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Public Health Train- ing in Uganda: A Case Study

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SUMMARY

Uganda is a country of 24.6 million persons covering 236,040 km², twice the size of Pennsylvania. Key indicators include a fertility rate of 6.9, an infant mortality rate of 88/1000, and a maternal mortality ratio estimate of 505/100,000.

The purpose of this study is to examine the Public Health needs of Uganda and how the present Public Health training programs are helping to meet Uganda's health needs. The study also looked at unmet needs for Public Health training, and how these could be met within the current structures or where new approaches were required. Data were collected through many interviews with key stakeholders in Public Health education and service in Uganda. This work was carried out by a team of four persons over a month's time. Many of the interviews were recorded and later transcribed.

Health services in Uganda are decentralized, with local district government employing the health staff and to a considerable extent controlling health budgets and expenditures. The Ministry of Health (MoH) provides national leadership and establishment of health policy. The MoH is seen by almost all interviewed as being effective and well focused on strengthening Public Health services in Uganda. It has learned to function in a multidisciplinary manner while promoting the strengths of districts to function in collaboration with local government. Health receives 2% of Uganda's national budget. Of the MoH's budget, 50% of recurrent costs and 80% of capital costs are met by donor funds. Many middle and senior level personnel at the MoH headquarters have received Public Health training at Makerere. People now joining the MoH are largely taken from the ranks of district health services.

In 1999/2000 a new National Health Policy was instituted which contained 12 programs in a Minimum Health Care Package. The health sub-district was created with the intent of bringing emergency and other services closer to the community. There has been considerable difficulty in staffing facilities at this level with doctors who are capable health care managers. Public Health training for cadre at this level is seen as a high priority by many. During the 2000-2005 period about 29,000 additional health workers were recruited, so that 55% of approved posts for professional health staff are now filled, compared with 33% before 2000. Still, many peripheral health facilities are only staffed with nursing assistants.

Access to health services is highly variable with large parts of some districts without ready access to health facilities and others having almost universal access. Of health facilities, 30% are operated by private not-for-profit organizations. The for-profit health sector is the most rapidly growing, but is almost entirely composed of outpatient services.

The Makerere University Institute of Public Health (MUIPH) represents one of the most active Public Health schools and research institutes in sub-Saharan Africa. Although established in 1959 its growth in the past 10 years has been exponential in both training and research. Facilitating this has been changes in the governance structure. Further changes expected soon, are likely to provide more autonomy. IPH has benefited from collaboration with a number of universities and research institutes in developed countries in both teaching and research.

Public Health Training. The development of graduate training in Public Health has been present since its founding. However, its rapid growth in training began with assistance from the Rockefeller Foundation to develop an MPH program in 1994 using the Public Health Schools Without Walls concept, along with Ghana and Zimbabwe. This approach placed MPH students in the field with intervals in Kampala for formal classroom work.

From the perception of major employers of MPH graduates, students have received a well rounded Public Health education. There is a feeling that if anything, students would benefit from further management skills, particularly in the area of human resource management. Plans are being considered for post-MPH fellowship programs which would have a specific specialty focus. One of the areas of priority for fellowships would be health systems management and Public Health leadership.

The need for continuing education courses for Public Health graduates and others to keep themselves current with new developments and policies was widely perceived by those interviewed. The use of short courses to count toward earning a degree was also seen as important. While IPH has conducted short courses for sometime, and these now draw from the region, it is agreed needs exist for many more such courses. A new area recently started with IPH offering an MPH by Distance Education through a paper-based MPH course. The response to this has been enthusiastic which has stretched the resources for this program.

District health services remain the largest single market for MPH graduates. Increasing this includes personnel in health sub-districts. When mid and senior level openings occur in the MoH headquarters these are generally filled by applicants who have previously served in district health management positions. Currently almost all district health leadership have MPH degrees from IPH. Increasingly, the non-government and donor-funded sectors are taking MPH graduates. This is perceived as a market for Public Health graduates which will continue to grow.

IPH has been training doctoral students in Public Health for some time. Recently this approach has been expanded considerably through exchange links with the Karolinska Institute and through the Johns Hopkins Rakai project. This latter program offers a “sandwich” PhD program with credits for course work taken in Baltimore, and supported by a Memorandum of Understanding between the two schools

Training links. Links with other University sections and institutes within Uganda have been established. This has been particularly useful in teaching management. Links with other Public Health schools and organizations carrying out Public Health programs in the regions tend to be somewhat informal. With Muhimbili there has been some sharing of faculty, particularly in the social sciences, although most persons interviewed agreed that this could be greater.

Connections between the MoH and IPH have generally been strong. MoH personnel take an active role in classroom teaching. In contrast to some other countries, the Ministry commonly uses IPH faculty to provide technical assistance to the MoH for various activities. There is some feeling among IPH faculty that they have not been able to influence policy development through research to the extent they think would be possible.

Research. Through links with universities and research organizations in Europe and North America IPH has carried out sophisticated epidemiological and laboratory studies. Many of the advances in HIV treatment and control have been developed through work at Makerere. Several of the IPH faculty have developed world-class research skills through these programs. On a more modest scale, IPH regularly carries out a number of studies on behalf of organizations and agencies working in Uganda. Few faculty have developed the capacity to regularly seek international funding as the primary implementers. This is seen as a goal to work toward. Further there is perceived to be a lack of coordination and sharing of information among individual researchers in the school. The development of a grants management office may help correct this.

Faculty The IPH represents a relatively small, but in most cases highly-productive faculty. While the faculty covers the key areas of Public Health practice and research, there are multiple areas that it would like to enter but lacks resources, both financial and human. Faculty development is a major need for IPH. This is both to enter new areas, as well as to reinforce existing programs where there is a growing demand for skills. Training grants for doctoral students at American universities are increasingly hard to obtain. Rockefeller scholarships have been one source.

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LIST OF ACRONYMS

AIM	AIDS Integrated Model Program
AMREF	African Medical Research Foundation
AVSI	Associazione Volontari per il Servizio Internazionale
CDC	Centers for Disease Control and Prevention
CME	Continuing Medical Education
DFID	Department for International Development
EDF	European Development Fund
EPI	Expanded Program for Immunization
GoU	Government of Uganda
GAVI	Global Alliance on Vaccine Initiatives
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HC	Health Centre
HIV	Human Immunodeficiency Virus
HSSP	Health Sector Strategic Plan
IMCI	Integrated Management of Childhood Illness
IPH	Institute of Public Health
JHU	Johns Hopkins University
MHCP	Minimum Health Care Package
MoES	Ministry of Education and Sports
MoFPED	Ministry of Finance, Planning & Economic Development
MoH	Ministry of Health
NGO	Non Governmental Organization
ORC	Opinion Research Corporation
PHSWOW	Public Health Schools Without Walls
PNFP	Private Not-for-Profit
PEPFAR	President's Emergency Program for AIDS Relief
UDHS	Uganda Demographic and Health Survey
UPHOLD	Uganda Program for Human and Holistic Development

1. INTRODUCTION

The mission of Public Health is to improve health of communities through promotion of physical and mental well-being, the prevention and control of disease, and to protect societies from environmental hazards in an equitable manner. Public Health practitioners must, therefore, be competent in leading the organizations, that delivery these services, and be able to evaluate their success. They must also be competent in defining and analyzing the determinants of health; be they medical or socio-economic. This broad “job description” of a Public Health practitioner should guide any Public Health training institution as to its mandate, taking into account the context.

The leading causes of mortality and morbidity in Uganda are preventable conditions and include such diseases as: Malaria, Acute Respiratory Tract Infections (ARI), diarrhoeal diseases, HIV/AIDS, trauma, malnutrition, Tuberculosis (TB), intestinal worms, etc. Additional risks come from new and re-emerging disease conditions that will further weaken the socio-economic fabric of the communities. Leading in this is the HIV/AIDS pandemic. Recent outbreaks of life threatening diseases have included re-emerging old threats such as antibiotic-resistant shigellosis, drug-resistant malarial parasites, cholera, multi-drug resistant TB, and relatively new ones such as the Hanta virus and Ebola. In addition to the recurring diseases, there is a weak Public Health infrastructure and inequitable access to quality health care services. To effectively work in this environment the health manager needs the following set of Public Health and management skills:

A Public Health leadership program must strive to create specific skills in its graduates to meet the Public Health needs of the population of Uganda.

These include :

- Build leadership capacity in a multidisciplinary, multisectoral environment.
- Develop the skills to measure and analyze needs and the success of activities to meet these needs.
- Effectively manage programs to deliver the Basic Package of Health Services.
- Create budgets and workplans and to manage the basic financial system to meet these.
- Manage human resources to maximize the efficiency of the health workforce.
- Work with government at local and national level to advocate for health.
- Investigate and manage outbreaks of disease; investigate and safeguard the population for environmental risks.
- Organize programs to prevent illness and to promote health behaviors.
- Conduct operational research activities.

2. BACKGROUND

Based on the 2002 Population and Housing Census (UBoS, 2002), Uganda has a population of 24.6 million with a rapid population growth rate of 3.4%; M:F sex ratio of 95.3; urban population of 11.3% and a population density of 85.0 per sq km. The total fertility rate is currently estimated at 6.9, and contraceptive prevalence rate at 23%, Maternal Mortality Ratio and Infant Mortality Rate stand at 505 per 100,000 and 88 per 1,000 live births respectively (UBOS and ORC Macro, 2001). The average life expectancy at birth is 47 years.

The main underlying factors contributing to the poor health status are low access to health services, poor quality of health care, weak management of health services and household poverty. According to health inventory done by the MoH in 1992 only 49% of the population live within a radius of 5km from a health facility. Within this national average there is wide variation in accessibility among districts, ranging from 8.9% to 99.3%. In general, the health services are under funded, with per capita expenditure from all sources on health now estimated at US \$18. This represents 2% of the central level budgetary expenditure. The Ugandan MoH Health Financing Strategy has estimated it needs \$ 28 per capita to provide the Minimum Health Care Package (Uganda MoH, 2002). This is an interim estimate as the target of \$ 34 per capita recommended in the report of WHO's Commission on Macroeconomics and Health is currently considered out of reach for the foreseeable future (WHO, 2003). The projected financing needs are shown in figure 1.

Most health units in the rural areas are short of qualified staff, equipment and supplies. Data collected during the Multi-Country Evaluation (MCE) of Integrated Management of Childhood Illness (IMCI) indicates that although about 70% of people with good geographic access eventually seek care in government or NGO facilities, only about 17% of sick children are taken to a government or NGO health facility as first point of contact. Most (about 48%) households rely on self-medication and use of drug shops and other informal care (UBOS-UNHS). Household poverty persists in the country in spite of fair macro-economic indicators. Poverty is unevenly distributed within the country, with the South having relatively low poverty levels and the insecure areas of the North having 80% or more of the population living below the poverty line.

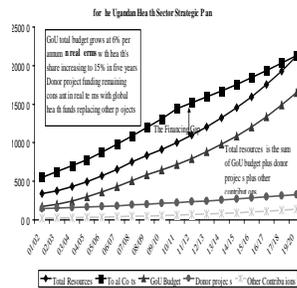


Figure 1: The Mid Term Review picture of the financing gap for realising the Health Sector Strategic Plan Under Optimistic Assumptions Source: Uganda MoH. Health Financing Strategy for Uganda.

Large numbers of persons living below the poverty line were found on the border with Kenya and to a lesser extent on the border with DR Congo.

In March 2001, the President of Uganda directed that all user-fees in government health facilities be stopped forthwith with the exception of the private wings in hospitals. This was largely prompted by a public outcry [during a critical presidential election time] that user-fees were deterring the poor from utilizing health services. Following this abolition there was a dramatic increase in utilization of about 50% for new cases, but much more so for adults than for children (Burnham, Pariyo et al, 2004). Other studies done by the Affordability Ladder (ALPS) investigators (unpublished) shows that although the proportion of households reporting no care for previous illness episode between 1999/2000 and 2002/03 had reduced by 2.2% for households in the poorest quintile (probably as a result of abolition of cost-sharing), the proportion of households reporting no care actually increased in the same time period for those in the 2nd, 3rd and 4th quintiles by 3.0%, 1.5% and 3.2% respectively. The low/high quintile ratio increased from 2.41 in 1999/00 to 3.47 in 2002/03. Catastrophic health expenditure occurred in all income groups, but impoverishment was experienced mostly in the poorer income groups. (UBOS/MoH/WHO/ALPS data). Despite annual economic (GDP) growth rate of over 7%, about 38% of the population still live below the poverty line. About 17% of the population have no access to a toilet facility and 39% have no access to safe drinking water (UBOS, 2002).

1A. PUBLIC HEALTH PROFILE IN UGANDA

In 1999/00 a new National Health Policy was instituted along with the first phase of a Health Sector Strategic Plan (HSSP I) to put it into operation. The HSSP put in place a set of health programs to address the most common or debilitating conditions for which relatively cost-effective interventions were available. This brought in the Minimum Health Care Package (MHCP) with 12 programs viz; a) control of communicable diseases (malaria, STD/HIV/AIDS, Tuberculosis), b) Integrated Management of Childhood Illness (IMCI), c) sexual and reproductive health and rights, d) immunization, e) environmental health, f) health education and promotion, g) school health, h) epidemic and disaster prevention, preparedness and response, i) improving nutrition, j) interventions against diseases targeted for elimination or eradication (includes polio, guinea worm, neonatal tetanus), k) strengthening mental health services and, l) essential clinical care.

Implementing the MHCP requires a responsive health system that provides among others, timely, appropriate, and affordable interventions. This will require an approach which users will find socially, culturally and economically appropriate.

Maternal and Child Health

Maternal and neonatal conditions provide the single highest contribution (20.4%) to Uganda's total burden of ill health and avoidable death. Internationally proven approaches to maternal and child mortality reductions have not yet been scaled-up in Uganda to a level that would achieve any significant national coverage, with immunization being the notable exception. Data collected during the Uganda Demographic and Health Survey (UDHS) suggests that the Infant Mortality Rate (IMR) stagnated between 1995 and 2001, with the neonatal component increasing from about 40% to 60% of the infant deaths. Whereas it is recognized that there are many determinants of IMR outside the control of the health sector, the rising contribution of neonatal com-

ponent could partly be a reflection of the lack of quality health care programs including proper MCH services.

A study on why IMR had not reduced found among other things that children born in clusters with immunization coverage less than 30 percent had a 47 percent higher risk of infant mortality than children born in clusters with a coverage higher than 50%. Households using surface water had a 30 percent higher risk of infant mortality than those using piped or tap water. Total fertility rate (TFR), which at 6.9 children per woman is the third highest in the world remained constant between 1995 and 2000. The median birth interval is the lowest registered in Sub-Saharan Africa with no improvements between 1995 and 2000. The proportion of supervised deliveries did not improve in the same time period while immunization coverage for some antigens declined (Uganda MOFPED Report on the Millenium Development Goals, 2002).

Antenatal coverage is high in Uganda. Women receive at least some antennal care for more than nine in ten births. However, in the critical third trimester there are only 1 – 2 visits implying that some risk factors could easily be missed out only to manifest at the time of delivery. In most cases antenatal care is provided by a nurse or midwife (83%). Doctors provide antenatal care to 9% of pregnant women, while the role of traditional birth attendants is insignificant. Only 42% of pregnant women make four or more antenatal care visits, while another 42% make only two to three visits. Very few women receive antenatal care during the first trimester of pregnancy (UDHS 2001). Only four in ten births in Uganda are assisted by trained health worker, while 18% are assisted by a TBA (traditional birth attendants) and 28% are assisted by a relative or friend. 15% of births are unassisted. Most births take place at home; only 37% of births occur in a health facility (UDHS 2001).

Maternal Mortality

The causes of maternal mortality and morbidity are largely due to poor or failure to manage complications of pregnancy (emergency obstetric care and management of complications of unsafe abortions). It is known that about 15% of all pregnancies end up with complications (UNICEF / WHO / UNFPA, October 1997). In countries with high birth rates like Uganda, the proportion of pregnancies that develop complications is high.

Table 1 shows the ranking of the direct obstetric complications that account for 85% of direct obstetric deaths. The major indirect causes of maternal death comprise of Malaria, HIV/AIDS, Anemia, Diabetes Mellitus, Cardiac Disease and Tuberculosis. The strategy to improve reproductive health in Uganda indicates the 3 key outputs as; a) increased access to institutional delivery and emergency obstetric care, b) strengthening Family Planning and c) implementing goal oriented Antenatal Care (Uganda MoH, 2005).

Table 1: Ranking causes of maternal death in Uganda	
Source: Safe Motherhood Needs Assessment Report, 1995/96.	
Cause	Percentage
Bleeding after delivery	25%
Infection after delivery	15%
Unsafe abortion	13%
High blood pressure	12%
Obstructed labour	8%
Other direct causes	8%

Child Health

Acute respiratory infections, diarrhea, and malaria are common causes of child death in Uganda. In the two weeks before the survey, 23% of children under five were ill with symptoms of acute respiratory infections, Two-thirds of these children were taken to a health facility. Twenty percent of children had diarrhea (UBOS and ORC Macro, 2001).

The Integrated Management of Childhood Illness (IMCI) is an approach intended to provide health care to children in a holistic manner. It integrates the management of major disease symptoms and signs such as fever, cough fast or difficult breathing, diarrhea and malnutrition. It also incorporates an assessment of the child's immunization status and for children less than 2 years, an assessment of their feeding practices. The proper management of these disease entities addresses 70% of all childhood illness in Uganda. IMCI was adopted as the child health strategy for Uganda in 1995 (Nsungwa, Burnham et al, 2004).

All districts have introduced IMCI and are at various stages of implementation. Coverage of sick children managed by IMCI trained health workers varies enormously across the country. Some districts have very few children managed by IMCI trained workers and others e.g., Masaka and Kiboga have close to 100% of all children managed by IMCI trained health workers (Pariyo et al, 2005).

Childhood Immunization coverage declined from 47% fully immunized in 1995 to 37% in 2000-2001. However, since the inception of the Health Sector Strategic Plan (HSSP) the pattern of utilization indicates an upward trend for all the antigens. The annual target for the pentavalent vaccine coverage was exceeded, however the target for TT2 was not met.

The Multi-Country Evaluation of IMCI (MCE) highlighted priority areas for strengthening IMCI at facility level in Uganda as, a) paying attention to quality of care, especially during scaling-up, b) health worker communication skills, c) supervision skills and regularity of supervision where case management of sick children is observed, d) clear communication of policy decisions e.g., on immunization to health care workers at facility level. Priorities for community IMCI were highlighted as; a) co-ordination of multi-sectoral approach and avoidance of duplication by the different stakeholders, b) increasing coverage of well known interventions e.g., immunization, use of bed-nets etc to a level that can have an impact on mortality, and c) strengthening the link between health facilities and households e.g., through village health teams (Uganda IMCI Impact Study Team, 2004).

Nutritional status of children

About 40% of Ugandan children under the age of five years are classified as stunted (low height-for age), 4% of children under the age of five years are wasted (low weight-for-height), and 23% are underweight (UDHS 2001).

Communicable Diseases

While significant progress was made over the HSSP 1 period particularly in areas such as EPI, HIV/AIDS, Guinea Worm, IMCI and Malaria, communicable diseases still dominate Uganda's disease profile.

Communicable diseases (including malaria 15.4%, pneumonia 10%, HIV/AIDS 9.1%, Diarrhea 8.4%) together account for 54% of the total burden of disease in Uganda. The overwhelming

part of this is borne by children under five years of age. As in other parts of the world, Tuberculosis has returned as a major challenge in the wake of the HIV/AIDS epidemic. In addition, many parts of the country continue to be plagued by other infectious diseases such as sleeping sickness, schistosomiasis, onchocerciasis, lymphatic filariasis, and other soil transmitted helminthes. In 2002, there was a major outbreak of the Ebola hemorrhagic fever in Gulu District in Northern Uganda, later spreading to the neighboring Masindi District in the mid-West and far off Mbarara District in the Southwest.

Control of communicable diseases requires strong community mobilization, effective use of resources and other preventative interventions to control them. Strong Public Health leadership at all levels is needed to implement the many complementary measures needed. A graduate of Makerere IPH, Dr. Matthew Lukwiya, was the first health professional to make a provisional diagnosis of Ebola in Gulu, sound the alarm and put in early preventive measures. He showed exemplary leadership, later succumbing to the disease himself. Many health workers in Gulu were unprepared to deal with the Ebola outbreak and a number of health workers died from the infection. Before his death, Dr. Lukwiya provided the strong local leadership before and after the arrival of the international teams that was necessary to inspire and guide his staff to implement appropriate emergency and preventive measures.

HIV/AIDS

The HIV/AIDS epidemic has affected the whole of society for more than two decades, resulting in the slowing of human development. Since the onset of the epidemic a cumulative total of over two million Ugandans have been infected with HIV and there are currently about 100,000 adults with AIDS disease. The prevalence among adults has decreased from about 18% in 1992 and is currently estimated at 6.2%. It is also estimated that there have been about 900,000 HIV/AIDS related deaths since the beginning of the epidemic.

The IPH, with support from the US Centers for Disease Control (CDC Atlanta), introduced and is implementing an innovative HIV/AIDS Program Management Fellowship Program. The focus is to train managers of HIV/AIDS programs or aspiring managers in program management in collaboration with host organizations/institutions. Over the years, as HIV/AIDS came to be recognized more and more as a problem, there is more HIV/AIDS content in the medical school and Public Health curricula. However, the link between the health sector and other sectors is still weak. Also needed is the application of cost-effective interventions such as newly introduced anti-retroviral therapy (ART) treatment programs at population level in order to save life and promote well being and productivity among the infected and affected persons.

TB morbidity in Uganda

Uganda is number 20 on the list of the world's 22 high TB burden countries. Although the recording system has deficiencies, TB notification data is among the more reliable in the country. In 2003 the following were recorded: a) 40,152 new TB cases (all types). b) incidence (all TB types) - 156.6/100,000 population, c) 20,320 new smear-positive (SS+) PTB cases, and d) incidence of SS+ PTB cases - 79.3/100,000 population.

The TB burden is variable across regions: the highest burden is in the South-West Region and Kampala, the lowest being in North-West and North-East Regions. HIV sero-prevalence among TB patients is currently estimated at between 40-50%.

TB control in Uganda

TB control is almost fully integrated with leprosy control. The national DOTS implementation strategy was developed and has been operational for some years. An international partnership network has been established and DOTS implementation has now rolled out to 55 districts out of 56 (98%). Tuberculosis control activities are by and large integrated in PHC services and community-based DOTS (CB-DOTS) is present in 42 districts. The management of TB control programs has been decentralized from national MoH to district level. By 2002, the treatment-completed rate was 61% (against a national target of 85%). Deaths from TB are still high at 17.2% and default rate is 6.2% nationally (7.1% without Kampala). Other TB statistics are as follows; estimated case detection rate - about 53% (national target is 70%), pulmonary TB confirmation rate - 55%, and proportion of relapse among TB cases - 7.4%. (*Uganda National Tuberculosis and Leprosy Control Program Database and Reports, 2002*)

HEALTH SYSTEMS AND STRUCTURES

a. Health infrastructure development and management

For the production of health outputs, the following health system inputs are required; Human resources for health, Health Infrastructure and medicines and equipment and supplies. Uganda's health system is built around several grades of health centers, district and rural hospitals, regional referral and national referral hospitals. Three types of health facilities provide outpatient curative services. These include: (i) Dispensaries, which are staffed by at least one qualified worker (nurse or clinical officer) and provide basic curative and preventive services, officially known as Health Center II (HC II); (ii) Dispensaries with maternity services and a limited number of in-patient beds, also staffed by qualified workers and in most cases a midwife (HC III); and (iii) Health centers, which in addition to the above have up to 40 in-patient beds, a doctor, and an operating theatre suitable for basic surgical procedures (HC IV). The HC 4 also acts as a referral point for the lower HCs. The Health sub-district team is usually headed by a young doctor (Medical Officer). Such doctors have to combine provision of clinical services such as emergency obstetrical care and treating complicated malaria with leadership of the health activities covering an area with a population of up to 70,000 people. Their duties include planning, budgeting and supervision of health services provided by other lower category units in their area. They thus need capacity building in a wide array of skills, both technical and management/leadership.

Geographical accessibility of households to health centers increased from 49% in 1992 to 72% in 2004 as a result of construction of new HC II. The upgrading of HC II to HC III and HC

Table 2: Variation in health service accessibility across selected districts

No	District	Pop. <5 km radius ('000)	% pop.< 5 km radius
1	Kotido	13.2	7.1
2	Kitgum/Pader	51.3	13.1
3	Gulu	168.2	32.6
4	Bushenyi	437.1	55.5
5	Katakwi	98.3	56.6
6	Kiboga	99.3	68.8
7	Jinja	414.9	99.7
8	Tororo	486.1	99.8
9	Kamapala	1,358	100

Source: The Health Infrastructure Maps 2002

III to HC IV respectively led to improved health service delivery. In order to improve emergency obstetric care, theatres and medical officers' houses were constructed at HC IVs. By 2004, 151 Health Centers had been designated HC 4 by the Ministry of Health. There is still wide variation of accessibility to basic health services across districts.

Although accessibility to basic health services has improved over the years, quality of health services has not improved correspondingly mainly because many of the new health units have remained non operational due to a lack of staff and equipment.

Table 3 summarizes the numbers of health resources that are available in Uganda by sub-sector.

There are a variety of professional and umbrella organizations coordinating and supporting health care services. Private not-for-profit (PNFP) providers are estimated to represent about 30% of all health facilities in Uganda. The majority of these

Table 3: Health Resources in Uganda's Public and Private Sectors¹

Type	Govt	PNFP	Private	Traditional	Total
Hospital	57	44	3	-	104
Lower Level Health Units	1,512	501	770+*	-	2,783+
Health Training Schools	28	20	Unknown	-	48+
Health Workers	17,714	9,193	600+*	Unknown	27,497+

Table notes: The numbers of private health units and private health workers are probably substantially understated. For example, one study collected financial data from 250 private clinics - a sample thought to be only representative of the total number of private clinics.

PNFP facilities (78%) are religious-based and operate under three umbrella organizations: the Uganda Catholic Medical Bureau (UCMB), the Uganda Protestant Medical Bureau (UPMB), and the Uganda Muslim Medical Bureau (UMMB). The rest of the PNFP providers are supported by other humanitarian organizations and Community Based Health Care Organizations such as African Humanitarian Action, African Evangelistic Enterprise, Family Planning Association of Uganda, Islamic Medical Association, Marie Stopes, Salem Budastat, Uganda Community Based Health Care Association, Uganda Red Cross, World Vision, Serulanda Survival, SOS Kinderhoff, and others (Source: Robert Taylor and Uganda MoH).

The Uganda Private Medical Practitioners Association (UPMPA) and the Uganda Private Midwives Association (UPMA) represent private practitioners, while the Uganda Medical Association (UMA), Uganda National Association of Nurses and Midwives, Pharmaceutical Society of Uganda (PSU), Uganda Dental Association (UDA), and the Uganda Association of Allied Health Professionals (UAAHP) include members from both the public and private sectors. Non Facility Based-NGOs comprise the majority of local and international organizations working in the health sector and include the Uganda Red Cross (local), AMREF, CUAMM, OXFAM, AVSI, World Vision, Plan International and Save the Children Fund International (SCF international), to name a few prominent examples. Although many traditional healers remain unaffiliated, there are several associations with registered members at the sub-county and district levels, coordinated by district Cultural Officers.

The importance of the private health sector has been given statutory recognition by the GoU in several ways. The Medical and Dental Practitioners Statute (1996), the Nurses and Midwives

¹ Sources: Robert Taylor. Purchasing strategies that reach the poor. MoH Working documents, *Inventory of Health Institutions in Uganda*, March 2000 and *Facility-based Private Not-For-Profit Health Providers: A Quantitative Survey*, November 2001. (Note: numbers do not always match between the two reports.)

Statute (1996), the Pharmacy and Drug Act (1970), and the Allied Health Professionals Statute (1996), all provide the licensing and regulatory framework for health professionals who are engaged in private practice. More broadly, a Public Private Partnership for Health Desk has been established at the Planning Department of the MoH (with grant support from the Italian Government). In addition, a Public Private Partnership Working Group, under the auspices of the Health Sector Strategic Plan, has developed, among other initiatives, a draft of a “National Policy on Public Private Partnership in Health.” And most significantly, the GoU has reinstated a system of subsidy grants to various PNFP providers. Most district health departments have identified a member of their team to act as focal person for public private partnership for health and serves to link the government led health services with the private sector (both PNFP and private practitioners).

b Human Resources for Health

During the period 2000-2005, approximately 2,900 health workers were recruited which increased the proportion of approved posts filled with health workers to 65.9% and with professional health workers from 33% to 55%. The numbers of qualified health workers are, however, still inadequate for effective delivery of the minimum health care package (see Table 2 on staffing levels) and the workforce is constrained by the unequal distribution and inappropriate skills-mix. Under Uganda’s decentralized health services, the capacity to recruit and retain qualified health workers vary from district to district. Some districts are more able to attract, recruit and retain qualified health workers than others. Whereas the overall coverage for all grades of health workers is 65.9%, the coverage of the individual districts range from 25 – 130%. In addition, there are substantial variations in coverage between facilities within individual districts. The Human Resource Inventory shows that 56 out of 802 Public Sector health center level 2 (HCII) are not staffed at all.

Table 4: Actual Number of Staff and Minimum Staffing Norms, public sector /PNFP

	Public Sector: HC2-GH			PNFP:HC2-GH			Regional Hospitals (10)			Total Districts (Public Sector/PNFP) & RH		
	Act	norm	Gap	Act	norm	Gap	Act	norm	Gap	Act	norm	Gap
Clinical	1,280	1,566	-286	436	762	-326	168	336	-168	1,884	2,664	-780
Medical	276	339	-63	305	334	-29	164	346	-182	745	1,019	-274
Midwives	1,558	1,862	-304	914	1,540	-626	312	369	-57	2,784	3,771	-987
Nursing	2,495	4,114	-1,619	1,915	2,908	-993	758	922	-164	5,168	7,944	-2,776
Total Medical/Clinical	5,609	7,881	-2,272	3,570	5,544	-1,974	1,402	1,973	-571	10,581	15,398	-4,817
Nursing Assistants	4,096	4,242	-146	2,005	2,190	-185	175	203	-28	6,276	6,635	-359
Diagnosics	308	1,194	-886	358	529	-171	79	145	-66	745	1,868	-1,123
Pharmacy	71	262	-191	43	126	-83	29	67	-38	143	455	-312
Other Medical Related	922	1,368	-446	126	203	-77	63	145	-82	1,111	1,716	-605
	1,575	1,929	-354	3,052	3,193	-141	462	869	-407	5,089	5,991	-902
	12581	16,876	-4,295	9,154	11,785	-2,631	3,402	3,402	-1,192	23,945	32,063	-8,118

Source: Draft Health Sector Strategic Plan II 2005/06 – 2009/1010

There are also wide variations among different levels of staff. Certain cadres of health workers especially diagnostic, laboratory, dental and pharmacy staff are in short supply and the number graduating from respective training schools is far below the needs. This has posed a significant problem in terms of how to fill these positions across the districts. Nursing assistants constitute the bulk of the staff at all levels of health care. Out of 803 HC2s, 255 (32%) are staffed by nursing assistants only.

As shown in table 4 the overall gap in absolute numbers between the staffing norms and the actual staffing for all districts (GoU and PNFP) and regional referral hospitals is 8,118.

The Health Sub-District (HSD) was established in order to strengthen the management and delivery of health services in the districts. This is, however, still a weak link in the district health system. The Medical Officers who are usually recruited to head the Health Sub-Districts (HSD) often are not able to perform their roles as expected. It is the first job for most of these medical officers and a lack of the skills of management for such a demanding post is understandable. As a realization of this at IPH, their training in Public Health is a high priority.

The Public Health environment in Uganda (infectious diseases, inappropriate health infrastructure etc) requires not only clinical skills but also Public Health skills. These management and leadership skills are particularly important at the district and sub-district levels, where much of the health care in Uganda is delivered.

The Ministry of Health and the local government health structures (including Health sub-Districts) are the principal customers for the graduates from IPH. About 60% of Public Health graduates in the country have been trained at the Institute. The majority of the Public Health graduates from Makerere join the public sector, though an increasing number now work for NGOs and donor-funded health activities.

c. Human Resources Policy and Management

Little progress has been made in addressing the issue of HR management capacity at the various levels. A policy guiding the management of human resources is lacking. There exist no data on the loss of Public Health practitioners trained in Uganda to other countries, though the number immigrating from Uganda, as well as from neighboring countries is thought to have been high.² Medical officers and nurses have for many years provided services in many countries, including the Gulf States, Europe and North America. For some years there were numbers of Ugandan medical practitioners in South Africa, though that option has now largely closed. Some Public Health personnel trained at IPH and from other countries have returned to their countries of origin. The current feeling is that with excellent employment prospects for Public Health personnel in Uganda, few of the recent graduates have left Uganda for employment elsewhere.

d. Population services--Coverage with essential programs

The health sector selected 4 key indicators for assessing progress in Uganda's Poverty Eradication Action Program (PEAP)³. These are immunization coverage as measured by, a) DPT3

²Eastwood JB, *et al.* Loss of health professionals from sub-Saharan Africa:the pivotal role of the UK.*Lancet*, 2005;365:1893-900.

³ Source: Annual Health Sector Performance Report 2002/03.

coverage, b) OPD new case attendance per person of the population, c) delivery in health care institutions, and d) percentage of staffing norms filled. The current estimates for these key indicators are as follows:

- Immunization services coverage as judged from DPT/HepB-Hib3 coverage is at 84%. However, coverage of fully immunized child under the age of 1 is still low at an estimated 44%.
- New OPD attendance is at 0.72 visits per person per capita, a particularly low number.
- Deliveries taking place at health facilities are at 20.3%.
- Percentage of approved posts filled by trained health workers is at 53% using pre-HSSP norms and 84% using HSSP norms.

3. SIGNIFICANCE OF THE STUDY OF PUBLIC HEALTH TRAINING CAPACITY

Beginning with the recent national census and proceeded by the Demographic and Health Survey, many of the key health indicators have shown a steady, though sometimes unspectacular improvement. The changes in HIV prevalence has been very impressive, while the changes in infant mortality and immunization coverage have not. In creating the successes, as well as holding onto the gains, the IPH has played a major role, especially through its graduates. The impact this Institute has had on the health of the nation and how this impact can be increased has never previously been evaluated. There is need to look at how the wider health sector is using these academic resources, both for technical assistance and the utilization of Public Health practitioners being trained. What are skills that are currently needed but not being produced, and of those which will be required for the future? This assessment would enable the Institute and stakeholders to set out options to strengthen public health training and capacity in Uganda.

OBJECTIVES

3.1 General Objective

The overall objective of this assessment was to determine how Public Health training is presently contributing to the health of the country, needs currently not being met, and how this could be done more effectively, either within the existing structure, or as part of a larger network of training schools.

3.2 Specific objectives

The specific objectives of this assessment were three namely:

- To assess the present Public Health environment of Uganda and determine how well the current Public Health resources are meeting these needs;
- To determine needs for additional Public Health leadership and management training for the delivery of health services and what the existing mechanisms are within the current training programs to address these needs;
- To set out options and recommendations to stakeholders to strengthen Public Health training, particularly in the areas of Public Health leadership and management, focusing

on middle and senior level personnel. The focus will be such as to consider the training of health personnel from regional countries.

4. METHODS

This assessment was carried out in Uganda. Personnel from MoH, NGOs, Multilaterals, Donors, academics from the Makerere University and the Institute of Public Health were chosen to participate in the assessment.

Data collection methods

Two methods were primarily used;

- The first was a series of interviews with principal stakeholders and key informants. A set of semi-structured interview guides were used to gather key information, probing for additional information depending on responses. This approach was mostly centered on perceptions and beliefs of key personnel closely involved in the provision and support of Public Health services in Uganda, and the training of Public Health personnel.
- The second approach was to review reports and records. This was done to provide a comprehensive but concise picture of the Public Health environment of Uganda as it is, and the ways in which it is likely to evolve in the next 5-10 years. An important part of this approach was an overview of personnel distribution both for the clinical specialties and those trained in Public Health. A further part of this approach was to develop a picture of IPH's Public Health teaching capacity and where this needed to be expanded to satisfy new needs identified as well as currently unmet, and to provide better academic and professional development.

Data Management and Analysis

Documents were read and key findings relevant to the study were summarized. Any unclear sections were noted for follow-up with the relevant key stakeholders. For the key informant interviews, at least two researchers participated in each of the interviews with one taking the lead on asking relevant questions while the other took notes. The aim of this was to minimize the duration of the interview since many of the key informants were high ranking officials who tended to have very busy schedules and could only give a limited amount of time for interview. After each day of data collection, key findings were discussed between the researchers in a debriefing session and the data collected was edited, cleaned and summarized. Missing information or inconsistencies were identified and if possible and appropriate, followed up with key informants within one working day, or at a time that was convenient to the informant. This follow-up process usually took the form of a telephone conversation and all interviewees had been requested for the possibility of this in case it became necessary to seek further clarification.

A qualitative approach was utilized for analysis since most of the data collected was non-numerical in nature.

All interviews were audio-taped and then transcribed verbatim to provide qualitative data. Textual data was explored using content analysis (Riley 1990). Data was read and re-read by the

investigators in order to identify emerging themes from the transcripts (Glasser and Strauss, 1967). Themes were identified and ethnographic summaries made. Codes were assigned to relevant segments of text that then formed data categories.

All data relevant to each category were identified and examined using the process of constant comparison, in which each item was checked or compared with the rest of the data in order to establish analytical categories. For those sections of the data that included multiple themes and hence had to be coded using several categories, process-indexing was used. This process allowed the analysis of data items to be fitted into several categories (Pope, Ziebland & May, 1999). Informed by the analytical and theoretical ideas in the terms of reference and those developed during the study, these categories were further refined by grouping them together.

Typical quotes were also selected and have been included in the report to emphasize the response given without losing the original context of the meaning.

Key findings are summarized and presented in an appropriate format agreed upon with JHU.

Ethical considerations

All the information sought and obtained in this study was available from public officers and readily available public documents. All the respondents were persons that would be expected to answer similar questions in the routine execution of their duties. It was thus deemed that there was no need to seek conventional IRB approval.

Permission was sought from individual stakeholders or organizations that had information relevant to this study. Officials interviewed granted permission and appointments for face to face interviews and allowed the study team access to documents and reports.

- Informed consent was obtained from all persons that were interviewed after explaining the goals and objectives of the study, confidentiality safeguards, and the potential risks and benefits of the study. Furthermore, the investigators undertook to protect the confidentiality of all information provided and would utilize this information only for the purposes of the study. No names of informants or organizations are used in the final report of this study without the consent of the individuals or organizations.

5. RESULTS

THE ENVIRONMENT FOR HEALTH SERVICES

Intersectoral Collaboration.

The MoH has learnt that developing effective intersectoral collaborations for health development is a difficult and lengthy process, which may fail unless it is undertaken and managed in a delicate and systematic manner. Lessons have been learnt from Uganda's multisectoral AIDS Control strategy and the recently established National Task Force on Maternal and Infant Mortality.

In collaboration with the Office of the Prime Minister, MoH supports both central and district level health managers in developing capacity in fostering effective intersectoral partnerships.

Previously MoH forged promising collaborative initiatives with the Ministries/sectors of agriculture, education, water and gender.

Ongoing collaborations in the areas such as maternal and child health, HIV/AIDS prevention and control, information and education for health, water and sanitation, school health and human resource development, malaria control and accident prevention are being strengthened. Similar efforts will be made in building partnerships for improving nutrition, gender sensitivity, and in humanitarian assistance to internally displaced persons and refugees. Improving coordination in health infrastructure development with sectors such as roads and communications, water and electricity will make significant contribution to improving both physical access and the quality of health services in the rural areas.

MoH interacts extensively with the MOFPED, as the latter is responsible for setting health expenditure ceilings. Funding for health services is channeled mainly through the central budget support. Funding from development partners who contribute through the central budget support, which were earmarked for health sector support (DFID, Ireland Aid, Belgium, Sida and Norwegian Aid) or general budget support (World Bank) are transferred to the treasury in the Ministry of Finance. The earmarked budget support funds and those allocated from the general budget support are then allocated to the health sector expenditure categories through the Medium Term Expenditure Framework (MTEF) and Budget Framework process.

Project funding and Global funding initiatives

The health sector also mobilizes resources from global funding initiatives like PEPFAR, GFATM, GAVI, EDF, schistosomiasis and filariasis control initiatives.

The Ugandan national budget is funded at a level of about 50% by donors through budget support (through the treasury) for recurrent expenditure and about 80% for capital development expenditure such as infrastructure. Over the years, due to a change in policy and the Sector Wide Approach (SWAp), there has been a shift in the mechanism of transferring donor assistance from a predominantly project mode in 1999/00 to a more balanced mixture of project and budget support mechanisms in 2003/04 as seen in figure 1.

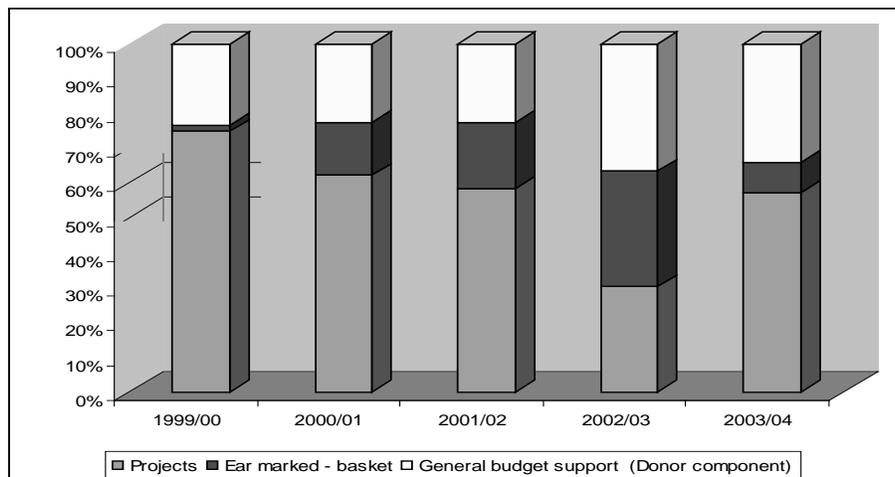


Fig 1. Percentage of donor aid transferred through the different transfer mechanisms for the health sector in Uganda. Source: Juliet Nabyonga, WHO Uganda.

Relationship to Non-Government sectors

The HSSP emphasizes the Public Private Partnership strategy for the improvement of health services delivery. There is a steadily increasing level of funding for PNFP facilities in Uganda.

Increasingly, the PNFP sub-sector is seen as a competitor for government and donor funds. Some politicians think that because of these subsidies the PNFP facilities should offer services free of charge or at quite reduced rates. The PNFP counter that the subsidies do not cover the costs of providing services. In order to mediate effectively in this negotiation, PNFP managers need skills to conduct costing of health services and to lobby and negotiate for additional resources. An important emerging area is the contracting for increased service provision between government and the PNFP facilities.

A number of achievements have been registered in the advancement of this partnership principle:

- The National Policy on Public Private Partnerships for health was finalized.
- Policy Implementation Guidelines were developed for PNFP providers.
- Implementation guidelines for private health practitioners (PHP) are being developed.
- Training of Health Unit Management Committees for the PNFP Lower level units has been done.

However, there is need for PNFP and government counterparts to acquire higher level analytical skills to assess cost-effectiveness of resource allocation strategies and the improvements in health outcomes. They will need to demonstrate the impacts of these policies on equity, burden of disease and to demonstrate that the disadvantaged groups are getting better services.

Provision of education and continuing education in PH areas by the MoH

The Health Manpower Development Center (HMDC) located in Mbale in Eastern Uganda is the institution under the MoH traditionally charged with the responsibility of spearheading in-service training or continuing medical education (CME). This term has now been broadened to continuing professional development (CPD). However, the main focus of the HMDC is lower cadre operational staff at health center level and others with little to offer middle level managers and nothing for senior level MoH officers. Middle Level Managers (MLM) courses that the HMDC used to spearhead for district-based managers have largely stopped due to lack of funding. The area of CPD needs further attention. At the moment there is little record keeping or enforcement of annual requirements. Further there are minimal opportunities to choose which course to attend. This is clearly an area for further innovation.

Pre- and in-service training

Health training institutions responsible for training various cadres of health workers e.g., nurses, midwives, clinical officers and others previously operated under the auspices of the MoH. They were recently transferred to the Ministry of Education and Sports (MoES) leaving the MoH unhappy about quality and standards of training. The rationale of the transfer to MoES was to harmonize admissions along with entry into other institutions of higher learning, traditionally a responsibility of the MoES. Other benefits were expected to include more professionally developed curricula and certification process. However, the MoES budget did not go up proportionately to accommodate this new responsibility and apart from salaries, little is left to support the functioning of the schools. In addition, the MoES supervisors of education institutions lack the technical know how to supervise technical quality of the training. The hospitals, necessary for practical training of most health professionals, continue to be the direct responsibility of the

MoH (regional referral hospitals) or to be strongly influenced by the MoH (district hospitals) through vetting of health budget allocations.

Under a new government decision, Makerere University has been given the responsibility to oversee the curricula, examinations and certification in all the key health training institutions including; Mulago Paramedical School, Mbale School of Hygiene, Mbale School of Clinical Officers, Fort Portal School of Clinical Officers, Gulu School of Clinical Officers, Masaka School of Comprehensive Nursing, Soroti School of Comprehensive Nursing, Jinja School of Ophthalmology Clinical Officers and Mulago Health Tutors College.

Capacity for both pre- and in- service training remain insufficient. The distribution of training institutions for PHC cadres continues to be insufficient, inadequate and uneven. The need for review and improvement of health training curricula remains a key issue. Training of comprehensive Nurse (ECN), clinical officers, health inspectors and other nurse cadres is progressing well. However, training of doctors, laboratory and pharmaceutical staff has remained low and urgent measures are required to scale-up their training.

Although certain aspects of the in-service training have and continue to be implemented it has been noted that the activities are uncoordinated and not integrated. IPH has played a role in in-service training by developing and conducting short courses for the districts of Hoima, Kaphchorwa, Kumi, Moroto, Nebbi and Pallisa. Topics covered have included Monitoring and Evaluation, use of health management information systems (HMIS) data in hospitals, planning and budgeting, managing human resources and quality assurance.

Most in-service training activities are mainly initiated by vertical programs without involvement of the districts. There are hardly any training needs assessment carried out to determine what needs to be learned. There is also the issue of lack of a link between in-service training, registration and licensing which results into lack of a system to recognize and accredit prior learning experiences and other types of informal learning. This is an area in which it is recognized that programs must move, yet little has been done about it to date.

When the MoH needs Public Health technical skills these are provided by a number of institutions depending on the level of technical skills required and the availability of training institutions to provide them. The Institute of Public Health (IPH) is by far the largest single source of these skills. Foreign universities are also an important source of these skills especially in cases where the skills sought are not offered at the IPH and scholarships offered by development partners. Multilaterals, NGOs and other consumers of Public Health technical skills, too depend on this source.

The Regional Center for Quality of Health Care runs the following short courses for health professionals working at various middle to senior level MoH positions; a) Innovative Training, b) Operations Research, c) Nutrition Interventions, d) Performance Improvement, e) Quality Assurance, f) Maternal and Neonatal Health, g) Facilitative Supervision, h) Malaria Interventions, i) HIV/AIDS Interventions, j) Reproductive Health Interventions, k) Economic Evaluation, and l) FP/Essential Drugs Logistics management.

IPH is developing additional short courses in basic health economics, quantitative techniques in health economics with support from the Health Economics Policy Network (HEPNet), and leadership for health and population programs in collaboration with Johns Hopkins University. Public Health technical skills at graduate and post graduate level are provided by IPH, University of Mbarara and Nkozi University. Collaboration between the universities, MoH, multilaterals and

NGOs in developing Public Health technical skills has improved. Makerere, Nkozi and Mbarara regularly exchange visiting lecturers and external examiners and in this way share their experiences. Some of the key Public Health faculty at both Nkozi and Mbarara are graduates of the PHSWOW program at IPH.

MoH in its collaboration with the non government sector has worked with AMREF to train about 15% of PNFP Health Unit Management Committees in planning, implementation of activities and management of health funds in ten districts of Uganda.

RELATIONSHIP OF MOH TO THE INSTITUTE OF PUBLIC HEALTH AND OTHER PUBLIC HEALTH RESOURCES

Use of IPH resources for Research activities

In cases where research activities have been commissioned by the MoH, negotiations are conducted with the Public Health school faculty that is selected to carry out the research. MoH personnel are often involved in executing or writing up the research, thus increasing the chances for the findings to be used in policy formulation. In research that is not commissioned by the MoH, there is little input from MoH and the use of the research findings is usually limited. Most research is driven by availability of funding and this often comes from institutions in the developed countries.

The Department of Health Policy, Planning and Management (HPPM) at IPH has recently moved to develop its own research agenda based on priorities it has identified. However, obtaining funding to pursue such an independent research agenda may prove to be a challenge.

Most research currently conducted by Public Health trainees at IPH is descriptive. There is a need perceived by a number of faculty to conduct more comprehensive and analytic studies e.g., covering policies in health, population and nutrition and system wide studies.

Development of Policy

The MoH seeks to develop policy through consensus. Policy developed through research findings is more involving of Public Health schools and other Public Health resources. For example the development of the Prevention of Mother to Child Transmission (PMTCT) policy heavily depended on the scientists that were involved in the trials at Makerere Medical School. The Department of HPPM at IPH is developing a center whose purpose will be to, among other things, facilitate the transformation of research findings into narratives and synthetic documents such as policy briefs for easier access and use by policy and other decision makers. The Department already runs a regional workshop for communicating research findings in health and population to policy makers with technical and funding support from the Population Reference Bureau.

Research, Documentation, Dissemination and Advocacy:

The Institute of Public Health undertakes research in health policy, health systems, community health, disease control and environmental health and disseminates critical information and knowledge on interventions most likely to reduce morbidity and mortality from common communicable diseases. The IPH resource center has a modest collection of Public Health reference texts and journals.

Individual members of the Public Health schools or other Public Health resources are members on various advisory boards within the Ministry of Health. MoH personnel too regularly participate in teaching courses at IPH. In so doing they enrich Public Health training with fresh experiences from the field as well as new policies.

Perceptions of the MoH personnel about the current PH workforce in the country

Uganda has about 2,000 doctors, of these about 50% are in the district health system and the rest are in the private sector. Almost all doctors in the district health system have some form of Public Health function irrespective of the fact that most of them do not have formal Public Health training, apart from the one-year orientation in Public Health received during their medical school training. Most Public Health work is carried out by lower level health workers who have little or no Public Health training.

MoH personnel pointed out that the Public Health training by the IPH was mainly directed at district level management. This was good as there was need for more personnel at the Health Sub-district with these skills. MoH personnel, however, mentioned that these graduates lacked ability to use the information at hand to make decisions.

Most of the personnel working at the MoH have previously been working at the district. There is a need to equip these staff with skills to enable them cope with their tasks at the MoH. The skills needed include; a) working with and providing leadership to other sectors to promote Public Health, b) management and control of current, emerging and re-emerging diseases and infections, c) advocacy for increased resource allocation to promote equity and quality of care particularly for disadvantaged groups and populations, d) design, management and evaluation of programs to address priority problems in health, nutrition and population domains, e) public Health operational research, f) assessment of alternative interventions and their cost-effectiveness leading to evidence-based resource allocation, g) assessment and control of environmental hazards.

The following quote illustrates the concern the MoH has about building capacity for effective health management.

“There is a need for IPH to develop capacities in the field of management of health services. There is a growing need for health managers both by MoH and NGOs”.

(MoH Personnel)

There was concern expressed that the MoH perspectives do not always appear to be taken into consideration in the introduction of new courses or programs. They felt that the Institute of Public Health could serve the MoH more effectively if there was a Memorandum of Understanding (MoU) between the two institutions that could guide the relationship.

“We at the Ministry have no formal forum through which we can contribute ideas to the curricula.”

(MoH Personnel)

Issues raised during interviews by MoH respondents on Public Health training included the following:

- IPH should introduce more specialized courses in Public Health e.g., malariology, non-communicable diseases, MCH, QA management, etc.
- Need to emphasize professionalism in the graduates.
- Nurses and clinical officers bear most of the work yet IPH seems not to have a program to support them (*ed note*: there is a Diploma in Public Health Nursing with intake of 10 per year).
- MPH trainees are not adequately supervised when on attachment in the field.
- MPH graduates are not well prepared in using available information to make Public Health decisions.
- Studies done by MPH trainees do not go deep enough to address the problems of the health sector.
- Placement of trainees is mainly with government departments or programs, this should be expanded to include NGOs as they are now an important stakeholder.
- There is a big need for Public Health workers e.g., at Health Sub-district level but there is no money to fill the positions with trained personnel.
- There is need to study why there is such a high attrition rate of health workers especially from rural areas.
- MoH tends to get expertise from outside and not IPH.
- IPH not tapping MoH expertise in teaching.

Perceptions of the NGO and donor personnel about the current PH workforce in the country

Most NGO and donor personnel pointed out that they were not conversant with the IPH training programs. They, however, noted that they found colleagues who had trained at IPH competent at their jobs.

“We recruited two graduates of IPH for our district programs; they are doing well and are still with us”

(NGO Personnel)

“Our organization had been trying to recruit a health officer competent in refugee health for a long time. We had to send one of our existing staff for training in Belgium”

(NGO Personnel)

Donors work mainly through the Ministry of Health and generally think that the level of Public Health skills at that level is good if compared to other developing countries. Donors, however, mentioned that skills in planning of health services, resource allocation for health services and priority setting should be strengthened.

Donors mentioned that district personnel delivering the minimum health package need more Public Health skills. These are usually nursing aides with little or no training at all.

“A training manual/curriculum for the training of nursing aides was developed within the Ministry of Health but I do not think the Institute of Public Health (IPH) participated in this process or in the actual training”

(Donor Personnel)

“A fair proportion of the health budget in Uganda is allocated to activities that involve some sort of capacity building. The Ministry of Health ought to partner with the Institute of Public Health so as to use these activities to improve the Public Health skills in the country”

(Donor Personnel)

PUBLIC HEALTH TRAINING IN UGANDA

Background of Makerere University Institute of Public Health (MUIPH)

Makerere University Institute of Public Health (MUIPH) started as a Department of Preventive Medicine of the Faculty of Medicine in 1959. The IPH subsequently started the first post-graduate training program (Diploma in Public Health) in Sub-Saharan Africa in 1969. During the 1970s the IPH acquired the name “Institute” but continued to function as a Department of the Faculty of Medicine until 2000 when it really became an autonomous institute with the four departments of a) Health Policy, Planning and Management, b) Epidemiology and Biostatistics, c) Disease Control and Environmental Health, and d) Community Health and Behavioural Sciences. The Institute also hosts a Regional Centre for Quality of Health Care (RCQoHC), which is a semi-autonomous body with a regional mandate to support improvement in quality of health care.

Plans are in advanced stages for the Institute to join forces with the Faculty of Medicine to form the new College of Health Sciences. It was due to begin in August 2005 but implementation has been put on hold pending resolution of some issues such as funding. Under the new order, MUIPH will become a full fledged and autonomous School of Public Health, headed by a Dean who will report to the Principal of the College of Health Sciences. The College of Health Sciences will be made up of four schools i.e., School of Public Health, School of Medicine, School of Biomedical Sciences and School of Health Sciences. The guiding principles for the new college have been formally stated as the following; a) emphasis on horizontal structure of viable and efficient units, b) greater opportunity for faster growth and expansion of constituent components, c) integration and linkage of health professional training institutions, and d) autonomy of constituent schools.

The structure of the new College of Health Sciences with its constituent schools is shown in figure 2 and that of the School of Public Health that MUIPH will evolve into is shown as figure 3.

Figure 2: Structure of the Proposed College of Health Sciences

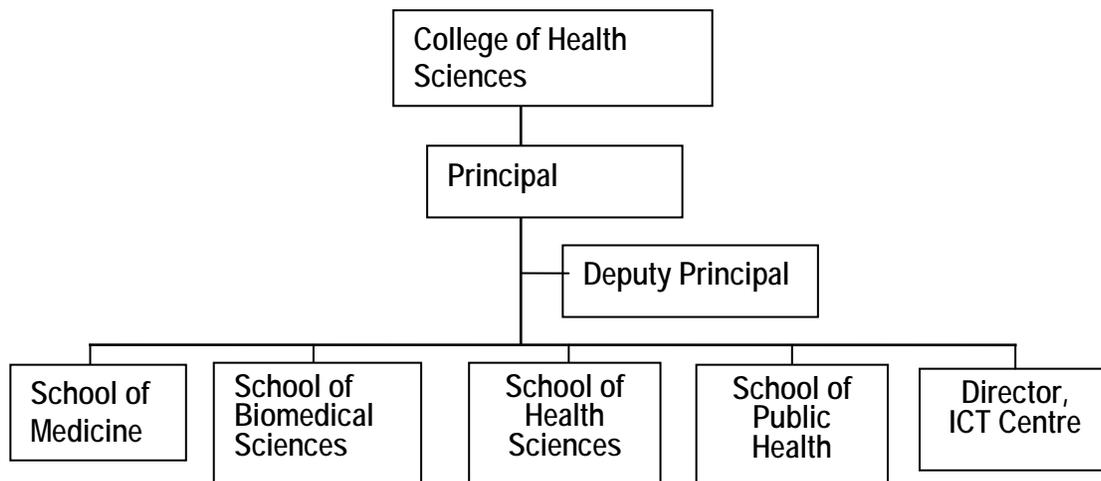
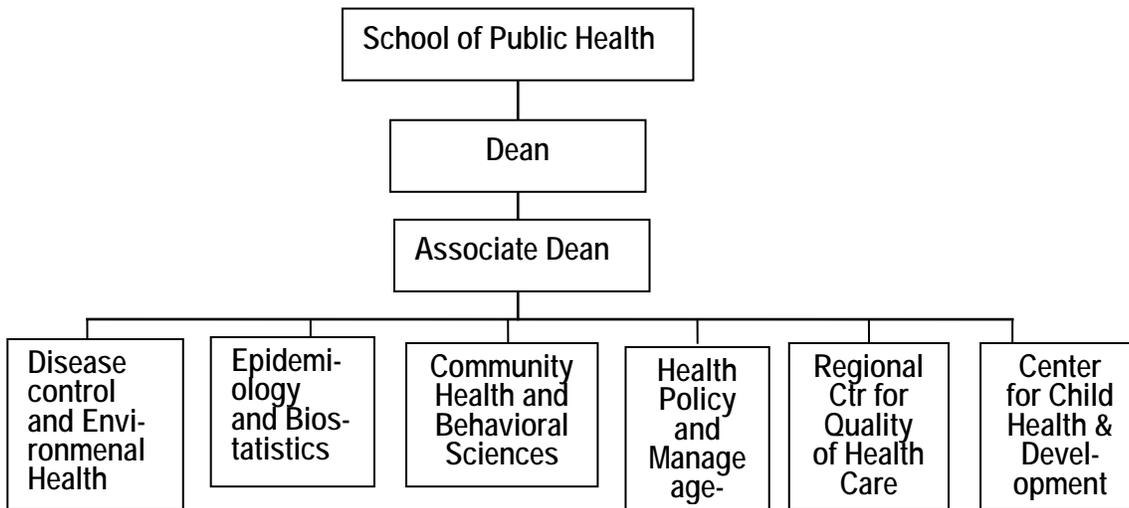


Figure 3: Proposed Structure of the School of Public Health



The Institute is currently recognized by WHO-AFRO as a Centre of Excellence for supporting countries in the East and Central African region in strengthening district health systems, planning and policy.

After the creation of 4 new departments at IPH, the need for additional faculty has become even more acute. For instance, the Department of Health Policy, Planning and Management has only 5 of the 14 established positions currently filled, and only two of them have a PhD. Of the positions filled, the highest level is for senior lecturer. The position for professor (1), and for As-

sociate Professor (2) are not yet filled among others. A number of research fellows have been recruited to support various teaching and research activities but will only serve as a stop-gap measure. These research fellows will grow into filling some of these positions, hence the need to develop their skills for research. The existing faculty need to have their own research and research supervision skills developed through collaboration and joint projects with researchers with more experience such as those in developed countries.

The Institute has as its vision to be a “Centre of excellence, providing leadership in Public Health”. The mission of MUIPH is “To promote the attainment of better health for the people of Uganda and the region through Public Health training, research and community service with the guiding principles of quality, relevance, responsiveness, equity and social justice”. The Institute has 3 basic core functions of teaching, research and service. In addition to its primary mandate of capacity building and research in Public Health, it collaborates with the Ugandan Ministry of Health (MoH) and with district, municipal and city local governments, international agencies and non-governmental organizations (NGOs) in supporting the planning, implementation and evaluation of health programs.

In 1990 WHO convened a meeting of leading Public Health leaders and educators in Africa and the developed world with experiences in Africa. They concluded that traditional approaches that used classroom based training alone were inadequate to impart the skills needed to address the numerous Public Health challenges in Africa. They recommended the use of practical, field oriented, competency based approaches. The Rockefeller Foundation subsequently provided financial support to develop the Public Health Schools without Walls initiatives in Zimbabwe, Uganda and Ghana with the introduction of Master of Public Health (MPH) programs that had a significant proportion of training time spent in the field.

The Makerere University Institute of Public Health (MUIPH) started the Ugandan PHSWOW program in 1994, which became the main graduate level training in Public Health in Uganda. The mission of the MPH program is “to produce practically oriented Public Health specialists who possess the knowledge, skills and professional attitudes required to assume leadership roles in the Public Health system,” and “to develop a new model of Public Health training that emphasizes problem-oriented learning and acquisition of competencies.”

Using a field oriented practice-based curriculum, MPH trainees spend 60% of total time over two years in a field component assigned to one of a network of 14 field practicum sites, under apprenticeship with competent and well experienced Public Health experts who serve as directors of district health departments. Each trainee is required to investigate at least 5 Public Health problems being faced by their host station and write up a professional or scientific report. These studies contribute to acquisition of some of the core competencies in Epidemiology, disease surveillance and control of priority problems (e.g., HIV/AIDs, malaria, Reproductive Health), health planning and management including program evaluation and communication. From the inception of the program over 600 short studies and 150 dissertations have been produced and recommendations made to improve Public Health in host districts and national programs.

The program has produced over 150 Public Health leaders at MPH level now serving at district and national program levels, with some in international organizations. Graduates of the program have provided much needed Public Health leaders to manage health care delivery under Uganda’s decentralization policy. Continuing shortages are being addressed and MUIPH started

a distance education based MPH in 2004 so as to scale up the program and cut on time trainees spend away from work.

With further decentralisation of health services to sub-district level, there is inevitably high demand for Public Health specialists, consequently, distance-learning MPH program was developed in 2003/04 and introduced in 2004/05 academic year. The initial intake of 50 students is entering their second year of the 3-year program. A second of 60 was admitted and started in August 2005.

The IPH developed a 5 year strategic plan for the period 2000/01 to 2004/05. This first strategic plan ever expired on 30th September 2005. A new strategic plan to cover 2005/06 to 2009/10 is being developed.

Support for the school

The Institute has good computer connectivity with a Local Area Network with over 50 workstations and a fast wireless Internet link that augments computer skills and access to Internet-based resources for training. Six of the 14 field training sites are linked via satellite to the Internet so that trainees and supervisors can more readily access information and exchange documents and data.

Total IPH revenue in 2004 grossed about US \$ 3,000,000. Of this, about 50% was for training grants from CDC and Rockefeller and the other 50% was for various research projects. In general, the breakdown of financial contributions by source is government (mainly staff salaries) 20%, tuition fees 20%, international donor funds 30%, and other sources (mainly research) 30%. The contribution from Government comes through the University mainly in form of staff salaries, utilities and building maintenance.

Gross income from research over the last 5 years has been about US \$.7 million. Student fees from established degree programs contribute only about \$50,000 to IPH income per year. This money is entirely dedicated to servicing the respective academic programs through purchase of educational materials and token top-up payments to staff per hour taught. However, training grants in form of short courses, and fellowships contributed about 4 million US \$ as gross income into IPH over the last 5 years. Close to 90% of this was for the support of the IPH/CDC fellowship program in HIV/AIDS. Main sources of funding are included in Appendix 3.

Faculty

The total full-time equivalent academic staff actively engaged in Public Health education are 26 FTEs (1 FTE = 40 hours per week).

The breakdown of all academic staff (full-time and part-time), their qualifications, age and sex distribution are shown in table 5

Table 5: Socio-demographic characteristics, Expertise and Qualifications of Academic Staff at MUIPH during 2004.

		Male		Female		Total
		New (within last 5 years)	5-10 years on staff	New (within last 5 years)	5-10 years on staff	
FT	Full-Time Staff (>30 hour/ week)	5	15	3	2	25
	Part-Time Staff (8-30 hours/week)	4	0	1	0	5
Qualifications	Staff w/ Doctoral / Equivalent Qualification	3	3	1	0	7
	Staff w/ Masters / Equivalent Qualification	6	12	3	2	23
	Staff w/ Bachelor / Equivalent Qualification	0	0	0	0	0
	Staff w/o Bachelor / Equivalent Qualification	0	0	0	0	0
AGE	Number of staff younger than 35 years	4	1	0	0	5
	Number of staff aged 36-50 years	9	8	3	0	20
	Number of staff 51 years and older	0	3	0	2	5

The vast majority of the senior faculty (lecturer and above) were trained abroad at Master's and doctoral levels. A number of the younger faculty at Master's degree level and one at PhD level are graduates of IPH. Funding for faculty training almost always came from donor sources.

New faculty are needed mainly in the following disciplines:

- Behavioral sciences.
- Demography.
- Quantitative Health Economics.
- Policy Analysis.
- Health Promotion and Communication.

A full list of IPH faculty publications is available at <http://www.iph.ac.ug/publication.htm>.

Although overall there are more undergraduates passing through IPH annually than graduate students, close to 70% of total student contact time is spent with graduate students. This is mainly due to the nature of the programs and supervision requirements for the field studies and the dissertation. Most of the experienced faculty are overloaded. This situation is compounded by the lack of younger faculty who could take over some of the undergraduate teaching and assignments. The IPH cannot recruit younger faculty because of financial constraints. The research fellows who come in on various research grants play a key role in alleviating the staff shortage but are still not enough.

Students

Annually the IPH handles over 150 under-graduates and over 150 graduate students (up from 60 since the introduction of the distance MPH). About one out of three students is female; 10% are international students.

About one in three students is on a donor funded scholarship. The rest receive various forms of support from their employer for tuition. Living costs are generally covered by the students themselves (from continued salary earnings) or relatives.

Admission Requirements

The graduate programs offered at IPH are open to Ugandans and Non-Ugandans who fulfill the admission requirements. The requirements described below refer to the MPH program, which is the main graduate degree offered at IPH. These are only the minimum academic conditions for admission and make one eligible for consideration. A candidate is eligible for admission if he/she satisfies any of the following:

- A degree in the health sciences e.g. medicine (human and veterinary), nursing, pharmacy, dentistry and at least two years' relevant field experience.
- A degree in social sciences e.g. social work, sociology, economics, demography and at least two years' relevant field experience.
- A degree in Biological Sciences e.g. statistics, environmental sciences, biology, laboratory sciences and at least two years' relevant field experience.

Description of the training programs offered

Apart from teaching Public Health to undergraduates i.e., medical students from the Faculty of Medicine and its own Bachelor of Environmental Health Sciences, the main focus of MUIPH is to train graduate level Public Health and other professionals and specialists in Public Health. Over the years, the particular focus has been on health planning and management, policy analysis in health, nutrition and population, epidemiology and biostatistics, reproductive health, child health, disease control and environmental health. The main graduate level training is a two year Master of Public Health (MPH) under the Public Health Schools without Walls (PHSWOW) initiative which uses a field oriented practice-based curriculum. The mission of the MPH program is “to produce practically oriented Public Health specialists who possess the knowledge, skills and professional attitudes required to assume leadership roles in the Public Health system,” and “to develop a new model of Public Health training that emphasizes problem-oriented learning and acquisition of competencies.”⁴ The program has a field component (60% of total time) for which students are assigned to one of a network of 11 field practicum sites, under apprenticeship with competent and well experienced Public Health experts serving as directors of district health departments. The objectives of the MPH program are:

- To strengthen the capacity for implementing health services at the district level, including priority setting and resource allocation;
- To provide leaders with the capacity and skills to meet the demands arising from the decentralization policy of the Uganda government;

⁴ MPH curriculum.

- To promote linkages between institutions providing Public Health training locally, regionally and worldwide;
- To increase the awareness and appreciation of the importance of Public Health as a means to enhance the attractiveness of careers in Public Health;
- To prepare Public Health practitioners to work within an integrated, multidisciplinary and multisectoral health system;
- To strengthen the capacity to carry out essential research in Public Health; and
- To strengthen the collection and utilization of information to improve the quality of health services.

The Institute also offers a three-year postgraduate course leading to the Master of Medicine (M.Med) degree in Public Health; a one-year postgraduate Diploma in Public Health (DPH), and a demand-driven PhD by research. The Institute's Regional Centre for Quality of Health Care offers a 9-month Diploma in Quality Assurance. For the last 4 years now, the Institute has collaborated with the US-CDC and a network of HIV/AIDS care organizations operating in Uganda to run a non-degree two-year Fellowship Program in the Management of HIV/AIDS programs. MUIPH students come from Uganda and other countries in the region.

Although there have been efforts to increase the internet ports accessible to students from 4 to 16, they are still not enough. It would be desirable to set up a student computer laboratory with about 20 PCs for both classroom learning purposes as well as the students' own access to information. The computers available in the resource centre are generally quite old and slow and would need upgrading.

The main barriers to diversifying the curriculum are the shortage of staff to cope with the workload which has increased with the introduction of new programs without a corresponding increase in faculty. The design of the MPH program (60% field based) generates a lot of field study outputs requiring intense supervision and one-on-one contact in order to produce quality studies.

District Health Officers serve as adjunct faculty and help supervise students who are on attachment to their respective departments or programs. However, these officers are often quite busy themselves coping with the challenges of running a decentralized health system. MoH officers play a key role in teaching some of the courses but sometimes are called to other duties at short notice. In such cases IPH faculty have to fill in or re-schedule sessions.

Faculty from other parts of the university that teach at IPH have tended to come mainly from social sciences faculties for parts of the behavioral components of the curriculum.

Relationship to the University and MoE

Good relationships have been established with the senior levels of the University. There is still a problem creating places for IPH permanent staff; however several new lecturer and senior lecturer positions have been created. There is the capacity to hire on faculty with soft money, and this is not subject to many difficulties. There is latitude to hire on positions through full professor using grant funds.

The University structure is already decentralizing decisions to the faculties, schools and institutes. The Heads have far more power than before. The institutes tend to run their own budgets, and the issues of transfer of credits with external partner institutions are also being worked on.

There are good relations with the office of the Vice-Chancellor and University central administration.

IPH has worked with the MoES in development of school health curricula for primary schools in Uganda. The link with the MoES will be strengthened when the proposed oversight role of Makerere over health training institutions starts to be exercised. Under the new arrangements Makerere will oversee the curriculum development, examinations, and certification of all allied health training institutions producing the nation's nurses, clinical officers and other allied staff.

Capacity for change within IPH programs

In developing new initiatives there is the need to have the freedom to implement new approaches in education, and not to be bound to a traditional University model. The main obstacle to developing new programs used to be a lengthy process for approval of curricula through faculties and Senate. This has now been streamlined and it is possible to get a new course approved within a couple of months rather than a year as it used to be. Depending on availability of funding, the University has now accepted to appoint faculty on fixed contract basis provided it will have no additional financial implication on the University's budget. It is thus possible to get additional faculty fully funded from grants but appointed and operating as full members of the university recognized faculty. Some traditional university views still persist but overall, the university environment is increasingly open to embracing change.

Transfer of student credits in and out

IPH has recently signed MoUs with Johns Hopkins for transfer of credits earned at either university. Arrangements to sign similar MoUs with the Institute of Tropical Medicine (Antwerp - Belgium), the Karolinska Institute (Stockholm – Sweden), and Tulane University are fairly advanced. There has always been an interuniversity council of the East African countries aimed and facilitating admission of nationals from one country to a university in one of the other two countries. The concept of transfer of credits has evidently been discussed, but this is still some distance from implementation.

Relationship with other training organizations

There are mainly informal links with AMREF, a major NGO involved in supporting health worker training and continuous professional development of health workers. Links with other faculties in the University exist mainly with Social Sciences who come to teach on the MPH courses as well as Faculty of Technology who teach many courses for the Bachelor of Environmental Health Sciences program.

The IPH has a long history of collaboration under the PHSWOW network with the University of Zimbabwe and the University of Ghana. There are regular exchanges of faculty who act as external examiners with these and other East African schools of Public Health in Tanzania and Kenya. Makerere IPH faculty were involved in developing the curriculum for a new school of Public Health at the National University of Rwanda, Butare.

Relationship to the Ministry of Health

The relationship between IPH and the MoH is generally cordial. IPH faculty are usually part of MoH review teams, they serve on various MoH committees, are asked to analyze data and review information from various programs. MoH personnel commonly participate in or teach courses as part of IPH faculty.

The MoH holds many workshops to which several IPH faculty members are usually invited. These workshops are useful for faculty to update themselves with new MoH policies and programs. The MoH provides a limited number of scholarships to MPH students with Government of Uganda funds (about 5 per year) and nominates others to receive WHO training grants (about 5 per year). In addition, the MoH directly sponsors some of its officers to courses abroad that are not offered in country e.g., Master's degree in health education and promotion.

The relationship has, however, had some problems. For instance, in the case of Human Resources Development unit within the MoH, there is a feeling that they are not sufficiently listened to when the University introduces new programs. The MoH has had some problems working adequately with the Health Services Commission and the Public Service Commission to develop career paths for certain public health positions in the Ministry of Health and this creates frustrations. There were discussions between IPH and MoH to develop a BSc in environmental health sciences for the health inspectors on the district health teams. However, while this was being developed, the government proceeded to drop the position from the district health team.

There is a realization that the relationship should be better than it is now since the IPH is primarily there to serve the Public Health training needs of the country. Moreover the MoH are currently the major consumers of IPH graduates and their services. One area in which the cooperation should be improved is in the development of the curricula. There also needs to be a stronger link with management of district health services and district leadership.

The ministry and the district health departments remain the principal employers for the graduates from IPH. The relationships have been good, and activities go both ways. A good number of the MoH officers are IPH graduates, and generally are willing to teach classes in the academic program. They bring to the students some good practical perspectives. One weakness of this relationship has been the reluctance of the University to get such MoH and district officers who teach or supervise students appointed as honorary lecturers. The main concern seems to be experiences in the past when MoH personnel have wanted appointment in the University as part-time lecturers which has financial implications to the already stretched University budget. However, being appointed Honorary Lecturer, as an alternative, has no financial implications. It would certainly boost the morale and status of these district/MoH officers who play such a key role in mentoring students or teaching.

Contacts could be increased and the arrangements could be more cordial than they are now. Closer interaction is needed. It would be good to post MoH personnel to IPH for various periods of time. IPH could play a bigger role in the training of health personnel working in the health district and the sub district level. As it is IPH is involved at a number of policy levels in areas such as the AIDS Control Program, the Global Fund, the polio campaign and various coordinating committees.

There is need to coordinate the training that is offered by both IPH and MoH so as to complement each other. There could be more effort on the part of the MoH to use IPH to help build health capacity at the district level. For instance the Health Manpower Development Centre (HMDC) has CME programs for middle level managers which IPH could strengthen and HMDC

could offer their rich experience in running distance education programs for health workers to IPH to help improve the newly established distance education MPH program.

The IPH has made contributions in many ways to MoH. Faculty members from the IPH do serve on a number of MoH committees. However, in the development of health policy, the impact could have been more. IPH respondents felt that MoH takes the opinions of IPH seriously on issues of policy and standards but MoH staff felt they do not get significant help from IPH faculty because the latter are too busy.

There is no MoU or other formal structures between IPH and the MoH. Most interactions and collaboration depends on an informal networking and personal arrangements. This could be made more formal, and at the same time more comprehensive. The consequence of this is that requests for members from MoH to IPH and vice versa are made late, and with teaching conflicts and so on, one misses the chance to serve. At the same time, the MoH personnel who do teach often get called away at the last minute for activities at the Ministry. This makes it hard to depend on Ministry personnel for teaching.

In general, IPH has not had very much impact on the policy development process at the MoH, and often IPH is not consulted in matters for which they could make contribution. How IPH can create a greater impact on policy formation has been the theme of repeated discussion among faculty.

IPH has grown beyond the image that many people in MoH have of the Institute, and IPH needs to update this image. The current director is concerned about the image and recently led a team of IPH heads of department to meet with MoH officials as a means of improving the relationship with the MoH and to increase joint activities.

Relationship of IPH to other organizations

The IPH hosts the Regional Centre for Quality of Health Care (RCQHC) whose main mandate is to support efforts to improve quality of care in the Eastern and Central African region. The Centre has a strong inclination to reproductive health and receives most of its funding from USAID through US-based co-operating agencies. The IPH has strong partnerships than can provide support in planning and implementation of health programs at local, regional and international levels. There is local collaboration and partnership with the MoH, districts, NGOs and health related agencies and institutions. Regional collaboration and partnership takes place through among others the Regional Centre for Quality of Health Care (RCQHC), IPH/CDC Fellowship in Management of HIV/AIDS Programs and Public Health related short courses which are a regional convergence point for students in Eastern and Central Africa. These include Communication of Research Findings to Policy Makers course run by the Department of HPPM, and the Disaster Preparedness course run by the Department of Community Health and Behavioural Sciences. Other international collaboration and partnership in exists in the area of health systems/services development and research with European, USA, Canadian and African universities and multi-lateral and bi-lateral agencies.

IPH faculty participate as part of review teams and committees for various NGO bodies, multilateral and bilateral organizations, and are often asked to analyze data and review information from various programs.

There is no MoU with these organizations to provide services, and most interactions depend on an informal networking. These could be made more formal hence the potential for more business for IPH.

Perceptions of the IPH faculty about the status of the Public Health workforce in the country

IPH Faculty frequently mention that Uganda had developed skills and experience in health promotion and behavior change, particularly as related to HIV/AIDS. Epidemiological skills had also been well developed within IPH. This has partly been due to the PHSWOW program, and the extensive programs supported by the CDC in Uganda and partly because of the multiple research and training programs done with the HIV/AIDS related funding.

District Health Officers heading health services in local authorities (many of them IPH graduates) are equipped with skills to conduct epidemiological studies and following up outbreaks among other things. However, the volume of managerial duties seldom leaves them time to do these tasks effectively. They should thus change roles to provide leadership to the Public Health team to carry out these tasks. However, due to time constraints in the 1 - 2 year MPH program that many of them would have gone through, they still need further support to develop their management and leadership skills. One possible approach is the development of a fellowship in health systems, which would be a formal program that extends beyond the MPH program and would equip graduates to function at a higher management capacity within health programs.

More than 95% of the IPH Public Health graduates are still working in Public Health. It is thought that about 10% have left the country mainly to take up international positions. It is estimated that about 60% of graduates have been absorbed into the health districts, health sub-districts or the MoH at the present time, 40% into NGO work including research and projects (such as USAID/UPHOLD, USAID/AIM and AMREF). PEPFAR alone has created 150-200 new Public Health jobs. There seems to be no current shortage of Public Health jobs openings. In the current Public Health environment in Uganda, there is no substantial 'brain drain' occurring.

“The pay has now become such that as a program manager of a Public Health program you can earn comfortable wages, this has reduced the loss of Public Health graduates to other countries. Most graduates now stay here in Uganda”.

(IPH Faculty)

Many of the mid and senior positions at the non-government sector were filled with people leaving the MoH (perhaps 20 senior people have left the MoH in the last 2 years). The MoH positions in turn are usually filled by people from the districts, and these need new skills for these senior positions. They need skills in policy analysis, quality assurance, advocacy and lobbying, strategic planning and leadership. The IPH could play a key role in helping to fill these gaps. By concentrating in building strong Public Health skills for the district, in the end the central level will benefit. However, some additional updating of skills should be considered for personnel making this transition.

Faculty also mentioned the need to increase the extent and diversity of human resources at the Ministry level, building on existing personnel, but adding new capacities. However, the problem was the government freeze on recruitment into public service. This had led to an inadequate

number of personnel able to deliver the minimum health care package, both at district and central levels.

“We at IPH are doing well in training personnel, but there is a need to expand the number of health workers and IPH has little leverage there”.

(IPH Faculty)

Faculty members mentioned that the MPH curriculum was broad-based; graduates finished with good Public Health knowledge and had the latitude to go into a number of areas. They also noted that partners and customers recognized the training as of good quality and that its graduates brought added value to health programs.

“There is the need to add some specialization, perhaps in the second year. Or a specialized module could be added for an additional year which could give the graduates depth in specific areas”

(IPH Faculty)

Areas where the IPH is not reaching its maximum potential

Recently the MoH has started to look at the services which are needed by the population and the numbers of human resources needed to deliver these, and then to assess the shortfall. This will be a major step forward in estimating the capacity needed. Although the Minimum Health Care Package is well articulated, the lack of improvement in various health indices indicates that these programs need to become more effective and value for money can be increased. Skills that will be needed include burden of disease analysis, cost-effectiveness and resource allocation, strategic planning, policy analysis, leadership and quality management.

Faculty mentioned that there was a shortage of manpower at most levels in the health sector. Mention was made of a need for increased competencies at the various levels of health services, particularly in planning, financial management, monitoring and evaluation. A common theme from the faculty was that there were not enough persons with human resources management skills. Many persons previously trained lack the skills to meet current demands of the health system. Attending scientific meetings or workshops was felt not to be enough, some organized CME⁵ approach was needed to bridge the gap.

Faculty mentioned the absorption of graduates into the public sector was restricted because of the ban on recruitment and budget constraints. There are no positions in the public service for some of the skills needed in the public sector.

Mention was made of the need of an assessment of graduates to evaluate the IPH curriculum to see what they felt they had not learned which would have helped them in the Public Health responsibilities..

“The curriculum is too focused on district level management.”

(IPH Faculty)

Many of the faculty feel that IPH does not have adequate depth in the behavioral sciences, health economics, health financing and laboratory facilities. With these in place the Institute

⁵ Now referred to in Uganda as Continuous Professional Development.

would be able to offer summer school, short courses and graduates would get Public Health laboratory experience (e.g., food, water quality and air quality testing).

Future challenges and directions

Faculty mentioned that in the past emphasis was on developing Public Health skills for district health management. Now the emphasis is on developing Public Health skills for health sub-district leaders and to the other members of the health team, such as the health visitors. New districts are being created frequently, and these need new personnel to staff district health positions. In addition there are constitutional plans to create new Regional Government positions—and that will require new levels and types of PH skills to oversee Public Health activities in the districts for which they will be responsible.

“Public Health training could also take another approach, “cascade training” where the people at the district could train those below them in management principles. This will probably not be at the MPH level, but could be done at a certificate or diploma level. At the higher levels this needs to be something which would address Public Health leadership skills. This would have to be done in some executive format.”

(IPH Faculty)

IPH respondents also noted that there were still unmet needs of the districts and sub districts for Public Health personnel, and that it would take some time before these needs are saturated. A considerable number of positions in the districts were unfilled or filled with people missing the adequate qualifications.

There are also unmet needs at the NGO levels. These gaps would remain for some time.

“Additional training was needed for the doctors in their undergraduate (pre-service) training, as they would have to do considerable Public Health work in their district jobs, without a full MPH degree—especially management and planning skills. Priorities would be around the field of epidemiology. There was a need to make this training as practical as possible.”

(IPH Faculty)

Faculty noted that the barrier to increasing the numbers of persons receiving Public Health training was the failure of IPH to expand its capacity, hence compromising the ability of the Institute to meet the opportunities and demands of the future. Further there are a number of areas where Public Health skills are needed in Uganda, where IPH lacks expertise. The freeze on recruitment of full time university-paid faculty has been part of the problem, although there are now some alternatives to this mechanism for hiring faculty. Lack of space is also becoming a key constraint.

“Training needs more depth in many departments. These departments are only one person deep in many cases. As the Public Health needs in Uganda change, new faculty need to be brought on, and many of these are still in the training process.”

(IPH Faculty)

CHALLENGES AND THREATS

Major weaknesses in IPH research

Although IPH faculty are an effective research team, and have the second largest amount in funds in the University, they are mostly as sub-contracts, and IPH does not have the experience of going after grants as prime contractors. Faculty mentioned that there was no culture of searching for grant funds and writing of proposals. The faculty need skills in maintaining themselves independently, and to be able to do the grant management, the reporting and the financial management themselves.

“Most of the research done is not focused on the specific evidence which the MoH needs to move its policy forward. There needs to be a stronger emphasis on evidence based research. Research is not focused on the needs of the users, particularly in the districts. Where the research is done it is not disseminated in a pervasive fashion.”

(IPH Faculty)

Faculty mentioned that research was sometimes carried out as an intellectual exercise, and not operationally focused on ways to address problems. Often there are many small problems investigated that really have little impact on the various problems. There needs to be a research agenda for the school which would address priorities for the country and areas where the school has the strengths. There also needs to be a mechanism which would help keep all faculty up to date on what the other researchers are doing.

There is a good emphasis at IPH on research skills, and graduates are generally good at epidemiology and assessing general management problems. However, there is a weakness in the areas of advanced analytical quantitative and qualitative skills and behavioral change work.

Weakness in service activities

There is a great demand for faculty help in various service activities, and there are not always the resources at IPH needed, although IPH can provide a good mixture of program strengths. The IPH does not always do a good job in seeing the opportunity to do training as a part of its service work. IPH could help meet the service needs of both the public sector and NGO/donor sector by creating tailor-made courses for these customers to help them meet major needs. A place to start would be with courses which meet common needs such as building monitoring and evaluation capacity.

“The various service activities which are undertaken are excellent opportunities for the faculty to earn additional funds. However, these are mostly done on a personal networking basis, and are essentially one-person activities. There is a need to involve more people in these activities, particularly students.”

(IPH Faculty)

Opportunities for PH growth in training

Faculty mentioned that there was potential for growth in short courses and also distance education. Although the distance education program had made a good start, the quality needs careful attention to be sure it gave good value. There was little or no continuing education for Public

Health personnel. Although it is a requirement for medical practitioners, there is little or no verification of this. There was also the need to provide more in-depth and specialty training in several areas of Public Health. Some of these specialty areas are clinical like TB, and others are health systems issues. The proposed health systems fellowship program being developed by the Department of HPPM will be one way to address this.

Individual faculty thoughts about IPH

“Becoming an autonomous institute separate from the Faculty of Medicine, has allowed for faster response to opportunities. In the past five years the IPH has been better able to identify needs and quickly establish training activities. In the past 5 years the scope of activities has expanded so there are more research programs, more services to the Public Health sector, and new courses such as the Bachelor of Environmental Health Sciences, MPH by distance learning and Diploma in Public Health Nursing.”

(IPH Faculty)

“The connections with the Regional Centre for Quality of Health Care has also been a success. However, this should be brought closer to the IPH, although it is actually part of the IPH.”

(IPH Faculty)

The IPH/CDC link has been an outstanding achievement, and could serve as a model for other potential programs. This has also provided additional lecture space and learning resources. The addition of the part time program has been a major accomplishment and Internet connectivity of field sites has been a great achievement for field based training.

The link up with Karolinska institute has provided more doctoral potentials. At the moment there are many doctoral opportunities for Makerere students. Also IPH has started to train its own PhD students, a major development.

“There are further opportunities; however, IPH needs a greater depth of faculty for this to be effective.”

(IPH Faculty)

There are also the potential links with regional and with international training facilities. Exchange of faculty is one area that can be pursued further for example, the Dean of School of Public Health and Social Sciences from the University of Dar-es-Salaam’s Muhimbili College of Health Sciences (Tanzania) has taught a social sciences course on term at Makerere. Within Uganda, there has been involvement of the social scientists teaching as faculty at IPH.

Major threats to the school for the future

The main threats include uncertainty about funding for the future in light of increasing budget constraints and diminishing government contributions to the University’s regular budget. There is also the risk that the relative autonomy of IPH may get compromised in the move to create a College of Health Sciences with the Faculty of Medicine. It will be important to protect

existing autonomy and even increasing it e.g., in the area of financial management, development of new courses and appointments of faculty.

How the MoH could assist the school and how the School could utilize the MoH

It would be in the interest of the MoH to lobby for increased government funding for student scholarships since most of them are serving in Public Health positions in the public sector, often serving in disadvantaged areas. The University could on its part do more to get MoH and district staff who mentor students or teach courses to be appointed honorary (or adjunct) lecturers so as to recognize their roles and the tremendous contributions they make.

FUTURE LEADERSHIP AND MANAGEMENT TRAINING PRIORITIES

From the situation analysis presented in this report, the following leadership and management training priorities should be considered for now and the future:

- Policy formulation and policy analysis – this will help build capacity to develop evidence-based policies or the ability among Public Health leaders and managers to quickly modify or discard policies found not to be working well.
- Strategic planning and management – there is need to strengthen the ability of health managers to look at the health system as a whole (systems thinking⁶), and take into account the context and opportunities for the improvement of Public Health which may not necessarily be within the health sector. The Institute’s current management teaching does not go into depth on this, partly due to constraints of the curriculum.
- Strategic leadership, professionalism and role modelling – Public Health leaders need to be educated to lead by example, to articulate a vision for improving Public Health, and sharing that vision with the people that they lead.
- Conceptual thinking in Public Health – how and why does health improve, how to use existing resources and opportunities to obtain the best health outcomes.
- Value for money and economic analyses of alternatives in Public Health policy – how should society best allocate its scarce health resources? This should cover skills in costing of health care interventions, and assessment of performance of health systems.
- Quality of care and quality improvement strategies – including team building, group dynamics, and team productivity enhancing strategies; this will go a long way to help improve the quality of care offered in public, PNFP and even private facilities.
- Applied health economics and health financing - options for the financing of health care, including non-traditional sources, development of health insurance and pre-paid schemes, and new global health financing mechanisms e.g., the Global Fund.
- Advocacy and communication – both within the health sector and with other stakeholders outside the health sector e.g., ministries of finance, water, agriculture, public service, education and local government and others whose actions have a direct bearing

⁶ Peter M. Senge, *The Fifth Discipline: The Art & Practice of The Learning Organization* (New York: Doubleday, 1990).

on health improvement. There is need for health leaders to acquire the ability to articulate the need for additional resources as well to engage those other sectors to promote health enhancing programmes and policies.

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The Institute of Public Health, soon to become the School of Public Health, is a dynamic unit characterizing the excellence which can be achieved in Africa through dedication of faculty and a clear mission to improve the health of Ugandans and using a solid scientific approach. Over the past 5-7 years the infrastructure has been steadily built and the organization changed to free resources for growth. IPH has expanded enormously in its research capacity. It now partners with leading research institutions in undertaking world-class research projects. In this capacity it has greatly strengthened many of its own faculty. However this strengthening has left some of the departments and parts of the faculty behind in this growth, which has been heavily dominated by HIV programs. Areas such as Community Health, Behavioral Sciences and Environmental Health have not entirely shared in this growth. Health Policy, Planning and Management have a full agenda of plans, but are overstretched for faculty resources. IPH has demonstrated its ability to reach out beyond the immediate confines of the University, with its use of the skills of the Uganda Management Institute for training. This approach to give a multi-disciplinary approach to training could be explored further for training in specific niches.

IPH has the potential to play a major role for not only East Africa, but for much of the continent. There are additional resources that are required, especially human resources, but with these, there is the potential to have a very positive influence on Public Health and in a larger scale development in general.

Recommendations

The core teaching capacities of IPH are well established. The program is heavily focused on services at the district (and now health sub-district level). This has made outstanding contributions to building the management capacity at the district level. There is ready agreement that there remain major areas where needs are unmet. Health services management figures repeatedly on lists from various groups interviewed. In particular is the need to build human resource management skills. At all levels this is identified as an important missing skill. Better environmental health training was repeatedly mentioned by those interviewed, especially with the rapid growth of urban areas. There are constraints with placement of graduates, as there is no clear position for them in the public service and MoH grade scale.

There are other markets for MPH graduates that IPH should explore. Two of these might be health facilities management and project management. An MPH focused in clinical or field research might be another focus. Alternatively, some sandwich combination with activities other than district services could be considered.

Moving into new areas, IPH has a distance education program recently started. There is some concern by the evaluation team that the academic support resources were not adequate to handle the demands for distance education program. There is a risk that the quality may slip without adequate faculty time available to it. Some short courses are being offered already, and these could be repackaged for a larger audience, and could potentially be taught off-site with the help of media resources. These could be at the same time credit courses and continuing medical education credits depending on the individual needs of those attending. At a more formal level, con-

siderations for post-MPH fellowships should be considered. These might be constructed differently from a doctoral degree program with an emphasis on practical training for specific organizational responsibilities rather than developing an academic career.

An additional area might be some specialized or niche courses, were there is not enough demand in the country or even the region to support a regular course, but over a larger area IPH could draw people in for this, even though faculty might have to be brought from outside. Such examples might be developing Public Health laboratory capacity for viral culture, or managing large municipal water systems, or future directions for large hospital management.

Further, there are regional needs for further training that are not being met by other schools in the region. As the recognized leader in Public Health education in East Africa, IPH is well placed to assist and complement some of the nascent Public Health training programs such as in Eritrea, Rwanda, and Burundi. There will be substantial training required for the new health services in Sudan, and IPH could play a major role in this.

Although IPH has broken down many barriers in its rapid development in recent years, there is still a need to reach out to other university systems across East Africa to facilitate transfer of students and credits easily across borders. A good start has already been made in the exchange of faculty between schools. If this can be continued, and in fact expanded, the exchange of students could follow in its train.

A common refrain from schools of Public Health in a number of countries is the difficulty in influencing policy at the MoH level. IPH probably has among the strongest connections with the MoH of any country in the region, yet IPH faculty expressed concern about their lack of research capacity or lack of research impact at the MoH policy level. This could be an important focus of IPH; to break into research activities that impact policy. Such training programs might have to look to other countries, and outside of Africa to find enough faculty to create such a program, but it is clear that there would be a large audience of Public Health faculty from all over the continent who would be interested in this topic.

Underlying all of these recommendations is the need to expand the basic building blocks of the school: infrastructure and faculty. Some faculty will be approaching retirement in a few years, and replacements are needed. There are important disciplines that should be strengthened or new departments created. This requires forward planning to identify suitable candidates well in advance, and arrange their sponsorship, if they are to receive some of their training outside the country. Although there have been improvements to the infrastructure of IPH in recent years, including the student materials resource room, and some additional offices and the board room, there is an urgent need for additional space for class rooms and faculty space, as well as the need for computer labs and perhaps a Public Health laboratory.

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Appendix 1: biographies of study investigators

1. Dr. George William Pariyo MBChB, MSc, PhD

Dr George Pariyo is Acting Head of the Department of Health Policy, Planning and Management at Makerere University Institute of Public Health (MUIPH). He holds an MBChB medical degree from Makerere University and a Master of Science (PHC Management) from the Istituto Superiore di Sanita (the Italian National Institute of Health) in Rome, and a Doctor of Philosophy (PhD) from the Johns Hopkins University (Baltimore Maryland – USA). His PhD research was on decision-making for allocation of resources in Uganda's decentralized health system.

Dr. Pariyo has organized surveys of households, health workers and district managers throughout Uganda. He has been involved in providing technical assistance to the Government of Uganda during the bi-annual government/donor Joint Review Missions under the Sector Wide Approach arrangements. He has worked with the MoH as a regional team leader providing support supervision for improvements of quality of health services. He has worked as a consultant to the Ministry of Health, USAID, UNICEF, European Union, World Health Organization and the World Bank in the areas of Health Systems Management, Public Health Policy, Planning and Management, control of infectious diseases and comprehensive HIV/AIDS Care and Control, developing various curricula and training materials at different levels. He has extensive experience working with the district health system in Uganda and is a former DMO of Hoima District in Uganda.

Dr Pariyo has been active in teaching Health Policy, Planning and Management to Post-Graduate students and 4th year medical students, and supervising post-graduate research since 1993. He is a member of the Higher Degrees Research and Ethics Committee of MUIPH, the body that reviews and approves doctoral research proposals at the Institute.

2. Dr. John Chris Lukwago MB ChB, DTM&H, MPH

Dr. Lukwago is a Public Health specialist at Axios International Consultants Ltd. He trained as a medical doctor at Makerere University Medical School, Uganda (1996) and later specialized in Tropical Medicine at the London School of Tropical Medicine (1999) and in Public Health in Developing Countries at the University of London (2000).

Dr. Lukwago has extensive experience in implementation of health policy at the district and sub-district levels. He has been involved with the Ministry of Health's Planning Unit in modifying the health system in Uganda. His research interests include the role private providers play in policy formulation and implementation of policies affecting malaria and HIV/AIDS control. His strengths are in the design and implementation of innovative health programs using the experience he has gained to influence policy issues.

3. Saul Kamukama, BSc, MPH

Mr. Kamukama is a Public Health specialist with experiences in food hygiene, emergency and refugee health care. He trained as a food science and food technology scientist at Makerere University and subsequently did an MPH at Makerere IPH. He previously worked in ensuring hygiene of fish landing sites and fish processing plants as well as with hygiene of dairy products..

Mr. Kamukama has extensive experience in field implementation of Public Health programmes and has worked among Sudanese refugees and internally displaced persons.

4. Gilbert M Burnham, MD, PhD

Dr Burnham is Professor of International Health at the Johns Hopkins Bloomberg School of Public Health in Baltimore. He holds an MD degree from Loma Linda University (California), and an MSc and PhD from the London School of Hygiene and Tropical Medicine. He is board certified in Internal Medicine. For 15 years he worked as a consultant physician and Hospital Superintendent in Malawi, before joining the Department of International Health. He presently is co-director of the Johns Hopkins Center for Refugees and Disaster Response.

Appendix 2: List of persons interviewed (To be updated)

Name	Position in Organization	Name of Organization
Dr. Vincent Orinda	Senior Health Officer	UNICEF
Dr. Stella Neema	Senior Researcher	MISR
Dr. Rwabukwari	Associate Dean	Faculty of Social Sciences
Dr. Sentamu Ddumba	Dean	Faculty of Economics and Management
Dr. Med Kanyesigye	Human Resources Development	AMREF
Dr. Okech	Senior Health Officer	Plan International
Mr. Anthony Ngosi	Country Representative	Africare
Dr. Edinah Baguma	Senior Health Officer	World vision
Dr. Filippo Ciantia	Country representative	AVSI
	Senior Health Officer	CARE
Dr. Jessica Nsungwa	IMCI Programme Manager	Ministry of Health
Dr. Mugenyi	TB/Leprosy program	Ministry of Health
Dr. Kato	Malaria Control Program	Ministry of Health
	Clinical services – Principal Medical Officer	Ministry of Health
Mrs. Margaret Chota	Commissioner Nursing	Ministry of Health
Prof. Kaijuka Mutabazi	Quality Assurance	Ministry of Health
Dr. Mugero	Assistant Commissioner, Community Health	Ministry of Health
Dr. Kyobutungi	Human Resource Development	Ministry of Health
Dr. Runumi	Commissioner Planning	Ministry of Health
Dr Alex Opio	Assistant Commissioner, Disease Control	Ministry of Health
Dr Mpanga Flavia	Health Advisor	Irish Aid
Dr. Bro. Daniel Gusti	Executive Director	UCMB
Dr David Serwadda	Director	Institute of Public Health
Dr William Bazeyo	Deputy Director	Institute of Public Health
Dr Joseph Konde Lule	Head, Dept Epidemiology and Biostatistics	Institute of Public Health
Dr Fred Wabwire	Assoc Professor, Epidemiology & Biostats	Institute of Public Health
Dr George Pariyo	Senior Lecturer/Head, Dept Health Policy, Planning, and Mgmt	Institute of Public Health
Dr Stefan Peterson	Visiting Assoc Professor, Dept Health Policy, Planning, and Mgmt	Institute of Public Health
Dr Christine Zirabamu-zaale	Head, Dept of Community Health	Institute of Public Health

Dr Fred Nuwana	Senior Lecturer/Head, Dep of Disease Control and Environmental Health	Institute of Public Health
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Appendix 3: Background Data on MUIPH Students, Faculty, Programs and Other Resources

Annual Student Enrolment

The annual student enrollment for these programs is estimated as in the following table:

Course	No. of students	Total Contact Hours	IPH Contact Hours	FTSE
PhD				
Health Systems Management	4			
Master of Public Health	24	2165	2165	60.0
Master of Public Health (Distance Education)	50			
Serviced courses:				
MBChB	320	4050	1289	101.8
B.Pharmacy	10	1350	80	1.0
BSc Nursing	15	1000	140	2.1
Bachelor of Environmental Health Sciences (BEHS)	30	5600	5600	20.6
Bachelor of Medical Radiography (BMR)	15	1000	140	2.1
Total FTSE*				187.6

*FTSE - Full Time Student Equivalent

Staffing Position Academic Staff

Dept/Post/Title	Establishment	In post	PhD	Masters (MA/MSc/MPH/MMed)	MBChB/MD
Epidemiology and Biostatistics					
Professor	1	0			
Associate Professor	2	2	1	2	2
Senior Lecturer	2	2	1	2	1
Lecturer	4	1	1	1	
Assistant Lecturer	4	1		1	
Adjunct/Fellows	0	2		2	
Teaching Assistants	2	0			
Sub-total	15	8	3	8	3
Health Policy, Planning and Management					
Professor	1	0			

Dept/Post/Title	Establishment	In post	PhD	Masters (MA/MSc/MPH/MMed)	MBChB/MD
Associate Professor	1	0			
Senior Lecturer	2	1	1	1	1
Lecturer	4	2	1	2	2
Assistant Lecturer	4	1		1	1
Adjunct/Fellows	0	5	1	5	4
Teaching Assistants	2	0			
Sub-total	14	9	3	9	8
Disease Control and Environmental Health					
Professor	0	0			
Associate Professor	1	1		1	1
Senior Lecturer	3	3	1	3	2
Lecturer	4	2	1	2	1
Assistant Lecturer	4	2		2	2
Adjunct/Fellows	0	0			
Teaching Assistants	2	2			
Sub-total	14	10	2	8	6
Community Health and Behavioural Sciences					
Professor	1	0			
Associate Professor	1	1			1
Senior Lecturer	2	1		1	1
Lecturer	4	1	1	1	
Assistant Lecturer	3	3		3	2
Adjunct/Fellows	0	1	1	1	
Teaching Assistants	4	0			
Sub-total	15	6	2	6	4
Total – all departments	58	34	10	31	21

Technical and Administrative Staff

Technical staff:

Title of Post	Establishment	Filled
Chief Technician	1	1
Health Educator	2	1
Epidemiology Assistant	2	1
Health Visitor	2	-
Nursing Sister	2	2
Administrative Secretary	1	-
Health Inspector	1	-

Social Worker	1	1
Senior Laboratory Technician	1	-
Technicians	3	2
Total	16	8

Technical and Administrative Staff

Administrative and support staff:

Title of Post	Establishment	Filled
Administrator	1	1
Personal Secretary	1	-
Secretary	1	-
Stenographer	3	-
Copy Typist	2	1
Laboratory Assistant	2	2
Records Clerk	1	1
Machine Operator	3	2
Laboratory Attendant	1	1
Field Assistant	1	1
Total	16	9

Group Employees:

Title of Post	Establishment	Filled
Sanitary Cleaner	1	1
Cleaners	6	6
Drivers	5	2
Messenger	1	1
Demographic scout	1	-
Groundsmen	3	3
Watchmen	3	3
Nursing Aides	6	6
Total	26	22

Physical Facilities Buildings

The IPH currently owns and is housed in the following physical facilities:

Laboratories	6
Lecture rooms/theatres	6
Offices and other rooms	30
Health Centre (Kasangati)	1

The Regional Centre for Quality of Health Care (RCQoHC) is part of the IPH but is currently housed in buildings made available by the Department of Physiology.

In addition to facilities actually run by IPH itself, there are a number of affiliate centres which house IPH programs and activities on a mutually agreed basis. These include:

- Kasangati Health Centre – jointly run by IPH and Mpigi District, located 14 km from Kampala on Gayaza Road, used for community health clerkship.
- Buikwe Health Centre - for practical training in community health clerkship owned by Mukono District (70 km from Kampala, off Jinja Road).
- Mpigi Health Centre – for practical training in community clerkship owned by Mpigi District (32 km from Kampala on Masaka Road).
- Field training sites for MPH program at District Health Offices in Arua, Hoima, Jinja, Kabale, Mukono, Rakai, Rukungiri, Tororo, Busia, Kumi and Iganga.

Equipment and Vehicle Stock as at August 2005

Item	Number
Computers	32
Printers	11
Photocopiers	4
Telephone external lines	7
Telephone intercom system	1
Fax Machines	3
Laboratory equipment	Assorted
Vehicles	9
Overhead projectors	4
Slide projectors	2
LCD projector	5
Video camera	1
Binding machine	1

Financial Resources

The main sources of funding for day to day activities of IPH currently are:

- Government of Uganda - payroll of staff, maintenance of facilities, support for research and dissemination in districts.
- The Rockefeller Foundation - mainly to MPH program core activities but also general logistical support and scholarship support to MPH students and for research.
- USAID - mainly to research activities or support through CDC - Atlanta for disease surveillance.
- UNICEF - mainly for UNICEF/GOU country program implementation, some research.
- Sida – support under SAREC research collaboration to 4 PhD students at IPH and to demographic surveillance site operated by IPH.
- WHO - technical support for research, occasional scholarships to students.
- Bilateral donor agencies - e.g., Italian Co-operation and DANIDA are supporting some field training sites, DfID and Sida supporting various research projects, other bilateral donors may provide scholarships directly to students.

- European Union - mainly support to research through North - South linkages.
- Various other private donors and foundations e.g., Madhvani.

Other sources of funding are:

- Fee paying students.
- Consultancy services by members of staff.

Appendix 4: interview guides

Form 1—Ministry of Health

These questions are to be asked from MoH personnel to assess Public Health needs in Uganda, how these are currently being addressed. In addition, to record perceptions of what IPH is now doing and what is the scope for expanded regional programs in Public Health.

1. Principal Public Health challenges which Uganda faces now and for the near future (5 years)
2. Of these, which are Uganda addressing well or well positioned to address?
3. Of these, which are Uganda not addressing well or not well positioned to address?
4. For which of these does Uganda already have adequate numbers of the necessary Public Health skills in the health sector?
5. And for which challenges does it need additional need either more of Public Health skills which are already represented in the health sector or where new skills are needed (or both)?
6. For the longer term future (5-10) years, what additional Public Health skills will Uganda require?
7. Specific to the MoH, what additional Public Health skills are needed now, or in the near future (3 years) that the MoH does not now have?
8. What Public Health training does the MoH currently run, independent of IPH and other organizations?
9. What is your view of the functioning of the Institute of Public Health?
 - Training
 - Research activity
10. What parts of these relationships are functioning well?
11. Which parts of the relationships are not functioning so well?
12. In what areas could the MoH better utilize the resources of the IPH?
 - training
 - Research activities
13. In which areas could the IPH's better utilize the resources of the MoH
 - training
 - Research activities

14. Relationships of the MoH with other professional schools (such as business, management, medicine).

15. If the IPH were to expand public training programs at a graduate level, what areas or for what cadre do you thinking would be priorities for creating new skills?

16. If IPH were to introduce short courses aimed at middle and senior management personnel to augment existing skills, what would be priorities?

17. Do you have other observations about Public Health skills in Uganda or IPH training in Public Health?

Form 2—Academics (IPH faculty)

This interview guide is to help determine the perceptions among IPH faculty of current training performance and needs, opportunities and barriers.

1. Principal Public Health challenges which Uganda faces now and for the near future (5 years)

2. Of these, which are Uganda addressing well or well positioned to address?

3. Of these, which are Uganda not addressing well or not well positioned to address?

4. For which of these does Uganda already have adequate numbers of the necessary Public Health skills in the health sector?

5. And for which challenges does it need

People with new skills?

More people with standard Public Health skills?

6. For the longer term future (5-10) years, what additional Public Health skills will Uganda require?

7. Who are the major customers for Public Health graduates and how are graduates distributed?

8. In what training areas do the major customers need increased Public Health skills?

9. As the IPH now functions, what are its major weaknesses in respect to **training** undertaken?

10. As the IPH now functions, what are its major weaknesses in respect to **research** undertaken

11. As the IPH now functions, what are its major weaknesses in respect to **service** undertaken?

12. What are the major barriers to expanding—

Research activities?

Training tasks?

Service?

and why?

13. Within IPH where has there been the major innovation and growth in the past 3 years?
Research
Training
Service
14. What are the opportunities for growth in Public Health education in the next 3 years?
15. Where are the opportunities for further growth in
Research?
Service?
16. To realize further growth at IPH, what additional academic resources are needed (human and material resources, structure etc)
17. Do you think there is a market for middle and senior level Public Health management training as a separate Public Health track in IPH?
18. What do you think the potential market for IPH doing short courses are—either for academic credit or continuing education?
19. What do you think the market is for distance education? For whom, and in what?
20. How would you characterize governance issues within IPH?
What are positive aspects?
What are negative aspects?
21. Is there likely to be any change in the next few years in governance issues?
22. How would you characterize governance issues between IPH and the University?
23. In the next few years, which way do you think governance issues are likely to develop?
Better or worse?
24. How would you describe the interactions between the MoH and IPH?
25. How has IPH contributed to the mission of the MoH
Training?
Research?
Service?
26. Has IPH made a contribution to the development of health policy? How?
27. How could this contribution be made stronger? What are barriers to this?
28. What are the School's relationships to other training organizations in Uganda?

Inside and outside of the university

29. What regional relationships exist? And what is their extent in—
Teaching?
Research?
Service?
30. What are the barriers to making these relationships stronger?
31. What overall contribution do you think IPH has made to the health of the people of Uganda?
And in what areas has this been the most pronounced?
32. What other observations do you have on Public Health needs and training in Uganda and the Public Health training provided by IPH?

Form 3—Academics, University administration and University government

This interview guide is to primarily assess the strength of the training programs at the Institute of Public Health, and the capacity of the IPH to take a strong role regionally in the training of Public Health practitioners and researchers.

1. What is your view on the potential of IPH for growth and innovation? How does its growth potential compare to other institutes and schools within the University?
2. How do you assess the relationships between the IPH and the University governance structures?
3. As the structure of the university is likely to change in the future, how do you see this affecting the IPH?
4. Should the IPH wish to develop new curricula which would focus on part-time or distance education for health personnel in East and Central Africa, how difficult would be the approval process for this? Would there be major barriers?
5. What is the mechanism for accepting students from neighboring countries to full programmes?
6. If students from neighbouring countries were to take some course at IPH, but not a full degree program, how difficult would be the transfer of credits back to their home university?
7. Do you have any other comments about the relationships between IPH and the university governance, or the training provided by IPH?

Form 4—Academics, other faculties in the university

This is for interview guide for other faculties which have had or currently have some interaction with IPH, particularly in training.

1. What are current collaborations with the IPH in training or service activities?
2. What do you see as the strengths and weaknesses of these collaborations?
3. Do you see the potential for greater collaborations—in both directions—for the future?
4. What are the barriers, administrative, financial and others which prevent better collaboration with IPH?
5. (for business and management schools) If IPH were to develop a curriculum in leadership and management for health, do you see that your unit (faculty or school) could contribute to its development?
6. Any other observations you have about training Public Health in Uganda or programmes at IPH?

Form 5—Stakeholders, NGOs, Other Service Organizations

This interview guide is to obtain information on how the NGOs view Public Health training, how they see its usefulness for the activities of their organization, and how they perceive needs for strengthened Public Health training in Uganda and regionally

1. What do you see as the major Public Health challenges to Uganda at the present and the near-term future?
2. Do you think the current Public Health capacities of Uganda are adequate to meet these challenges?
3. If not, where are the areas where more capacity is needed?
4. Where in Uganda's health system do you feel the need for additional Public Health capacities are the greatest? Why?
5. How do you view the quality, suitability and quantity of IPH graduates in Public Health?
6. If you feel that more Public Health personnel are required, do you believe that IPH is capable of this presently, or that major changes are required to produce more graduates?
7. Do you feel that there are new skills required now for Uganda's Public Health challenges that are not being currently taught by IPH?
8. If so what would you say should be new skills introduced among graduates?

9. From the perspective of your organization, what additional skills would you like to see Public Health graduates receiving at IPH?

Form 6—Stakeholders—Donors, donor-funded agencies

This interview guide is for the health managers in donor agencies or large donor funded projects. The intent is to find their perception of Public Health needs in Uganda, areas not being addressed well, and particularly, their views on the suitability of IPH training.

1. What do you see as the major Public Health challenges to Uganda at the present and the near-term future?
2. Do you think the current Public Health capacities of Uganda are adequate to meet these challenges?
3. If not, where are the areas where more capacity is needed?
4. Where in Uganda's health system do you feel the need for additional Public Health capacities are the greatest? Why?
5. How do you view the quality, suitability and quantity of IPH graduates in Public Health?
6. If you feel that more Public Health personnel are required, do you believe that IPH is capable of this presently, or that major changes are required to produce more graduates?
7. Do you feel that there are new skills required now for Uganda's Public Health challenges that are not being currently taught by IPH?
8. If so what would you say should be new skills introduced among graduates?
9. Do you see specific barriers in the IPH program or the university system which prevents the Public Health graduates from IPH of getting all the skills they need?
10. If IPH were to expand its curriculum to include advanced training in policy, leadership and management, are there components of this which your organization could support? If so what?
11. Do you believe there are potentials for regional Public Health training programs in East and Central Africa?
12. If so, do you think IPH is positioned to play a leadership role in developing these?
13. What barriers do you see to IPH assuming a leadership role in a regional Public Health training network?

14. Do you have any other observations about Public Health needs in Uganda and Public Health training provided by IPH?

Form 7—Stakeholders, Multilaterals

1. What do you see as the major Public Health challenges to Uganda at the present and the near-term future?

2. Do you think the current Public Health capacities of Uganda are adequate to meet these challenges?

3. If not, where are the areas where more capacity is needed?

4. Where in Uganda's health system do you feel the need for additional Public Health capacities are the greatest? Why?

5. How do you view the quality, suitability and quantity of IPH graduates in Public Health?

6. If you feel that more Public Health personnel are required, do you believe that IPH is capable of this presently, or that major changes are required to produce more graduates?

7. Do you feel that there are new skills required now for Uganda's Public Health challenges that are not being currently taught by IPH?

8. If so what would you say should be new skills introduced among graduates?

9. Do you see specific barriers in the IPH program or the university system which prevents the Public Health graduates from IPH of getting all the skills they need?

10. If IPH were to expand its curriculum to include advanced training in policy, leadership and management, are there components of this which your organization could support? If so what?

11. Do you believe there are potentials for regional Public Health training programs in East and Central Africa?

12. If so, do you think IPH is positioned to play a leadership role in developing these?

13. What barriers do you see to IPH assuming a leadership role in a regional Public Health training network?

14. Do you have any other observations on Public Health needs in Uganda and training provided by IPH?