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Controlling Specific Infections Successful Strategies (CSISS) Project

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Nursing Quality Improvement Office (NQIO)
February 28th, 2017



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Did you know?



DID YOU KNOW?

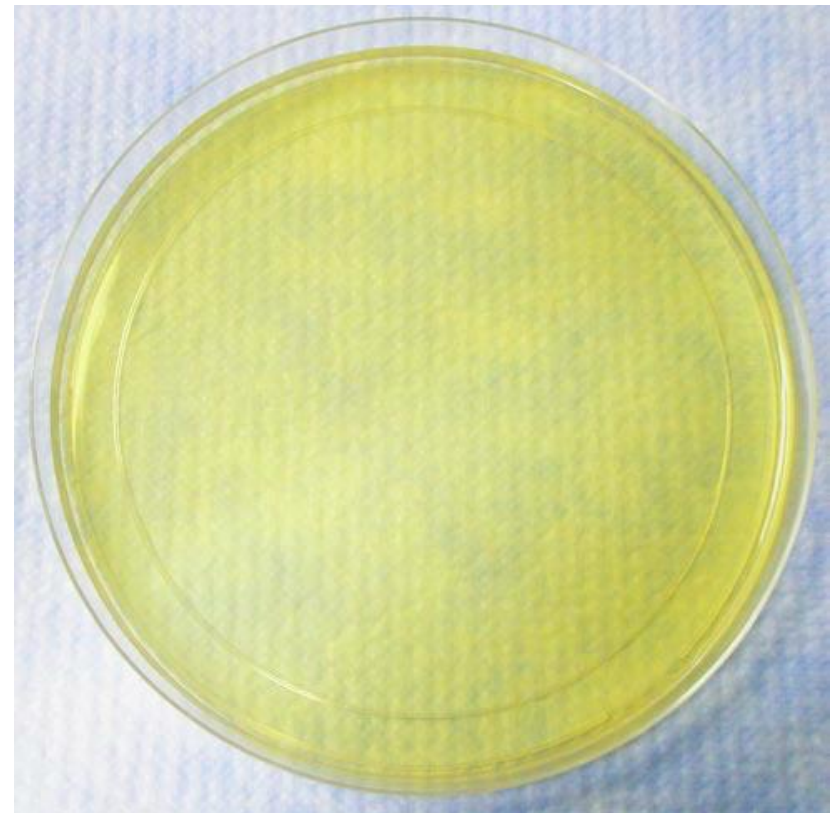
- What is the cost of a nosocomial VRE case?
\$6,000 per case
 - What is the cost of a nosocomial CDifficile case?
\$10,000 per case
 - How much longer does the patient stay in the hospital?
10 more days!
- If patient develops more complications, these numbers could triple!!!**

MRSA ON HANDS

Culture from a HCW's ungloved contaminated hand after performing an abdominal examination of a patient with MRSA colonization



Culture of HCW's hand after cleansing with alcohol hand sanitizer – No Growth



GLOVES DO NOT REPLACE HAND HYGIENE

Did not wash hands after glove removal



Glowgerm on Gloves

Did not wash hands after removing 2nd set of gloves



After removing Gloves



2nd set of gloves

WHAT SURFACES WERE THE MOST CONTAMINATED?

- Blood gas analyzers
- Computer mice
- Telephone handles
- Ventilators
- Door handles
- Patient monitors
- Medical equipment



DID YOU KNOW?

On how many surfaces can
you transfer the bugs?

7 surfaces!

DID YOU KNOW?

Touching a single contaminated surface can transfer pathogens up to the next 7 touched surfaces.



Controlling Specific Infections (2013-2014)

2014 CONTROLLING SPECIFIC INFECTIONS (CSI) : A GREAT SUCCESS

- Nosocomial infections: not only it increases risk for patients but it increases costs
 - C. Difficile : \$10,000 /case and VRE : \$6,000 /case
 - ↑ LOS = 10 days/case
 - ↓ access to care for other potential patient
- **Demonstrated Return on Investment (ROI) of 2014 CSI in 8 months on 6 units**
 - ✓ 34 less C-diff cases
 - ✓ Cost avoidance: \$340,000
 - ✓ ↓ LOS of 340 bed days
 - ✓ ↑ access to care for inpatient admission



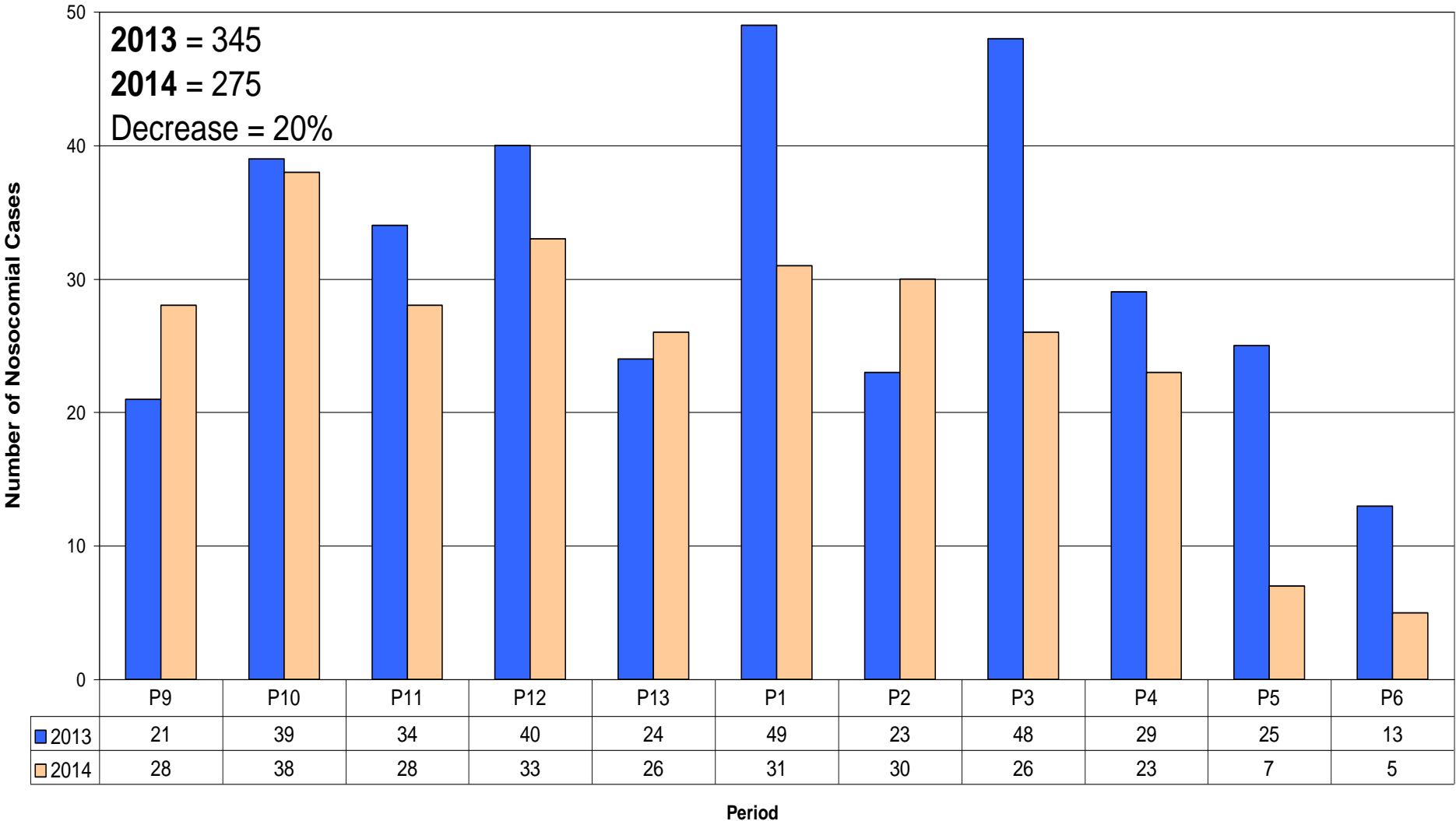
2014 CONTROLLING SPECIFIC INFECTIONS (CSI) : A GREAT SUCCESS (CONT'D)

- **Demonstrated Return on Investment (ROI) of 2014 CSI in 8 months on 6 units**
 - ✓ 70 less VRE cases
 - ✓ Cost avoidance: \$420,000
 - ✓ ↓ LOS of 700 bed days
 - ✓ ↑ access to care for inpatient admission
- **TOTAL: \$760,000**
- ↓ costs in supplies for personal protective equipment (PPE)
- ↓ costs in supplies in medication for pharmacy
- ↓ costs of HSKG HR, labour time (blitz cleaning) and supplies



Overall VRE cases

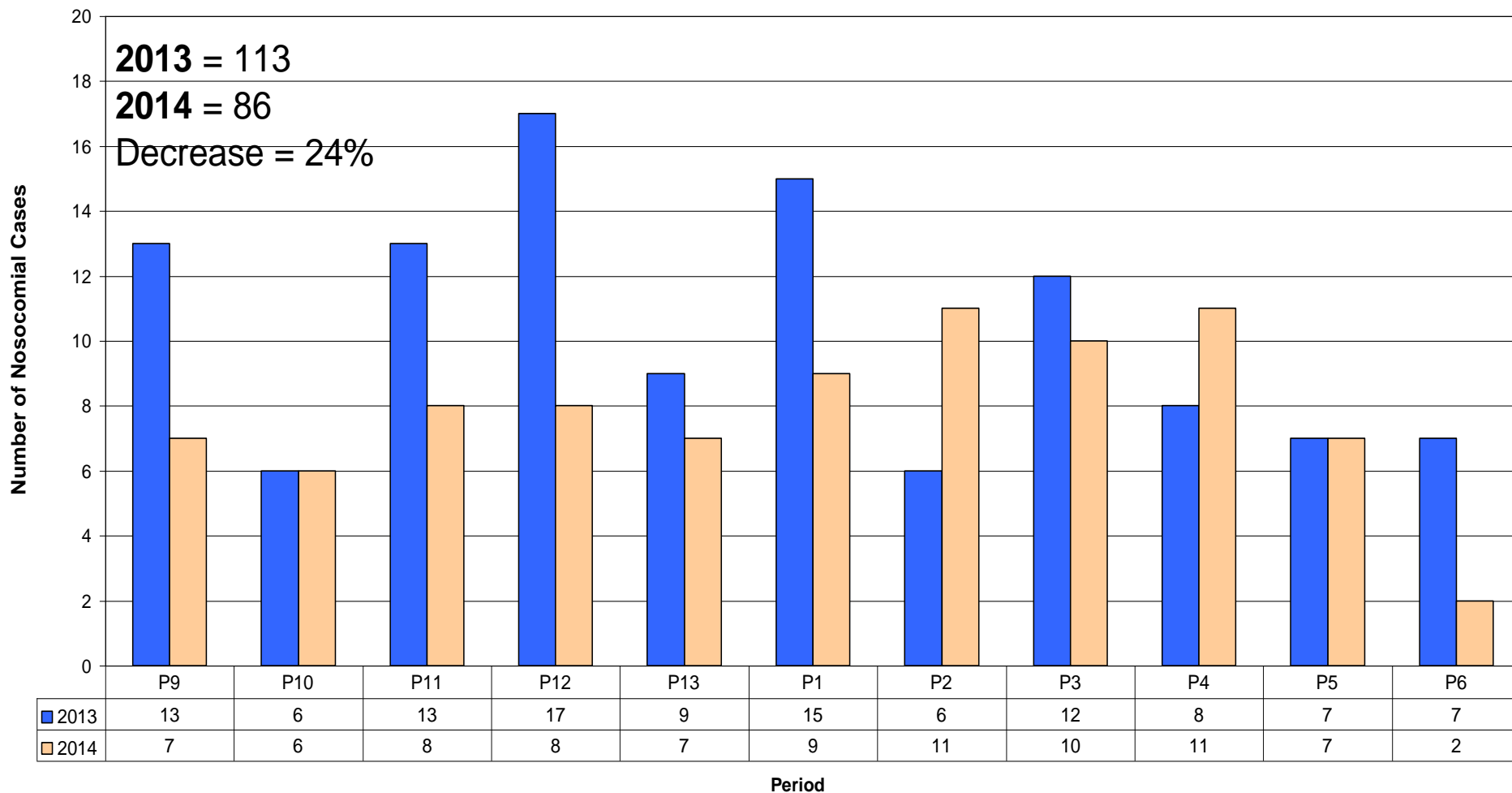
20% decrease



Overall C Difficile cases

24% decrease

TCAB INDICS - CDAD Cases - Period 9-6 - 2013-2014



COSTS OF 2014 CSI FOR 6 UNITS OVER 8 MONTHS

- Release time for staff: \$194,400
- Workshops: \$12,000
- Facilitation: \$105,000
- Total: \$311,400

**HOW DO WE DIFFUSE SUCH A SUCCESS
THROUGHOUT THE MUHC IN A FEASIBLE,
VERY LOW COST AND SUSTAINABLE
WAY???**

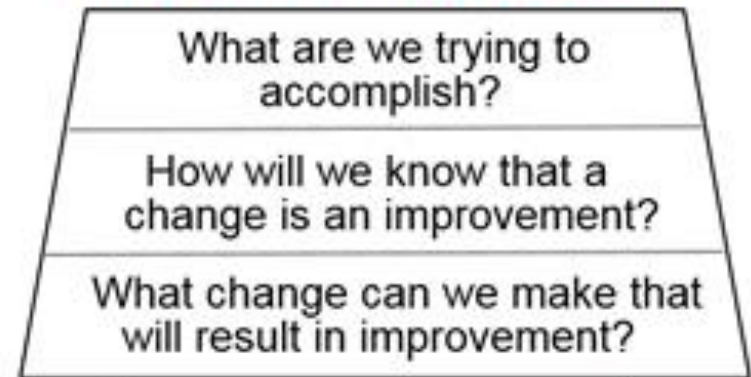


Methodology

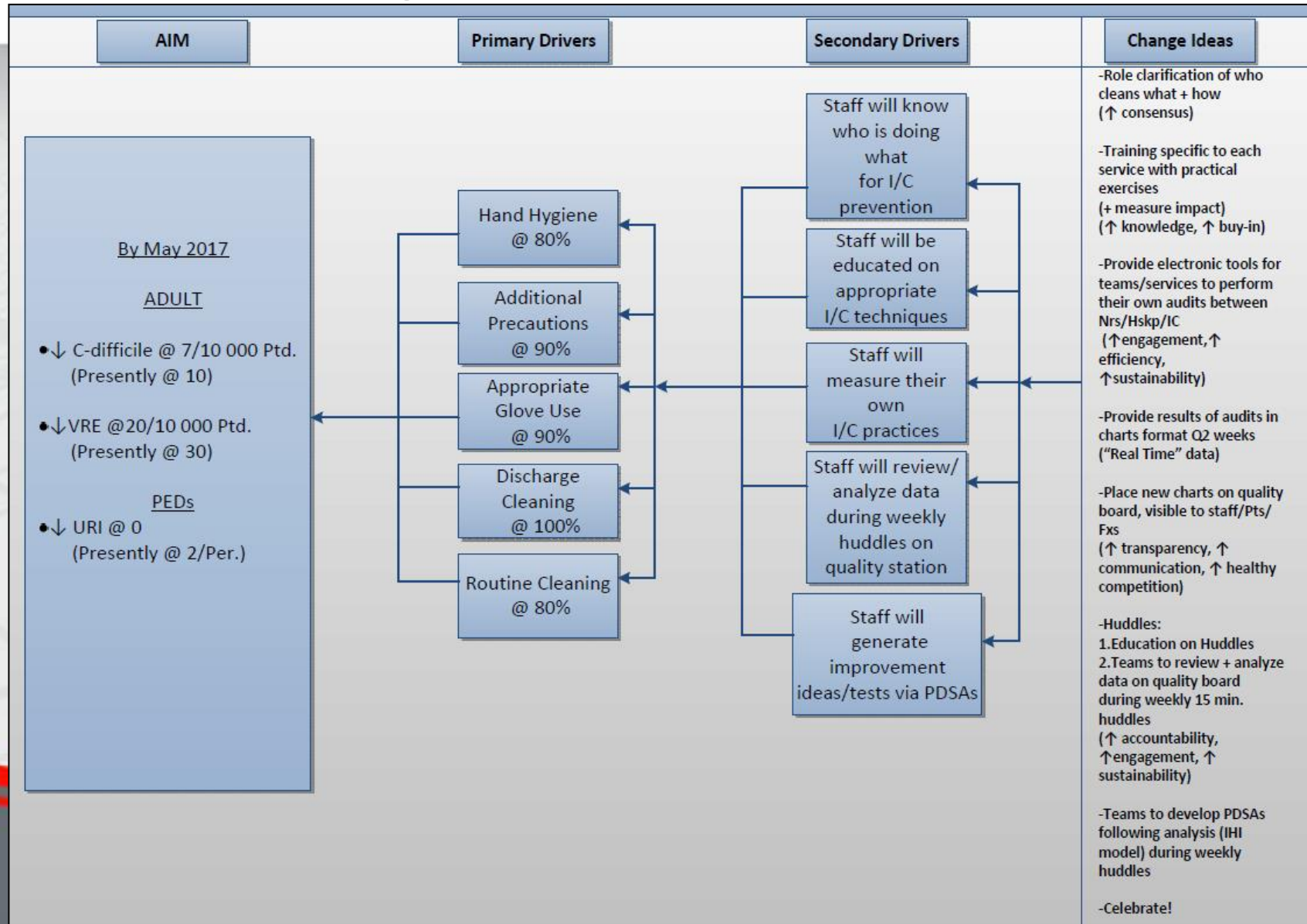
New Quality Improvement Structure

- Methodology developed for CSISS (2016-present)
 - Audits
 - Quality station Qualité
 - Weekly Huddles

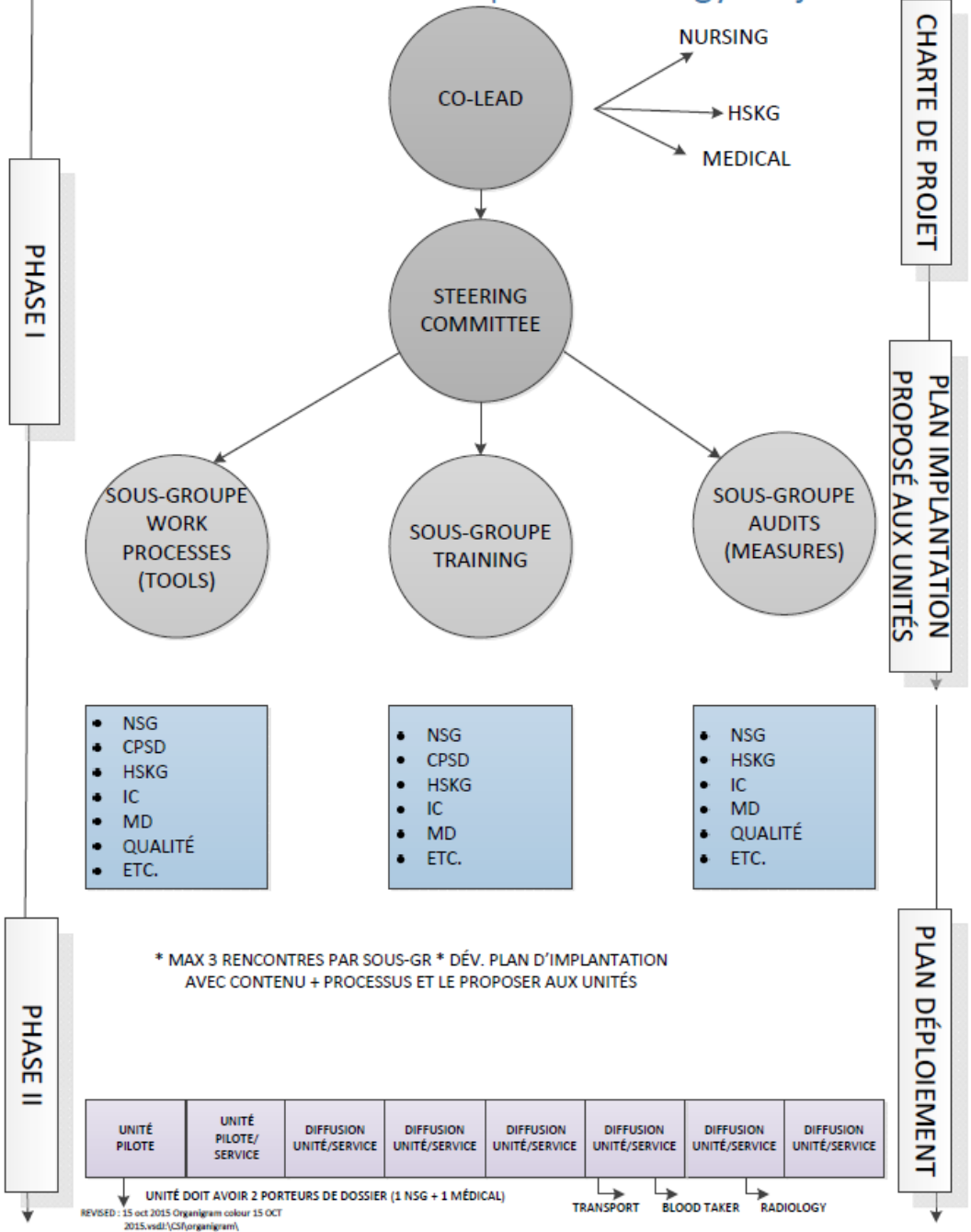
Model for Improvement



CSI SUCCESSFUL STRATEGIES (CSISS) DRIVER DIAGRAM



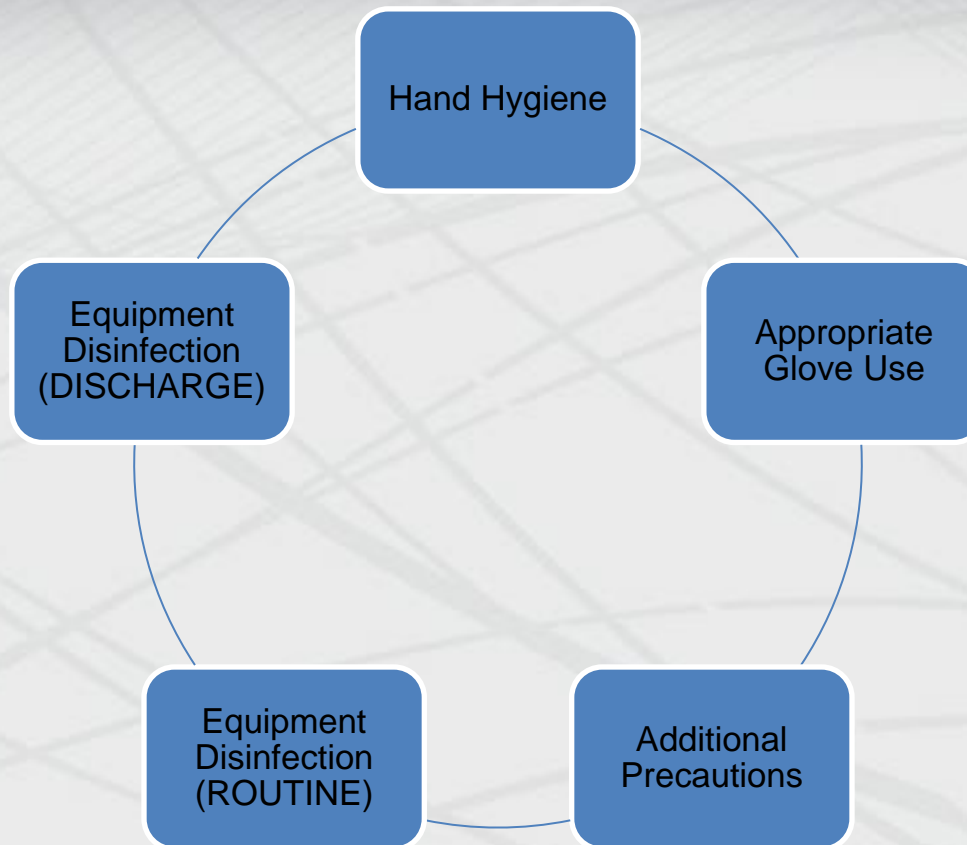
Governance of the CSI Spread Strategy Project



CSI SUCCESSFUL STRATEGIES (CSISS) PROJECT CHARTER

Improvement Project Identification	
Improvement Project Name: Implementation of <u>Controlling Specific Infections (CSI)</u> strategies to ensure appropriate infection control practices in clinical areas at the Glen and across the MUHC (using a phase approach) and reach MUHC infections targets for C-difficile and VRE	
Department: Nursing, Logistic, Clinical Operations, Infection Control, Quality Department, Medical Affairs	Site: Phase 1: Glen site-Adult Phase 2: MGH, MCH, Lachine and Neuro Phase 3: Outpatients
Project Start: 2015-05-18	Project Completion (expected): 2016-09-30 (phase 1)
Improvement Project Governance	
Requester(s)/sponsors: Andréanne Saucier Ewa Sidorowicz Martine Alfonso	Co-leaders of CSI: Kathy Kowal Sophie Baillargeon Dr Douyon Project Manager: Anaïck Briand from Nursing Improvement Program (NIP)
CSI Steering Committee Members: <ul style="list-style-type: none"> • Nursing: Alyson Turner, Sophie Baillargeon, Anaïck Briand • Medical Affairs: Dr Douyon, Dr Chaudhury or Dr Lee, Dr Korah (Peds) • Housekeeping: Kathy Kowal, Andrew Georges • IC: Ramona Rodrigues, Dr Frenette, Dr Quach • Quality: Danielle Lamy (MUHC) • Patient representatives: Elizabeth Pereira, Mari Jo Pires, Philippe Vachon Senior Advisor: P. O'Connor	Members of the subgroups: <p>Subgroup #1: Work Processes (tools)</p> <ul style="list-style-type: none"> • Nursing: Anaïck Briand (chair of the subgroup) • Nursing: Apama Bhattacharjee • Nursing (1 member CPSD): Emma Monaco • Medical Affairs (1 MD in medical mission): Dr Todd Lee • Housekeeping: Andrew Georges • IC: Caroline Lafleur <p>Subgroup #2: Training</p> <ul style="list-style-type: none"> • Nursing: Alyson Turner (chair of the subgroup) • Nursing: Valerie Cass, Shella Moyse • Nursing (1 member CPSD): Emma Monaco • Medical Affairs (1 MD in surgical mission): Dr Chaudhury • Housekeeping: Andrew Georges • IC: Adila Zahir <p>Subgroup #3: Audit</p> <ul style="list-style-type: none"> • Quality: Danielle Lamy (chair of the subgroup), Audrey Vandendriessche • Nursing: Marjolaine Frenette • Housekeeping: Carlo Rossi • IC: Charles Frenette, Connie Patterson

CSISS STRATEGIES



CSISS EDUCATION ON IC PRACTICES

- IPAC Modules (6 accredited modules done by RNs & RNAs)
- 90 minute PAB Hands-On Training
- 60 minute Housekeeping Hands-On Training
- 90 minute Transport Hands-On Training
- 60 minute OT/PT Hands-On Training
- 60 minute MD Hands-On Training

HOW DO WE BREAK THE CHAIN?



5 HAND HYGIENE MOMENTS

What are the 5 moments for hand hygiene when in contact with a patient and his environment?

HAND HYGIENE & PROPER GLOVE USE BUNDLE



Video



QUESTION?

You came out of a C Difficile isolation room, what product will you use to perform hand hygiene and why?

ADDITIONAL PRECAUTIONS BUNDLE

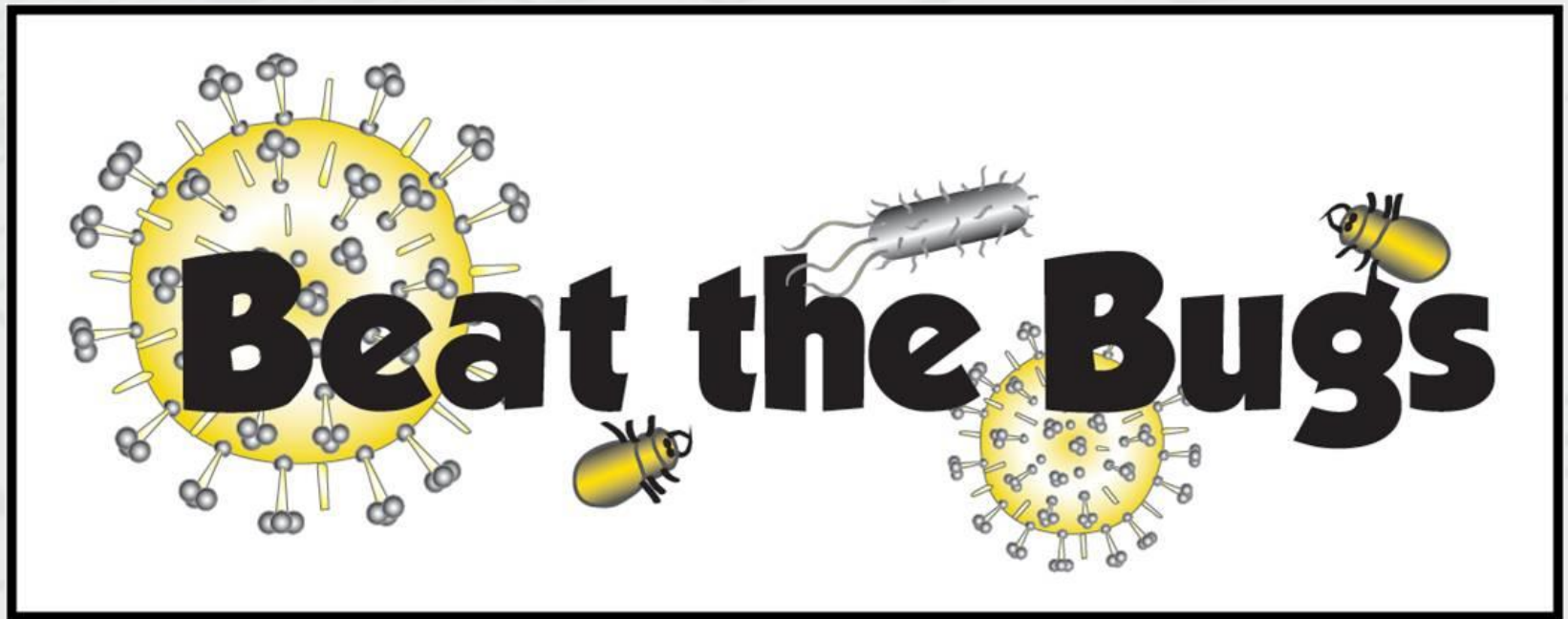


EQUIPMENT DISINFECTION BUNDLE



DID YOU KNOW?

Remember, bugs like VRE can live on a surface for up to 4 months and Cdifficile can live on a surface for up to 2 years!!!!



QUESTION?

You came out of a C Difficile isolation room, what product will you use to clean your stethoscope?

STANDARDIZED DATA COLLECTION AT THE UNIT LEVEL (TABLET AND SOFTWARE PROVIDED)



SpeedyAudit (HH and additional precautions measurements)



← Opportunity →

Location: Glen RVH - D10
Profession: Médecin/Physician -Résid...

In Out

Missed Wash Rub

Session Duration: 00:07 0 Opp - 0 Ind

Compliance Additional Precauti... Notes

← Opportunity →

Location: Site D
Profession: Nurse

Additional Precautions

Contact Droplet Airborne


PPE

Gloves Gown Goggles

Mask N95

Compliance Additional Precautions Tap

surveygizmo® (Equipment disinfection for routine and discharge cleaning)



GLOW GERM- ...

+ Record a Response

Complete Responses (1)

Response #1 -10/19/2015 11:54 am
[edit](#) | [upload](#) | [delete](#)

Response #2 -10/20/2015 8:55 am
[edit](#) | [upload](#) | [delete](#)

Kiosk On

↻ Upload All Local Responses

PART 2: READING

Indicate if the housekeeping items marked during the part 1 have been disinfected.

- If disinfected, select **COMPLIANT**.
- If not disinfected, select **NON COMPLIANT**.
- If unanswerable, keep the status N/A.

	N/A	NON COMPLIANT	COMPLIANT
Bed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bedside table	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Doorknobs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Light Cord	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Light Switch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hallway computers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Horizontal Surfaces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keyboards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Locker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Toilet Bowls	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Toilet Flusher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SUMMARY OF DATA COLLECTION

Audits	MUHC target compliance	How to get results
Hand Hygiene	80%	200 observations (min 75 per period) 8 observations sessions of 20 min per period Auditor: ICP & Nursing
Additional Precautions	90%	
Appropriate Gloves use	90%	
Glow Germ		
Discharge	100%	Min 4 audits per period, 80 housekeeping items + 20 nursing items per period Auditor: Nursing leadership team
Routine	80%	100 housekeeping items + 40 nursing items per period Auditor: ICP & housekeeping supervisor

QUALITY STATION QUALITÉ

QUALITY STATION QUALITÉ

Plan: what are our objectives?

Objectifs

Calendrier des audits

RESULTS: Are we improving?

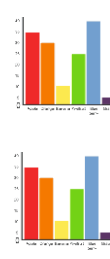
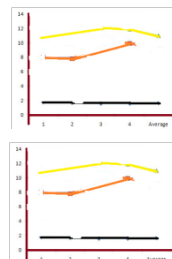
Graphs

Results: % conformity with:

By period

Current period

Criteria



IMPROVE: How?

Plan d'actions pour améliorer

Cibles d'améliorations pour la prochaine période

Prochaine mise à jour

Quality Station Qualité

Join us every Thursday
From 11:30 to 11:45

Controlle Spécifique des Infections - Stratégies de Succès
Controlling Specific Infections - Successful Strategies
(CSI)

Ongoing Quality Improvement projects

Do all our activities fit the conditions?
What are we going to do next and for how long?

Controlled infection rates in UK hospitals and our performance?
How will we achieve it if things do not improve?

What arrangements should we have and implement to do this successfully?
What changes are needed to do this successfully?



Several sheets of text and documents are pinned in this section. They include what appears to be a checklist or a list of items, possibly related to the 'Successful Strategies' mentioned in the header. The text is too small to read clearly but seems to be organized into sections.

Project information box with a yellow circular icon on the left and a large empty rectangular area on the right, likely for project details or dates.

A collection of project management documents, including what looks like a Gantt chart or a project plan, and several smaller sheets of text or data. These documents are arranged in a somewhat overlapping manner, suggesting they are part of an ongoing project.



EXAMPLE OF HUDDLE



Results



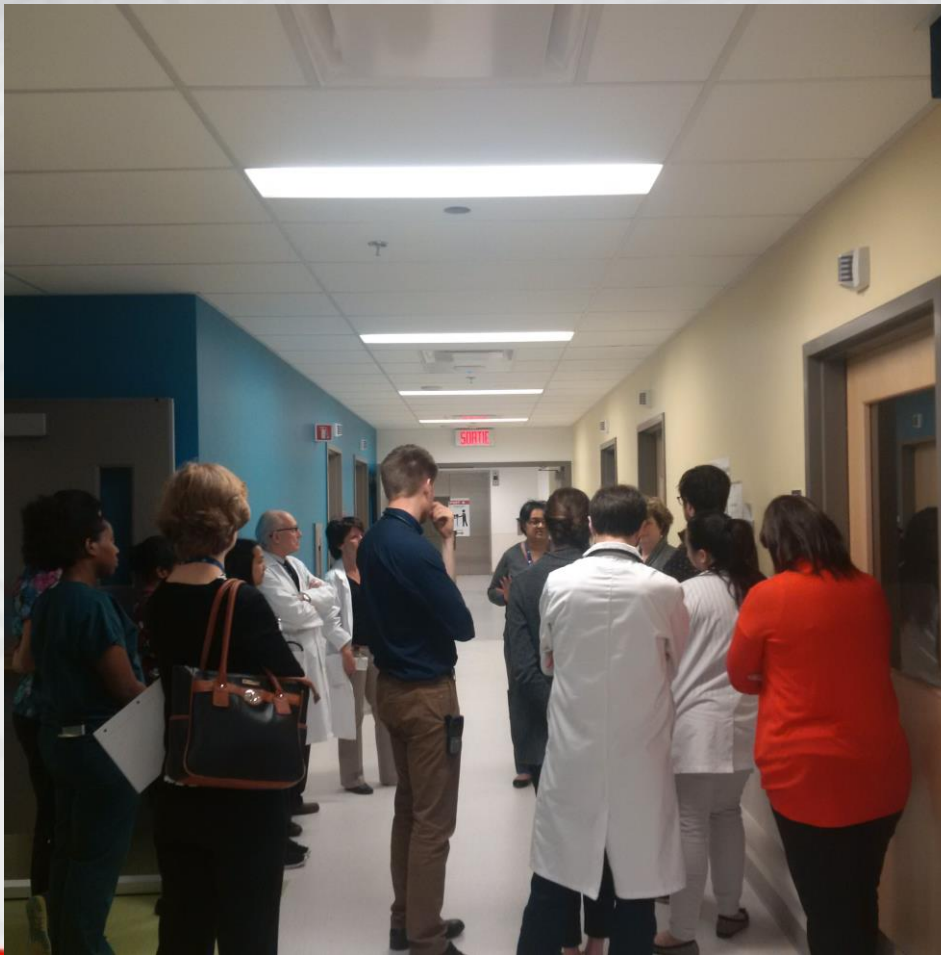
CSI SUCCESSFUL STRATEGIES TRAINING AS OF DECEMBER 31ST, 2016

- 87 PABs (part GLEN adult and pediatric/part MNH) (90min training)
- 187 Housekeepers (GLEN/MGH/Neuro) (60min training)
- 15 Housekeeping Managers (75% trained all sites)
- 68 transport attendants (all GLEN/part MGH/all MNH) (90min training)
- 50 OT and PT (all GLEN/MGH/Neuro)

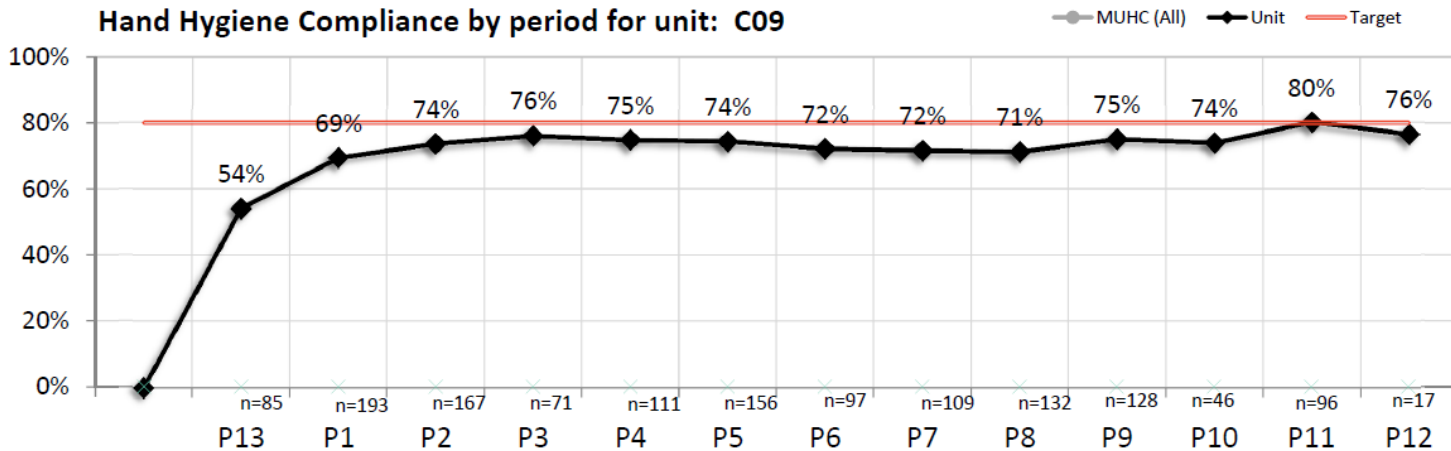
OUTCOME:

- **Training comments were very positive:**
 - 100% of trained staff would recommend this training**
 - 95% learned something on HH
 - 96% learned something on glove use
 - 96% learned something on additional precautions
 - 92% learned something on equipment disinfection
- **Interdisciplinary proposal to secure funds from the CSN bursary to train the remaining staff (\$23,800)**

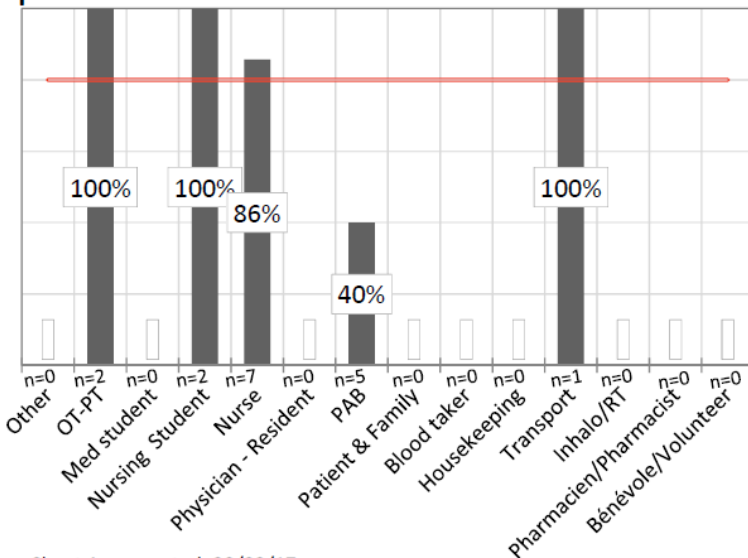
EXAMPLE OF HUDDLE ON C9 (PILOT UNIT)



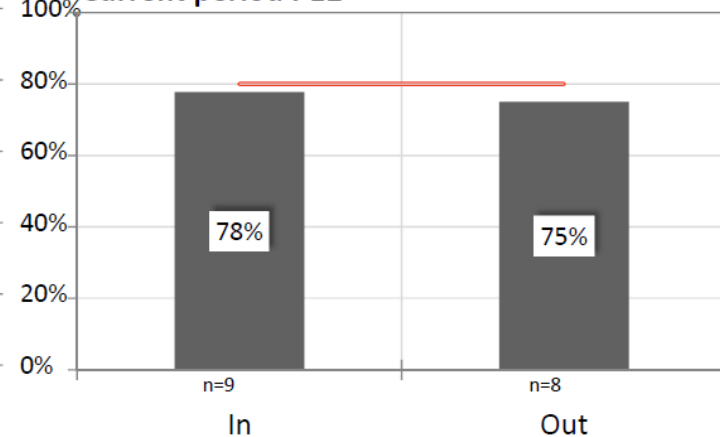
RESULTS ON C9 (HAND HYGIENE)



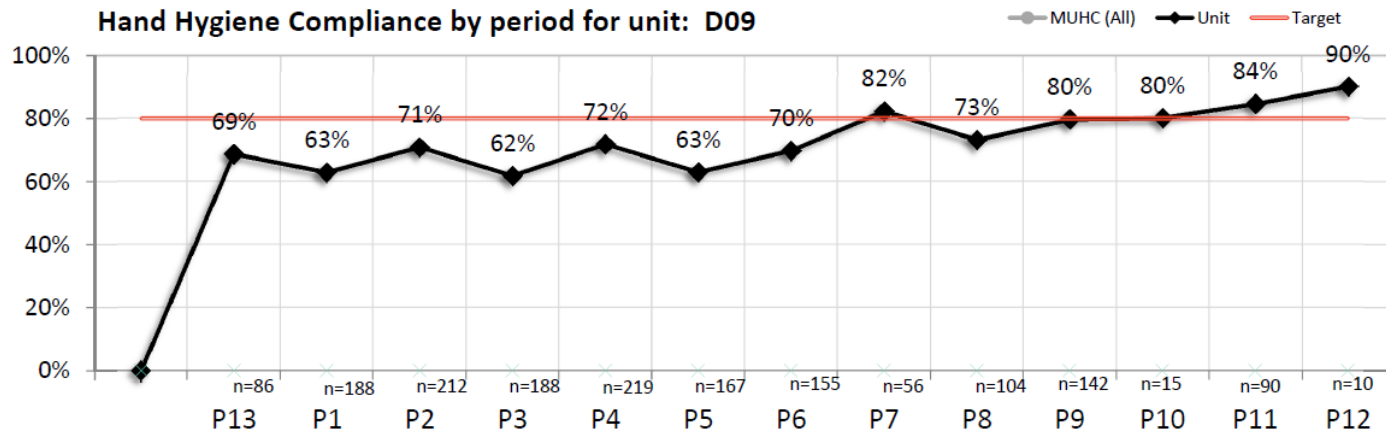
Hand Hygiene Compliance by Profession Current period P12



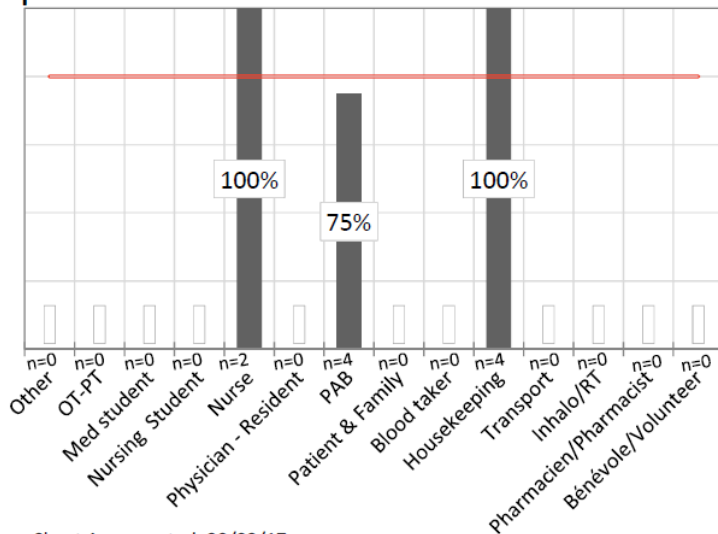
Hand Hygiene Compliance by Moment Current period P12



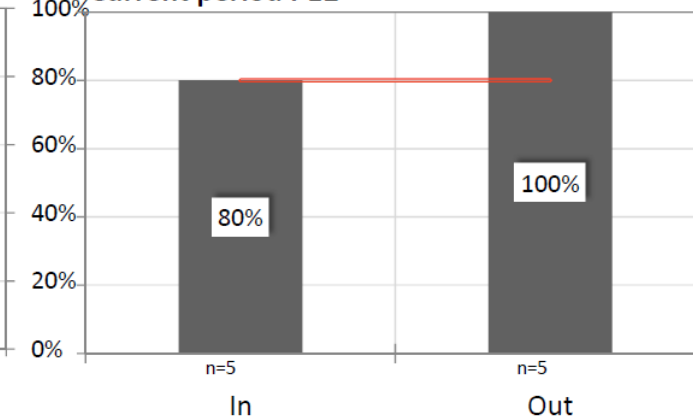
RESULTS ON D9 (HAND HYGIENE)



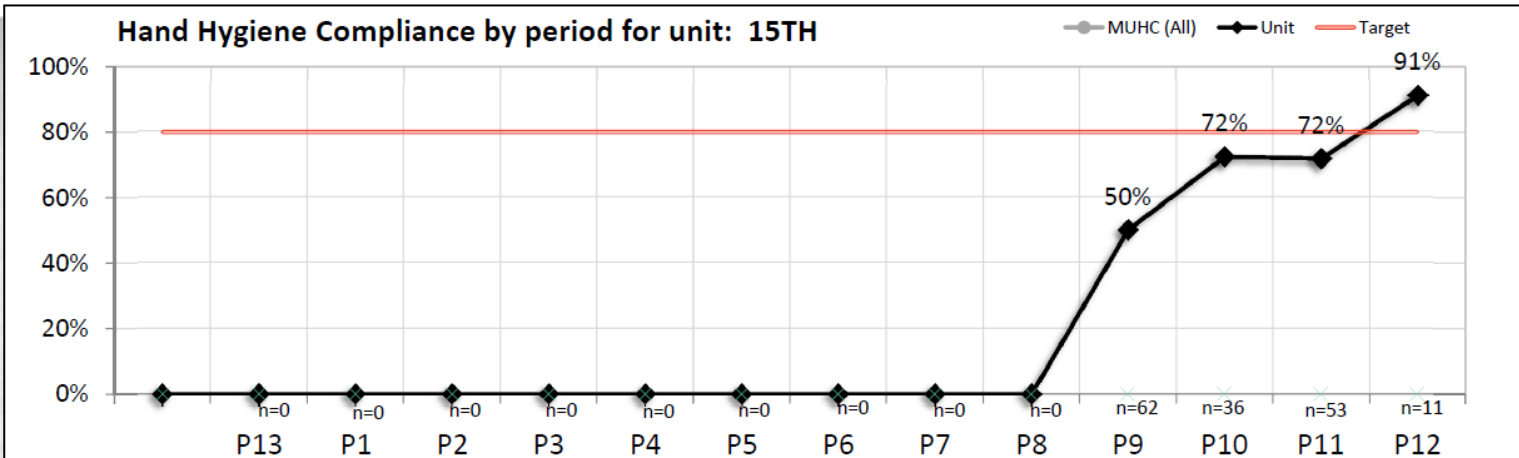
Hand Hygiene Compliance by Profession Current period P12



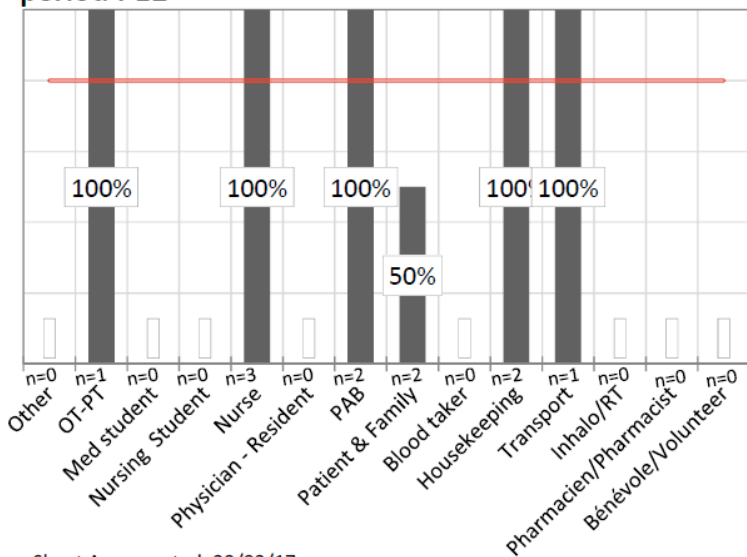
Hand Hygiene Compliance by Moment Current period P12



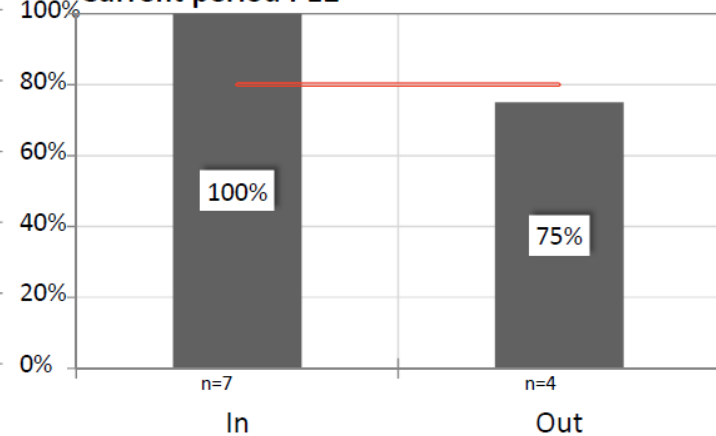
RESULTS ON MGH15 (HAND HYGIENE)



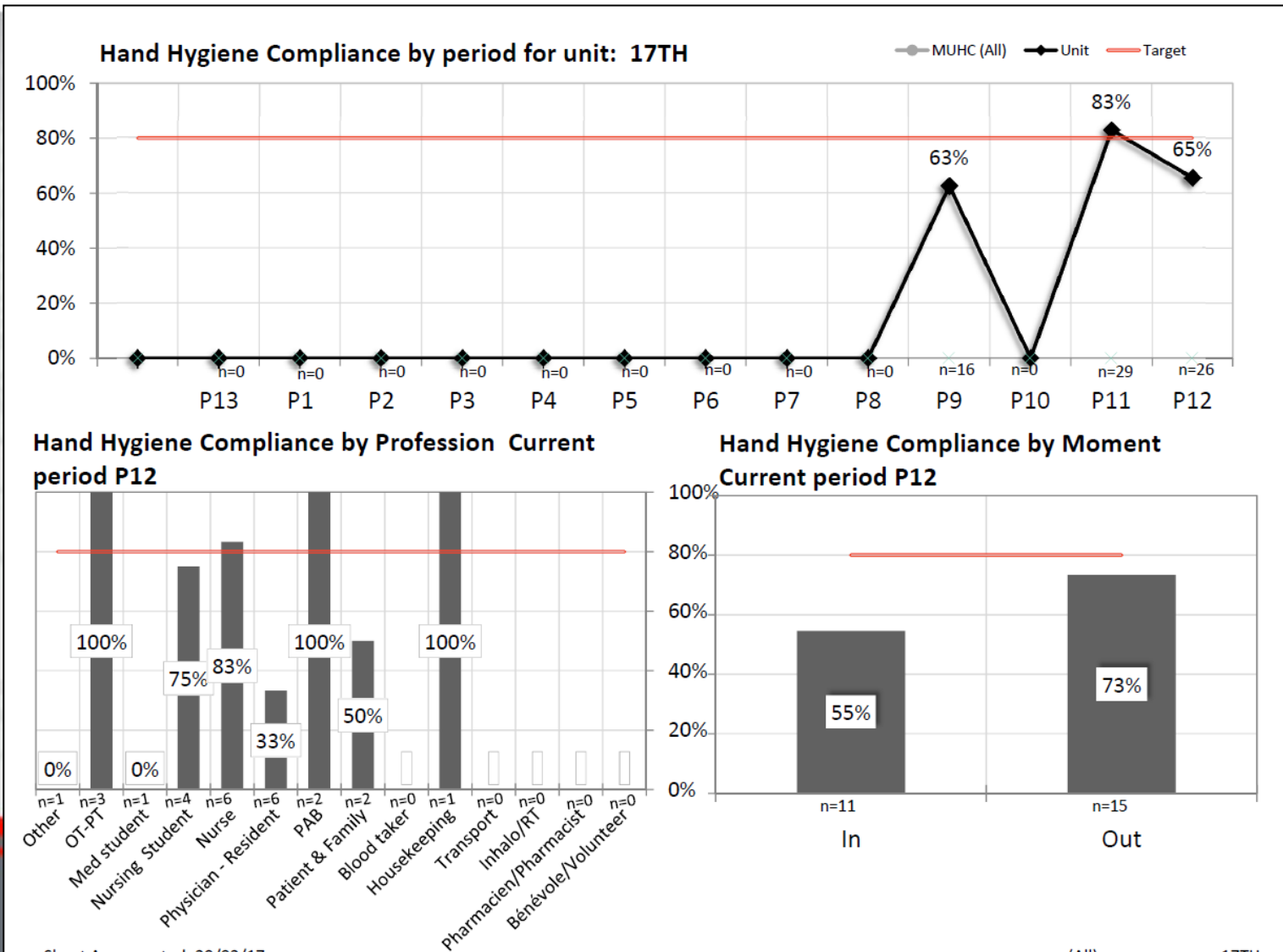
Hand Hygiene Compliance by Profession Current period P12



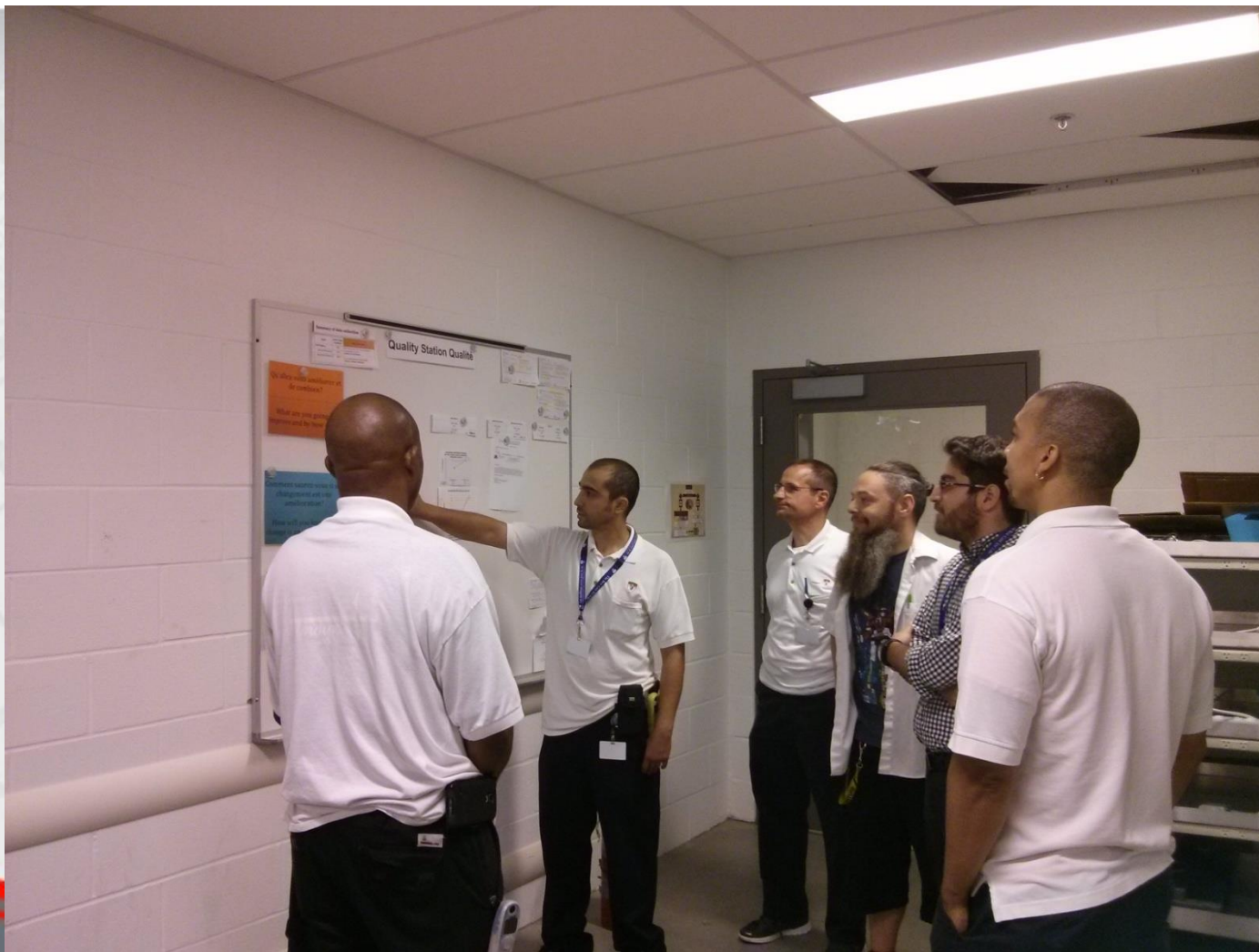
Hand Hygiene Compliance by Moment Current period P12



RESULTS ON MGH17 (HAND HYGIENE)



EXAMPLE OF HUDDLE @ GLEN TRANSPORT



WHAT WILL IT COST?

	CSI 2014	CSISS 2016	Savings
# of Units	6	6	
Costs Release time	\$194,400	0\$	
Costs Facilitation	\$105,000	\$27,000	
Costs Workshop	\$12,000	0\$ (CSN funds)	
Costs Tablet	NA	\$6,000 (1,000\$/tablet)	
Total	\$311,400	\$33,000	Saving \$278,400
Time	8 months	↓ 4 months	Saving 4 months

RETURN ON INVESTMENT

	CSI 2014	CSISS 2016	Savings
Cost avoidance	\$760,000	\$10,000*X Cdiff \$6,000*X VRE	\$10,000*X Cdiff \$6,000*X VRE
LOS	760 days	10*X	10*X
Sustained (Y/N)	+/-	Y (through huddles)	

CSI SUCCESSFUL STRATEGIES IS THE FEASIBLE, LOW COST, SUSTAINABLE SOLUTION...

Leaving skills on unit/service (education, audits, huddles, PDSA, goal settings) for sustainability at low cost

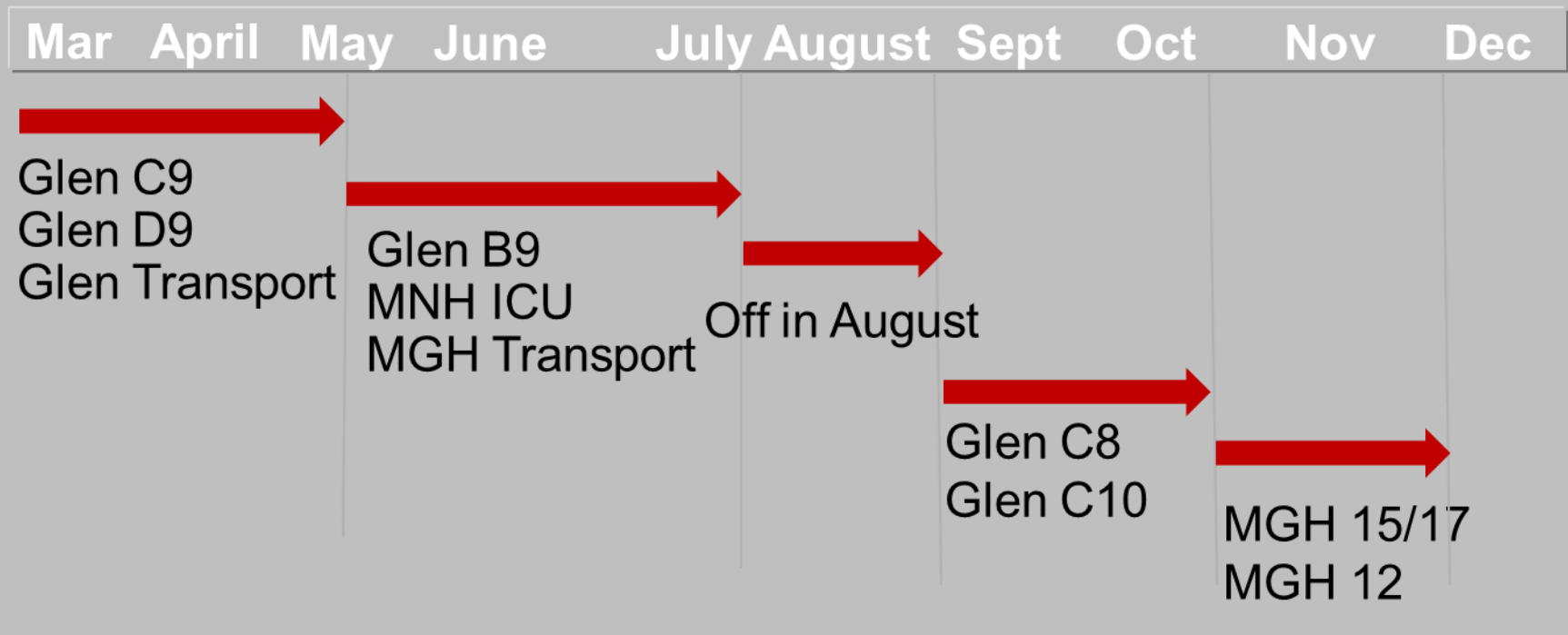
Building Capacities

Make CSISS an **organizational goal**

Change culture of the MUHC

CSISS Timeline (March 2016-December 2016)

CSISS Timeline (March 2016-December 2016)



Video CSISS



Thank you for helping us fight the invisible enemy

Your support

Collaborative approach

Aha! VRE on the bladder scanner...

ALL together!



Disseminate the information at all levels

For patients

Culture change

Leadership