The Newsletter has carried previous reports on the Joint Commission on Accreditation of Healthcare Organizations' (JCAHO) Agenda for Change and its development of indicators of quality of care. SHEA member Robert Haley, MD, Chair of JCAHO's Infection Control Indicators Task Force, updates us with the following two-part report.

JCAHO Infection Control Indicators, Part I

In 1987, as part of its Agenda for Change, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) began a long-term project to develop quantitative indicators of certain aspects of the quality of care provided by its accredited hospitals. Indicator development initially focused on three areas: anesthesia, obstetrics and hospital-wide. The hospital-wide indicator task force was to develop infection control indicators as well as indicators for medication use. After initial meetings of the hospital-wide task force, however, the JCAHO staff concluded that a single task force could not develop indicators in many disparate areas and that, instead, separate expert task forces would be convened to develop indicators for infection control and for medication use.

In January 1990, the JCAHO convened a small group of consultants to explore the development of the infection control indicators. Subsequently, it selected a larger task force (listed in Part II), and the developmental process got underway with task force meetings in April and July, numerous subcommittee meetings and exchanges of drafts and telephone conference calls between. The next meeting is scheduled for late October.

INTENT OF INDICATORS

The first business of the task force was to arrive at a statement of the intent of the infection control indicators to serve as a basis for development. Through a productive dialogue between the JCAHO staff and task force members, the intent of the indicators process was defined to be two-fold as follows: first, to encourage the increased use of outcome measurement by hospitals to improve continually the quality of care that they provide; and second, to make the JCAHO's accreditation process more effective by enhancing its ability to measure the continuous improvement process in hospitals between the triennial surveys.

It is anticipated that hospitals initially will use the measurements internally to identify opportunities to improve infection surveillance and control and to reduce quality-of-care problems. Later, the JCAHO will provide hospitals with interhospital comparisons that can be used to identify further opportunities for improvement or potential problems not detected by intrahospital measurements. Just which data will be transmitted to the JCAHO for analysis and how they will be sent are undetermined at present, although it is clear that some form of computerization will be required.

An important nuance of the program is that the JCAHO does not intend to use thresholds or ranges of indicator rates per se in accreditation decisions. Rather, the accreditation decisions may be influenced by the appropriateness of the actions that hospitals take in response to the comparative rates within intrinsic risk strata. This allows for and encourages the types of epidemiologic evaluation of stratified rates and reasoned action that have arisen in the infection control field.

DEFINITION OF AN INDICATOR

An indicator is a measurement of a hospital process or outcome performed according to standardized written definitions and systematic data collection and tabulation methods that should signal validly areas of clinical practice that potentially can be improved. Indicators are not necessarily direct measures of the quality of care; they should be pragmatic measurements that draw attention to potential opportunities to improve, and either directly stimulate action by clinicians or other staff, or prompt further investigation that leads to improvement.

To be most useful, indicators will be discrete, measurable and clearly described. They will reflect practices agreed to be important to the quality of patient care for a large number of patients, of substantial impact on the health of individual patients and potentially problematic, and, where possible, reflect system-wide performance. Ultimately, they will be formulated in practical terms and will be translated into data elements that can be collected by some combination of standard

clinical surveillance techniques, medical record review, post-discharge follow-up and computer monitoring with a reasonable amount of time and effort.

INDICATOR DEVELOPMENT PROCESS

The first order of business at the preliminary meeting of the small group of consultants in January was to construct a process diagram representing all of the elements of hospital care relevant to infection control to serve as a systematic basis for ensuring that indicators will be developed to cover all important aspects of the process. After a lively debate, however, a strong consensus held that, although process diagrams had been used productively by task forces developing other indicators, these elements were already well understood in the infection control field, and the issues to be addressed by infection control indicators had already been thoroughly identified. Consequently, the further development of process diagrams was tabled, and the consultant group proceeded directly to developing a tentative list of indicators that would measure the most serious of the known nosocomial infection problems for consideration by the full task force. A standardized format for writing infection control indicators also was devised, subject to later revision.

At the first meeting of the full task force in April, the members worked through the initial indicator list and, for each indicator, debated the following six indicator evaluation criteria: the extent to which it measures a known problem; the seriousness of the problem to patients; its applicability to the 54,000 JCAHO-accredited hospitals; its representation of issues that reflect system-wide performance, such as multi-practitioner, interservice and cross-disciplinary coordination; its usefulness in improving care and reducing unwanted patient outcomes; and the feasibility of collecting it reliably, validly and with reasonable cost. At the end of the meeting, subcommittees were formed to focus on the indicators for surgical wound infection, pneumonia, urinary tract infection, bloodstream infection, employee health and indicator data accuracy. The issue of indicators for assessing the hospitals' analysis and use of data to reduce infection problems was left to the entire task force to study for the next meeting. In the subsequent three months, the subcommittee members, working individually and collectively by mail and conference call, developed 12 indicators. These were complied by the JCAHO staff and mailed back to all task force members with a questionnaire for members to use in rating each indicator using the six indicator evaluation criteria.

At the second full task force meeting, the ratings and comments on the 12 draft indicators were studied, and each indicator was thoroughly debated. Through the discussions, five of the 12 indicators were eliminated and four were constructed by group consensus, including two new indicators on how hospitals actually use data collected for other indicators to reduce the rates of nosocomial infections. The latter two indicators also were referred to the JCAHO Department of Survey Processes Improvement for possible inclusion in future survey activities and to the Department of Standards for possible use in future revision or development of accreditation standards. All of the indicators again were referred to their respective subcommittees for further development and more detailed implementation according to a revised indicator description format. Other strategic issues discussed included: further efforts to portray the infection control process in a schematic diagram with which to convey the context of the indicators; a debate over the respective roles of process and outcome indicators, particularly focusing on process indicators to assess the accuracy of hospitals' surveillance data; and the JCAHO's procedures for alpha and beta testing of indicators in volunteer test site hospitals.

REJECTED INDICATORS

These first two meetings of the full task force were distinguished more by the potential indicators that were rejected than by the task force's acceptance of any. For example, the first draft indicator-the hospital's overall nosocomial infection rate-after a thoughtful discussion, was rejected by unanimous vote. It was considered to be too time-consuming to collect because of the need to do continuous, comprehensive surveillance, unlikely to be accurate, and thus misleading to interpret, and unusable for interhospital comparisons because of the lack of a suitable risk index to control for the overall risk of infection of all types.

Other draft indicators that were rejected either at the first or second task force meeting or in subcommittee meetings included the rate of deaths attributable to nosocomial infection (invalidity of attribution to infection, relative rarity, lack of proven risk adjustment), rates of urinary tract infections in the neonatal intensive care unit (narrow applicability and low risk), extended length of stay due to nosocomial infection (limited usefulness), percentage of antimicrobial doses attributed to nosocomial infection (limited usefulness), rates of patients placed in respiratory isolation more than 48 hours after admission (limited applicability), the percentage of patient-care personnel immunized for hepatitis B (already covered by Occupational Safety and Health Administration [OSHA] and state laws) and the rate of sharps injuries in employees (reporting too variable).

The second half of *the Joint Commission Infection Control Indicators will be presented in November's* Newsletter.

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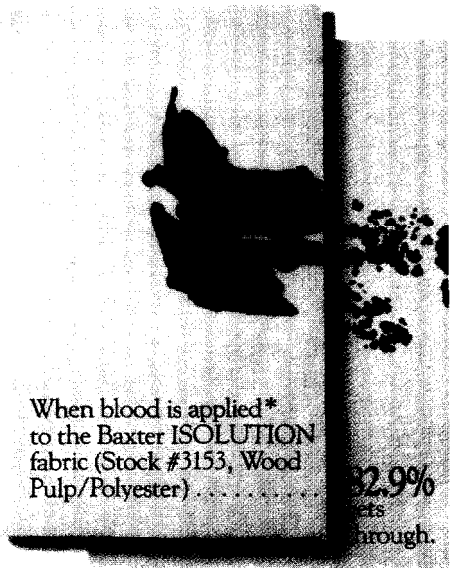

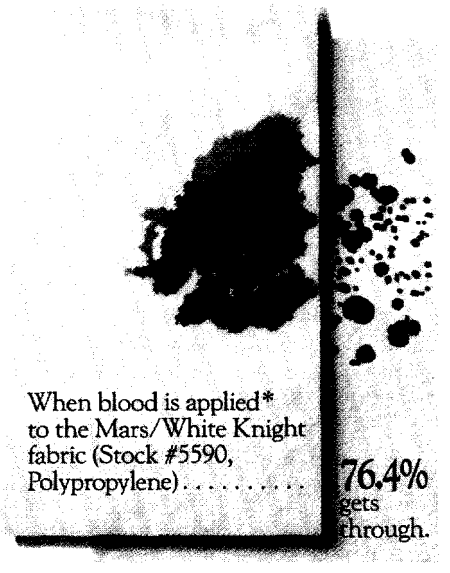

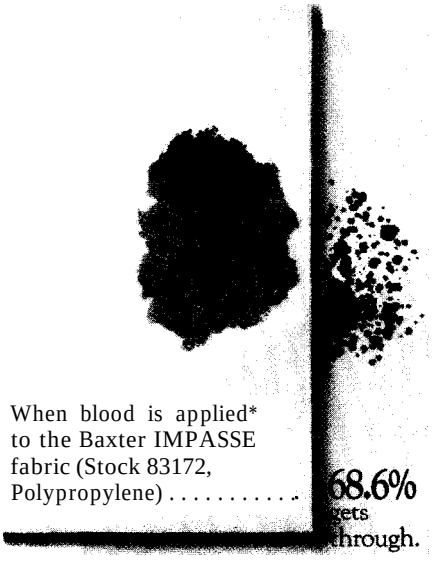

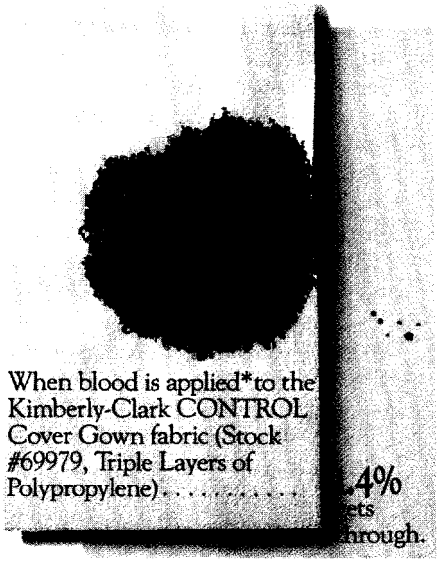

*applied at 0.5 psi of pressure

1 Eisenach, K., T. Yamauchi, B. Johnson, and R. Clarke. 1989. Resistance of cover gowns to microbially contaminated human body fluids. Abscr. Annu. Meet. of Interscience Conf. on Antimicrob. Agents and Chemother., 604, p.202.

2 Klein, B.S., W.H. Perloff, and D.G. Maki. 1989. Reduction of nosocomial infection during pediatric intensive care by protective isolation. N. Engl. J. Med. 320: 1714-1721.

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