

management

Taking the touch out of healthcare-acquired infections

Infections contracted in health care systems are a significant problem, affecting over 1.4 million people worldwide and up to 10 percent of patients admitted to modern hospitals in the developed world. In 2003 the estimated annual cost to DHBs of treating hospital-acquired infections (HAI) was approximately \$140 million. This does not of course take into account the impact on the individual patients. Recent estimates in Australia put the cost of HAI at \$1 billion per annum and \$5-10 billion in the US. ^{1,2}

A systematic method of collecting, collating and analysing data concerning the distribution and features of a disease or organism is an essential component for an effective infection prevention and control programme.

For UK's Imperial College Healthcare NHS Trust the process has been greatly assisted following the adoption of ICNet in December 2006. Nearly three years on and the Trust, which with five hospitals in west London, 1900 general, acute specialist and private beds and 9146 staff is the largest in the UK, has avoided any significant outbreaks of healthcare acquired infection, despite increases of diseases such as norovirus and influenza.

ICNet is an innovative software package that allows real time collaboration of patient and laboratory data to enable proactive infection control case management and surveillance of HAI. ICNet also provides a powerful tool for the manipulation and analysis required for mandatory reporting of these infections.

Clare Johnstone, an Infection Prevention and Control Nurse at the Imperial College Healthcare NHS Trust, spoke to Infection Control Nurses (ICNs) at a recent national conference in Nelson. Among her key points, getting the Infection Control Nurse back to the point of care is key to successful infection control, and ICNet has enabled that. The following is an adaptation of Miss Johnstone's presentation.

"What we are talking about is surveillance for the patient; surveillance and case management. With the right information, action and interventions, you ultimately improve patient safety.

"In the past we had daily listings from the laboratory systems, which took hours to interpret and document. Records were paper-based, there were delays in informing clinical staff, and it was difficult and time-consuming to identify and manage outbreaks. Audit trails were also time-consuming to document and assess.

"Infection Control Nurses would spend hours in the office, communicating with wards mainly by telephone or brief visit. Minimal time was spent with patients or in providing education.

"In recognition of the challenges this approach posed nationally, the Department of Health and Health Protection Agency in the UK piloted three infection control software systems. We developed a business case for the ICNet option, which offered a case management facility as well as the ability to produce quick and early reports.

"The pilot and interaction with other ICNet users provided the ground work for much of the implementation, which involved the development of interfaces with our laboratory system, the creation of a list of alert organisms and their link to KPIs, training and testing. We went live in December 2006.

"ICNet provided training, which included in-depth training that enabled me to become the Trust's in-house ICNet trainer. Everyone was very supportive of the new initiative and could see the benefits.

"We now have a system for infection control that has a live interface

with laboratory and patient administration systems via a single patient record.

"We set it up so we have three regular downloads from the laboratory each day. This creates an even spread throughout the day creates a more manageable caseload.

"The information is accessible through our web-based internal access via software in the wards as well as tablet PCs. Organism, specimen and antibiogram information is at the ICN's fingertips and expert advice for clinicians and nurses is automatically documented.

"Because the information is instant, we are able to quantify IP&C case loads, document workload and configure alerts in real time. ICNet also gives us the ability to tag patient records so they are immediately visible when re-admitted, thereby reducing cross-infection. An assurance audit trail is generated and mandatory reporting is almost instant.

"ICNet has resulted in 15 hours per week of ICN time being freed up per site. This has in turn led to an increase in direct patient contact and increased education at ward level. As a consequence we are experiencing a reduction in ward outbreaks, with speedy interventions preventing relapses and cross infections.

"In the future we intend to link ICNet to the operating theatre database to expand and improve surgical site infection monitoring. We also hope to connect it to a proposed electronic prescribing system to review and audit antibiotic usage and promote first class antibiotic stewardship.

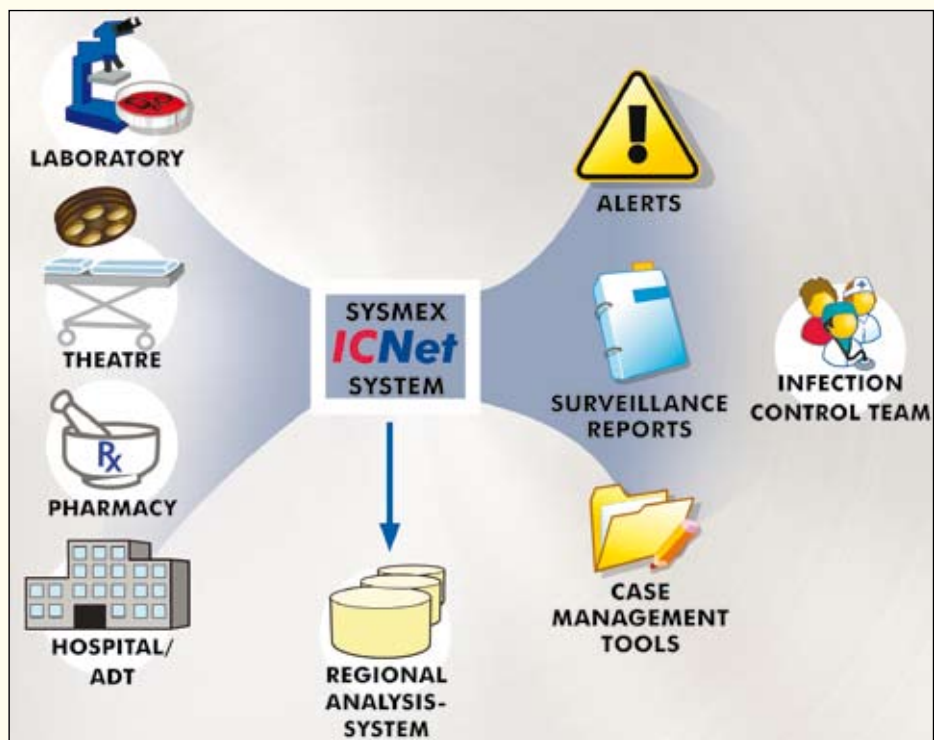
"We have found ICNet to be a very easy system to use with major benefits in having a single record and single documentation. We can now focus on case management, education and assuring patient safety."

This talk promoted much discussion within the ICN community at the Nelson Conference and more details on it can be found at www.sysmex.co.nz and www.icnetplc.com

ICNet automates the collection of laboratory results, surgical and patient admission details into its browser-based display. This gives Infection Control Teams a patient-centric view of all the information.

With real-time alerts and a wide range of reporting and analytical tools, ICNet saves time and promotes quicker, more targeted responses. It has been proven to significantly reduce the incidence of healthcare acquired infection.

ICNet is available in New Zealand through Sysmex New Zealand Ltd.



References

1. Medical News article - <http://www.news-medical.net/news/20090903/Healthcare-acquired-infection-costs-241-billion-per-annum.aspx>

2. Cost of Healthcare-associated infections (HAI) and Hospital Budgets for InfectionControl and Prevention (IC): Just a Drop in the Ocean? - https://dicon.mc.duke.edu/wysiwyg/downloads/HAI_cost_abstract-shea_FINAL_by_Dev.pdf



The power of IT for infection control

“Following the implementation of ICNet in our hospital, ICNs had an average release of 14.5 hours more time per week.”

Senior Matron for Infection Prevention and Control
Chesterfield Royal Hospital NHS Foundation Trust, UK

ICNet provides Infection Control Teams with the intelligence they need - laboratory results, surgical and patient admission details - saving time, promoting quicker, more targeted responses and getting the team back to the point of care.

With over 1000 users worldwide, ICNet is the software of choice for HAI case management and surveillance.



www.sysmex.co.nz