MAJOR HEALTH PROBLEMS IN SOME SELECTED DISTRICTS OF TANZANIA

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Summary

Major health problems in 45 districts of Tanzania were analysed as part of the preparations for the Phase II of health sector reforms in the country. Malaria, respiratory tract infections, diarrhoea, intestinal worms and skin infections featured highly among the most important diseases in all districts. Although non-communicable diseases featured low in most districts, deaths due to hypertension, mental disorders, neoplasms, and diabetes were reported. Schistosomiasis was mentioned as the second most important vector-borne disease in all districts endemic of the disease. Tick-borne relapsing fever was reported in districts in the northwestern and southwestern part of the country. Bancroftian filariasis was ranked as the second most important vector-borne disease in Kyela district. Plague was reported in Lushoto, Newala and Muheza districts. Onchocerciasis was reported from its previously known foci districts of Songea, Kilosa, Tunduru, Morogoro rural, Muheza and Lushoto. The districts reported few data on occupational hazards. Only few health centres were observed to have at least one Assistant Medical Officer. There was an average of one Medical Officer and 2 Assistant Medical Officers per hospital. Only 20% of hospitals were providing ultrasound services and only 18% were providing physiotherapy services. The referral system was found to be defective and non-functional. Some of the reasons, which may lead to the increased number of disease incidences and deaths in Tanzania, are discussed.

Introduction

The health sector in Tanzania is undergoing major reform. This is defined as a sustained process of fundamental change in policy and institution arrangements, designed to improve the functioning and performance of the health sector and ultimately the health status of the population. In practice it is a review of responsibilities and mechanisms of health care provision leading to integrated service delivery with transfer of authority for implementation to district councils.

In this study, findings of the analysis as regards to health delivery system in 45 districts of Tanzania are reported. The main objective was to obtain baseline data that will be used to determine district health output and performance indicators in the country. Specifically, (i) to assess health service programmes including curative, preventive, and health promotive services in the districts, (ii) to assess health management, organisation and service distribution in the districts, (iii) to assess health indicators including demographic, socio-economic, nutritional status and transport and communication in the districts, (iv) to identify constraints and strengths in the provision of health services in the districts.

Methodology

During Phase II of the Health Sector Reforms in Tanzania a situation analysis of the district health delivery system was conducted in Arumeru, Bagamoyo, Bukoba Rural, Bunda, Dodoma Rural, Geita, Handeni, Igunga, Kahama, Kibaha, Kibondo, Kigoma urban, Kilosa, Kwimba, Kyela, Lindi Rural, Lushoto, Makete, Manyoni, Maswa, Mbeya Rural, Mbozi, Mbulu, Meatu, Morogoro Rural, Mpanda, Mtwara Rural, Mufindi, Muheza, Muleba, Nachingwea, Newala, Ngara, Rombo, Ruangwa, Rufiji, Same, Sengerema, Serengeti, Singida Rural, Songea, Sumbawanga Urban, Tandahimba, Tabora Rural, and Tunduru Districts. These account for about 40% of all districts in Tanzania.

The study approach was mainly by the self-assessment methods involving members of the respective district health management teams (DHMTs) with facilitation of an investigator. The study in each district started with a one-day training workshop involving the investigator and DHMT members. The intention of the workshop was to familiarise the DHMT members with the study methodology and the tools. Thereafter, DHMT members collected and compiled data for situation analysis. The exercise took about 4 days to complete. The data sources were Health Information Management

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System Records, Medical Registers and District Annual Reports for 1994-1999.

Results

Reproductive Health
Maternal mortality rate (MMR) varied significantly between districts. The highest MMR (977/100000) was observed in Morogoro rural and the lowest (36/100000) in Muheza district. 18% of the districts visited could not provide data on this parameter. Significant variations were also observed on infant mortality rate (IMR). The IMR ranged from 354/1000 in Same to 4/1000 in Kibondo, with an overall average of 78.

Most districts recorded peak attendance of antenatal care in years 1995 and 1996 possibly due to introduction of the current Health Management Information System. Over 50% of women made their first visit after 20 weeks of gestation. However, in Mbozi over 60% of the women consistently made their first visit before the 20th week of gestation. It was observed that on the average over 66% of all registered deliveries were conducted at health facilities, while the remaining (33%) took place at home, assisted by either Maternal and Child Health Aide or Traditional Birth Attendants (TBA). Most (67.7%) of the home deliveries were supervised by untrained TBAs. Trained TBAs and MCHAs handled 18.5% and 13.7% of the deliveries, respectively.

Immunisation was found to be high in most districts. Highest coverage was observed with BCG vaccinations. It was very interesting to note that even in districts where most deliveries were carried out at home, the children were immediately presented to health facilities for immunisation. Immunisation coverage showed an increasing trend from 1994 to 1999 with a slight slump in 1997. Immunisable diseases that were frequently reported to occur in the districts included measles, neonatal tetanus and acute flaccid paralysis.

Communicable Diseases
Malaria was reported as the most important vector-borne disease in all 45 districts under the study (Table 1). Malaria cases in the districts have increased by 11.8% from 1996 to 1999. In recent years more cases of malaria were reported in Meatu, Kyela and Tunduru districts. However, high case fatality rates due to malaria were reported in Mufindi and Kahama district. Acute respiratory diseases, diarrhoea and pneumonia were ranked among the 5 most important diseases in most of the districts. Marked higher incidences of tuberculosis were observed in Mtwara, Morogoro, Dodoma and Igunga districts.

Schistosomiasis was found as the second most important vector-borne disease in all districts endemic of the disease. By 1999 some 48.9% (22/45) of the districts were endemic of schistosomiasis. Tick-borne relapsing fever was reported in 20% of the districts. The disease was common in northwestern and southwestern parts of the country. Although the disease was previously known to be most important in central Tanzania, it was only ranked as the 3rd most important vector-borne disease in Dodoma rural district.

Bancroftian filariasis was reported from 17.8% of the districts and was ranked as the second most important vector-borne disease in Kyela. Same and Tunduru districts reported the presence of bancroftian filariasis in their areas during 1999.

Plague, an important highly fatal vector-borne disease was reported in Lushoto, Newala and Muheza districts for the period between 1994 and 1999. Onchocerciasis was frequently reported from its previously known foci of Songea, Kilosa, Tunduru, Morogoro rural, Muheza and Lushoto.

Other important vector-borne diseases reported included louse-borne relapsing fever, scabies, trypanosomiasis, tungiasis and trachoma. Louse-borne relapsing fever was reported only in Mbulu district where it claimed lives of several individuals. Scabies was reported in Songea district only. Tungiasis was an important health problem in Makete and Songea. Cases of human trypanosomiasis were reported in Kibondo, Meatu and Bagamoyo districts. In Kibondo district the disease was ranked as the second most important health problem.

Genital discharge syndrome occurred in significant numbers in Kibaha, Kyela and Lindi rural districts. Clinical AIDS was reported with high case fatality rates in Mufindi (0.30-10.2%), Muheza (57.3-63.0%), Kilosa (96.8%) and Mbozi (1.0%).

Non-communicable Diseases
The most common non-communicable diseases included hypertension, mental disorders, diabetes and neoplasms. These diseases were reported to cause high case fatality rates.

Disease Outbreaks
Outbreaks of cholera, meningitis, dysentery, plague, rabies, measles, typhoid, poliomyelitis and neonatal tetanus were reported in most districts. In 1999 cholera was reported in 64.4% of the districts. Cholera caused more than 500 deaths in Bunda, Lushoto and Handeni districts in 1999 alone (Figure 1).

Meningitis was reported in 60% (27/45) of the districts, claiming high mortality rates in Mbozi, Muleba and Sengerema. Rabies appears to re-emerge fast with high incidences in 28.9% (13/45) of the districts and with high mortality rates in Manyoni and Newala. Outbreaks of measles were recorded in 53.3% (24/45) of the districts. The disease was however, more prevalent in

Rufiji district. Other disease outbreaks included: typhoid fever, polio and neonatal tetanus. Typhoid fever was more prevalent in Manyoni and Singida districts. Neonatal tetanus featured highly in district of both the northern and southern highlands.

In 1998-99 dysentery was reported as an important disease in Igunga, Lindi, Lushoto, Bukoba, Handeni, Makete and Mtwara causing case fatality rates of between 0.20 and 0.23% in Bukoba rural and Igunga districts. Typhoid fever was also an important disease in Bukoba, Handeni, Manyoni, Morogoro rural, Igunga and Mbozi. The disease case fatality rate ranged from 0.38% in Handeni to 14.3% in Igunga district. Of recent, major outbreaks of meningitis were reported in Igunga (26.9%), Handeni (14.3%), Makete, (50%), Morogoro (56.4%) and Manyoni (24.3%). Cholera continued to occur with significant case fatality rates in Igunga (3.8%) and Muheza (5.8%).

Occupational Health
In all districts visited, little if any, was known or practiced regarding occupational health. Few reports of occupational hazards were reported in Same district. No information could be provided on work related accidents or diseases.

Health Facilities
A total of 160 health centres were available in the 45 districts, giving an average of 3 (1-8) health centres per district. A total of 70 hospitals were available. Nineteen districts were found to have a single hospital. The rest had 2 to 3 hospitals each. Staffing levels were rather disappointing. Only one private health centre was found to have an Assistant Medical Officer (AMO). The rest had either Clinical Officer or Assistant Clinical Officers. At hospital level, there was an average of one Medical Officer and 2 AMOs supported by 5 clinical officers and 20 nurses. In addition, there was an average of 3 pharmaceutical staff, 3 laboratory staff, one radiographer and 1 anaesthetist per 2 hospitals.

Adequate hospital beds with an average occupancy rate of 60% were available in each district. All hospitals were found to be offering surgical, X-ray and laboratory services. Only 20% and 18% of hospitals were providing ultrasound and physiotherapy services respectively. It was observed that 36% of the health facilities require major repairs while 27% require minor repairs. The referral system was found to be defective and non-functional.

Discussion
Communicable diseases continue to cause most of the mortality and morbidity in Tanzania. The commonest causes of mortality and morbidity in Tanzania include malaria, upper respiratory tract infection, diarrhoeal diseases pneumonia and skin diseases. Epidemic prone diseases such as cholera, measles, meningitis, plague, typhoid, and dysentery are becoming more important today than ever before.

Malaria continued to be the number one public health problem in all districts under study. It has already been established that > 80% of the country is endemic to malaria and transmission is almost all year round (Ministry of Health, unpublished report) The high malaria case fatality rate (CFR) reported in some districts such as Mufindi and Kahama, may indicate that severe malaria cases are not being brought to the health facility early enough because of:

i)   Problems with accessibility in terms of distances, ability to pay for services, and quality of care;

ii) Communities perception and attitude to care in health facilities which is influenced by culture;

iii) Increasing resistance of the malaria parasite to available antimalarial drugs; and

iv) Weaknesses in the malaria control programme. The quality of care of severe malaria cases in the health care facility is usually poor due to inappropriate management of cases, lack of antimalarial drugs and supplies and poor quality of antimalarial drugs (1). Nonetheless, the fact that health facilities are overwhelmed with severe cases during malaria epidemics cannot be ignored. Population migration either to the lowlands in Mufindi or of people seeking employment in Mining Companies in Kahama are likely to have contributed to the malaria outbreaks that were witnessed in recent years.

Although Tanzania is outside the meningococal belt, sporadic cases have been reported in much of the study districts. In 1999 serious epidemics were reported in Arumeru, Igu~ga, Kyela, Mbulu, Meatu, Muheza, Ruangwa and Tunduru districts. The probable factors related with neonatal tetanus occurrence are cleanliness of the delivery site (health facility *versus* home), cord care and lack of adequate vaccination of mothers.

In all districts little was known about occupational diseases. In Same district, for instance, cases of occupational hazards related to dusts (from saw mills and gypsum mining) have been reported to the district hospital but none could have its origin traced. Moreover, none of the districts had reliable statistics on work-related accidents or diseases. It was realised that employers seem to be or are not interested in occupational injury; this lack of interest stems from lack of knowledge of the extent of accidents, diseases, and deaths in the workplace. However, lack of emphasis in health information management system contributes to poor reporting of occupational hazards.

Some of the reasons which may lead to the increased number of disease incidences and deaths include

reduced immunisation coverage, competing priority for resources, increased transmission risks due to migration from rural to urban areas, poverty, overcrowding, poor sanitation, hygiene (2) as well as poor utilisation of our surveillance system (3). It has been observed that often there are delays in reporting cases of epidemic prone diseases when they occur. Collection, analysis, utilisation and dissemination of surveillance data at the district level are often inadequate. Also data is often passed on to the national level with no feed back and hence no action is taken. Moreover, the involvement of laboratory facilities is generally weak. There is need therefore, to put in place strategies that will detect and respond to diseases of epidemic potential, diseases of public health importance, and disease targeted for eradication and elimination. The information will help DHMTs to respond as quickly as possible to outbreaks, set priorities, plan interventions, mobilise and allocate resources.

There has been advancement in the provision of health services over the years. However, these services are still poor and their distribution is grossly biased. Despite the fact that the quantity and quality of trained health manpower have increased significantly, the situation is far from satisfactory. For instance, there is one doctor per 106,578 and one nurse per 37,819 populations per district in northern Tanzania. Viewed against the background of the current emphasis on primary health care for all, there is also a serious deficit of the required lower and middle level health personnel such as technicians and pharmacists. Few of the districts studied had a trained laboratory technologist or a pharmacist. The dispersion of services and personnel is grossly inequitable. Thus the availability of technical manpower was inadequate by recommended standards in most of the districts.

The levels of personal hygiene and environmental sanitation are poor in any situation where most causes of deaths are due to communicable diseases. The circumstance is marked by inadequate water supplies, poor quality water, and inadequate disposal methods for solid and liquid wastes. For example, in northern Tanzania, the proportion of households with acceptable toilets was 17.6% (Arumeru) and that with access to safe water was 16% (Same) (L.E.G. Mboera, unpublished report).

In this respect, it should therefore be realised that improvements in the health status of the population do not only depend on investments in the health sector *per se*, but also on advancement and development of interrelated sectors and projects such as improved latrines and water supply. Therefore, the existing set-up of the delivery of health care in Tanzania is of limited impact. There is no appropriate system of referral and in general, health management system is defective particularly in infrastructure within the government health system. Equipment are usually lacking and other supplies like drugs are scarce.

In conclusion, accurate epidemiological data are essential for adequate disease control. These data have to be obtained by surveillance. The problem is that in many districts, the surveillance systems are not functioning properly. Currently, data collected at facility level do not serve any useful purpose at the facility. There appears to be a problem in ownership of the data. Facilities tend to consider the data as belonging to the supervision team. This has got to change if we are to make a headway. It would be a step ahead if simple charts on the above questions would appear on the walls of each facility.

Another important challenge is translating collected data and research findings into policy. Where do these very important data and research findings end up, in reports, theses and dissertations or into scientific publications only? Something has to be done on this aspect. The Essential National Health Research Forum is currently addressing this issue critically. It suffices to mention here that scientists ought to learn to "repackage" their findings such that they not only become palatable to the academic community, but also to policy and decision makers who happens to be non-scientists. In addition, efforts should be made to provide a forum for dialogue between scientists and decision-makers where communication between the stakeholders would be effected.

It is important therefore that introduction of major health and policies, such as health sector reforms should follow careful systematic scientific method of analysing the available information. Decision-makers in health sector should be guided not solely by instinct or intuition but by sound knowledge and science. The required knowledge and science must be promoted by every level of health services, from the most peripheral of primary health care unit to district hospitals and specialist referral hospitals to policy-making divisions of the Ministry of Health.

Table 1: *The Proportion (%) of Districts Reporting Vector-borne Diseases According to the Rank of Importance*

Disease	Ranking by District				
	1	2	3	4	5
Malaria	100	0	0	0	0
Schistosomiasis	0	48.9	0	0	0
Tick-borne relapsing fever	0	20	8.9	0	0
Bancroftian filariasis	0	2.2	13.3	2.2	0
Plague	0	2.2	2.2	0	2.2
Trachoma	0	2.2	2.2	2.2	0
Onchocerciasis	0	2.2	6.7	4.4	0
Louse-borne relapsing fever	0	0	2.2	0	0
Tungiasis	0	0	2.2	2.2	0
Trypanosomiasis	0	2.2	2.2	2.2	0
Scabies	0	0	2.2	0	0
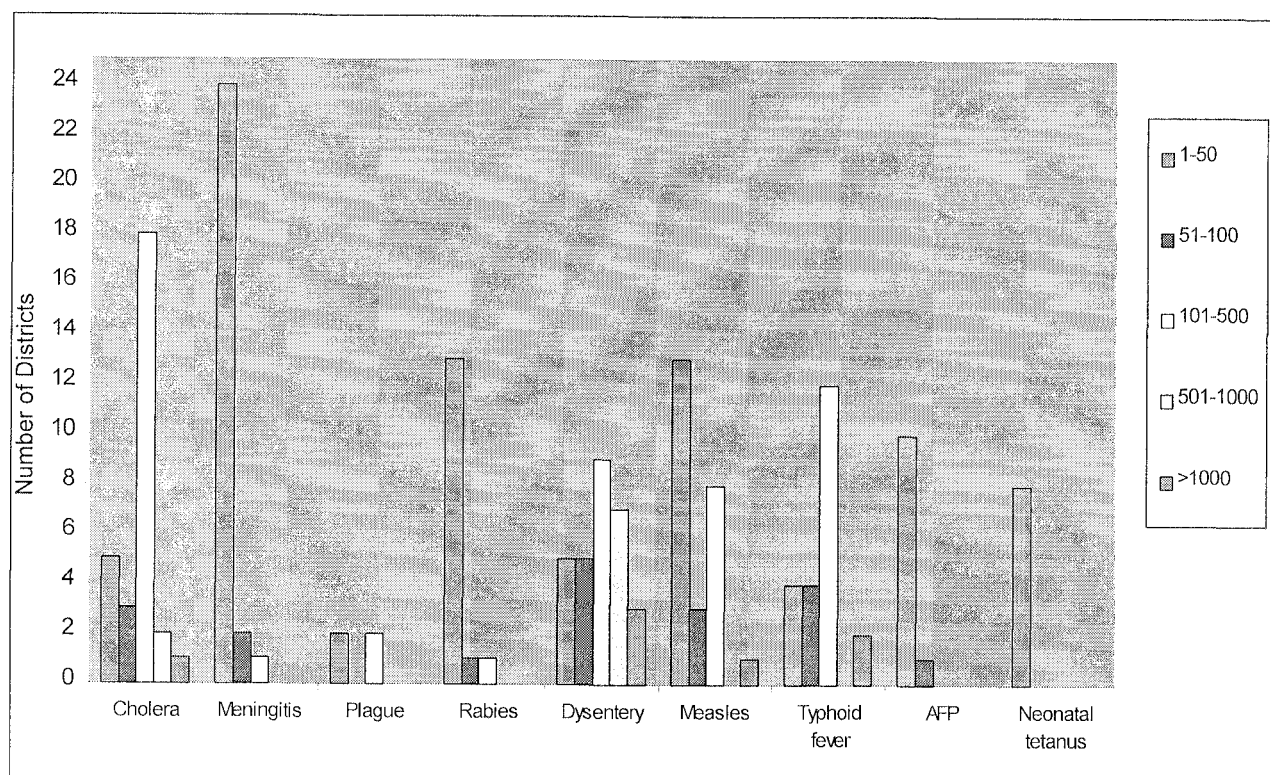
Figure 1: *Number of Districts Reporting Disease Outbreaks Ranked According to the Number of Deaths*

References

1. Mboera, L.E.G., Kamugisha, M.L., Rumisha, S.F., Kisinza, W.N., Chuwa, G.J., Mkumbwike, B., Khihatura, A., Kadete, L., Mgohamwende, F., Mohamedi, M., Kitua, A.Y. & Molteni, F. (2001) *Malaria Epidemiological Studies in Iringa Rural District, Tanzania.* Report submitted to the National Malaria Control Programme, Ministry of Health, *June 2001, Dar es Salaam.*

2. Mwisongo, A., Mboera, L., Makundi, E.A., Mcharo, J., Senkoro, K.P., Kisoka, W., Malebo, H., Kamugisha, M.L., Mubyazi, G.M., Mushi, A.K., Mwanga, J., Magesa, S.M., Kisinza, W.N., Hiza, P., Malecela-Lazaro, M.N. & Kitua, A.Y. (2001) Situation analysis of 45 districts of Tanzania under phase II of health sector reforms. *Report submitted to the Ministry of Health,* Dar es Salaam, Tanzania, March 2001.

3. Mboera, L.E.G., Rumisha, S.F. Mwisongo, A.J. & Kitua, A.Y. (2001) Utilisation of health management information system in Tanzania. *Tanzania Health Research Bulletin* (in press).