

# A Multi-Faceted Approach to Eliminating Infection The Children's Hospital of NJ Experience

## GOALS

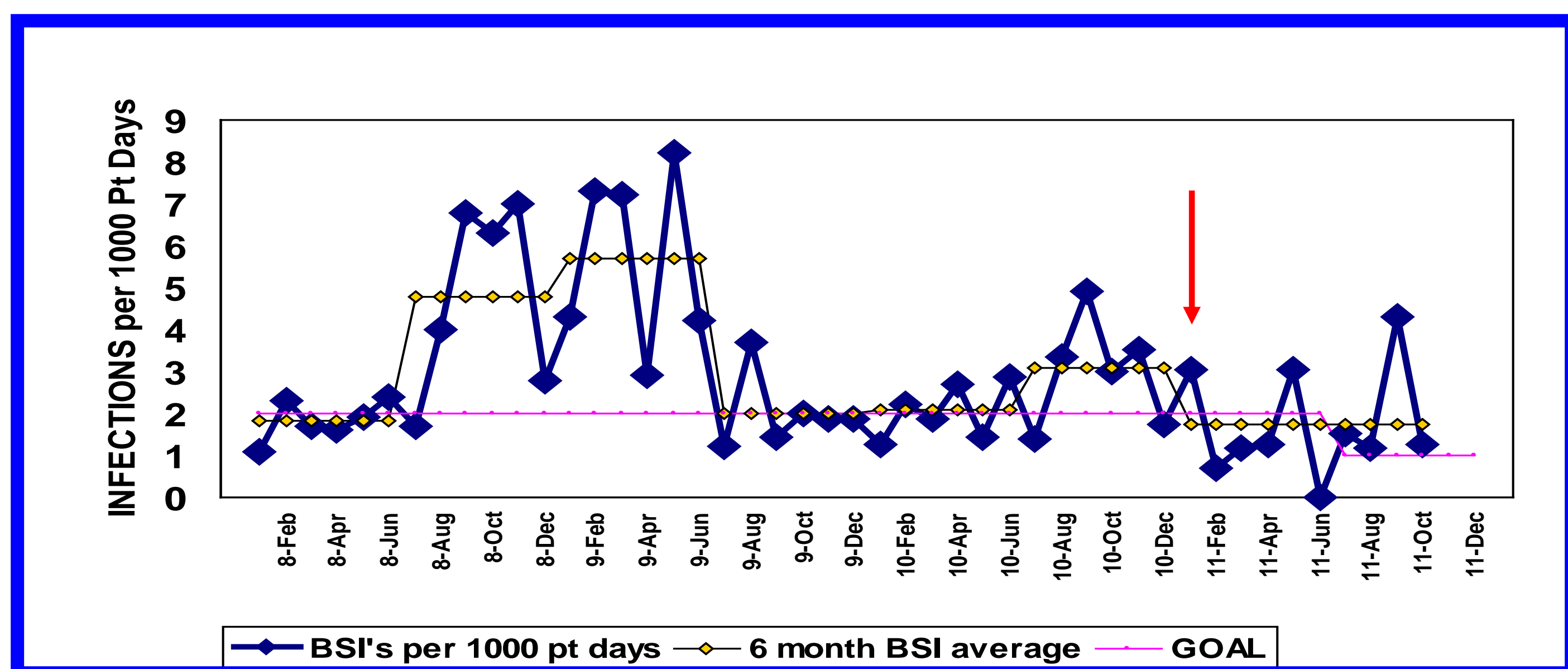
1. To decrease our overall rate (all admissions) of BSI's to 2/1000 pt days by June 30, 2011 and to 1/1000 by December 2011
2. To decrease our rate of CONS BSI's in VLBW babies from 14.8% to 10.5% (VON mean) by DEC 31, 2011 & to 4.7% (25th pctl) by Dec 31, 2012
3. Decreasing infections will improve Quality by limiting invasive procedures and decrease costs of lab tests, antibiotics & staff time

## INTRODUCTION

An increase in BSI in late 2008 led our QI program to focus on an initiative to decrease these infection rates

While we have had success in decreasing our infection rates we continue to experience intermittent spikes in infection

**GOAL 1:** As shown in the graph below we achieved our goal of fewer than 2 BSI/1000 patient days by June 30, 2011



**GOAL 2:** We have exceeded our goal of 10.5%. Infections to date in 2011 are 8.1%

- Late August of 2011 brought mini-outbreaks of Serratia and MRSA. This was after the peak of the high census during the summer
- These led us to consider what additional measures we might take to eliminate infections in our NICU.

## AIM

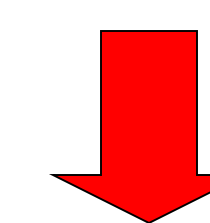
To re-define our process of patient care in order to decrease cross-contamination

## METHODS

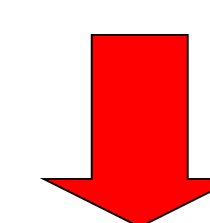
1. A sub-group of our QI team was assigned to develop a process to optimize environmental hygiene
  - i. Team was multi-disciplinary and cross-departmental including housekeeping, administration and infection control
  - ii. Comprehensive discussions and forums with staff and personnel
  - iii. The space constraints was identified as a significant barrier
2. Random survey of families to hear their perspective and understanding of the hand-hygiene practice

### Innovation in Infection Control

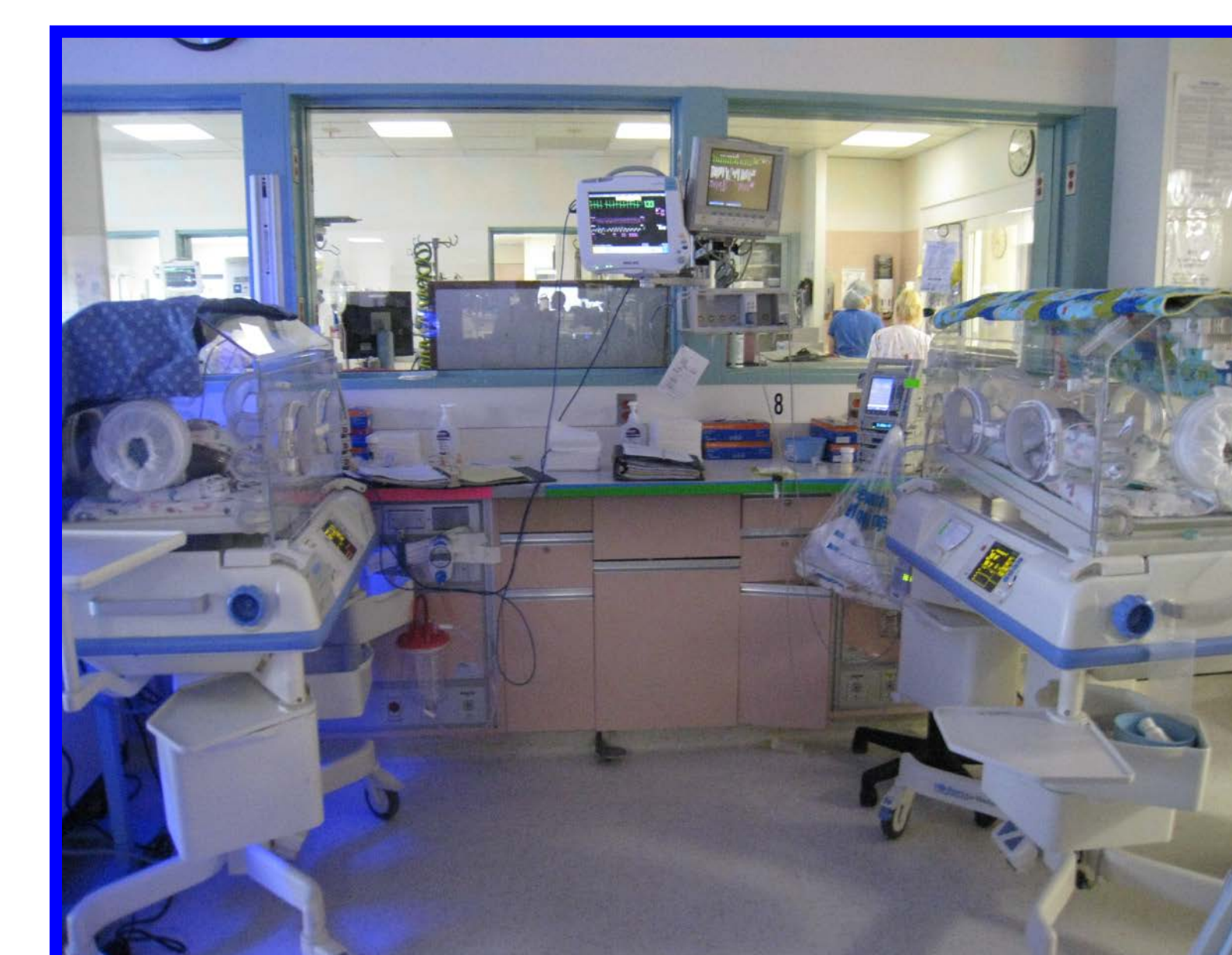
Goal: optimal environmental hygiene



Efficient utilization of limited space



Virtual Clean Room Alternative



## RESULTS I

1. The Virtual Clean Room was delineated
  - Includes - isolette/ open crib, ventilator, blender and suction controls, IV pumps, bedside organizer & monitor
  - Excludes - counters, tubings below counter, lower half of ventilator and suction canister
2. A protocol for daily hygiene activities to maintain the virtual space was defined. This includes
  - (i) once a shift cleaning using PDI wipes with a 2 minute wet time
  - (ii) hand hygiene protocol on entering and leaving the space
  - (iii) equipment brought into virtual room must be wiped down
3. Infection Control Record to monitor compliance.
4. Survey form to evaluate the process.
5. A 2 week trial was initiated in a test room (11/21/11 - 12/4/11)

## CONCLUSIONS

1. Previously instituted PBP's have decreased BSI but a continued effort is needed to get to zero
2. The virtual room
  - i. is an attempt to utilize our limited space more efficiently and optimize environmental hygiene
  - ii. continuous evaluation of the process will be performed as we implement this as standard practice for our unit
  - iii. the enthusiastic involvement and rapid acceptance of the concept by staff suggests that we may have achieved a pivotal point in "culture change"
3. Parents
  - i. appreciate the importance of hand hygiene
  - ii. education of washing practices are inconsistent
  - iii. cell phones use is more consistent than expected
  - iv. engaging parents in defining the "rules" for cell phone use is desirable
4. Quality
  - i. cost saving from decreased infections is projected to be over \$100,000 p.a.

## RESULTS II – Parent Survey

HAND HYGIENE		CELL PHONES	
Wash on entering unit	10/10	Never Use	1/10
Time of wash (secs)	10 - 60	Don't Talk	10/10
Sanitize entering room	8/10	May Photograph	9/10
Sanitize exiting room	3/10	May Text	3/10
Sanitize entering incubator	10/10	Sanitize after cell use	6/10

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