

Bundle Approach to Infection Prevention

Mediclinic City Hospital, Dubai.

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Patient Safety Challenge

IDENTIFICATION

- Mediclinic City Hospital, established in 2008, is a 280 bed multi-disciplinary acute-care hospital in Dubai Healthcare City.
- Includes a comprehensive cancer center, level III NICU, PICU and adult ICU.
- Active infection control committee which meets monthly to review ongoing surveillance data regarding healthcare-associated infections (HAIs).

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ANALYSIS

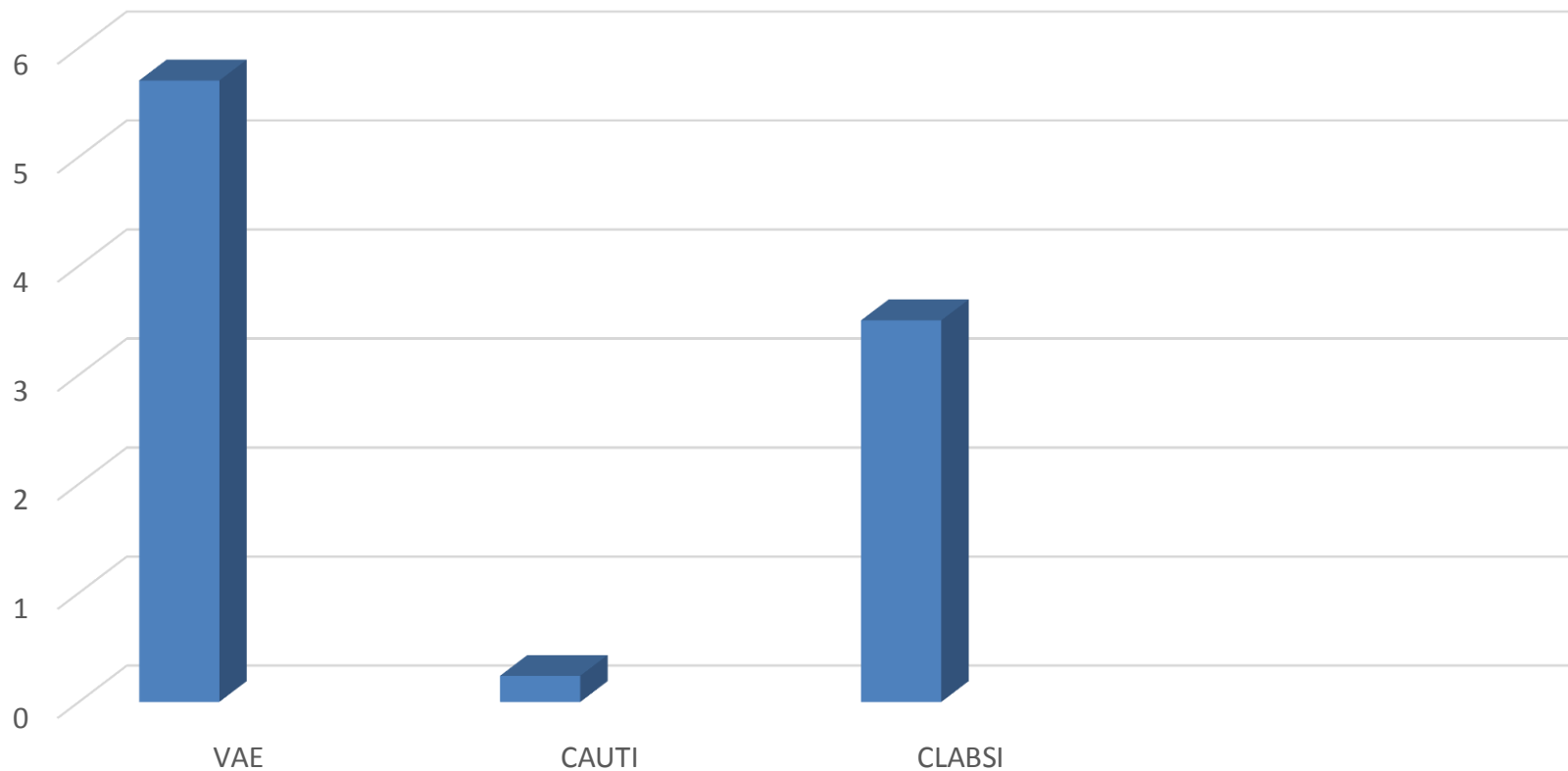
To identify the burden of device-related HAI's in our hospital, we use CDC definitions, reported as rates per 1000 device-days:

- Ventilator-associated event (VAE)
- Central line-associated bloodstream infections (CLABSI)
- Catheter-associated urinary tract infection (CAUTI)

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ANALYSIS: BASELINE

HAI 2014



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APPROACH & SOLUTION

- Multidisciplinary team approach to implement “patient care bundles” for patients with urinary catheters, central lines or those on ventilators.
- Bundles were implemented hospital-wide in 2015.
- Education of physicians, nurses and patients by infection control link nurses in each inpatient unit.
- CDC bundle checklists for insertion and daily monitoring were simplified into an easy-to-read form.
- Random audits x2/week to evaluate bundle compliance.
- “Just in time” feedback to address any lapse in bundle compliance.

Patient Safety Challenge

BEST PRACTICE IMPLEMENTATION

ميدىكلينيك
MEDICLINIC
**ADULT VENTILATOR
BUNDLE**

Facility: _____

PATIENT LABEL

Date Ventilator started				Date discontinued									
Place a tick "√" if achieved, or a "X" if not achieved in each box													
Day	Shift	Head of the bed elevated 30–45°	Daily Sedation, Vacation and spontaneous breathing trial	Peptic Ulcer Disease Prophylaxis	DVT Prophylaxis	Chlorhexidine Oral Mouth care q 4 hours	Turning of patient q2	Gas O2 – Worsening gas exchange & O2 requirements	Temperature of >38°C	Sputum: New purulent/ change in character	WBC >= 12,000 or <= 4,000	Staff Signature	Comment
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Patient Safety Challenge

BEST PRACTICE IMPLEMENTATION



میدیکلینیک
MEDICLINIC
URINARY CATHETER
CARE BUNDLE
Facility: _____

PATIENT LABEL

CATHETER INSERTION CHECKLIST		Place a tick "✓" if achieved, or a "X" if not achieved in each box	
Before Procedure (Reason for the need of catheterization)	YES	NO	Comments
Urinary retention /obstruction			
Severely ill/immobility			
Lack bladder control			
Patient request/End of life			
Perioperative-selected surgical procedure			
Assisting with pressure ulcer healing for incontinent patient			
Epidural pain relief			
During Procedure	YES	NO	
Insert catheter using aseptic procedure			
Hand Hygiene before the procedure			
Catheter Insertion kit with sterile gloves, drape, cleansing supplies, sterile single pack lubricant, and sterile urinary catheter attached to a drainage bag.			
Only properly trained staff must insert the catheter			
After the Procedure	YES	NO	
Comply hand hygiene requirements			
Daily review of catheter necessity and prompt removal when not needed			
Catheter securement in place			
Maintain close drainage system			
Maintain unobstructed flow, keep collection bag below the level of the bladder and off the floor			
Daily cleansing of metal surface with soap and water			
Provide individual clean collection container at the bedside			
Name of Procedure		Date:	
Provider:			
Location/ Department of the Urinary Catheterization:			
Reviewed by:		Date:	



میدیکلینیک
MEDICLINIC
URINARY CATHETER
CARE BUNDLE
Facility: _____

PATIENT LABEL

Date catheter inserted		Date catheter discontinued											
Place a tick "✓" if achieved, or a "X" if not achieved in each box													
Date	Shift	Daily Review of Catheter Necessity and Prompt removal, if not needed	Catheter Securement Device in Place	Hand Hygiene Performed	Excretions/Contact	Daily Meatal Hygiene Performed With Soap and Water	Drainage Bag Emptied Using A Clean Container	Maintain Unobstructed Flow, Keep Drainage Bag Off The Floor	Temp >38° C	Suprapubic tenderness	Urgency/Frequency	Staff Signature	Comment
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BEST PRACTICE IMPLEMENTATION

ميدىكلينيك
MEDICLINIC
CENTRAL VENOUS
LINE BUNDLE
Facility: _____

PATIENT LABEL

INSERTION CHECKLIST			
Type of catheter		YES	NO
Central Line:	Location: _____		
CVP Line:	Location: _____		
PICC Line:	Location: _____		
Broviac & Umbilical:	Location: _____		
Other: _____	Location: _____		
Is this a new line: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Is the procedure <input type="checkbox"/> Elective <input type="checkbox"/> Emergent <input type="checkbox"/> Reposition			
Before Procedure		YES	NO
Appropriate site selection			
Position patient correctly for the procedure			
Assemble equipment and supplies			
Perform Hand Hygiene			
Prep procedure site with >0.5% Chlorhexidine. Allow site to dry completely			
Drape entire patient in sterile drapes			
During Procedure		YES	NO
Wear mask with eye shield, head cap, and sterile gown			
Wear sterile gloves during catheter insertion			
Maintain sterile field			
Assisting personnel follow same procedures			
After the Procedure		YES	NO
Apply transparent dressing and labeled properly with date and time started			
Comply with hand hygiene requirement.			
Scrub the access ports /hub with chlorhexidine immediately prior to use			
Monitor insertion site and Immediately replace dressings that are wet, soiled, or dislodged			
Name of Procedure Provider			

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ميدىكلينيك
MEDICLINIC
CENTRAL VENOUS
LINE BUNDLE
Facility: _____

PATIENT LABEL

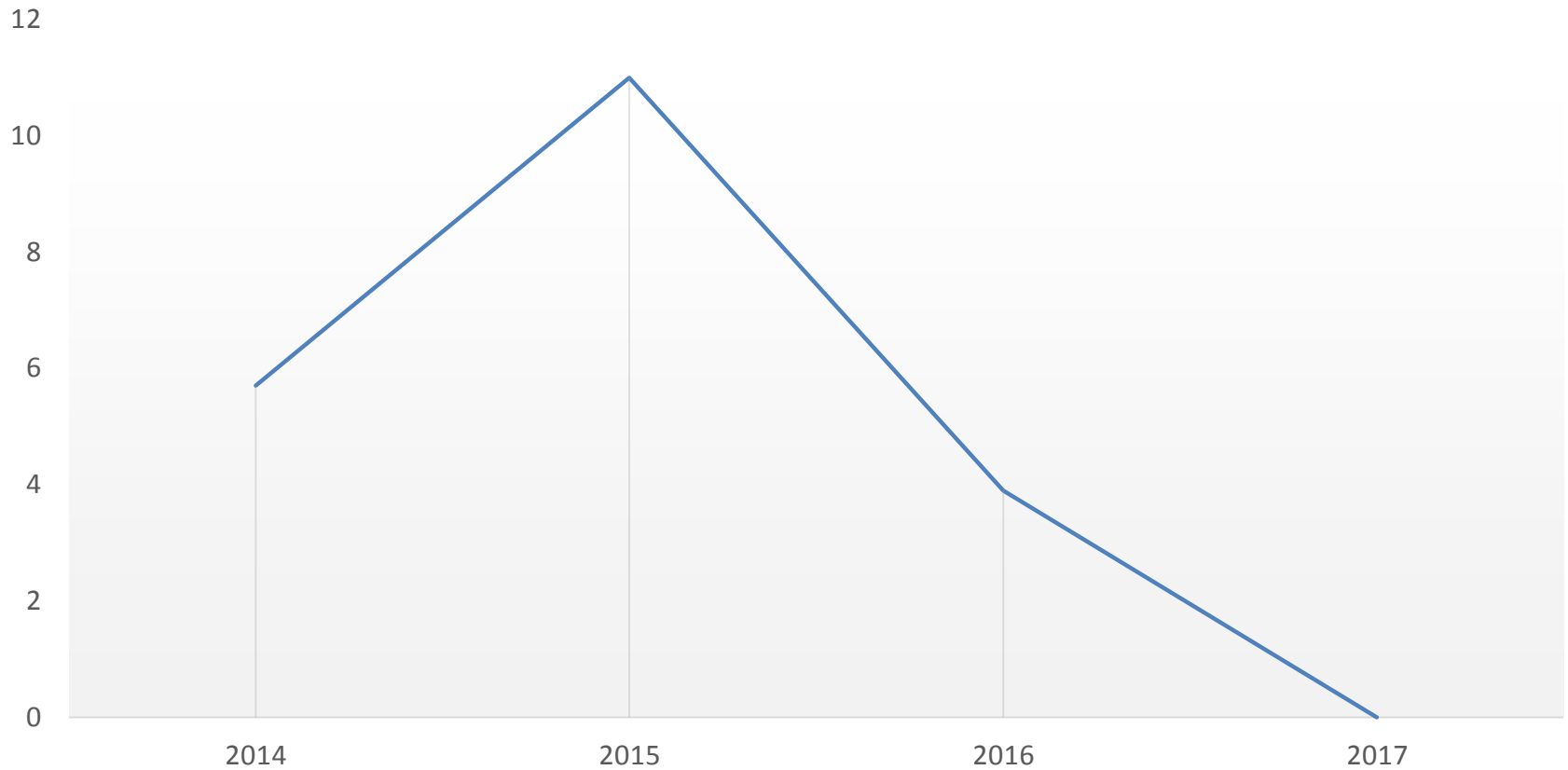
Date Central Line inserted:		Date Central Line discontinued:											
Place a tick "✓" if achieved, or a "X" if not achieved in each box													
Date	Shift	Daily review of line necessity and prompt removal when not needed	Dressing intact and labeled properly w/ date and time started	Scrub the access ports /hub with chlorhexidine immediately prior to use	Comply with hand hygiene requirement.	Regular monitoring of insertion site	Change dressing at least every 7 days or when wet and soiled or dislodged (one for site disinfection)	Fever	Chills	Hypotension	Increased WBC	Staff Signature	Comment
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MCME.CL.16.2

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RESULTS: VAE

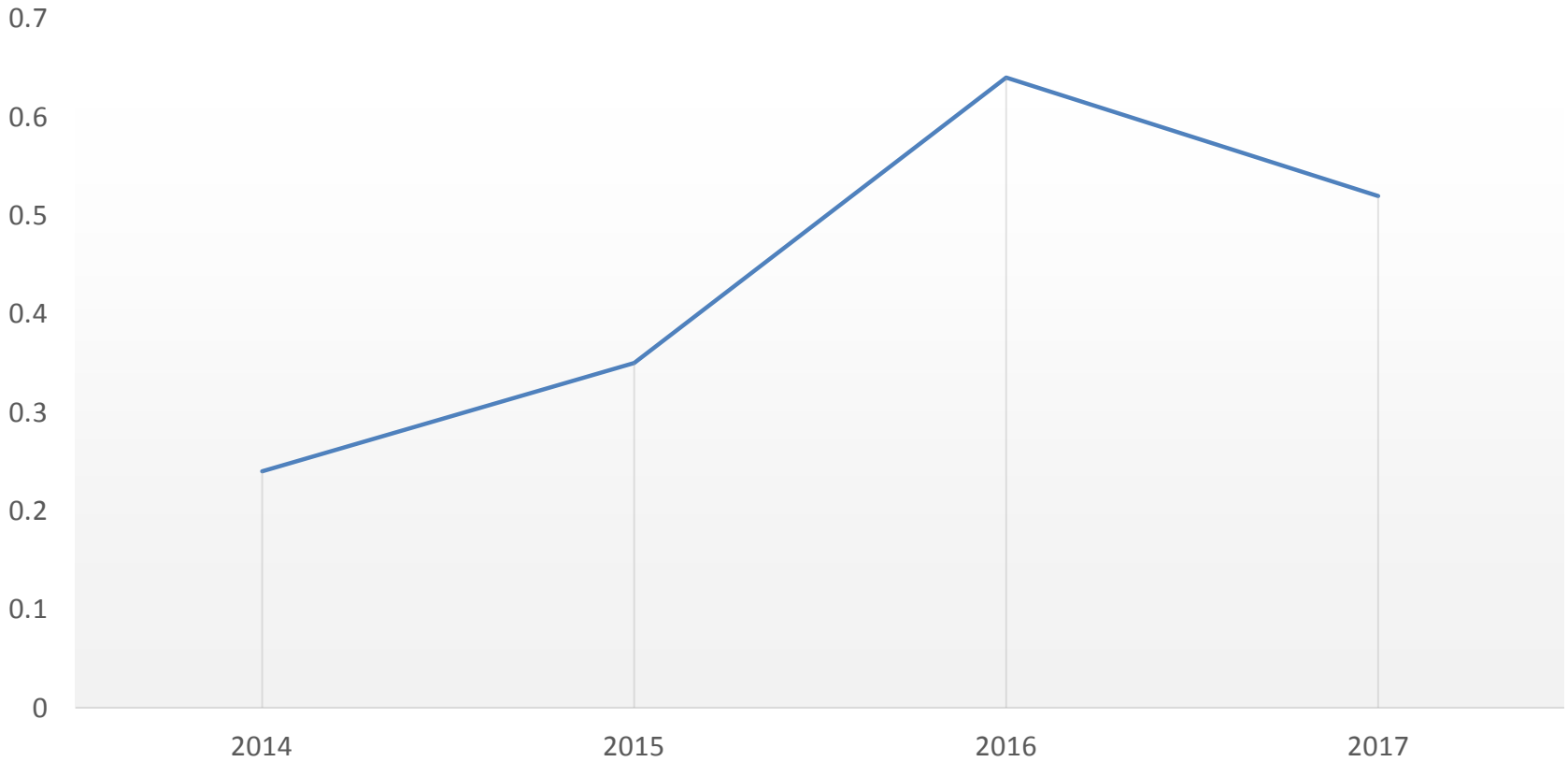
VAE



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RESULTS: CAUTI

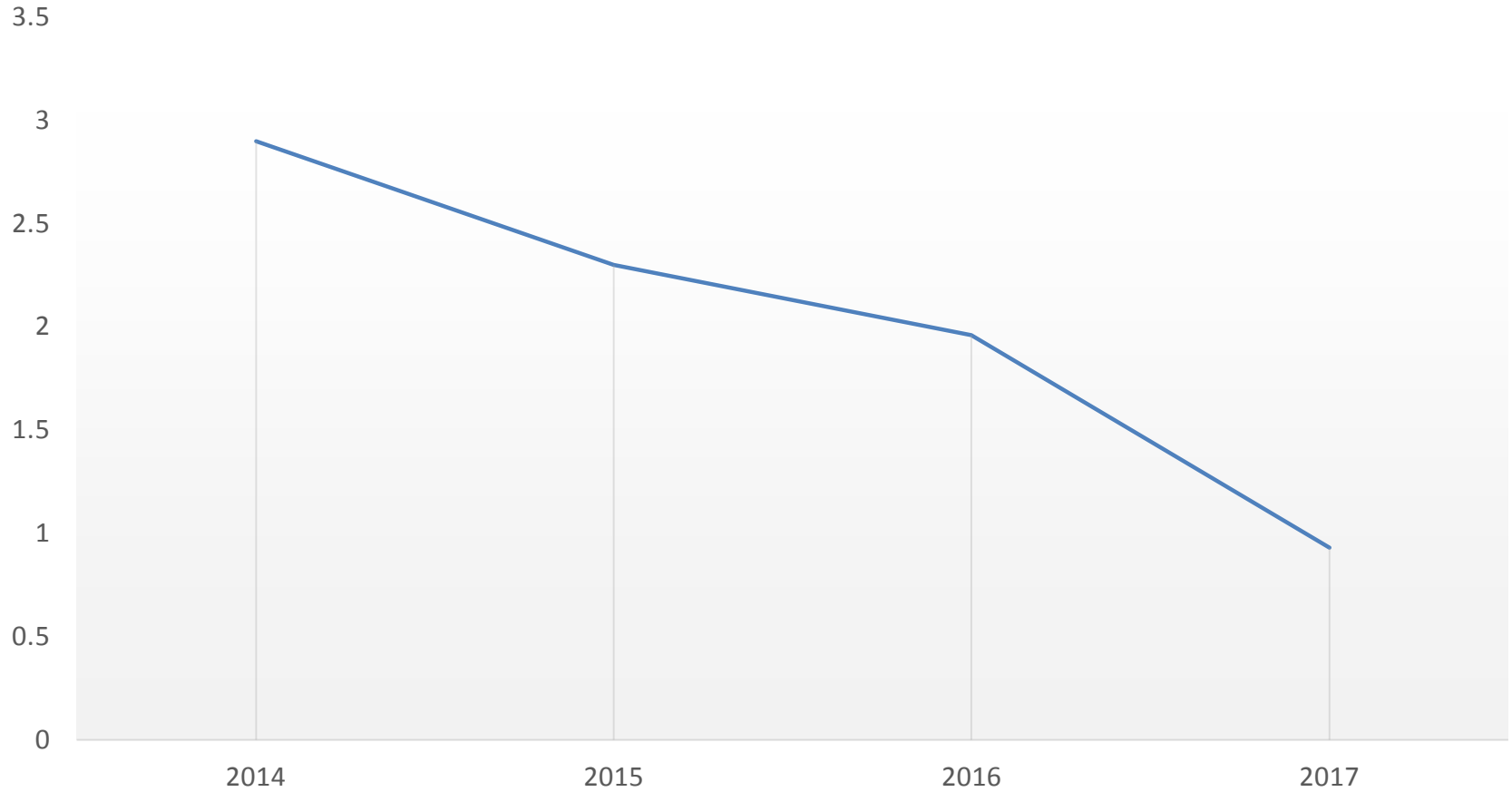
CAUTI



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RESULTS: CLABSI

CLABSI



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LESSONS LEARNED

- We found sustained and significant declines in rates of device-related HAIs with the bundle care approach.
- Implementing healthcare bundles and remaining compliant is very achievable in the UAE.
- Bundle compliance improves patient safety outcomes without incurring any additional healthcare costs: win-win situation.
- Our suggestion to other healthcare facilities in the region: “take the leap!”.

شكراً

THANK YOU!