

**January 2015**

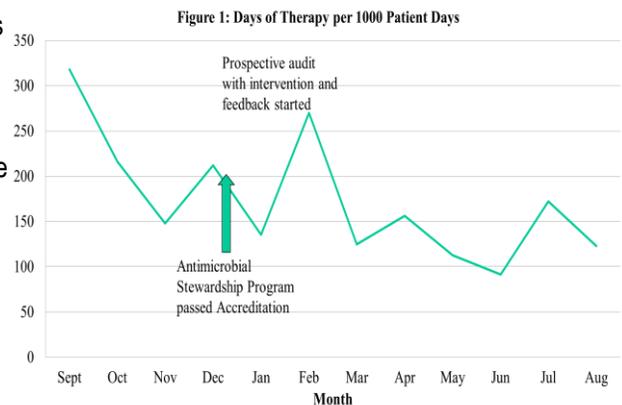
**\*\* Please drop by booth 102 at the Canadian Society of Hospital Pharmacist's Professional Practice Conference, Feb 2-3 at the Sheraton Centre Toronto to meet Sammu, Becky, Kelti, or Kevin \*\***

**North West's Development of an Antibiotic Stewardship Program:**

To meet Accreditation Canada standards for a functioning antimicrobial stewardship program, one rural hospital asked their North West Telepharmacist to help implement the program. After forming an Antimicrobial Stewardship Committee with terms of reference, a gap analysis was completed to develop a plan for implementation. Over a 6 month period, a hospital-specific antibiogram was developed, education was provided for physicians and nurses, a pharmacist-led intravenous (IV) to oral (PO) program was developed, and a prospective audit with intervention and feedback was implemented.

The program successfully met the Accreditation Canada standards and showed a decrease in the days of therapy per 1000 patient days over a one year period (Figure 1).

Small rural and remote acute hospitals without access to an on-site clinical pharmacist can successfully implement and maintain an antimicrobial stewardship program by seeking support from experienced remote clinical pharmacists.



**Antimicrobial Stewardship Case Study:**

A 73 year old patient was admitted with shortness of breath and possible exacerbation of congestive heart failure on a Saturday afternoon. On admission, ceftriaxone 2 g IV every 24 hours was empirically ordered by the emergency physician.

The North West Telepharmacy Solution's telepharmacist remotely reviewed the order Monday morning and contacted the charge nurse to gather more information on the patient's status. The patient was afebrile on admission and had a WBC count of 9.5 which changed to 6.7 two days later. The chest x-ray report also indicated no signs of pneumonia.

The telepharmacist discovered that the attending physician had just stopped the ceftriaxone and started moxifloxacin 400 mg PO daily during morning rounds. The telepharmacist suggested stopping the moxifloxacin as there were no signs of pneumonia and patient was doing better with increased furosemide doses while in hospital. The attending physician accepted the telepharmacist's recommendation and stopped the moxifloxacin. The patient was discharged home the following afternoon.

**Outcome:**

The mixed diagnosis of COPD exacerbation or CHF is not uncommon in the emergency department; as such, antibiotics are started and optimization of cardiac medication occurs. With these changes, patients often improve quickly and are ready for discharge from hospital several days later; reflecting on whether the improvement was due to antibiotics or cardiac optimization is not often done. In this case, the telepharmacist identified the inappropriate continuation of moxifloxacin by incorporating antimicrobial stewardship principles into his daily workload. As a result, an unnecessary antibiotic was stopped, possible adverse events from antibiotic use were prevented, and the hospital avoided costs associated with the administration of an expensive fluoroquinolone.

*A ceftriaxone dose of 2 G is rarely indicated for anything other than meningitis or perhaps infections requiring ICU admission; for respiratory treatments including COPD exacerbations and pneumonia, ceftriaxone 1 G IV Q24H is sufficient. The hospital utilizes telepharmacy review of orders from Mon-Friday 8am to 4pm. Hence, the 2 G dose was given for 3 doses before the oral stepdown occurred and the telepharmacist had the opportunity to intervene. There is a further opportunity for reduced antibiotic use with expansion of telepharmacy coverage to 24/7/365.*

### **Let North West Telepharmacy Solutions be your Hospital's Solution:**

North West Telepharmacy Solutions understands patient safety is number one priority for healthcare. That explains why we don't stop working at 4 pm. We offer 24/7 Around-the-clock pharmacist medication order review and after-hours On-Call Service.

For more information on adding our services to your hospital, visit our website at [www.northwesttelepharmacy.ca](http://www.northwesttelepharmacy.ca) or contact:



**Sammu Dhaliwall**, RPh, ACPR, Pharm D  
Clinical Pharmacist & Business Development Manager  
sdhaliwall@northwest.ca  
613-482-7098



**Kevin McDonald**  
Senior Manager of Hospital Telepharmacy  
kmcDonald@northwest.ca  
613-733-7117 option 5

**North West Telepharmacist Feature: Introducing Becky Agar**



Becky Agar graduated from the University of Toronto with a Bachelor of Pharmacy in 1996, and has worked as a hospital pharmacist since 2004, specializing in Intensive Care and Respiriology. She recently acted as a national policy advisor with Cystic Fibrosis Canada, advocating for patient access to medications. She is a mother of two active boys, and generally spends most of her free time in hockey arenas. Alternately, she enjoys spending time in the kitchen, cooking for her ravenous family