

Antimicrobial Stewardship Profile: Joseph Brant Hospital



Joseph Brant Hospital is an acute care hospital with 245 acute care beds, serving the Burlington community and surrounding areas of Halton and Hamilton, including Waterdown, Flamborough, Milton and Stoney Creek.

The hospital participates in regional programs including:

- Cancer Care
- Cardiac Care
- Maternal and Newborn services
- Neonatal ICU
- Vascular and Thoracic



Champions (L-R): Nancy LaBelle, Hala Basheer, Dr. Anne Opavsky and Dr. Dwight Prodger.

The time and care spent on communication goes a long way to address Dr. Prodger's observation: "[the] ASP has to be provider-friendly." In addition, Dr. Prodger feels that physician practice change is supported through the presence of an infectious disease specialist available in the hospital.

Why an Antimicrobial Stewardship Program (ASP)?

Dr. Dwight Prodger, Chief of Staff, VP Medical Affairs defines the Joseph Brant Hospital ASP as a patient and quality safety initiative important to the hospital board and senior leadership team. The hospital has emerged as a leader in best practices improving patient quality of care by optimizing antimicrobial therapy and clinical outcomes. The primary goal of the ASP is to ensure that each patient receives the best treatment possible by implementing strategies to improve antimicrobial use. They aspire to improve quality of care and patient outcomes, preventing hospital acquired infections, antimicrobial resistance and *Clostridium difficile* infection.

Dr. Anne Opavsky, the infectious diseases physician and Medical Director of the ASP, and Hala Basheer, the antimicrobial stewardship pharmacist are partners in the development and maintenance of the program. They are passionate champions of optimal antimicrobial use.

Elements of the ASP

Patient specific prospective audit and feedback (PAF) of antimicrobial use on a daily basis is a core element of the ASP. After a retrospective review of microbiology, antimicrobial utilization and drug costs across all hospital areas for a 5-year period the approach of selecting specific targets for recommendations regarding antibiotic use was adopted. These lead to daily review of all intensive care unit (ICU) patients receiving antibiotics and/or with positive microbiology results. All patients with bloodstream infections and on broad spectrum antibiotics are also reviewed. The formal and informal relationships developed by Dr. Opavsky and Basheer across the organization have been invaluable in solidifying support for the ASP and driving appropriate antimicrobial treatment of patients to support best patient outcomes.

With a focus on sustainability of the program, Basheer and Dr. Opavsky prioritize their work, focusing on PAF, but also other approaches. Guideline development and review, outcome analysis and education receive equal attention of the ASP.

Dr. Prodger and Nancy LaBelle, Director, Quality, Safety and Patient Relations and Infection Control are important champions of the program. Labelle noted that many Infection Prevention and Control (IPAC) interventions had been put in place to decrease hospital acquired infections and that the addition of an ASP was the next logical step.

Collaboration

The approach of daily ASP recommendations has been to complement the patient care led by each patients' most responsible physician. After daily review of targets for PAF in the ICU and hospital-wide, Basheer and Dr. Opavsky contact the primary physician to gain insight and communicate ASP recommendations. Each accepted recommendation is paired with an ASP label on the patient chart noting the advice. Dr. Opavsky relates that not all conversations lead to acceptance of recommendations but that the interaction itself is of value.

IPAC, Microbiology and Pharmacy are partners that help make the program work. The IPAC team and the ASP share trending bacterial colonization and *Clostridium difficile* infection rates and outbreak data informally on a daily basis and more formally as both teams are represented on each other's hospital committees. Basheer and Dr. Opavsky also rely on the expertise of the Microbiology lab, who inform the team seven days a week on positive results that along with antimicrobial utilization data inform the ASP team's daily work. The ASP team also partners with the Department of Pharmacy on antimicrobial related safety issues, including optimization of dose, duration and therapeutic monitoring of antibiotic levels.

Joseph Brant Hospital celebrates their champions – from the physicians to the senior leadership team to the collaborators above - in their day to day roles along with their commitment and passion to the patients and community they serve.

Successes

- Engagement of physicians: an 85 to 100 per cent uptake of all prospective audit and feedback advice
- Uptake of ASP recommendations is sometimes so successful that the physician is already one step ahead of us in antimicrobial management
- Partnership with pharmacists in the development and use of vancomycin and aminoglycoside dosing and monitoring guides
- Getting cultures first: improved diagnostic testing performed before starting antimicrobials, increasing opportunities for de-escalation

Challenges

- Finding the best mechanism of contacting physicians (electronic or by phone) can be a barrier to efficiently communicating recommendations
- The limited capacity of existing information technology to track data and facilitate antimicrobial stewardship
- The process of implementing and informing change

Horizon

- Regular reporting to medical staff, partners and senior leadership regarding uptake of recommendations, and impact on antimicrobial utilization and cost, as well as hospital infection and colonization rates
 - Develop a Joseph Brant Hospital online resource for empiric use of antimicrobials
 - Diagnostic and management guidelines and order sets for community and hospital-acquired pneumonia.
 - Lead and build ASP capacity across the Local Health Integration Network (LHIN)
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For further information

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