Surveillance of Hospital Infections in the United Kingdom

To the Editor:

Surveillance of hospital infections is of great interest worldwide. Over the past three decades, surveillance has seemed to be accepted in the United States and considered to be less important in the United Kingdom (UK). To determine the extent to which surveillance is performed by infection control teams (ICTs) in the UK, a telephone survey was undertaken, Thirty infection control nurses (ICNs) chosen by random sampling were contacted and asked 40 questions relating to the establishment and organization of surveillance, data collection, analysis and interpretation, and dissemination of the results.

All ICNs stated that some form of surveillance was undertaken in their hospital/district health authority. In 29 instances, the protocol was not written or documented. Six different methods were used by the 30 hospitals or districts. Some infection control teams had selected more than one method.

"Alert" organism surveillance was reported most frequently (Table). This involved the follow-up of patients from whom certain species of microorganisms had been isolated (i.e., methicillin-resistant *Staphylococcus aureus, Mycobacterium tuberculosis, Salmonella* species, *Shigella* species). The second most common method was listing microorganisms by ward. In this method, a record of all positive isolates from each ward was noted, and wards were visited when the number indicated that there might be a problem.

Table
Surveillance Methods Used by ICTs

Surveillance Method	No. Teams Using Method
Alert organism	26
Listings of positive microbial isolates by ward	13
Follow-up of positive microbial tests	6
Ward visiting	4
Ward reporting/notification	4
Total continous surveillance	2

The follow-up of positive microbiology tests involved visiting the wards and reviewing case records to determine if the patients had symptoms and signs of infection. Ward-visiting surveillance involved visiting the wards regularly and asking if the nursing staff considered any patients as having infections. For ward reporting/notification surveillance, the nursing staff completed a form for each infected patient and sent it to a member of the ICT Two teams undertook total continuous suveillance that was limited to surgical wound infections. This required the daily review of all records and laboratory reports of patients with surgical wounds.

Only half the of teams routinely undertook an analysis. The information most frequently produced was the number of patients with "alert" organisms in a give time period. Five ICNs produced infection rates that were reported back to the clinical staff; these were for surgical wound infections.

Although the results should be interpreted cautiously, as the sample size was small, they indicate that data on hospital infection are collected by most ICTs. The methods most frequently reported are those to detect potential cross-infection hazards and clusters or outbreaks of infection. However, studies in the United States have shown that only 2% to 4% of nosocomial infection occurs in clusters.[1,2]

The methods reported by this survey have limitations. The follow-up of microbiology tests is dependent on specimen collection and efficient laboratory processing. Ward reporting/notification surveillance requires the nursing and/or medical staff to complete a form and send it to a central agent (e.g., the ICN). Compliance has been found to be low by Cohen and coworkers.[3] Ward-visiting surveillance is dependent on the surveyor being able to confer with the nurse in charge of the patient's care. Total continuous surveillance, although comprehensive, is time-consuming, as it requires follow-up of all patients within a population.

The production of infection rates is becoming increasingly important in healthcare. The use of continuous or targeted surveillance has been shown to be successful in reducing the incidence of nosocomial infection.[4,5] In the UK, ICTs recognize the need for surveillance within the limited resources at their disposal. So that teams can make an informed

https://doi.org/10.1086/646110 Published online by Cambridge University Press

choice of methods, different hospital infection surveillance methods must be assessed objectively.

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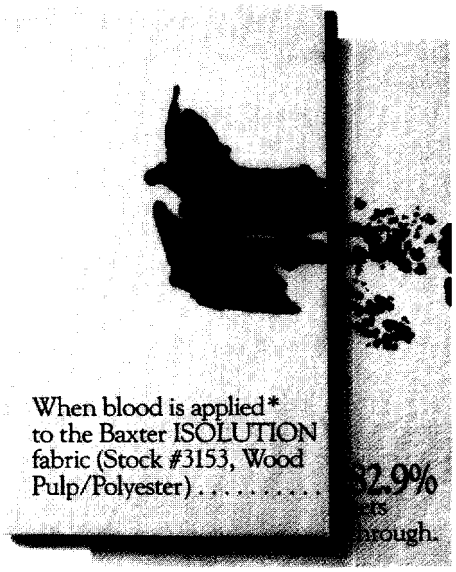

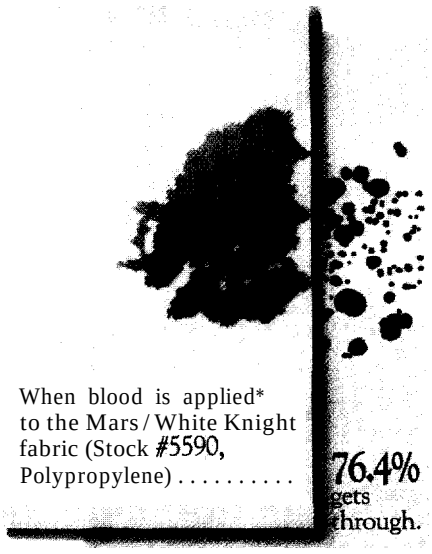

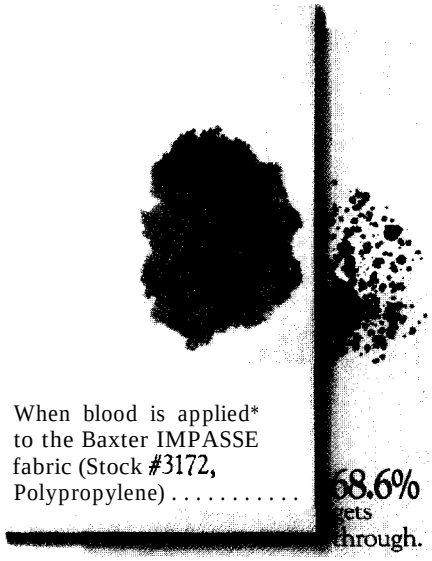

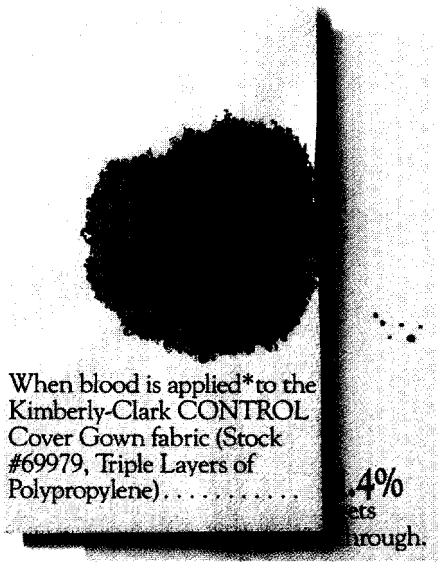

*applied at 0.5 psi of pressure

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

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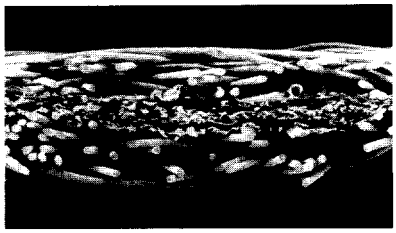

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