Reducing Antibiotic Use in Elderly for Suspected UTI in LTC Setting
Ostile Foucault Peck, MSN, APRN, ANP-C

PROBLEM STATEMENT
- Reduce antibiotic use by improving UTI communication between staff and providers.
- Implement the UTI SBAR tool using the PDSA model.
- Project clinical site:
  - 65% of antibiotics used between in pre-project, was for UTI treatment.
  - UTI rate is 6.5% compared to the state of Florida rate of 2.6%

PROJECT PURPOSE
- Explore current antibiotic practices and implement a SBAR tool to combat antibiotic overuse for suspected UTI in residents at LTC.
- The overarching aim:
  - Reduce antibiotic use for UTI treatment by 30%.
  - Implement a nurse driven standardized UTI SBAR assessment tool.
  - Use SBAR to communicate with providers.
  - Initiate an antibiotic review process.

The clinical question:
- Does implementing a nurse driven UTI assessment tool using SBAR and initiating an antibiotic review process reduce the number of antibiotic used for patients with suspected or confirmed UTI in LTC?

NURSING THEORY
- The Lippitt, White & Wesley Planned Change Model which focuses on communication skills, problem-solving, and establishing feedback processes.
- QI Model: Plan-Do-Study-Act (PDSA) Model.

METHODS

Subjects (Participants)
- Retrospective chart review and evaluation for 100 residents pre/post project.
- Pre: 38 females, 12 males
- Post: 43 females, 7 males

Setting
- A rehabilitation health center in Southeastern US.

Instruments/Tools
- UTI SBAR tool developed by Johns Hopkins University.

Intervention and Data Collection
- First month: Meetings with staff and stakeholders about
  - Antibiotic risks.
  - UTI symptoms.
  - How to use the UTI SBAR tool.
- Second month: Implementation of the use of SBAR tool, Data compiled and analyzed.

DISCUSSION
- Significant drop in the rate of urinalysis tests and antibiotics between pre and post project.
- Staff education helped nurses recognize when to call provider and what information to share.
- Limitations:
  - Inconsistent SBAR use due to nurse’s involvement in COVID-19 pandemic training.
  - Post SBAR data collection coincided with COVID-19 pandemic.
  - Further decline in number of urinalysis tests and antibiotics is expected over time.
- Results showed that use of evidence-based communication tool can reduce unnecessary antibiotics and urinalysis testing in LTC setting.

RESULTS
- T-test to compare pre and post project data, result indicated:
  - Urinalysis: Pre-SBAR (M=1.16, SD=0.71), and post-SBAR (M=0.68, SD=0.59) indicate that use of SBAR improved urinalysis at t(98)=3.6767, p <.0004.
  - Antibiotic: Pre-SBAR (M=1.14, SD=0.64) and post-SBAR (M=0.94, SD=0.51) indicate that use of SBAR improved antibiotic at t(98)=3.9747 p value is .0001, this means, both results are significant at p <.05.

UTI education and use of SBAR tool decrease the number of urinalysis tests and antibiotic use.

IMPLICATIONS FOR ADVANCED PRACTICE NURSING
- Can help change practice patterns and impact antibiotics and urinalysis outcomes.
- Motivate the multidisciplinary team to use EBP guidelines to treat UTI.
- Support efforts to decrease the risks for antibiotic overuse and resistance.

REFERENCES