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## The Relationship Between APIC and SHEA: "Closely Watched Trains"

Aside from the Hospital Infections Program of the Centers for Disease Control (CDC), the major organizations in the United States that focus mainly on the control of nosocomial infections are the Association for Practitioners in Infection Control (APIC) and the Society of Hospital Epidemiologists of America (SHEA). This editorial will examine the current status and future directions of infection control, present historical perspectives of APIC and SHEA, and explore the current and possible future relationship between the two organizations.

Nationwide outbreaks of infections among hospitalized patients in the 1950s and 1960s led to programs by the American Hospital Association (AHA), the CDC, and the Joint Commission on the Accreditation of Hospitals (JCAH) designed to control and prevent nosocomial infections. Persons specially trained at CDC used epidemiologic techniques to identify, document, characterize, and reduce the risk of nosocomial infections. Due in large part to JCAH requirements for accreditation, infection control programs became a regular part of hospital organizational structure. Components of such programs included (1) a specially designated person, usually a nurse, who performed surveillance, documentation and teaching, (2) a committee, and (3) a chair, who may or may not have had prior training in infectious diseases. The CDC examined the value of hospital infection prevention and control programs in its Study on the Efficacy of Nosocomial Infection Control (SENIC), the first national assessment of this infection prevention strategy. The study showed that programs containing (1) intensive surveillance and control activities, (2) a trained, effective

infection control physician, (3) an infection control nurse for each 250 beds, and (4) a system of reporting infection rates to surgeons, reduced infection rates by 32%.<sup>1</sup>

Under the latest federal effort to control health care costs, hospitals are reimbursed a fixed amount based upon diagnoses for each patient admission. Nosocomial infections increase hospital stay and cost, but 50% of the diagnosis-related groups (DRGs) do not allow for any complication or co-morbidity.<sup>2</sup> Even for those DRGs that do provide additional reimbursement for a complication, the additional funds may well not cover the total additional costs. For example, a postoperative wound infection doubled the hospital stay and cost.<sup>3</sup> But, as pointed out in examples presented by Farber,<sup>2</sup> a wound infection complicating a laminectomy actually increased the reimbursement by only 24%. In the current economic climate, it seems reasonable, as Wenzel suggests,<sup>4</sup> that hospitals with effective infection control programs may have an economic advantage under the existing prospective payment plan. However, a note of caution was sounded by Fuchs and Gustafson who observed that significant changes in infection rates could not be attributed solely to the infection control program, but to other factors associated with the impact of DRGs, including decreased utilization of laboratory services and decreased length of stay.<sup>5</sup>

When the Association for Practitioners in Infection Control (APIC) was founded in 1972, the goals were to establish a communication network for persons involved in infection control, to provide for education in the field, and to standardize the practice of infection control. The *American Journal of Infection Control (AJIC)*, *Chapter Update*, and *APIC News* were established to improve communication. For education, APIC sponsored workshops, seminars, and conferences, including the Annual Educational Conference. Perhaps the most important contribution to education however was the *APIC Curriculum for Infection Control Practice* (Dubuque, Kendall-Hunt), published in 1983. This document was based on the standards of

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knowledge thought by APIC to be essential to the practice of infection control. The Certification Board of Infection Control was established by APIC in 1981 and since 1983 has offered examinations for certification. Both the *Curriculum* and certification address the goals of standardizing the practice of infection control and of educating practitioners. Membership in APIC increased from 285 persons in 1972 to 5,794 in 1980, each year's total representing an increase of 20% to 90% over the previous year. In 1981 APIC membership declined abruptly for the first time.<sup>6</sup> Since 1982, the membership has grown at a rate of approximately 4.2%, with a high of 7.0% in 1984 and a low of 0.5% in 1986. The 1986 membership total was 7,042 persons (personal communication, Emily Rinehart, RN).

The April 1986 issue of *AJIC* contains the 1985 APIC position paper that pointed out that epidemiologic principles and practices used in infection control could be legitimately applied to analysis of outcomes other than infections in health care institutions. As such, infection control personnel constituted a unique resource in institutions, oftentimes the only persons with specific training and expertise in epidemiology. While emphasizing and reinforcing the strengths and value of traditional infection control practice, the paper called for an increased consultative function of the infection control practitioner (ICP) and a broadened application of epidemiologic principles and methods to include other aspects of quality and appropriateness of care. The paper also called for a commitment on the part of APIC to promote this new application and to assist those of its members who might assume expanded roles in their institutions. The August 1987 issue of *AJIC* includes a report of the strategic planning committee, outlining APIC's goals and objectives from 1988 to 1992. In the entire strategic plan, there is no specific mention of the broadened application of epidemiology nor of educational or other APIC support for ICPs who may wish to expand their roles beyond infection control in their institutions. The plan does include a needs assessment to determine the educational needs of advanced ICPs; this tactic was rated B, with A being the most urgent priority rating.

The Society of Hospital Epidemiologists of America was founded by a small group of persons attending the 1980 meeting of the Interscience Conference on Antimicrobial Agents and Chemotherapy. The initial mission of SHEA was to improve patient care through prevention and control of nosocomial infections and to foster a support group to improve the professional standing of hospital epidemiologists.<sup>7</sup> Liaisons were established with organizations of similar interests, including CDC, APIC, American Society for Microbiology (ASM), Society of Epidemiologic Research, and the AHA. SHEA was to provide input to agencies responsible for the development of recommendations and guidelines for infection control, including JCAH and the Immunization Practices Advisory Committee. The membership reached 375 by the end of 1983. Over the past three years, the total has been essentially stable, ranging from 419 to 431 members (personal communication, Bruce Hamory, MD). SHEA

continues to try to meet the needs of university-affiliated hospital epidemiologists, with backgrounds in infectious diseases and epidemiology, and those needs of the much larger group of persons serving as chairs of infection control committees, many of whom have had no specific training in infectious diseases, infection control, or epidemiology.

The exact role of hospital epidemiology within institutions continues to be debated. It has been argued that infectious diseases specialists have no particular training or expertise (and some would say interest) in considerations of adverse outcomes other than infections. Others have stressed the need to broaden the purview of hospital epidemiology, including involvement in such programs as occupational medicine, patient safety, utilization review, and other patient care evaluation programs.<sup>8,9</sup> The September 1985 issue of the *SHEA Newsletter* contained the purpose and philosophy of SHEA and the principal goals for 1985 to 1991. The first goal is to "develop models of hospital epidemiology that incorporate all hospital activities involving data collection and/or analysis."

Both APIC and SHEA have thus expressed support for consideration of expansion of the practice of hospital epidemiology beyond a focus on infection control. Currently, there does not appear to be a great movement in this direction by either organization. Five years ago there were fears that economic constraints imposed by DRGs would lead to substantial reduction of infection control programs with elimination of positions or relegation of surveillance activities to utilization review or quality assurance personnel. These fears have become realities in some institutions. However, the SENIC study, published in 1985, provided evidence supporting the value of traditional infection control programs. Although data collected for the study are now over ten years old and many hospitals were excluded from consideration, results of this study are used by personnel in infection control programs to support, validate, and justify their positions.

The relationship between APIC and SHEA had a somewhat rocky beginning, with a certain amount of suspicion and impassioned rhetoric. Many ICPs, and some hospital epidemiologists, felt that greater involvement by physicians should have taken the form of greater input into existing organizations, such as APIC or ASM. Others expressed initial fears that SHEA would draw physician members away from APIC. Ultimately, however, the birth of SHEA was generally supported by APIC. Over the nine-year period from 1977 through 1985, the physician membership total in APIC has not changed, ranging from 5% to 6%. The current relationship between APIC and SHEA is healthy and growing. The jointly sponsored scientific sessions at the APIC Annual Educational Conference continue to be well received. A SHEA/APIC Task Force on AIDS was formed this spring and is in the process of evaluating its mission and determining how best to serve its respective memberships. Presidents of both organizations now attend each other's board meetings in an attempt to foster the spirit of communication. For the future, joint involvement in research projects and in educational programs for hospital administrators are being discussed.

Because of what I believe to be a unique body of knowledge of epidemiology possessed by infection control personnel within health care institutions, I support the extension of this expertise to consideration of outcomes other than infection. This approach will not be appropriate for all institutions or for all ICPs, many of whom may wish to confine their activities solely to infection control. However, many other ICPs are currently functioning as directors of or consultants to quality assurance, utilization review, or risk management programs. I hope that both organizations will push this expansion of the application of epidemiology, APIC by encouraging certification and provision of educational support necessary to assume new roles, with special emphasis on epidemiology and management skills, and SHEA by supporting the position among its members and eliciting expression of that support within their respective institutions. APIC and SHEA are clearly trains heading ultimately for the same destination and the tracks are getting somewhat closer together.

What is not quite so clear is whether or not they will both pull into the same next station.

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