

IMPLEMENTING AN ACTION PLAN TO ADDRESS THE INCREASED INCIDENCE OF VANCOMYCIN RESISTANT ENTEROCOCCI

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DESCRIPTION

Vancomycin-resistant enterococci (VRE) is a multi-drug-resistant organism that poses a significant risk to patients admitted to hospitals. Nosocomial transmission of resistant organisms serves as a potential source of hospital outbreaks. To mitigate this risk, early identification and timely intervention of Infection Prevention and Control (IPAC) measures like routine screening for VRE, helps to limit the transmission. Between September 2022 to August 2024, thirteen different units at Humber River Health (HRH) reported an increased incidence of VRE. In response, the multidisciplinary team collaborated to develop an action plan aimed at preventing further transmission of VRE within these units.

OBJECTIVE

To implement key strategies to eliminate transmission of VRE on units with increased VRE incidence.

ACTIONS TAKEN

Collaborating with stakeholders to conduct an Issues to Action including:

- Huddling with nursing staff to reinforce hand hygiene, PPE compliance, additional precautions, quality of swabs, and decluttering of patient rooms
- Weekly rounds with unit leaders, IPAC, and Environmental Services to identify gaps in practices
- Conducting hand hygiene, PPE availability, discharge clean, and Glo Germ environmental audits regularly and promptly addressing concerns
- Monthly meetings with leadership from units on increased incidence to provide updates and share strategies
- Performing enhanced environmental cleaning of units and patient rooms

Month	Unit													Total
	9E	12E	8E	13E	8W	7E	9W	12W	13W	RCC-CA2N	14E	11W	11E	
Aug'22	0	0	0	0	0	0	0	0	0					0
Sept'22	3	2	0	0	0	0	0	0	0					5
Oct'22	4	3	0	0	0	1	0	0	0					8
Nov'22	2	1	1	0	1	0	1	0	1					7
Dec'22	0	0	3	3	1	0	1	0	0					8
Jan'23	2	1	0	1	4	0	0	2	0					10
Feb'23	5	0	1	2	1	1	1	0	0					11
Mar'23	1	0	1	0	1	1	2	2	0					8
Apr'23	1	0	0	2	0	2	1	2	0					8
May'23	1	0	1	0	0	1	0	2	4					9
June'23	1	OFF	1	0	0	1	0	0	0					3
July'23	2		1	0	OFF	0	1	1	0					5
Aug'23	3		1	OFF		0	0	0	0					5
Sept'23	2		0			1	1	2	OFF	2				8
Oct'23	3		1		1	0	1	0		0				5
Nov'23	4		0		3	0	0	0		0				7
Dec'23	2		0		0	0	0	0		0				2
Jan'24	0		1		0	Off	1	Off		Off				2
Feb'24	0		0		0		0							0
Mar'24	0		1	2	Off		0				3			6
Apr'24	Off		0	1			0				0	2		3
May'24			1	1			Off				1	2	2	7
Jun'24			0	0							0	2	0	2
Jul'24			1	0							0	0	0	1
Aug'24			0	0	3				2		0	0	1	6
Sept'24				Off							Off			
Oct'24														


Figure 1. VRE Cases by Units in Increased Incidence - The number of nosocomial VRE cases each month for each unit on increased incidence. Units highlighted in red are in increased incidence. The units highlighted in green are no longer in increased incidence as of September 2024.

Units	Aug'23	Sep'23	Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	Mar'24	Apr'24	May'24
14 East Stroke/Rehab	85%	82%	90%	89%	97%	96%	93%	85%	90%	88%
13 West Medicine	90%	73%	100%	100%	97%	100%	100%	86%	92%	85%
13 East Medicine	92%	92%	100%	100%	95%	97%	89%	86%	91%	87%
12 West Medicine	90%	87%	100%	98%	100%	99%	98%	93%	93%	87%
12 East Medicine	86%	94%	93%	98%	99%	99%	96%	91%	94%	92%
11 West Surgery	89%	76%	86%	98%	99%	93%	98%	95%	95%	93%
11 East Surgery	90%	92%	100%	98%	93%	97%	99%	96%	95%	93%
9 West Medicine	86%	73%	100%	99%	96%	100%	97%	92%	95%	83%
9 East Nephrology	90%	85%	75%	96%	95%	98%	97%	90%	95%	90%
8 West Medicine	87%	85%	100%	99%	94%	94%	96%	97%	95%	90%
8 East Medicine	85%	92%	96%	99%	95%	90%	94%	91%	97%	94%
7 East Cardiology	85%	82%	99%	97%	92%	97%	93%	96%	90%	94%
Church 2N RCC	100%	95%	97%	98%	90%	93%	85%	71%	93%	95%

Figure 2. Hand Hygiene Compliance for Moment 1 (before patient/patient environment contact) - These audits show an increase in hand hygiene compliance for units on increased incidence between August 2023 to May 2024.

Units	Sum of Percentage							
	Jan '24	Feb '24	Mar '24	Apr '24	May '24	Jun '24	Jul '24	Aug '24
14E	74%	83%	76%	100%	97%	98%	99%	99%
13W	92%	100%	89%	90%	99%	96%	98%	99%
13E	77%	77%	74%	95%	95%	98%	96%	97%
12W	68%	89%	81%	85%	93%	95%	97%	94%
12E	70%	92%	90%	92%	91%	93%	94%	97%
11W	82%	78%	94%	96%	94%	100%	N/A	100%
11E	83%	92%	98%	100%	98%	100%	N/A	98%
9W	71%	92%	90%	90%	88%	95%	98%	97%
9E	81%	88%	89%	81%	85%	92%	99%	95%
8W	88%	95%	92%	92%	97%	94%	95%	100%
8E	81%	90%	87%	85%	97%	83%	96%	98%
7E	90%	90%	86%	88%	90%	97%	94%	100%
RCC Church	72%	N/A	65%	100%	89%	93%	96%	94%

Figure 3. PPE Audit Results - From January 2024 to August 2024, PPE holders were audited for the presence of adequate PPE. These audits resulted in a greater percentage of PPE holders being filled on units with increased VRE incidence.



Humber River Hospital Lighting New Ways in Healthcare

Issues to Action: Tour of Units on VRE Increased Incidence

Completed By: Infection Prevention & Control Date Prepared: February 28, 2023

Status Legend for Templates

- ✓ Process completed
- ↔ Process is in place and ongoing
- ↑ Process completion is underway
- × Process not yet underway
- OD Overdue

Summary: On February 24, the multidisciplinary team conducted unit rounds on the units currently on VRE increased incidence. Below are the findings and required action plan.

#	Projects/Activities/Issue	Desired Outcomes	Implementation/ Action Plan Steps	Status	Accountabilities/ Timelines
13 East					
1	Commode chairs in Soiled utility room	No commode chairs stored in soiled utility room	Move commode chairs to Soiled equipment room for cleaning. Store commode chairs in Clean equipment room		Unit manager
2	High/Tall Walker in Soiled Utility	No walker stored in soiled utility room	Walker to be cleaned and moved to storage area		Unit manager
3	Wall-mounted hand sanitizer-missing in Soiled utility room	Hand-sanitizer to be replaced	Submit request to 50000 to have hand sanitizers replaced		Unit manager to contact Planning & Redevelopment

Figure 4. Issues to Action Document from Unit Rounding - This document identified issues, desired outcomes, implementation, and timelines for the action plan to eliminate the transmission of VRE on units with increased incidence.

SUMMARY OF RESULTS

Since September 2022, thirteen units have entered increased incidence of VRE. Implementing the action plan resulted in effective control of the spread of VRE. As of August 2024, eight of these units have successfully resolved their increased incidence status by going three consecutive months without any new nosocomial cases. Five units remain under increased incidence, with two on track to resolve their status, and having gone at least one month without new nosocomial VRE cases.

LESSONS LEARNED

Implementing an action plan and collaborating with the multidisciplinary team decreases the incidence of VRE in acute care settings, improving patients' safety and health outcomes.

