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Integration of disease control in health facilities, a spider's kiss?

Seven managerial principles to avoid damaging health centres and hospitals in developing countries

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Introduction

Numerous agencies (WHO, WB, EU) have increasingly devoted efforts and resources to disease control programmes in developing countries (DC). Both international aid agencies and governments in developing countries tend to concentrate public delivery of care on disease control programmes. The recent appearance of international funds and initiatives reflect this trend which, as recognised by senior staff from aid agencies, have strained health care systems in DC. This paper examines the managerial mechanisms at work. It then proposes avenues to avoid detrimental effects of disease control on access to health care in developing countries, which can be summarised by the following principles:

1. disease control activities should generally be integrated – unless clear technical arguments indicate otherwise

2. disease control programmes should make their conduct explicit to at least avoid negative interference with health care and possibly strengthen health systems.

3. disease control integration in health care facilities must be consistent with the management's "state of the art".

4. integration should primarily take place in non for profit health care facilities.

5. disease control programmes should voluntarily downscale their objectives as health care does not permit an immediate delivery of their activities.

6. donors should attach a flexibility rate to the scope of investments that they are willing to finance.

7. to achieve sustainable health care development, local institutions must be strengthened.
Administrative and operational integration

Three definitions need to be agreed upon.

*Disease control programmes* are coherent sets of activities, know how and resources designed to control a single (or a limited number of) related disease(s) and tailored to reduce morbidity or mortality due to the targeted disease. Through programme support, general practitioners worldwide “benefit” from specific resources made available and programme standards defined by specialists to rationalise clinical decision making and improve their handling of specific diseases.

Disease control activities can be implemented in general clinical services of health centres and hospitals, in which case they are "operationally integrated" or alternatively be performed by separate teams. There is a continuum of situations between these poles, illustrated by the case of a STD clinic in a general hospital.

When the decisions on disease control are made by general health care managers, the programme is "administratively integrated". When decisions are made by disease control managers, the programme is "administratively non-integrated". Here again, there is a wide range of intermediate situations.

Hence, disease control programmes can be analysed according to their level of operational and administrative autonomy from health care administration.

Patterns of disease control integration

In practice, there are three main patterns of organisation templates defined by the flow of authority and the degree of operational integration (diagramme 1).

Diagramme 1. The key patterns of organisation templates in disease control:

integrated programmes (1), vertical programmes (3) and programmes without administrative integration (2)
In a fully integrated disease control programme (pattern 1) middle line health care managers organise disease control in their area. Disease control programme specialists intervene as their technical advisors but do not manage health care resources nor decide on coverage rate targets.

In diagram 1, pattern 3 corresponds to "vertical programmes". The onchocerciasis control programme is an example of this. The technical appropriate indications of vertical programmes are: the delivery of activities that do not correspond to the problem solving capacity of the health services (such as vector control), the control of clustered damaging diseases, the control of diseases too rare to keep up health professionals' skills, the contact with special risk groups such as commercial sex workers, and the control of emergencies.

Pattern 2 stands for programmes which have the authority to promote their (integrated) health operations. Operationally integrated / administratively autonomous programmes have almost been the standard of externally supported control programmes because the decision to set up autonomous administrations was often taken by donor agencies on the ground that they bypass bottlenecks in the management of public health care systems and therefore achieve rapid results. On the other hand, operational integration was saving programme finances.

Unfortunately, this second pattern has a major drawback: it multiplies the lines of command which act upon health care providers from various sides. Each programme supervisor will try to maximise "his" specific programme results. In practice, health professionals tend to bias their activities towards those which most increase their revenues. Comparatively well-financed disease control programmes have undermined general practice in first line health services thus jeopardising one of the key device of disease control - the health care services themselves - hence cutting in their own flesh. In this way disease control programmes contributed to a disintegration of care delivery and undermined the acceptability of numerous health centres which hosted them.

Disease control programmes with template pattern 2 can be labelled "pervasive" because they bypass health care administration's middle line and yield unbalances in the health care operating core. To reduce their frequency, donor agencies should admit that the middle line of African health care systems must be improved and that they can help achieve this.

Vertical and pervasive programmes share several characteristics:

- Some were effective though rarely well documented. A good example is the Expanded Programme for Immunisation, which contributed to improve life expectancy in developing countries.
- However, where health care had vanished, generally, disease control programmes did not achieve sustainable results (see for instance the difficulties to maintain onchocerciasis control through devolution and how the "Immunisation for All by 1990" campaign vanished). In this sense, the control of smallpox building upon vertical

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1 This middle line is not only and not necessarily led by a state district medical officer. It consists of a group of health care professionals possibly from different institutions with public preoccupations who are acquainted with health care management. They seek to influence decision making at district level. They act together to improve health care and to co-ordinate between GPs and specialists. The creation of a middle line health care without a state middle line is currently tested in Belgium. (The Sylog project, financed by the Ministry of Social Affairs). This project explores the limits of bottom-up strategies designed to create a health care middle line in an environment where people are rich and health care delivered privately. It remains to be seen to which extent this process compares to similar intents in developing countries.
structures was an exception\textsuperscript{7}. Any proposal based on this success story overlooks a rare epidemiological feature, the very low reproduction rate of smallpox.

- Generally\textsuperscript{2}, vertical and pervasive programmes do only address a fraction of people's demand for curative care. They mostly demand healing any kind of complaint, alleviation of suffering and anxiety, and not the control of one single possible cause of their complaint. Instead, vertical disease control programmes rather focus on their own restricted objectives. Overlooking demand, they are often tempted to reduce community participation to social marketing\textsuperscript{5} - a technique close to mere advertisement designed to improve compliance. As opposed to persuasion, dialogue between professionals and users is not often stressed in vertical programmes.

- Vertical programmes are rarely co-financed by health service users. As they not necessarily respond to a demand, people may be much less willing to pay for health services constrained to become merely a collection of disease control programmes. This represents an opportunity cost for community health care services which could host the programmes successfully if they were properly integrated.

- Vertical programmes lack efficiency. Disease-specialised hierarchies made (inter-) national administrations grow significantly. Already in 1986, the running costs of 4 - 5 priority disease control programmes were worth those of a health centre network performing similar disease control but offering in addition comprehensive care as delivered by family practitioners\textsuperscript{9}. While the costs of AIDS control modified these data, operationally integrated programmes remain much more efficient than parallel disease-specific control structures. In addition, their high cost led to insufficient coverage (see the West African maternal and child health services limited to urban settings).

It should be acknowledged that if vertical and pervasive disease control programmes have rarely achieved sustainable objectives, organisational design failure is not the sole cause of the worrying trends of African endemic diseases. Social, political and economic factors must also be taken into account to understand them. Still, health systems could do more to control diseases with strategies respecting health care delivery, as suggested by the following examples.

\textsuperscript{2} Exceptions exist, e.g. Trypanosomiasis control programmes.
How to fish patients where there is no pond?

Control of AIDS, tuberculosis and malaria requires a health system consisting of at least two tiers: a peripheral hospital and a network of health centres. What happens if these facilities do not work?

Consider malaria. The probability that a severe case will die at home is higher when the acceptability of dispensaries is insufficient. Ibrahima Sondo, from West Africa, lives 5 hours away from the nearest town. His 4-year-old daughter Fatou got malaria. He did not bring her to the nearest health centre. The reason was that 4 months earlier he had been rebuffed by the medical assistant who had no drugs for his fever. He could only obtain these drugs in town at 10 Euro. Too much, too far. The next night, Fatou died of cerebral malaria.

Consider tuberculosis. A South American health centre is forgotten by its users. It hardly achieves an utilisation rate of 0.15 new cases/year/inhabitant. There is not much chance that the local general practitioner will detect Alfredo Guerrera’s tuberculosis in the earlier stages, which further deteriorates the prognosis. In addition, this doctor is unlikely to achieve a high continuity rate in the treatment if he is not capable of communicating with his patients, the key reason why his health centre is abandoned.

Consider AIDS. Owani is an East-African teacher. This 45-year-old man has both AIDS and tuberculosis, a frequent association. Some anti-retroviral drugs prevent rifampicine, a tuberculostatic drug, to operate. The drugs Owani received at the NGO health centre were unable to control his condition and the medical assistant referred him to the nearest hospital. Owani dropped out of the programme because the two district hospital doctors, unpaid, were absent.

Disease control programmes can strain health care services

A vast literature on merits and failures of disease control integration is available. It delineates:

- the usual need of integration for successfully achieving disease control while being efficient;
- the indications of vertical programmes (see above);
- the conditions of integration, namely areas with functioning health services, available additional resources, a working health care middle line (strategies to improve it are available), utilised health facilities;
- a WHO technical report series addresses the integration of disease control activities in non-health sectors.

Theoretically, integration of disease control activities is desirable not only for the sake of efficiency but also because it permits to enlarge the capacity of nurses and general practitioners to adequately tackle health problems. However, concerns that these programmes can undermine health care have been expressed. The mechanisms through which disease control programmes can strain health care services, when badly integrated, are: interests of specialised bureaucracies, opportunity costs, ill definition of priorities, financial unbalances, limited budgets for additional duties in hospitals and dispensaries, non-integrated lines of command, tensions amongst health professionals on incomes, opportunity costs, interference with other curative activities, and lack of sustainability.
The most detrimental effect of pervasive programmes has probably been the reduction of the professional identity of doctors and medical assistants. Nowadays, general practitioners and medical assistants in the public sector generally concentrate on preventive programmes (antenatal care, under-five clinics and immunisations, family planning, nutritional rehabilitation, ...) and a few specialised treatments (oral rehydration, tuberculostatics, ...). The energy devoted mainly to preventive programmes together with poor resource management contributed to the diminution of the importance of curative care in public facilities during the 80's and 90's. Due to deficient training, general practitioners and medical assistants in developing countries rarely built generic preventive activities into curative care (with the exception of immunisation). Only in exceptional cases did they set up prevention activities that are not part of a national programme. Then, if only five or six preventive programmes and "elementary" curative care were available, the patient-centredness principle\(^2\) was of limited relevance. All that is required was a small number of parameters to enable general practitioners to channel the patient to the appropriate programme (Does the woman want to postpone the next pregnancy? Is the child vaccinated?).

For general practitioners, it was inevitable that this employment structure reinforced the professional identity forged by training. With members of the employment hierarchy and international experts stressing traditionally quantitative objectives (coverage) at the expense of non-programmed preventive and curative care, the only communication skill required of general practitioners and medical assistants was the capacity to make users comply.

Programmes integrated into first line health services could have been compatible with a biopsychosocial approach but pervasive programmes have downgraded the professional identity of first line care providers to merely meeting technical standards in narrow domains. This oversimplification of their task definition has contributed to a deteriorated self-esteem and low morale. Paradoxically, but understandably, the numerous training seminars organised by pervasive programmes – representing sometimes more than 50% of their work time\(^2\) - were appreciated by the health professionals, because they represented their main source of revenue.

**International aid policies : 7 principles to ensure that disease control programmes make good use of hospitals and health centres in developing countries, and possibly strengthen them**

Donor agencies should agree upon a code of "good governance" designed to avoid disease control programmes straining the operations of health care facilities. Our suggestions are discussed below.

**Principle one: Disease control activities should generally be integrated – unless clear technical arguments indicate otherwise**

The rationale for generally integrating disease control activities is threefold:
- since users represent a convenient pool for case detection, disease control programmes must often target primarily health care users while seeking to increase their number. In addition, continuity of care for chronic patients, such as those with TB and AIDS, cannot be secured for non-users – which makes their case detection less relevant;
- integration enlarges the scope of problems tackled by health care facilities, making them more effective;
- pooling programme resources also makes health systems more efficient.
There are exceptions to this rule, and the indications of vertical programmes have been discussed above. Also, integration must be postponed when health services are functioning badly (for which technical criteria must be specified). Hence the need for contextual analysis.

**Principle two:** Disease control programmes should *make* their conduct *explicit* to at least avoid negative interference with health care and possibly strengthen health systems.

Pervasive programmes and integration in ill-functioning health services have proved to be unsustainable and detrimental to health care utilisation. To avoid it, the exercise advocated in this second principle drives programme officers to study health care organisation, dialogue with health care managers, and enhance transparency of programme resources (how does the programme compensate for the extra workload it requests from health care services).

To help making “their” programmes more health care friendly, programme managers must understand the rationale of the health care subsystems (laboratory, hospital ward, outpatient consultation, etc) that are mobilised in the integration process. For instance, an AIDS programme could do more than simply avoid patients stigmatisation by medical assistants and doctors. It could promote patient-centred care to improve utilisation of health centres and dispensaries.

**Principle three:** Disease control integration in health care facilities must be consistent with the management’s “state of the art”.

Lessons can be derived from experience, action research and interviews with field health professionals:
- Micro-nutrients delivery requires attended under-five clinics; reduction of AIDS vertical transmission requires antenatal care; early detection of tuberculosis requires the use of outpatient clinics; etc. In other words, programmes require their target population to use the health facilities. It is in the interest of disease control that the utilisation of general health care services improves. Hence the need for disease control programmes to consider measures to increase related utilisation rates;
- Appropriate resources should be provided to health centres and hospitals to host programme activities. In addition, it should be made possible to use specific programme resources for a range of purposes – not only disease control ones - and with as few special management control devices as possible;
- The balance in health care functions must be protected by the integration process (timetable, workload, finances, etc).³;
- Decisions on integration of disease control activities - identified by specialists - should be left to health care middle line (district medical executive teams in Africa), though discussed with disease control specialists. Pervasive vertical programme templates should be avoided. Administrative integration should always go together with operational integration. Disease control programme lines of command going down to the health care units should be avoided;
- This assumes that district medical officers are appointed on technical grounds and get appropriate coaching. Vertical programmes already “often rely upon the continued

³ As a reminder, health centres are primarily responsible for family medicine’s outpatient consultations, antenatal care, under-five clinics, family planning, nutritional rehabilitation, care to chronic patients, home visits and community participation. Experience has shown that a small team of 4 people, of which one health professional, can offer such a minimal package of activities to several thousands of persons (against 1 GP per 600 in Belgium). A working district hospital, with a capacity of handling medical and surgical emergencies, is needed for 150 to 250,000 people.
provision of incentives to attract and retain high-calibre staff and ensure that key activities are carried out properly at all levels\textsuperscript{4}. International donor agencies would be far more efficient if they financed "high calibre staff" as district medical officers in charge of both health care and disease control. Not one single health policy can be implemented without the appropriate human resources in health care administrations, especially in its middle line. Strategies based on local health systems (see above) can contribute to strengthen it;
- Finally, growth of disease control administrations should be controlled.

**Principle four: integration should primarily take place in non for profit health care facilities.**

Concerning health care facilities, Giusti et al. make the useful distinction between their public / private status and their public / private rationale using the following criterion: rather than being merely government-owned, an institution follows a public rationale when its policy is characterised primarily by a quest for equity, social solidarity, and well-being \textsuperscript{24}. This implies that some NGO facilities are serving a public purpose while some government ones are serving a private one.

Overall access to care is abominably insufficient in DC because a large proportion of the 56% of the world population living on less than 2 USD/day/p.c. rely on state provided health care which is lacking acceptability and on NGOs which lack coverage while another part has no other option but to rely on the private for profit sector known to have limited financial accessibility in low income countries \textsuperscript{25} \textsuperscript{26} \textsuperscript{27} \textsuperscript{28} \textsuperscript{29}. However, while other non-governmental organisations have rather successfully achieved programme integration in developing countries, success stories with integration in the private-for-profit sector are not well documented — and could prove to be unrealistic not only because of its low utilisation rate but also because the capacity of health authorities to regulate and control this sector is the cornerstone of a programme’s integration in private- for-profit facilities. Whether public authorities in developing countries are equipped to face the regulatory challenge is a question open to debate. Figueras & Saltman \textsuperscript{30} acknowledge that the success of reform strategies in Europe required \textit{"the availability of public health skills to assess health needs, evaluate interventions and monitor outcome."} The management skills and resources required for contracting as well as regulating contractual arrangements seem well beyond the capacities of many developing countries, including middle income countries.

Rather, with dialogue, training, and leverage, disease control programmes can support efforts to improve "public" health care facilities (such as belonging to cities, NGO, MOH, mutual aid associations) and contribute to make them more democratic with community participation.

**Principle five: Disease control programmes should voluntarily downscale their objectives as health care does not permit an immediate delivery of their activities**

A trade off must be achieved between rapid and easily measurable results – favoured by vertical programmes - and sustainability of disease control activities - strained by their high costs. When disease control activities are integrated, programme managers must generally accept a quality toll and a slower coverage for the sake of sustainability. They should be entitled to adjust their coverage ambitions to the absorption capacity of health care services. Bearing in mind the diminishing return principle, eradication attempts should be considered cautiously (poliomyelitis, dracunculiasis, ...).
Principle six: Donors should attach a flexibility-rate to the scope of investments they are willing to finance.

Disease control programmes should make health care systems in LDCs more efficient by helping to make them more comprehensive. Providing resources to key functions in health services contributes to it. In particular, technical assistance to general health care administration and operations can require diverting resources away from the programme’s direct objectives. For ethical reasons, health professionals should be entitled to use programme resources for non-programme objectives. For instance, an antibiotic belonging to a sexually transmitted diseases (STD) programme should be legitimately used to treat pneumonia.

Principle 7: To achieve sustainable health care development, local institutions must be strengthened.

Programmes must also aim at the institutional development of NGOs, administrations and academic units in the South, which should be associated to the technical assistance to health care delivery and disease control. This is needed to secure long term sustainability of disease control.

Conclusion

The integration of disease control activities has generally an added value both for disease control and health care. To avoid the integration to be fatal to both of them – first health care, then disease control – careful management is required. Resources to support health care systems in developing countries are needed. Strengthening of health care must also be built in disease control. When they cannot be avoided, and unless they meet technical indications, vertical programmes must be conceived as interim approaches. They should never be pervasive. In fact, unless vertical programmes are technically justified, disease control strategies and objectives must be adapted to the state of health care services, if these programmes are not to dig their own grave.

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