions implemented simultaneously is estimated in a residual way in order to avoid double counting.

d. Cost estimation[63]

The costing module of the MBB tool normally yields additional resources required for removing a set of health system bottlenecks that are considered to hinder health service delivery to the population. It is based on the premise, that while a basic package of effective interventions can improve health, the cost estimate should reflect the cost of eliminating the constraints or bottlenecks that hinder its expansion (Figure 20).

Figure 20: MBB costing methodology

Marginal cost of overcoming				
Gaps in access to packages	Human resource bottlenecks for implementation of packages	Logistics bottlenecks & marginal costs of supplies	Barriers to utilization & stimulating demand of packages	Bottlenecks with technical & organizational quality of packages
+ Marginal costs for steering the process				

The MBB model was slightly modified to produce the total cost of scaling up health interventions and not just the additional cost. Thus, as previously mentioned the cost estimated reflect not only the investment needs but also the total recurrent cost necessary to sustain the health production function.

Overall, the methodology used by the MBB to estimate the additional cost can be summarized by the following generic formula. The additional cost of an input i (MC_i) is calculated as follows:

$$MC_i = P_{oi} \times Q_{oi} \times S_{oi} \times n - P_{bi} \times Q_{bi} \times S_{bi} \times n$$

In the above formula, MC_i is the additional cost of input i; P_{oi} is the unit price of input i in the scenario ; Q_{oi} is the quantity of input i per unit of output, or per service production unit in the scenario (in other words, the amount of the input needed to produce one unit of a given service/output); S_{oi} is the SPU per 1 million population of input i for the objective coverage (in other words the amount of service/output i for producing the coverage/outcome for 1 million people) ; P_{bi} is the baseline unit cost of input i; Q_{bi} is the quantity of input i per service production units for baseline coverage; S_{bi} is the SPU per 1 million population of input i for the baseline coverage; and n is the population.

The additional cost estimates are then aggregated over all inputs i and subsequently aggregated over all determinants of coverage, and service delivery modes, allowing an estimate of the total cost of overcoming bottlenecks in the health system. The aggregated amounts show the cost of removing each bottleneck, as well as the cost of scaling up interventions through the three service delivery modes.

The production of health services involves a variety of inputs including human resources, infrastructures, drugs and equipment, vehicles, etc. The types, combinations and numbers of the inputs vary across types of health services, service delivery modes, and regions with their

[63] MBB Technical Notes, forthcoming.

different population densities. To help simplify the unit costing, the MBB uses the term Service Production Unit (SPU) to identify the cost center related to the scaling up of health services or overcoming bottlenecks. The SPU is to be estimated on the basis of the capacity (population covered) of each health facility or outreach team. Therefore, an SPU can be a functional health center, physicians, nurses or midwives, community workers, drug and vaccine kits, a mobile team, or a hospital on the supply side; it could also be household behavior or utilization of health services on the demand side.

The above formula was used to estimate the cost of all additional investment required to upgrade the health system. The second part of the formula was removed to estimate the total recurrent cost in order to reflect both the current recurrent cost and those implied by the additional.