

INTERNATIONAL COLLOQUIUM

ANTWERP, 26-27-28 November 2002

INTEGRATION AND DISEASE CONTROL

Objectives of the meeting

This colloquium first of all aims to clarify and possibly redefine concepts and terminology regarding integrated disease control. Its second aim is to review and discuss strategies and methods for integrated disease control. These will be reviewed and discussed focusing on the mutual interaction between health services and control programmes: i.e. both the impact on the disease and on the system will be taken into consideration. Its third aim is to review practical results of integrated strategies for the control of major diseases in developing countries, and to investigate ways of improving the documentation and dissemination of such experiences.

This should result in an increased awareness of the need, challenges and applicability of integration policies. Better quality and efficiency of health care in developing countries as well as a sustainable reduction of the disease burden should follow.

SPONSORS

The colloquium organisers are grateful for the generous support from the following institutions and companies:

- Directorate General of International Co-operation, Belgium
- Flemish Government
- Fund for Scientific Research – Flanders, with the support of the Flemish Minister of Education and Training to promote international research in Flanders
Fonds voor Wetenschappelijk Onderzoek (FWO) – Vlaanderen, met de steun van de Vlaamse Minister van Onderwijs en Vorming in het kader van een specifieke actie om het onderzoek in Vlaanderen internationaal bekend te maken
- European Community
- City of Antwerp
- Fortis Bank

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Website information and registration: <http://www.itg.be/colloq2002>

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PREFACE

B.Gryseels, Director, Institute of Tropical Medicine, Antwerp

Last year, the Institute of Tropical Medicine organised, jointly with 15 African Ministers of Health and the Belgian government, then acting president of the European Union, an international conference on "Health CARE for All".

This meeting resulted in the "Antwerp Declaration on Health CARE for All" which called on national governments and international agencies to revive the spirit of Alma Ata and to invest more vigorously in accessible curative and preventive health care.

Basic health care is not only a fundamental human right, but also a pillar for efficient and sustainable disease control. This message is more than ever important now that global initiatives for the control of major poverty related diseases, such as AIDS, malaria and TB are unfolding.

Without proper investment in sustainable health systems, such donor driven programmes with strong emphasis on single diseases and measurable outcome may once more result in frustrating experiences that do not respond to the needs of people.

On the other hand, the challenge of integration of effective disease control measures in the routine activities of health care structures is not an easy one. The health systems are understaffed, under-funded, insufficient in number and quality. In general, they have a hard time just meeting the basic curative demands of the communities they serve.

Yet, investing heavily in managing or controlling one or a few diseases or to set up vertical parallel systems to deal with them, almost invariably fail in terms of sustainability, efficiency and acceptability. Often, they weaken rather than strengthen the health system in the long term.

In this follow-up meeting of the "Health CARE for All" conference, we intend to collect experiences with integrated disease control, and to build up the perspectives and frameworks for future strategies. We will look at the issues from a conceptual, strategic, operational, economic and technical angle. Lessons will be drawn from several diseases, including, but not only, AIDS, malaria and TB.

As is usual in ITM-colloquia, experts from all relevant disciplines will contribute to the debates; thanks to sponsors such as the Belgian government and the European Union, the South is more than strongly represented, as are high-level officials from international agencies, NGOs and academia. The colloquium will kick off with a challenging confrontation between the needs of the South, expressed by DC experts, and the policies on integration and disease control by international agencies and global initiatives.

I am very grateful to all participants, many of whom have travelled far to share their experiences; to the sponsoring agencies of this meeting and the Fortis Bank who have offered us this magnificent infrastructure; and to all scientific and support staff who have invested many months in preparing this meeting.

I am convinced that our debates and conclusions will come at a very appropriate time and may contribute significantly to the strategies of the unfolding global health initiatives as well as to the responses of national governments and local health services.

PROGRAMME

TUESDAY 26 NOVEMBER 2002

15.00 – 17.00	Registration at Fortis Bank, Wapper, Antwerp
15.00	Guided tour of the Institute of Tropical Medicine – Registration required
17.00 – 19.00	ACADEMIC SESSION (How) Do global initiatives strengthen health systems? With representatives of the Global Fund to fight Aids, TB and Malaria, Roll Back Malaria, Stop TB, The Vaccine Fund as well as political addresses by representatives of Belgian Authorities – Fortis Bank, Wapper, Antwerp
19.15	Reception at Fortis Bank, Wapper, Antwerp

WEDNESDAY 27 NOVEMBER 2002

8.00	Registration at the entrance of the auditorium of Fortis Bank, Wapper, Antwerp
	Poster set-up

SESSION I DISEASE CONTROL AND HEALTH SERVICES

Chairpersons: J. Laruelle (DGIS, Belgium)
T. Sukwa (WHO Africa, Zimbabwe)

9.30	B. Gryseels (ITM, Belgium)	Welcome address
9.40	G. Kegels (ITM, Belgium)	Objectives and expected outcome
9.50	B. Criel (ITM, Belgium)	A framework to analyse the relationship between integrated health care and vertical programmes
10.10	Th. Delvaux & F. Moerman (ITM, Belgium)	Integration of disease control in health services: results of an ITM/DGIS policy study
10.30	Coffee Break	

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|-------|---|---|
| 11.00 | D. Molyneux (Liverpool School of Tropical Medicine, U.K.) | Health services and disease control: experiences, opportunities and realities |
| 11.15 | H. Van Balen (Medicus Mundi, Belgium) | Disease control in PHC: a historical perspective |
| 11.30 | A. El Abassi (UNICEF, Geneva) | Current interactions between health systems and disease control |
| 11.45 | Discussion | |

12.30 Lunch and Poster Session

SESSION II INTERSECTORAL APPROACHES IN DISEASE CONTROL

**Chairpersons: M. Chimbari (University of Zimbabwe)
M. Deguerry (MSF, Belgium)**

- | | | |
|-------|---|--|
| 14.00 | J. Ouma (MOH, Kenya) | Multisectoral involvement in vector control |
| 14.15 | V. Schall (Fundação Oswaldo Cruz, Brazil) | Education and community action in disease control |
| 14.30 | P. Maes (MSF, Belgium) | Water, hygiene and sanitation in a medical humanitarian organisation |
| 14.45 | Discussion | |

15.15 Coffee Break

SESSION III ECONOMIC PERSPECTIVES AND LIMITS OF INTEGRATED DISEASE CONTROL

**Chairpersons: N. Katz (FAPEMIG, Brazil)
U. D'Alessandro (ITM, Belgium)**

- | | | |
|-------|---|--|
| 15.45 | D. McFarland (Rollins School of Public Health, Emory University, USA) | The economics of integration |
| 16.00 | M. Traoré (INRB, Mali) | Financing of disease control programmes |
| 16.15 | A representative of DGIS | Donor policies and sustainability |
| 16.30 | F. Binka (Indepth Network, Ghana) | Bottlenecks for bringing innovations into health systems |
| 16.45 | S. de Vlas (Erasmus University, The Netherlands) | Modelling of integrated disease control: the example of schistosomiasis control in Ghana |
| 17.00 | Discussion (Session II and III) | |

17.45 End of Session

19.00 Reception at and guided tour of the City Hall, Grote Markt 1, Antwerp

SESSION IV IMPLEMENTATION OF DISEASE CONTROL ACTIVITIES

**Chairpersons: A. Buvé (ITM, Belgium)
F. Crabbé (ITM, Cambodia)**

- 9.00 P. Blaise (ITM, Belgium) Strengthening of the health system through specific programmes: the example of mental health
- 9.15 A. Kilian (GTZ, Uganda) Monitoring and evaluation of disease control
- 9.30 A. Bennani (MOH, Morocco) Control of diseases with low prevalence
- 9.45 N. Zagaria (WHO, Geneva) A common public health platform for eradication/elimination of communicable diseases

Discussion

10.30 Coffee Break

SESSION V INTEGRATION IN PRACTICE: EXPERIENCE FROM THE FIELD

**Chairpersons: A. El Abassi (Unicef, Geneva)
P. Van der Stuyft (ITM, Belgium)**

- 11.00 T. Sukwa (WHO Africa) Integration of communicable disease control programmes at district level in the African region
- 11.15 H. Luwaga (MOH, Uganda) Integration in the field: the perspective of the district
- 11.30 M. Chimbari (Lake Kariba Research Station, Zimbabwe) Stakeholder views on integrated disease control
- 11.45 W. Bannenberg (Consultant, South Africa) Disease control and drug supply

12.00 Discussion

12.30 Lunch and Poster Session

- 14.00 Y. Benguigui (PAHO, USA) IMCI – WHO/UNICEF approach for the integrated control of childhood diseases: the experience of the region of the Americas
- 14.15 D. Coetzee (University of Cape Town, South Africa) TB & AIDS care in South Africa
- 14.30 Chhi Vun Mean (MOH, Cambodia) Implementation of STI and HIV/AIDS prevention at national, provincial and district level
- 14.45 D. Molisho (FOMETRO, RDC) Trypanosomiasis control in Congo
- 15.00 N. Katz (FAPEMIG, Brazil) Integration leading to disintegration
- 15.15 Discussion

15.45 Coffee Break

FINAL SESSION

- 16.30 M. Boelaert (ITM, Belgium) Synthesis

PLENARY DISCUSSION

Chairpersons: M. Coosemans (ITM, Belgium)
M. Traoré (INRB, Mali)

18.00 End of Session

20.00 Get-together at Fortis Bank

NOTES

A FRAMEWORK TO ANALYSE THE RELATIONSHIP BETWEEN INTEGRATED HEALTH CARE AND VERTICAL PROGRAMMES

Bart Criel, Department of Public Health, Institute of Tropical Medicine, Antwerp, Belgium. bcriel@itg.be

In the past, the relationship between vertical programmes and general health services has often been of a tempestuous nature, not in the least because of the rigid ideological stand taken by the advocates of either integrated health care delivery or vertical disease control. Such a relationship has been a hindrance to a fruitful collaboration in the benefit of the patients. Hence the need to clarify the terms of the debate between 'verticalists' and 'horizontalists' so that dialogue will be possible, today in this colloquium, and in the future in the field.

In this framework, five issues are addressed. Firstly, an attempt is made to define what a programme is, and what is meant under the notion 'integration of a programme'. Secondly, a set of criteria is proposed that (can) guide policy makers in their decision to create a specific programme. Thirdly, the different logic of an (horizontal) integrated health care system and a (vertical) disease control programme is briefly discussed. From this analysis transpires the fact that there always is, and always will be, a field of tension – but not necessarily a conflict - between these two approaches to health care delivery. Hence the need to arrive at an optimal interface between both approaches, and the challenge for this international colloquium to define the conditions under which such an optimum can be achieved. Fourthly, a series of elements that guide planners and managers in their decision to integrate, or not, specific disease control activities in general health services are addressed under the form of three specific questions:

- i) is integration *desirable?*;
- ii) is integration *possible?*; and
- iii) is integration *opportune?*

These questions apply to general health services, but also to other social sectors that face the issue of integrating specific disease control activities in their basic package of services. Fifthly and lastly, a series of proposals are formulated that can, hopefully, contribute to a rational and productive debate in this colloquium.

INTEGRATION OF STI/HIV IN REPRODUCTIVE HEALTH SERVICES

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Background

The concept of comprehensive sexual and reproductive health, including prevention and care of Sexually Transmitted Infections (STI)/ HIV, was disseminated after the Cairo Conference on Population in 1994. Integrating STI/ HIV into reproductive health activities was seen as a way to increase STI coverage because of the importance of STI/HIV as public health problems and the association between STI and HIV transmission. There was also a wish to improve quality of MCH/FP services and of a more holistic approach addressing women/couple's needs and rights.

Objective

As part of the Framework Agreement with the Directorate General of International Cooperation of the Belgian Government, we aimed to document on effective integration of STI /HIV in existing reproductive health services.

Results

Findings from two case-studies carried out in Côte d'Ivoire (Evaluation of integration of STI activities into FP clinics) and in Cambodia (Integration of reproductive health activities in STI clinics for female sex workers) showed that there is a need for comprehensive reproductive health services. In the context of Family Planning clinics in Côte d'Ivoire, program managers and providers reported no substantial work overload due to the integration of STI services. However integration of new activities should not be performed without careful preparation. A project has just started in Côte d'Ivoire on integration of the prevention of mother-to-child transmission of HIV. The hypothesis to be tested is that, when carried out after a proper needs assessment and with a adequate supervision, integrating prevention of mother-to-child-transmission into maternity care services might be beneficial for improving quality of maternity care services.

Conclusions

Integrated reproductive health care represents an opportunity to offer a better response to women and couples' needs and rights. How to implement it most effectively remains a big challenge.

THE CONTRIBUTION OF HEALTH CARE SERVICES TO A SOUND AND SUSTAINABLE MALARIA CONTROL POLICY

Filip Moerman, Parasitology and Epidemiology Unit, Institute of Tropical Medicine, Antwerp, fmoerman@itg.be

HIV/AIDS, TB and malaria, besides creating a heavy mortality and morbidity burden in developing countries (DC), are also responsible for constraining economic development. Nevertheless, the burden of malaria can be reduced by applying existing remedies, namely proper case management, insecticide-treated bed nets ensuring a prompt response to epidemics.

Several international agencies have devoted ever-greater efforts and resources to specific disease control programmes, regardless of the performance of local health systems and the sustainability of such interventions. The recent announcement of international funds and initiatives [such as the Global Fund to fight AIDS, TB and malaria (GFATM)] reflects this trend, and adds to the risk of straining/overburdening health care systems. It remains to be seen whether the GFATM will be able to collect and distribute the necessary financial resources to make a significant impact.

Even assuming the availability of adequate resources, a poorly performing health care system will not be able to employ them optimally, and their impact may be less than expected. In extreme cases, their introduction may even be detrimental, harming already over-stretched health facilities.

A careful situation analysis of the performance of the health care systems is needed before inputting substantial resources into specific disease control activities. Whenever such a system is performing poorly, prompt action for its improvement should be taken which will usually mean that part of the resources earmarked for the control of the 3 major diseases should be diverted to strengthen the health care system.

Even the most cost-effective intervention will not deliver the expected beneficial results, if access to good quality health care is not available to all levels of the local population. It is the responsibility of scientists and health care managers to highlight to donor agencies the importance of an adequate health care system if the programmes for control of specific diseases are to be successful.

NOTES

HEALTH SERVICES AND VECTOR BORNE DISEASE CONTROL EXPERIENCES, OPPORTUNITIES AND CURRENT REALITIES

David H. Molyneux, Director, Lymphatic Filariasis Support Centre, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool L3 5QA, Tel. 44 (0)151 705 3291, Fax 44 (0)151 709 0354, Email fahy@liv.ac.uk

Over recent decades scientific advances, development of global alliances and partnerships for disease control, establishment of donation programmes, involvement of NGOs both international and local for implementation in resource poor settings, establishment of strong evaluation systems and national commitment to well defined goals have achieved significant health gains through specific disease control activities. This paper will focus on parasite and vector borne disease control efforts and assess the successes and failures within the health service context. However, in several disease control programmes there is a necessity for highly specific and co-ordinated interventions. The requisite knowledge and human resource base particularly in sub-Saharan Africa is limited hence initially the Onchocerciasis Control Programme (OCP initiated in 1974) had limited links to health services. This has reversed as the programme comes to the end of its cycle whereas a new programme, APOC, based only on Mectizan distribution, is embedded in the health systems. Similarly the evolving Lymphatic Filariasis Elimination programme will be integrated within the health system at the outset – with particular reference to district level management. Earlier success in LF elimination (China, Thailand, Suriname, Malaysia) was organised by specific units within Ministries of Health often involving vector control units. Evidence from the OCP suggests investment by the programme has increased surveillance capacity, assisted integration of a multi-disease approach at national and sub-national level, enhanced human resources, promoted inter-country linkages, improved health information systems and brought additional resources to the programme. Middle income countries have been successful in building within their health service budgets appropriate and specific interventions (e.g. LF in China, Chagas disease in the Southern Cone, Guinea worm in India) which have significantly reduced disease burden. Such programmes have been misinterpreted by health policy makers and NGOs as inappropriately vertical despite their success. Disease control requires specific approaches technical knowledge and different strategies; these are not amenable to generalisation. Conflict, collapsed and under-resourced systems, loss of human resources and health sector reform have resulted in collapse of specific programmes previously successfully run within health services (e.g. sleeping sickness, vector control teams).

Emergent disease surveillance cannot presently be addressed due to lack of resources and often rapidly expand in distribution through reduced or inadequate surveillance. Disease control should be embedded within all levels of the health system but policy makers have an obligation to recognise specific requirements, the need for sub-regional approaches and recognise technical pre-requisites of the disease if burdens are to be reduced. Conversely, malaria exemplifies how limited access to and quality of the formal health services prevents progress given the complexity of the biological systems on the one hand and absence of rapid policy to practice process on the other, particularly in sub-Saharan African settings.

Country experiences will be documented on implementation of specific programmes, which become embedded in district health systems; issues of timing, access, social mobilisation are different disease control objectives using the same implementation tool (e.g. Mectizan for LF and onchocerciasis; bednets for malaria and LF; albendazole for LF, onchocerciasis and intestinal helminths) and present complex issues that require policy resolution at national and more appropriately sub-national level driven by disease burden, distribution and resource.

DISEASE CONTROL IN PRIMARY HEALTH CARE A HISTORICAL PERSPECTIVE

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The limits of disease control by specific structures showed up in the sixties. The response to the mass examination by mobile teams dropped; the malaria eradication program was too ambitious. Above all the Bangalore study, on early detection and treatment of TB patients has shown that easy access to credible health facilities, alertness of the practitioner, good communication (including counselling and retrieval of defaulters), had a greater impact on the result than the maximisation of the technical components of the diagnosis and treatment. The conclusions of this study are applicable to practically all endemic diseases. These observations and the doubts upon the impact of isolated campaigns of immunisation when mainly poverty is deteriorating health, were compelling arguments for the organisation of permanently accessible adequate multi-function health care facilities.

In the meantime the community development movement of the fifties and sixties emerged and encouraged communities to identify their needs and find solutions themselves in all areas of social life, including health. In the seventies, in rich as well as in poor countries, individual patients and population groups were viewed as active partners.

The Alma Ata Declaration of 1978 on PHC proposed a fair balance between the participation of the population and the rationalisation of the care. Its implementation entails a substantial change in the organisation of health care: an integrated system, composed of a network of health centres, delivering care of a good standard, interacting with the community and backed by a referral level. The whole system is managed by a team of health workers, accountable to the target population. In several countries health services have been oriented in that direction, showing that the system could play the expected role in disease control, as long as the indispensable resources were available.

But too often the complexity of the change was overlooked. The resistance of persons with vested interests was lost sight of. The cost (in terms of human efforts, money and time) was underestimated. The concept of a correctly functioning health care system was insufficiently clarified. A lot of impulsive measures, neglecting the reaction of the system as a whole, have discredited the concept: village health workers were enforced; "participation" was imposed; disease control programs were integrated without joining the indispensable resources; "selective primary care" or specific remunerations were introduced, jeopardising the normal functioning of the health centres; training programs were often not adapted to the working conditions; health districts were officially recognised even without an onset of a system.

It remains true that basic health services have a role to play in disease control and that their orientation towards the PHC concept adds a relevant interaction with the target groups.

Health systems research has to learn how in a given setting the existing health care facilities can gradually be developed according to that concept. Preconditions are: accessible and efficient health care, enabling users to judge in practical terms the advantage of what is being offered and a platform where specialists and generalists analyse and reinforce jointly each others contribution, as well to the disease control programs as to the strengthening of an adequate first line health service.

CURRENT INTERACTIONS BETWEEN SYSTEMS AND DISEASE CONTROL

*A. El Abassi, UNICEF representative at WHO, Geneva
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On the one hand there is a growing agreement to consider that health care systems that are not making an effective contribution to control diseases are to be questioned about their performance and effectiveness. On the other hand, disease control programmes that are not taking into account health care services opportunities and constraints should be questioned about the strategy they are developing to achieve results. This has led to a situation where disease control programmes and global initiatives are developing a "system strengthening" component on the one hand and health care services programmes and reforms being more result oriented in their design on the other.

Despite this evolution, difficulties remain to make positive interactions between disease control and health care services at the different levels of development, implementation and management (global, regional, central and local): priority conflicts, duplication, missed opportunities are observed.

Several experiences developed and promoted approaches to optimise where possible and when relevant the interaction between disease control objectives & strategies, and health care services development. The Essential Care Package (ECP) of preventive and curative care is one key element of such experiences. Health facilities providing ECP with the appropriate support (supervision and logistics) of the district health team made a real difference in quality of care provided to the population as well as in making significant progress in disease control programmes the ECP contributed to. Countries promoting and improving such an effective approach faced several difficulties to move forward and scale up. Some difficulties were linked with countries' context and capacities but others were much more related to support provided by external partners:

- (i) numerous & departmentalised new or renewed global initiatives;
- (ii) linkages between disease control initiatives and broader initiatives such as health care reform/SWAP/poverty reduction are still insufficiently worked out;
- (iii) priority setting is much more influenced by money and political support channelled through global programmes and initiatives rather than the recognised principle of country specific context and country ownership development.

Major issues to be addressed are highlighted and some proven successful factors are suggested in order to make the interaction between disease control and health care services development as fruitful as possible, adapted to each country or context.

NOTES

SECTOR INVOLVEMENT IN VECTOR CONTROL IN KENYA

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Sam A. Ochola, Division of Malaria Control, Ministry of Health, Kenya

The presentation gives an account of 30 years experience as a key player in vector borne control activities in Kenya. It gives a summary of the important vector borne diseases in Kenya and approaches to their control.

An account of how the control of vector borne diseases is organised within Ministry of Health, Kenya is given. It provides information on the key players in vector control activities in Kenya. The successes and failures are pointed out giving specific examples where relevant.

The presentation gives details of a practical example of sector involvement in vector control targeted towards malaria, considered to be number one vector borne disease in Kenya in terms of morbidity and mortality.

In a recent study in the highland area of Kisii and Gucha Districts in Kenya, the Ministry of Health with the support of Merlin established organised community groups to distribute treated bednets and to conduct Insecticide Residual Spray(IRS) using Icon 10% WP (lambda-cyhalothrin). Training was provided by the then Zeneca - now Syngenta, East Africa Ltd.

The project also compared the use of Insecticide-treated nets (ITNs) and IRS and came up with the result that IRS may be both more effective and cheaper than ITNs in communities subjected to low, seasonal risks of malaria infection and as such should be considered as part of a malaria prevention tool. Suggestions on how this kind of partnership can be promoted and integrated into Disease Control in general is made. More effective approaches to vector control is proposed given the new tools and knowledge that are now becoming available.

THE ROLE OF HEALTH EDUCATION IN INTEGRATED PROGRAMS OF DISEASE PREVENTION AND CONTROL AND IN HEALTH PROMOTION

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The importance of Health Education has been largely recognized in the last decades, mainly after the Declaration on Primary Health Care at Alma-Ata (September 1978), and the Ottawa Charter on Health Promotion (First International Conference on Health Promotion, Ottawa, November 1986). Since then, several efforts have been made to improve the quality of life. In many countries, the infectious diseases prevalence and child mortality were reduced, associated with better nutrition, availability of potable water and sanitation, corresponding to a growth of the life expectancy. However, such improvements were not equitably distributed in the world and a lot of people are still living without basic human rights such as: clean water, food, habitation and education. It is urgent that these inequalities are dealt with and education is a priority in order to stimulate collective actions, such as the fight for basic rights, as well as the development of responsibility for one's health and commitment with environment preservation.

For a long time there has been sufficient scientific knowledge that allows for the control or eradication of several infectious diseases that are prevalent in many countries, including Brazil. These diseases are associated with socio-economic and political models of development adopted, and the consequent social inequalities. In addition to these diseases, there are new ones, as AIDS and another chronic illness, which require attention and strategies for their prevention and control. It is fundamental to invest in public health, not only in the infrastructure and services, but also in education and research. In this way, it is very important to develop integrated strategies of information/education, in which multi-professional staff and population can construct and evaluate new approaches together, exchanging knowledge of the bio-psycho-social areas.

Some strategies have been developed in the Laboratory of Health Education (René Rachou Research Center, Oswaldo Cruz Foundation), integrating Health Education, through socio-historical orientation that considers the context, previous knowledge and experiences of the population participant in the process of knowledge construction. They are presented here as examples of the possibilities and limits of Health Education research and actions, which permit reflect and discuss about this field.

The projects that are being developed are based on case-study methodology, related to the following diseases: schistosomiasis and other helminthiasis; AIDS; diabetes mellitus and leishmaniasis. Each project involves similar steps, including a diagnosis phase to understand the context and the previous knowledge of the population under study; the analysis of the educational materials and strategies used in health education programs under way in the country; proposals and development of new resources, with the participation of the population and key-persons (health professionals, teachers, local authorities etc); evaluation of the resources and actions developed and their impact on disease prevention and control.

In all the projects, during the diagnosis phase, the poor knowledge of the population studied about the investigated problems was observed. In addition, the analysis of the educational materials demonstrated several inadequacies, conceptual errors and traditional form of information design. Considering leishmaniasis, the use of threatening texts and images is frequent to stimulate fear as a control strategy (Luz et al. 2002). In the case of pediatric AIDS, it was verified that a high percentage of

families (50%) discovered the disease among them only through the illness of their children, demonstrating the serious lack of knowledge and severe deficiency in prevention and control of vertical transmission (Drummond et al., 2002). In relation to the diabetes mellitus, an educative program in an ambulatory has been developed revealing the importance of the interchange of knowledge among patients and multi-professional staff to stimulate new prevention attitudes that can result in a better control of the disease evolution (Torres et al., 2002). In relation to schistosomiasis, new transmission situations, such as by ecological tourism, reaching the urban middle class population lacking immunological protection and information about the disease, were verified (Enk et al., 2002), requiring new ways to face this disease.

In all the studies the results indicates that is necessary to favor a democratic and continuous process of education, about the health/disease processes, stimulating the population to participate in the programs of health promotion and giving them support to improve their own health services. All these processes require a health education program that promotes self-decisions in the individual or group level about their own health. It also implies the pursuit for information to guarantee the formation process that stimulates participative actions to conquer a better socio-politic environment that will permit life with quality and health. Thus, Health Education means the capacity not only to access the information but also the possibility to use it in a creative way, relating it with culture and transforming it into knowledge for a better life.

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WATER, HYGIENE AND SANITATION (WHS) IN A MEDICAL HUMANITARIAN ORGANISATION.

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A Medical Humanitarian organisation is confronted on a daily basis with the deadly interaction between conflict, violence, poverty and disease. Assuring the basic need for Water, Hygiene and Sanitation can be life saving in these specific contexts. In the conceptualisation of their short and long term health programmes, a Medical Humanitarian Organisation integrates appropriate WHS activities to increase the level of epidemic surveillance, case management, prevention activities and witnessing. The quality of these WHS activities can be increased through partnerships with National Authorities, Academic Institutions and Product Developers.

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THE ECONOMICS OF INTEGRATION FOR DISEASE CONTROL PROGRAMS

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Although integration of services is often promoted as a means to achieve health service efficiency and effectiveness, there is a relative paucity of evidence to support this policy objective from an economic perspective. This paper will briefly review the economic theory that underlies the policy objective of integration; review the existing evidence from disease control programmes, elimination and eradication programmes and other health services; and propose a set of operations research questions designed to move us further along the continuum of matching the reality of integration with the rhetoric of integration.

The review of evidence will include findings from the Africa Programme on Onchocerciasis Control, the Integrated Management of Childhood Illnesses (IMCI) programme, TB control programmes, integration of Voluntary Counseling and Testing services (VCT) into district health services, and eradication and elimination programmes currently being implemented in Africa. The latter include guinea worm, trachoma, lymphatic filariasis, schistosomiasis and polio. The emphasis in the review is to assess the alignment of the practice of integration with the promise of integration using economic theory as the framework of analysis.

This presentation will discuss the persistence of the call for integration of disease control programmes into weak, fragile health systems in spite of the competing demands of achieving specific goals of elimination and eradication. These competing policy statements often emanate from the same global partnerships – on the one hand, touting the desirability of integration, while at the same time promoting targets for disease elimination and eradication that are at odds with strengthening underlying health service delivery systems. Economics theory is used to justify both positions. This presentation attempts to align theory and practice in a set of specific operations research proposals.

FINANCING OF DISEASE CONTROL PROGRAMMES

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In early 1950, there was a disease that killed one in every four victims and 50 million cases occurred annually in the world. It killed two Queens, two Kings and two Emperors in Europe. The death threat of 60% of the world population was great enough for the international donor community to support an eradication campaign that was launched by the World Health Organisation in 1967. Smallpox was eradicated in 1977, with sustained funding and global effort to ensure a universal coverage. The WHO for an intensified 10 years eradication programme voted a modest annual allocation of US\$ 2.5 million in 1966, needless to say that a significant cost was borne by local financing mechanisms at country level.

In early 1970, there was a disease that affected 20 million people in Africa, America and Yemen. All infected individuals suffered from severely itching rashes, wrinkling and depigmentation of the skin. River blindness caused 10% of serious ocular lesions including blindness among those infected in Africa. It caused the population to desert more than 250.000 square kilometres of fertile riverside lands, running away from the black flies. The high morbidity and socio-economic impact of the disease were the mobilising factors of the international community to initiate a concerted action against onchocerciasis. The Control Programme in West Africa started in 1974 and is coming to an end in December 2002, with the elimination of onchocerciasis as a public health problem. The programme cost US\$ 560 million, less than One US\$ per person protected annually during 28 years in the OCP area. This does not include the significant cost borne by the countries that will have to fully integrate the control activities in their routine health system from December 2002.

Schistosomiasis and helminthiasis affect 2 billion people worldwide. A schistosomiasis control project was initiated in Mali in 1978 to complement a dam building project that led to a major improvement in vegetable growing, but also to substantial increase in the prevalence of urinary schistosomiasis in surrounding villages. The project became a national programme in 1982 and was almost entirely funded by GTZ for more than 15 years. In 1988, schistosomiasis has yet to be controlled when GTZ withdrew its support. The cost analysis indicated that more than 1.8 times the annual per capita government spending on health was needed for the implementation of a proper control strategy.

Could lessons be learnt from these experiences to control other diseases? Without underestimating the specificity of the epidemiological characteristics of the diseases, the financing of these control programmes was initiated because of the great potential of the diseases to kill, cause suffering and economic loss. This will be discussed in relation with the political will, for a global effort and a concerted action, as well as the need for clearly defined achievable objectives and the capacity of affected countries to sustain.

A long-term commitment from both donors and beneficiaries is essential.

DONOR POLICIES AND SUSTAINABILITY

BOTTLENECKS FOR BRINGING INNOVATIONS INTO HEALTH SYSTEMS

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MODELLING OF INTEGRATED DISEASE CONTROL: THE EXAMPLE OF SCHISTOSOMIASIS CONTROL IN GHANA

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The minimum requirement for integrated schistosomiasis control is adequate treatment with praziquantel for symptomatic individuals who report at a health care facility (passive case finding). As treatment of patients with early, mild symptoms such as haematuria and bloody stools may prevent development of chronic, more serious disease later, passive case finding can play an important role in morbidity control.

We have developed a mathematical model which describes the series of *infection – disease – health care visiting – treatment – infection* to study the dynamics of passive case finding and to identify the best options for improvement. Two field studies were set up in Ghana to obtain quantifications about: (1) health care seeking behaviour, by interview of individuals with reported schistosomiasis-related symptoms in the last month; (2) performance of the Ghanaian health system regarding schistosomiasis case management, by presenting clinical scenarios to personnel of health facilities.

It appeared that 70% of interviewed individuals with blood in urine or painful urination did not seek health care, whilst diarrhoea, blood in stool and abdominal pain usually led to action (mainly self-medication). On average 20% of symptoms were reported to health facilities. "Don't have the money" (43%) and "Not important enough" (41%) were most often mentioned as reasons for not visiting a clinic/health centre. Patients presenting at health facilities with urinary schistosomiasis would have a 50% chance of obtaining the right prescription (mainly after diagnostic test or referral to hospital), whereas this would be less than 20% for patients with intestinal schistosomiasis. Praziquantel was in stock in only 50 – 60% of the situations where it was prescribed.

Using above quantifications and assumptions about schistosomiasis natural history, we will explore the effect of passive case detection on the prevention of chronic disease. Then we will predict the impact of making praziquantel available at every Ghanaian health facility and compare this to increasing health seeking behaviour through health education.

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A MENTAL HEALTH CARE PROGRAMME AS ENTRY POINT TO IMPROVE THE QUALITY OF PRIMARY CARE SERVICES

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Mental health care interventions in Africa, when conceived, designed and implemented as classical disease control programmes, mainly focus on drug compliance. They give, however, far less attention to social and rehabilitation components.

In 2000, the Sa M.O.A. project (*SANTé Mentale en milieu Ouvert Africain*) launched a mental health care pilot programme in a urban quarter of Conakry (Guinea). The project was implemented in a set of primary care health centres run by the Guinean NGO 'FMG' (*Fraternité Médicale Guinée*). This project led to useful insights in the magnitude and nature of mental health problems in an African town. It provided relief to patients, families and communities. But, more importantly, this project had a significant impact on the general consultation process, far beyond mental health issues. Indeed, there are indications that it improved the quality of interpersonal care, one of the two pillars of quality of care as defined by Donabedian.

In this paper, we first describe the specificity of the approach to mental health care problems used in this setting. The specific hypothesis tested in the Sa M.O.A. project is that the management of most mental problems, whatever their initial severity, can and should be addressed on an ambulatory basis and in a patient centred way. Hence the need to integrate medical and social approaches, so as to address the family and community dimensions of mental health problems.

In a second part, we illustrate how this approach contributed to the unexpected change in the health workers attitudes and in their way to interact with patients in routine outpatient curative care services. Medical doctors became aware that their consultation time increased and they themselves attributed this to the wider scope they adopted in the clinical process, beyond diagnostic and prescription aspects.

Finally, we identify the characteristics of the approach used in Sa M.O.A. that were instrumental in strengthening the quality of general health care services. We conclude that the more a disease-specific programme takes into consideration the human and social dimensions of the illness, the more relevant and feasible a policy of integration becomes.

MONITORING AND EVALUATING DISEASE CONTROL ACTIVITIES THE EXPERIENCE OF WESTERN UGANDA

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Since 1989 the German Government is supporting the health services in a number of districts in Western Uganda through the German Technical Cooperation, GTZ. The project which covers a population of approximately 1 million initially focused on the reconstruction and strengthening of District Health Services but subsequently introduced integrated disease control activities particularly against onchocerciasis, HIV/AIDS and malaria. Monitoring and evaluation of these disease control components within the work of the District Health Teams builds on a computerized Health Management and Information System (HMIS) which allows easy and rapid access to data reported from peripheral health facilities as well as on the capacity at district, Health-Sub-District and health facility level to utilize these data which the project has supported over the years.

While monitoring of outputs of the integrated disease control components is being carried out as part of the integrated district health plan monitoring, specific surveillance tools have been established for output and impact assessment. The presentation will focus on HIV/AIDS and malaria and describe these M&E tools as well as major results in detail. For HIV/AIDS sentinel surveillance of HIV prevalence among pregnant women attending ANC services in three different strata (urban, road-side and rural) is carried out annually since 1991. This is complemented by a surveillance system of rapid assessment of sexual behaviour among secondary school students in rural as well as urban sentinel schools which is ongoing since 1994. In order to allow validation of surveillance data and direct measurement of impact, population based surveys are carried out by the DHT in 5 year intervals.

In Malaria a similar system exists combining routine data from HMIS and output monitoring for insecticide treated mosquito nets with rapid assessment of net and ITN coverage using sentinel surveillance at primary schools, regular assessment of health workers knowledge and attitudes and in-depth surveys on key elements of malaria control. Since mortality rate among children under five (U5MR) is not only a key impact indicator for effective health services but also for the success of an integrated malaria control program, indirect estimation of U5MR has been incorporated in any household based survey carried out in the project area.

Comparing resulting data with national estimates derived from the Demographic and Health Surveys (DHS) shows that while in 1988 U5MR was similar (205/1000 in project area, 191/1000 national), a continuous decline of U5MR could be demonstrated in the project area (154/1000 in 1994, 105/1000 in 1998). This is in contrast to the national level where U5MR stagnated at 161/1000 in 1994 and 152/1000 in 1998 and demonstrates the success of a disease control approach solidly integrated into a strong health services delivery system. Disease Control and Drug Supply

FIGHTING AGAINST LOW PREVALENCE DISEASES

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In Morocco, the low prevalence of transmittable diseases (except for tuberculosis) does not justify setting up large-scale vertical control programmes. Hence, disease control is based on sharing of resources, services and interventions at different levels and between different governmental sectors. This integration approach covers the shared aspects, such as epidemiological surveillance system, drug distribution system, training (including continuing medical education), the referral system, management of anti-microbial resistance, health care research, sensitisation and community participation.

This approach is possible because of the decentralisation policy of the Ministry of Health that is based on a well-developed primary health care network, supplemented by dynamic health coverage strategies. The provinces have a large autonomy regarding the implementation of all steps of disease control, allowing to take into account the geographical, cultural and socio-economic contexts. The national epidemiology and disease control level concentrates essentially on definition of norms, co-ordination, supervision, evaluation and financing.

Many achievements resulted from this integration process: the set-up of regional epidemiological observatories (in order to revitalise epidemiological surveillance), the integration of syndromic management of STDs in the reproductive health services, integration of zoonosis control through the creation of an inter-ministerial control commission, the optimisation of community participation in the control of trachoma, the creation of inter-ministerial provincial committees for the control of HIV/AIDS and the integration of the practical approach for the management of respiratory diseases in order to reinforce the experience acquired by the national TB control program.

Among the strengths of the integration of disease control, we mention the optimisation of use of resources, the improved efficiency of disease control programmes, the participation of other governmental sectors and the sensitisation of the community on the determinant role it should play in the protection of its health. Nevertheless, this integration approach meets some difficulties mainly due to the resistance from managers of specific programmes and from financing agencies. Moreover, it needs a strong political commitment and the set-up of an effective co-ordination system.

**A COMMON PUBLIC HEALTH PLATFORM FOR ERADICATION/ELIMINATION OF
COMMUNICABLE DISEASES**

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INTEGRATION OF COMMUNICABLE DISEASE INTERVENTIONS AT DISTRICT LEVEL IN THE WHO AFRICA REGION: AN OPERATIONAL PLAN

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Communicable diseases remain the most important health problem in the African Region of the World Health Organization (WHO/AFRO). The commonest causes of death and illness in the Region are acute respiratory tract infections, diarrhoeal diseases, malaria, tuberculosis, HIV/AIDS/STIs and vaccine preventable infections. Epidemic-prone diseases such as meningococcal meningitis, cholera, yellow fever and viral haemorrhagic fevers, especially Ebola virus fever, are also prominent health threats in the continent.

Over the years, WHO/AFRO has supported countries implement communicable disease control programmes. However, most of this support has been provided in a vertical manner. Individual programmes at AFRO have undertaken technical missions to countries to support activities such as programme planning, training and monitoring and evaluation. As more resources and players become available at country level, implementation of interventions needs to be well planned and managed in taking it to scale. This, therefore, requires development of mechanisms for integration and coordination at Regional, Country and District levels. Integration of disease control programmes is more talked about than done. Even in a decentralized health system, integration is a term very commonly used but rarely practiced. It is with this background that WHO/AFRO is proposing to its Member States to consider adopting/strengthening an integrated approach to communicable disease control, particularly at district level.

Faced with the challenge, WHO/AFRO has elaborated an operational plan for implementation of key interventions for prevention and control of malaria, HIV/AIDS/STIs and vaccine preventable diseases in an integrated manner. The goal of the integration is to increase efficiency and effectiveness in the utilization of available resources for health at country level and to co-ordinate the participation of partners in order to reduce morbidity and mortality in children. The expected result is that based on the lessons learned from piloting the operational plan, implementation of integrated activities will be expanded to cover all districts in Member States so as to achieve impact on under five morbidity and mortality in the Region.

This paper presents the core interventions identified, key activities, roles and responsibilities for AFRO and countries, co-ordination mechanisms, monitoring and evaluation and the implementation steps for the plan.

INTEGRATION IN THE FIELD: THE PERSPECTIVE OF THE DISTRICT

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**STAKEHOLDER VIEWS ON INTEGRATION OF SCHISTOSOMIASIS CONTROL ACTIVITIES
INTO BASIC HEALTH SERVICES
THE ZIMBABWEAN COMPONENT OF MULTI-COUNTRY STUDY**

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A study to find out stakeholder opinions on integration of schistosomiasis control activities into basic health services was conducted in Zimbabwe as part of a multi-country study involving the following countries, Senegal, Mali and Morocco. In Zimbabwe, the study was conducted in Mashonaland East and Mashonaland Central Provinces. Data was collected using structured questionnaires, workshops and focus group discussions. The following are some of the findings:

- Prioritisation of schistosomiasis among other health problems was shown, with people at peripheral level highly prioritising it;
- Control of schistosomiasis activities are partially integrated and the level of integration varies from province to province and at health centre level;
- Coverage of clinical cases is poor and there was general shortage of metrifonite, the only drug then available at health centre level in Zimbabwe;
- Consensus was reached on the idea of downgrading Praziquantel from Group B to Group C in order to improve coverage of the clinically affected;
- The concept of cost recovery through contribution from the community was recommended. It was noted that training is top down, without proper needs assessment and supervision at the peripheral level lacking;
- General research questions were identified as a necessary step towards integration of schistosomiasis into basic health services.

DISEASE CONTROL AND DRUG SUPPLY

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The first Essential Drugs List was published 25 years ago by WHO. The 12th edition of WHO's model List contains 315 active substances, covering the most prevalent diseases. In Africa, 7 diseases (HIV/AIDS, malaria, measles, TB, respiratory infections, and diarrhoea) cause 50% of mortality. Prompt diagnosis and treatment with existing essential medicines and vaccines could save over 3 million lives per year. Unfortunately, 2 billion people (50% of the developing world's population) do not yet have access to essential medicines.

According to WHO, access to essential medicines depends on: rational selection, affordable prices, sustainable financing and reliable health and supply systems. 157 countries have developed national Essential Drug Lists. Most diseases can be treated with very affordable essential drugs; the average drug cost of a treatment episode at a Zambian health centre is only USD 0.18. District hospitals can treat the most common diseases with a drug budget of USD 1-2 per capita per year.

Even if affordable essential drugs have been selected at national level, this does not guarantee that patients in rural health centres will benefit. A drug supply system may suffer from inefficiencies at several levels. Capacity to implement the National Drug Policy may be weak. Drugs may not be procured in time or (cost-) effectively. Bulk purchasing through tenders may obtain low prices, but quantities of needed drugs can be difficult to predict. Lack of effective drug regulatory authorities may increase the risk for substandard or even counterfeit drugs. Pilferage and corruption may reroute drugs. Storage conditions may compromise quality. Distribution may be irregular. Drug budgets may be exhausted, or skewed towards hospitals at the expense of primary health care. Health workers may not be trained to recognize the disease, or lack diagnostic tests. Prescribing habits may be compromised by patient expectations, or defensive prescribing of antibiotics. 10-20 seconds of dispensing time may be too short to inform the patient about proper drug use, especially if more drugs are prescribed at the same time. Adherence to the prescription may be poor due to cultural factors.

The net effect of all these sequential risks may be that only 5-10% of the national drug budget may be effectively used to cure treatable diseases. Health workers appreciate essential drug manuals and training, but rational prescribing learned at workshops may not be sustainable if there is no regular follow-up or supervision.

Disease control programmes often depend on the availability of specific essential drugs. Having access to more (donor) resources, they may be tempted to set up their own financing, procurement, storage and distribution systems for programme drugs, as they rate the "normal" drug supply system inefficient. They may also develop their own treatment guidelines (separately from the national essential drug selection process), organise dedicated (non-integrated) training workshops, ask health workers to collect specific management information (beyond the routine data collection), and evaluate their own programme out of context from the "normal" essential drug programme.

Treatment for a few diseases (HIV/AIDS, resistant TB, resistant malaria) is so expensive that it depends completely on Global Fund support, which may set specific requirements for procurement and distribution.

Drug companies and donors may also donate drugs in kind. Although possibly well-meaning, such donations may create havoc in local production or tenders if they are not properly co-ordinated with the receivers. Expensive drugs may also come with additional conditions to ensure safe distribution and use, creating more work for already overburdened health workers.

Vertical disease control programmes may therefore have unintended negative effects on "normal" drug supply programmes.

Some countries have tried to abolish vertical programmes, and integrate them into their Health Reforms. By pooling resources in a common "drug basket", disease programmes and Primary Health Care should both benefit. Once established, vertical programmes often resist such integration efforts. Political will for an integrated health reform should therefore be strong. The solutions for most of the technical drug supply problems are known, and far cheaper to resolve than some expensive disease treatments. Governments, NGOs and donors should coordinate efforts to implement an integrated national essential drug programme. Major diseases can be monitored in routine data collection, and the availability of vital disease programme drugs can become major indicators. Properly integrated, disease programmes may even become a crucial stimulus for successful essential drug programme. Think development, think horizontal!

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IMCI - INTEGRATED WHO/UNICEF APPROACH FOR THE CONTROL OF CHILDHOOD DISEASES: THE EXPERIENCE OF THE REGION OF THE AMERICAS

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Integrated Management of Childhood Illness (IMCI), developed jointly by WHO and UNICEF, is an integrated approach to child health that focuses on the well-being of the whole child taking into account the variety of factors that puts a child at serious risk. In the Region of the Americas, most countries adopted IMCI's step-by-step approach to systematically assess children's prevalent diseases and health problems, thus contributing to early detection, prompt treatment, prevention services and health promotion education.

Implementation of IMCI promotes effective control of childhood diseases by improving its diagnosis and treatment, both at home and health facilities. In addition, childhood mortality from diseases targeted by IMCI strategy have dropped faster than what was previously observed before IMCI implementation. As a result, the first assessment of Healthy Children: Goal 2002 Initiative, oriented to avert 100,000 deaths in children less than five years of age from 1999 to 2002 in the Region of the Americas, has shown positive and promising results.

Although integrated case management is a key aspect to effective health care, putting it into practice is not simple. Since delivering medical treatment focuses on the detection of specific illnesses and diseases, an integrated approach to patient care is challenging for health workers. Without proper skills and tools, this task becomes even more challenging.

IMCI provides an efficient tool for integrated case management approach to childhood diseases and reduces missed opportunities for early detection and treatment. Furthermore, IMCI is allows the opportunity for educating parents in seeking timely medical attention for their children and is becoming key for assessing parent's health, early pregnancy detection and pre-natal care, early treatment of communicable and non-communicable diseases, health prevention and health promotion interventions.

By providing access to IMCI to all children, control of childhood diseases could be achieved. This may be reached by promoting the IMCI strategy to health services, communities and universities so that pre-graduate students training to be health care professionals and deliver basic medical care to vulnerable populations receive an early medical training in IMCI.

HIV AND TB INTEGRATION

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In poor parts of southern Africa the prevalence of HIV is greater than 1000 per 100 000. Before the onset of the HIV epidemic there was a high prevalence of TB, in some areas as high as 700 per 100 000.

HIV increases the risk of acquiring TB and TB adversely affects individuals co-infected with HIV. TB is the commonest opportunistic infection in HIV positive persons in Africa and it is the commonest cause of death.

At TB services up to 58% of TB patients are co-infected with HIV. This has placed an even greater burden on TB services.

In April 2000 Medecins Sans Frontieres (MSF) opened clinics for patients with HIV-related problems within three Community Health Clinics in Khayelitsha, Cape Town. Fifteen percent of patients attending these services are referred from TB clinics while 25% of patients on highly active antiretroviral therapy are from TB clinics.

Until recently two services with separate resources, including space, staff and recording systems have been in place for patients with TB and/or HIV in Khayelitsha. This has led to longer waiting times for patients, duplication of services and under-utilisation of staff.

At one of the three clinics a pilot project is being conducted to integrate the HIV and TB clinics. The results of this step-wise process will be presented.

“MANAGING HIV/AIDS INTERVENTIONS AT NATIONAL, PROVINCIAL AND OPERATIONAL DISTRICT LEVEL IN CAMBODIA”

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1. Brief description of the HIV epidemic in Cambodia

Relatively to its population of 11.5 million, Cambodia is still the Asian country worst affected by the HIV/AIDS epidemic. The national prevalence rate has been estimated to reach 2.7% in 2002, representing slightly more than 150,000 adults living with HIV/AIDS. HIV is primarily transmitted through unsafe sex, with blood-borne and mother-to-child transmission still playing a marginal role. Although female sex workers have the highest prevalence rates, followed by men with high-risk behaviour, both prevalence and incidence rates in female sex workers appear to have been continuously declining for the last few years. There is evidence that there has been a genuine decline in unsafe sex over the last few years, both in terms of increasing condom use, and declining purchase of sex by men. While prevention efforts must be maintained, Cambodia must now anticipate increasing numbers of HIV positive individuals falling ill in the coming years. It has been estimated that there will be nearly 20,000 new AIDS cases per year between 2002 and 2005.

2. National response to HIV/AIDS – contents of the programme

The National Centre for HIV/AIDS, Dermatology and STDs (NCHADS) has recognised since 1998 the need to target HIV prevention at population groups at the highest risk of HIV transmission. A 100% Condom Use Promotion strategy, adapted from the Thai experience, was piloted in one province between 1998 and 2000 by NCHADS with technical input from ITM and WHO. The lessons learned from this pilot have helped develop the ‘packages’ of prevention and care activities reflected in the Ministry of Health’s *Strategic Plan for HIV/AIDS and STI Prevention and Care in Cambodia 2001-2005*, comprising IEC, targeted and integrated STI care, voluntary testing and counselling, and development of a comprehensive continuum of care based on three premises: 1) the need to reduce HIV transmission in high risk situations, 2) the need to raise awareness about HIV/AIDS in the general population, and 3) the need to equip the health system to cope with increasing demand for AIDS care.

3. National response to HIV/AIDS – management of the programme

The Cambodian government has fully acknowledged the reality and severity of the HIV/AIDS epidemic. The National AIDS Authority was established in 1999 to co-ordinate the national response among the main government ministries. Its role also includes drawing up of overall policies (e.g. fighting discrimination against PLWHAs), stimulating multi-sectoral responses, and advocacy among national government members.

Within the Ministry of Health, NCHADS is institutionally responsible for health sector interventions. NCHADS currently employs about 60 permanent staff, and is divided into two Bureaux (the Administration and Technical Bureaux) and 7 Units, each one with clearly defined roles and responsibilities. NCHADS works with Provincial AIDS Offices (PAOs) for implementation at field level. PAOs, established within the Technical Bureau of Provincial Health Departments (PHDs), are responsible for managing all health-related HIV/AIDS interventions, such as outreach, targeted and integrated STI

services, VCT services, home-based care, etc in their respective province and operational districts (ODs). Experience has shown that the key to achieving effective decentralisation lies in a shared responsibility between the Central level (NCHADS) and the Provincial level (the PAOs, and the PHDs and ODs) whereby NCHADS is primarily responsible for the development of overall strategy and guidelines for implementation of programme components, while the PAOs and PHDs develop and implement operational plans, based on these guidelines. Funds are allocated to the PAOs, through the PHDs, based on these plans. NCHADS provides technical assistance through supervision of activities, and monitors the achievement of plans and the expenditure of funds.

Provincial AIDS secretariats (PAS), chaired by the provincial health director, have been established to provide a co-ordination platform between the Ministry of Health, other ministries involved in the HIV/AIDS response and the many NGOs active in provinces. They meet on a monthly basis.

Health NGOs have their own co-ordination bodies, MEDICAM and the HIV/AIDS co-ordination committee (HACC), also meeting on a monthly basis.

4. Implementation challenges

While the Cambodian government has a clear view of what the national response should be, actual implementation represents an enormous challenge. The health infrastructure is slowly being rebuilt after nearly three decades of neglect, destruction, and radical change. Even though a significant percentage is earmarked for health and HIV/AIDS, the national health budget is clearly insufficient to address the needs for HIV/AIDS interventions. Health service spending is dominated by private expenditures. Estimates suggest that private individuals contribute between 60 and 85 percent of total spending (US\$ 18-30 per capita per year). Government spends annually around US\$ 2.5 per capita, and a further \$ 5.7 is obtained in external aid. Transfer of funds to the provinces is slow and lacks transparency. Government staff at provincial and OD level have limited technical and managerial capacities. Co-ordination by underpaid government staff of the demands of numerous donors and NGOs is a painstaking exercise. In exchange for their generosity in compensating for the shortage of government funds, external donors put pressure on the national response to meet their own priorities or interests. In 2001 46% of funds allocated for HIV in the health sector, from the national budget, loans and donor grants, passed through the Government, of which 28% was from the national budget or bank loans; 41% was donor funding managed through NGOs (primarily USAID funding), and 13% raised and managed directly by NGOs. Collaboration between the government and NGO sectors has sometimes been strained, the government seeing NGOs as arrogant and overpaid, and NGOs viewing the public sector as lacking technical skills and financial accountability.

However, the remarkable progress made by both the national government and national NGOs over the past five years augurs well for the capacity of Cambodians to respond further to the HIV epidemic.

**TRYPANOSOMIASIS CONTROL IN THE DEMOCRATIC REPUBLIC OF CONGO (DRC)
INVOLVEMENT OF THE HEALTH SERVICES IN THE CONTROL OF SLEEPING SICKNESS**

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The health system reform process in the DRC aims to strengthen the role of the 'Zone de Santé' (health district) as the level of integration of disease control activities. The main advantage of the health district model is that this approach brings health services closer to the population and promotes community involvement.

From its geographical situation (between the tropics), the DRC remains a country with a high burden of tropical diseases. Human African Trypanosomiasis (HAT) is one of them. In the DRC, HAT is caused by *Trypanosoma brucei gambiense* and affects 10 out of 11 administrative provinces. Out of 306 'Zones de Santé', 138 are affected by the disease (BCT, rapport annuel 2001).

One of the problems encountered these days in HAT control is the weakness of community participation. The independent trypanosomiasis services seem, in some cases, to weaken the basic health services that should play a role in community involvement as well as in screening and follow-up activities.

In this paper, based on historical facts and the work in progress in the *Zone de Santé* of Miabi, we will discuss how an increased involvement of the district's qualified medical personnel could contribute to the inclusion of trypanosomiasis control activities in basic health services' responsibilities. We will highlight difficulties in terms of power games and balances between stakeholders.

INTEGRATION, DECENTRALIZATION, VERTICALIZATION HOW CAN INFECTIOUS DISEASES BE CONTROLLED: THE BRAZILIAN CASE

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In 1808, a decree by the Prince Don João from Portugal (then the colonialist of Brazil) transferred the responsibilities of the Public Health Service to the Central Government of Brazil. For the first time in Brazil the responsibilities in the area of public health were centralized.

Centralization and decentralization (central government versus local responsibilities) were administration alternatives used in the next 200 years aiming to control diseases such yellow fever, small pox, cholera, malaria, tuberculosis, hookworm diseases and, more recently, poliomyelitis, schistosomiasis, Chagas disease, dengue and HIV / AIDS among others.

Alternate administrative models produced different results on the control of diseases and showed the complexity of the problem.

The use of a “campaign” model for the eradication or control of endemic diseases (vertical organization) was associated with two fundamental facts. First, the population suffers acute diseases with very high morbidity and mortality and produces dangerous economic effects. Second, the organization of the local health services was deficient and lacked the capacity for acting successfully in the control of the diseases. The cure and prevention of diseases were two aspects rarely considered together.

Although the campaign model offered good results in the eradication or control of yellow fever, malaria (initially), small-pox, poliomyelitis and Chagas disease, it became clear that this model was exhausted.

After the last Constitution of Brazil (1988), the new challenge was the creation of “SUS” (Unified Health System), when the measures for the disease control were integrated.

Actions for the control of endemic diseases were now the responsibility of the states and (provinces) municipalities. Though in most of the cases, the central government, still responsible for planning and orientation, continues to acquire materials (vaccines, drugs, pesticides, etc) and to distribute them to the other actors.

Discussion about benefits and problems appeared with this new horizontalized, decentralized administrative model will be presented.

NOTES

NOTES

POSTERS

**CHLOROQUINE-SULFADOXINE/PYRIMETHAMINE SENSITIVITY SURVEILLANCE
IN ZIMBABWE
WHERE VERTICAL EXPERTS AND HORIZONTAL STRUCTURES HAPPILY MEET**

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Chloroquine effectiveness studies have been carried out in Zimbabwe since 1994. An organised and systematic monitoring of sensitivity of *P. falciparum* to antimalarial drugs was however only put in place in 1999. Since then, each of the country's 8 provinces has selected a sentinel site where data are collected in a systematic and standardised manner. The technical aspects of the survey require a vertical framework, but the actual data collection is well integrated in the activities of local multi-purpose health teams.

The protocol for the *in vivo* CQ-SP testing is a standard protocol designed by experts of the World Health Organisation and adopted by the experts of the national malaria programme, which is, at central level, part of the epidemiology and disease control unit. Training of personnel involved in the surveillance happens in a typical 'cascade-form': central experts train provincial programme managers who in turn are responsible for the training of district and peripheral personnel. The *in vivo* sensitivity study itself is carried out in the outpatient department and laboratory of the selected first line health centres, by a local team consisting of two nurses, a laboratory technician and an environmental health technician. The sampling takes place during the malaria season, as an integral part of the routine clinical activities. Supervision and analysis of data is done by the provincial and district health authorities whilst interpretation of data and possible policy changes are the responsibility of the central level.

The Zimbabwean experience teaches us that this approach is beneficial to all involved: the community and patients benefit from improved case management; the local personnel benefits from extra resources and on-the-job training, acquiring technical skills that are maintained after completing the survey; central managers are provided with good quality data required for evidence based decision making; district and provincial managers who disseminate and discuss locally obtained results are relevantly involved in national policy changes.

NATIONAL STRATEGIC PLAN OF HIV/AIDS CONTROL IN MOROCCO

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Issues

The HIV/AIDS epidemic in Morocco has a low prevalence rate as it is less than 1%, but during the last few years an increase of the AIDS cases and HIV prevalence is observed in some provinces. Since 1987, the country has developed a national expertise in order to address the social as well as the institutional dimensions of the problem. This was particularly the case for the blood safety, the diagnosis and treatment of STIs, the formal and the informal education, the HIV voluntary counselling and testing and the access to ARV therapy. The national AIDS programme control has recently realised a process of situation and response analysis and formulated a National Strategic Plan (NSP).

Description

The results of the process have allowed the national team to formulate a NSP for the years 2002 to 2004. The guiding principles are based on focusing the most vulnerable groups in the most affected areas and providing them essential activities. The package of essential activities has been defined in the NSP for HIV prevention as well as for AIDS impact reduction. This plan has also formulated the general strategies for the essential activities quality insurance as well as for the increase of the geographical coverage, the political advocacy, the social mobilisation, the cultural appropriateness, the capacity building and resources mobilisation. However, there are some areas which have needed specific strategies such as the accelerated access to ARV, the social communication, the counselling and anonymous voluntary testing, the research and innovation.

Lessons learned

It was a very important process for the national AIDS programme control, since all the NGOs and other public sectors concerned were involved in the different steps. This was crucial for the NSP.

Conclusion

Specific strategic objectives and steps have been adopted in order to guide the formulation of the operational plans of the different actors at the central as well as the local levels.

**IMPLEMENTING INTEGRATED DISEASE CONTROL PROGRAMS
UGANDA'S EXPERIENCE WITH INTEGRATED
MANAGEMENT OF CHILDHOOD ILLNESS**

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Malaria, pneumonia, diarrhea, measles and malnutrition and often occurring in combination contribute up to 70% of all the morbidity and mortality among the under five children in middle and low-income countries. National Health Authorities have put in place programs for control specific diseases singly. However children brought for treatment in developing countries are often suffering from more than one disease and causative factors of the common disease at level of household and communities are interlinked.

The WHO/UNICEF's Integrated Management of Childhood Illness (IMCI) strategy is one of the key interventions towards integration of health care delivery for under-five children. It aims at promoting accurate identification of childhood illnesses, ensuring appropriate combined treatment, strengthening counselling of caretakers among others. In the home and community setting, it promotes appropriate care seeking behaviours, improved nutrition and preventative care, and the correct implementation of prescribed care.

Uganda has been implementing the IMCI strategy since 1995 with in the context of a highly decentralised health system. The experiences are:

- IMCI guidelines and tools are in competition with those of disease specific programs with IMCI guidelines and tools sometimes being taken rather than a norm.
- Because of dealing with many (5) major disease conditions and promotion of holistic approach to managing sick children, IMCI capacity building process takes longer and is more expensive compared to those of individual a single disease.

Key challenges of integrating common diseases control under the IMCI strategy include:

- Finding the optimal balance between disease specific technical concerns on one hand and cross cutting health system issues on the other.
- Determination of appropriate organisation structure to foster integration.
- With different actors having different disease priorities and all wanting to gain credit for success how can health system solve the issue of attribution within an integrated disease control framework?

From the above experience I can recommend that:

- Develop policies and strategic plans for integrated disease control for all other actors to fit in.
- Develop integrated guidelines and tools for case management, supervision and framework for preventive activities with co-ordination at level higher than individual program management.
- Health system tools like planning guidelines, budgeting format, needs to be in conformity with integrated nature of disease control activities.
- Strengthen capacity for government to ensure that non-government organisation and private sector conform to agreed guidelines and standards.

Though disease specific technical concerns needs to address it's of even of greater importance to identify and address health systems factors that hinder integration or perpetuate vertical operations in disease control interventions.

(The contents of this paper do not necessarily represent the views of WHO)

INTERSECTORAL COLLABORATION FOR MALARIA CONTROL: INTRODUCING THE SYSTEMWIDE INITIATIVE ON MALARIA AND AGRICULTURE (SIMA)

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The CGIAR Systemwide Initiative on Malaria and Agriculture (SIMA), aims to create a community of partners in agriculture, health and development that will be a decisive new force in reducing malaria over the coming decade. SIMA's goal of malaria reduction will be achieved by developing and promoting methods for malaria control through improved agricultural practices and proper management of natural resources. Portfolios with different interventions will be compiled to reduce malaria in specific agro-ecosystem settings. These interventions will be based on scientifically documented interactions between agricultural production systems and malaria, and will complement existing anti-malaria approaches such as bednet campaigns and vaccine development. A knowledge base will be compiled of scientifically validated and newly generated experiences in agro-ecosystem management interventions that can reduce malaria, as well as on the impact of malaria on agricultural productivity and household food security.

The importance of the links between agriculture and human health for the reduction of rural poverty calls for broad cooperation. SIMA proposes to facilitate interaction between agriculture and health research communities to better understand and document the inter-relationship between malaria and agriculture and contribute to malaria reduction. SIMA comprises a network of partners from international health and agricultural research institutes, and national and regional organizations from different countries, mainly in Africa. The initiative is coordinated by the International Water Management Institute (IWMI), one of the 16 Future Harvest centers of the Consultative Group on International Agricultural Research (CGIAR).

A significant advantage of involving agricultural research institutes in health research and diseases control is that these have access to decision makers in the agriculture sector. The international agricultural research centers provide some 150 field sites across Africa where a malaria research component can be integrated with on-going research on tropical agriculture, livestock management, medicinal plants, irrigation and water management, and other aspects of tropical farming practice systems.

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INTEGRATION OF REFUGEE AND HOST POPULATION HEALTH SERVICES IN NORTHERN UGANDA

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Background

Since 1990, Uganda has hosted an estimated 200,000 refugees who come mainly from the Sudan. The majority 142,646 (71%) of the refugees live in settlements in three districts of northern Uganda (i.e Arua, Adjumani and Moyo). Although the policy of the Government of Uganda allows refugees to live in settlements interspersed amongst the host communities, refugee and host population health services run in parallel. In 1999 the government of Uganda and the United Nations High Commissioner for Refugees (UNHCR) developed a strategy to integrate refugee and host population social and health services in northern Uganda. We assessed availability of resources and access to health services for refugee and the host populations in the three refugee affected districts of northern Uganda during 1999-2001.

Methods

The study was carried out in Arua, Adjumani and Moyo districts of northern Uganda. Data on major obstetrical interventions on refugee and host populations was collected retrospectively between September 2000 and December 2000; and prospectively between January 2001 and December 2001, from 5 hospitals, covering a period of three years, 1999-2001. Data on resources in refugee and host health facilities was collected during 2001. We estimated the expected number of births, calculated rates and deficits of major obstetric interventions for absolute maternal indications for refugee and host populations for 1999, 2000 and 2001 for the region, districts and sub-districts hosting different numbers of refugees.

Findings

In the region, during 1999-2001, rates of major obstetrical intervention for refugees were significantly higher than for the host population 0.60% (95% CI 0.34-0.86) versus 0.47% (0.41-0.53); 0.93% (0.57-1.29) versus 0.52% (0.46-0.58) and 0.61% (0.34-0.87) versus 0.47% (0.42-0.52). The combined rate over the three years for refugees was statistically significantly higher than for host population 1.01% (0.77-1.25) versus 0.51% (0.38-0.44) $p < 0.001$. In rural areas/sub-counties hosting both refugee and host populations, rates of major obstetrical intervention for refugees were significantly higher than for rural host population 0.60% (95% CI 0.34-0.86) versus 0.40% (0.28-0.52); 0.93% (0.57-1.29) versus 0.50% (0.36-0.61); and 0.61% (0.34-0.87) versus 0.47% (0.34-0.60). The combined rate over the three years was statistically significantly higher for refugees than for rural host population 1.01% (0.77-1.25) versus 0.45% (0.38-0.52) $p < 0.001$. The study showed that a higher proportion of refugee health units 17/29 (58.6%) compared to 15/55 (27.3%) host health units have access to transport facilities (ambulance/other vehicles); 9/19 (47.4%) refugee health units compared to 4/30 (13.3%) host units have radio communication network facilities. The majority of refugee health units 15/17 (88.2%) well as host health units 28/32 (87.5%) have in functional state, most of the basic clinical/diagnostic and delivery equipment.

Conclusion and Recommendation

In the refugee affected districts of northern Uganda, access to referral health services is better for refugees than for the host population, and refugee health units are better equipped compared to host health units. In this stable refugee setting, in post emergency period, integration of refugee and host health services could contribute to improved health services for entire populations in refugee affected settings.

IMPLEMENTATION OF MALARIA CONTROL IN MALI: POLICY AND EPIDEMIOLOGICAL ANALYSIS

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Malaria is a focal disease whose epidemiology is influenced by factors related to people, mosquito and the environment. The development and implementation of any control measure should take into account the complex interrelationships among the health policy, the health care system and the malaria disease system.

This research, carried out between 1998 and 2000, addresses the problems of integrating malaria control into the decentralising health system of Mali, using epidemiological, health service, and extensive interview data at all levels of the health care system.

The research was done at central level (international organisations and national institutions), in two regions, four districts, eight community health centres, and sixteen villages.

The policy analysis framework described by Walt (1994) permitted to underline the organisational and managerial issues within the system, and the extend of implementation of the malaria control interventions, the level of involvement and commitment of the main actors at different levels.

The epidemiological model (WHO, 2000) allows the description of the regional variability of the malaria disease system and the characteristics of the human population in relation with malaria transmission, treatment and prevention.

The existing implementation gaps are linked to both systemic issues and the disease specific problems.

The absence of a clear national strategy document for malaria control addressing the organisation and management of the linkages between the major actors, their roles and responsibilities and the degree and forms of community participation, together with the low managerial capacity and the weak mechanisms of control over implementation has led to wide gaps between policy intent and outcome. Qualified and motivated health personnel are scarce, and malaria control activities inadequate, neglecting local epidemiological variability.

The role of the various actors predominates happenings at all levels from policy making to implementation. The selection, quality, training and remuneration of staff and other are crucial determinants for achieving effective implementation of malaria control.

INTEGRATION OF HEALTH CARE DELIVERY: AN ANALYTICAL FRAMEWORK

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The delivery of health interventions is basically organised through two different approaches depending on the objectives and resources available: the vertical and the horizontal approaches. For diseases, which require clinical and public health strategies, the two approaches are not mutually exclusive, but complementary. There is increasing recognition of the need for a more sophisticated approach than is possible through the simple vertical/horizontal debate.

Malaria management, prevention and control, together with innovations, reorganisations and research, can be thought of as a series of layers of work involving organisations, structures and actors at the international, national, regional, district, community and household levels.

With the decentralisation of health interventions that is taking place today we are much less clear about transfers between levels and about understanding how to decentralise control programmes. However studies on the implementation of control strategies through multifunctional health services are relatively scarce, and indeed not easy to conduct.

The application of the following framework permitted to analyse the integration of malaria control programme into the decentralised health system of Mali. Interviews and literature data were used. This analytical approach works along the policy content through to implementation.

It includes :

1. Definition of integration as seen by the protagonists at different levels.
2. Identification of the advantages, constraints, and opportunities.
3. Identification of strategic approaches to a successful integration.

These three points were examined at the different levels of the health system (international organisations, national policy makers and sub-national implementers) in order to understand their viewpoints and options towards integration.

It focussed on both

- Understanding within each level of the health system what is planned to happen, what is happening in practice, what should happen and why.
- And the movement, interconnections and co-ordination between levels.

It also allowed the understanding of what is happening at the implementation level, analyzing and explaining the implementation gaps, in relation to the structure of the health care system.

INTEGRATING HIV CARE: NETWORKING WITH FAMILY DOCTORS AND AIDS SPECIALISTS - LESSONS LEARNED FROM A PILOT PROJECT IN FLANDERS

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When drugs are affordable for most patients, HIV becomes from an organisational point of view, a chronic disease. Especially in a context of very low prevalence, this poses a challenge for offering sufficient quality of care. In order to respond to a demand for more comprehensive, integrated and accessible care, the AIDS referral unit of the Institute of Tropical Medicine and a group of GPs, who since the start of the endemic were involved in HIV care, decided in 1998 to build a network of GPs who - while being adequately trained in the latest developments on HIV-therapy - could offer sufficiently accessible, integrated and comprehensive care to at least a subgroup of HIV-patients.

At present a core group of around 15 GPs regularly attend the peer-group meetings, organised 3 to 4 times a year. At each session, a colleague working at the AIDS referral unit or a member of a patient organisation participates. At the end of 2001, a series of evaluative semi-structured interviews with participating and non-participating GPs were conducted.

The main issue that had to be developed during the peer-group sessions was the GPs' confidence in their ability to provide proper follow-up care during the HIV-therapy. The technical issues of pharmacological actions, interactions and side-effects had to be explained and were a constant topic on the agenda of every meeting. The interviews indicate that practitioners who participated in most of the meetings, were more technically skilled and felt much more at ease with the follow up of HIV-patients.

As a second issue, the specificity of their profession within the health care system was elaborated. The interviews indicate that holistic care, comprehensiveness and integration of care, became more meaningful thanks to analysis of and reflection on their own experiences.

A third issue that was developed was the scope and the limits of their responsibility regarding HIV care. The case studies helped to elaborate referral strategies, which led to the development of a collaboration protocol agreed upon by the AIDS referral unit and the GPs' network representatives.

Networking for a low prevalent health problem, but one that because of its severity demands long-term care, is the only strategy for meeting technical and quality standards. Our experience proves that networking is feasible and that it satisfies a need of the care providers. And although evaluation at the level of the consumer still needs to be conducted, it seems that, financial incentives are needed to support this structured approach and to maintain the enthusiasm and motivation of the GPs.

INTEGRATED SEROLOGICAL SCREENING FOR HUMAN AFRICAN TRYPANOSOMIASIS BY FIRST LINE HEALTH SERVICES IN KINSHASA, D.R. CONGO

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Background

The city of Kinshasa was considered an extinct focus of Human African Trypanosomiasis (HAT), but from 1996 onwards, HAT cases are again reported in residents. In 2000, 626 new cases were notified⁴. 98% of those patients were diagnosed by specialized teams of the national control program: 2 mobile teams and 4 fixed specialized centers. Only two percent of the cases were detected by the regular first line health centers (HC). To improve "passive" HAT case detection, we trained the microscopists of all HC situated in the risk areas in the periphery of Kinshasa . We also introduced serological screening for HAT of all patients presenting to those HC. We present preliminar results of this integrated HAT screening.

Method

This operational research project is a collaboration between a national reference laboratory (INRB), the HAT control program (BCT) and the urban district health services. Twenty two HC in the administrative region "Ville de Kinshasa" were selected for this intervention, on the basis of their risk for HAT. The training of 40 microscopists from those HCs took place between July and December 2001. Sixteen HCs participated in the serological screening. All patients presenting to those HCs were offered screening by IFAT, independently of their motive of consultation. In consenting patients, a finger prick blood sample was collected on filter paper. The samples were collected by and processed at the reference laboratory INRB. Results were communicated on a weekly basis to HCs, and positive patients were invited for a confirmatory test. We present screening results for the period April to August 2002.

Results

Over the 5 months of the study, 2745 filter paper samples were taken. 2518 were processed and 227 had to be discarded due to errors of registration or poor sampling technique. One percent of the samples (27/ 2518) was IFAT positive. Only ten of the 27 (37%) IFAT positive patients could be retrieved for parasitological investigation, and 6 of the ten were confirmed. Two IFAT positives were old HAT cases, they were both parasitologically negative. All 6 parasitologically positive patients were referred to the "Centre National de Référence de la THA" for treatment. One woman refuse to join the treatment centre because she had nobody to take care of her family.

⁴ Annual report BCT 2000

Discussion

This operational research project evaluates a strategy of targeted population screening for HAT in an urban environment. The screening activity was carried out by the fixed first line health facilities, in collaboration with a national reference laboratory, which processed the serological tests. Our preliminary results show that retrieval of the serologic positives posed great difficulty. The operational link between the national reference laboratory and the first line health service still merits good reflection. A screening test which could be processed immediately at the first line HC laboratory would probably improve the efficiency of the screening. In the meanwhile, we work on better operational links between the reference laboratory and the first line HC microscopists. We plan to extend the screening to all 22 HC "at risk" . Our preliminary results show that it is feasible to integrate HAT screening into primary care in risk areas. The cost-effectiveness of this strategy compared to classical "vertical" screening should be assessed.

**SOCIAL STIGMA OF TUBERCULOSIS AND HEALTH CARE PROVIDERS FEARS
A KEY-ISSUE IN THE INTEGRATION DEBATE FOR TUBERCULOSIS CONTROL
PROGRAM**

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Social stigma is an important barrier to successful care for tuberculosis patients. Generally, it is only considered as a problem originating from lay people beliefs. The proper fears of health care providers towards tuberculosis patients is rarely tackled. However, their behaviour and recommendations given to patients at various stages of the tuberculosis patient's care indicate the importance of that factor.

To illustrate that, we studied two specific parts of the care to TB patients: sputum collection and communication during treatment to tuberculosis patients. In the first case, the study was performed in three Municipios. Information on the process of sputum collection was obtained through 115 patients and 31 interviews with professionals. In the second case, we studied in two Municipios the recommendations given by health professionals, as understood by tuberculosis patients. In-depth qualitative analysis was done through interview of 52 tuberculosis patients, 113 professionals, and two focus group discussions.

In both cases incorrect knowledge and fears from health care providers outside of the programme resulted in wrong care process to the patient (bad supervisoin of sputum production by the patient, too high proportion of salivary sputum collected, and wrong behavioural recommendation given to TB patient during their treatment). This happened in a context whereby in-services training and workshop organised by the TB control program were targeting exclusively at professionals from the program.

The absence of information diffusion outside the tuberculosis program can be considered as a key integration problem of tuberculosis control program within general health services. Therefore, thinking at solution to unjustified fears of health professionals towards tuberculosis patient can not be done without approaching the issue of integration of tuberculosis programs within general health services.

THE IMPACT OF PARTNERSHIPS IN THE PREVENTION OF HIV TRANSMISSION BY BLOOD TRANSFUSION IN DEMOCRATIC REPUBLIC OF CONGO

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Blood safety remains a serious problem in many sub-Saharan African countries. The German Technical Cooperation (GTZ) has been developing a blood safety net in Kinshasa, capital of the Democratic Republic of the Congo (DRC), since 1987. The project encompasses 25 health centers and hospitals where it has introduced a minimum package of activities for blood safety.

Since 1990, the DRC has faced political and socio-economic crises that have resulted in the destruction of the health infrastructure and the deterioration of health conditions for the general population. HIV transmission in particular has become a larger concern, as prevalence has been increasing due to war, migration of populations and poverty.

The principal objective of the GTZ project has been to prevent AIDS infection via blood transfusion. Project activities have included making available blood transfusion materials and other supplies and the local training of people in the centers supported by the project. Training has covered various topics in blood safety practices, concentrating on testing for HIV and other infections transmitted by blood.

Activities for the project were developed in partnership with the Ministry of Health, communities of voluntary blood donors and private health structures. This blood safety net is estimated to have prevented almost 3000 HIV infections via blood transfusion in Kinshasa each year of its operation. The system also served as the framework for the design of a national blood safety network.

In accordance with the WHO regional blood safety strategy, the Ministry of Health created a National Blood Transfusion Center in 1999. This Center has worked to institutionalize the activities supported by GTZ and coordinates work on blood safety nationwide. Through active lobbying, the Ministry of Health has also recruited other partners (Italian Technical Cooperation, World Bank, Cordaid, European Union, USAID, Belgian Cooperation) to help him in the implementation of the blood safety program. In June 2002, the President of the Republic inaugurated the National Blood Transfusion Centre and activities have been extended nationwide.

This project is a case study of partnerships between a government and several bilateral and multilateral organizations and is playing a major role in the prevention of blood-transmitted infections in the DRC. Although not all the problems have been solved, the success of this project gives hope that the safety of the blood supply will be soon be achieved throughout the entire country.

INTEGRATION OF TSETSE CONTROL WITH FARMING ACTIVITIES AMONG CULTIVATORS IN TORORO, PALLISA, KUMI AND APAC DISTRICTS IN UGANDA

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Tsetse and Trypanosomiasis remain a health problem and a major hindrance to livestock development in Uganda. Tsetse control strategies have remained in the hands of the Government, which has relied on sophisticated technologies such as aerial spraying which are inappropriate to Uganda's economic and environmental situation. Given that the vector, *Glossina fuscipes fuscipes*, is peridomestic and the transmission cycle is undoubtedly the domestic animal - fly - man, involvement of the community in its control using appropriate technologies would be most appropriate.

It is suggested that there are five major reasons among others, which account for why, community-based vector control programmes fail:

- a) economic and logistical constraints
- b) lack of continued interest
- c) lack of voluntary time to devote to vector control
- d) short period of time used to introduce the project (usually by donors) to community in a top-down approach and
- e) negative attitude among Government employees to empower the community to control vectors.

In order to address the above constraints, a new approach to community participation in vector control was conceived. This involved the creation of a non-governmental Organization registered with the National NGO Registration Board, development and use of appropriate traps/targets for tsetse control and integrating income-generating activities with tsetse control. The study therefore addressed essentially both tsetse control and poverty alleviation to make tsetse control affordable. This paper discusses and compares adoption rate of these technologies in four districts with different ethnicity, background and experience with Trypanosomiasis.

Key words: NGO, *G.f.fuscipes*, control, integration, poverty alleviation.

HOW DOES THE CARD AGGLUTINATION TEST FOR TRYPANOSOMES CONTRIBUTE TO THE EFFECTIVENESS OF SCREENING FOR TRYPANOSOMIASIS?

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Background

The Card Agglutination Test for Trypanosomes (CATT) was adopted as a tool for screening in the human African trypanosomiasis (HAT) control programme of the Democratic Republic of Congo during 1997 and 1998. We analysed the contribution of the CATT to the effectiveness of the screening process.

Method

We analysed the available routine data over the period January 97 to December 98. The effectiveness of the HAT screening process is expressed as the % of true cases that gets effectively cured after a single round of screening. The process is analysed in all its components: the attendance at the screening, the sensitivity of the screening procedure, the sensitivity of the parasitological confirmation, the proportion of the referred cases that effectively receive treatment and the cure rate of the treatment.

Results

Low attendance rates in some areas are a major problem. The CATT increases the sensitivity of the screening but a considerable part of the gains are lost at other stages of the screening process. Sensitivity of the parasitological confirmation is uncertain, but it is likely that an important part of the effectiveness is lost at this stage. The data on the proportion of patients that get treatment and treatment outcome contain important inconsistencies and gaps. The model shows that the effectiveness of the screening process is less than 50 %. The introduction of CATT had probably less than 15 % marginal effect on this effectiveness, although caution is needed because of the considerable uncertainties in the estimations of the parameters of the model.

Discussion

The relatively low marginal benefit of CATT introduction on the effectiveness of screening is mainly due to the multiple steps where opportunities to cure infected people are lost. The effect of single improvements of the screening process must be seen in this framework. A lot of mobile teams operate in areas where in fact few cases are found. To avoid inefficient use of resources, reallocating of those teams and other ways of monitoring the situation should be considered, taking into account numerous practical, social and political factors.

QUANTITATIVE EVALUATION OF SCHISTOSOMIASIS CASE MANAGEMENT IN THE HEALTH SYSTEMS IN SENEGAL, GHANA AND MALI

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Background

Clinical care for patients presenting at health care facilities is an essential component of integrated schistosomiasis control. We evaluated schistosomiasis case management in three West African countries with a different history and policy for schistosomiasis control.

Methods

55 health care facilities in Northern Senegal, 70 in Ghana and 60 in Mali in different regions were visited. The person in charge of the hospital, health center and few private clinics was interviewed about knowledge of symptoms, schistosomiasis case management policy and availability of diagnostic materials and praziquantel (PZQ).

Results

70% of the respondents in Ghana, 83% in Mali and 91% in Senegal reported presence of *Schistosoma haematobium* in the coverage area of the health care facility. *S. mansoni* was reported to occur in respectively 17%, 37% and 47%. The main diagnostic symptom of *S. haematobium* infection (haematuria) was mentioned by more than 95% of the respondents. In contrast, in Ghana and Mali only 41% and 60% of the respondents mentioned blood in stool, the main symptom of *S. mansoni* infection. Symptom-based treatment was frequently reported as the standard for patients presenting with haematuria in Senegal and Mali, especially at health centre level. The main reported strategy in Ghana was to request a diagnostic test before prescribing treatment. Most health care facilities in Senegal and Mali had PZQ available. In Ghana only 22% had PZQ in stock. Treatment costs (consultation ticket, diagnostic test, PZQ and transportation) for *S. haematobium* were on average 1.48 Euro in Senegal, 2.13 Euro in Ghana and 2.30 Euro in Mali. For *S. mansoni* this was 1.68 Euro in Senegal, 1.81 Euro in Ghana and 2.37 Euro in Mali. Costs of PZQ constituted the largest part (from 38% to 55%).

Conclusion

This is the first time that health systems from three countries were quantitatively evaluated for schistosomiasis case management as part of integrated schistosomiasis control. The differences in functioning were substantial: especially *S. mansoni* treatment was better in Senegal probably due to an intervention project. Still in all areas, the relatively high costs might restrain patients from seeking health care.

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