

Standard Precautions: doing the right thing for everyone

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Introduction

This poster describes the impact of implementing a modified Standard Precautions model for the management of patients colonised with Multi-Resistant Organisms (MROs) in a rehabilitation facility.

Standard Precautions represent the infection control practices for patient interventions and resources in all care environments to minimise the risk of infection transmission from recognised and unrecognised sources of infection. Standard Precautions have evolved from Universal Precautions, which were first introduced in 1985 to protect staff from blood and body fluid exposure to now protect patients and staff from transmission risk of pathogens in general.

Contact Precautions are recommended to prevent the transmission of infections via direct or indirect contact including MROs such as Methicillin Resistant *Staphylococcus aureus* (MRSA) and Vancomycin resistant enterococci (VRE). Despite high compliance with implementation of Contact Precautions with patients known to be colonised with a MRO, nosocomial transmission continues to occur. The effect of Contact Precautions as part of management strategies to reduce transmission in an outbreak situation has been documented, but the impact may be less so in endemic settings¹. Also, without routine universal admission screening, it is possible many patients flagged as MRO positive are no longer so and patients colonised with a MRO are not yet recognised. Even with this process in place, there will be a delay between testing and the availability of results.

In their review of 16 studies reporting data on the impact of isolation on patients, Abad et al identified a negative impact on the patients' mental well-being (depression and anxiety, fear and loneliness) and behaviour (higher anger-hostility score). They also identified that Health Care Workers spent less time with those isolated. Patient safety was also negatively affected, leading to 8 fold increase in adverse events including falls and medication errors. Many patients reported not understanding why they had been isolated².

Methods

In September 2015, a programme to introduce a modified Standard Precautions model was implemented in a rehabilitation facility. This 57 bed facility is located within the Illawarra Shoalhaven Local Health District (ISLHD) on the south coast of NSW, Australia. The patients are transferred from more acute settings following surgical procedures or as the result of medical conditions. 15 beds are designated as Palliative Care. Anecdotally, this patient population frequently has a history of a long association with healthcare and therefore a high incidence of MRO colonisation. This model constituted achievement of >90% hand hygiene compliance (independently audited to confirm), introduction of modified PPE use and changes to the environmental cleaning protocols. (Figure 1)

Traditional Standard Precautions	ISLHD Standard Precautions
5 Moments for hand hygiene	5 Moments for hand hygiene
Appropriate Personal Protective Equipment use	Disposable apron for close contact with all patients
Gloves for blood and body fluids only	Gloves for blood and body fluids only
Cleaning all equipment before and after use with neutral detergent	Cleaning all equipment before and after use with neutral detergent
Regular environmental cleaning with neutral detergent	Regular environmental cleaning with neutral detergent, PLUS
Combined detergent/disinfection product for: rooms of patients identified with MRO daily and on discharge	Combined detergent/disinfectant product for: all bathrooms daily and toilets twice daily, all beds on discharge
Appropriate waste management	Appropriate waste management
Storage controls for clean linen	Storage controls for clean linen
Add Contact Precautions for MRO patients	Risk assess single room

Figure 1: Comparison of Traditional Standard Precautions and the ISLHD modified

The need for Contact Precautions for all patients with a history of MRO colonisation was replaced with a patient-focussed risk assessment (Figure 2). This included consideration of the clinical setting to inform decision-making regarding patient accommodation and precautions to be implemented. An intensive education program was conducted with all staff outlining the new model of care. This highlighted the importance from the patients' perspective, the new practices that the staff would be required to engage in and introduced the risk assessment process to ensure patients were accommodated correctly according to the likelihood of transmission to others.

MRO Risk Assessment (does not include CPE)			Risk factors presented by the MRO colonised/infected patient that can increase the likelihood of transmission to others		
			Good skin integrity	Poor skin integrity	Diarrhoea
Risk Rating of Clinical Inpatient Area	Low Aged care units, Rehabilitation units Palliative care units	Maternity and birthing units Level 1 nursery	ISLHD Standard Precautions	ISLHD Standard Precautions	Contact-plus Single room *
	Medium Acute medical units Paediatric units		ISLHD Standard Precautions	ISLHD Standard Precautions	Contact-plus Single room *
	High Surgical units Emergency departments	Level 2 nurseries	ISLHD Standard Precautions	ISLHD Standard Precautions Single room*	Contact-plus Single room *
	Extreme Intensive care units Renal dialysis units	Haematology and oncology units Transplant units	ISLHD Standard Precautions	ISLHD Standard Precautions Single room*	Contact-plus Single room *

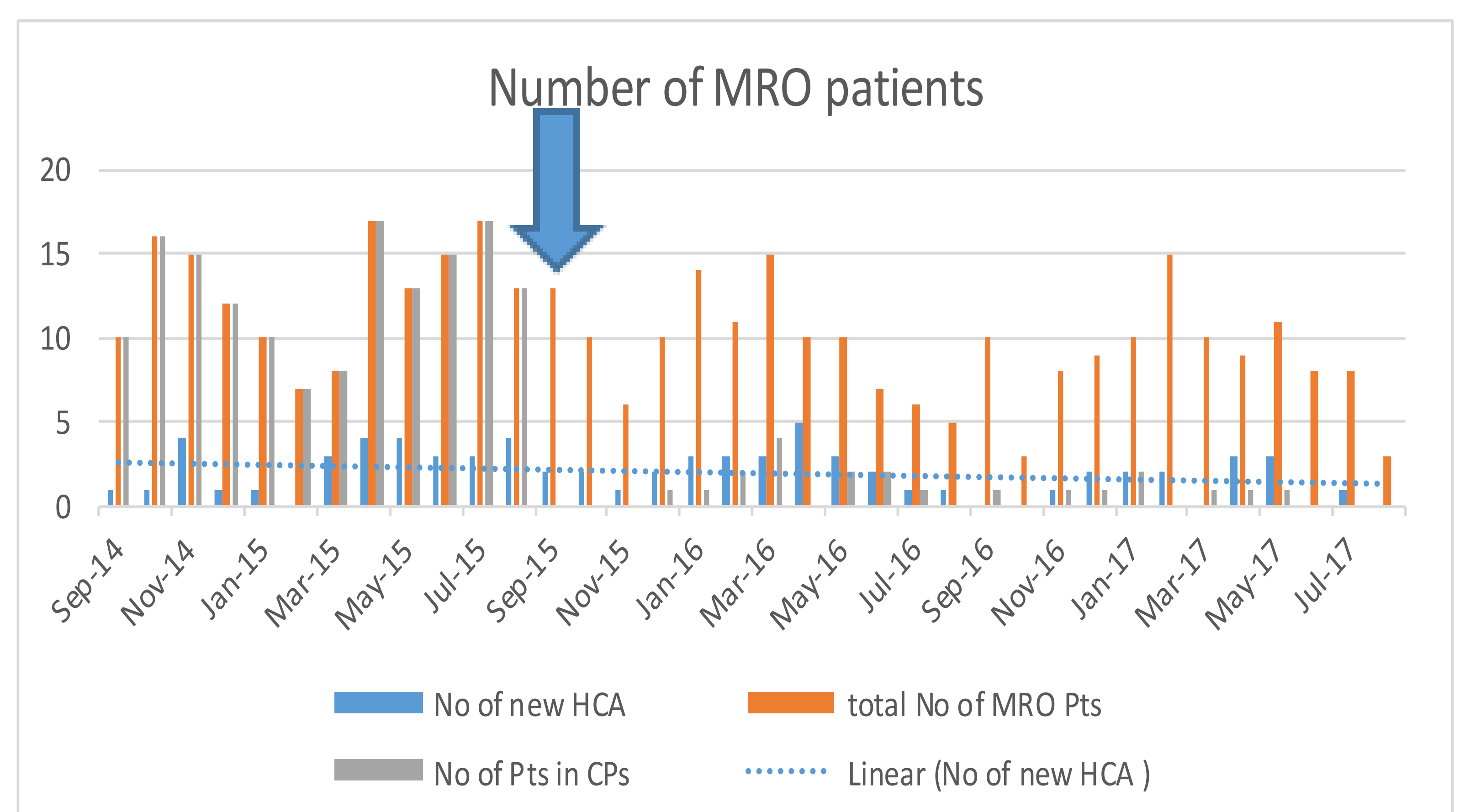
*Poor skin integrity includes exudating wounds and abscesses, exfoliating skin conditions, but does not include skin tears;
 * If single rooms are not available, at a minimum the patient should have access to a designated toilet or commode.*

Figure 2: ISLHD Patient Centred Risk Assessment

The next step was a review of access to PPE. A survey of the wards identified limited point of use access to PPE, especially aprons. Working with one of the companies that supplied PPE to the district, a very versatile PPE dispensing system was developed. This system is comprised of Perspex sleeves which can be mounted in a variety of ways to hold all the different pieces of PPE. These sleeves can also be configured to account for limited and varied wall spaces available



Results



Conclusion

MRO transmission in a rehabilitation facility can be controlled through implementation of modified Standard Precautions and a risk assessment approach. Very few patients are now cared for using Contact Precautions due to their MRO status alone. The number of patients identified as colonised or infected with a MRO has dropped slightly since the implementation of this model of care. This is despite there being no change in the demographic of the patient population admitted to the facility.

The potential negative outcomes associated with multi resistant strains is the same as those for antibiotic sensitive pathogens. This modified Standard Precautions model using the patient-centred risk assessment balances the need to protect patients from MROs and other pathogen acquisition transmitted through direct and indirect contact. At the same time, patients risk assessed as requiring Standard Precautions are not socially isolated and are able to partake in all rehabilitation activities.

References :

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- Abad C; Fearday A; Safdar N. Adverse effects of isolation in hospitalised patients: a systemic review. Journal of Hospital Infection. 76: 97-102. 2010