



CARE COACH

A NEW APPROACH TO INTEGRATE CARE FROM BED TO BENCH

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PROBLEM STATEMENT

- Globally surgical site infection (SSI) is the most frequent type of health care-associated infection (HAI) on admission.
- In 2022 69% of the SSIs were post cardiac surgery. 56% of the overall burden were due to deep-seated infections despite implementation of multi-model (essential practices according to CDC & WHO) strategies to prevent it
- Among all the multifactorial causes to SSIs delayed presentation of patients to hospital was the most common contributing factor for deep seated SSIs.
- SSI is an unpleasant experience for patients which increases the care burden on families and communities thereby increased cost for patients and providers.
- Hence, we hypothesized that enhanced monitoring of patients in the post discharge period would provide valuable insights in early detection of infection and thereby prevent deep seated infections.
- Our team decided to address this problem statement following a detailed root cause analysis. (5 WHY's, process flow chart templates)

AIM



To strengthen SSI surveillance for post cardiac surgery patients and thereby enhance patient outcomes by provision of personalized support and guidance



Bridge the gap by enhance Communication and Collaboration Among Healthcare Team Members



To Optimize Healthcare Resource Utilization

OBJECTIVES

- To increase phone call surveillance number by 350 every month
- To increase patient and family related follow up factors by 80%
- To enhance communication between team members by 100%
- To reduce unnecessary hospital visit(our hospital or outside hospital) by 60%
- To reduce the cost spent by patient and their family by 60% (transport and stay)

DATA COLLECTION PLAN

Definition SSI: According to NHSN surveillance 2023

Sample size : All patients who underwent cardiac surgery in Apollo main hospital

Sampling period: March 2023 to February 2024

Sampling Technique: Purposive sampling technique

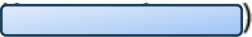
Inclusion criteria:

- Patients of both sex, aged above 18 years of age.
- Patient who underwent cardiac surgery (minimal invasive, on pump, off pump etc.) in Apollo main hospital from Tamil Nadu or outside Tamil Nadu

Exclusion criteria:

- unable to communicate independently

SSI PREVENTION PLAN

- Data collection
- Define our goals
- Time-line 
- Policies and document
- Resources
- Task force
- Process mapping

- Solutions based on gap analysis
- Prioritise the mandatory solutions
- Stick to time-line
- Review and assess
- Results shared with leadership team



- Gap analysis to analyse our current status (Knowledge, Training, infrastructure development)
- Review flaws in the current status
- Check list
- Review meetings with the task force
- Education and training of core team members

- Maintain and monitor the improvement
- Continuous education and training of core team
- Recognize the staff
- Changes embedded in normal work progress

Dr Yamuna Apollo hospital, Chennai

PDSA CYCLE

LIST THE TASK NECESSARY TO COMPLETE (PLAN)	PERSON RESPONSIBLE (WHO)	WHEN	WHERE
1. Post operative wound status surveillance bundle form every shift	Assigned nurse	At the time of patient care	ICU, Ward
2. Wound status assessment by Care Coach during daily rounds	Infection control nurse (Care coach)	At the time of patient care	ICU, Ward
3. Discharge advise on wound care management to patient and family Mention in discharge summary with phone number Care coach	Primary surgical team, ward nurses	At the time of discharge	Ward
4. Wound status update to care coach at the time of discharge	Ward in charge nurse	At the time of discharge	Ward
5. Video phone call follow up (10,20,30,60 and 90 days)	Infection control nurse (Care coach)	After discharge	Secured place in CTICU
6. Communication to primary team if score is above 6	Infection control nurse (Care coach)	Immediately after follow up	Cardiothoracic Department
7. Communication to the patient about the advice given by primary team. If primary team insists to meet the patient fix appointment through telemedicine through cardiac Op secretary and share prescription through telemedicine	Infection control nurse (Care coach) Cardiac OP secretary Primary surgical team Telemedicine	After discussion with primary team	Cardiothoracic Department
8. Compiled data is shared and discussed with Medical administrator and Cardiothoracic team	Infection control officer with Infection control nurse (Care coach)	Every month	Cardiothoracic department meeting

METHODOLOGY: PATIENT CENTRIC APPROACH

- **Interpretation of Total Score:**
- 0-5: Advise by care coach over phone
- 6-15: communication with clinical team. If required OP visit and if outside Chennai telemedicine (Fixes appointment)
- 16-26: Suggestion by care coach to get admitted in Apollo hospital through emergency department and communication to primary team

S.no	Condition	Questions	Score range
1.	Bathing	Are you taking bath/shower daily?	(0-1)
2.	Glycemic Control	Have you been able to maintain stable blood sugar levels?	0-2
3.	Weight Lifting	Are you following the weight lifting restrictions provided by our healthcare team?	0-2
4.	Routine Exercise	Are you engaging in regular exercise as recommended by our healthcare team?	(0-2)
5.	Pain	How would you rate your overall pain level? 0: No pain 1: Mild pain 2: Moderate pain 3: Severe pain	0-3
6.	Tenderness	Do you experience any tenderness around the surgical site?	0-1
7.	Swelling	Have you noticed any swelling at or near the surgical site?	0-1
8.	Redness	Is there any redness around the incision area?	0-1
9.	Warmth	Do you feel any unusual warmth or heat around the surgical site?	0-1
10.	Fever	Have you experienced any fever (temperature above 100.4°F or 38°C) since the surgery?	0-1
11.	Discharge from Surgical Site	Are you experiencing any abnormal discharge (e.g., pus) from the surgical site? (No, mild, moderate, severe)	0-3
12.	Culture or on Antibiotics	Have you had any culture taken from the surgical site, and are you currently on antibiotics?	0-1

S.no	Condition	Questions	Score range
13.	Surgeon Review	Have you visited your surgeon for a post-operative review as scheduled?	0-1
14.	Spirometry Usage	Are you using the spirometry device as instructed?	0-1
15.	Chest Belt	Are you wearing the prescribed chest belt regularly?	0-1
16.	Analgesics Continuation	Are you continuing to take your prescribed analgesic medications beyond period of prescription	0-1
17.	Leg Edema score (Cleveland clinic)	Have you noticed any swelling or edema in your legs? (No, mild, moderate, moderately severe, severe)	0-3

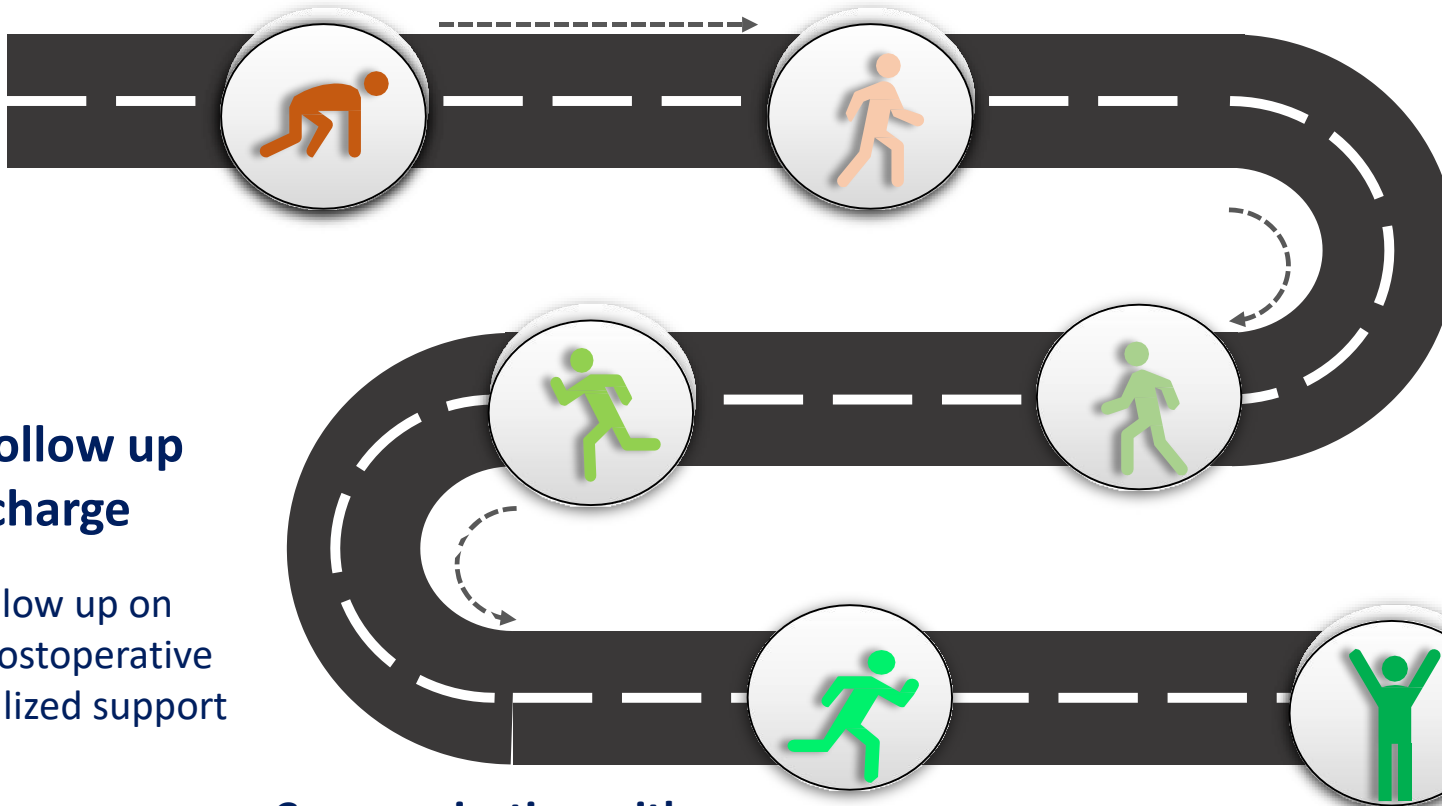


Cardiac patient journey in our hospital



Admission in hospital through ED or OPD

Post surgery in ICU (3-4 days)



Ward 3 days

Advise and education on wound management
Training for ward nurses on wound care and update status at the time of discharge

Video call follow up after discharge

Advise and follow up on overall care of postoperative patients. Personalized support

Communication with clinical team score: 6-15 early visit to prevent deep SSI

Patient beneficial outcome: Decreased deep SSI and unnecessary hospital visit

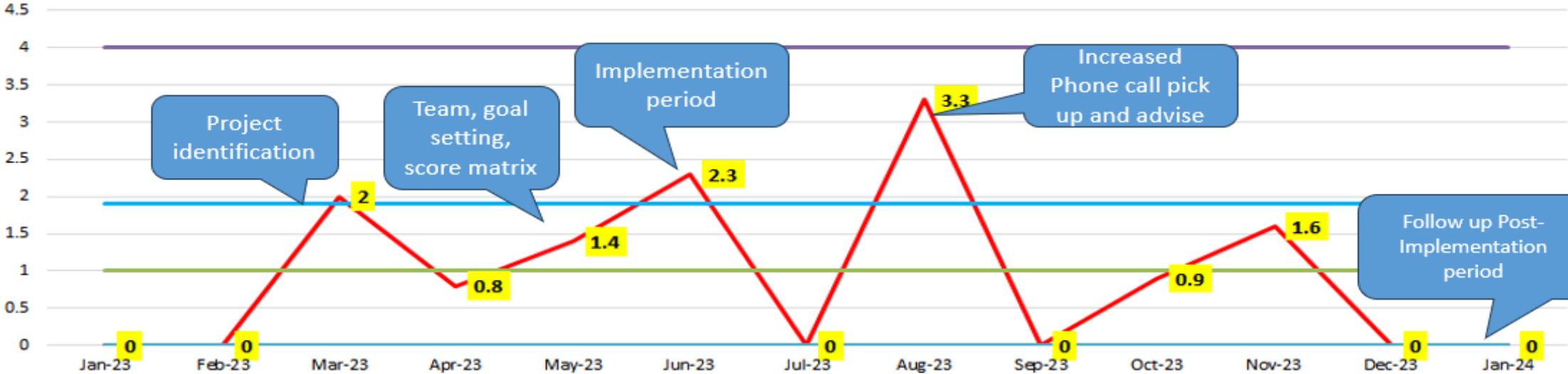


8th Edition

CAHOCON 2024

6TH & 7TH APRIL 2024

CARDIAC SSI RATE JAN 2023 TO JAN 2024

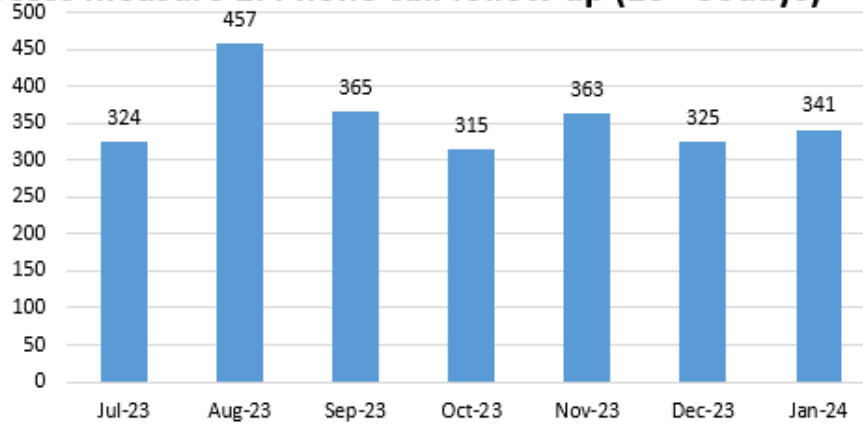


	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
SSi RATE	0	0	2	0.8	1.4	2.3	0	3.3	0	0.9	1.6	0	0
BENCH MARK	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
MEAN	1	1	1	1	1	1	1	1	1	1	1	1	1
UCL	4	4	4	4	4	4	4	4	4	4	4	4	4
LCL	0	0	0	0	0	0	0	0	0	0	0	0	0

Month	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
CARDIAC SSI	0	0	3	1	2	3	0	5	0	1	2	0	0
CT CASE	132	121	147	130	138	129	127	161	135	111	124	110	119

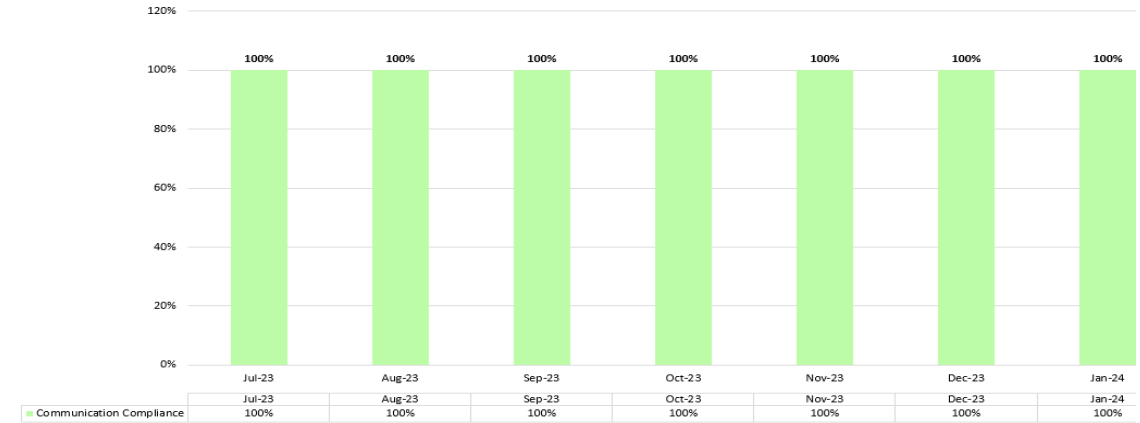
PROJECT OUTCOMES

Process measure 1: Phone call follow up (10 - 30days)

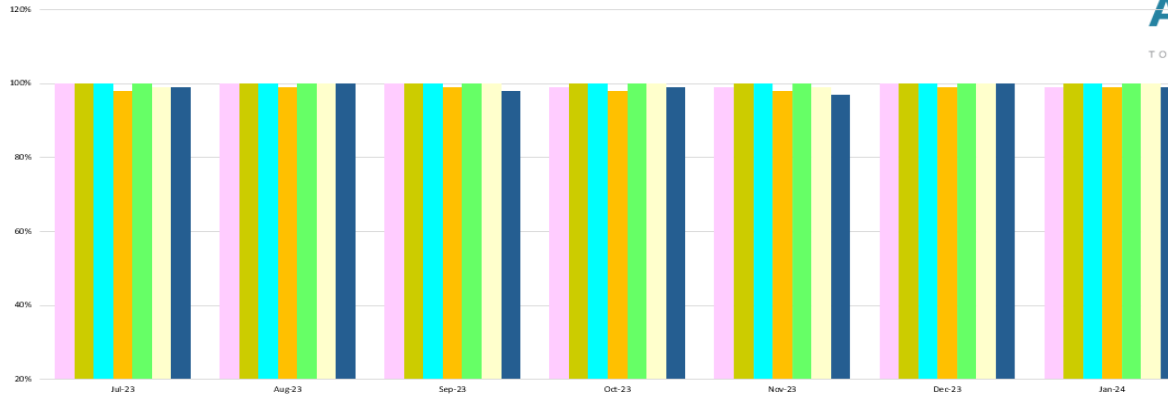


	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Phone call follow up (10 - 30days)	324	457	365	315	363	325	341

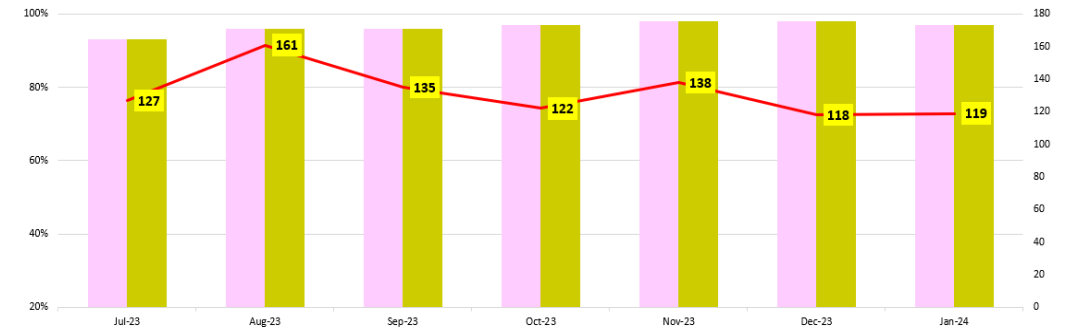
Process measure 3: Inter and intra team Communication Compliance



Process measure 2: Patient, family related Factors compliance



1 and 2 Outcome measures:



- Percentage reduction of unnecessary hospital visit (10-30 days)
- Overall cost saving due to unnecessary visit
- Total Case

Tools and protocol



Care coach advise at the time of discharge

COMPONENTS OF BUNDLE	DATE	PO01	PO02	PO03	PO04	PO05	PO06	PO07	PO08
SHEET TIMING	15/11/23	16/11/23	17/11/23	18/11/23	19/11/23	20/11/23	21/11/23	22/11/23	23/11/23
Surgical antibiotic prophylaxis stopped	M	A	N	M	A	N	M	A	N
Hand hygiene	✓	✓	✓	✓	✓	✓	✓	✓	✓
Asseptic handling of surgical site dressing	✓	✓	✓	✓	✓	✓	✓	✓	✓
Glycemic control (Strong/d/8.3mmol/L)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fever	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tenderness, redness, swelling, discharge at the site of surgery	✓	✓	✓	✓	✓	✓	✓	✓	✓
Appropriate cultures sent	✓	✓	✓	✓	✓	✓	✓	✓	✓
Signature of the assigned nurse	[Signatures]								
Name of the Nurse	[Names]								

Surgical site bundle form



Wound status at the time of discharge



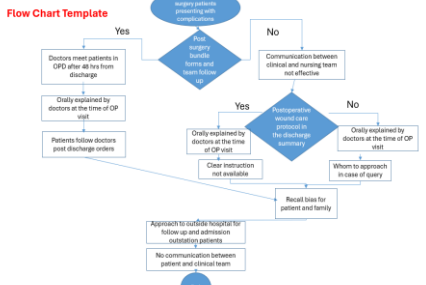
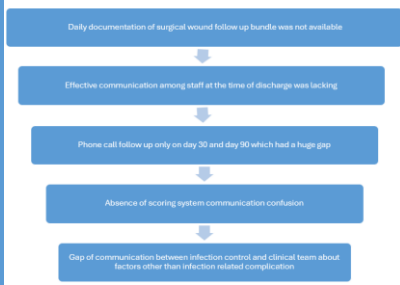
Nursing communication



Clinical team communication



Video call follow up



Conclusive remarks

- Reduction in deep SSIs is possible by targeted or care oriented approach to prioritized group
- Personalized guidance to patient and family on timely basis builds trust and bonding between patient and health care organization