



Neonatal Intensive Care Unit Renovation: Maintaining Patient Safety

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INTRODUCTION

Renovation in an intensive patient care area creates substantial risks to patients and staff. Renovation to the Neonatal Intensive Care Unit (NICU) took place from November 2012 to April 2013. The key challenge in under-taking the renovation project is involvement of multiple moves of high risk neonates requiring maneuvers that ensure patient safety preparedness.

AIM

Our aim is to mitigate risks associated with the following to ensure patient safety is maintained during the renovation :

1. Phase of decanting high risk neonates to an alternative location, pre-renovation.
2. Phase of transferring high risk neonates to the newly renovated NICU, post-renovation.
3. Infection due to re-location and overcrowding .

METHODOLOGY

A NICU renovation team conducted three Enterprise Risk Management (ERM) sessions from 9 July 2012 to 9 January 2013 to identify and mitigate risks associated with the various phases of NICU renovation :

1. Pre-Renovation
2. Decanting NICU neonates
3. Post-Renovation

Risks identified for the three phases were rated according to the type of controls in place. Risks that were under-controlled required substantial or significant changes to improve its control effectiveness.

RESULTS

Table 1 : Risk Factors were Identified from the ERMs during the 3 phases of renovation and the identified risks rated as adequately controlled or under controlled :

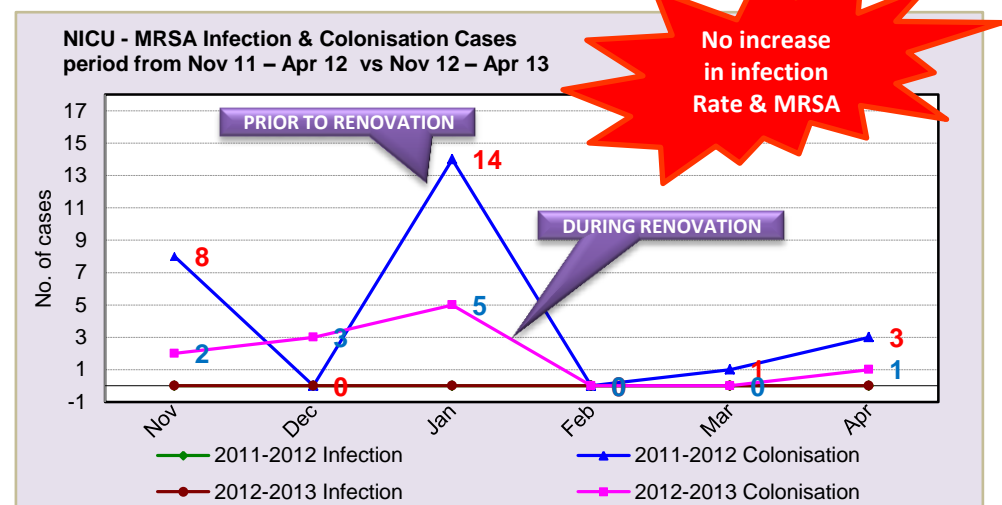
ERM	Number of Risks Identified	Percentage of Risk rating with current Controls		Changes to Controls
		Adequately Controlled	Under Controlled	
1. Pre-Renovation Phase	6	100%	0%	Nil
2. Decanting NICU Neonates	30	50%	50%	Yes
3. Post-Renovation	14	64%	36%	Yes

Table 2 : Risks rated under controlled had changes with substantial / significant improvements done effectively to become adequately controlled.

ERM	Percentage of Risks Rated Under Controlled	Changes to Control Effectiveness	Risk Rating After Changes to Controls
2. Decanting NICU Neonates	50%	Substantial / Significant Improvements	Adequately Controlled / Potentially Over Controlled
3. Post-Renovation	36%	Substantial / Significant Improvements	Adequately Controlled / Potentially Over Controlled

Table 3 : There was no increase in infection rates and Methicillin Resistant Staphylococcus (MRSA) during the period of renovation compared to the same period prior to renovation.

Prior to Renovation	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	Total
No. of Infection	2	4	4	2	2	5	19
Renovation	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	Total
No. of Infection	3	1	5	3	3	0	15



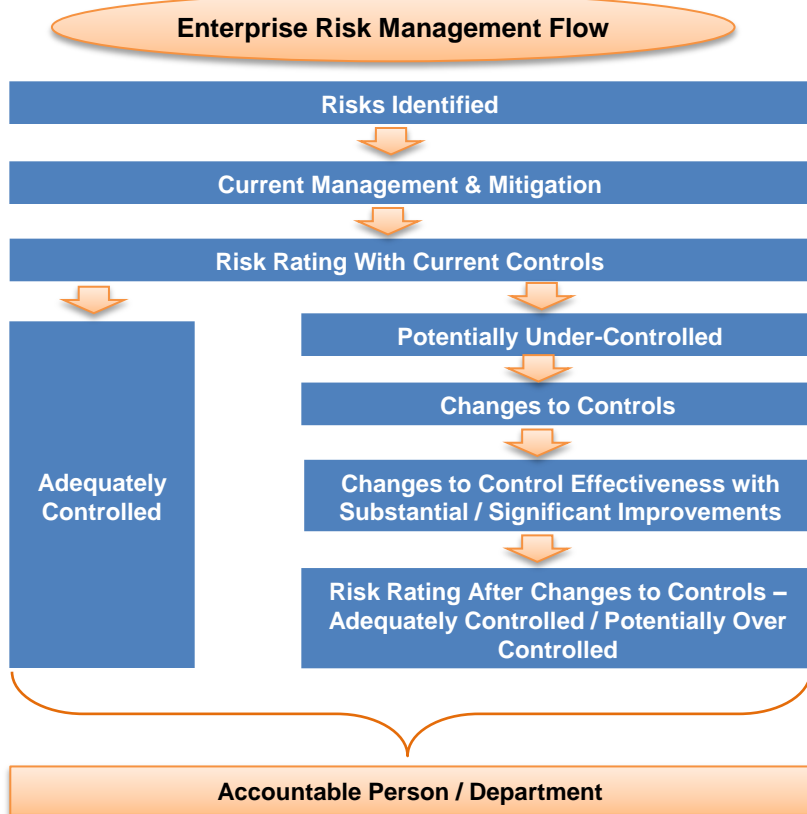
CONCLUSION

Renovation of the NICU has provided improvements to its facilities, but the renovation process involves multiple risk factors that can impact outcomes in high risk neonates. The application of ERM in mitigating risks and implementing changes to control them have facilitated in preventing adverse effects to this group of vulnerable patients.

More importantly, the ERM has prepared the NICU Renovation team to plan and exercise safety measures in real time settings during the three phases of (1) Pre-Renovation (2) Decanting NICU neonates (3) Post-Renovation.



Renovated NICU



Pre-renovation



Decanting Neonates



Post-renovation