Use of a Computerized Clinical System as a Monitoring Tool for Infection Control

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Introduction

The quality of information presented to the team responsible for infection control (IC) is crucial and can significantly impact the effectiveness of care provided by the IC team. We developed tools for organizing the information collected by a computerised patient record to improve the information received and the workflow of the IC team.

1. Methods

Assuta Tel Aviv hospital of the Assuta Medical Centers Network is a 300 bed elective surgical hospital. The hospital performs about 40,000 surgical procedures. The patient record in the hospital is a computerised system (Metavision, IMDsoft, Tel Aviv, Israel) which collects all pertinent data regarding the patients.

We developed tools which collect and organize the data regarding patients who have relevant information to infection control processes. These tools were designed to improve the efficacy and workflow of the IC team.

We created a number of presentation screens:

1. Re-admitted patients in whom a pathogen was isolated on a previous admission trigger an alert to the IC team.
2. Positive cultures of a resistant organism trigger an alert to the treating team including instruction regarding appropriate isolation. When information on a resistant organism is introduced into the system, the system indicates type of isolation needed for the specific pathogen, the required equipment for each type of isolation and the kind of follow up each patient needs.
3. The IC team receives an automated alert and has a layout presenting all patients with resistant organisms.
4. There is automated monitoring of patients with central catheters to follow their duration and clinical data.
2. Results

After implementation of the various tools, we observed a far more effective workflow of the IC team. Location of patients who require intervention became quicker and the time spent to cover all patients with infection control issue decreased from 2 hours to 30 minutes daily.

3. Discussion

In our routine daily work in the infection control team the presentation of credible and accurate data in real time is crucial. Adequate characterization and implementation of such a computerised clinical system using advance technology can provide us with tools that improve routine infection control teams work.