

Background

- *Clostridium difficile* infection (CDI) is a diarrheal illness caused by spore-forming bacterium that is costly (\$1.2-5.9 billion in the US annually) and can be life-threatening.
- CDIs can be transmitted in hospitals causing Hospital Acquired CDIs (HACDI) and thus can be prevented.
- Institutions are required to report HACDI rates nationally. Those failing to meet standard rates of HACDI are subject to Medicare reimbursement reductions.
- In 2018-2019, the Standardized Infection Ratio (SIR) at Ascension Providence Rochester Hospital was elevated.
- Errors in the automated reporting system (Sentri7) used to identify HACDI cases were suspected to be leading to overreporting.

Baseline Assessment

- Standardized protocol developed based upon the Infectious Disease Society of America guidelines that categorized HACDI cases as:
 - 1) Confirmed
 - 2) Mislabeled
 - 3) Indeterminate
- Protocol applied by 4 residents to review accuracy of all cases of HACDI reported by Sentri7 from September, 2018-August, 2019
- Outcomes of our analysis revealed 47% of HACDI cases were mislabeled.

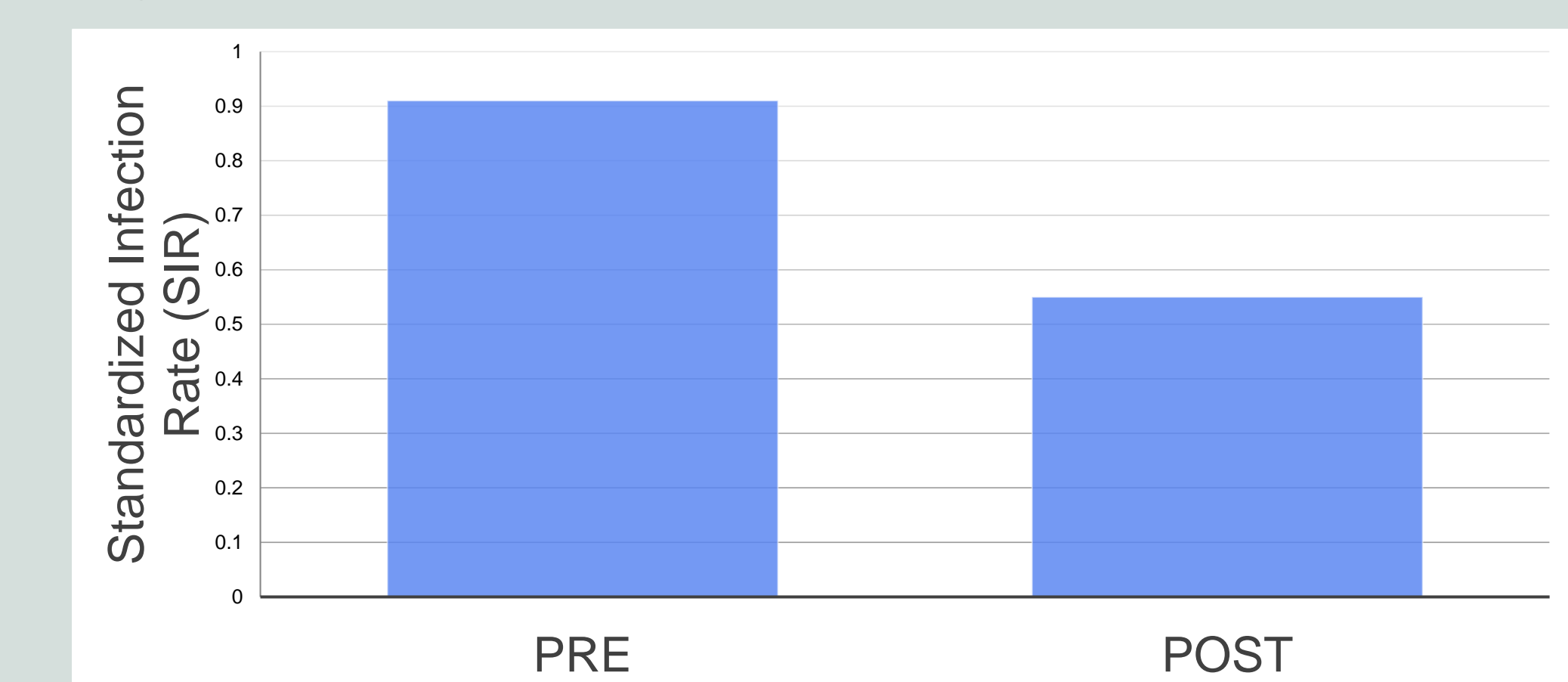
Figure 1. Outcomes of Analyzed Sentri7 HACDI cases



PDSA Cycle 1

- **Plan**
 - *Intervention:* correction process in the Sentri7 System to identify HACDI cases with a negative DNA amplification and review by Quality Department personnel before submission.
 - *Evaluation:* compare HACDI Standard Infection Rates in the quarter before and after intervention.
- **Do**
 - New process implemented in November 2019.
- **Study**
 - After a correction process was implemented, there was a 40% decrease in our hospital's SIR.

Figure 3. SIR Pre and Post Correction Process

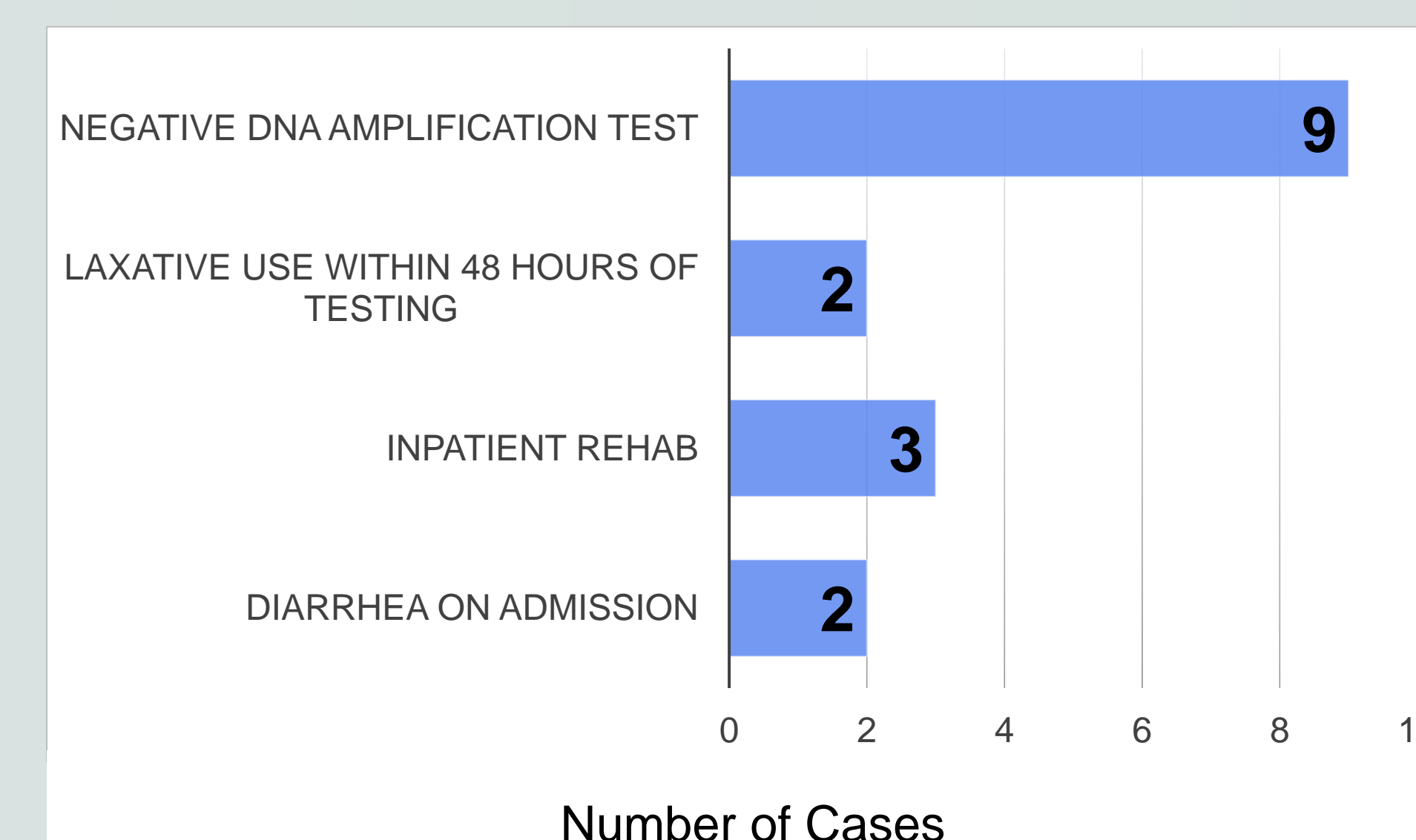


Quality Improvement Objectives

- **Long-Term:** Develop a protocol that decreases errors in reported rates of HACDI by 50% thereby reducing the SIR.
- **Baseline:** determine rate and patterns of HACDI reporting errors.
- **PDSA Cycle 1:** examine the impact of a Sentri7 correction process on our hospitals SIR.

- Mislabeled cases were further analyzed for the cause of mislabeling(see Figure 2).

Figure 2. Reasons for Mislabeling of HACDI



- **Act**
 - *Adopt:* protocol successful in quickly identifying HACDI cases with negative DNA amplification.
 - *Adapt:* examine whether additional protocols can address other causes of overreporting (e.g., laxative use, diarrhea at admission)

PUBLIC HEALTH IMPLICATIONS

Accurate reporting of HACDI rates is crucial given their relation to reimbursement. While computerized reporting systems can improve efficiency, they may also lead to rates of overreporting. Institutional-level policies can identify and correct overreporting and prevent reimbursement reductions.