Round Table Discussion

Information is not only for managers

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The product described by Shaw — a simplified health information system implemented on a national scale — is not new (*1*, *2*). What is interesting is the bottom-up process, as it is quite unusual for systems originating in one district to take hold over a wide geographical area. This may be because some districts are reluctant to use a system designed by other districts or because they do not have the same resources for implementation. Whatever the circumstances, bottom-up processes can produce a variety of incompatible information systems, each competing to be adopted as a national standard. South Africa does not appear to have succumbed to this problem, but it is still not clear if its system really works. It would be instructive to learn more about its reporting rate from institutions. This is a good indicator of an information system's performance as it requires several basic processes to be fulfilled, such as a complete listing of reporting units, compliance with reporting requirements and processes for monitoring compliance. A good reporting rate is also critical to the eventual interpretation of indicators.

Whether a top-down or bottom-up approach is preferred, the design of health information systems requires a clear understanding of why data are being collected; ultimately they should influence the behaviour of those in control of resources in ways that will enable the health sector to achieve its objectives. Data should certainly be used by health managers to plan and monitor programmes, enabling them to allocate resources to priority health problems or populations. The information required for this task, however, is wider than that provided by routine health information systems. Some relevant data systems — for population, finances, and staffing — are managed by other government departments, while some information is collected through censuses or surveys (particularly if many services are delivered through non-government providers). An optimal information strategy needs to consider how the different sources of information will work together. For example, it should be clear about the definitions of indicators and the coding systems used for geographical units. Some form of centrally coordinated approach seems inevitable. Such coordination should not be mistaken as being set up for the purpose of supplying central level managers with information: although they might benefit from information, they rarely have the capacity or authority to respond to large quantities of data. Rather, central coordination is primarily to bring together data from districts so that they can be summarized in such ways that districts can compare their performance with that of others.

Health managers are often ineffective users of information, despite efforts to train them, encourage them or provide them with new information systems. Time and again, inequities or inefficiencies in the use of resources go unheeded. This may be because health managers have little influence over key decisions in government or perhaps because they are not motivated to respond. There is a growing awareness that if we are interested in enhancing the performance of the health sector then external uses of information can carry greater weight than internal uses (*3*). Thus, public disclosure of information can help "politicians, patients and citizens to scrutinize the operations which they are financing" (*4*) and in this role it can encourage managers to be more responsive to their clients' needs. Similarly, information can be used by health managers to lobby external authorities for greater support. If external uses of information have greater impact than internal uses, should not the health sector take this into account when designing its minimal data sets? It may be that the minimal data set for politicians, citizens and the treasury are the same as that for health managers, but not necessarily so. Citizens may be more interested in learning whether basic inputs such as staff and drugs are available, whereas a ministry of finance may be interested in learning whether national development priorities are being delivered. Whatever the final content, minimal data sets need to begin with the key users and uses of information and they should not remain the preserve of health managers. ■

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Indicators for a health information data set in Ghana

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A health information system handles the recording, storage, retrieval and processing of health data. Broadly defined, the health information system should cover such data sources as vital registration, censuses, routine service-generated statistics, population-based surveys and research information, in order to provide evidence for decision-making in the health system.

Assessments of health information systems have given rise to several misgivings. Foremost among them is the fact that multiple data sources are not linked to each other; indeed, different instruments may generate different data on the same person or event. Routine service data are collected with the needs of higher-level programme managers and donors in mind; in addition, they may be incomplete or of doubtful quality, and timeliness can be a problem. Surveys are useful, but they tend to be expensive and donor driven and are often not linked to routine service data. Research data are generally available but are rarely included as part of the health information system because research is conducted outside the scope of ministries of health. Dissemination of the information collected is usually

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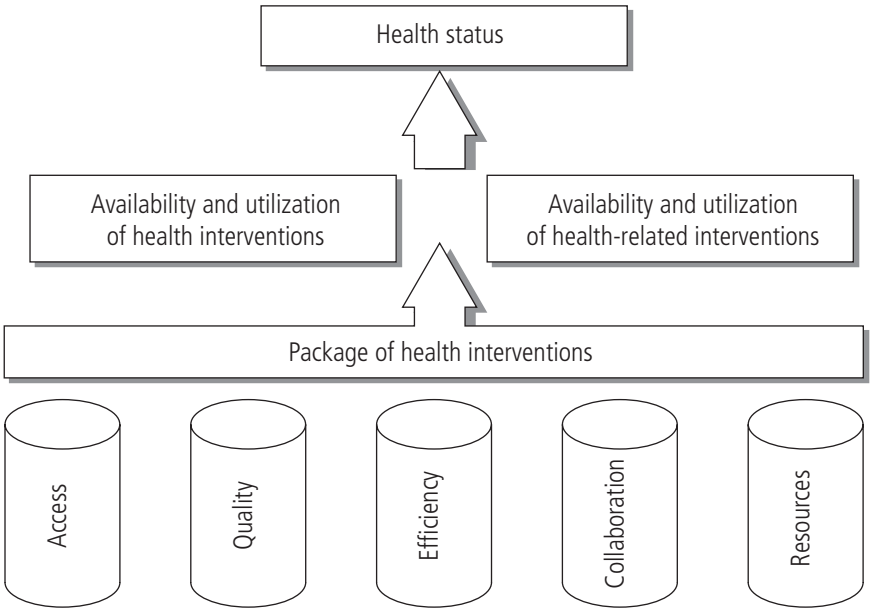
Fig. 1. **Conceptual framework for health sector reforms and information**



weak and its use, particularly in policy-making, is infrequent. Several efforts undertaken to strengthen health information have not taken into account any general framework for designing the information system.

The paper by Shaw describes efforts to correct the multiplicity of data sets in South Africa, especially at the periphery, without describing an overall framework for how this is to be achieved. Even though the process reported has reduced the data set to 100–150 elements and 80–120 indicators, the numbers still appear too large to manage effectively. An overall vision of health information needs in the context of health development is important even at the district level beyond programme managers. The current wave of health sector reforms and health system strengthening will require this broader context for the development and standardization of health information.

In Ghana, a conceptual framework for health sector development (health sector reforms) helped to generate indicators for health information (see Fig. 1). This framework allows data required for policy development, priority setting and programme performance measurement, as well as monitoring and evaluation, to be determined in the sector as a whole. Sector-wide indicators that fell into three main categories were agreed upon; 20 indicators are collected and used at all levels, which does not exclude the use of more indicators at any level.

The three categories of indicator concern: health status, including mortality and morbidity; programme output, covering programme performance in public health and clinical care interventions as well as health-related indicators such as enrolment at school; and systems development, in which a package of five cross-cutting areas of access to care, quality of care, efficiency in the use of resources, collaboration with other sectors (communities, other providers of care, other ministries and donors) and financing of care is determined. Indicators in the first two categories are easily developed but are more difficult to define in the third category, where methods of data collection are also difficult as the indicators do not lend themselves to routine service statistics and surveys may be needed.

The impact of the process adopted in the South African experience is commendable, as it appeared to influence other districts, the regions and national levels. Its impact at the global level is not indicated but, given that global initiatives and donors have major information requirements, a process that links with global development is important.

With this in view, the Health Metric Network initiative is timely. Particularly welcome is the development of a simple framework to define the scope of the health information system. The framework should serve as a diagnostic tool for evaluating the state of a country's health information system, a road map for developing plans for improvement, and a process for monitoring and evaluating progress. Its application at the country level should build on experiences such as that described in South Africa. ■

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A data warehouse approach can manage multiple data sets

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Development of essential national indicators and data sets — or national *standards* — is regarded as the key issue in country health information system reform. Most countries, however, fail to achieve this goal. The reasons are: fragmentation (difficulty in reaching agreement on standards across health programmes); focus on reporting rather than on use of data and information; constantly changing needs (e.g. with regard to HIV/AIDS); and standards that are "cast in stone" (software and paper tools are difficult to change).

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