Specific programs and human resources:

 $addressing \ a \ key \ implementation \ constraint$

Pag

Information

Joint Learning Initiative (JLI), www.globalhealthtrust.org Royal Tropical Institute (KIT) KIT Development Policy and Practice Mauritskade 63 1092 AD Amsterdam, The Netherlands T+31 (0)20 5688 8332

F +31 (0)20 5688 8444 E-mail: development@kit.nl Website: www.kit.nl/health

Royal Tropical Institute (KIT)
KIT Publishers
P.O. Box 95001
1090 HA Amsterdam, The Netherlands
T +31 (0)20 5688 272
F +31 (0)20 5688 286

E-mail: publishers@kit.nl Website: www.kit.nl/publishers © 2004 KIT Publishers, Amsterdam, The Netherlands
Author: Marjolein Dieleman (KIT DEV)
Editor: Joke van Kampen
Chair JLI Working Group 'Priority Diseases': Gijs Elzinga
Co-financing agency: Directorate-General for
International Development Cooperation (DGIS) of the
Dutch Ministry of Foreign Affairs
Photography: p. 20, p. 10 and frontcover (TALC);
p. 13 (WHO/EPI-program); backcover and p. 22
(Anrik Engelhard)

Cover and graphic design: Grafisch Ontwerpbureau Agaatsz BNO, Meppel, The Netherlands Printing: Meester & De Jonge, Lochem, The Netherlands

ISBN: 90 6832 6406 NUR: 600/940

Specific programs and human resources:

addressing a key implementation constraint

Table of Contents

Foreword	7
Constraints in specific disease control programs	9
Strategies for possible solutions	13
Towards implementation	19
The way forward	23
Recommendations	27
List of abbreviations	29

Foreword

This paper explores human resources constraints in health service delivery, especially with regards to specific disease control and provides an inventory of strategies that can be used to overcome constraints. This paper is the edited version of the report on the meeting of the Working Group "Priority Diseases" which is one of the seven working groups of the Joint Learning Initiative currently exploring strategies to address the human resources constraints in health services delivery.

Specific programmes on selected diseases are important components of the international and national health agenda, almost every country has such programmes. But, in order to be effective, and to relieve the burden of disease for those in need in a cost effective way, these programs require specific attention to human resource management. In many developing countries such programs do not reach their full potential, due to the lack of implementation capacity, either in quantity or in quality, or, due to the lack of an integrated approach. An integrated approach means taking the context into consideration, building cooperation with actors outside the health sector and making effective use of existing human resources.

Constraints in specific disease control programs, related to Human Resources are:

- a. The lack of a sufficient number of implementing health workers.
- b. The lack of quality
- c. Imbalance in availability of workers.

The Working Group "Priority Diseases" convened a meeting on November 11 and 12, 2003 in the Netherlands.

Constraints in specific disease control programs

A. The lack of a sufficient number of implementing health workers

There is a wide variety of reasons for this constraint and countries also vary with regards to this aspect.

In many countries training institutes do not produce enough health personnel, due to financial limitations and lack of capacity. Apart from the insufficient numbers, there is also under exploitation of existing resources. Disease control programs can benefit greatly from involving human resources outside and beyond the health sector, such as community based workers, families, educational personnel, community leaders, the public sector, Non Governmental Organisations (NGOs) and civil society institutions. But cooperation between sectors and involving other sectors requires a special management approach that is often not in place.

Brain waste from the health to the non-health sector and brain drain from public to private as well as migration are common factors hindering the full implementation of effective health interventions. The HIV/AIDS pandemic leads, among other things, to an increased burden on personnel while it reduces the productivity of the health sector at the same time.

Globally imposed policies such as reduction of the workforce as part of International Monetary Fund (IMF) requirements, and national policies limiting numbers and salary levels of health personnel are contributing factors to the lack of a sufficient number of health workers.

B. The lack of quality

In many places training is poor, which leads to a lack of quality of performance. Training institutions have limited capacity, the quality of trainers is not sufficient, curricula are outdated or not problem oriented. Learning materials are lacking or inadequate.

Another contributing factor is the widespread lack of motivation among health personnel. Low motivation can be effectively addressed by inspiring leadership and by the provision of incentives but the effect of performance based incentives,



either in terms of targets or outcomes, has not been experimented and researched extensively yet.

International intervention strategies often do not match local circumstances or skills of locally available human resources, thus contributing to demotivation and lack of quality performance.

C. Imbalance in availability of workers

There is imbalance in three respects: geographically, between levels and with regards to gender aspects.

The geographic imbalance contains staff oversupply in urban areas and undersupply in rural areas, among ethnic groups and the existence of high concentrations areas. Contributing factors to the geographic imbalance are the lack of planning and the lack of means to enforce posting. In some African countries rural areas are served by lower cadres and unskilled personnel while the problem is not acknowledged by the higher levels of the health system and insufficiently dealt with.

Imbalance between levels of the health system shows where there are more workers at tertiary level while the primary level goes understaffed. Also, unclear mandates and a lack of a clear division of tasks between the levels contributes to an imbalance between levels.

Gender issues also constitute imbalance in the health system. Women tend to be under represented at management level and more women work as paramedics than as doctors. A lack of gender sensitive human resources management and gender norms in society go hand in hand and contribute to gender inequity in the health system.

A number of issues affect health services in general and thus also the human resources management in health services:

- Lack of cooperation and collaboration between programs within the health sector and between the health sector and other sectors is widespread. Better cooperation however is starting, for instance in Malawi where HIV/AIDS and tuberculosis control programs try to mutually benefit from a coordinated approach.
- The same is true at the international level. Lack of collaboration at the international level affects national health where countries are confronted with international programs that create contradictions at the national level.

An example related to collaboration between programs was the opportunity for distribution of a (free) two-drug regimen to stop transmission of filariasis that will also contribute to the control of other public health problems, such as malaria fevers, hookworm and onchoceriasis. Despite the potential, this drug distribution does not occur due to working methods of the various specific programs that have been set up internationally and that inhibit collaboration

An example of contradictory policies at the international level is the need for more human resources to implement specific disease control programs and the limitation in recruitment due to IMF regulations.

- Poor human resource management and lack of flexibility hampers the effectiveness of the health system. Human resources within the health system is a highly sensitive and deeply political issue. Changes, such as reallocation of personnel, decentralization, transfer of skills and responsibilities to lower cadres, are not easily made due to unwillingness or lack of possibilities of ministries.
- There is a tendency to allocate resources according to the professionally perceived needs and to the needs of specific programs, rather than to the demand of services in the population. This mismatch between Human Resources planning for programs and the needs of people may lead to an excess of supply for some programs (such as for tuberculosis in Vietnam), while for other programs there is a shortage of personnel.
- The burden of work of health workers is still increasing, not decreasing. Recent developments that contribute to the workload are drug resistance in malaria (leading to the need for continuing curative interventions), the distribution of Anti-Retro Viral (ARV) Treatment for HIV/AIDS infected clients (which requires intensive support from health workers) and expanded Directly Observed Therapy Short Course (DOTS) for tuberculosis.

An example is the 3x5 initiative, which will absorb progressively more human resources at the expense of other health programs. As this program will only serve one tenth of the HIV infected population of Sub Saharan Africa it will impact on equity issues.

Strategies for possible solutions

Most specific programs have to be carried out within the existing health system and with the existing human resources. The possibility to recruit additional personnel for specific programs is very limited. Therefore strategies to overcome the current constraints should concentrate on improvement of the existing systems and human resources.

Three main strategies are identified:

- a. Strengthening of the existing human resources in the health sector
- b. Identifying innovative ways to mobilize the workforce and developing new partnerships
- c. Identifying and exploiting synergies between programs



A. Strengthening of the existing human resources in the health sector:

Generally, current programs strengthen the public health system by providing infrastructure, equipment and capacity building. Specific programs should be better used to vitalize the public health system. A start for that is to use a country focus rather than a program focus for priority setting and for the analysis of the human resources needs. Overall human resources strengths and weaknesses can be analysed within the framework of specific programs, while specific programs should aim at contributing to the sustainability of the human resources system.

Specific programs can assist in creating capacity for human resources policy making and human resources management through tools and training. The improvement of working conditions can play a role in this.

Specific programs can be the catalyst force to reinforce the national human resources policy or can be supportive in the development of a national health human resources policy.

The same is true for the improvement of data collection and the use of human resources data for decision making. Linking the data to the general Health Management Information system is essential. There is an urgent need to develop an inventory of current available human resources and their tasks. Such an inventory can be used as the basis for strategy development aiming at making better use of available human resources within the public health system.

Last but not least, specific programs can bring to the surface the need for advocacy efforts for change. For instance in the area of stimulating the transfer of skills and responsibilities and the involvement of all stakeholders in a meaningful way.

B. Identifying innovative ways to mobilize the workforce and developing new partnerships

Two innovative ways to mobilize the workforce have been proven to be effective. First, the technique of simplifying strategies can be used. Secondly, the redefining and transferring of skills to other professional levels or to communities also works to better use the available human resources.

Simplifying strategies is based upon an assessment of available human resources and the adaptation of the interventions to the level that is available, instead of

identifying the necessary professional level for the program (that might not be available). A good example of this is the polio eradication program. Its strategy evolved over time but the basis is local flexibility within good practices, the involvement of communities in carrying out interventions and partnerships with the private sector.

The polio eradication program used four key strategies that lead to its success. The program invested in the political system in order to be able to assess the system in place. Within the program real costs were reimbursed. Non-financial incentives (such as transport) were provided for health workers and volunteers and investments were made in management tools and training. Simplifying strategies is not a method to save money. Dependent on the national situation technical and financial support are necessary, but it works to maximize the capacity of the available human resources.³

Specific programs can consider other professional cadres or communities as care providers. Redefining and transferring skills to other levels is widely used especially within HIV/AIDS programs. Training needs to be conducted at appropriate levels while a tasks analysis forms the basis for a well-designed program of transferring skills. In Malawi, Zambia and Thailand, lay counsellors and volunteers are mobilized to provide counselling. People living with HIV/AIDS are involved in prevention, care and treatment (referral) in Thailand. Other examples are the role of volunteers in the polio eradication program; malaria programs that work with community members or the retail sector to sell bed nets and the provision of anti malarials. Not all skills can be transferred to non-health professionals but there are also possibilities within the health sector. For instance, midwives can do more than doctors sometimes think, while at the same time, nurses and doctors should be able to deliver safely.

During the meeting a tool was presented to assess intervention complexity, to be used in addition to other criteria for priority setting such as the burden of disease, cost-effectiveness and affordability. The tool enables categorising of interventions according to their degree of complexity. Being recently designed, it still needs to be introduced. It is designed to identify research priorities for interventions that are easy to scale up or possibilities for simplification of existing interventions to address constraints in implementation. It also can be used to guide decision-making on changes of characteristics of these interventions to implement them in specific settings. It offers the opportunity to identify possibilities to adapt interventions to the skill level of available human resources, of crucial importance for rapid up scaling.

A practical example for strategies needing change in order to be implemented in resource poor settings is ARV provision, which was first based on a model from the US and Europe, but clinical monitoring of patients had to be simplified in order to enable ARV provision in resource poor countries.

Specific tool for intervention complexity

Especially clinical skills transfer is a sensitive issue and requires the involvement of professional associations and strong political lobbying.

Moreover, the provision of care involves ethical considerations and so does the change in the provisions of care and the transfer of skills. The discussion on ethical issues cannot be limited to the health sector, defining what is best for the country is a matter of public debate, political decision making and participation of civil society.

Developing new partnerships is an essential strategy in strengthening the health system. There are partnerships with other sectors, such as education or social security and there are partnerships with the private sector.

An example of multi-sectoral cooperation is the HIV/AIDS program in Uganda where many sectors are involved to reach out to the population in many different ways but with the same messages.

Examples of partnerships with the private sector are social franchising for HIV/AIDS and tuberculosis or the use of the retail sector to distribute drugs. It is important however to define clearly the different players that form the private sector: private for profit, faith based organisations or traditional healers, national and international NGOs. Each of these organisations has opportunities for partnerships, but they have different missions and capabilities, and therefore different forms of partnerships need to be developed in terms of tasks to be conducted, finance, etc.

Community mobilisation is another opportunity for partnerships. Since health cannot only be defined in medical terms, health interventions are also much more broader than clinical interventions. Community mobilisation tends to work where the community benefits as well as the individual volunteers.

An example of a strong partnership in tuberculosis control can be found in Bangladesh, where the government works closely together with an NGO, Bangladesh Rural Advancement Communities (BRAC). BRAC works in partnership with communities through the Community Health Volunteers (CHV). These CHV are recruited and trained by BRAC and receive financial incentives for identification of TB patients and upon completion of treatment Success was measured in case detection (65%) and completed therapy (90%).

Apart from the incentives, other elements also contributed to the success of the BRAC method. BRAC took an evidence-based approach, started with a pilot and has a research component. Secondly the Community Health Volunteers within the program were enabled to combine community resources. They are not only active in tuberculosis control, they also have access to micro credit, provide anti malarials, sell soap etc. The volunteers work within a learning environment, while an

institutionalised structure provides a support network, training, monitoring and evaluation.

C. Identifying and exploiting synergies between programs

Collaboration and interaction are needed both at national and international levels. At national level, interaction should take place on skill definition, coordination of resources and activities (training). Specific programs need to pay attention to how to mainstream their structure. They specifically need to address in advance the (future) use of trained professionals recruited for the program for other health interventions. The same is true for the networks that are built up, the mobilised communities and the trained volunteers. Examples are the use of the polio eradication structure to distribute Vitamin A or the provisions of DOTS in HIV/AIDS clinics.

Implementation of specific programs will benefit from better-defined responsibilities between international organisations. This will also enhance coherency in policies. Sharing of resources should be encouraged instead of inhibited.

At international level, specific programs mainly focus on advocacy and financial issues and do not prioritise human resources issues. International policy is changing and human resources is on the agenda, but this is not reflected in levels of funding. Initiatives to make the international programs accountable for their efforts in the area of human resources are needed.

Opportunities are present, for instance funds could be obtained through the Global Fund. However, proposals need to be developed at country level, where the need for inclusion of human resources in these proposals is either not felt or the capacity to develop such proposals is limited. At international level there are currently collaborating efforts, such as the World Bank, Global Fund and presidential initiatives to harmonise mechanisms and have a better fit between Sector Wide Approaches and specific program strategies.

An area of concern is the lack of evidence-based implementation of public health strategies and the lack of documentation. More interventions should be accompanied by action research and experiences should be better documented. Special attention needs to be paid to developments that are taking place within the informal sector and that are not tracked either by financial systems or by health management information systems. But they might contain potential solutions to the human resources crisis and therefore need to be mapped and documented. This is further complicated because mapping and documenting

health system developments within the informal sector or developments triggered by economical conditions, require broader expertise than most human resources or health experts have acquired.

1:39

Towards implementation

Three models of planning improved use of human resources can be recognized:

Health needs approach

Within this approach one identifies what needs to be done through a task analysis. In order to match service targets with requirements for human resources, functional job analysis and service targets are put into a matrix. The matrix defines tasks, time required for tasks, skills required at different levels for a number of priority programs. This is compared to the available human resources in order to define the human resources gap. The results are used to redistribute tasks and to identify human resources needs.

An example of this approach is the WHO model to evaluate human resources requirements for priority health interventions aimed at the achievement of the Millennium Development Goals.

The strength of this approach is that the result is a clear definition of required skills at each level. The weakness is that it tends to describe an ideal situation that has no relation to the reality and that the approach does not encourage looking beyond the professional health sector.

Asset approach

This approach looks at the available human resources and infrastructure and readapts the strategy to it. The leading principle can be described as: Available resources could deliver the intervention if mobilised and managed. This approach determines the technical feasibility of each task, based upon the available human resources.

An example is the polio eradication program that used the assessment of available human resources to conduct specific tasks in a local setting, as an entry point for in-country interventions.

Strengths are that the approach is reality based, and that it takes other sectors and partners into account. The weakness is that the possibility to adapt strategies to available human resources has its limits. There is also a risk of competition for human resources between specific programs.



Demand approach

Within this approach the demand of beneficiaries is the lead principle. Human resources are adapted to the demand. By using existing data, human resources needs can be projected over time and under or oversupply of staff can be assessed. Strategies to better use health personnel can be based upon this, such as the redistribution of staff over facilities or the redefinition of tasks within health facilities.

An example of this method is the calculation of workload in urban health facilities in Conakry.

The strength of this approach is that it provides a method for rational use of resources. The weakness is that it tends to be static, demand changes over time while this model has difficulties to adapt.

Looking at these approaches at work, there does not seem to be a single best model for the planning of human resources. In reality a task analysis is needed to identify skills and training needs (health needs approach). In the mean time tasks need to be adapted to available resources and partners need to be identified (asset approach) while a realistic assessment of the current demand is essential to rational planning (demand approach). Thus, a combination of the methods is likely to give the best results, under the motto: technical feasibility given the available resources.

In addition, comparing good practices between alike countries can also provide a quick assessment of human resources because it can help to define the context in which strategies work or do not work. Countries could be grouped according to certain criteria. Successful programs are assessed within each "country group" and replicated in alike countries. The beauty of this is that it provides a short cut to address constraints in program implementation but there are not many examples available. The problem is to define the indicators for "alike" while the method is not based upon a rational analysis.

Specific programs also need to contribute to the improvement of the environment of workers. This is necessary to ensure retention and motivation. And apart from mobilising communities and capacitating low cadre health workers, the current disease burden creates an increasing need for middle and upper level health professionals. Specific strategies to train and retain these cadres need to be developed as well.

Finally, addressing human resources constraints requires an advocacy strategy. Lobbying and networking is needed to convince different interest and professional groups and the political decision making level of the importance of this issue, since it requires resources.

To set or change standards and to regulate the private sector, the support of the professional associations and trade unions is a key factor to success. This is even more true when it comes to the transfer of skills.

Human resources for health needs to be put on the international agenda as well. Issues such as migration (brain drain) and donor contribution to increase salary levels of personnel and/or possibilities to alleviate the limitation in recruitment of personnel in resource poor countries need to be discussed with different interest groups.



The way forward

Responses to the human resources crisis in global health have a short term, medium term and long term aspect. An incremental approach is more likely to work than immediate change. Based upon the credo: technical feasibility within available resources, using a combination of planning models and using key strategies (strengthening the public health system, national and international collaboration between programs, using innovative working methods and a better match between international policies and local needs) solutions can be grouped as follows:

Long-term solutions:

Advocating for more national and international resources for health and for a definition of health as a major asset towards development (instead of just an expenditure) is needed. Access to quality health care should be increased as well as access to primary and secondary education as basis for human development. Coherent policies at international and national level need to be developed in order to allow and support human capital development in country.

Medium term solutions:

The introduction of health management systems and approaches that enable more equitable deployment of personnel and decentralisation of human resources management and responsibilities is needed. Interventions should focus on assisting governments in developing human resources policies and management structures and on capacitating training institutes to train more, or better, qualified personnel. An example of good support is to assist countries to translate the Global Burden of Disease to a "District Burden of Disease", which can be translated at the local level to a health program. This method addresses the overburdening of districts with the implementation of too many programs by taking the absorption capacity into account.

Short-term solutions:

On the short term, issues that are relatively easy to implement should be addressed. Some of these issues are the development of new partnerships, with the private sector, other public sectors and with the community. A number of initiatives have been developed. Tuberculosis control has started to mobilize the national tuberculosis programs to pay more attention to human resources development. Specific programs, such as HIV/AIDS or malaria control are involving the private sector and the community. However, in order to contribute to a sustainable system, more efforts are required to strengthen human resources within the health system. Improvement of collaboration at the national level by pooling resources and training, by adapting and simplifying interventions and by supporting human resources management with tools and training is needed. Standardisation of treatments and integration of programs will decrease the workload and increase the absorption capacity of available human resources. In addition, the interface between specific programs and the health system needs to be reinforced. For instance, health systems should benefit from human resources lessons learned within specific programs. Also, specific programs can assist governments in setting goals, targets and indicators for evaluation so as to make health systems accountable for results.

Immediate action:

Evidence needs to be provided that improvements in human resources have an impact on health outcomes and do enhance the implementation of health interventions. Documented successes can be used as an advocacy tool towards policy makers.

Proposed interventions

Recognizing the importance of long-term solutions, the proposed list of interventions focuses at the immediate and short-term solutions. This is due to the urgency of the human resources crisis within the health system.

National collaboration between specific programs

- Improve national collaboration by choosing in-countries technical and financial experts to map out changes and activities in a one year period by identifying the process and by defining what will be achieved, how and the nature of partnership in the group of stakeholders
- Set up interventions that address several public health problems:
 - Distribution of insecticide treated nets correlated with activities of health workers in antenatal care, immunisation programs and/or treatment of filiariasis
 - Intermittent preventive treatment for pregnant women with malaria prophylaxis during antenatal care combined with the promotion of the use of insecticide treated nets during pregnancy and after delivery, and appropriate case management

• Sharing examples of good practices on national collaboration between participants of the meeting through e-mail (3 pages per intervention)

Sectoral planning

Participants enumerated ongoing programs that should be documented:

- Describe the model for road traffic accidents used in Brazil and its results (results will be shown within 6 months)
- Document the outcome of an intervention where school teachers diagnosed malaria and provided anti-malarials in Ghana
- Document the role of private providers in DOTS. A cost-effectiveness analysis has been conducted. Six case studies were conducted, of which two on cost-effectiveness
- Document the outcome of a meeting between ministers of five different sectors to discuss human resources in the health sector in the Gambia
- Document the use of retail sector for distribution of insecticide treated nets in Tanzania
- Describe the experiment of multi-sector approach in HIV/AIDS in Uganda
- Describe the results of the use of media for messages for behavioural change in malaria control in the Gambia

Management

Participants enumerated on-going experiments that need to be documented and ideas that need to be advocated:

- Document the experience in output-based contracting at district level to increase immunisation coverage
- Document case studies on effects of incentive packages on staff retention (e.g. in Zambia)
- Conduct a tracer study in the Congo to evaluate career development of professional staff contracted by the polio-eradication program
- Document the evaluation of the onchoceriasis program in West Africa; the study includes the evaluation of the capacity building program.
- Advocate for inclusion of human resources in objectives of specific programs, as currently is done in tuberculosis programs
- Advocate for the Global Fund and WHO to work on a process to influence the direction of Global Fund proposals and to better ensure that these proposals include human resources. The human resources inclusion would also be part of the evaluation of proposals by the technical review committees
- Develop a policy statement on the need to tax recruitment agencies that stimulate migration of professionals from resource poor countries to US, Europe and Australia

Interface between global level and national level

- Promote HIV/AIDS workplace programs for health workers through the Global Fund
- Propose strategies for health organisations at the global level. Develop a plan to identify communal interventions that have short-term results and formulate a process for implementation. These communal activities should be an entry point for an international forum for research, where experiences are exchanged and research topics proposed
- Evaluate the Interagency Coordination Committees in a number of countries on the outcome of their coordination efforts: evaluate budget and flow of funds to assess how these collaborating structures function

Recommendations

Key to successful implementation is the ability and willingness of international and national health service and program leaders to include strengthening of human resources in their objectives and action plans. An investment in knowledge and people should be made, but leaders need to have confidence that these investments will result in improved health outcomes. WG5 needs to develop an advocacy strategy to convince these leaders to adopt short, medium and long-term strategies to address human resources constraints and to be accountable for actions. WG5 should initiate the following advocacy and lobbying actions:

- Organise a high level meeting with the core investor group (GAVI, Global Fund, World Bank) to discuss mechanisms to contribute to strengthening human resources within their mandate. For instance demanding inclusion of human resources strengthening as an obligatory part in proposals (as proposed for the Global Fund).
- Organise a high level meeting with international and national leaders of specific programs to present the outcome of the WG5 meeting and discuss practical solutions. Suggestions could be to identify a number of specific interventions that could be used as a practical experiment for better collaboration⁴ and to strengthen the human resources management and education system in countries by reserving a certain amount (5-10%) of the budget for strengthening human resources.
- Invite individual specific programs to discuss innovative working methods (new partnerships and adaptation of technical interventions). Based on the result of this discussion, specific programs should formulate proposals for a pilot program. In order to collect evidence and document results, funds should be provided for accompanying action-research.

⁴ An example could be to start a pilot program on the two-drug regimen distribution for filariasis in a number of countries; another example is the implementation of effective nutrition interventions (promotion of breastfeeding, education on complementary feeding, vit. A and zinc supplementation, etc).

- Document current evidence of efforts to address human resources constraints and their results: commission further research to document a number of case studies proposed in the list of interventions. This documentation should be distributed to specific programs and human resources planners and managers in countries and internationally.
- Publish papers through a supplement of a journal to reach not only decision makers but also managers and program implementers so as to create a strategic alliance for advocacy on human resources.

List of Abbreviations

AIDS Acquired Immuno Deficiency Syndrome

ARV Anti-Retro Viral

BRAC Bangladesh Rural Advancement Communities

CHV Community Health Volunteers

DOTS Directly Observed Therapy Short Course

GAVI Global Alliance for Vaccines and Immunization

HIV Human Immunodeficiency Virus IMF International Monetary Fund NGO Non Governmental Organisation

TB Tuberculosis WG5 Working group 5

WHO World Health Organisation