

# Reducing Antibiotic Use in Elderly for Suspected UTI in LTC Setting

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### 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 & Westley 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.

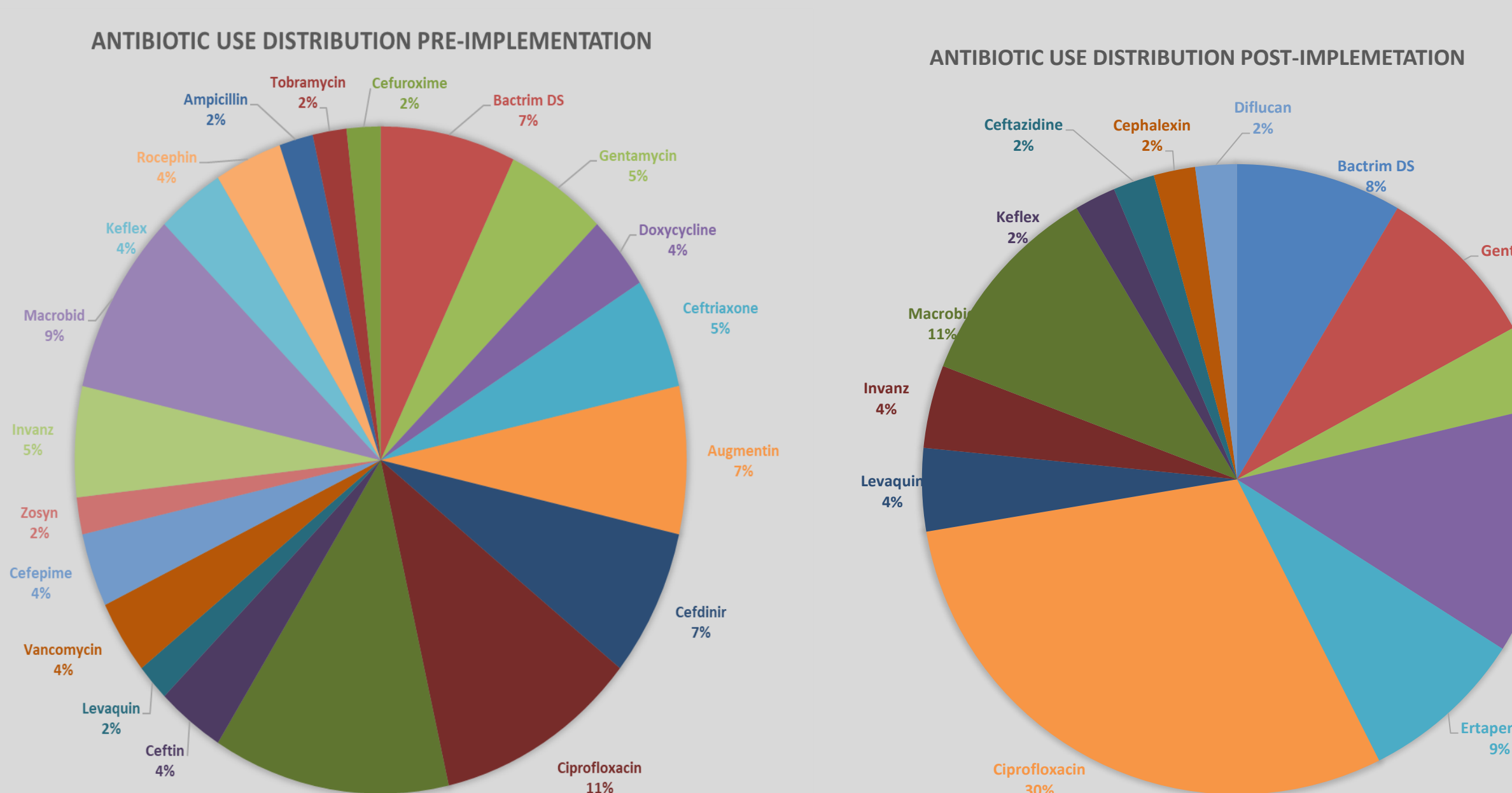
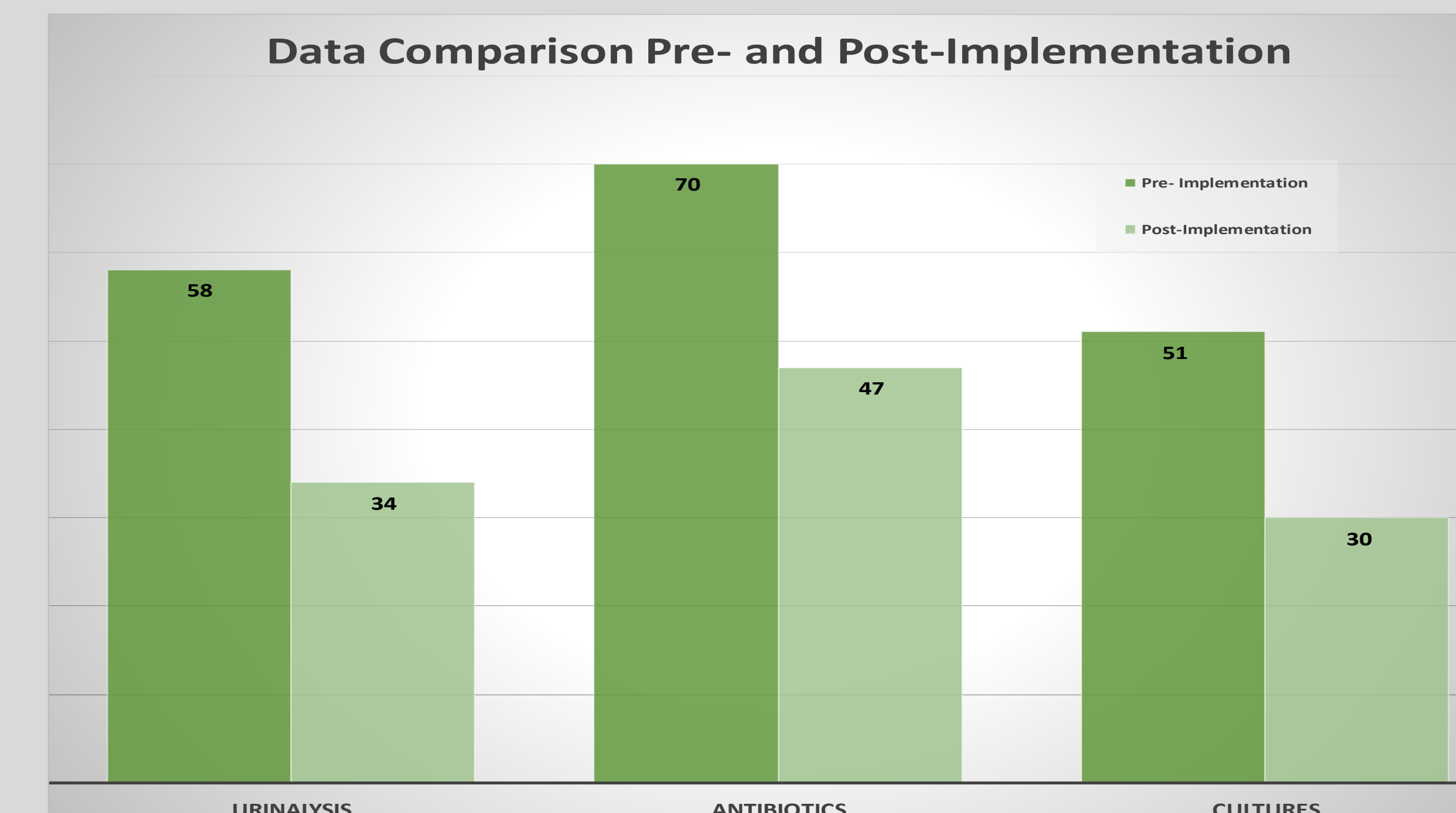
### DISCUSSION

- 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  $p < .05$ .



### IMPLICATIONS FOR ADVANCED PRACTICE NURSING

APRNS:

- 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 use overuse and resistance.

### SUSTAINABILITY

- No additional cost to sustain use of UTI SBAR.
- Infection control nurse available for support.
- Management supports use of UTI SBAR.

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