

7. At the present time, most national legislation makes a distinction between ordinary sickness and injuries and those related to employment. Usually, more favorable benefits and more complete medical care are accorded to work-related illnesses and injuries. Benefits for the latter are usually financed entirely by the employer, whereas insurance for ordinary sickness and injury is shared between worker and employer. It is open to question whether continuing to make a distinction between these risks is necessary or desirable. Why should the treatment or compensation be less in one case than in the other? Frequently, long and costly litigation is required to determine the origin of an illness or injury. Elimination of the distinction would have as a central aspect the adequate design and implementation of occupational health programs, as well as their integration in the overall development of health services.

## CONCLUSIONS

In the face of budgetary limitations on the medical services provided by the ministry of health, it is natural that consideration is being given to the relationship of social security to medical care in the English-speaking Caribbean. Feasibility studies have been done in some coun-

tries, and steps toward a closer relationship have been taken in a few. Nevertheless, wider and more systematic research is required, not only on economic and financial implications but also on the best alternatives for organizing and providing services so as to incorporate advances in medical and health knowledge and at the same time rationalize their utilization.

Quality medical care is everybody's concern and right, but, like so many other benefits, it has a price—and a constantly increasing one. Thus, new sources of revenue are needed by the ministries of health. A small additional contribution from the salaries of the employed population might be a practical way of breaking the bottleneck of medical care and giving the ministries of health a financial "shot in the arm" to enable them to provide better organized, more efficient, and more effective medical services to the population of the English-speaking Caribbean.

In pursuance of policy decisions by its Governing Bodies, PAHO is prepared to continue cooperating with social security institutions in Member Countries in this endeavor, and also to coordinate its efforts and resources with other international agencies to support national actions to achieve these goals.



# Prevention and Control of Hospital Infections in Latin America and the Caribbean

The Pan American Health Organization/World Health Organization, in a

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joint effort with the Society of Hospital Epidemiology of America (SHEA), organized the Regional Conference on Prevention and Control of Nosocomial Infections. The meeting was held at PAHO/WHO Headquarters in Washington, D.C., from 11 to 15 December 1989, and was attended by professionals from

Argentina, Bermuda, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Ecuador, Guatemala, Jamaica, Mexico, Panama, Peru, Puerto Rico, Turks and Caicos Islands, United States of America, Uruguay, and Venezuela.

One of the objectives of the meeting was to propose mechanisms for promoting standardization in this area among the ministries of health in the Region. To that end, recommendations were made regarding the implementation of hospital epidemiology programs in the PAHO Member Countries and methods and procedures for guaranteeing the quality of hospital medical care. In addition, mechanisms were discussed for establishing, with SHEA's support, a regional network for the exchange and dissemination of procedures and standards for preventing hospital infections and for improving the quality of medical care in the approximately 15,000 hospitals in the Region.

## PRESENTATIONS

To inform the Member Countries about recent advances, reports were presented on the following topics: the historical and current development of hospital epidemiology, including hospital infection programs and the costs and consequences of hospital infections; microbiological resources and techniques useful for hospital epidemiology; methods for gathering, validating, and analyzing surveillance data at the national, regional, local, and hospital levels; problems of disinfection, sterilization, and hospital waste treatment; mechanisms of nosocomial transmission of pathogens and isolation systems; the health of hospital workers; the impact of AIDS on hospital services, including control of the blood supply, ways to prevent contamination of staff, patient screening, and institutional policies regarding seropositive individuals; infec-

tions among high-risk patients and those in intensive care units, and infections associated with abusive utilization of invasive devices; the epidemiology and control of resistance to antibiotics; and prospects for controlling hospital infections in developing regions.

In addition to the above presentations, some of the participants delivered reports on the status of hospital infection control in their respective countries. These reports are summarized below.

*Argentina.* Programs for the control of hospital infections in Argentina have been affected by physical limitations related to the buildings in use; financial difficulties that limit the acquisition of materials; operational difficulties linked to lack of standardization and lack of compliance with existing standards; and insufficient education in the area of infection prevention. Motivation, training, and improvement in the knowledge and skills of staff at all levels (auxiliary, technical, and professional) is essential, and national programs must be developed for health professionals, with training beginning at the undergraduate level. Hospital-based programs for infection prevention and control should be established. Efforts to prevent AIDS transmission have stimulated such programs, but these efforts must form part of a more comprehensive approach.

*Brazil.* The national program for prevention and control of hospital infections began in a few hospitals in 1976, but it was not until 1983 that the Ministry of Health implemented a national human resources training project, with the support of PAHO. In 1987, 44 training centers for hospital personnel were accredited for the 5,929 hospitals in Brazil. The national program supports seminars and conferences on preventing hospital infections and also fosters the establishment

of "control committees" in the hospitals; in 1980 a study revealed that only 2.3% of the hospitals had such committees. Activities for the 1990s will include, among other goals, a study of the extent of hospital infections, review of the personnel training policy, and increased dissemination of reports on this subject.

**Colombia.** Although a policy of surveillance and epidemiological control of hospital infections was established a decade ago, awareness of its importance has not been enhanced. Hospital infection rates range from 5% to 25%. The Ministry of Health has prepared manuals for the control of hospital infections, established legislation making infection control committees mandatory in all hospitals nationwide, established a National Control Commission, and provided training for hospital personnel. As part of this effort, research was carried out on the use of antimicrobials, which led to an increase in courses on the rational use of these agents. A program has been designed to evaluate nosocomial infection prevention and control activities in hospitals and clinics in Bogotá, Cali, Cartagena, and Medellín.

**Costa Rica.** In 1977 the Social Security Fund, which has authority over Costa Rica's hospitals, called for the establishment of infection prevention committees, under the supervision of a National Commission. The following year, with PAHO support, the first course on prevention of hospital infections was organized for hospital staff. However, in 1989 a survey revealed that only 12 of 26 hospitals (46%) have prevention committees. Hospital infection rates were found to vary from 1% to 16%. Improvement is hampered by lack of compulsory regulations that prevention committees be established and maintained; lack of a policy that places priority on controlling hospi-

tal infections and establishes goals for the allocation of human and material resources; and lack of continuing education programs in this area for hospital personnel.

**Chile.** It is estimated that the overall rate of intrahospital infections in Chile is 4.5% per year. National control activities were begun in 1980 with the establishment of a National Commission. In 1982, a nurse was designated in each hospital for activities related to surveillance, control, and registration of intrahospital infections. The team was expanded in 1986 to include an epidemiologist and a microbiologist. In addition to information on incidence, the hospitals analyze cost, mortality, epidemic outbreaks, and resistance to antibacterials, and perform special studies on invasive procedures. Evaluation has revealed the need to improve training in hospital epidemiology, improve the surveillance system, establish an employee health program, incorporate new diagnostic technologies, provide training to the health team, and establish a hospital evaluation program.

**Cuba.** Studies on intrahospital infections done in the 1960s found rates ranging from 1.5% to 54%. In 1968 the first infection prevention committee was established in a hospital; in 1970 this structure was extended to all the country's hospitals by a decision of the Ministry of Public Health. A national program was set up in 1983, and the National Laboratory on Hospital Infections was established in 1988 to control antibiotics, disinfectants, and sterilization methods. One nurse is in charge of prevention and control of infections for every 300 hospital beds, and hospital epidemiology departments are being set up. Present rates of hospital infection are 6.5% for surgical hospitals, 4.8% for maternal and child hospitals, and 5.2% for pediatric hospi-

tals. For intensive care units, the overall rate is 24.3%. Plans are in place to establish model antibiotic use hospitals, improve laboratory testing, and review and update national standards in this area.

**Ecuador.** The national program for the control of hospital infections was begun in 1985 with the publication of a manual of standards and procedures by the Ministry of Health. However, it was 1988 before a committee on the subject was set up within the National Epidemiology Bureau. Very few hospitals have established infection control committees, and where they do exist, they do not have the necessary authority to implement corrective measures. Although appropriate training is provided to personnel in some provinces, there is still a need to establish coordinated national and regional commissions with the authority to exercise control and correct shortcomings.

**Guatemala.** Activities for the prevention and control of nosocomial infections were initiated in 1979 with the organization of committees in some hospitals. In 1986, the Department of Epidemiological Surveillance identified underregistration, lack of information, and epidemic outbreaks as problem areas. The lack of a National Commission was also felt to be a shortcoming. Standards for epidemiological surveillance in hospitals have been formulated. In 1988, courses were first given on hygiene and epidemiology, and a manual of procedures was produced in 1989.

**Mexico.** The National Institutes of Health established a Priority Program for the Control of Intrahospital Infections, and a uniform hospital surveillance and control system has been organized. Surveillance in a general hospital in the state of Veracruz revealed a 6% rate of hospital infections, with nosocomial patients hos-

pitalized an average of 10 days longer than other patients. Mortality in this group was 12%, compared with 5% overall hospital mortality. Results in other hospitals show a 9% to 10% nosocomial infection rate. In addition to the surveillance system, the Mexican program includes an infection control committee, which has established standards and policies, and a continuing education program for staff. This infrastructure will support the training of the human resources required to further develop and expand the program, despite the practical difficulties being encountered in maintaining the quality of medical care.

**Uruguay.** At present there is no national program for the surveillance and control of hospital infections. Data from four hospitals reveal infection rates of 4% to 25%. No guidelines exist to assess the situation; when developed, they should be applied in all the establishments to enable comparison.

**Venezuela.** In 1981 the Ministry of Health and Social Assistance issued a resolution creating infection control commissions in public and private hospitals, coordinated by a national commission. In 1986 a seminar on the subject was held, with PAHO support, for directors, professionals, and technical personnel. More recently, the epidemiological surveillance system, which monitors the frequency and occurrence of hospital infections in both public and private establishments, has been improved. Report forms for notifying outbreaks of hospital infections were designed, and training courses were provided in medical schools and schools of public health. In 1988 the National Technical Commission for the Prevention and Control of Hospital Infections received complete information from 42 hospitals indicating infection rates of 10% to 15% of all patients discharged.

## RECOMMENDATIONS

The following are the main recommendations proposed by the representatives of the countries attending the conference:

1. Organize a survey to assess the situation in each country in the Region, similar to the assessment carried out by WHO in Europe and Asia.

2. Maintain the current national commissions for the prevention and control of hospital infections and establish them in countries where they do not yet exist.

3. Regulate the operation of health establishments. To be accredited, they should have a program that includes an infection control committee, with multidisciplinary participation; daily notification, with monthly reports; active surveillance; and procedures for infection prevention and control.

4. Place priority on the establishment of an epidemiology unit in hospitals.

5. Establish national and regional centers that offer periodic courses in hospital infection prevention and control.

6. Include the topic of hospital infections in health sciences curricula, and establish continuing education courses.

7. Promote organization of the Latin American and Caribbean Society for the Prevention and Control of Hospital Infections.

8. Request PAHO to promote a meeting of experts to prepare a document that identifies standards and procedures for preventing and controlling hospital infections in Latin America and the Caribbean.

9. Periodically distribute updated information on nosocomial infections.

10. Hold a regional working meeting in the near future to define policy and plans of action in this area.

11. Carry out joint/cooperative epidemiological research projects among the government and university health institutions in the countries.

12. Request the collaboration of the Latin American Federation of Hospitals on this topic, to guarantee the quality of medical care and reduce costs.

13. Identify microbiology laboratories of recognized excellence and effectiveness to serve as regional reference laboratories for ensuring quality control.

14. Support use or establishment of national reference laboratories in order to obtain an improved assessment of hospital infections.

15. Ask PAHO to facilitate the attendance of experts from the countries at international courses and conferences, to enable them to reinforce and expand their knowledge of the subject.

16. As part of the national commissions on hospital infections, create working groups in each country on the control of antibiotics in order to standardize the diagnosis of resistance in the countries' laboratories, identify national laboratories with the capacity to determine resistance, and establish an information network on sensitivity and resistance to antibiotics.

17. Permanently include the subject of prevention and control of hospital infections in meetings, workshops, and other activities related to local health systems and the quality of medical care.