

MRSA-Free Healthcare: A Quality Improvement Approach (Sustainability Phase)

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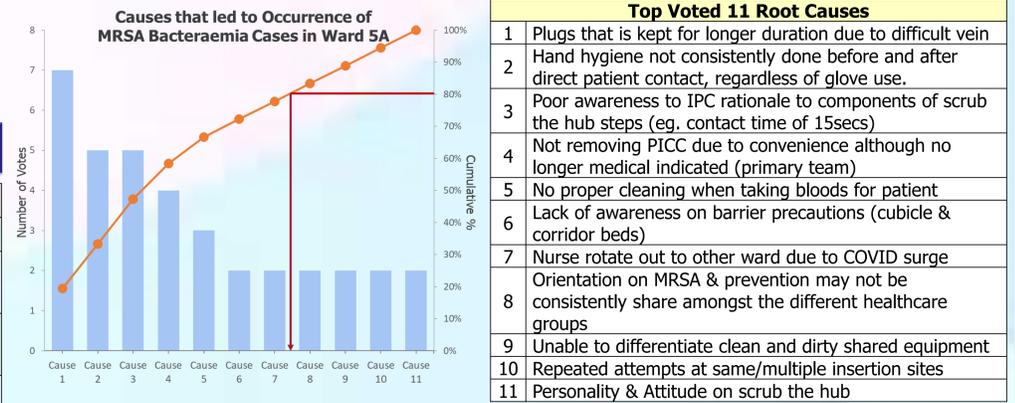
Mission Statement

To achieve a 50% reduction for MRSA Bacteremia rates in TTSH, from median 0.80 per 10,000 patient days in 2022 to 0.40 per 10,000 patient days by 2025.

Team Members

Team Structure	Name	Designation & Department
Team Lead	Dr Darius Beh	Consultant, Infectious Diseases
Core Team Members	Ms Poh Bee Fong	Deputy Director of Nursing, Infection Prevention & Control
	Ms Ang Sue Fern	Nurse Clinician, Infection Prevention & Control
	Ms Ong Ee Ling	Assistant Manager, Clinical Standards & Improvement
Pilot Site Team Members	Adj A/Prof Ashish Anil Sule	Senior Consultant, General Medicine
	Dr Noe Manicdao Cangco	Senior Resident Physician, General Medicine
	Ms Lim Mei Ling	Senior Nurse Manager, Level 5
	Ms Ghislaine Zhang Jiabei	Nurse Clinician, Ward 5A
Sponsor	Ms Lim Chia Yee	Senior Staff Nurse, Ward 5A
	Adj A/Prof Tan Hui Ling	ACMB, Quality & Clinical Governance

Pareto Chart



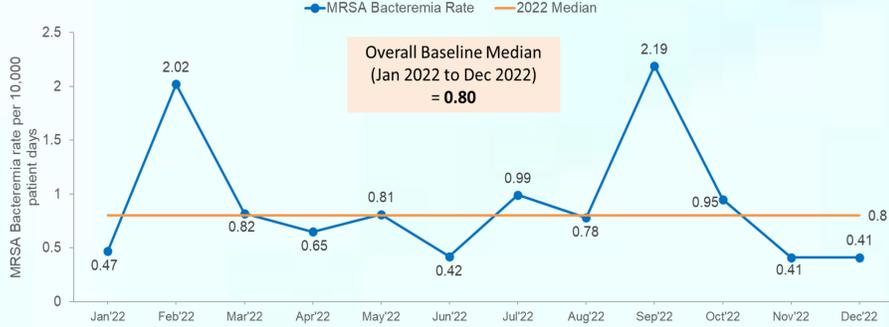
Implementation

Jan 2023	May 2023	Jun 2023	Jul 2023	Aug 2023
Standardize practice and compliance for MRSA treatment for patients	A step-by-step guide to empower patients in the application and completion of Otcenisan gel (5 days) therapy	Vein Visualizer (Hospital-wide intervention)	1. Installation of handrub holder and rack for PPE 2. Audit by Scrub the Hub Champions 3. Display MRSA Free Days in Ward	1. Ward 5A MRSA Roadshow 2. Audit by Scrub the Hub Champions
			1. Standardize orientation on MRSA & prevention (Junior and Senior General Medicine doctors) 2. Refresher on MRSA transmission / prevention / decolonization (Senior & Junior Nurses)	

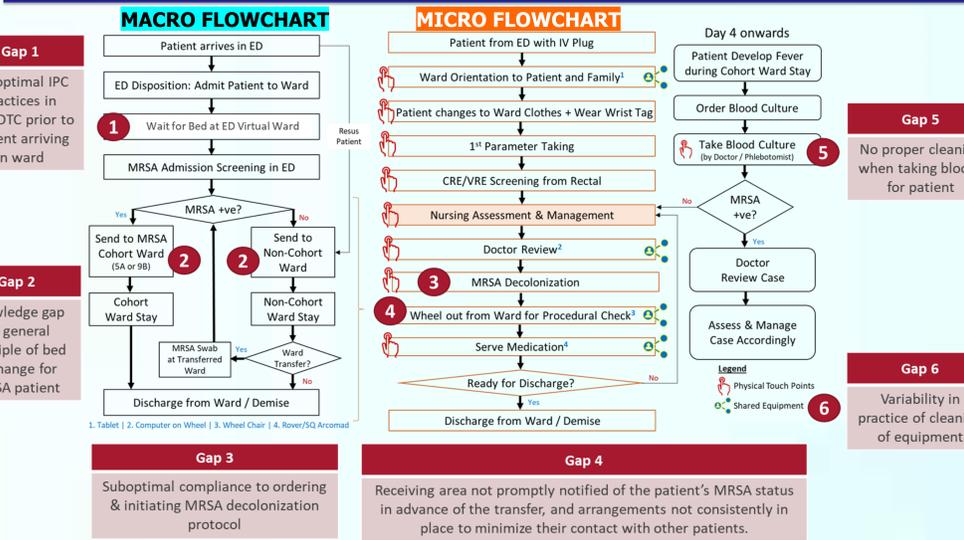
Evidence for a Problem Worth Solving

Overall MRSA Bacteremia Rates in TTSH

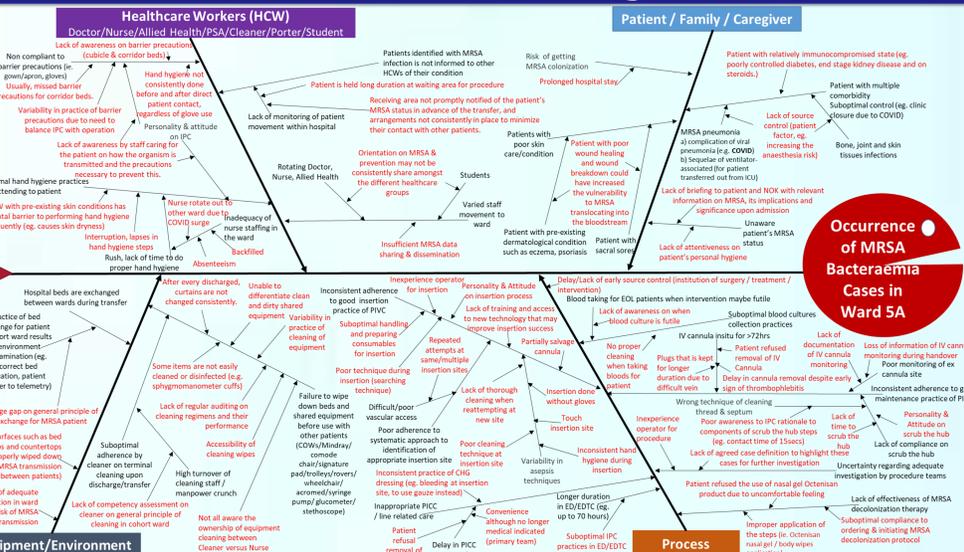
Period: January to December 2022



Flow Chart of Pilot Site (Ward 5A)



Cause and Effect Diagram



MRSA Free Days Chart

WARD 5A has proudly worked for 144 DAYS WITH NO MRSA BACTEREMIA CASE

LITTLE CHANGES. HUGE IMPACT.

1. SCRUB THE HUB 10 Septum & Throat
2. CLEANING BLOOD TAKING SITE
3. WEAR PPE IF CROSSING BEYOND THE YELLOW LINE
4. REMEMBER TO DO YOUR 4 HAND HYGIENE

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LET'S REMIND EACH OTHER TO PRACTICE CONSISTENTLY. Little Changes & Huge Impact Poster

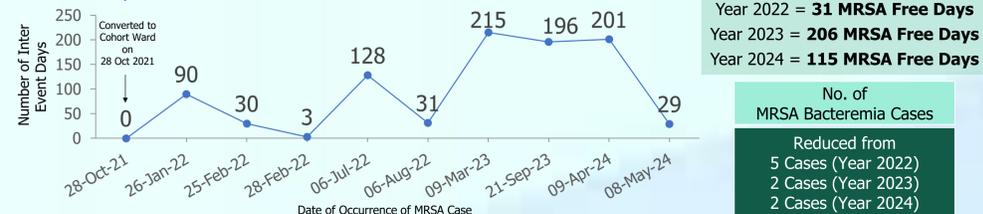
Results

Year	Overall MRSA Bacteremia Rates (Median)	Total No. of MRSA Cases
2022	0.80	52
2023	0.50	34
2024	0.44	27

A significant reduction in MRSA cases over the course of the project.

MRSA Free Days in Ward 5A (Pilot Site)

Period: January 2022 to December 2024



Cost Savings

For Ward 5A	MRSA	No MRSA
Average Length of Stay (Per Patient)	30 days (exclude patients who stayed >100 days)	7.5 days
Total Cost of Care (Per Patient)	30 x \$1046 = \$31,380	7.5 x \$1046 = \$7,845
Bed Days Saved per Prevented MRSA (Per Patient)	30 - 7.5 = 22.5 days	
Potential Cost Saved Per Prevented MRSA (In Monetary Terms)	\$31,380 - \$7,845 = \$23,535	

Note: Unit Cost for Inpatient Stay Per Day Per Patient = \$1,046

Limitation of this analysis:

- (1) Uncertain if the increased ALOS is due to MRSA bacteraemia or result of other confounding severe disease states
- (2) Cases and controls not matched
- (3) Overall decrease in cases observed in entire hospital between 2022, 2023 & 2024 not taken into account and adjusted for.

Strategies to Sustain

- 1) Strong leadership support and commitment to a culture of safety are crucial for sustaining MRSA improvement efforts and ensuring that infection control measures remain a priority.
- 2) Regularly assessing the effectiveness of interventions, learning from successes and failures, and making necessary adjustments are key to the ongoing improvement of MRSA control strategies in hospital.
- 3) Enforcing strict adherence to infection control protocols, including hand hygiene, isolation precautions and cleaning procedures are fundamental to reducing MRSA transmission.

Strategies to Spread

