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be stored for more than 12 months, and fields can be easily redefined or created by entering codes without thumbing through a manual's appendix. Separate monitoring files can be designed for different objectives, including noninfectious sentinel events, risk analysis and acquired immunodeficiency syndrome (AIDS) registries. The only limitation is the limit of one's mind, imagination and creativity.

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#### **To the Editor:**

Concerning the editorial "Choice of Microcomputer Software in Infection Control" (1990;11:178-179), I found it interesting and informative. However, it refers to two specific software packages available. I would like to make your readers aware of another software package called BOSS (Bug Oriented Surveillance System, Ardmore, Pennsylvania). This infection control software package is excellent. It most definitely meets the criteria of program speed, user friendliness and accuracy. It is a major asset in helping any hospital meet accreditation standards as set by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) in the area of epidemiology. This program was written by Dr. Maryanne McGuckin, 115 E. Athens Ave., Ardmore, PA 19903.

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#### **To the Editor:**

Other software programs currently exist on the market that more than adequately address the new Joint Commission on Accreditation of Healthcare Organizations (JCAHO) standards. I would like to discuss one such program.

In 1987, as the nurse administrator at a 380-bed community hospital in southern New Jersey, I was, and still am, responsible for

our hospital's infection control program. At that time, I felt it necessary to either hire an additional full-time employee or computerize the infection control department.

After a thorough analysis, I elected to computerize the department. I, along with our infection control practitioner (ICP), evaluated numerous software programs, and we elected to purchase BOSS (Bug Oriented Surveillance System, Ardmore, Pennsylvania). BOSS was developed by Dr. Maryanne B. McGuckin. This software program is based upon the McGuckin Method of Surveillance, developed by Dr. McGuckin in the late 1970s.

This particular surveillance methodology is based on current reports from antimicrobial susceptibility testing or microbiology isolate reports. Monitoring of specific bacterial species of a particular institution's nursing units is accomplished for a 26-week period. Distribution of the number of organisms isolated during this period is divided into fifths, or quintiles. The threshold for each bacterial species is set between the fourth and fifth quintile.

When the threshold is exceeded, an epidemiologic investigation is conducted to ascertain if the outbreak is nosocomial or community-acquired. McGuckin's BOSS computerized system can accommodate 30 different nursing units. Each nursing unit can list 15 different pieces of microorganism isolate data. The different isolates per unit are tracked daily during this initial 26-week period. After the 26th week of data collection, the computer calculates a threshold for the respective organism and unit. When further data are entered, should the number of positive isolates exceed the established threshold, two asterisks are noted in the last column listing, alerting the user to a potential problem that warrants further investigation. The calculations occur daily when the data are entered. Reports can be generated at any time.

The efficiency of this system is

that less than one hour per day is spent entering data, and the review is prospective, not retrospective. Thus, problem identification occurs immediately, and appropriate investigation and intervention can be accomplished. Another key aspect of this system is that the entire inpatient hospital population can be monitored consistently. Thus, all patients who are at risk of developing a nosocomial infection are monitored on a daily basis. This system also is extremely user-friendly. Our ICP, who was not computer literate, learned this system in a very short time.

In the fall of 1990, we will update our BOSS system with McGuckin's SWIR (surgical wound infection report) software system. This additional software tracks all surgeons by name and/or code number. This system classifies all surgeries according to the Centers for Disease Control's (CDC's) four surgical wound classifications. The reports from this system also generate the percentage of surgery for each surgeon by the appropriate wound classification.

In April, 1990, our institution was surveyed by JCAHO. I am happy to report that we received a perfect evaluation on our infection control program. There were no contingencies nor any recommendations. In fact, we were complimented by the JCAHO nurse surveyor on having a "sophisticated infection control program." In her words, "Your system really does what all good quality assurance systems should do." I know that this excellent review is a direct consequence of being computerized on McGuckin's BOSS and SWIR software systems. However, good reviews from accrediting agencies are not the only important factor. I know that we really are affecting patient care positively and truly preventing nosocomial infections, which is the primary goal of any good infection control program.

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