

E.4. Health Information Infrastructure and Organizational Issues

These components are poorly developed in the Region. They require clear responsibility and accountability structures, setting of objectives and targets for individuals and departments, and mechanisms for motivating people and for providing feedback about their achievements.

Lack of organizational rationality, limited organizational skills, and inability to manage and use information for decision-making constitute significant issues. Illiteracy is a barrier to the growing area of consumer-oriented health applications or “consumer informatics”, the basis for individual access to health information and self-help. Adequate institutional infrastructure requires the presence of a framework that allows information to be used in a way that encourages individuals to take advantage of existing data according to their particular needs and the objectives of the organization.

A recent survey of the health information infrastructure in the Region revealed major problems and constraints related to data collection, information utilization and dissemination, and the capacitation of human resources. The survey (PAHO/WHO Health Services Information Systems Resources Survey), conducted in 1996, had the objective of determining the status of development of the information function in the Region, including organizational development and infrastructure. Key informants in twenty-four countries responded to the survey.

E.4.1. Data Collection, Processing, and Information Utilization

Data capture and its accuracy represent the most serious problem in the operation of information systems, and major stumbling blocks confronted by systems operators relate to the quality of data sources and timely data collection and recording. An analysis of the degree of development of nine core information systems functions studied by the PAHO/WHO Health Services Information Systems Resources Survey showed that nearly all countries conduct systematic health data collection, recording, and archiving, based on norms and standards defined at the national level (Table 1).

Most of the information collected refers to services provided and epidemiological surveillance. In two-thirds of the countries it was considered to be of intermediate level of detail and data organization, in about one-sixth to be of low level of detail and data organization, and in only 12 to 16% of cases considered to be advanced. Significantly, data related to users and their families, the environment, health risk factors, user satisfaction with health services and violence to women and children were not collected or sporadically collected in about two-thirds of the countries surveyed. When data are processed and information is available, its utilization by health professionals is another important problem. Of the seven areas of application studied, the level of information use was reported consistently as absent or low. In the area of service evaluation and support to service operation, the level of utilization was considered to be intermediate to advanced in one-third of the countries. Significantly, very little use is made of data in the areas of clinical decision-making, cost of service, and clinical and administrative research (Table 2).

Table 1. Degree of Development of Nine Core Information Function Activities in Twenty-four Latin American and Caribbean Countries in 1996 Categorized by Level of Detail and Data Organization and Expressed as Percentage of Respondents

CORE INFORMATION FUNCTION	ABSENT	LOW	INTERMEDIATE	ADVANCED
Systematic data collection following national standards	4.2	20.6	62.5	12.5
Recording and archiving	4.2	12.5	66.7	16.7
Information about services provided	0.0	20.8	62.5	16.7
Information about users and their families	29.2	50.0	20.8	0.0
Information related to epidemiological surveillance	0.0	12.5	75.0	12.5
Information about the environment	12.5	41.7	37.5	8.3
Information about health risk factors	20.8	50.0	25.0	4.2
Information about violence (women and children)	20.8	70.8	8.3	0.0
Information about user satisfaction with health services	25.0	54.2	20.8	0.0

Table 2. Utilization of Data and Information by Areas of Application in Twenty-four Latin American and Caribbean Countries in 1996 Categorized by Level of Utilization Expressed as Percentage of Respondents

AREA OF APPLICATION	ABSENT	LOW	INTERMEDIATE	ADVANCED
Type of service provided	16.7	62.5	16.7	4.2
Support to service operation	4.2	58.3	33.3	4.2
Clinical decision-making	25.0	50.0	25.0	0.0
Evaluation of service processes	12.5	54.2	29.2	4.2
Evaluation of staff performance	33.3	41.7	25.0	0.0
Cost of services	45.8	29.2	16.7	8.3
Clinical and administrative research	37.5	50.0	12.5	0.0

Countries are confronted with continuing constraints in their infrastructure for the generation, analysis, summarization, reporting, communication, and especially in using health data and information for the better management of their health programs and services. In summary, the following problems and constraints characterize most of the information systems in the Region:

- Requirements for data recording and reporting by service staff are excessive in that much of the required data are not used in the tasks they perform in case and facility management, with the result that there is an unnecessary recording and reporting burden on service staff.

Such extensive reporting also leads to great amounts of data accumulating at all levels of the system, little of which are analyzed and used;

- Lack of awareness by health policy-makers and program managers of the strategic importance and practical usefulness of health information for planning and management results in low demand for information;
- Data routinely reported by health services are considered of dubious quality in terms of validity and completeness, and therefore are frequently not relied upon;
- Data on the health of those without access to services, or who use private sector services are missing from government-run health information systems;
- There is increasing use of general and special-purpose surveys, often supported by international agencies, to capture data, some of which should be available within routine reporting systems. Such surveys further lessen reliance on the routine data;
- In many countries, disease surveillance systems do not function adequately;
- Data capture at the point of care, and data entry or recording in manual or automated databases represent two significant problem areas in health data management;
- Despite considerable investment in computers and data processing, inadequate use is being made of available technological options for the better management and communications of health data;
- Various departments, programs, and institutions within the health sector tend to develop their own data collection systems. Effective coordination of health information is often lacking, which results in duplication and gaps in data collection, reporting, use, and management;
- Analysis, reporting, and feedback of health data and information from the central level to the services are rare and not well prepared, and reports to international agencies are inconsistent and dominate the indicators promoted by the agencies, which may not be relevant for national use;
- The greatest need remains the establishment of information systems that enable the recovery of patient-oriented, problem-oriented, and procedure-oriented data to assist in the assessment of the impact of health services on the health status of individuals and populations.