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Antimicrobial Stewardship Profile: Campbellford Memorial Hospital

CAMPBELLFORD MEMORIAL HOSPITAL

Campbellford Memorial Hospital is a single-site community hospital serving a rural community with 34 acute care beds and 4 telemetry beds. The hospital's Emergency Department handles 20,000 visits per year. An outpatient clinic area supports:

- Ear, Nose and Throat (ENT)
- General Surgery
- Orthopedics
- Rheumatology
- Urology

Champions (L-R): Marilyn Petherick, ICP; Jan Raine, CNO; and Andrea Thomas, Pharmacy Technician.

Dr. Schabas and his team are vigilant in observing emerging patterns largely associated with use of antimicrobials.

Why an Antimicrobial Stewardship Program (ASP)?

An escalating rate of *Clostridium difficile* infections (CDI) in 2007-2008 was the sparkplug to ignite changes at Campbellford Memorial Hospital. In June 2008, Dr. Richard Schabas, an internist at the hospital, contacted the hospital's CEO and asked for immediate support to implement an ASP. Nursing and pharmacy staff were also voicing concerns to Chief Nursing Officer (CNO), Jan Raine. The alarming numbers of CDI cases were not decreasing despite the initiation of a number of infection control and environmental cleaning interventions.

Nursing staff had noted an association between the use of moxifloxacin for community-acquired pneumonia and onset of CDI. During the outbreak the association was so strong some nursing staff initiated contact precautions on patients receiving moxifloxacin in anticipation of CDI. As a small hospital, Jan Raine believes in "investing in their own". They have few resources other than their own staff, so she has made it a priority to ensure her staff have access to education and the ability to network with their peers.

Initial Steps - Targeting the Drug - Restricting Antimicrobials

Pharmacy provided an analysis on the usage of moxifloxacin, clindamycin and cephalosporins. A chart review found that 80% of the CDI cases had received a fluoroquinolone (majority being moxifloxacin). At a meeting with senior leadership, the infection control professional (ICP) and Dr. Schabas discussed the findings of the chart review. Under the leadership and direction of Dr. Schabas, the Chief of Staff issued letters to physicians asking that they stop prescribing fluoroquinolones for their inpatients. To support this practice change, pharmacy conducted prospective audit and feedback for all orders of moxifloxacin and the pharmacist, with the assistance of Dr. Schabas, provided alternative drug recommendations. Dr. Schabas proved to be the voice and physician champion for the ASP and willingly took on the task of ASP leadership. He claims that 95% of change in prescribing practices can happen simply through peer pressure.

In 2011, Campbellford Memorial Hospital adopted a policy that included a decision-making algorithm for three antibiotics: clindamycin, moxifloxacin and levofloxacin. As part of the algorithm these drugs cannot be administered to any inpatient for treatment without approval by the Internist or the Chief of Staff. This algorithm was developed under the direction of the ASP committee and was approved by the Medical Advisory Committee (MAC).

Collaboration

Infection Prevention and Control and Pharmacy play key roles in antimicrobial stewardship. Marilyn Petherick, Infection Control Professional, provides staff with the education necessary to sustain the hospital's ASP. She also reviews pharmacy-generated reports identifying all patients (both inpatients and outpatients) who have received moxifloxacin, clindamycin or levofloxacin. Campbellford Memorial Hospital is seeking 100% compliance with the antimicrobial stewardship protocol which has been set as "priority one" in their Quality Improvement Program (QIP). "Setting antimicrobial restriction as a QIP indicator is not easy," says Raine. "There are many individuals who must support this formulary restriction." IPAC and pharmacy conduct daily reviews on alerts of prescribed targeted antimicrobials. Monthly audits and quarterly reports have shown 100% compliance with this QIP. The pharmacy department acts like a hub, providing education, reports, and manpower for the pharmacy system's order entry. Prospective audit and feedback takes place as the pharmacist reviews the duration of antimicrobial treatment.

Successes

- Implementation of measurements/metrics – compliance with the QIP indicator for the restricted antimicrobials and CDI rates
- A significant decrease of CDI following the restriction of moxifloxacin in 2008 yielding 18 months with no cases

Challenges

- Time management with competing work priorities; balancing roles and tasks outside of the ASP
- Communication with physicians about changes or new initiatives
- Multiple small but time consuming barriers when implementing new ASP initiatives

Horizon

- All cases of CDI will continue to be reviewed and additional antimicrobials (i.e. ciprofloxacin) may be restricted in the future, if associations with CDI are noted
- The ASP team at Campbellford Memorial Hospital are focusing their efforts on sustaining their existing ASP

Disclaimer

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For further information

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