

# EMPOWERING NURSING CHAMPIONS IN IMPLEMENTING MULTIDIMENSIONAL APPROACH IN THE PREVENTION AND REDUCTION OF CATHETER ASSOCIATED URINARY TRACT INFECTIONS

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## Introduction:

Catheter associated urinary tract infections (CAUTI) rates remained a challenge in adult cardiology hospital for several years and was markedly reduced to 50% in 2019 after full implementation of nurse-led protocol. During Covid pandemic in 2020-2021, the CAUTI rates started to rise due to 50% deployment of staff to Covid facilities that prompted our nursing champions to implement preventive measures to reduce infection and to promote patient safety. Our goal is to achieve a 50% reduction in the incidence of CAUTI by end of 2022 and to reduce the standardized infection ratio (SIR) below NHSN SIR (0.993).

## Methods:

Infection Control Team and CAUTI nursing champions conducted a comprehensive gap analysis of staff practices and patients' significant risks identified as contributing factors in the development of catheter associated urinary tract infections with real time notification of infections to the unit leaders and nursing champion for any detected infections. A STOP CAUTI Project was initiated as a quality improvement initiative empowering nursing champions to implement multi-dimensional approach preventive strategies focusing on availability of supplies/resources, staff and patient education, standardization of perineal care, CAUTI insertion and maintenance bundle, nurse-led protocol for early removal of urinary catheters, monitoring and audits of staff practices. Infection rates are calculated to monitor the trends of infections and a standardized infection ratio (SIR) was used to determine the predicted infections versus the observed and to compare the hospital SIR to the National Healthcare Safety Network (NHSN) national SIR.

## Results:

A gradual reduction of the CAUTI incidences, rates and SIR was observed in 2015 to 2018 and a significant decrease in the CAUTI incidence and rate to 1.36/4416 urinary catheter (UC) days with 6 infections and SIR 0.752 below NHSN National SIR (0.993) in 2019 compared to high SIR 1.46 and 2.6/4615 UC days with 12 infections in 2018 due to full implementation of nurse-led protocol and nursing champions proactive approach. During Covid pandemic in 2020, the infection rate was increased to 2.54/3933 urinary catheter days with 10 infections with high SIR (1.358) compared to 2019. Despite a 51% increase in the urinary catheter usage in 2021, the infection rate was reduced to 1.68/5967 with 10 infections and with acceptable SIR (0.938) below NHSN National SIR (0.993) due to the implementation of evidence-based practices to reduce CAUTI. In 2022, a remarkable decrease of CAUTI rate of 1.11/4499 UC days with 5 infections and SIR 0.592 below NHSN National SIR (0.993) was associated with the standardized implementation of preventive strategies.

FIGURE 1

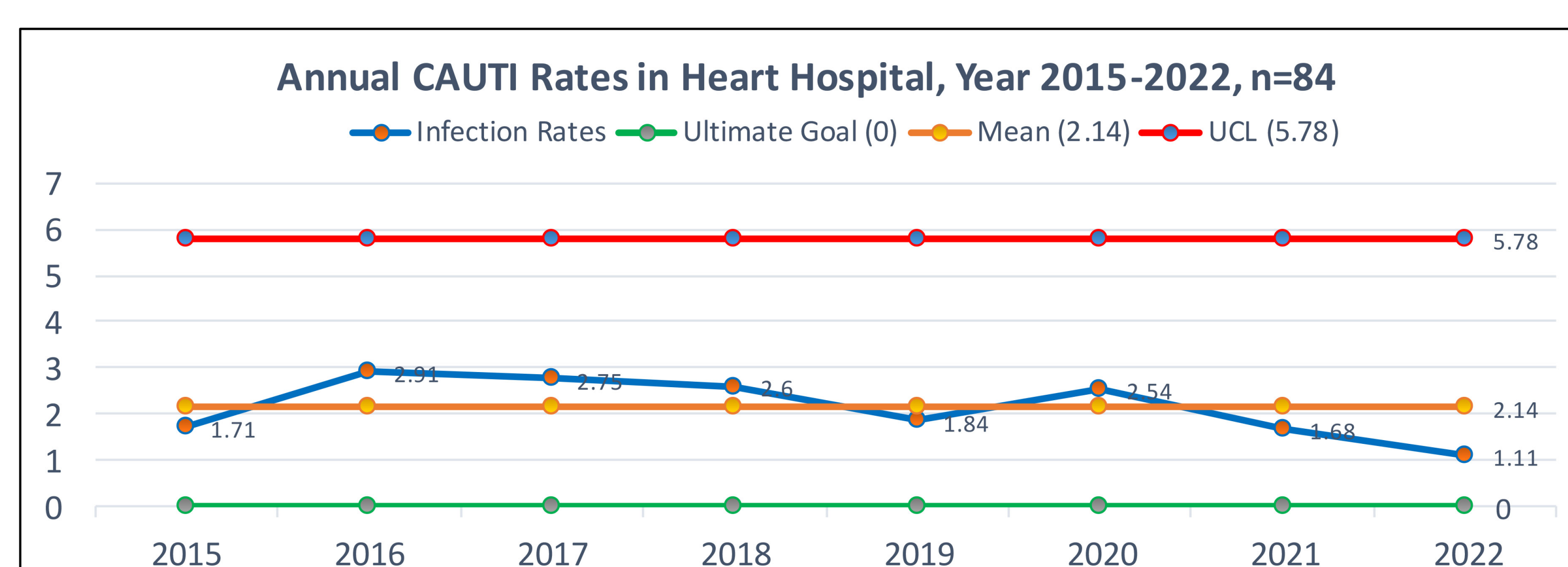
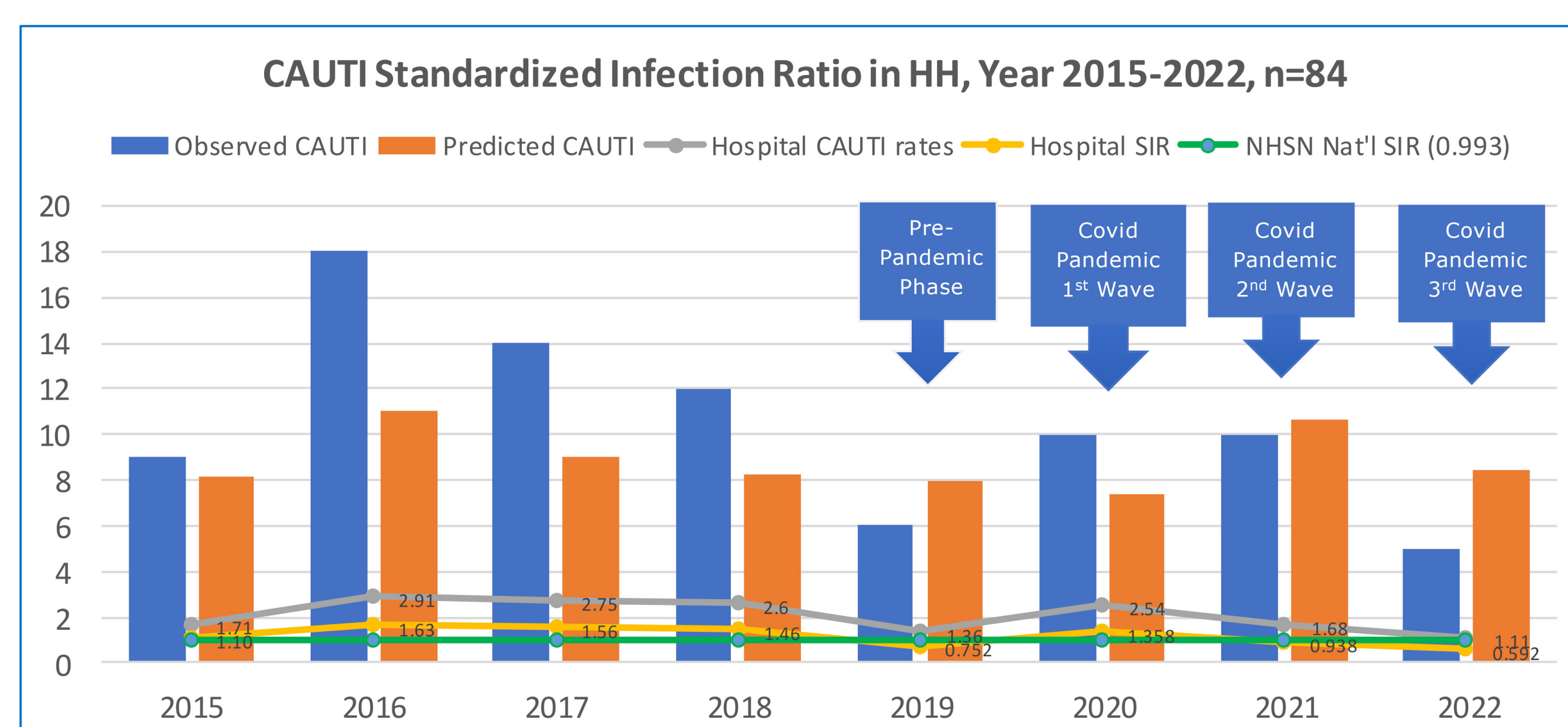


FIGURE 2



## Conclusion:

Empowering nursing champions to strictly implement the multidimensional approach focusing on availability of resources and supplies, education and training of staff, patients and family, standardization of staff practices in implementing evidence-based practices, nurse-led protocol, commitment, teamwork, continuous monitoring and feedback, communication and reminders to change cultures and strong leadership support will make a significant difference in the reduction of catheter associated urinary tract infections despite of the challenges faced during Covid pandemic.

## Disclosure of Interest:

None Declared

## Keywords:

CAUTI, nursing champions, Prevention of infection