Leading Organizational Spread in Improvement
Prevention of Catheter Associated Urinary Tract Infections

To be a light in society, relieving suffering and enriching lives with the love of Christ

Deepthika De Silva
Head, Healthcare Performance Office

Declaration of Interest

Nothing to declare on payments made

- for presentation

- for advice

- for funding of project

- to attend conference

- on other interests connected to this work

- for attending conference

An inspiring story

- **Plan**
- **Prepare**
- **Plant**
- **Nurture**
- **Harvest**

Description of Community Hospital

- Post Acute care
- Bed strength - 260
- Services provided
  - rehabilitative care
  - subacute care
  - dementia care
  - palliative care
- Average length of stay 28 days
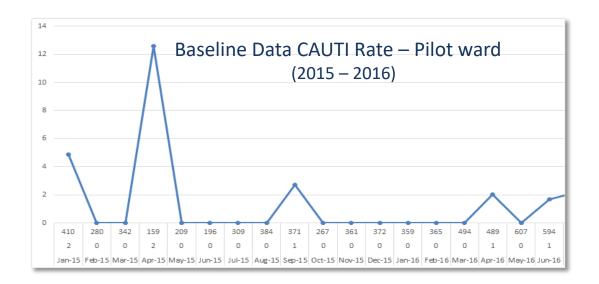- Patients on urinary catheter - 13%

Why work on Prevention of CAUTI ?

- SACH CAUTI rate (2016) – 1.66 per 1000 urinary catheter days
- Preventable
- Increases length of stay
- Performance indicator

Results of a Gap Analysis - Ask 5 Take 5

- Definition of CAUTI varies

- Non -standard practice to review need for catheter

- Patients and caregivers not effectively engaged in prevention of CAUTI.
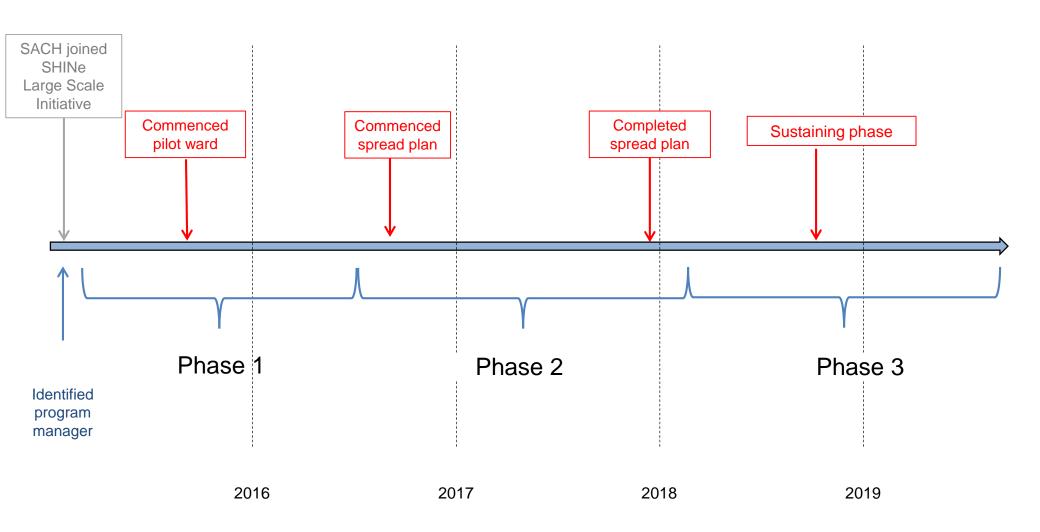

Baseline Data CAUTI Rate – Pilot ward (2015 – 2016)

	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
	410	280	342	159	209	196	309	384	371	267	361	372	359	365	494	489	607	594
	2	0	0	2	0	0	0	0	1	0	0	0	0	0	0	1	0	1

Project Team

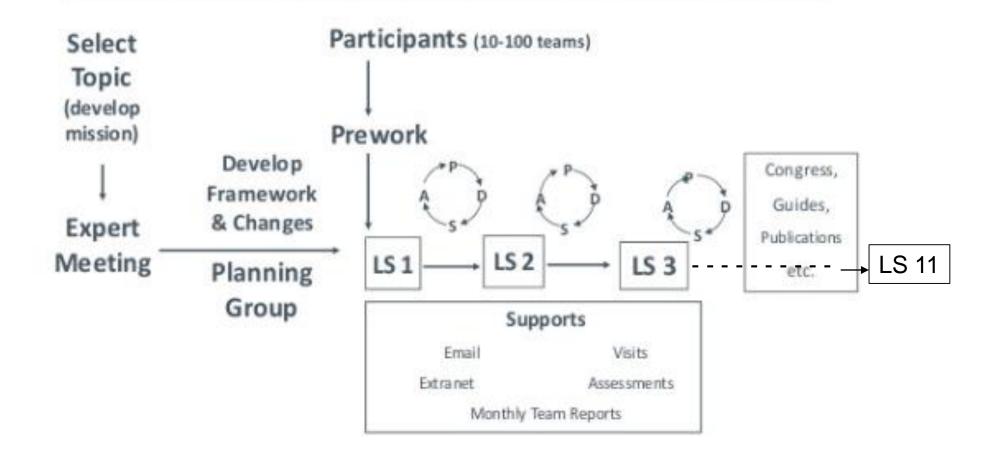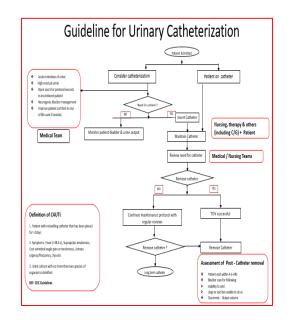| TEAM MEMBERS	NAME	DESIGNATION
Institutional sponsor	Ms. Lei Choo Alison Sim	Director of Nursing
Team member	Dr. Prabaharan Sinnathurai	Doctor
	Ms. Arlene	Nurse Manager
	Ms. Myint Wai Hlaing	Staff Nurse
	Ms. Chin Lian Magdalene	Senior Physiotherapist
	Ms. Mei Heong Lim	Infection control nurse
Program Manager	Dr. Deepthika De Silva	Head health care performance office
	Ms. Sonali Das	Executive HPO

Project Timeline

SACH joined
SHINe
Large Scale
Initiative

Commenced
pilot ward

Commenced
spread plan

Completed
spread plan

Sustaining phase

Identified
program
manager

Phase 1

Phase 2

Phase 3

2016

2017

2018

2019

CAUTI Bundle

Interventions

1 **Clinical Guideline** for urinary catheterization

2 **Audits**
- Indications for catheterization
- Maintenance of catheter
- Regular reviews on need for catheter

3 **'Catheter Pants'**

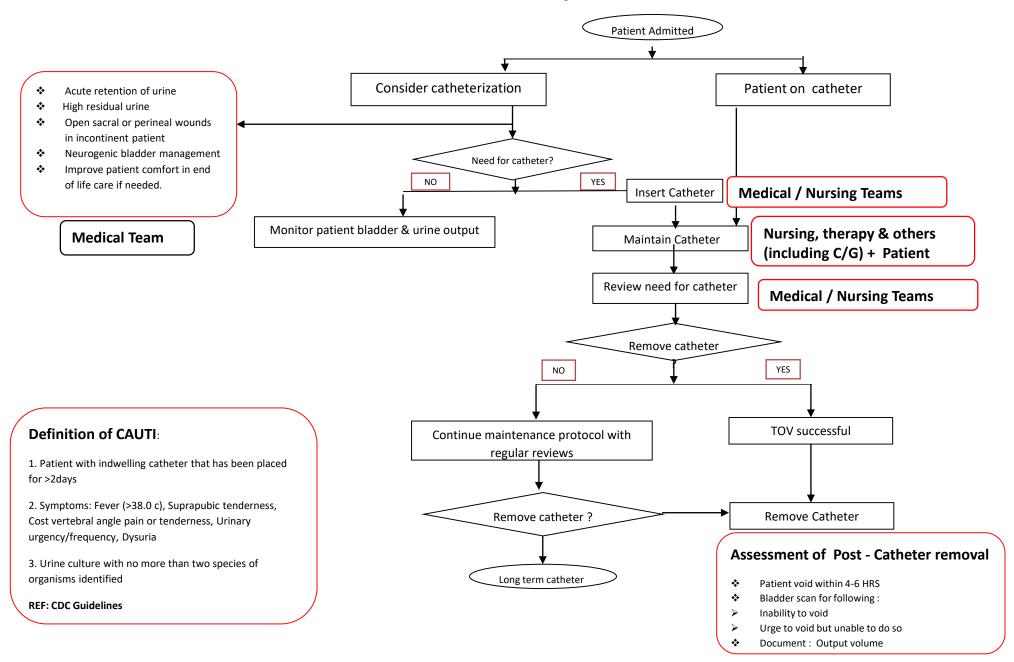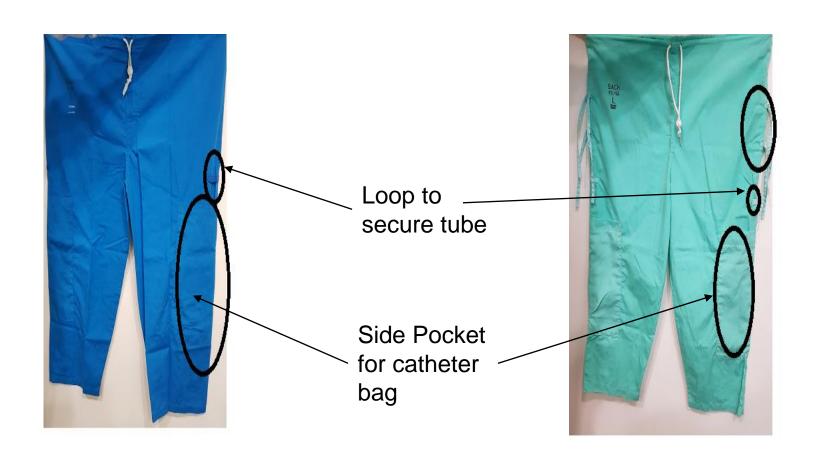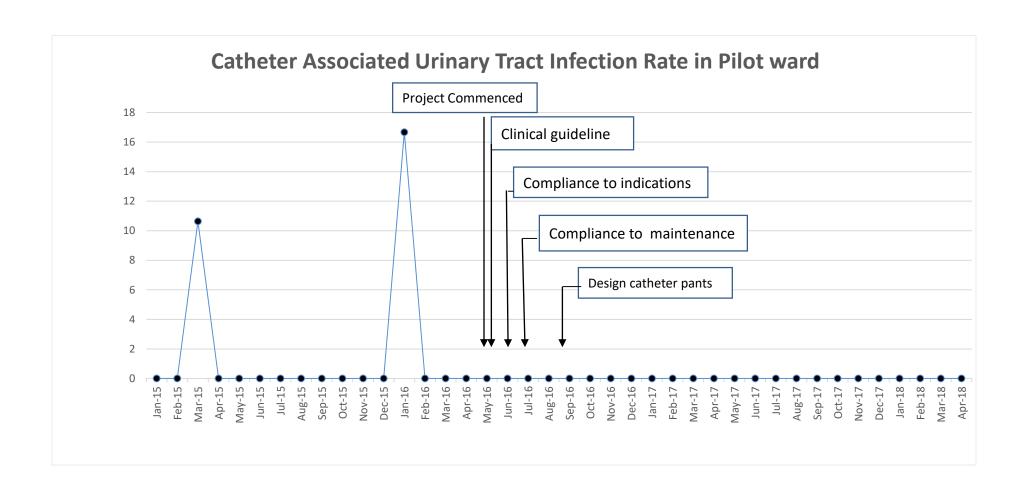**4** **Electronic data collection System to** 'self regulate' at individual ward levels.
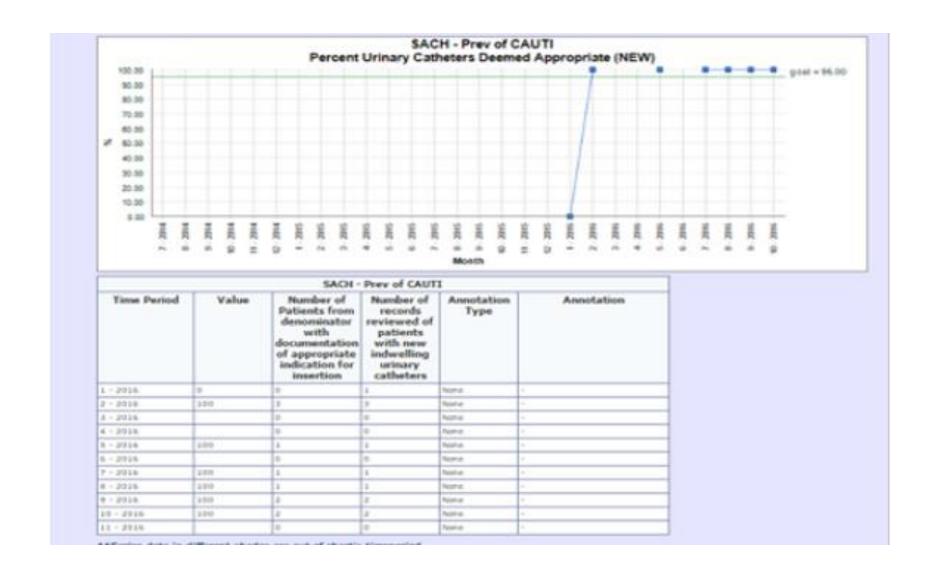

Guideline for Urinary Catheterization

CAUTI Pant

AUDIT CHECKLIST

eData Collection System

Guideline for Urinary Catheterization

Patient Admitted

- Consider catheterization
- Patient on catheter

- Acute retention of urine
- High residual urine
- Open sacral or perineal wounds in incontinent patient
- Neurogenic bladder management
- Improve patient comfort in end of life care if needed.

Medical Team

Need for catheter?

- NO
- YES

Insert Catheter

Medical / Nursing Teams

Monitor patient bladder & urine output

Maintain Catheter

Nursing, therapy & others (including C/G) + Patient

Review need for catheter

Medical / Nursing Teams

Remove catheter

- NO
- YES

Continue maintenance protocol with regular reviews

TOV successful

Definition of CAUTI:

1. Patient with indwelling catheter that has been placed for >2days

2. Symptoms: Fever (>38.0 c), Suprapubic tenderness, Cost vertebral angle pain or tenderness, Urinary urgency/frequency, Dysuria

3. Urine culture with no more than two species of organisms identified

REF: CDC Guidelines

Remove catheter ?

Remove Catheter

Long term catheter

Assessment of Post - Catheter removal

- Patient void within 4-6 HRS
- Bladder scan for following :
  - Inability to void
  - Urge to void but unable to do so
- Document : Output volume

Design of 'CAUTI PANTS'

Loop to secure tube

Side Pocket for catheter bag

Pilot ward Outcome Measures

Catheter Associated Urinary Tract Infection Rate in Pilot ward

Pilot ward Process Measures

Ready To Spread?

LEADERSHIP

CAUTI BUNDLE

SPREAD PLAN

Spread Team

SOCIAL SYSTEM

MONITOR PROGRESS & DATA

COMMUNICATION

Spread Aim

- Zero CAUTI in SACH by December 2019

- 100% compliance to CAUTI Guideline

Spread Team

- Communicate

- Influence & motivate

- Provide knowledge

- Coach and guide

- Support, problem solve

- Monitor progress of spread

- Feedback to senior management and frontline

IHI Psychology of Change Framework

Unleash Intrinsic Motivation

Tapping into sources of intrinsic motivation galvanizes people's individual and collective commitment to act.

Adapt in Action

Acting can be a motivational experience for people to learn and iterate to be effective.

Co-Design People-Driven Change

Those most affected by change have the greatest interest in designing it in ways that are meaningful and workable to them.

Activate People's Agency

Distribute Power

People can contribute their unique assets to bring about change when power is shared.

Co-Produce in Authentic Relationship

Change is co-produced when people inquire, listen, see, and commit to one another.
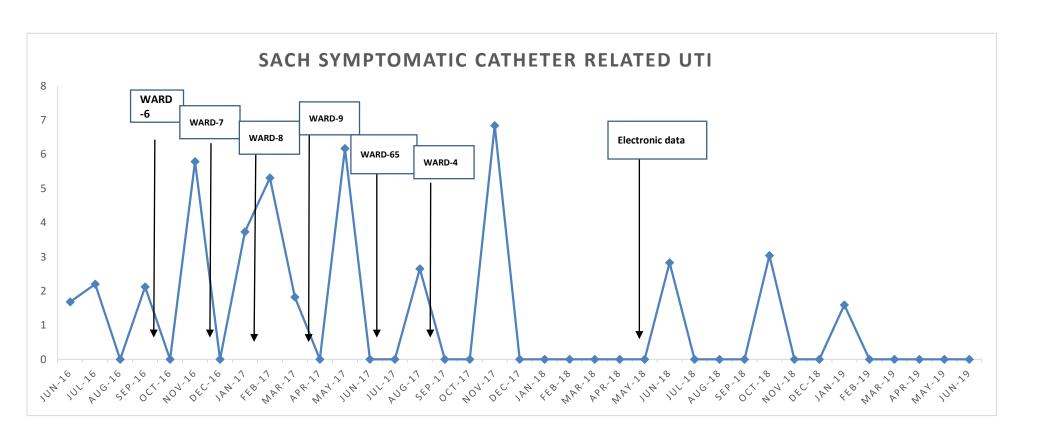
http://www.ihi.org/resources/Pages/IHIWhitePapers/IHI-Psychology-of-Change-Framework.aspx

Our Experience in Application of this Framework during spread

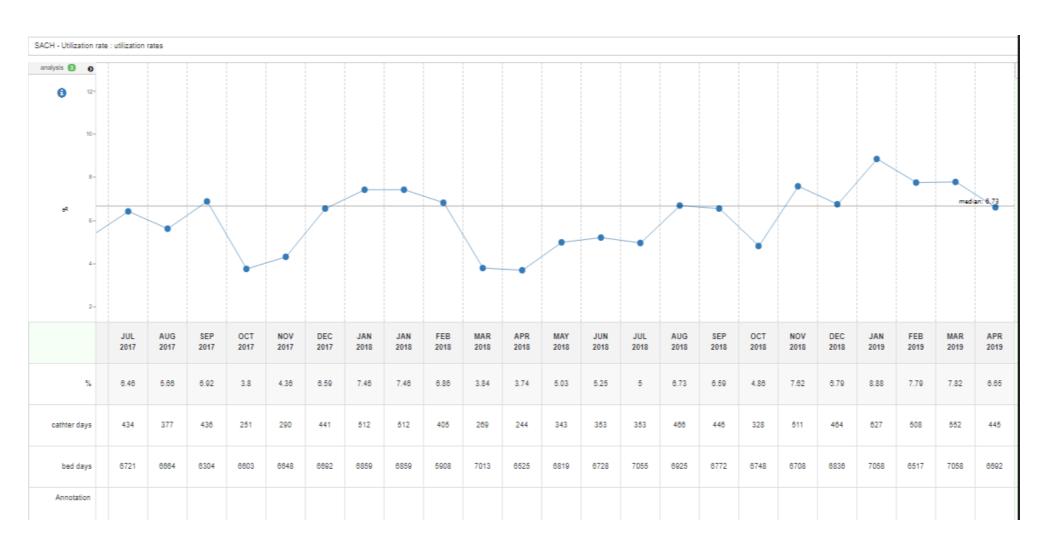| Domain	Action
Trusting relationships	A strong foundation to build and work with.
Intrinsic motivation	Be Patient! Listen! Stakeholders need time to accept change.
Co –design changes	Design *with* frontline staff
Clear roles	Each member understands his / her role
Regular feedback	Frontline begins to own their data

Outcome Measures - CAUTI Rate

SACH SYMPTOMATIC CATHETER RELATED UTI

Process Measure
% of Catheter Deemed Appropriate

Percent Urinary Catheters Deemed Appropriate (NEW)

Catheter Utilization Rate

SACH - Utilization rate : utilization rates

analysis

median: 6.73

	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	JAN 2018	FEB 2018	MAR 2018	APR 2018	MAY 2018	JUN 2018	JUL 2018	AUG 2018	SEP 2018	OCT 2018	NOV 2018	DEC 2018	JAN 2019	FEB 2019	MAR 2019	APR 2019
%	6.46	5.66	6.92	3.8	4.36	6.59	7.46	7.46	6.86	3.84	3.74	5.03	5.25	5	6.73	6.59	4.86	7.62	6.79	8.88	7.79	7.82	6.65
cathter days	434	377	436	251	290	441	512	512	405	269	244	343	353	353	466	446	328	511	464	627	508	552	445
bed days	6721	6664	6304	6603	6648	6692	6859	6859	5908	7013	6525	6819	6728	7055	6925	6772	6748	6708	6836	7058	6517	7058	6692
Annotation																							

Strategies to Sustain Achievements

	Change	Actions to Sustain
1	Clinical guideline	Accessible to all clinicians
2	Audits by ICN	Regular hospital wide audits
3	CAUTI Pants	250 pants added to linen inventory
4	Electronic data collation (in progress)	Staff capable of self monitoring & regulating their practices. (in progress) - Catheter days - Indication for catheterization - Trial of void - Date of insertion and removal
5	Patient & caregiver engagement	Empower patients by frontline staff
6	Staff Recognition	Consider human factors when designing change. Every improvement matters - big and small

Leading Change in Improvement

- Vision for improvement

- Creating and sustaining a culture where trust and respect grows within the organization

- All staff to embrace the concept of being a "Learning Organization"

- Celebrate!

Our Improvers!!