

Pharmacist-Driven ASP

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Abbott Northwestern Hospital

- Largest not-for-profit hospital in the Twin Cities area
 - 633 licensed beds
 - Daily census ~ 475
 - MHI, VPCI, Orthopedic Institute, Neuroscience Institute, Mental Health, Courage Kenny Rehabilitation Institute, Kidney and Heart Transplant Programs
- Part of Allina Health
 - 11 hospitals, 4 metro hospitals
 - Only Allina metro hospital previously without an ASP
 - ASP expansion to most regional hospitals

Abbott Northwestern Hospital

- 60+ hospitalists
 - See ~80% of patients
- 36 medical residents
- Pharmacy Department
 - Director of Pharmacy
 - Pharmacy Managers – 2 Clinical, 2 Operations
 - Pharmacy Coordinators – ID, CV, Transplant, Oncology
 - 55 staff pharmacists
 - 2 PGY2 residents (ID, CV)
 - 5 PGY1 residents

Barriers at Time of Implementation

- Several private ID providers
 - Difficult to have one champion ID provider
- Formulary
- Documentation of recommendations
- PharmD/MD time commitment/resources
- Pharmacist making recommendations
- Monitoring antimicrobial usage
- Cost savings analysis

Getting Started at ANW....

- Pharmacist-driven
- Assessed what was already in place
 - IV to PO protocol
 - Renal dosing policy
 - Formulary
 - Restricted medication
 - Order sets
 - Usage criteria (antifungal, gram positives)
- Developed antimicrobial guidelines
- Conducted pilots
 - Medical/surgery unit (2008)
 - Hospital-wide (2009)
- Developed report to monitor antimicrobial usage

Example: Antimicrobial Usage Guidelines

Cefepime: parenteral	<ul style="list-style-type: none">• An alternative to broad spectrum penicillins, carbapenems, and ceftazidime for the treatment of nosocomial infections including pseudomonas and extended spectrum beta lactamase producing organisms.
Ceftazidime: parenteral	<ul style="list-style-type: none">• Empiric therapy in febrile, neutropenic patients with a documented ANC < 1,000 and patients with suspected nosocomial meningitis• Treatment of documented infections caused by susceptible strains of Pseudomonas aeruginosa or other gram negative bacilli which are resistant to penicillins.
Ceftriaxone: doses > 2 gm IV Daily	<ul style="list-style-type: none">• Reserved for the treatment of meningitis (recommended dose is 2 grams IV Q 12 hrs. in combination with vancomycin until culture results are finalized).• Treatment of brain abscess
Cefuroxime: parenteral (reserved for pediatric patients only)	<ul style="list-style-type: none">• Reserved for pediatric patients <u>only</u> for the following indications: pneumonia, epiglottitis, cellulitis, and septic arthritis. Cefuroxime should not be used for the treatment of meningitis.

ANW Antibiotic Stewardship Team

- ID-trained pharmacist
- PGY2 ID pharmacy resident
- PGY1 pharmacy residents
- Pharmacy students
- Supported by:
 - Allina Infection Prevention and Control Council
 - Abbott Infection Prevention and Control Committee
 - Abbott Infectious Diseases Physicians
 - Pharmacy and Therapeutics Committee
 - Abbott Pharmacy Administration
 - Abbott Hospital Administration

Responsibilities

- Daily workflow
 - SCIP Core Measure
 - PNA Core Measure
 - ED admissions
 - Bug No Drug Alert
 - Patient care units
 - Pharmacist-to-pharmacist consults
- Order set updates and development
- MUEs/Projects
- Quarterly ASP report to P&T Committee

Outcomes Through 2012

- ~1250 recommendations/year
- Provider acceptance rate > 90%
- Total antibiotic DOT/1,000 PD decreased by 9.6%
- Total FQ DOT/1,000 PD decreased by 46%
- Antibiotic cost/PD decreased by 11.6%
- Cost savings of ~\$400,000 during first two years
- Through 2012, cost savings of ~\$270,000
- Contributing factor to a 51% reduction in HA C. diff rates from 2009 to 2012

Current Barriers

- Several private ID providers
- Formulary
- Documentation of recommendations
- **PharmD/MD time commitment/resources**
- Pharmacist making recommendations
- Monitoring antimicrobial usage
- Cost savings analysis

Expanding Our ASP

- NUMC (February - August 2013)
 - 131 recommendations, acceptance rate ~85%
 - Total antibiotic DOT/1000 PD decreased by 23%
 - Antibiotic cost/PD decreased by 53%
 - Estimated annualized cost savings of \$8500
- River Falls Hospital – PGY2 ID Resident
- Pharmacy Clinical Scoring Tool