

Health systems case study:

Health management information systems (HMIS) in Nigeria and Zambia

With the importance of the Millennium Development Goals (MDGs), and the need to measure progress towards reducing in particular maternal and childhood mortality, health information systems are under increasing focus.

HPI has been involved in initiatives to strengthen health information systems in Zambia and Nigeria. In both cases, HPI has partnered with the South African based Health Information Systems Program (HISP) to develop appropriate systems. The approaches adopted in the two countries differ hugely, largely because of differences in their access to technology and other resources. The projects are briefly described below.

HMIS development in Nigeria

HPI and HISP have been providing assistance in the development of HMIS in Nigeria since 2003 as part of the Partnership for Transforming Health Systems (PATHS) programme. This includes work across six states in Nigeria with a population in excess of 30 million people.

Initially the HMIS system was piloted in a small number of Local Government Areas (LGAs) and associated health facilities in Benue, Enugu and Jigawa states, before scaling up across other LGAs in the same states. During this process the international team worked with Nigerian colleagues (national consultants and state-employed HMIS officers) to develop appropriate tools in the form of registers and monthly reports, a small but manageable essential dataset, and to adapt and customise District Health Information System (DHIS) software for the Nigerian context. Once the model and the process of rolling it out were well developed and tested, they could then be introduced across each of the six states.

The process of strengthening the HMIS involved a partnership between the state Ministry of Health and the consultants. This was complemented by intense training of staff at all levels lasting more than three years, to gradually increase their capacity and develop their expertise in a sustainable manner. One result of this partnership has been the development of a local organisation in Nigeria, HISP Nigeria, to support the work.

As experience was gained, lessons were shared at the federal level, resulting in significant adjustments to the

federal HMIS. A particularly important meeting was held in Abuja in August 2006 at which progress in five of the PATHS states, including progress in HMIS development was reviewed. The Federal Ministry of Health was involved in this workshop and was sufficiently impressed by the progress that it asked the local HMIS consultants to provide a proposal for an already-advertised tender for software to be used across all states in Nigeria. The Nigerian HMIS team won the tender, and has successfully completed the first round of training workshops in all states.

Jigawa and Kano states held quarterly Health Information Reviews for reviewing information submitted from LGAs, which proved a successful mechanism for the sharing of experiences. At these meetings staff from hospitals and clinics (usually HMIS officers and primary health care coordinators at LGA level, and record officers or medical officers from hospitals) were presented with printouts of their data from the DHIS, and given 45 minutes to review the data and prepare a presentation on it. The aim was to look at the completeness, consistency and accuracy of the data. Participants were instructed to focus on the attendance and Out Patient Department (OPD) data; and maternity and antenatal care data. Each facility then presented their data, and debated the findings with colleagues and Ministry of Health officials. This led to intense sharing of experiences and best practices, followed by the development of solutions, which were then adopted and followed up at subsequent meetings. Information officers from the hospital brought along their original data, so that they could compare what had been captured on the DHIS.

While significant success has been achieved (for instance reporting rates across the first five PATHS states has risen from less than 25 per cent to approximately 60 per cent coverage of facilities), efforts to strengthen the HMIS have still a long way to go before they can be said to be truly locally sustainable. Particular issues that still require support relate to:

- The institutionalisation of training in information systems with the aim of developing a stock of information workers that are suitably trained in modern information management technique
- The lack of adequate infrastructure in many rural areas, in particular telephone lines and a regular electricity supply
- The lack of regular supplies of paper, which is needed for data collection and reporting.

Health Information Systems (HIS) Development in Zambia

HPI also worked with HISP in Zambia on an HMIS strengthening project funded by the EU. The first part of this project began in February 2007. The existing Ministry of Health (MOH) HMIS database was a rigid, hard-coded access database that had been in use since 1998; it could not easily be adjusted to accommodate new reporting needs presented by, for instance the HIV/AIDS programmes. Therefore the first three months of the project involved customising the DHIS software for the Zambian context. As part of the process, the indicator set has been revised for Zambia, and the data collection tools adjusted to accommodate the increased reporting needs. New data was also added, for instance census data was obtained from the Central Statistics Office (CSO) and imported so as to provide denominator data for many of the indicators. The new HMIS database is called the “Integrated HMIS” database, and serves as a “data warehouse” for a variety of data related to the health services.

Once this initial work had been completed, the revised system was piloted in the Copperbelt Province in August 2007. Training materials were developed and themselves tested during an initial training workshop in Ndola, which included representatives from national level, from each of the provinces, some programme managers, and representatives from the training institutions. These people were then able to support the roll-out of the work to other provinces once the materials had been finalised. In September 2007, another training workshop was held for the Copperbelt district information officers, and data that had been collected in facilities during August was captured in the Integrated HMIS database. Each district information officer received a brand-new, state of the art computer and printer funded by the EU. This roll out of the revised HMIS and associated training will be completed in 2008.



One of the District Information Officers who attended the Ndola training workshop with the chart of the information cycle that he had made.