

# A code of best practice for disease control programmes to avoid damaging health care services in developing countries<sup>†</sup>

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## SUMMARY

How should we implement disease control programmes so as to strengthen existing health systems? To answer this question, we re-examined the integration of these programmes from a managerial perspective. Based on a literature review, we concluded that integration is essential in the majority of cases. We went on to examine the mechanisms whereby the integration of disease control activities can jeopardize health care delivery, resulting in low service utilization, low detection and cure rates, and patient delays. To do this we clustered disease control programmes into three categories and assessed the impact of each on local health care facilities. From these results, we suggest a series of measures designed to help aid agencies and national governments support local health care infrastructures or, as a minimum, avoid damaging them. Whilst some vertical programmes should never be integrated, two conditions are essential to the integration of others: (1) Disease control needs to be integrated with *general* health care delivery—which implies the possibility to deliver general practice/family medicine care in publicly oriented health services. (2) Integration of both operational and administrative aspects should take place simultaneously. Any health policies in developing countries tending to allocate disease control programmes to government facilities and general health care to private facilities preclude their integration. They risk unravelling the fabric on which both disease control and health care delivery depend. Copyright © 2003 John Wiley & Sons, Ltd.

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## INTRODUCTION

Oxfam has published a warning to the organizers of the Global Fund to Fight AIDS, Tuberculosis and Malaria advising them to ‘put in place programmes which are

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designed and implemented to strengthen existing health systems, in order to ensure effectiveness and sustainable impact' (Oxfam, 2003). The question is how? To answer it, we re-examined the integration of disease control programmes from a managerial perspective. Based on a review of the literature, we concluded that integration is essential in the majority of cases. We went on to examine the mechanisms whereby the integration of disease control activities can jeopardize general health care delivery, resulting in low service utilization and low programme target detection rates. To do this we clustered disease control programmes into three categories and the impact of each on local health care facilities was assessed. Finally, we suggest a series of measures designed to help aid agencies and national governments support local health care infrastructures or, as a minimum, avoid damaging them.

In this paper, integration is defined as a process where disease control activities are functionally merged or tightly coordinated with multifunctional health care delivery. However, another definition is sometimes used in the technical literature. This makes reference to a situation where different disease control interventions are delivered simultaneously, in the absence of any form of '*patient centred*' care.

In industrialized countries, family medicine has espoused a '*patient centred*' model of doctor-patient interaction (Engel, 1977), whereby the doctor actively seeks the patient's point of view. This approach has been shown to result in greater patient compliance and satisfaction (Stewart, 1984). Key elements of patient centred care imply:

- an assessment of the social, family, psychological and somatic factors that may influence the health problem and its solution;
- an agreement with the patient upon a treatment strategy involving possibly curative, preventive and/or health-promotional care, as well as the intervention of other professionals.

Whilst in industrialized countries such patient centred care is led by general practitioners (GPs), in many low income countries this role may be undertaken by nurses or auxiliaries, who are often the first line providers of general health care. The principles of patient centred care still apply, however, irrespective of the type of practitioner. Specific managerial strategies are available to progressively overcome obstacles such as lack of skills (e.g. coaching, peer exchange of experience, in-service training), lack of time (e.g. through task delegation, redesign of patients' flow, reprogramming of personnel time, use of family files, etc) or lack of privacy in health facilities (such as booking special appointments).

This raises the question of whether, in developing countries, disease control programmes should be integrated among themselves, such as in UNICEF's Growth monitoring, Oral rehydration, Breast-feeding and Immunization (GOBI) programme or with the general health care services.

For decades the debate around the pros and cons of vertical versus horizontal health care organization modes has divided the public health community. In the 1950s and 1960s, pharmaceutical and vector control breakthroughs were translated straightforwardly in malaria, smallpox and other disease control programmes (Mills, 1983). In 1978, the Alma Ata Declaration expressed an international will to promote comprehensive primary health care (PHC) and community participation in health. One year later, Walsh and Warren proposed 'Selective Primary Health

Care' as an alternative to 'comprehensive' Primary Health Care (Walsh and Warren, 1979). Selective PHC focused on provision of a few programmes selected on the grounds of cost-effectiveness. This concept is quite close to:

- WHO's definition in 1996 of 'integrated health services' or 'integrated programmes' (WHO Study Group, 1996);
- World Bank's definition of the 'minimal package of activities' (World Bank, 1994), otherwise called 'benefit packages', and 'priority programmes';
- strategies designed by UNICEF and WHO to deliver combined interventions, such as GOBI or later Integrated Management of Childhood Illness.

The features distinguishing these strategies from comprehensive approaches to first line health care include not seeing health improvement as part of a long-term development process (Rifkin and Walt, 1986) and the lack of preoccupation for holistic patient and family centred care (Unger *et al.*, 2002).

During the 1990s, international policies began to recommend disease control prioritization within the public sector, together with increasing privatization of curative care on the grounds of (supposed) higher efficiency of the for-profit sector (COM, 2002; Human Development Network, 1997; WHO, 2000).

This debate is far from theoretical. On the ground, as will be seen, disease control programmes may seriously hamper broader health care delivery, which in turn could limit the effectiveness of the disease control programmes. To avoid such a negative feedback loop, this paper proposes a code of best practice for disease control programmes to avoid damaging health care services in developing countries. This code could be used in multiple ways:

- health professionals and planners can follow it when designing or reforming programmes;
- international organizations could pledge to respect such a code;
- research workers can find in this code a source of benchmarks to evaluate public health strategies;
- parliamentary members, political parties and activists could use it to interrogate health sector aid and exert democratic control on governmental and international interventions.

## A TYPOLOGY OF DISEASE CONTROL PROGRAMMES

Coherent sets of activities, know-how and resources designed to control a single or a limited number of related disease(s), are termed *disease control* programmes (Cairncross *et al.*, 1997). The sponsors of a disease control programme intend that health professionals use it to meet standards set by specialists involved in the programme. Outputs are usually measured in terms of rational clinical decision making, coverage, detection or cure rates.

Two key criteria may be used to distinguish between types of disease control programmes:

- in health services where these programmes are delivered, there may or may not be an effort to attract and treat patients suffering from conditions outside of the

- a Vertical programme (no integration at all)
- b Integrated programme (operational and administrative integration)
- c Indirect programme (operational integration alone)

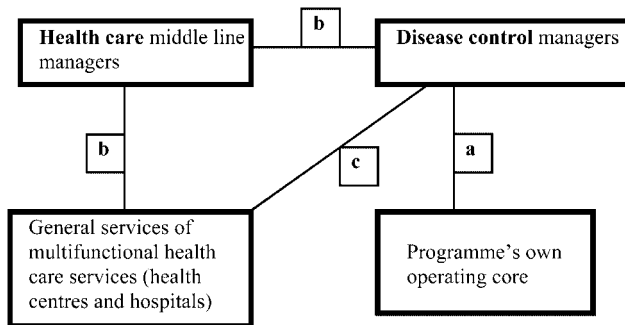


Figure 1. Organizational templates in disease control

programmes' remit—that is to deliver general, patient centred care. Accordingly, such programmes will be deemed either operationally *integrated* or *not* with *general health care delivery*;

- the middle management of disease control programmes may or may not be integrated with the middle management of (public) health care services—typified by district management teams. Such programmes will be deemed either administratively *integrated* or *not* with local *health care administrations* according to whether or not local health care managers make decisions about programme implementation.

Based on these two criteria, three main types of programmes can be delineated (see Figure 1)—though in reality all programmes fall somewhere along a spectrum between being free standing (vertical) at one end and administratively integrated at the other.

### *Vertical programmes*

In theory, these programmes supply environmental interventions and clinical resources in parallel with local health care providers. Vertical programmes operate outside the existing general health care structure. They may also operate separately from local health care structures. For example, the substantial funds available through several private foundations are often channelled through public/private, independently governed structures detached from public health services (Brugha *et al.*, 2002; Yamey, 2002).

Some achievements of vertical programmes must be acknowledged, of which the best known is smallpox eradication—a success which has not yet been repeated

(poliomyelitis could be the next candidate). Inspired by the successful smallpox control model, Foege and colleagues suggested that health care services should be reorganized along the lines of the fire brigade (Foege *et al.*, 1976). This surveillance-based approach underestimates the special epidemiological characteristics of smallpox, i.e. its slow transmission rate.

In fact, there are clear indications for vertical programmes such as: vector control; the control of diseases too rare for general health professionals to maintain the necessary specialist skills; outreach to specific risk groups such as commercial sex workers and drug addicts; the control of some epidemics and emergencies; and providing health activities for which there is no demand, e.g. epidemiological surveillance (Criel *et al.*, 1997). Where an epidemic places a considerable strain on health services, temporary solutions can be adopted. For example, AIDS community home based care programmes are justified in Eastern and Southern Africa because of the overwhelming workload AIDS puts on first line facilities. In addition there are prerequisites for successful integration—principally, a functioning health service, a functioning middle management, adequate resources and utilized facilities (Hanson, 2000). Where these do not exist, efforts must be made to build up this capacity for integration as soon as possible.

There are, however, disadvantages associated with vertical programmes. Usually, they address only a fraction of the demand or need for health care. Patients are likely to demand a range of treatments spanning curative care, relief from suffering, reassurance, prevention and advice on use of health services—not just the control of one single cause of ill health. In contrast, vertical programmes focus on restricted objectives, largely ignoring patient demand for access to wider health care. Thus dialogue between ‘programme’ professional and patient is limited to matters of education and information—one-way communication—to promote the campaign objectives.

A report prepared for the Swiss Agency for Development and Cooperation identifies other disadvantages of vertical programmes: they create duplication (each single disease control programme requires its own bureaucracy), lead to inefficient facility utilization by recipients, may lead to gaps in care, are incompatible with decentralized health care delivery, and where funded externally undermine government capacity by reducing the responsibility of the state to improve health care in its own services (Brown, 2001).

Since vertical programmes are seldom created to meet local expressed demand, patients may be unwilling to pay for these initiatives which means they are rarely co-financed by users. However, the reassuring sense of control available to the sponsoring organization, the capacity to record results directly, and the ability to set targets and measure results, mean that vertical programmes are frequently supported by donors, even when not appropriate.

### *Integrated programmes*

Integrated programmes are fully integrated disease control activities, often conceived at high levels but organized by middle health care managers in their own area. The managers can set priorities and targets and decide on resource allocation and coverage. Disease control specialists function as technical advisors.

Integrated programmes have some disadvantages: a lack of close financial control, a longer development phase, some difficulties in monitoring outputs, a loss of technical effectiveness (a generalist will never have the technical competence of a specialist in a specific disease) and they may be slower to build coverage.

It has been argued that the data are lacking to justify disease control integration. Twenty years ago, Mills (1983) reviewed a number of cost-effectiveness studies in order to establish exactly what information was available on the way in which individual programmes such as malaria control and immunization activities were structured in order to maximize their cost-effectiveness. At that time, she concluded that detailed cost-benefit analysis was urgently needed. More recently, the Cochrane Collaboration examined the effects of primary medical care integration in middle- and low-income countries on performance, costs and patient outcomes (Briggs *et al.*, 2001). It concluded that, despite the mass of work supporting such integration, there has been no systematic assessment of the published research to determine whether integration strategies improve health service performance or health outcomes. One could argue, however, that collecting sufficient quantitative information to decide whether integration is or is not desirable leads to 'paralysis by analysis', since optimal solutions are context-dependent.

Many authors have stressed the necessity of integrating programmes into local health facilities in order to achieve a reasonable prospect of successful disease control (Ageel and Amin, 1997; Bossyns, 1997; Loretto, 1989; Tulloch, 1999; Wilkinson, 1999). Admittedly, they did so in papers that were unable to meet the inclusion criteria for an evidence-based literature review. Methodological problems may help to explain why, after decades of debate on the pros and cons of integration, controlled studies on this issue remain so scarce. The obstacles are, in fact, similar to those met in clinical practice when trying to accommodate evidence-based medicine directives: real life situations do not revolve around the management of disease control programmes taken in isolation whilst their cost-effectiveness depends on the configuration of their individual mix (Goodman, 1999; Naylor, 1995).

In this paper, we argue that integration should be, in principle, more effective and efficient and should be the main template for health service organization. Three management arguments can be marshalled to support our case.

First, case management is sometimes the only practical control procedure (for example in tuberculosis control). Secondly, in practice, virtually all control strategies requiring clinical services to achieve any prospect of success, even those that used to rely on environmental interventions such as for onchocerciasis, lymphatic filariasis, schistosomiasis and helminthiasis, are nowadays largely based on 'morbidity control' through the administration of drugs to individuals and entire groups or communities. In general, patients consult for the relief of (generally non-specific) symptoms, not for a diagnosis, because they are usually unaware of the aetiology of their condition (Redwood-Campbell and Plumb, 2002). These patients represent a pool of users that disease control programmes can target for early case detection. Clinical services that incorporate disease control interventions—be they provided by ministry of health, municipal or non-governmental organizations—need thus to attract general care users through the offer of comprehensive, quality care and an array of services flexible enough to adapt to local needs. Patient-centred care also

permits professional–patient dialogue and provides measures tailored to secure continuity of care, thus discouraging patients from ‘falling-out’ of health care programmes. These conditions are a prerequisite for high detection rates, continuity of care, high cure rates and improved prognosis.

Second, ‘organizational structures requiring independent staff for each disease programme are extremely expensive and difficult to sustain’. By contrast, services which provide a full spectrum of health care can improve operating efficiency through the integration of separate sources of finance and real resources including, and most importantly, staff. Even if we were to accept the superior cost-effectiveness of vertical programmes for controlling the specific diseases they target—and this remains to be demonstrated—higher efficiency thresholds could not be achieved since the high costs of sustaining parallel disease control administrations could not be financed in developing countries. This would rule out the template considered by the Cochrane Collaboration. This is why Narayan (2001), who performed an in-depth analysis of externally aided projects in Karnataka, India, could conclude that ‘there is an urgent need to integrate Health with Family Welfare, primary health care and the population agenda with each other to avoid not only duplication by compartmentalization but also to reach the community and tackle the health problems of people especially the poor in a more integrated way’.

Third, resources, new skills and techniques introduced as part of a disease control programme greatly increase the scope of conditions that can be tackled by health professionals. This is the process by which integration helps to enhance the credibility of existing structures by increasing the range and scope of health care problems that can be treated by health centres and hospitals.

Maintaining the possibility of integration has two policy consequences:

1. public health services should be tailored to deliver general, clinical care—not exclusively to patients targeted by disease control programmes;
2. the rationale of those international aid policies which tend to restrict public service operations to disease control and a few maternal and child programmes should be questioned (COM, 2002; Human Development Network, 1997; WHO, 2000).

### *Indirect programmes*

These are operationally integrated (but administratively vertical) programmes. The health care staff reports to the programme manager for each programme, rather than to a health service manager (a district medical officer, for example). Operationally integrated/administratively autonomous programmes are popular with donor agencies on the grounds that they overcome bottlenecks in health care bureaucracies and achieve rapid results. In addition, indirect programmes by-pass some of the problems (previously described) of integrated systems and can offer significant financial savings to donors through the use of resources provided by the recipient state.

As stated in a World Bank technical paper: ‘Successful control programmes are largely centralized in formulating strategy and decentralized in operations (tactics). No single structural pattern applies universally, but the tendency is toward decentralized, and categorical or partially integrated organizations’ (Liese *et al.*, 1991).

A number of authors (Bachmann and Makan, 1997; Gish, 1992; Lush *et al.*, 1999; Tulloch, 1999; Unger, 1991) have expressed concern that, in practice, integrated programmes place considerable strain on primary health care workers. In fact, they were highlighting drawbacks of 'indirect' disease control programmes. Throughout the 1980s and 1990s health professionals in developing countries were encouraged to participate in prevention programmes and standard therapy plans such as the use of oral rehydration and tuberculostatics. These programmes were frequently based upon 'management by objective'. Such management, together with the under-resourcing of non-programme activities, distorted the balance of health care in first line services. Only in exceptional cases did these health professionals implement preventive programmes at a local level that were not part of a national plan. In general, they found it almost impossible to introduce prevention tailored to *individual* patient needs. With an armamentarium of perhaps two or three disease-specific programmes, and maybe not many more curative treatments, the principle of patient—centred medicine, was no longer relevant. All that was required were a small number of parameters to enable health professionals to channel the patient into the appropriate programme: does the woman want to postpone the next pregnancy? Is the child vaccinated? In fact, the main—the only?—communication skill required was the ability to recruit patients and ensure their compliance. Over-simplification of the professional role contributed to a deteriorating self-esteem and a low morale of the health personnel.

Together with the reduction in funding, these factors seriously diminished the acceptability of public health care in developing countries. This in turn, together with the introduction of user fees, has resulted in reduced utilization of public facilities. Completing the circle, low utilization levels created problems for disease control programmes themselves by reducing detection, continuity and cure rates.

How could this happen? They are various explanations:

- pressure exerted by disease control administrations, whether they be located in governments or international aid agencies (Gish, 1992);
- multiplication of disease-specific divisions in (inter)-national health administrations;
- setting ill-defined priorities and increasing opportunity costs (Gish, 1992);
- strains which arise from inadequate budgets, financial overruns and unrealistic costing (Tulloch, 1999);
- failure to make clear the lines of command (Lush *et al.*, 1999);
- tension between health care professionals over income disparity, treatment discrepancies and opportunity costs (Bachmann and Makan, 1997), and problems with sustainability (Unger, 1991).

All these problems are linked to the nature of highly autonomous administrations. Indirect programmes multiply conflicting lines of command competing for the attention of health care providers (a 'stovepipe' phenomenon). Each programme supervisor will try to maximize 'his' specific programme results. Health professionals will tend to bias their activities towards those which yield most revenue, and well-funded programmes will divert attention away from holistic bio-psychosocial treatment—or patient centred care. These factors, in combination, will undermine care delivery and discourage patients from using health facilities.



## A 'CODE OF BEST PRACTICE'

In order to take advantage of appropriate integration and prevent disease control programmes from damaging general care delivery, we propose the development of a code of 'best practice' for governments and international aid organizations, with the aim of protecting health care in facilities where disease control programmes are delivered. This would be a voluntary code, but non-compliance might be used to lobby governments, and donor agencies to reconsider their funding plans.

We propose the following principles:

1. *Disease control activities should generally be integrated, with the exception of certain well-defined situations. They should be integrated in health centres, which offer patient centred care.*

As discussed above, justification for this requirement is twofold. The early detection of chronic diseases (like tuberculosis and AIDS) and of acute conditions (like severe malaria, childhood acute respiratory infections, diarrhoeal diseases) is hindered by low primary care utilization rates. In practice, patient loyalty can only be created by good quality primary care. In addition, improved doctor/patient communication should result in enhanced continuity of care and better cure rates. Still, there are exceptions for which a vertical organization is still appropriate (see above).

2. *Disease control programmes should be integrated in not-for-profit health facilities*

The arguments for this are threefold:

- access to privately delivered health care financed by user charges in low income countries is severely restricted (Bennett, 1992; Ensor, 1997; McPake, 1997; Mouyokani *et al.*, 1999; Van der Stuyft *et al.*, 1997);
- attempts to modify behaviour in private practice to comply with national guidelines has faltered in developing countries (Brugha and Zwi, 1998). Private practitioners are frequently reluctant to implement national health policy guidelines (Hong *et al.*, 1993) or to refer their patients to public facilities when they encounter serious public health problems (Lonnroth *et al.*, 1999);
- the capacity of health authorities to regulate and control private health facilities is the cornerstone of disease control integration in the private sector. It is doubtful whether health authorities in developing countries have the skills and resources to do this effectively; they already struggle to exert stewardship and control in the public sector. Figueras and Saltman (1998) acknowledge that the success of reform strategies in Europe required 'the availability of public health skills to assess health needs, evaluate interventions and monitor outcome'. The management skills and resources required for contracting-out disease control programmes seem well beyond the capacity of most developing countries, including those of middle income.

3. *Disease control programmes should plan to avoid conflict with health care delivery*

Programme managers should prepare, in advance, a protocol for damage control, specifying how the programme will integrate 'on the ground', how it will improve access to health care in host facilities and how it will leave health facilities strengthened.

To protect the balance of health care functions (the 'minimum package of activities' that primary health care centres in the developing world are expected to provide) from disruption or interference due to the integration of disease control programmes, this protocol would:

- not only foresee the provision of adequate resources to health facilities in order to host programme activities, but compensate for the extra burden programmes place on them—which implies transparency in use of programme resources.
- plan a realistic timetable for results, compatible with PHC priorities. This may involve slower build up of coverage to ensure disease control sustainability. Bearing in mind the principle of diminishing returns, disease eradication programmes should be embarked upon with some caution.
- accept a degree of flexibility in the use of programme investments and permit the diversion of resources from a programme to, for instance, general functional improvements in PHC. One example may be that of microscopes, supplied as part of a tuberculosis control programme, which may be used to detect urinary tract infections. Similarly, for ethical reasons, drugs supplied as part of a particular programme should not be denied to any needy patient on the grounds that their condition is outside the programme's remit.
- develop the interface between health care professionals and the specific category of users targeted by the programme. For example, micro-nutrient delivery requires high coverage rates of under-five clinics; reduction in AIDS vertical transmission requires antenatal care and utilized maternity services; and the early detection of tuberculosis requires outpatient clinics with acceptable utilization rates.

Regarding human resources: 'Programmes often rely on the continued provision of incentives to attract and retain high-calibre staff to ensure that key activities are carried out' (Kelly, 1999). We suggest that the best staff available locally should not be 'acquired' by the programme sponsors. Instead, consideration should be given to recruiting experienced staff and offering them posts in district health management teams, with a joint responsibility to improve health care services, whilst implementing disease control programmes.

#### *4. The administration of disease control programmes should be designed and operated to strengthen health systems*

We have already suggested why indirect programmes with their lines of command going down to the health care units should be avoided, and why administrative integration should go together with operational integration. Though naturally discussed with disease control specialists at every stage, decisions on the integration of disease control activities should be left to health service managers, such as those of district management teams.

The task of programme officers is to bring technical assistance to health professionals. This support should be delivered through health care middle management. Their duties also encompass operational research on the implementation of the disease control programme. Programme officers who have not the capacity to perform these tasks are not suited to the job. The lack of skilled personnel in developing countries is particularly acute at the peripheral level. This is why district bureaucracies should, in many instances, be able to re-deploy middle managers who are health professionals and return them to clinical responsibilities. They might be advantageously replaced with regional or national programme officers covering large territories and acting as advisers to district medical officers.

Vertical and indirect programmes do not mix well with plans to decentralize power to districts. When health centres consist mainly of a collection of vertical programmes, scope for local decision-making is very limited and strategic decisions may remain with central government. Operational integration should always go together with administrative integration and thus complement the decentralization process. Greater autonomy should be granted to health service middle managers, because integrating disease control programmes with health services requires continual mutual adjustments among highly skilled personnel. Administrative decentralization is also desirable because of geographical and socio-cultural heterogeneity within a country, e.g. access to health care and user participation demands autonomy and decision-making capacity at the periphery.

Local universities could be invited to participate in programme design, training and evaluation. By acting in partnerships like these, programme sponsors can facilitate the transfer of expertise and technology.

Finally, programme management control systems should be simplified, in order to avoid an unnecessary bureaucratic burden on health professionals.

## CONCLUSIONS

Whilst some vertical programmes should not be integrated, two conditions are essential to the integration of others:

- disease control needs to be integrated with general health care delivery and in particular patient centred care;
- integration of both operational and administrative aspects should take place simultaneously.

We have attempted to draw attention to the negative impact on health care delivery which could arise from any tendency of disease control programmes becoming the cornerstone of public health centres. By drafting a 'Code of Best Practice' for programme sponsors, we have suggested ways in which fragmentation in health care delivery can be minimized. If implemented we suggest that this code would assist disease control programmes both to achieve their own objectives *and* support and strengthen PHC services in developing countries.

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