

By Harvey A. Elder, MD

Infection Control—Into The Next Decade

Profound changes in today's medical care are redefining the practice and profession of Infection Control. These include changes in the practice of medicine and other hospital based healing professions, the decision making process, and the organization and financing of medical care.

1. There are major changes in the attitudes regarding health care. a) Increasingly, hospital based medical care specialists provide for the patient only during a "window" of time, ie, emergency room and intensive care specialists. These care teams, lacking long-term follow up, are without feedback regarding the complications of their "life-saving" and convenience procedures. Thus, they believe "in my hands these are safe. I never see complications." b) Patients are more sophisticated demanding greater voice in their care; however, the care provided is more complicated and patients, aware they do not understand the issues, are intimidated into anxious silence. c) Medicine is more technical and its treatments more reductionistic and objective. Increasingly it views the subjective aspects of care as placebo or worse—irrational.

2. There are major changes in the goals and objectives of curative medicine. a) Prevention of disease (via immunization, hygienic practices, etc.) is less espoused by third party payers, and consequently by medical practitioners. (This at a time when prevention is a major concern for a growing population disenchanted by the healing professions.) b) Science (which was a sacred cow, perceived to promise a fulfilled life free of pain) is blamed for our problems and rejected by many. Because of this rejection, decision making often uses "feeling" and "belief" instead of logic and careful data! Thus, many see what they want, rather than what is. c) Many believe that optimum health care is not available to all. Unfortunate complications are accepted for some patient categories and are not always an impetus to "improve" patient care.

3. There are major changes in the management of hospitals. a) The administrative superstructure has enlarged, with more layers of management between patient care personnel and decision makers. b) The senior decision maker's office may be many miles distant from the hospital. Some are a "day's journey" from the hospital or "light years" away from patients. c) This leaves decision makers

with a truncated picture of the hospital. Often hospital decision making uses dollars for the evaluation tool of "cost effectiveness," while human and social aspects of patient care are ignored.

4. There are major changes in financing health care, especially hospitalized care (DRG, etc). a) These changes make nosocomial infections and other complications fiscal disasters to hospitals. b) Additionally, these changes force hospitals to cut costs by decreasing the number of employees (even of Infection Control personnel) and limiting supplies. c) Such changes probably encourage middle managers to protect their "turf."

These changes increase hospital concerns about all complications of hospitalization (nosocomial infections are only one category of complication) with many staff groups doing surveillance (Infection Control is only one). These changes objectivize patients who are managed by efficient patient care staff utilizing technologic advances to increase their "through-put"; often "intensive care" is intensive monitoring without increased human presence, ie, care! Additional factors challenge and confront Infection Control practice and profession:

1. Compared to simplistic audits, careful epidemiologic studies are costly and complex.

2. Patient based scientific logic of infection control is without "on-line" objective "hi-tech" clout.

3. Infection Control asks our colleges to follow ancient principles little glamorized by modern technical medicine.

Not just health professions generally but specifically the practice and profession of Infection Control will change during the coming decades. If Infection Control continues to do what it has been doing for the past 30 years, it will cease to exist as a profession and its practices will be replaced by others. I believe that Infection Control must identify how it can support health care during the next decade and make fundamental shifts in the profession. If such are done wisely, not only will patient care be improved, but also our profession will deserve to survive.

By the end of this decade what will be the focus of hospital based Infection Control? I believe that the natu-

ral/logical position is at the hospital decision matrix. No longer will Infection Control problems be just infections, rather IC* will provide skills to be used widely throughout the hospital. These skills include: a) problem evaluation by epidemiologic methods, b) problem resolution based upon scientific principles in harmony with accurate data, and c) development of multiple humane options that maintain the dignity of patients and hospital employees. These skills are needed throughout the hospital.

In the model proposed in this editorial, IC develops multiple good/satisfactory options, and administration chooses the best option(s) based upon the political and fiscal costs. IC uses the analytic tools of epidemiology describing the problems in need of resolution and the form the solutions must take. They identify potential solutions based upon scientific principles and consistent with hospital data. The problems associated with implementing these solutions can be evaluated only by people who understand and provide patient care. By separating science from political and fiscal issues this model provides careful solutions and expert resolution of cost considerations.

In this model IC is in charge of all quality assurance including audit, utilization review, etc. IC would provide epidemiologic analysis of patient and constituency related problems in objective and human parameters. Analysis would continue until satisfactory problem resolution was documented. a) IC would do descriptive epidemiology with hospital departments and services. In cooperation with a service or department IC would develop evaluation instruments, provide and supervise data collection personnel and analyze, compile and format these data into tables and charts utilizing their skills in data base management systems. b) IC needs scientific acumen to analyze the literature and develop potential solutions and new techniques. They need excellence in experimental design for testing of outcome effectiveness as well as ease of performance.

IC personnel will always need a firm base in patient care

**IC is used as an interim word to indicate the broader practice as described in this editorial. IC is to be differentiated from Infection Control which is the practice as defined for the past decade.*

so they can evaluate the cost extracted from patients (including families) and employees when implementing new methods. It will be increasingly difficult (though necessary) to hold both the scientific and the human in concert during decision making. As humanist and as scientist in decision making, IC must integrate science with humanism.

IC personnel need skills in communication and motivation so that new procedures and their reasons can be presented in a manner that will stimulate compliance. IC must be able to encourage employees to personally carry responsibility for quality assurance. Thus, IC must possess management and educational skills.

Today, Infection Control is assumed to be knowledgeable in microbiology, antibiotics, epidemiology, statistics and immunization. Future IC will need these plus an understanding of employee health, drug toxicity, iatrogenic complications from many medical areas (ie, diagnostic and therapeutic) as well as of technical matters relating to building construction, sanitation, food management, etc.

IC must become the hospital's resident skeptic. They need to identify problems precisely so the solution can be recognized. They must question what is done and what is proposed to be done. IC must also be human, humanizing the aseptic and frightening. IC needs to be knowledgeable, critical and caring.

Hospitals need descriptive and analytic epidemiology of their problems with scientific and human resolutions presented to administration for decisions based upon fiscal and political considerations. As consultant to administration, only IC can bring epidemiologic, scientific and patient care considerations into focus for each problem.

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