

## Antimicrobial Stewardship (AMS) Program: Highlight Report - FY 16/17 Quarter 3

### Executive Summary

#### Best Practices

There is ongoing work to develop and revise clinical tools, protocols and order sets. Items completed and actively developed/ revised include:

- Decompensated Cirrhosis Order set (completed)
- Oseltamivir for Influenza Outbreak order set (completed)
- Antimicrobial Dosing Guidelines for Adults clinical tool 2016/17 update (projected completion Feb 2017)
- Empiric Treatment of Common Infections in Adults clinical tool 2016/17 update (projected completion Feb 2017)
- Revision/regionalization of Sexual Assault Order set (projected completion March 2017)
- Creation/Regionalization of Chronic Obstructive Pulmonary Disorder (COPD) order sets (projected completion April 2017)
- Pharmacist Managed Pharmacokinetic Monitoring and Dosing of Vancomycin and Aminoglycosides clinical practice standard (projected completion March 2017)
- Intravenous to oral antimicrobial conversion order set (pilot project Dawson Creek) - approved; awaiting implementation

Future projects in active initial or planning stages include:

- Revision of Outpatient IV Antimicrobial Therapy options; re-instatement of Cefazolin + Probenacid
- Regional Sepsis protocol revisions/updates
- Pharmacy Resident Research project - Gap analysis of outpatient IV antimicrobial therapy (OPAT) across NH
- Education Module and treatment algorithm development for Urinary Tract Infections (including catheter associated and asymptomatic bacteriuria)

- Education Module development for Community Acquired Pneumonia and Aspiration Pneumonia in Adults

#### Antimicrobial Usage Metrics

We are continuing to work with IT and data analysts to solve the issue with data integrity identified previously; therefore until the data integrity has been restored the AMS program will not be reporting on antimicrobial usage or overall costs. Our goal is to have this issue rectified by end of quarter 4, in time to produce an annual report.

#### Clinical Service/Audit & Feedback

Variations of Prospective Audit and Feedback (A&F) of targeted antimicrobials continue to occur at UHNBC, GR Baker, Mills Memorial hospital, Prince Rupert Regional Hospital, Bulkley Valley & District Hospital, Wrinch Memorial Hospital as well as Dawson Creek & District Hospital. Priority sites for this work are identified based on availability of on-site pharmacists; if the pharmacist also provides remote services for a smaller site and workload permits, review of patients at those smaller sites will also occur. Over the quarter 750 patient cases were reviewed and 293 drug therapy problems were identified with a 58% resolution rate. The top 3 drug therapy problems encountered continue to be: A. Unnecessary Antimicrobial Discontinued, B. Suboptimal or ineffective therapy and C. Converting IV antimicrobial to an oral agent.

Patient case reviews at St. John Hospital in Vanderhoof and Fort St. John hospital planned to commence January 30<sup>th</sup>, 2017 and March 7<sup>th</sup>, 2017, respectively.

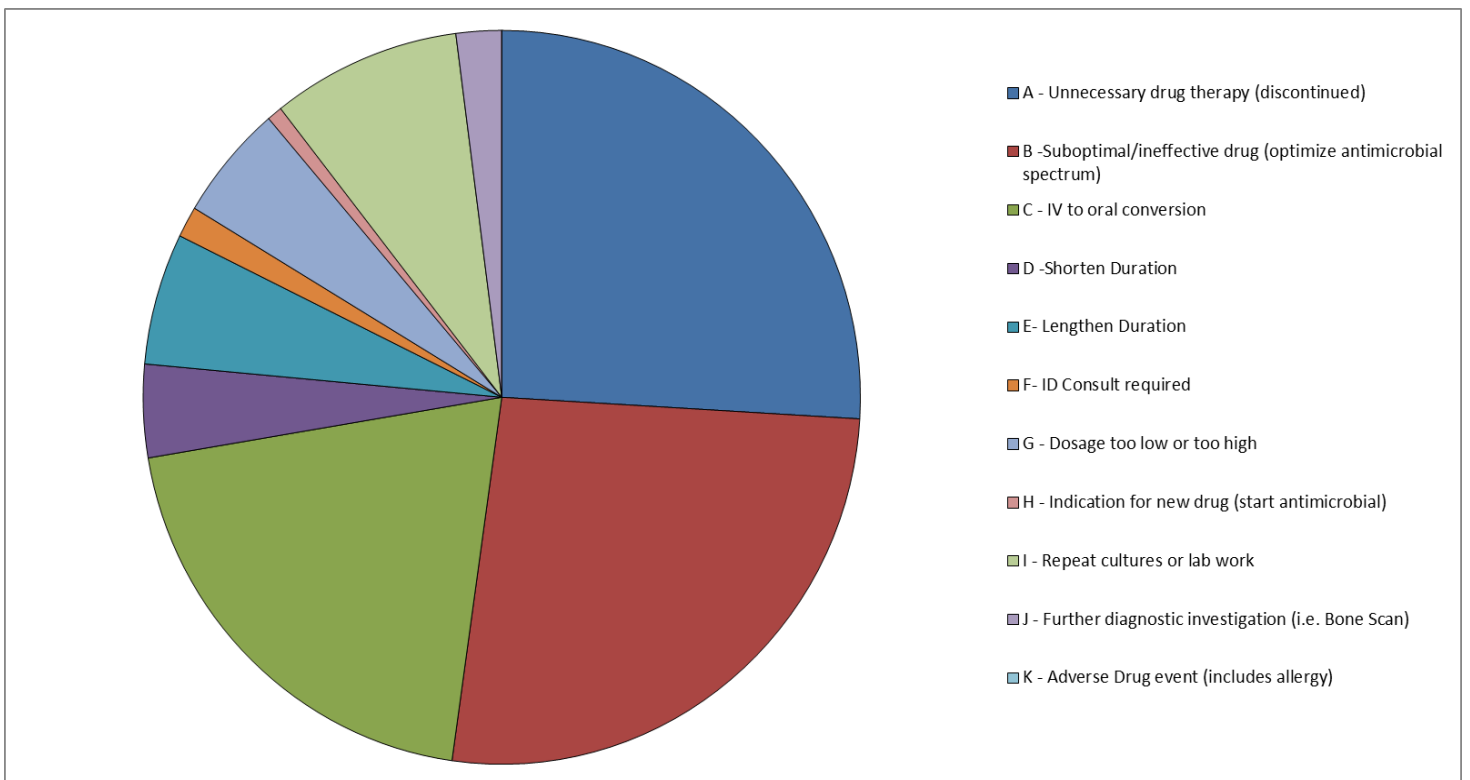
**Antimicrobial Usage Metrics**

Antibiotic utilization, measured in defined daily dose (DDD) per 100 patient-days, is calculated to track the utilization trend over time. The DDD is the assumed average adult maintenance dose per day for a drug used for its main indication. The conversion of drug utilization amount to DDD units is performed to standardize utilization of different classes of antibiotics, allowing comparisons to be made across different facilities or patient groups (excluding pediatric populations). Please note that due to identified issues of data integrity, the AMS program is re-evaluating how data is collected and analyzed. Therefore we are unable to report on antimicrobial consumption and costs across the health authority at this time. We hope to rectify this issue in time for the annual report.

**Audit and Feedback Service**

Variations of prospective audit and feedback (A&F) of targeted antimicrobials are currently occurring at UHNBC, GR Baker, Mills Memorial, Bulkley Valley & District, Wrinch Memorial, Prince Rupert Regional and Dawson Creek & District Hospitals. This process involves assessment of patients on antimicrobial therapy evaluated against recommended therapies according to infectious disease resources and guidelines to ensure the optimal use of drug therapy. There are a variety of types of antimicrobial therapy problems identified via the A&F patient case reviews.

**Figure 2 - Antimicrobial Drug Therapy Problem Types**



For the full quarterly report please visit OurNH under Clinical & Patient Care on the Medications page > [Antimicrobial Stewardship](#). (In order to access OurNH, you must be connected to a Northern Health computer or have remote access. Please contact the AMS program coordinator (Alicia Ridgewell) at 250-565-5956 if you have any difficulty accessing the documents).