



CAUTION

Strategy

CAUTI OUT OF NATION





Contents

- Introduction
- CAUTI Impact
- CAUTI Rate and DUR
- Fishbone (Gap Analysis)
- Description of CAUTION
- Vision, Mission & Aim
- Strategic goals
- CAUTION Strategy Phases
- CAUTION Components
- Further Information



Introduction

- Catheter-Associated Urinary Tract Infection (CAUTI) is an infection of the urinary tract system associated with a urinary catheter.
- It is estimated that approximately 12%-16% of adult patients have an indwelling urinary catheter during their hospital stay.
- Most common type of healthcare-associated infection is urinary tract infections (UTIs), and it is accounting for more than 30% as compared to other HAIs.





CAUTI CRITERIA & DEFINITIONS

SUTI 1 Catheter-associated Urinary Tract Infection (CAUTI) - Any Age Patient

Elements:

The patient must meet 1, 2, and 3 below:

1. The patient had an indwelling urinary catheter (IUC) that had been in place for more than 2 consecutive days in an inpatient location on the date of the event

AND was either:

- Present for any portion of the calendar day on the date of the event OR
- Removed the day before the date of the event





CAUTI CRITERIA & DEFINITIONS

2. The patient has at least one of the following signs or symptoms:

Fever ($>38^{\circ}\text{C}$)

Suprapubic tenderness*

Costovertebral angle pain or tenderness*

Urinary urgency

Urinary frequency

Dysuria





CAUTI CRITERIA & DEFINITIONS

Elements:

3. The patient has a urine culture with no more than two species of organisms identified, and at least one bacterium of $\geq 10^5$ CFU/ml.

All elements of the SUTI criterion must occur during the IWP.





CAUTI CRITERIA & DEFINITIONS

SUTI 2 CAUTI or Non-CAUTI in patients 1 year of age or less

Elements:

The patient must meet 1, 2, and 3 below:

1. Patient is ≤ 1 year and with or without an indwelling urinary catheter that had been in place for > 2 days on the date of the event AND was either:

Present for any portion of the calendar day on the date of the event

Removed the day before the date of the event





• CAUTI CRITERIA & DEFINITIONS

• SUTI 2 CAUTI or Non-CAUTI in patients 1 year of age or less

Elements:

2. The patient has at least one of the following signs or symptoms:

- Fever ($>38^{\circ}\text{C}$)
- Hypothermia ($<36.0^{\circ}\text{C}$)
- Apnea
- Bradycardia
- Lethargy
- Vomiting
- Suprapubic tenderness*





CAUTI CRITERIA & DEFINITIONS

. SUTI 2 CAUTI or Non-CAUTI in patients 1 year of age or less

Elements:

3. The patient has a urine culture with no more than two species of organisms identified, at least one of which is a bacterium of $\geq 10^5$ CFU/ml.

All elements of the UTI criterion must occur during the IWP.





CAUTI CRITERIA & DEFINITIONS

Catheter-associated ABUTI or Non-catheter associated ABUTI

- Any Age Patient

Elements:

The patient must meet 1, 2, and 3 below:

- 1.** Patient with* or without an indwelling urinary catheter has no signs or symptoms of SUTI 1 or 2 according to age
- 2.** Patient has a urine culture with no more than two species of organisms identified, at least one of which is a bacterium of $\geq 10^5$ CFU/ml
- 3.** Patient has organism identified** from blood specimen with at least **one matching bacterium** to the bacterium at $\geq 10^5$ CFU/ml identified in the urine specimen OR is eligible for LCBI criterion 2 (without fever) and matching common commensal(s) in the urine.

Note: All elements of the ABUTI criterion must occur during the IWP.





Notes ON CAUTI Criteria

“**Mixed flora**” is not available in the pathogen list within NSHN. Therefore, it cannot be reported as a pathogen to meet the NHSN UTI criteria.

Additionally, “mixed flora” represents at least two species of organisms.

Therefore, an additional organism recovered from the same culture would represent > 2 species of microorganisms. Such a specimen also cannot be used to meet the UTI criteria.

Examples

Culture with *Pseudomonas aeruginosa* and *Providencia stuartii*= 2 species

Culture with *E. Coli*, enterococcus, & proteus= 3 species

MSSA and MRSA = 1 species (report most resistant)





Notes ON CAUTI Criteria

Notes:

The following excluded organisms cannot be used to meet the UTI definition:

Any *Candida* species as well as a report of “yeast” that is not otherwise:

specified; mold; dimorphic fungi or parasites

In SUTI criteria, pain or tenderness of the suprapubic region or costovertebral the angle should be without other recognized cause

Fever is a non-specific symptom of infection and cannot be excluded from UTI determination because it is thought clinically it is due to another recognized cause.

Suprapubic tenderness whether elicited by palpation (tenderness-sign) or provided as a *subjective complaint* of suprapubic pain (pain symptom), documentation of either found in the medical record acceptable as a part of SUTI criterion.

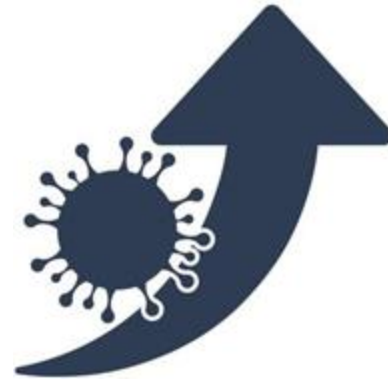




Impact of CAUTI on Healthcare Facilities



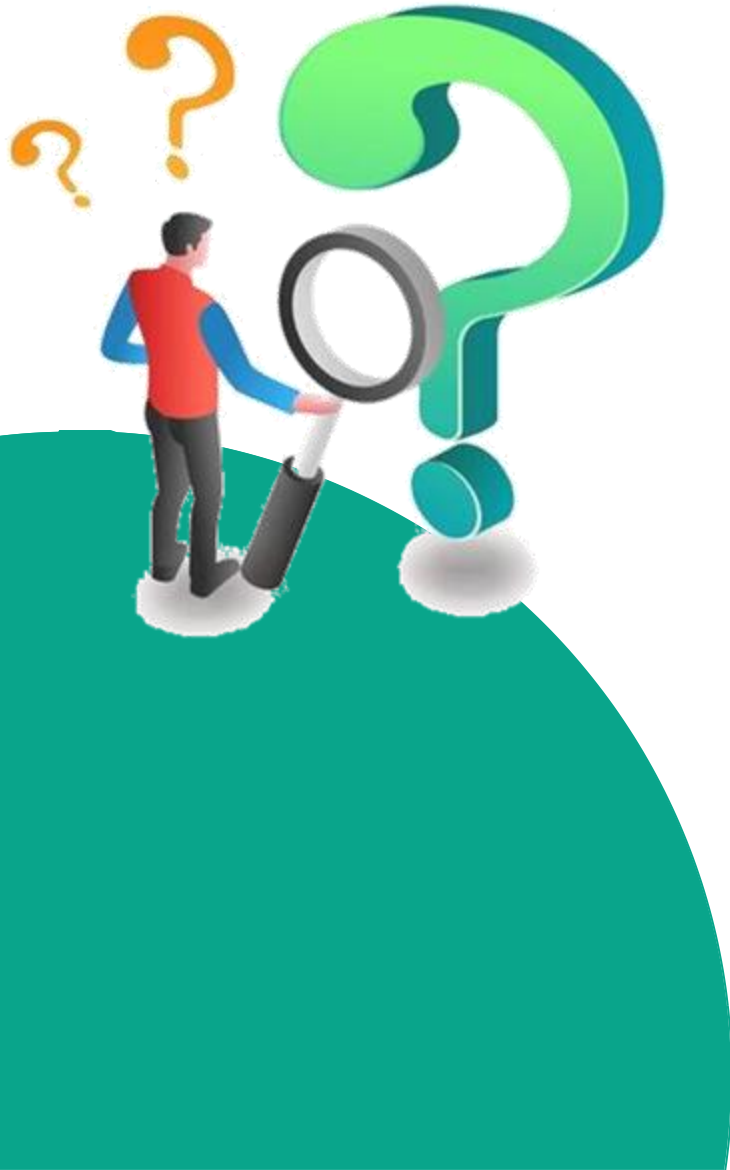
Prolonged length of stay (LOS): From 2- 4 days.



High morbidity and mortality: Estimated 13,000 per year.



Increased healthcare cost: \$400- 500 Billion per year.



CAUTI Rate and DUR

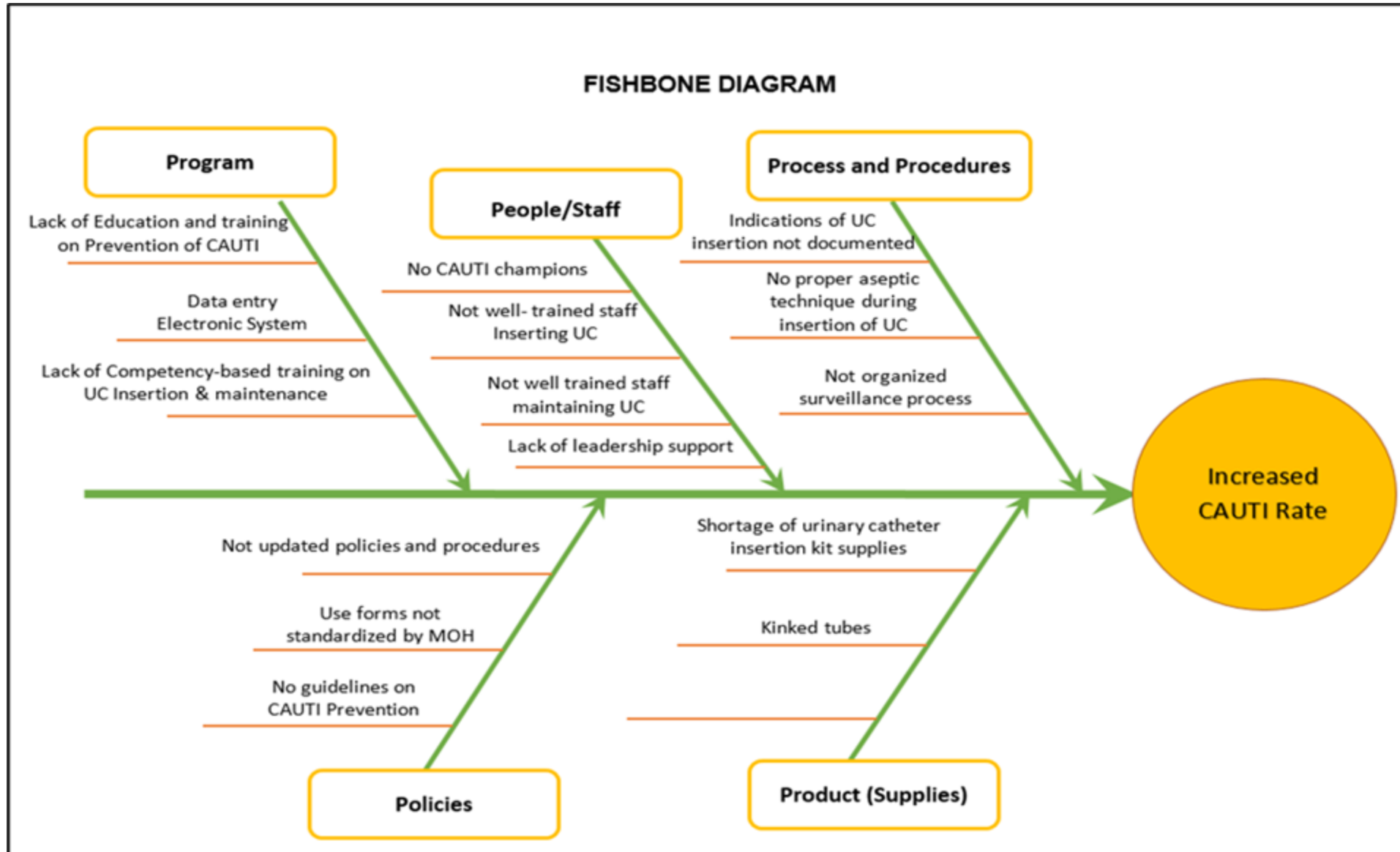
The national rate of CAUTI is 1.03 per 1000 UC days which is just a little higher than 2021 national benchmark of 0.92/1000 UC days.

DUR or device utilization ratio is higher by 33% compared to 2021.

We need to put a lot of efforts to lower the rate, however, without appropriate application of evidence-based interventions it will be difficult to reach our goal.



CAUTI GAP AND FISHBONE ANALYSIS





PERFORMANCE MANAGEMENT: COLOUR ZONES

Rate: $> 3.4 / 1000$ UC days
Results are higher than the established target, require urgent attention and needs aggressive measures

BLACK ZONE

Rate: $> 0.5 - 1.7 / 1000$ UC days
Results are above the established target, but within a tolerance interval. They need to be analyzed and monitored.

YELLOW ZONE



RED ZONE

Rate: $> 1.7 - 3.4 / 1000$ UC days
Results are higher than the established target and require urgent attention

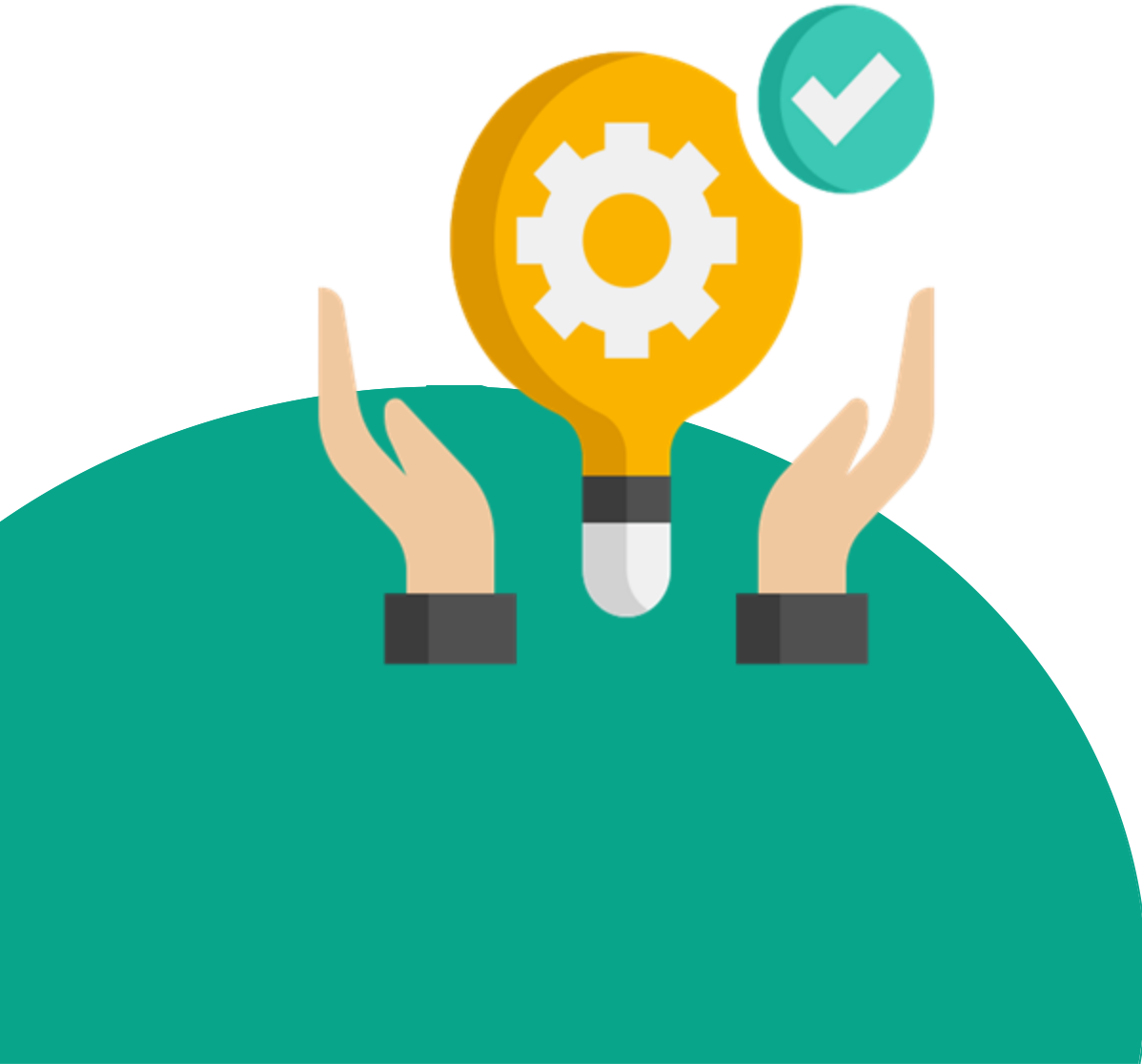
GREEN ZONE

Rate: $0.5 - 0 / 1000$ UC days
Results are on or over the established target.



Description of CAUTION (CAUTI Out of Nation)

CAUTION is a national strategy that aims to reduce CAUTI in national all healthcare facilities through comprehensive approach of intensive implementation of multiple evidence –based interventions



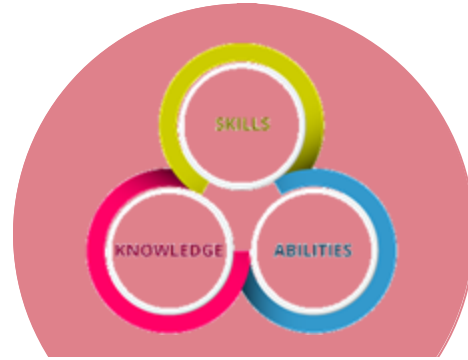


CAUTION STRATEGY



VISION

To eliminate CAUTI in all national healthcare facilities by the end of the year 2025.



MISSION

To enhance knowledge and practice related to the updated evidence-based bundles of interventions for the prevention of (CAUTI) among all healthcare professionals in all national healthcare facilities.



AIM

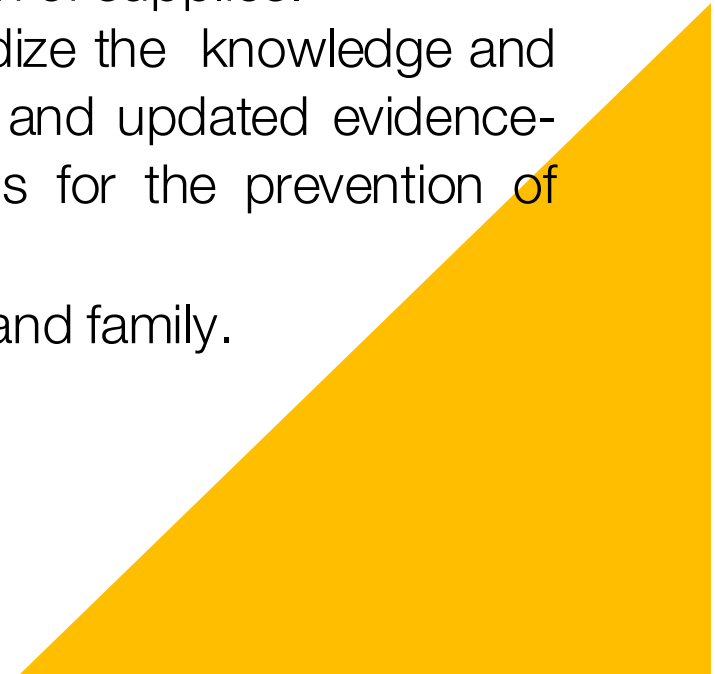
To reduce the current national CAUTI rate by 50% in all national healthcare facilities, starting from March 2023 to March 2025 (3 years period).



Strategic Goals



- To improve awareness of leaders, administrators, and decision-makers about CAUTION.
- To construct evidence based best practices .
- To maintain effective chain of supplies.
- To promote and standardize the knowledge and practice related to new and updated evidence-based recommendations for the prevention of (CAUTI).
- To educate staff, patient and family.





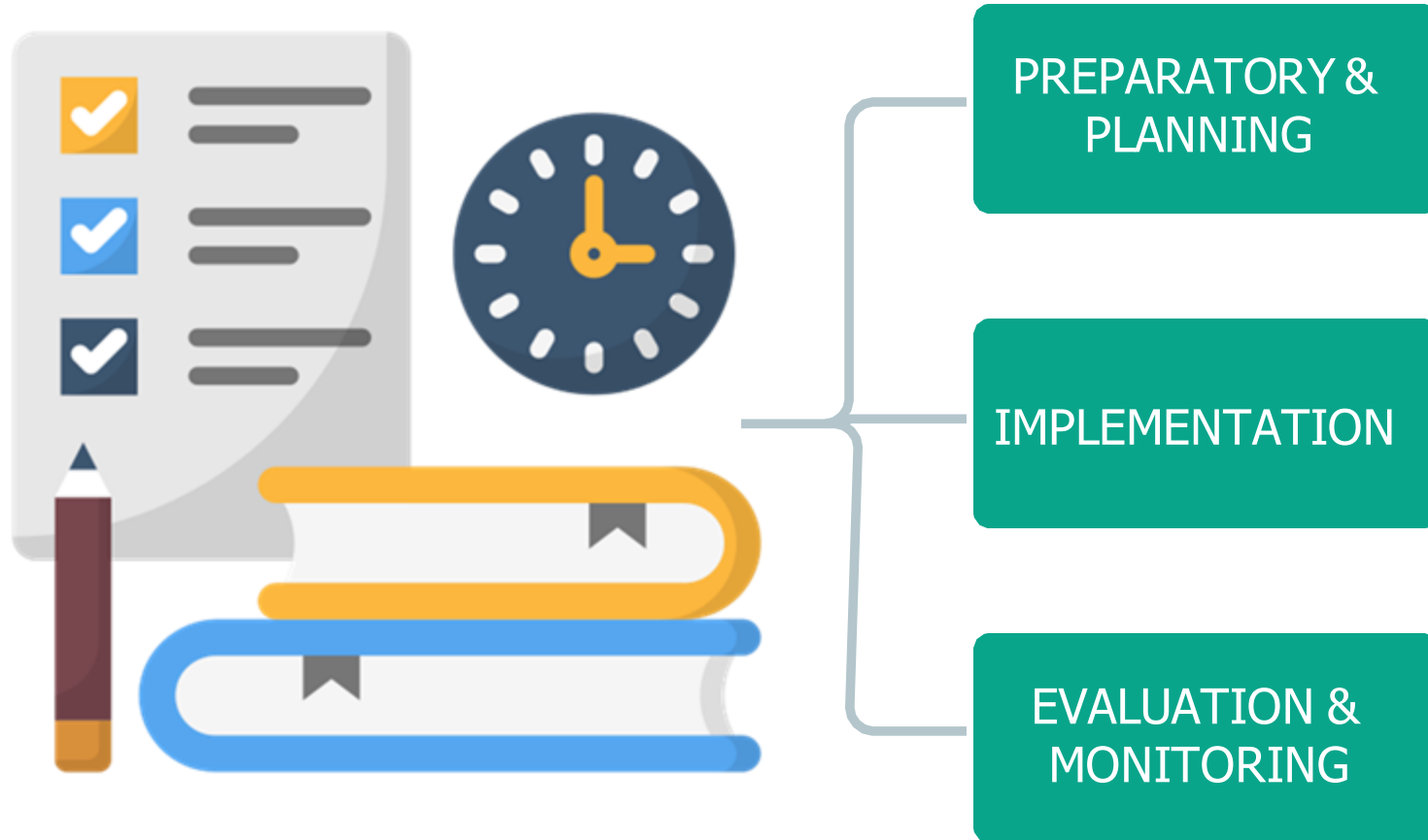
Strategic Goals



- To monitor and evaluate CAUTI events, rates and its device utilization ratios in national healthcare facilities.
- To conduct CAUTION to CAUTI (C2C) competition.
- To enhance engagement of multidisciplinary stakeholders helping CAUTION implementation.
- To establish a channel of communication to disseminate the information and knowledge about CAUTION and share our strategic experience.
- To frequently monitor and evaluate CAUTION KPIs, send reports to regions and when needed for the duration of the strategy.



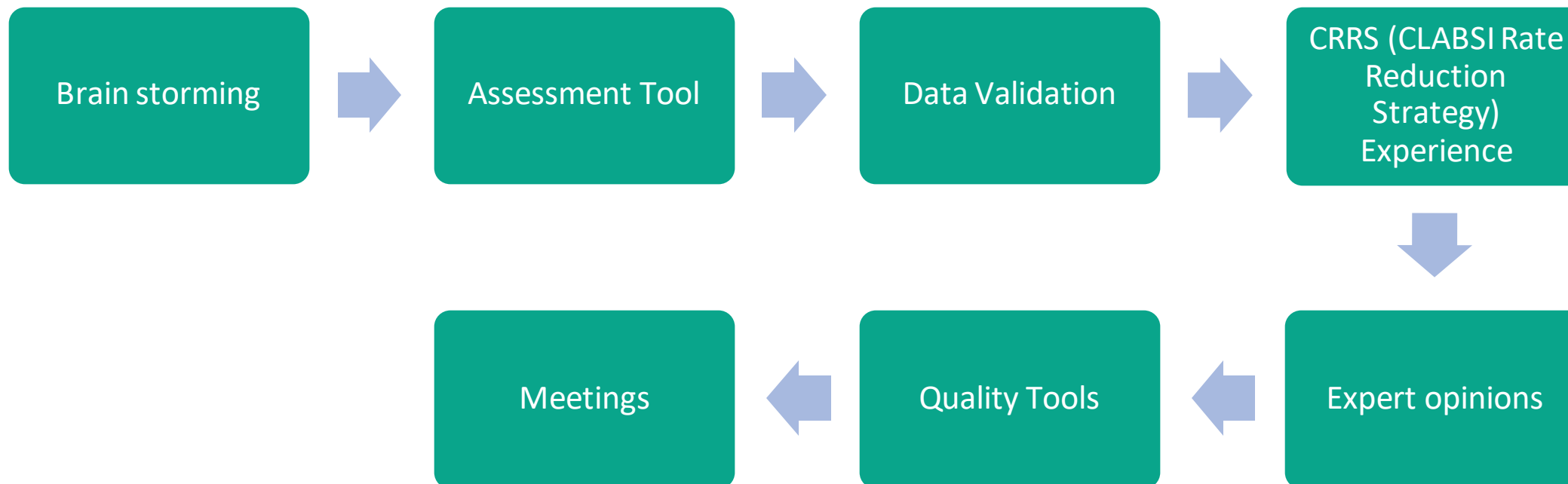
Phases of CAUTION Strategy





Phases of CAUTION Strategy

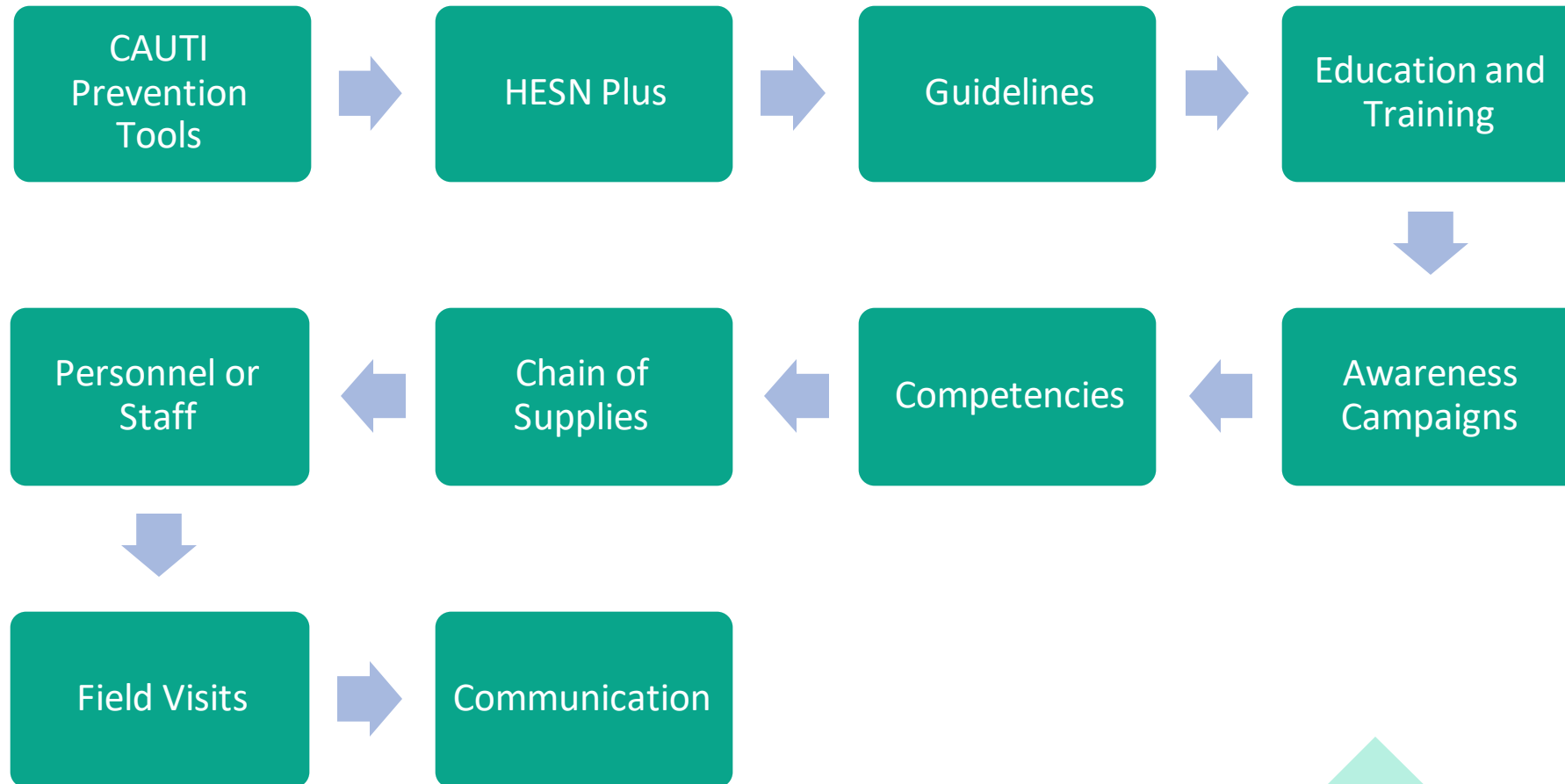
A. PREPARATORY & PLANNING PHASE:





Phases of CAUTION Strategy

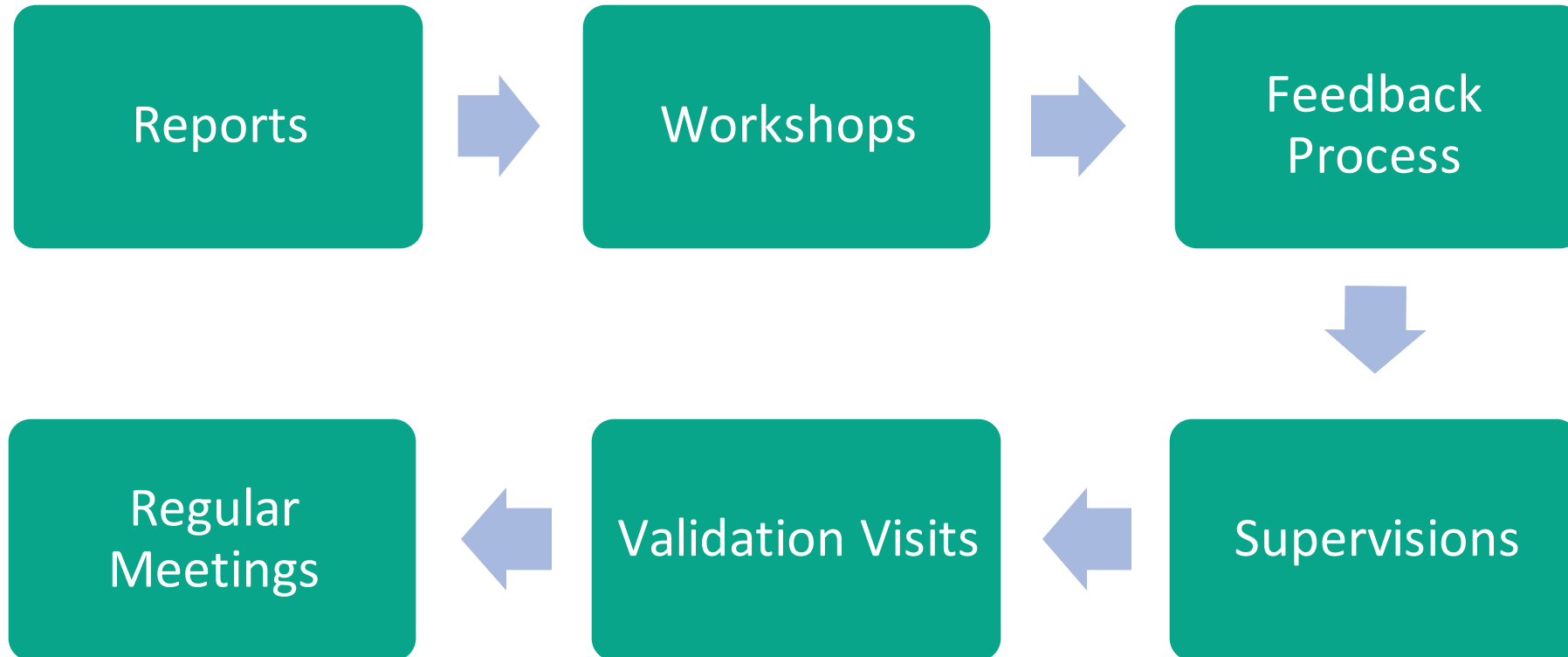
B. IMPLEMENTATION PHASE:





Phases of CAUTION Strategy

C. MONITORING & EVALUATION PHASE:





CAUTION STRATEGY COMPONENTS

1. Leadership and Governance.
2. CAUTI Surveillance and data management.
3. CAUTI prevention best practices.
4. Personnel and communication management.
5. Education and training for staff, patients, and their families.
6. Urinary catheter insertion and maintenance supplies.
7. Performance Improvement by monitoring and evaluation
8. CAUTION to CAUTI (C2C) initiative



Leadership & Governance



I. Supportive and Validation visits
(MOH & Private Hospital)

II. Continuous communication and advice
given

CAUTI Surveillance & Data Management



CAUTI Rate



0.5/ 1000 Urinary
catheter days
(GOAL)

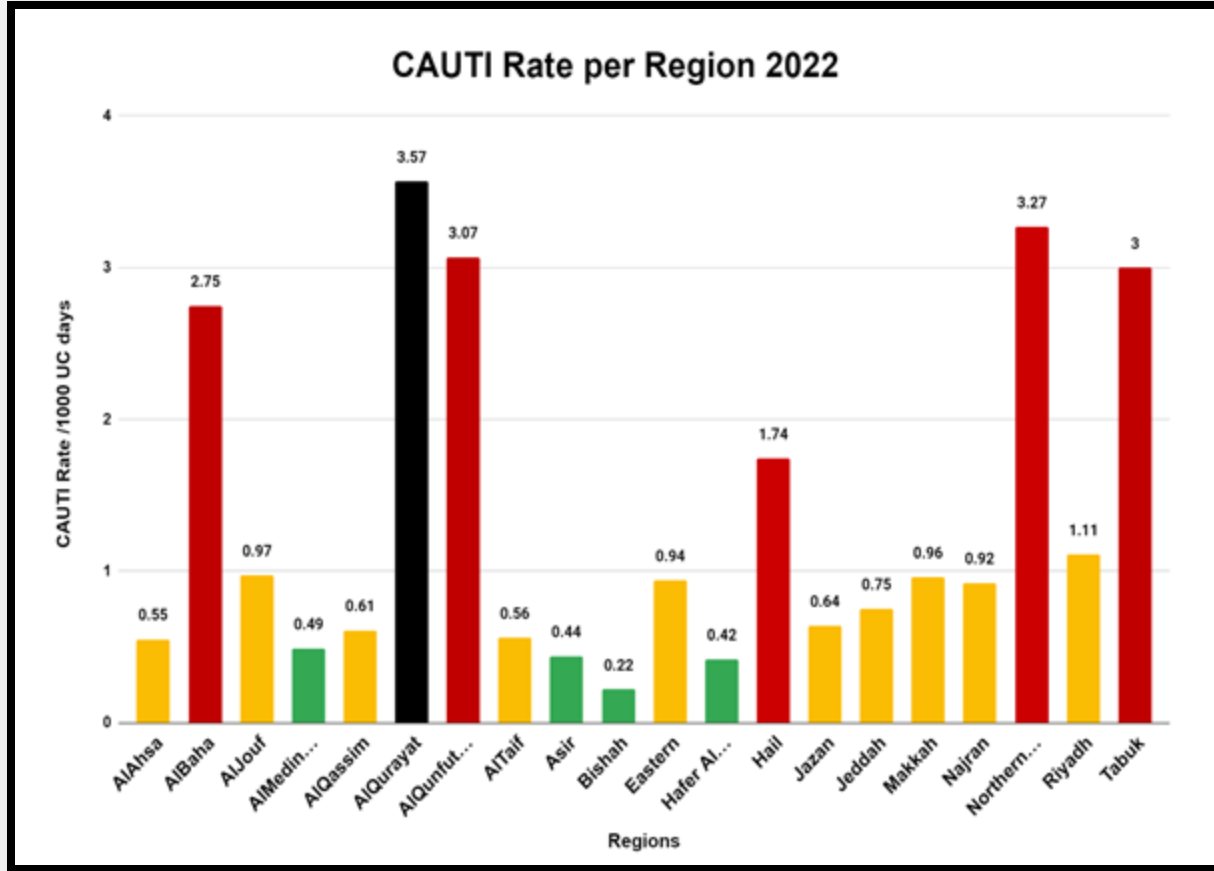


0.88/ 1000 Urinary
catheter days
(2023 TARGET
RATE)

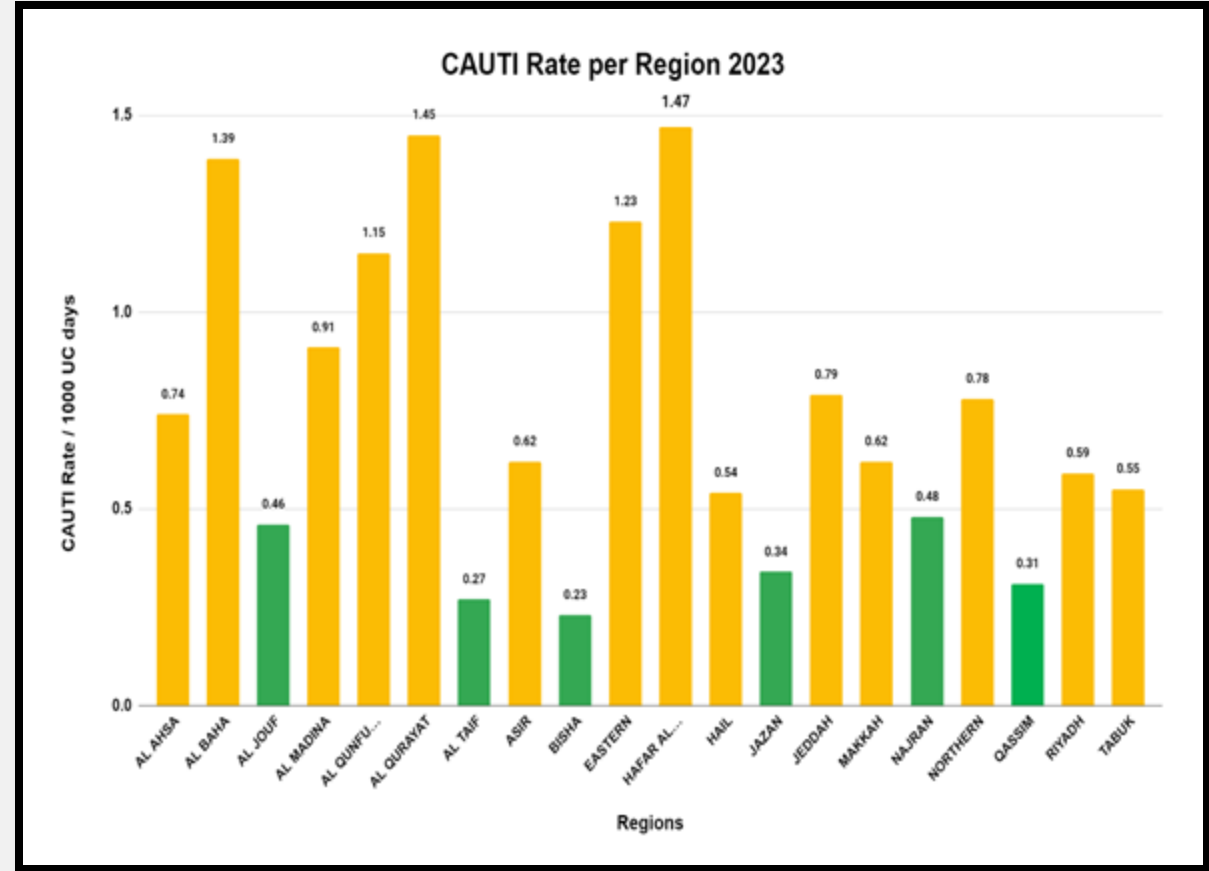


0.68/ 1000 Urinary
catheter days
(JAN – DEC 2023)

CAUTI Rate (per Region) (Jan-DEC 2022 & 2023)



2022

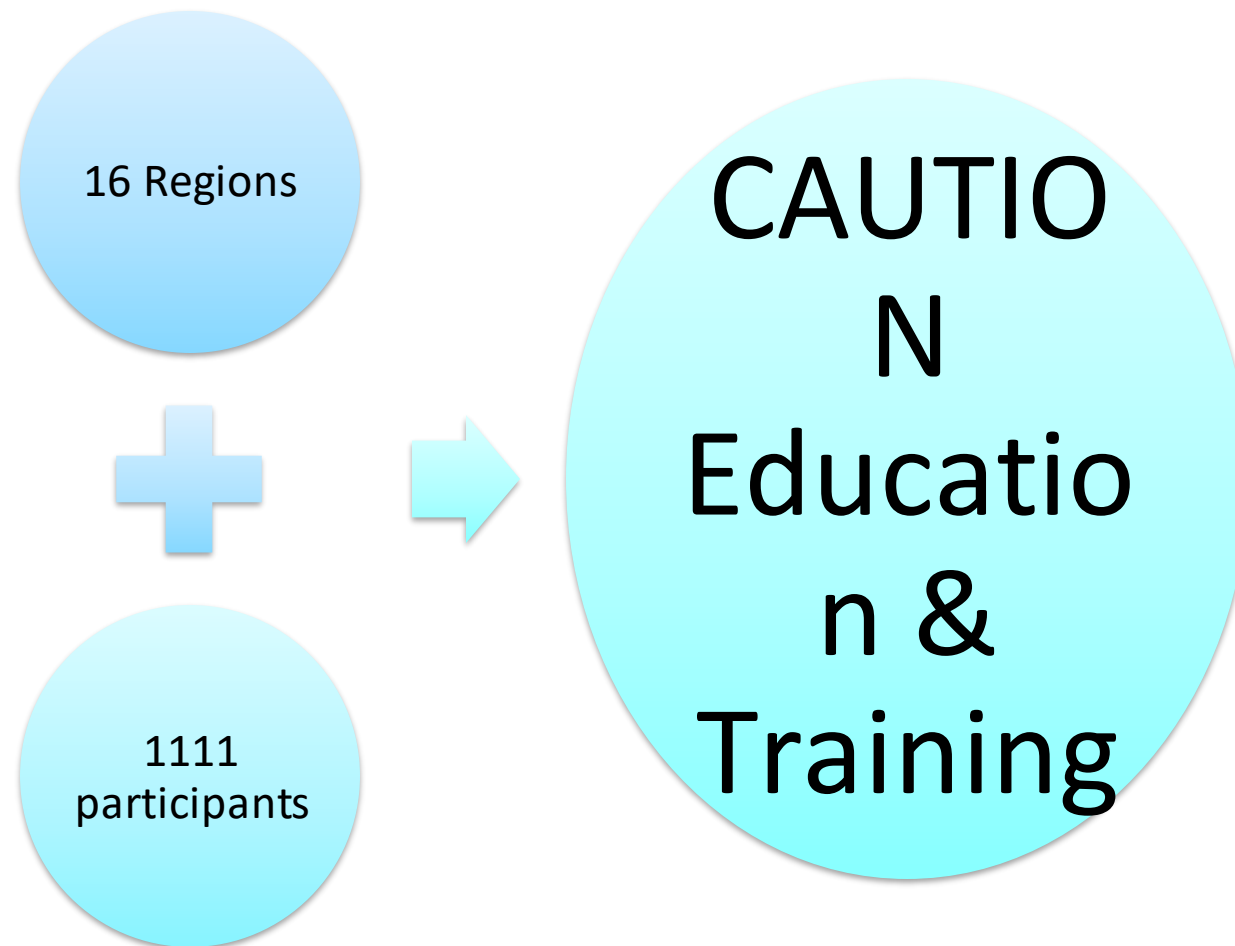


2023

Education & Training

CAUTION Education & Training

- Started May 2023 in collaboration with our partner BD Company
- A lecture presentation on CAUTION Strategy as an introduction was given by the GDIPC Surveillance Team
- Presentation by BD Company
- Hands On Training on Insertion of Indwelling Urinary Catheter



Education & Training



Performance Improvement by Monitoring & Evaluation



- Regular evaluation for the requirements both CAUTION and C2C (weekly for AUC, monthly for google form)
- Validation visit scheduled as per result of performance



EVIDENCE – BASED INTERVENTIONS



A. Guideline - Guideline for Prevention of CAUTI

B. Tools

- CAUTION Roadmap Implementation Assessment
- Urinary Catheter Insertion Competency
- Urinary Catheter Maintenance Competency
- Urinary Catheter Insertion Adherence Monitoring
- Urinary Catheter Maintenance Adherence Monitoring
- Daily CAUTI Safety Huddle
- CAUTION Champions Criteria

C. CAUTION Supplies Tools

- CAUTION Implementation Related Supplies Codes Tools
- CAUTION Supplies Consumption Calculator Tool

D. Education Materials

- Lectures on CAUTI Surveillance and CAUTI Prevention

E. Posters



SCAN
For more information
on our CAUTION Strategy





وَمَنْ أَحْيَاهَا فَكَأَنَّمَا أَحْيَا النَّاسَ جَمِيعًا

and that if a person saves a
man from death, it will be
as if he had saved the
whole of mankind

المائدة: سورة

Thank you

