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SHEA News

The 1992 Conference for Hospitals Participating in the National Nosocomial Infections Surveillance System, November 19-20, 1992, Atlanta, Georgia

The National Nosocomial Infections Surveillance (NNIS) System began in 1970 when selected US hospitals routinely reported their nosocomial infection surveillance data for aggregation into a national data base. The NNIS system is comprised of 140 hospitals and is currently the only source of national data on the epidemiology of nosocomial infections in the United States. The lessons learned from 20 years of NNIS surveillance have proven useful in advising hospitals on effective methods for conducting surveillance of nosocomial infections. Periodically, meetings are held to discuss surveillance efforts of hospitals in the NNIS system. Over 155 people from 88 NNIS hospitals met at the Centers for Disease Control and Prevention for the 1992 Conference for Hospitals Participating in the National Nosocomial Infections Surveillance System, which was co-sponsored by The National Foundation for Infectious Diseases.

Although updates on a variety of recent developments in hospital epidemiology were discussed at the conference, the following conference highlights on NNIS methods and analyses may be of general interest. The conference began with a discussion of the NNIS analyses of intensive care unit data. The major conclusions of previously published reports from these components remained (i.e., interhospital comparison of overall patient rates and patient day rates from these critical care areas continued to be strongly confounded by average length of stay and device use in the intensive care units). The preliminary but significant findings were the dramatic and steady decrease in mean ventilator-associated pneumonia rates in medical, medical/surgical, and surgical intensive care units over the last six years. In coronary intensive care units, the mean ventilator-associated pneumonia rates decreased over a five-year period, 1987 through 1991 but rose slightly in 1992. However, the mean of the ventilator-associated pneumonia rates actually increased in the pediatric intensive care units. For catheter-associated urinary tract infection rates, the mean decreased only for medical and surgical intensive care units. For central line-associated bloodstream infection rates, no changes were noted in any of the intensive care unit types. Further work is continuing and details will be published at that time.

The highlight of the presentation on Surgical Site Infection (SSI) Analyses was the unveiling of a new method of classifying operations into one of four "risk strata" (low,

New Editors for SHEA News

Beginning with this issue, ***SHEA*** News will be edited by Dr. C. Glen Mayhall of Memphis and two Associate Editors, Dr. Murray D. Batt of Park Ridge, Illinois, and Dr. Edward S. Wong of Richmond, Virginia. The new editors succeed Dr. Robert A. Weinstein of Chicago, Illinois, who brought ***SHEA News*** to its current high level of quality. The new editors are committed to a continued effort to further improve ***SHEA News*** and make it an even more effective communication for the SHEA membership.

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medium-low, medium-high, high) based upon the type of procedure performed and the value of the NNIS SSI risk index (0,1,2,3). In addition to the three risk factors (duration of surgery, ASA score, wound class) that are counted in the NNIS SSI risk index, the operative procedure plays an important role in determining the risk of developing a surgical site infection. For example, a coronary artery by-pass graft operation with one risk factor carries a similar postoperative risk of infection to that of a colon resection with no risk factors. Based upon the procedure and the value of the risk index, NNIS personnel have developed a method of classifying all NNIS operative procedures into one of four strata: low, if the SSI risk is less than 2%; medium-low, if the SSI risk is at least 2% but less than 5%; medium-high, if the SSI risk is at least 5% but less than 9%; and high, if the SSI risk is 9% or more. For example, the rates for cholecystectomies with one risk factor carry similar risk of developing an SSI, as do the rates for gastric surgeries with no risk factors, because both of these are included in the medium-low risk strata. Work is continuing and will be published when completed. In addition, efforts to identify procedure-specific risk factors is continuing for the eight procedures of 40 NNIS operative procedures where the NNIS risk index does not predict surgical infection risk.

The use of these risk factors allows hospitals to combine data from several procedures within the same risk stratum, (e.g., appendectomies and cholecystectomies) with no risk factors in order to calculate a more accurate estimate of their surgical infection rates since the denominator for each hospital will have a larger number of procedures. Surgeon-specific infection rates can also be combined for more accurate estimates. These rates can then be compared to rates from the aggregated NNIS data. The conference included a session on how to compare SSI rates calculated for an individual hospital or surgeon with aggregated NNIS data.

One of the most spirited discussions of the conference occurred in the session on Methods to Obtain Post-Discharge SSI Surveillance Data in the NNIS System. Numerous infection control practitioners commented on a draft protocol for post-discharge surveillance of SSIs, which was sent to all NNIS hospitals in early November 1992. As a result of the discussions, NNIS personnel are reexamining the entire protocol. The major obstacle appears to be the lack of a baseline, also called the gold standard, for comparing the efficacy of the approaches in the protocol. Many practitioners described time-consuming approaches to finding SSIs after discharge of patients, only to find very few infections. Either the infections were not occurring outside the hospital (in contrast to most published reports) or the methods used by practitioners (e.g., contacting the surgeons) were insufficiently accurate to be of value. In addition, strong concerns were voiced about the personnel resources that would be required by the proposed post-discharge surveillance protocol. The suggestion was made to find funding for establishing the "gold standard" to evaluate patients at a specified time after surgery and their discharge from the hospital. Several of the approaches to post-discharge surveillance could be followed concurrently. However, without a gold standard, the value of the draft protocol was seriously questioned.

Further conferences for hospitals participating in the NNIS system are planned; current plans call for the next conference to be held in two years.

OSHA Response to a Query by SHEA Liaison

The Occupational Safety and Health Administration (OSHA) recently provided our liaison, Dr. Michael Decker, with a formal response to a query posed in July. SHEA requested clarification of the employer's responsibility for laundering the personal clothing of an employee in the event the clothing became contaminated with blood, either through failure of personal protective equipment or through unanticipated exposure. OSHA agreed that the standard did not address this situation, and concluded, therefore, that employer citations for failure to launder contaminated personal garments "may be inappropriate." However, if the contamination were due to the employer's failure to evaluate a hazard or to provide appropriate protective equipment, citations "may be issued." OSHA concluded by encouraging employers to provide for such laundering, if feasible.

Brief items of interest for the SHEA News 07 Newsletter may be sent to C. Glen Mayhall, MD, SHEA, Newsletter Editor, Division of Infectious Diseases, Department of Medicine, University of Tennessee, 956 Court Ave., Memphis, TN 38163; FAX (901) 528-5854. Copy should be typed, double-spaced, and should not exceed five pages.

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