

SUNWAY
MEDICAL CENTRE
Sunway City Kuala Lumpur

1. Infection Control Department, Sunway Medical Centre (SMC)
2. Quality Resources Department, SMC
3. Nursing Division, SMC

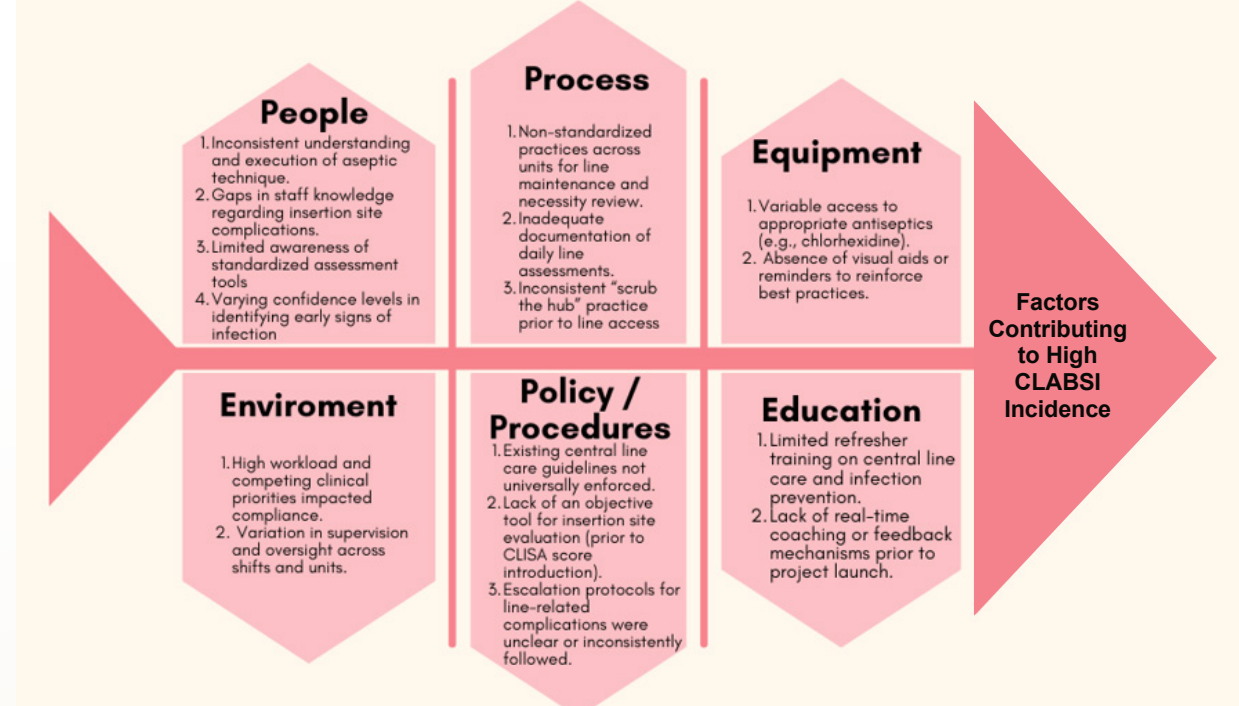
GOAL

To achieve a minimum 50% reduction in CLABSI rates within a 12-month period through the implementation of a comprehensive central line care bundle, while concurrently elevating staff adherence and competency.



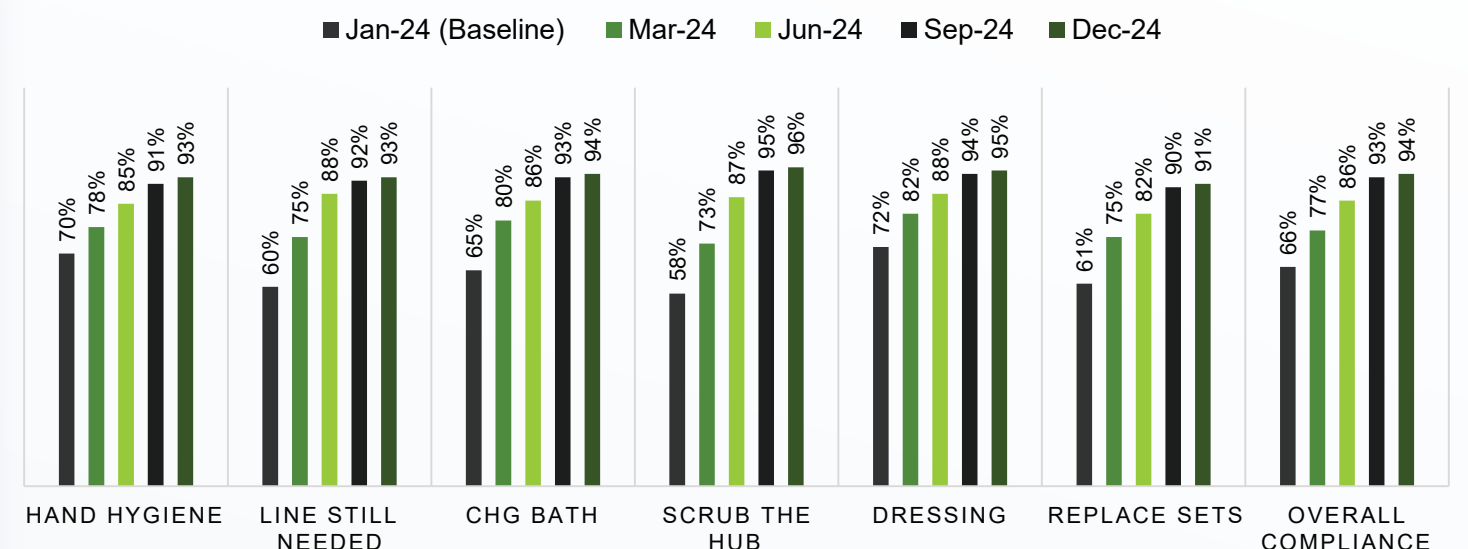
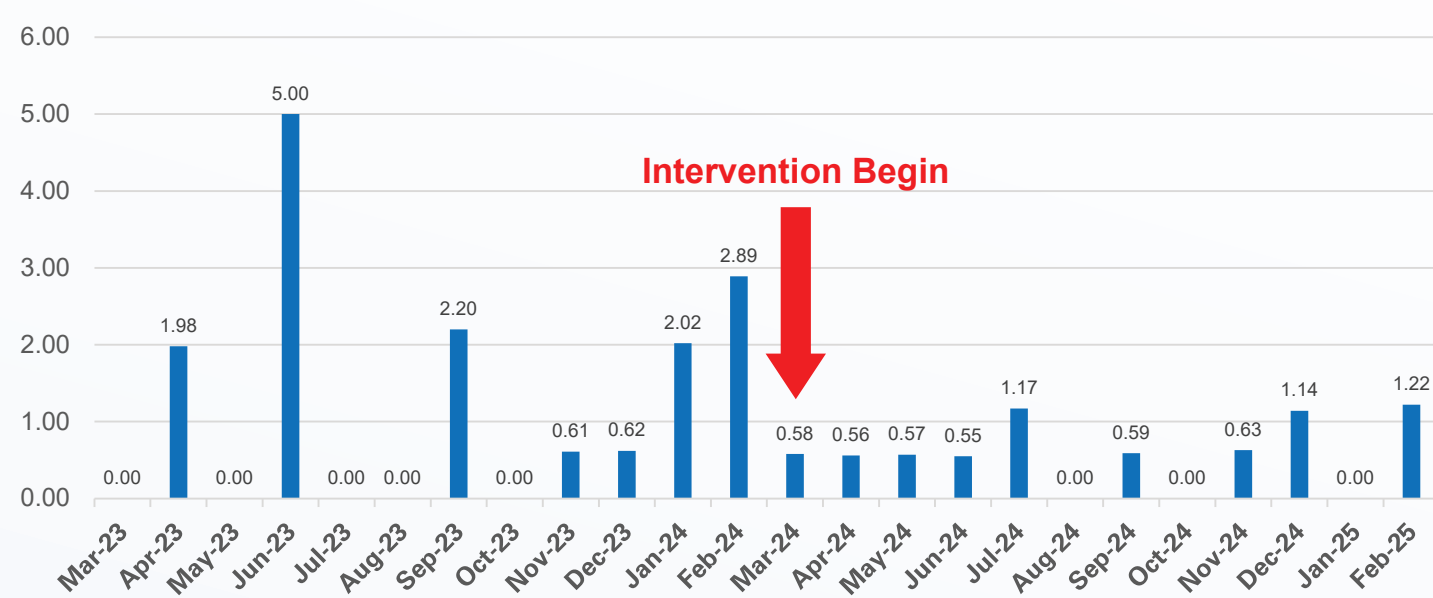
DRAFT VISUAL 01

SUNWAY MEDICAL CENTRE [®]		Vascular Catheter Care Bundle	
Surrey City Health Lullum			
Implementation of administration set			
1. Recommendations from the Centers for Disease Control and Prevention (CDC)			
2. Recommendations from the Infectious Diseases Society of America (IDSA) National Nursing Workgroup of Practice			
3. Recommendations from APIC, Guide for Prevention of Central-Line-Associated Bloodstream Infections (CLABSI) 2015			
Types of administration set		Frequency of changing	
Continuous IV fluid administration set		Not more than 72 hours interval	
Blood Transfusion administration set		Every 4 hours or completion of each unit of blood	
TPN administration set		Every 24 hours	
Proprietary administration set		A dedicated administration set should be used and should be replaced every 12 hours when the site is changed	
Intensified infusion administration set (petitdosis)		Replace set every 24 hours.	
C. Fill in box with "Y" if Yes and "N" if No:			
Last catheter day			
Date & Time			
Perform hand hygiene before and after touch catheter			
Daily inspect all access whether each central line is still needed <i>Please indicate CLABSI scoring (see CLABSI score)</i>			
Daily Chlorhexidine preparation Oximeter bathing for patients aged over 2 months			
Discard the bag with less than residual priming in each use with 70% alcohol			
Observe for any clots, leucocytes, visible exuding if any, immediately replace dressing			
Respect administration sets as per manufacturer's advice to the above dates			
Staff Name & Signature			



Beginning in March 2024, a multidisciplinary quality improvement initiative was deployed, emphasizing the rigorous enforcement of central line care bundle elements—maximal sterile barrier precautions, strict hand hygiene, 2% chlorhexidine skin antisepsis, meticulous hub disinfection, daily assessment of line necessity, and maintenance of a clean, intact dressing. The Central Line Insertion Site Assessment (CLISA) score was integrated into daily workflows to support early detection of line-related complications. Structured staff education, real-time coaching, and continuous compliance audits were carried out to ensure fidelity and sustainability.

Post-implementation analysis demonstrated a 48% reduction in CLABSI rates, declining from 1.13 to 0.59 per 1,000 central line-days over the span of March 2024 to February 2025. Compliance with care bundle protocols improved significantly, from a baseline of 66% to 94% by the end of the implementation period. Enhanced staff engagement and clinical vigilance were evident through improved audit performance and positive feedback, reinforcing the safety culture within the Sunway Medical Centre.



At baseline in January, overall compliance was 66%, with lower scores in “Scrub the Hub” and “Line Still Needed.” After implementing the care bundle, compliance increased month by month. By June, overall compliance reached 86%, and by December, it improved further to 94%, with all bundle elements scoring above 90%.

This initiative underscores the profound impact of systematic, evidence-based interventions in reducing preventable bloodstream infections in high-risk environments. The marked decline in CLABSI incidence reflects the success of strong clinical governance, interprofessional collaboration, and continuous performance monitoring. This model offers a scalable and sustainable approach to infection prevention that aligns with global patient safety priorities.