



Showcase for Hopkins Inquiry and Nursing Excellence

SHINE

Conference **2023**

Implementation of Navel to Knees with Chlorhexidine
Gluconate to Prevent Catheter Associated Urinary Tract
Infections

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JOHNS HOPKINS
NURSING

- Urinary tract infections (UTI) are the 5th most common hospital-acquired infection (NASN, 2023)
 - Risk of Catheter-Associated UTI (CAUTI) increases 3-7% each day an indwelling urinary catheter (IUC) is in place (Mitchell, 2021)
- CAUTI prevention bundles are evidence-based best practices shown to decrease catheter days & CAUTI rates (Lo, 2014; Schmudde, 2019)
- Current JHH CAUTI Prevention policy states to provide perineal care daily and after each bowel movement, ensuring the IUC is also cleaned.
 - Chlorhexidine gluconate (CHG) bath cloths may be used once per day

Clinical DIMENSION

Navel to Knees With Chlorhexidine Gluconate

Preventing Catheter-Associated Urinary Tract Infections

Yvonne Schmudde, MS, RN, CCRN, CNE; Kristi Olson-Sitki, MSN, RN, NE-BC;
Jennifer Bond, MS, RN-BC, CCRN-K; Jill Chamberlain, PhD, RN, CNE, CHSE

- Baseline standard of care:
 - Urinary catheter care twice a day with soap & water to the meatus and catheter
- QI Interventions:
 - 2-person IUC insertion technique to ensure sterile technique
 - Navel to knees (NTK) with CHG twice daily and after each bowel movement
- Following the adoption of NTK, the 9-month average CAUTI rate dropped from 3.06/1000 IUC days to 0.46/1000 IUC days

Practice Problem

- From January 1, 2021 through July 2022, 12 CAUTI cases attributed to maintenance care on two 32-bed inpatient neurosciences medical-surgical and intermediate care units
- Root Cause Analysis of the CAUTIs found inconsistent achievement with daily documentation of perineal and IUC care
 - Perineal vs indwelling urinary catheter care
- Variety of products utilized for perineal and IUC care



QI Project Aims

- Implement NTK with CHG BID and following bowel movements
- Goal = 80% documentation achievement
- Observe whether this intervention decreases the incidence and rates of CAUTIs

Intervention

- NTK with CHG BID and prn following a bowel movement
- Daily questioning of need for indwelling urinary catheter
- Reminders to day and night shift nursing staff



Education Plan

- Poster
- Email
- Huddles
- Video

Preventing Catheter-Associated Urinary Tract Infections (CAUTI)

What is the 'Navel to Knees with CHG' Campaign?

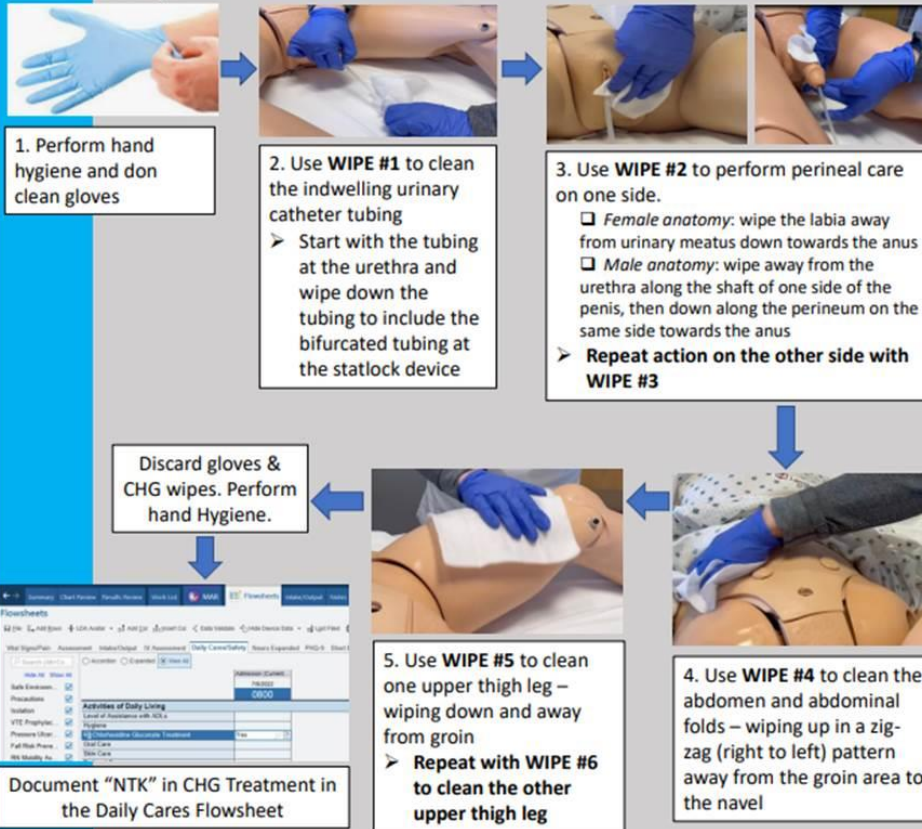
Extending catheter care and peri care from the navel to the knees with CHG wipes to prevent bacteria from migrating towards the catheter.



Supplies & Frequency:

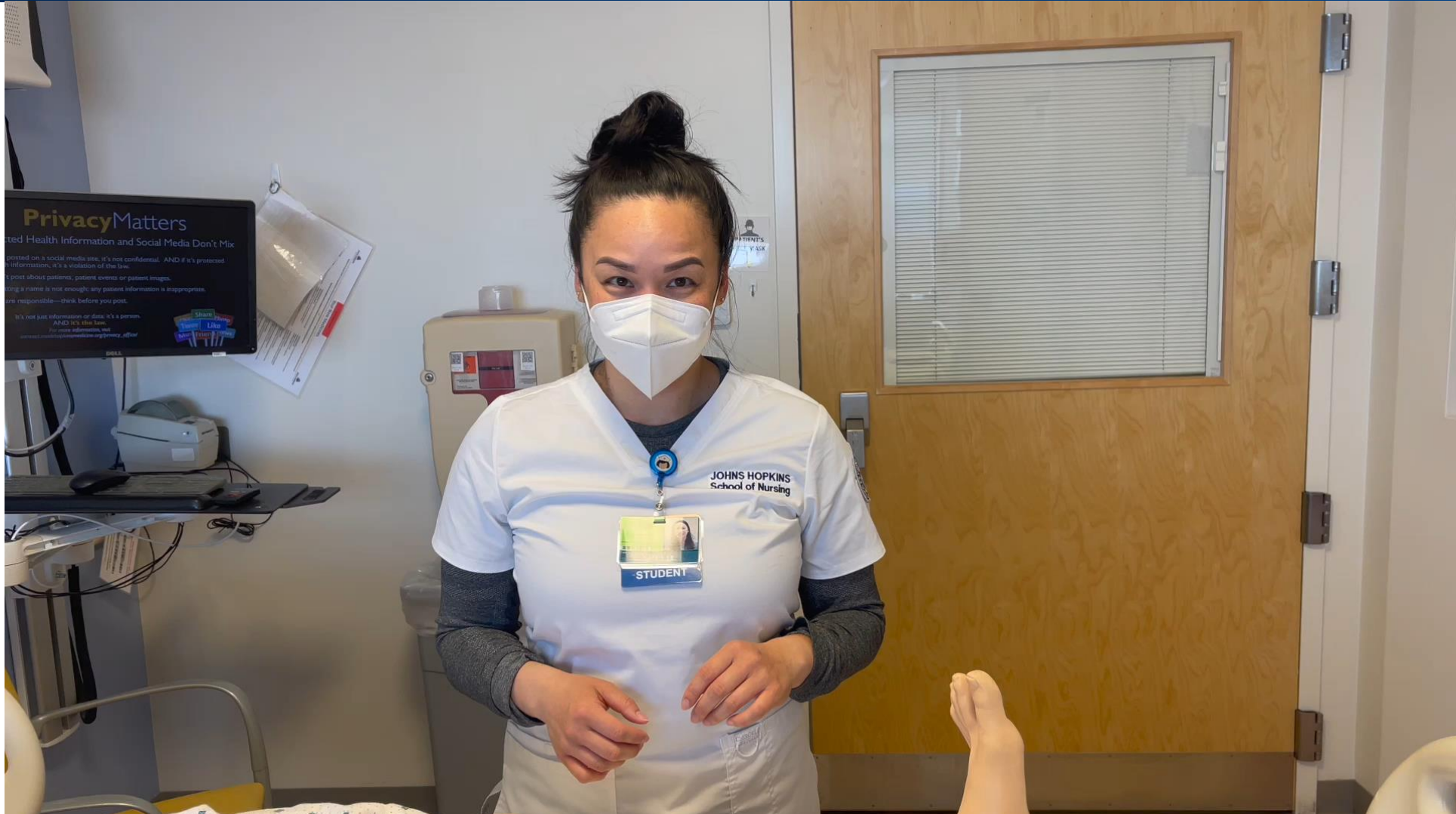
- Clean Pair of Gloves and 6 CHG wipes per each treatment
- Once per shift (BID) AND after each bowel movement

5 Steps in 'Navel to Knees with CHG' Treatment:



Schmudde, Y., Olson-Sitki, K., Bond, Jennifer, & Chamberlain, J. (2019). Navel to knees with chlorhexidine gluconate: Preventing catheter-associated urinary tract infections. *Dimensions of Critical Care Nursing*, 38(5), (236 – 240). <https://doi.org/10.1097/DCC.0000000000000371>

Educational Video



Implementation Plan

- Questioned appropriateness of IUC every morning
 - Individual communication with prescriber and bedside nurse
- Secure Chat Staff reminders to perform NTK
 - First 20 weeks—each shift
 - 21-24 weeks—3 random days/nights a week
 - 24+ weeks—end of reminders
- Every Monday—Post updated documentation achievement data on huddle boards

- A password protected excel document was created and stored with restricted access
- First 20 weeks, every morning the Clinical Nurse Specialist added patients with an IUC to the excel document
- After 20 weeks, patient with IUCs were added Monday through Friday
- Auditors performed retrospective chart review within 24-72 hours

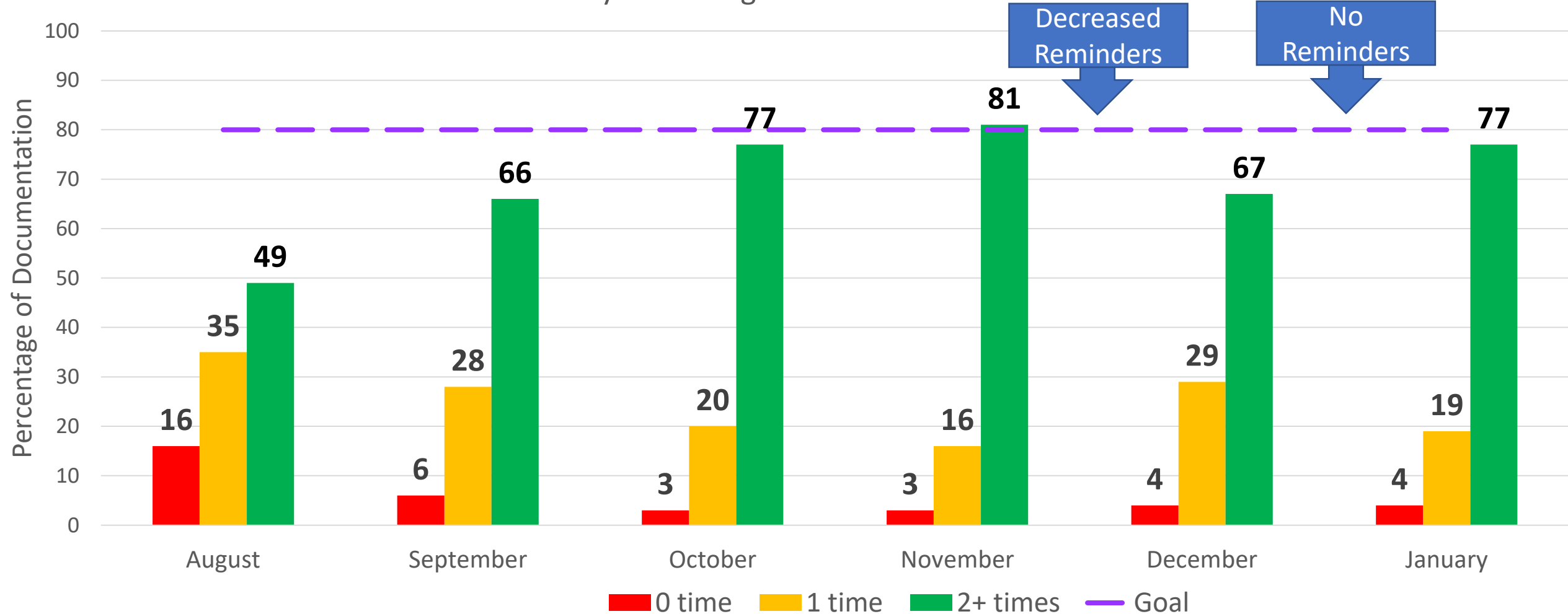
Auditing Plan

- First 20 weeks daily auditing:
 - Clinical Nurse Specialist audited documentation achievement on Tuesdays
 - Fuld Fellows audited documentation achievement Wednesday through Monday
- Weeks 21-24 audits three times/week
- Weeks 24+ audit of 2-3 charts for a week on each unit
- Applauses & Secure Chat messages

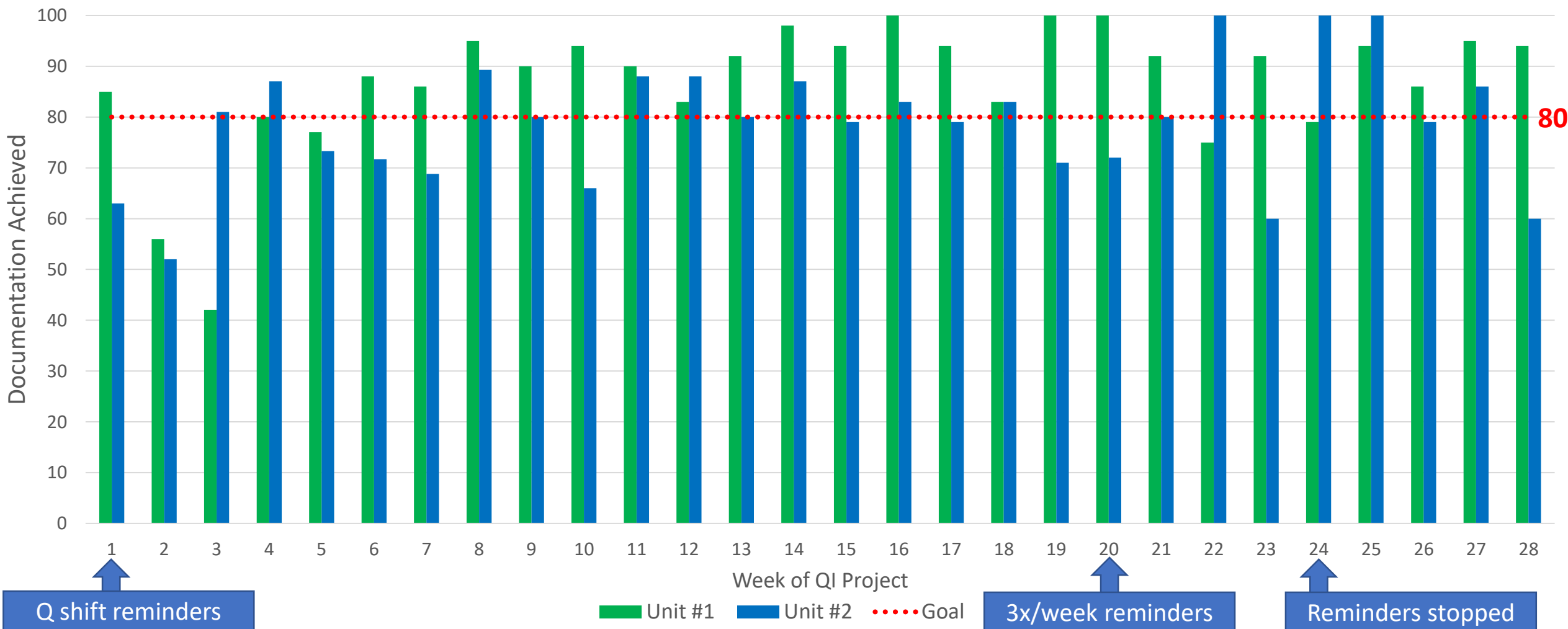


Results

Monthly Percentage of NTK Documentation



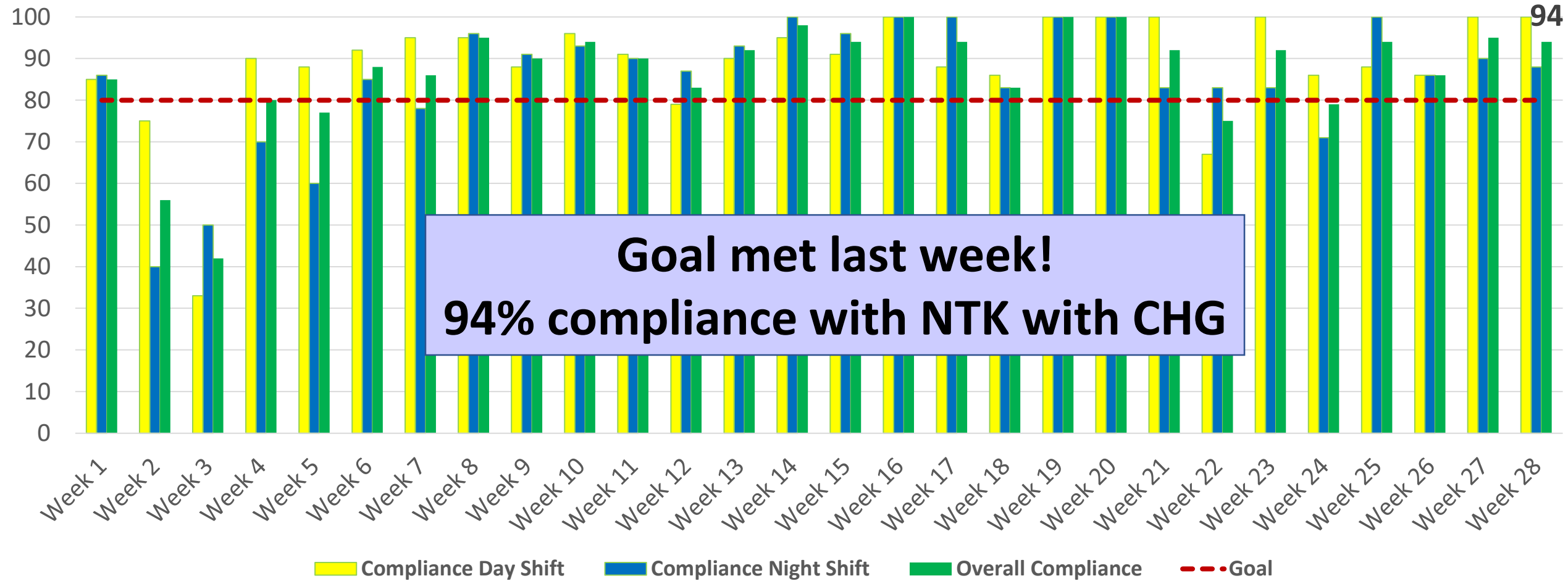
Weekly NTK with CHG BID Achievement by Unit



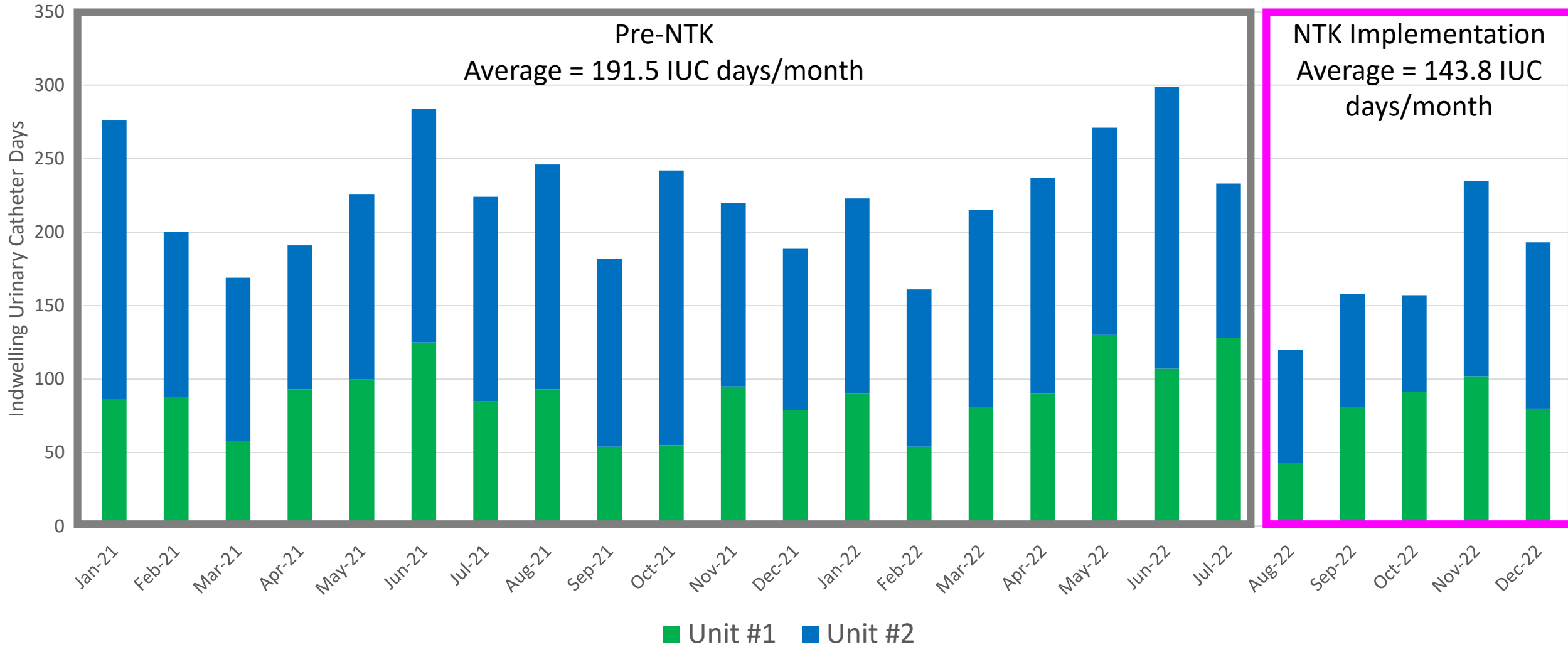
Weekly Huddle Board Project Update

NTK with CHG Documentation Achievement

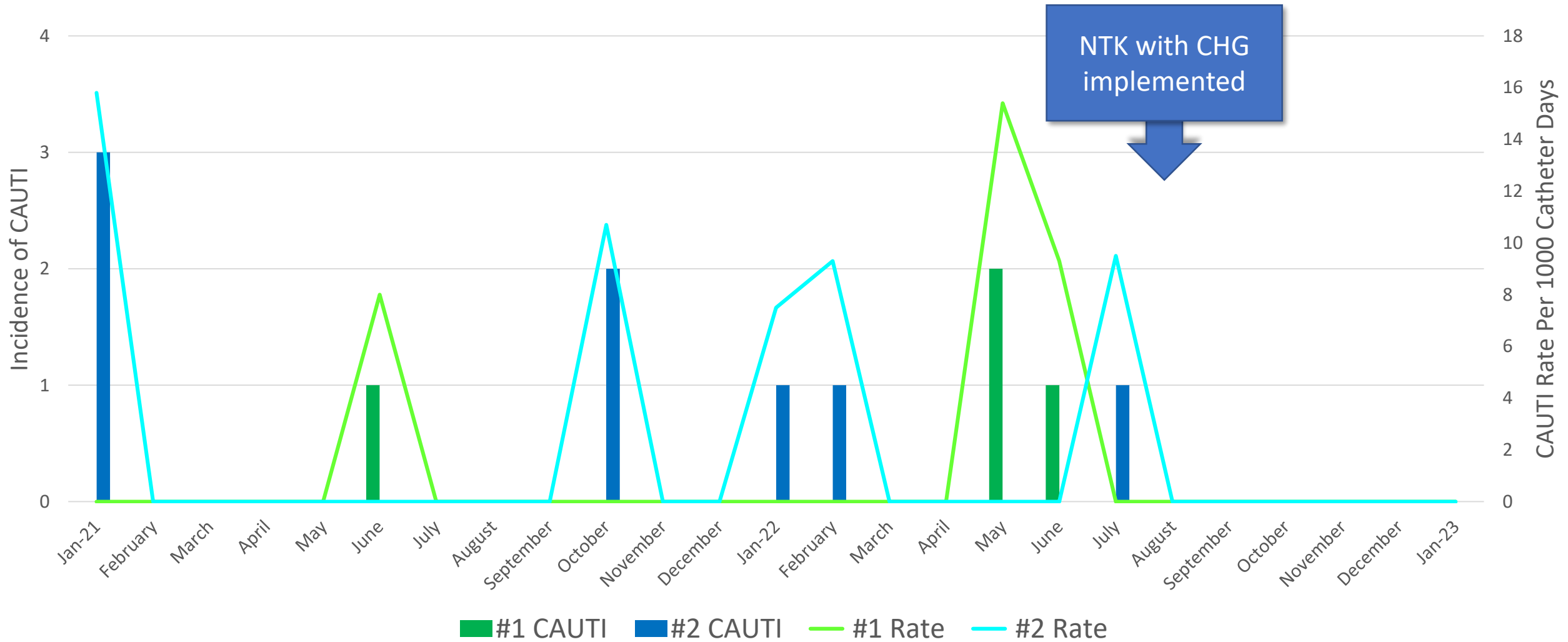
Goal = 80%



Indwelling Urinary Catheter Days



CAUTI Incidence and Rate by Unit



Summary of Outcomes

- Meeting the NTK BID 80% goal increased from 37.5% during the first four weeks to 75% in the last four weeks
- Average number of IUC days decreased by 25% during the QI period
- In the six months since implementation of the NTK with CHG QI project, there have been no CAUTIs on two inpatient neurosciences medical-surgical and intermediate care units

- Lo, E., Nicolle, L. E., Coffin, S. E., Gould, C., Maragakis, L. L., Meddings, J., ... & Yokoe, D. S. (2014). Strategies to prevent catheter-associated urinary tract infections in acute care hospitals: 2014 update. *Infection Control & Hospital Epidemiology*, 35(5), 464-479.
- Mitchell, B., Curryer, C., Holliday, E., Rickard, C. M., & Fasugba, O. (2021). Effectiveness of meatal cleaning in the prevention of catheter-associated urinary tract infections and bacteriuria: an updated systematic review and meta-analysis. *BMJ Open*, 11(6), e046817. <https://doi.org/10.1136/bmjopen-2020-046817>
- National Healthcare Safety Network (2023). *Urinary Tract Infection (Catheter-Associated Urinary Tract Infection [CAUTI] and Non-Catheter-Associated Urinary Tract [UTI] Events*. Accessed February 15, 2023. <https://www.cdc.gov/nhsn/pdfs/pscmanual/7psccauticurrent.pdf>
- Schmudde, Y., Olson-Sitki, K., Bond, J., & Chamberlain, J. (2019). Navel to Knees With Chlorhexidine Gluconate. *Dimensions of Critical Care Nursing*, 38(5), 236–240. <https://doi.org/10.1097/dcc.0000000000000371>



Questions?