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World Institute for Development Economics Research

Research Paper No. 2007/06

Rehabilitating Health Systems in Post-Conflict Situations

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January 2007

Abstract

Although baseline data for post-conflict situations are frequently unavailable, there is a clear deterioration in the health conditions of populations during and following conflict. Excess mortality and morbidity, displaced populations, and vulnerability to communicable diseases during and following conflict all call for immediate relief and restoration of basic services. As much as possible, short-term relief and assistance programmes should be implemented in a manner compatible with longer term health system rehabilitation.

This paper presents a framework for analyzing the inputs and policies that make up post-conflict rehabilitation programmes in the health sector. Post-conflict …/

Keywords: health, conflict, war, institutions
JEL classification: H51, I18, D02, H56

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This study has been prepared within the UNU-WIDER project on 'Reconstruction in Conflict and Post-Conflict Societies', directed by Tony Addison. The project was supported by the Finnish Ministry for Foreign Affairs.

UNU-WIDER gratefully acknowledges the financial contributions to the research programme by the governments of Denmark (Royal Ministry of Foreign Affairs), Finland (Ministry for Foreign Affairs), Norway (Royal Ministry of Foreign Affairs), Sweden (Swedish International Development Cooperation Agency – Sida) and the United Kingdom (Department for International Development).

ISSN 1810-2611 ISBN 92-9190-945-9 ISBN-13 978-92-9190-945-2

rehabilitation of the health sector can be viewed as three inter-related approaches: (1) an initial response to immediate health needs; (2) the restoration or establishment of a package of essential health services; and (3) rehabilitation of the health system itself. These three approaches should operate synergistically and as part of a continuum.

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Typescript prepared by Lorraine Telfer-Taivainen at UNU-WIDER

1 Introduction

Armed conflict is an unfortunately common reality in modern times. In the past twenty-five years, more than fifty countries have experienced conflict. The countries afflicted are disproportionately poor—fifteen of the twenty poorest countries in the world had conflict in the last two decades of the twentieth century (World Bank 1998). By the year 2020, mortality and morbidity from war are expected to represent the eighth largest category of disease burden worldwide (Krug et al. 2000).

The concentration of contemporary conflicts in resource-poor countries presents the international community with a considerable challenge in approaching post-conflict reconstruction. Most contemporary wars are intra-state rather than international; many have inflicted large numbers of civilian casualties. In Croatia in 1991 and 1992, civilians accounted for nearly two-thirds of the registered deaths from the conflict (Kuzman et al. 1993).

In addition to direct casualties, armed conflicts negatively affect public health through several distinct channels. In poor states, military spending comes at the expense of social and health expenditures. Foreign investment and economic growth are among the first victims of armed conflict. Moreover, responding to the trauma caused by armed conflict takes priority over promoting long-term economic and social development. The World Bank (1998) has estimated that during the 1990s a greater amount of international resources went to relief efforts than to ongoing development programmes. In Rwanda, the three-month genocide in 1994 and its aftermath carried a financial price tag worth ten years of development assistance, without counting the enormous human toll of that conflict.

Post-conflict reconstruction is the process that ‘supports the transition from conflict to peace in an affected country through the rebuilding of the socioeconomic framework of the society’ (World Bank 1998). Ideally, post-conflict reconstruction should extend beyond the reconstruction of physical infrastructure; it should set the conditions for a functional and sustainable peace.

In addition to disproportionately affecting resource-poor countries, conflicts pose other challenges inherent in the rehabilitation process. One relates to the issue of legitimacy and political decision-making: Who has the authority to set priorities and make decisions? Who controls the resources? Coordinated timing and allocation of available resources are important to both the long-term sustainability and political feasibility of rehabilitation efforts. Donors, international organizations, and post-conflict governments often have varying agendas that require reconciliation (Macrae 1997).

These challenges often exist in a broader context of constitutional weakness; the concentration of wealth and power in the hands of a military and political elite (Cox 2001); powerful warlords and continued criminal activity (Zwi et al. 1999); and the residual conditions of war—including black markets and organized crime (Cox 2001). These problems, which exist generally in post-conflict situations, particularly affect rehabilitation in the health sector. Health systems are heavily dependent on the broader macroeconomic picture in terms of revenue, sector expenditures, and the prioritization of policies.

This paper will explore the complexities of the relationship between conflicts and health—specifically what is involved in reconstructing health systems in the post-conflict period. Most armed conflicts generate major public health consequences, both in terms of the population's health status and the structure, policies, and financing of the health system. The paper begins by addressing these consequences, and then presents a framework for analyzing the inputs and policies that make up post-conflict reconstruction programmes in the health sector. The effects of public health reconstruction are influenced by the level of pre-conflict infrastructure and health system development, and also depend heavily on the greater context of economic and political rehabilitation. The paper analyzes the experiences of different countries that have undergone conflict—including several that are still experiencing the negative effects of conflict—and concludes with lessons learned from this comparative analysis.

2 The negative effects of conflict

2.1 Effects on public health

The consequences of conflict on the health of populations are vast. In addition to the direct effects of war, there are a range of adverse outcomes through intermediate effects—including the destruction of infrastructure, equipment, and supplies; and the interruption of essential services. In many cases, conflict exacerbates poor health conditions present before the conflict.

The direct effects of conflict include mortality and morbidity resulting form conflict, including injuries caused by landmines, which are pervasive in contemporary conflicts. Negative health effects are both physical and emotional, often resulting in permanent or long-term disability. Another indirect effect of conflict on public health results from population displacement. Displaced populations are particularly susceptible to communicable diseases—including respiratory infections, malaria, and measles. Other population groups especially vulnerable to the indirect effects of conflict are those who have chronic diseases and experience prolonged periods without treatment, and those who were already affected by food insecurity, nutritional deficiencies, and high fertility rates prior to the onset of conflict.

Conflict destroys infrastructure and necessary supplies and equipment: thus, the delivery of preventive and curative health services are often interrupted. Ruptures in the supply of clean water and breakdowns in sanitation systems result in an increase in preventable communicable diseases such diarrhoea, malaria, and tuberculosis. Vaccination campaigns, micronutrient supplementation programmes, and other public health efforts are neglected or abandoned. Additionally, although the phenomenon is not well documented, post-conflict settings are high-risk situations for the transmission of HIV/AIDS—with highly mobile populations and an increase in the sex-trade as a form of employment.

Health indicators from Mozambique help to illustrate the devastating effects of prolonged conflict on public health. The country experienced ongoing civil war from 1975 to 1991 (see Appendix). The under-five mortality rate peaked at 473 per 1,000 in 1986. Following the intervention of the International Red Cross Committee (ICRC), which introduced vaccines and vitamin A supplementation programmes, and other groups in 1991 the rate dropped to 269 per 1,000—still extraordinarily high (Keane 1996). In 1985, only 45 per cent of pregnant women had a prenatal consultation; in 1988 only 25 per cent of women gave birth outside of the home. In 1990 just 20 per cent of the urban water system was purified. Nor was there significant improvement in the immediate post-conflict period. In 1995, four years following the end of the conflict, the under-five mortality rate had actually increased to 270 per 1,000 (Keane 1996).

Sierra Leone provides a similar example. In 1999, the time of the official declaration of the end of war, the population's health ranked among the worst in the world. Infant and under-five mortality rates stood at 170 and 286 per 1,000 live births, respectively. The maternal mortality rate was 1,800 per 100,000 births—one of the worst in the world (World Bank 2002). The diseases most affecting the population—malaria, tuberculosis, acute respiratory infections, diarrhoea, cholera, and other water-borne diseases—all have cost-effective cures and preventions. But these have not been widely applied in Sierra Leone because of a lack of financial, infrastructure, and human resources, weak capacity in the health sector, and residual insecurity that renders parts of the country inaccessible.

In Afghanistan in 2001, only one-third of the health districts had reproductive health services; just 15 per cent of deliveries were attended by a trained health care worker (Cook 2003). Half the children under five years of age were stunted or chronically malnourished, and nearly one- quarter of Afghan children were dying before reaching the age of five from preventable diseases including acute respiratory infections and diarrhoea (Waldman and Hanif 2002). The maternal mortality rate was 1,700 per 100,000 births; 40 per cent of deaths in women were attributed to maternal causes (Cook 2003).

Although baseline data for post-conflict situations are frequently unavailable, there is a clear deterioration in the health conditions of populations during and following conflict. The excess mortality and morbidity, and vulnerability to communicable diseases during and following conflict, necessitate immediate relief and restoration of basic services. But the rehabilitation of the health system must also address underlying problems of destroyed or damaged infrastructure and interruption of services so that the restoration of basic health care is efficient and equitable in the medium and long-term as well.

2.2 Effects on health systems

Health systems—as defined by the World Health Organization (WHO)—comprise the organizations, institutions, and resources that are involved in actions to improve health (WHO 2000). All three components of the health system—organizations, institutions, and resources—are likely to be negatively affected by conflict and the political instability that surrounds and follows it. Typically, the management of health service organizations becomes more centralized and characterized by vertical programmes; community-based programmes are likely to be neglected. Disease surveillance often suffers during conflicts, resulting in uninformed prioritization. Data are limited; services fragmented; and qualified managers hard to find within the public health system. There is limited data availability for decision-making, fragmentation, and a lack of training in management positions (Zwi et al. 1999).

These problems are aggravated by limited resource availability—manifest in at least four different ways. The first is financial—resulting from increased military expenditures, reduction in government revenues, an inability to generate significant new revenue, and an increasing dependence on aid. During El Salvador's civil war—from 1980 to 1992—per-capita health expenditures decreased by 50 per cent. While conflicts impose financial constraints on health systems, in post-conflict situations deteriorated or destroyed health systems infrastructure requires substantial capital investment.

A second area of limited resource availability is human resources. Some trained health professionals and management staff are kidnapped or killed during conflicts. Others have fled; among those remaining in their positions many have experienced disrupted training and are underpaid or not at all. Of the 160 physicians working in East Timor prior to the 1999 referendum, only 20-30 remained after the ensuing violence (World Bank 2000).

Third, much of the service delivery infrastructure itself—health care clinics, health centres, and hospitals—is destroyed during chronic conflicts or is subverted to military or political use and is no longer functional for health care delivery (Zwi et al. 1999). In East Timor, as of January 2000, only 23 per cent of the health facilities remained undamaged (World Bank 2000).

During the internal insurgency in Mozambique, from 1981-92, the National Health Service became a military target during an escalation in the conflict between 1982 and 1985, particularly in its most vulnerable rural areas (Pavignani and Colombo 2001). Fifty per cent of the health infrastructure in Mozambique was completely destroyed during the conflict; the remaining facilities were in need of repairs and equipment and had limited coverage (Keane 1996).

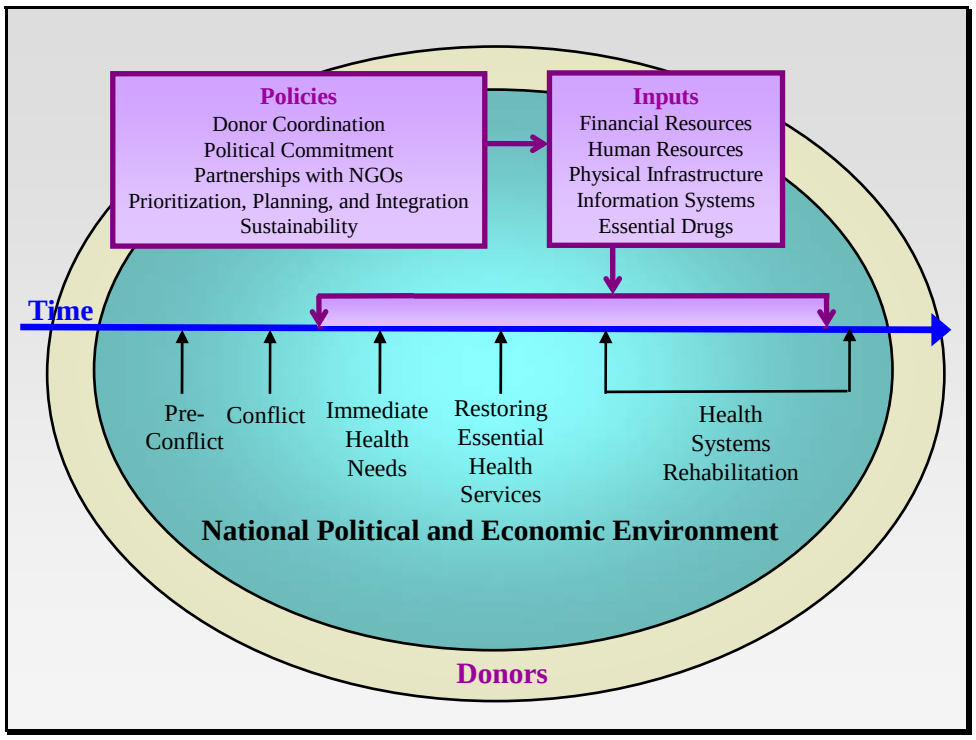
Finally, policy-making structures themselves are severely weakened by conflict and instability—creating a vacuum of authority and a lack of legitimacy in health systems decision-making. There is a resulting lack of institutional memory, further complicated by the exodus of policymakers, academics, and other necessary actors in health policy. Underlying these institutional weaknesses, there is generally a sense of torn social networks and a lack of trust. The cumulative effect of these impacts fundamentally changes the nature of health service delivery in post-conflict situations. Primary care delivery typically suffers the most; remaining service delivery capacity is likely to be at the secondary and tertiary level, principally in urban settings. Utilization of health services is negatively affected by a fear of violence, curfews, corruption, and informal payments to health workers. While NGOs continue to deliver health services in specific geographic areas, healthcare service delivery in post-conflict situations is often reduced to a patchwork of programmes and services offered through different channels. With NGOs and donors operating on separate agendas and timelines, the resource flows themselves can be difficult to track (Zwi et al. 1999).

During nearly 20 years of conflict in Uganda, the national health policy process practically came to a halt. When the National Resistance Movement (NRM) gained power in 1986, there was a general breakdown in public institutions in general and a leadership vacuum in the health system—particularly related to primary care and health financing. Vertical projects cropped up in this vacuum, operating separately from the government and focusing more on infrastructure reconstruction than on sustainable health promotion programmes. These developments ultimately undermined the capacity of the Ugandan government to run its own health system, and created inefficiencies in the healthcare delivery (Macrae et al. 1996).

3 A framework for post-conflict health systems rehabilitation

Every post-conflict situation is unique, and appropriate inputs and policies for reconstructing health systems vary accordingly. This section of the paper seeks to identify common factors across countries—in terms of the inputs necessary to make crippled health systems function and the policies necessary to make health systems function effectively, equitably, and in a sustainable manner. As a first step in identifying these common factors, we propose the following framework as a basis for analyzing the rehabilitation of health systems in post-conflict situations (Figure 1).

Figure 1: A framework for post-conflict health systems rehabilitation



The national political and economic framework provides the immediate context—in terms of the pre-conflict health system, the conflict itself, and post-conflict rehabilitation. But in modern conflicts, the ensuing relief efforts and rehabilitation are typically strongly influenced by a wider international context beyond the national environment—this context is portrayed in Figure 1 by the 'Donors' oval surrounding the national environment. This supranational level provides a variety of influences on, policies for, and inputs into rehabilitation.

Post-conflict rehabilitation of the health sector can be viewed in three parts: (1) an initial response to immediate health needs; (2) the restoration or establishment of a package of essential health services; and (3) rehabilitation of the health system itself. The critical point, however, is that these three phases are not isolated from each other; the manner in which the immediate humanitarian needs are met can have profound implications for fostering sustainability. Where possible, the three parts should operate synergistically and as part of a continuum.

Addressing the immediate health needs of displaced and distressed population groups is the first step in rehabilitation. Successful humanitarian and relief efforts for healthcare in post-conflict areas have included the following elements: basic and emergency curative health services; obstetric services; communicable disease control; immunizations; and supplementary feeding programmes. Relief efforts can also install important elements of future health system functions—including health information systems; and chronic disease preparedness (Toole 2000).

Responding to immediate health needs requires urgent action and quick, tangible inputs. From a humanitarian standpoint, these are necessary to restore basic health services and reduce excess mortality and morbidity. In some cases, this immediate response is among the first manifestations of the restoration of peace and normalcy. However, incorporating a fast-track response to address immediate needs into a systematic medium and long-term response is essential for the successful reconstruction of the national health system. The fast-track response should address relief issues remaining from the conflict stage while simultaneously anticipating future policies and programmes that will move towards the principle objectives of all health systems—efficiency, equity, and positive population health outcomes.

In Mozambique, the UN High Commissioner for Refugees (UNHCR) developed decentralized Quick Impact Projects (QIPs) to assist in the resettlement of displaced persons and to meet their health needs. In at least one province, Zambezia, the QIPs focused more on investments in capital infrastructure than on the development of sustainable health resources. Additionally, the projects did not take into account changes in health needs as populations shifted and displaced persons returned to their homes (Keane 1996).

Following the relief phase, most health sector rehabilitation efforts have moved to restore the systematic delivery of essential health services. These efforts have focused on a package of cost-effective interventions. In Mozambique, for example, priority services implemented following the end of conflict were the Expanded Programme on Immunization (EPI) for children under five years of age, tetanus immunization for pregnant women, vitamin A supplementation for high-risk populations, deworming for children, and initial health education campaigns (Keane 1996). In East Timor, initial priorities were in food security, water and sanitation, immunizations, obstetric services, and disease surveillance. In Afghanistan, the concept of a basic health services package (BHSP) has played a central role in plans for post-conflict health reconstruction—an effort to restore services that in some areas have not been available for more than a decade.[1]

Ideally, the implementation of a basic package of health services should be accompanied by additional components of a comprehensive approach to health systems rehabilitation—in which essential health services are restored and resources are also directed towards medium and long-term needs in the areas of management, financing, and health policy. Most post-conflict countries have this intention, and have added

[1] The BHSP in Afghanistan includes: maternal and newborn health; traditional birth attendants (TBAs); additional emergency obstetric services; child health and immunizations; nutritional supplements including vitamin A, folic acid, and iron; growth monitoring; supplementary feeding programmes; communicable disease control, including bednets for malaria prevention; community health workers trained in the diagnosis and treatment of common conditions; mental health treatment; and a defined set of essential drugs (Waldman and Hanif 2002).

management and capacity-building elements to initial rehabilitation projects. Sierra Leone's initial health sector reconstruction project involved two components: (1) the restoration of essential health services in four designated priority districts at an estimated cost of $15.2 million; and (2) development of public and private sector capacities—through district team strengthening, support to the Health ministry, and promotion of civil society participation—at an estimated cost of nearly $6 million (World Bank 2002). Similarly, in East Timor in 2000, the UN Transitional Authority (UNTAET) established the Interim Health Authority to design and lead a health sector rehabilitation and development programme. The objectives of Phase I of this programme were to restore access of basic services to the entire population and to begin to develop health policy and systems for the future. Phase II, beginning in 2001, was designed to support ongoing health services, focus on equality, and more clearly develop policy guidelines, administrative systems, and regulations (Tulloch et al. 2003).

Croatia, as part of a health sector rehabilitation project supported by the World Bank, initiated a project with five different components, totalling nearly $40 million. The first component was an investment in health care delivery—both primary and hospital services—with a focus on restructuring and rationing acute, outpatient, and complementary care. The second component was in public health –including programmes for health monitoring and programme evaluation, national health promotion, and media advocacy—particularly for the prevention of cardiovascular disease, particularly prevalent in Croatia. The third component, pharmaceutical waste disposal, addressed the issue of pharmaceutical remnants from the war and selected specific sites for disposal. The fourth and fifth components, entitled System Wide Initiatives and Project Management, supported the first three components and served as the basis for strengthening management and regulation in the health system, and for evaluation and monitoring of the project itself (World Bank 1999).

4 Inputs

The framework for post-conflict rehabilitation of the health sector described in Figure 1 illustrates the importance of meeting immediate health needs by restoring basic health services while also planning for the medium and long-term development of the health system itself. Two overarching factors feed into the rehabilitation of health systems—(1) financial, human and physical inputs; and (2) policy issues. Key inputs include financing, human resources, physical infrastructure, information systems, and essential drugs. These inputs can be inherited from the pre-conflict health system, donated by international actors, or generated from within the country.

4.1 Financial resources

Extraordinary financial resources are required to rebuild health systems, particularly when the health sector was chronically under-funded before and during the conflict. In post-conflict situations, expenditures on infrastructure, equipment, and other capital

costs initially absorb much of the financial resources. But recurrent expenditures are also needed for the sustainable financing for the health system. Inevitably, initial investment and recurrent expenditures will exceed the capacity of national sources; even in the long-term many governments are unable to finance and provide basic health services to their entire population. It is important that the government does assume as much of these expenditures as possible, early on, to ensure sustainability and ownership. In many situations, this is a difficult or impossible goal. For example, as of 1999 Mozambique continued to experience considerable dependence on external financing. The National Health Service relied on outside aid for 50 per cent of its recurrent expenditures and 90 per cent of capital expenditures (Pavignani and Durao 1999).

What does health system rehabilitation cost? In Sierra Leone, the 2001 Health Sector Reconstruction and Development Project was designed to re-establish the provision of health services while simultaneously improving sector capacity through the decentralization of decision-making and improvements in management capabilities (World Bank 2002). The first component of the project—to restore essential health services in four priority districts and support key programmes in malaria, tuberculosis, and sanitation—had an estimated cost of $15 million. The second component—designed to develop both public and private health sector capacity—received almost $6 million to be used to strengthen planning, evaluation, and implementation by district team; develop the Health ministry's abilities in the areas of management, budgeting, and financing; and improve human resource development and civil society participation. Together, the two components of the project cost $21.2 million (Table 1). In a country with an estimated population of 5.7 million (CIA 2003a), this is equivalent to $3.70 per resident.

Table 1: Financing of the Sierra Leone Health Sector Reconstruction and Development Project

Cost Category	Inputs ($US millions)		
	Local	Foreign	Total
Goods	1.9	5.1	7.0
Works	4.5	0.0	4.5
Services	2.9	0.5	3.3
Training	1.2	0.2	1.5
Operational Costs	3.3	0.0	3.3
Unallocated	1.5	0.0	1.5
Total	**15.4**	**5.8**	**21.2**

Source: World Bank (2002).

By contrast, the estimated cost of Afghanistan's BHSP and hospital care for five years, beginning in 2002, will be between $230 and $310 million in addition to $100 million for necessary health infrastructure. The World Bank has estimated that to effectively provide the minimum package of health care to the full population of 22 million will require $2.2 billion over ten years—or $10 per person per year (UNDP 2002). The total estimated cost for the Health System Project in Croatia at the time the loan was approved was $39.8 million—or $9 per resident (CIA 2003b). Of this amount, $14.9 million was from the Croatian government and the remainder from foreign assistance (World Bank 1999).

4.2 Human resources

The interruption of normal health services before and during conflicts has tremendous effects on the human resource capacity of the health sector. In East Timor, only 20-30 of the 160 doctors working in the country before the conflict remained afterwards (World Bank 2000). Inputs into human resources should take into account training needs at different levels, management skills, sufficient compensation to draw qualified personnel to the public sector, and hardship compensation for personnel relocating to rural, disadvantaged, and dangerous areas. Human resources are a key input into health systems rehabilitation—shifting health personnel towards primary care and preventive medicine, and from urban to rural areas, can mitigate the persistent inequities generated by the pre-conflict health system and exacerbated by the conflict.

4.3 Other inputs

Physical infrastructure—including health posts, health centres, hospitals, and accompanying equipment—is a critical component for the successful functioning of all health systems. In post-conflict situations, the physical infrastructure of the health system is often badly damaged and in need of reinvestment. As a result, nearly all of the reconstruction projects reviewed in this paper include a component for the physical rehabilitation of buildings and for re-equipping health facilities.

Rehabilitating a health system following conflict also requires current information to guide the prioritization and policy decisions. An effective health information system is critical. The period immediately following a peace agreement generally requires an enormous amount of information concerning the status of the health system and population health indicators. Accurate baseline data will help in prioritizing resource allocation and guiding policy-making. As a post-conflict country transitions from restoring essential health services to health system rehabilitation, the health information system continues to play an essential role in planning and prioritization, and also attracts and coordinates external assistance. Another key input to the health sector rehabilitation is a functioning drug supply system, including an essential drug list and systems for procurement, supply, evidence-based prescribing, and quality monitoring.

5 Policy issues

The framework in Figure 1 lays out the principal policy issues related to rehabilitation of the health system. These include: coordination among donors; political commitment by host governments; partnerships with NGOs; planning, prioritization, and integration of health services; and the sustainability of the rehabilitation effort. Each of these issues is described in this section of the paper. In addition, the context in which health policy is developed is critical: factors such as the quality of the technical analysis that informs decision-making; the capacity and motivation of government bureaucracy; and the influence of international donors on governments (Grindle and Thomas 1991).

Kosovo provides an illustration of a positive context for policy development. In 1999 a policy team produced a 'Proposed Strategy for the Future Development of Health Services in Kosovo' after a series of consultation meetings and gathering information from all factions. The next step was the formation of policy working group—including WHO staff, the Director of the Institute of Public Health, and the Dean of the Medical College—who in turn engaged other leaders in the sector and across Serbia to develop the health policy guidelines. The main principles of the guidelines were: decentralized primary care; family medicine teams; a referral system for specialist care; using population density and geographical indicators as bases for decisions about health facility placement; not expanding services and recurrent expenditures beyond the future capabilities of Kosovo; predominantly public provision with improved private sector regulations; an essential drugs programme and corresponding evidence-based prescribing; and a health system that would not discriminate based on ethnicity (Shuey et al. 2003).

Similarly, Croatia, in preparation for its Health System Project (HSP), developed an inventory and categorization of health facilities, facility planning and service rationalization guidelines, an accreditation system for providers and facilities, and clinical and pharmaceutical protocols for a national health information system. Once implemented, the HSP went on to develop new policy options in the areas of insurance arrangements, provider payment mechanisms, and alternative revenue sources (World Bank 1999).

5.1 Donor coordination

The 1990s witnessed a manifestation of international interest in post-conflict reconstruction and the coordination and rationalization of donor inputs in post-conflict settings. Multilateral donors became actively involved in the field; among other developments, the World Bank formed a post-conflict unit (Lanjouw et al. 1998). The issue of donor coordination and the role of international assistance in assisting countries in the transition into the post-conflict rehabilitation were central in these discussions. International donors with specific agendas can potentially undermine the cohesiveness of a national health policy. The growth in sheer numbers and variety of international

agencies working in the health sector, as well as their rapid entry into and exit from post-conflict situations have fuelled a move towards greater coordination of donor inputs.

Many influential decisions in health systems rehabilitation take place outside the country in question, at the headquarters of multilateral and bilateral organizations. The vagueness of political authority, questions of legitimacy, and the limited capacity of a new government present make it difficult to coordinate external assistance so that it corresponds to the national health priorities and a coordinated policy strategy. The health sector presents a particular challenge in this sense because of the urgency of the needs in the sector, its humanitarian appeal to the international community, and the complex channels and competing interests of assistance to sector (Lanjouw et al. 1998).

Immediately following the peace agreement there is typically a rush of NGOs, and multinational or bilateral organizations to provide humanitarian relief and alleviate human suffering—critical functions in the absence of a working health system. The quandary that follows lies in the implications of this inflow for the future development and sustainability of a national health policy strategy. Maximizing the volume of external resources initially may come at the expense of a coherent and coordinated effort within a national health system strategy (Buse and Walt 1997). As the country moves from conflict toward development, there is not necessarily a corresponding shift in efforts by the international actors, who may continue to operate in a relief mode with short-term objectives.

In addition to disjointed timelines, a lack of donor coordination affects the human resource capacity of the health system. Host government officials may be distracted by the competing projects and needs of different donors (ibid.). Also, qualified health care personnel move from the public sector to the NGO or private sector, where the compensation is likely to be better. Despite these inherent challenges—which are present in general in development assistance to health sectors but are particularly acute in post-conflict situations—there are important factors that can facilitate the coordination of external assistance. Fundamental among these is the role of the existing health authority, whether it is the health ministry or an interim health authority. A strong leadership role, together with internal coordination, demonstrates the credibility desired by donor agencies and lays the ground for long-term, mutually agreed-upon plans. A second critical element for effective donor coordination is the sharing of credible and accessible information among and between the international actors and the existing health authority (Pavignani and Durao 1999).

The rehabilitation of the East Timor health system from 1999 to 2001 illustrates many of the challenges common to post-conflict health sector rehabilitation—including competing objectives and expectations of donors, stakeholders, and politicians. In East Timor, there were discrepancies in the priorities, timelines, and reporting formats

among organizations. International organizations bid against each other for qualified personnel, who were often recruited from local organizations (see Appendix). Despite these challenges, East Timor has realized considerable achievements in restoring its health system.

Coordination of donors' inputs can occur in different formats—sharing information; seeking outside expertise as to appropriate inputs; or jointly managing inputs and processes (Walt et al. 1999). Moving from project-based assistance—characterized by the quick disbursement of large amounts of money to a particular project—to sector-based aid is an important step to maximize external assistance without jeopardizing an evolving national health system strategy. Sector-based aid generally involves an agreement between donors and the existing health authority based on shared analysis, conditionalities, and priorities (Buse and Walt 1997).

There have been different formalized approaches to aid coordination—including sector-wide approach mechanisms (SWAps) and performance-based partnership agreements (PPAs). SWAps pool donor funds, which are then used by the government according to agreed strategies and priorities. The advantage of SWAps is that the decision-making authority is transferred to the host government, promoting a more cohesive and sustainable national health system. The weakness of SWAps in post-conflict situations lies in the probable weakness of governments in transition.

Performance-based partnership agreements have been tried in Afghanistan and Cambodia as a means to bridge the resources of NGOs with government-established policies and regulations through contractual agreements. In principle, the government retains control of policy and planning but does not actually provide services. Rather, NGOs bid for contracts to implement a basic health services package determined by the government. A potential drawback of PPAs is that if NGOs are not covering all geographic locations in a country then the basic health services package will remain inaccessible to some populations. Another potential pitfall is that donors may bypass government completely and entered directly into contracts with NGOs. This occurred in Cambodia in the early 1990s, resulting in relatively heavy investment into NGO infrastructure without government oversight, and subsequent funding constraints for health ministry programmes.

5.2 Political commitment by government

The commitment of post-conflict governments to develop a coordinated plan for health sector development, and to implement this plan, greatly affects donors' intentions and the long-term cohesiveness of health sector rehabilitation. A country's ability to effectively manage external assistance depends partly on the existence of an articulated national health policy strategy, into which donors are willing to integrate in order to guarantee equity and promote efficiency. Mozambique attracted coordinated donor

support by developing a health policy formulation before the signing of the peace agreement (Pavignani and Colombo 2001).

Following the Second World War, the transitional Japanese government made a strong political commitment to the health sector as part of its plan to rebuild the country (Yoshimura 2002). This commitment—manifested by a willingness to promote legislation and major public health programmes—was greatly facilitated by the fact that the pre-conflict condition of the health system was relatively strong and the fact that there was a broad consensus in Japanese society supporting rehabilitation efforts. More recently, Croatia, Kosovo, and East Timor have all demonstrated strong commitments to post-conflict health sector rehabilitation. Afghanistan hopes to follow in their footsteps. Afghanistan's Interim National Health Policy 2002-04 foresees a principal role for the health ministry in terms of 'stewardship of the health sector by the health ministry to ensure transparency, accountability, advocacy, and regulation, demonstrating commitment to long-term cohesion of a national framework for the health system' (Transitional Islamic Government of Afghanistan 2003).

5.3 Partnerships with NGOs

Related to political commitment, the ability of a government to enter in active partnership agreements with NGOs can strongly influence the success of health sector rehabilitation. In Kosovo in 1999 no single authority or agency had sufficient capacity to single-handedly design a public health infrastructure and disease surveillance system. As a result, the WHO, the International Rescue Committee (IRC), and the Kosovar Institute of Public Health (IPH) designed the 'Epidemic Prevention and Preparedness' (EPP) Programme to enhance the capacity of the IPH to reduce mortality and morbidity related to infectious diseases. The EPP Programme was a concerted effort combining the Kosovo IPH, a multilateral organization (WHO), and an NGO (the IRC) in rehabilitating the public health infrastructure to promote sustainability and government ownership of the disease surveillance mechanism. The success of the EPP depended on clearly-defined roles and responsibilities, communication among partners, and especially the early and sustained involvement of local IPH authorities despite their lack of technical and human resource capacity (Brennan et al. 2001).

As an alternative mechanism for collaborating with NGOs, Cambodia and now Afghanistan have implemented performance-based partnership agreements (PPAs). The PPA arrangement allows the government to take advantage of the presence and capacities of NGOs in an environment in which the capacity of the MOH to directly deliver services is currently very limited. By contracting with NGOs to deliver an agreed-upon package of services, the government should be able to focus more on management, policy, and financing mechanisms, with a particular focus on equity and quality. As stated earlier, however, PPAs are only likely to be effective if governments maintain an active role in the management of the agreements rather than being left as a third party as international donors collaborate separately with NGOs.

5.4 Prioritization, planning, and integration

Post-conflict health sector rehabilitation is an effort to maximize positive outcomes with constrained resources—as such, the rehabilitation process implies a prioritization process for the allocation of resources. This prioritization can be based on the cost-effectiveness of health care services, equity in access to services, or a range of other criteria. In addition to choosing among different types of health services and—potentially—different population groups, post-conflict governments and donors must make allocation decisions related to human resource capacity development—for example the level of resources to devote to management training and medical education.

Clearly, resource allocation decisions should be based on local realities; there is no universally correct approach to resource allocation. Nonetheless, approaches that favour equity, cost-effectiveness, and integration of services are more likely to engender successful rehabilitation of the health sector in the long run. Mozambique's health plan strategies in the latter half of the 1990s followed sound allocation methodologies. These plans, amounting to $355 million over five years, stressed the following priorities:

- Health care delivery—including rehabilitation of infrastructure and equipment, and maintenance of services.
- Human resources development—focusing on training and providing liveable wages to government health workers.
- Institutional development—including decentralization, strengthening management capacities, and development of information systems.

Uganda in the 1980s provides an example of less desirable resource allocation patterns, depending heavily on vertical programmes, capital investments, and tertiary care. Although the physical health infrastructure was improved and immunization coverage increased, the negative consequences of Uganda's approach were substantial. The vertical programmes addressed neither capacity building for personnel nor the integration of disease-specific priorities into the overall health system. Of the $202 million allocated in the national plan for health sector rehabilitation, nearly half was dedicated to infrastructure, including hospital rehabilitation and construction. The majority of the remaining funds were directed toward the restoration of vertical programmes for immunization and essential drug lists. This plan was capital intensive, and implied significant increases in recurrent expenditures in the future, far exceeding Uganda's financial capabilities and threatening sustainability (Macrae et al. 1996).[2]

[2] In 1986, 41 per cent of the health sector rehabilitation budget was allocated to rebuild the teaching hospital in Kampala, reflecting the emphasis on urban hospitals over community and rural health centres (Macrae 1997).

Separately from prioritization, planning is also essential for health sector rehabilitation. In Mozambique, by 1996 health service use in rural areas had increased three-fold from two years earlier. The health ministry had begun to merge vertical disease programmes into more comprehensive programmes. Health sector planning was based on available epidemiologic, demographic, and health system data. An important lesson from the Mozambique experience with health sector rehabilitation was the willingness of the government and its partners to plan ahead—so that even with unforeseen political events there was a sense of preparedness and direction in the health system (see Appendix).

A key component of planning is the timing of specific inputs in the rehabilitation process. Investing in capital, such as construction of health facilities, without sufficient information about the health status and needs of the population can perpetuate existing inequalities and neglect new health demands. Not investing early enough in components such as human resource development and management skills may jeopardize the long-term sustainability of the health system, or create a vacuum of capacity and accountability. Integration of health services is closely related to both prioritization for resource allocation and planning for implementation. In a post-conflict situation with little credible central authority, donors are likely to favour funding vertical projects running parallel to a weakened health system. Integrating these projects within the health system—and furthermore integrating disease programmes within the health system—is likely to produce better long-term results.

The different partners involved in rehabilitating the health sector in East Timor strongly favoured integration over vertical programmes. With the government, they developed district health plans designed to comprehensively meet the basic health needs of the population (Waldman 2003). The integration of public health priorities in East Timor was greatly facilitated by the establishment of an Interim Health Authority (IHA) in 2000. The IHA became the Department of Health Services (DHS), established a national health policy strategy and preventive public health programmes, and reached agreements with NGOs for in each district to formalize standards (Tulloch et al. 2003).

5.5 Sustainability

One of the most formidable challenges in rehabilitating the health sector is the consideration of the long-term sustainability of current investments. There is a temptation and tendency to invest heavily in reconstruction of health facility structures—but post-conflict governments and societies may well not have the financial resources to pay the recurrent costs of maintaining and operating new health infrastructure, particularly large hospitals. Likewise, vertical disease control programmes—such as the Expanded Programme on Immunizations (EPI) and Control of Diarrhoeal Diseases (CDD) programme—are popular and achieve noticeable results in the short-term. Unfortunately, vertical programmes do less to address underlying deficiencies in financing and management.

A third potential obstacle to long-term sustainability relates to the private and non-governmental sector—when public capacity is in turmoil, private provision increases and public health workers and managers move to the private sector or to NGOs. While these developments may strengthen NGOs and lead to short-run improvements in performance, they are not compatible with the long-term development of an integrated and operational national health system (Macrae 1997).

5.6 Other policy issues

Finding the appropriate role for the private sector in post-conflict health sector rehabilitation is often a delicate issue. Private providers may have continued to function during the conflict; harnessing their energy and resources and bringing them into an integrated public-private service delivery mix is a considerable challenge in many post-conflict settings.

Incorporating women in the earliest phases of the health sector rehabilitation is crucial, as they have likely been marginalized from public and civic life, yet are often the eyes and ears of families and communities. Particularly in countries like Afghanistan, the health care system has discriminated against women, both in terms of their role as health care professionals and in terms of service delivery. Including women in policy discussions and human resource development will provide more opportunities to ensure a distribution of resources that will be accessible to, and used by, women and their children.

6 Conclusions

The success of the post-conflict health sector rehabilitation programmes is difficult to evaluate. These programmes are dependent on external factors—including military security and supportive political processes. In addition, there are a range of factors that influence health status that are outside of the immediate scope of a health sector rehabilitation programme—including poverty alleviation, economic growth, transportation, and water and sanitation infrastructure. Success also depends on local commitment and capacities—including human resource and supervision capacities, and the availability of data to guide decision-making. Although each post-conflict situation is unique, there are some valuable lessons from experiences to date.

Inevitably, reconstruction is both more difficult and more costly than anticipated. Even if there is no reoccurrence of conflict or instability, the conflict and its reverberations will have shifted some needs and produced new ones (Pavignani 2002). Recognizing that neither universal nor quick solutions to health sector reconstruction exist is important for setting realistic goals and timeframes.

The success stories, particularly Mozambique, Kosovo, and (to date) Afghanistan share in common the development of a clear national strategy to guide health system

development—a strategy that sets long-term priorities and allows for the integration of donor inputs. A national strategy for health systems development should encourage participation of a range of stakeholders (Keane 1996). Among these stakeholders, health care professionals should be consulted on both the immediate health needs of the population as well as longer-term policies. Appealing to the maximum number of actors to ensure buy-in will facilitate the implementation of the strategy, but will also lessen pressure on the incoming government to enforce the plan. The process of developing such a strategy should begin as early as possible as a country transitions from conflict to relative peace (Pavignani 2002). Within three months of the end of war in 1999, Kosovo had already adopted an interim health policy strategy, developed by the WHO in consultation with the Kosovar medical community (LSHTM 2001).

The importance of donor coordination is difficult to underemphasize. As much as possible, donor inputs should be integrated into a long-term comprehensive health sector strategy rather than operating parallel to the government through vertical programmes. Maximizing the impact of external assistance also depends on the absorptive capacity of the existing health system. Typically the initial post-conflict period sees temporary economic growth spurt attributable to the inflow of aid. However, the capacity of post-conflict governments to effectively channel the flows of aid into appropriate development strategies is limited—leading to the counterintuitive suggestion that external assistance should start modestly and increase, rather than decrease, over time as part of a coordinated development process.

Short-term relief and assistance programmes should be implemented in a manner compatible with longer-term health system rehabilitation. The three approaches to health sector rehabilitation outlined in this paper—(1) an initial response to immediate health needs; (2) the restoration or establishment of a package of essential health services; and (3) rehabilitation of the health system itself—should operate synergistically and as part of a continuum.

Appendix

Country examples

This Appendix highlights different experiences in post-conflict health system rehabilitation, illustrating specific approaches in different countries.

Japan: an historical perspective

Although the nature of contemporary conflicts has changed since the Second World War, Japan offers a useful point of comparison for post-conflict health system reconstruction. The Second World War devastated the country, both through direct war damage and through secondary effects including unemployment, and reduced agricultural output and consequent food shortages. In 1945, Japan had endured 14 years of war. The country lay in ruins, with over three million dead (Powers 2001). The public sanitation systems in several cities were destroyed, leading to increases in communicable diseases (Ministry of Health and Welfare 2004).

To address the nutritional problems stemming from food shortages, in 1945 the post-war transitional government carries out a national nutrition survey, assigned nutritionists to health centres, and implemented a Nutrition Improvement Law calling for nutrition counsellors to offer nutritional guidance and supporting a school lunch programme. Benefits were provided to poor farmers under the Rural Life Extension Services act. Two laws aimed to stem the increase in communicable diseases. The Communicable Disease Prevention Law encouraged community efforts to organize vector control; the 1948 Preventive Vaccination Law required immunizations for six diseases. Additionally, national subsidies supported municipal public water supply projects in municipalities, and a surveillance system was established to track sources and routes of infection (ibid.). In terms of regulation and health care delivery, the 1947 Medical Service Law set requirements for medical facilities, based on evidence-based medical care, and set minimum qualifications for medical personnel.

A decade after the end of the Second World War, Japan was experiencing rapid economic growth—particularly in manufacturing—driven by a dynamic private sector, high savings ratios, the willingness of banks to support industry, and macroeconomic measures to curb inflation. With the exception of South Korea, such dynamic growth has rarely been seen in post-conflict situations since. In most countries plagued by contemporary conflict, the capacity for economic development has been impaired for much longer (Yoshimura 2002).

Important factors underlying the success of Japan's health system reconstruction were social solidarity; exemplary political leadership; assistance from the international

community in restructuring and democratization; and financial support from the IMF and the World Bank following the Bretton Woods conference. Perhaps even more important was the state of Japan before the Second World War—with a relatively egalitarian distribution of wealth compared to nations afflicted by conflict today. Also, from the time reconstruction began, the Japanese government made strong political commitments to the health and education sectors in an effort to restore Japan back to its earlier stature (Yoshimura 2002).

Over fifty years ago, Japan had an approach to the reconstruction of its health system that is rarely seen in current efforts. This approach featured a strong political commitment and prioritization of the health and education sectors, manifested by a willingness to promote legislation and major public health programmes. This commitment was greatly facilitated by the fact that the pre-conflict condition of the health system was relatively strong—and the fact that there was a broad consensus in Japanese society supporting rehabilitation efforts.

East Timor: a sector-wide approach

In August 1999 the majority of East Timor's population chose independence from Indonesia in a popular referendum organized by the UN. The referendum was followed by months of violence, looting, and destruction by pro-Indonesian factions. Ensuing riots compounded the destruction. Health indicators, never as good as the rest of Indonesia, had been worsened by the conflict. The East Timor health system, even before the disturbances, was chronically under-funded and highly-centralized. Public subsidies were not targeted towards the poor. East Timor was heavily dependent on donor support (Tulloch et al. 2003).

East Timor used a sector-wide approach in its Health Sector Rehabilitation and Development Programme Sector, a critical move for cooperation between the UN Transitional Authority for East Timor (UNTAET), NGOs, and bilateral and international organizations. Instead of vertical projects running parallel to a weakened health system, East Timor developed district health plans, with the hopes that these would be more sustainable and meet the basic health needs of the entire population better than patchwork programmes and projects scattered across the country (Waldman 2003).

In 2000, the UNTAET established a central health authority—the Interim Health Authority—(IHA) to design a Health Sector Rehabilitation and Development Programme with the goal of an integrated public health management system. The objective of Phase I of this programme was to allow NGOs to continue providing essential services while the IHA prepared for longer-term investments in the health system. During Phase II, the IHA became the Department of Health Services (DHS) and established a national health policy strategy and preventive public health programmes.

Also during this phase, the DHS reached agreements with NGOs for each district to formalize district standards (Tulloch et al. 2003). In 2001, Phase III saw the Health ministry assume financing responsibilities in most districts and begin to recruit health professionals from those same NGOs. In the final phase of the health system recovery, in late 2001, the NGOs withdrew from the districts—leaving the management of all health facilities to the Health ministry (Rohland and Cliffe 2002).

The objectives of this health sector rehabilitation programme were based on the fundamental goal of '… address[ing] immediate basic health needs of the population of East Timor and develop[ing] health policies and health system appropriate to the country' (Tulloch et al. 2003). The main approach to reach this goal was to promote access to basic package of health services, and to restore fundamental components of the health system. These components were defined as: a pharmaceutical logistics system; reconstructed and re-equipped health centres; a referral system; administrative infrastructure; and a small grant scheme to support involvement by communities and stakeholders. By stressing these fundamentals, the programme aimed to lay the foundation for future health policies and the development of a cohesive health system (Tulloch et al. 2003).

Reconstruction of the East Timor health system encountered a series of challenges—including competing objectives and expectations of donors, stakeholders, and politicians; the timely procurement of quality goods and supplies; levels of funding in excess of absorptive capacity; and very strict procurement procedures—leaving little flexibility for short-term funding reallocation. There were discrepancies in the priorities, timelines, and reporting formats among organizations. International organizations bid against each other for qualified personnel, who were often recruited from local organizations.

Despite these challenges—common to most post-conflict settings—East Timor has realized considerable achievements in restoring its health system. By late 2001 the East Timor Health ministry was in place, with over 800 staff recruited and in the field. A central pharmacy had constructed; most essential drugs were available by the central health authority. Twenty-two new health centres had been constructed. A household survey for health and health care was nearly complete. The National Tuberculosis Programme and the Integrated Management of Childhood Illnesses programme were re-established, and there were projects underway to address reproductive health, HIV/AIDS, and mental health. Moreover, there was a sense of collaboration by the organizations involved. Most importantly, the Central Health Authority had credibility in the local and international community as the principal authority for the health sector reconstruction (Tulloch et al. 2003).

Mozambique: the importance of planning

After thirty years of conflict—first with Portugal and later between the government and the South-African backed resistance movement *Resistencia Nacional Mocambicana* (RENAMO)—Mozambique celebrated a peace agreement in 1992. The agreement also marked the beginning of the rehabilitation of the health sector. By the mid-1980s the National Health Service had become heavily dependent on external aid. Nearly 60 per cent of the national budget came from donor funds. A large proportion of international aid bypassed the government entirely and went straight to NGOs. The health sector was on emergency footing for the last part of the war with RENAMO—with uncoordinated inputs, inefficient programmes, and declining health status indicators (Pavignani and Durao 1999).

In the early 1990s the health ministry, anticipating peace in the near future, developed an ambitious plan for the transition into peace. This was plan was succeeded by a health plan for the time period 1996-2001 with a $355 million budget and the following priorities (Keane 1996):

(1) Health care delivery—rehabilitation of equipment and infrastructure, maintenance of services.
(2) Human resources development—training, wage increases, and other support.
(3) Institutional development—management capacity, investment in information systems, and decentralization.

However, the transition from conflict to peace—from 1993 to 1995—was much harder than anticipated. Progress was slow and expensive, and as displaced populations returned home or settled in new areas, new strains on the health system resulted in delays in the expansion of the health care delivery. The reconstruction of primary health care infrastructure was beset by obstacles related to uncoordinated investments. There was a tension between a realistic approach to policy discussion—acknowledging capacity limitations and insufficient resources—and a more ambitious approach emphasizing the need for progress (Pavignani and Durao 1999).

By 1996, health service use in rural areas had increased three fold from two years earlier and the democratically elected government installed in 1994 had continued the health sector rehabilitation plans of the successor government. By the mid 1990s, the health ministry had begun to merge vertical disease programmes into more comprehensive programmes. Health sector planning was based on available epidemiologic, demographic, and health system data. Perhaps the most important lesson from the Mozambique experience was the willingness of the government and its partners to plan ahead—so that even with unforeseen political events there was a sense of preparedness and direction in the health system.

Afghanistan: performance-based partnership agreements

Afghanistan, much in the international spotlight due to its transition into the post-conflict phase following twenty years of conflict and the end of Taliban rule, will offer substantial insight into approaches to health sector rehabilitation. With health indicators among the worst in the world, Afghanistan only has room for improvement. During twenty years of conflict, Soviet occupation, and civil war, Afghanistan's health system had deteriorated so severely that when the Taliban collapsed in 2001 the health system was almost non-existent.

In 2002 a joint donor mission issued an aide memoir with a very strong public health emphasis, recognizing the substantial limitations of the government to provide health services and recommending strong relationships with the private sector through Performance-based Partnership Agreements (PPAs) in which the government would contract to the private non-profit sector for health care delivery. The donor mission—composed of representatives from WHO, UNICEF, UNFPA, and bilateral organizations—found that most health centres were in urban areas and that there were overstaffed centres without appropriate training and policies, and recommended eliminating user fees as there were no mechanisms to guarantee equity and transparency. Investments in maternal and child health care were of paramount importance, since much the mortality and morbidity in these populations could be prevented through the provision of basic health care services and preventive measures (Waldman and Hanif 2002).

Through the PPA scheme, Afghanistan has focused heavily on the restoration—or initial implementation—of a Basic Health Services Package (BSHP). The BHSP is defined to include adequately trained health personnel, offering a core package of services made widely available, rather than a more comprehensive package available to a select few. It is also defined in function of levels of care, ranging from community health workers to referral systems in secondary and tertiary settings. The BHSP requires corresponding investments in community education, and its effectiveness will depend on operational research, health information systems, and programme management and coordination.

Afghanistan's Interim National Health Policy 2002-04 foresees a principal role for the Health ministry in terms of 'stewardship of the health sector by the health ministry to ensure transparency, accountability, advocacy, and regulation, demonstrating commitment to long-term cohesion of a national framework for the health system' (Transitional Islamic Government of Afghanistan 2003). The PPA arrangement allows the government to take advantage of the presence and capacities of NGOs in an environment in which the capacity of the MOH to directly deliver services is currently very limited. By contracting with NGOs to deliver an agreed-upon package of services, the government should be able to focus more on management, policy, and financing mechanisms, with a particular focus on equity and quality.

Afghanistan's health sector development plan lays out short, medium, and long-term goals. Short-term goals include the establishment of a national immunization programme—with 90 per cent measles vaccination coverage and 40 per cent immunization coverage of the full Expanded Programme on Immunizations (EPI) for children; supplementary and therapeutic feeding programmes to address urgent problems of malnutrition, the implementation of a basic health services package, and refresher training for health care personnel. Intermediate goals, within a 3 year horizon, include reducing the infant mortality rate (IMR) to 140 per 1,000; increasing EPI coverage to 50%; eradicating polio and measles; further reducing the prevalence and incidence of acute malnutrition; increasing tetanus toxoid coverage for pregnant women; and undertaking comprehensive training for female health personnel in an effort to address gender issues as important public health interventions. Within 10 years, appropriate public health actions could deliver the essential basic health services package to the entire population; reduce the IMR to 85 per 1,000 live births; reduce the Maternal Mortality Rate (MMR) by 50 per cent to 850 per 100,000 births; and reduce the Total Fertility Rate (TFR) to between 5 and 6 children per married woman (UNDP 2002).

Afghanistan has begun its health system reconstruction early and actively, with substantial support from the international community and a commitment to restore basic health services while also addressing importance of management and health policy. Given the state of the health system inherited from decades of conflict, Afghanistan is essentially starting from scratch, but has indicated clear goals for the immediate, medium- and long-term.

Kosovo: a collaborative effort to restore public health infrastructure

The war in Kosovo in 1999—with a resulting flood of refugees and internally displaced persons (IDPs)—placed serious pressures on new country's public health system. Health system infrastructure itself was damaged; and disease surveillance capacity and epidemic preparedness weakened. Additionally, the post-conflict health system faced significant challenges. The health system before the conflict had been centralized—based heavily on specialist care, vertical programmes, and predominantly government employees. The ethnic repression and discrimination of the previous decade had manifested in development of the parallel and separate health systems (Shuey et al. 2003).

No single authority or agency within Kosovo had sufficient capacity to single-handedly design a public health infrastructure and disease surveillance system. As a result, the WHO, the International Rescue Committee (IRC), and the Kosovar Institute of Public Health (IPH) designed the 'Epidemic Prevention and Preparedness' (EPP) Programme to enhance the capacity of the IPH to reduce mortality and morbidity related to

infectious diseases—a severe problem following the conflict and a high priority identified by the Kosovar officials (Brennan et al. 2001).

In the absence of public health surveillance, epidemiological tracking, and a health information system, the post-conflict effort to control infectious disease was challenging. Estimates and history suggested high risks for typhoid, hemorrhagic fevers, hepatitis A, and tuberculosis. The conditions for all of these diseases were worsened by the disruption of sanitary sources, contaminated water supply, and migrating populations.

The EPP programme began by conducting a country-wide baseline health survey for both ethnic Albanian and Serb populations. The second component of the EPP was the standardization of healthcare definitions and cost-effective case-management protocols for subsequent distribution to all levels of the health care system. Third, the EPP installed a public health surveillance system, including adequately trained epidemiologists, microbiologists, and managers. The fourth component was the rehabilitation of microbiology laboratories to improve diagnostic testing and increase efficiency. These four components were complemented by community-based public health education and promotion campaigns through the media and health professionals. The final piece of the EPP Programme was to create, at the regional level, epidemic response teams with training in outbreak investigation, epidemiological studies, and information management (Brennan et al. 2001).

Kosovo presents a unique experience, in that the EPP Programme was a concerted effort combining the Kosovo IPH, a multilateral organization (the WHO), and an NGO (the IRC) in rehabilitating the public health infrastructure to promote sustainability and government ownership of the disease surveillance mechanism. The success of the EPP depended on clearly-defined roles and responsibilities, communication among partners, the early and sustained involvement of local IPH authorities despite their lack of technical and human resource capacity, and flexibility in objectives (Brennan et al. 2001).

Uganda: a lack of prioritization

The most salient feature of Uganda's approach to the reconstruction of its health system was the lack of priority given to the health sector in overall national rehabilitation plans. Repressive regimes and political factionalism had marked Uganda's history since independence in 1962. When the National Resistance Movement (NRM), under Yoweri Musevini, took power in 1986, there was a period of peace, offering an opportunity for transition from conflict and to development.

Unfortunately, health was not prominent in the NMR's early political agenda. The new government assumed that rebuilding infrastructure and promoting economic growth

would by themselves ultimately lead to social development and health improvements. The NMR established executive secretaries for most other sectors but did not include the health sector as a priority focus for rehabilitation. This neglect of thoughtful policy development and sector reconstruction would prove to be detrimental to Uganda's post-conflict health system.

Until the 1970s, the Ugandan population enjoyed better health status than its African neighbours, but the cumulative effect of political instability and conflict dropped Uganda to a ranking of 40th in terms of public heath status among African countries. Infant mortality rates increased between the 1970s and 1980s, as did the burden of communicable diseases including malaria, tuberculosis, and measles, and HIV (Macrae et al. 1996). The national health system, centred on urban care and curative models, failed to address the needs of the rural populations. By the mid-1980s the health system was starved of financing. In 1986/87, the health ministry budget was just 6.4 per cent of its 1970 amount in real terms—in part due to increases in military spending, not atypical of conflict and post-conflict situations. Public spending on health was less than 0.1 per cent of GDP (ibid.).

In addition to the financing consequences, conflict had also devastated the human resource base in the health sector, thereby undermining potential policy development. The physical infrastructure also suffered from the decades of conflict. As the public health system deteriorated, the private sector partially filled the void, attracting public employees with the prospect of payments supplementary to their normal salary. This change in the balance between public and private healthcare provision exacerbated the existing fragmentation in health service delivery.

The approach to post-conflict health system reconstruction in Uganda was oriented towards rebuilding infrastructure rather than system reforms. In the 1986 $202 million national plan for health sector rehabilitation, nearly half was dedicated to infrastructure, hospital rehabilitation, and a teaching hospital. Of the other $111 million designated, the majority was directed toward the restoration of vertical programmes for immunization and essential drug lists. The plan was capital intensive, implying significant increases in recurrent expenditures into the future that exceeded Uganda's financial capabilities (Macrae et al. 1996).

Beyond the emphasis on the physical reconstruction of the health sector, the rehabilitation plan for the health sector in Uganda had other weaknesses. The government assumed responsibility to finance rehabilitation of the secondary and tertiary levels, and left the primary health care level to the hands of the non-governmental sector—leading to parallel systems and fragmentation. On the positive side, much of the physical health infrastructure was improved, immunization coverage increased dramatically, and the essential drugs programme was operating smoothly. However, the negative consequences of Uganda's approach were substantial. The

vertical programmes addressed neither capacity building for personnel nor the integration of disease-specific priorities into the overall health system. In the absence of a national policy, donors operated according to their respective agendas, and assumed the role of resource allocation. The resulting patchwork in projects and services, through vertical programmes, the private sector, and the non-governmental community undermined the possibility of a more comprehensive national health policy. Although there was a commitment by the NMR and the donor community to rehabilitate the health sector, both parties disproportionately focused on rebuilding infrastructure at the expense of long-term health policy objectives.

Cambodia: coordinating external aid

Cambodia's post-conflict health sector rehabilitation underscores the importance of the role of external aid and efforts to coordinate international assistance. Since independence in 1954, Cambodia has depended heavily on foreign aid. During the Cold War, regime changes dictated whether aid came from the West and or the East (Lanjouw et al. 1999). After the Cold War, international aid continued to pour into Cambodia, usually bypassing the central government which was frequently changing and plagued with factionalism.

In 1988, a large portion of a $10 million package for relief and development was programmed for the health sector, with delivery through existing NGOs. By 1992 over $28 million was channelled to the health sector through 55 NGOs (Lanjouw et al. 1998 and 1999). Despite anticipated peace in the early 1990s and elections in 1993, international agencies were tentative in engaging with the government given the lack of a coherent national strategy and political factionalism. Still, international aid accounted for a considerably greater portion of health expenditures than did the government. In 1993, international aid represented $4.40 in per capita health spending, compared to less than $1.00 in spending on health by the government (Lanjouw et al. 1998; World Bank 2004).

There have been several attempts to coordinate donor assistance. In 1989 a number of NGOs established an informal coordinating mechanism, MEDICAM, to develop relationships with the MOH. Two years later, when the UN Transitional Authority in Cambodia (UNTAC) was established as an interim authority but lacked authority to allocate revenues. Donors bypassed the regime and entered directly into contracts with NGOs, the number of which had nearly doubled during 1991-93. One result was that there was relatively heavy investment into infrastructure in the health sector, while programmes and activities were under-funded.

In 1991, the World Health Organization supported an effort by the health ministry to coordinate efforts and resources within the health sector. The resulting Coordinating Committee for Health was chaired by the Undersecretary of Health within UNTAC with

representatives from the Health ministry, WHO, UNICEF, ICRC, UNDP, bilateral agencies and three NGOs. The objectives of the Committee were to monitor and evaluate health activities by international aid agencies; provide technical advice; and make recommendations to the Health ministry to support planning, coordination, and implementation of health sector policies and programmes. The idea was also to ensure the sharing and evaluation of health system information to collectively identify priorities and limitations (Lanjouw et al. 1998, 1999).

Both the MEDICAM and the Coordinating Committee efforts were more effective in sharing information than in actual implementation of compliance based on national health policy—partly because they both lacked political authority, and partly because donor agencies continued to negotiate separately with political factions and with NGOs, based on geographical location and their own respective agendas.

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