



## **ANOTHER WIN AGAINST SUPERBUGS: *Sunnybrook's Antimicrobial Stewardship Team Collaborate With Care Teams To Reduce Infection***

Toronto, ON (September 15, 2011) – Sunnybrook's Antimicrobial Stewardship program is called Day 3 Reflections and is at the leading edge of this work in Canadian hospitals.

Antimicrobial stewardship programs help hospitals optimize the use of antimicrobials (antibiotic, antiviral and antifungal medications) to maximize clinical cure or to prevent infection, while minimizing consequences of antibiotic overuse, including antibiotic-resistant organisms such as MRSA (methicillin-resistant *Staphylococcus aureus*) and *C. difficile* (*Clostridium difficile*).

'We are all here for the best quality in patient care' is the simple but powerful idea behind Sunnybrook's program – and the key to its success.

The program is a joint project of the Division of Infectious Diseases and the Department of Pharmacy in close partnership with clinical care areas across the hospital.

"From the beginning we wanted the program to focus on a more collaborative, consultative process," says Dr. Nick Daneman, Infectious Diseases Physician Lead, Antimicrobial Stewardship program, and a Clinician Scientist in the Division of Infectious Diseases at Sunnybrook.

"Day 3 Reflections is symbolic of our unique approach and our collective thinking at a time in the patient's stay when generally there is more data and his or her condition is more stable. The stewardship team and the care teams can take a figurative step back, to review and discuss the most appropriate antibiotic use," says Dr. Sandra Walker, Clinical Coordinator- Infectious Diseases and Antimicrobial Stewardship, in the Department of Pharmacy.

### ***Consultative Approach***

To develop the program, the team began by meeting with the physicians and pharmacists of the pilot units – Sunnybrook's three Intensive Care Units. Together they determined how best antimicrobial stewardship could be tailored to the needs of critical care patients. "Throughout our meetings, there was a strong sense of collegiality to operate together to optimize care," says Dr. Walker.

"We developed an active, not a restrictive program, where on a case-by-case basis there is individualized feedback," says Dr. Daneman. "The stewardship team visits the Unit, reviews the patient's story in detail, and discusses suggestions with the critical care team in addition to leaving formal recommendations in the chart progress notes."

"The frontline members of our team and 'face' of antimicrobial stewardship at Sunnybrook are Marion Elligsen (Antimicrobial Stewardship Pharmacist) and Lesley Palmay (Antimicrobial Stewardship Fellow). Marion and Lesley review patients on a

daily basis from Monday to Friday and following consultation with the rest of our team, directly communicate recommendations on our collective behalf,” conveys Dr. Walker.

**Better data. Better Collaborations**

To support this feedback process the stewardship team and care teams view in real time all pharmacy, microbiology and patient care data on SPIRIT (Stewardship Program Integrating Resource Information Technology), a new, web-based software system. This overall mapping serves as a very effective research tool and facilitates more dialogue between the teams.

**Program Success**

Antimicrobial stewardship in the Intensive Care Units resulted in a 21 per cent reduction in broad-spectrum antibiotic use, a 31 per cent reduction in *C.difficile*, and promising reductions in antibiotic resistance rates.

“We have demonstrated significant overall reduction in utilization and reduction in broad spectrum antibiotic use, which relates to lower drug costs,” says Dr. Simor, Chief, Microbiology, and the Division of Infectious Diseases. “More significantly, there is evidence of improved quality of care as indicated by a decrease in some forms of antibiotic resistance and in *C. difficile* infection rates.”

Sunnybrook’s Antibiotic Stewardship program team has been recognized for its work, receiving Ministry of Health and Innovation Awards in 2009 and 2010. “Our success is due in large part to the tremendous work and collaborative spirit of physicians and staff in our Intensive Care Units,” says Dr. Daneman.

**Next Steps**

The goal is to expand the program within the hospital. The team continues to use a dynamic approach working closely with medical and surgical care teams to better meet each area’s needs.

System-wide, Sunnybrook’s Antibiotic Stewardship program team advocates for antimicrobial stewardship education, provides mentorship to other hospitals across Ontario, and pushes forward the frontiers of antibiotic stewardship research.

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