Health Information Systems in the Caribbean
Time For Attention

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Health Information Systems (HIS) are critical to decision-making across the health sector. Accurate reliable information available in a timely fashion enables prioritizing or health problems, health policy formulation, governance, research, human resource management and financing. The growing importance of cost analyses and cost-effectiveness analyses argues for better HIS in the Caribbean (1–3). In this issue of the Journal, the paper by Cunningham-Myrie on hospital-based information systems in four countries draws attention to existing deficiencies and to the broader matter of HIS.

In the PAHO 1995-1998 Strategic Plan, Sir George Alleyne stated "information is the stock in trade of what we do" (4); a position consistent with the important role of information systems espoused by the Caribbean Cooperation in Health #2 (5). Health Information Systems integrate data collection, processing and reporting. Information should then be used to improve the effectiveness and efficiency of health services through better management at all levels. Operationally, the framework of HIS includes all resources, organizations and actions to achieve the above (2, 6).

There are four key functions to a health information system – data generation, compilation, analyses and synthesis, and finally, communication and use – perhaps the most important function. Information is of no value if it is not available in a format that meets the needs of the user. Limited access and use diminishes the value (7). When data/information goes up but rarely comes down, data collectors are less likely to appreciate the value of their work

Population needs, health systems, scientific knowledge and disease patterns are constantly changing. Consequently, information generation must be continuous; not a static or 'one off' process. Several levels and domains of information exist including health determinants, inputs, outcomes and health/social inequalities. Some of the data is outside the health sector. Population data, collected through surveys (periodic and special), information on individual beliefs, behaviours and practices, information on what is needed, what is cost effective and what are the critical elements for public health programmes, are part of HIS.

A current problem is excessive data collection in multiple, poorly coordinated subsystems in healthcare (7, 8). Each health programme tends to develop its own HIS without the necessary linkages and sharing of data as identified in the Cunningham-Myrie paper. Donor-assisted programmes each have information-generating components on which continued funding is dependent. Global initiatives such as the Millennium Development Goals and associated poverty reduction programmes, and those concerned with HIV/AIDS, tuberculosis, malaria and vaccines/immunization, are examples (9).

Developments in information technology have catalyzed growth in health informatics which now draws upon various disciplines, methodologies and technologies (10). Despite increasingly available systems and programmes to convert health data into health information, and which facilitate cyberspace links and information exchange between institutions, there is a need for these in the Caribbean as identified by Cunningham-Myrie. There is no universal formula for the combinations a country should use (8). Best combinations should be based on existing data sources and available resources. Establishing and maintaining HIS (not always seen as a priority) can be a major expenditure with significant utilization of human resources.

Recent evaluations of the progress of countries in achieving the Millennium Development Goals (which are heavily health-oriented) have highlighted the gaps in HIS as has the Cunningham-Myrie paper (9). In some Caribbean countries, basic systems such as the registration of births, deaths and causes of death are inadequate (11). In others, there are problems with the completeness and validity of the data, engendering mistrust of the data (6, 7). There are issues of the links, or lack thereof, both within countries and between countries at PAHO and CARICOM level. Improving the system is necessary but will be challenging.

Building appropriate HIS requires long-term sustained effort by committed persons. Improving HIS entails the creation of a 'data use culture' and the recognition by health staff in all levels of the health system of their critical roles in HIS. Training and sensitization will be important in capacity-building initiatives to enhance health information systems.

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