Call Bell As A Service Parameter: From Call Light To Patient Delight

Capt .Usha Banerjee[1], Ms.Preeti[2], Ms.N.Rathina[3] MsD.Maryline Flinsi[4] Ms.Rohini Sharma[5]

[1]*Group Director Nursing Apollo Hospitals Group*
[3]*Assistant Manager Nursing excellence Indraprastha Apollo Hospital, NewDelhi -76*
[3]*Senior Learning Officer Education and Development Nursing Indraprastha Apollo Hospital, NewDelhi -76*
[4]*Principal Apollo school of Nursing Indraprastha Apollo hospital ,Newdelhi-76*
5*Vice Principal Apollo school of Nursing Indraprastha Apollo hospital ,Newdelhi-76Corresponding Author:Capt .Usha Banerjee*

Abstract: *This study has been conducted to assess the effectiveness of the call bell tool kit and its impact in enhancing the patient delight. Structured Questionnaire was used to collect data from 50 patients and 50 nurses across Apollo Hospitals in 4 locations - Bengaluru, Chennai, and Delhi& Kolkata. Time motion study was done with 179 Nurses across the 4 units for 100 patient [25 patients from each unit]with different Room categories/ Specialities / Treatment plan .Convenient sampling technique was used to select the samples for the study. The data was analysed using descriptive and inferential statistics and also brainstorming sessions with the team, RCA was done to identify major delay in in call bell response. A customized toolkit was drafted on the basis of the problems and insights identified during the study. One day post implementation study was conducted in single room wards which had the maximum call bell load to understand the impact of toolkit implementation.*
Results:*Thepre-test results shows that the expectation of patients for answering call bells is very high with expecting a response in less than 2 min.Call bells have tradition viewed as a Nurse's job and the same was visible in the survey results which sought the patient's opinion and experience on who should attend call bells. Most of the call bell wasresponded in 2-5minutes. More than 1/3rd of our patients participated in the study were dissatisfied with the call bell response. The staff nurses participated in the study has expressed that majority of the call [78%] are of non-clinical needs. Majority of the causes for delay in attending call bells was attending other patients. Results of the time motion study states that Majority of the call bells [60%] are non-clinical in nature and non-urgent and among the 3 shifts morning shift saw the highest number of step counts .Housekeeping needs was the single largest reason [70%] for non-clinical calls. The study shows that 2.9 minutes is the response time that is the time from pressing of a call bell till it is answered and 9.9 minutes is the resolution time that is the time from pressing of call bell till the patient request/need is met. Based on the observations a tool kit was prepared.The post implementationstudy of the Call Bell was done and it has led to a substantial reduction in the number of call bells [for non-clinical reasons as these needs were met in a proactive manner*
There was a marked reduction in the total and average number of call bells because in general call bells for all the departments came down. The response and resolution time were also reduced due to decrease in volume of call bells.
Keywords: Nurses, Patients, call bell, Tool kit.

I.   Introduction

In today's world customer delight is the need of the hour. Patients come to hospital not by choice but by need. Despite appropriate medical and nursing care, there are number of factors that trigger their senses leading to dissatisfaction. Response to call bell is one such factor. Whenever the patient press the call bell if there is poor response, it leads to irritation and unnecessary complains. Ensuring turnaround time of 1-2 minutes response to call bell is positively the most acceptable initiative that will ensure customer delight, patient satisfaction and satisfaction of health care provider which needs to be practised worldwide. Cumulative analysis of patient feedback, complaints and hospital rounds over the years reflect a significant amount of issues related to call bell response. Frustration over issues related to call lights / call bells is one of the most frequent comments that patients and their attendants make the most common reasons being:

➢   Delays in getting call lights / call bells answered
➢   Variation in the call lights / call bells response time from a low of less than a minute to a high of 20 minutes

> ➢ The amount of time it took to handle the patient's request once the light / call bell was answered
> ➢ The patient's request not being fulfilled once the call light / call bell was answered

The call bell system does not indicate the urgency & purpose of the call (patient deterioration/ housekeeping / F & B/ comfort needs etc.). Unarguably, the single most staff who responds to every 'call' of patients is the nursing staff irrespective of their availability at the nursing station. Poor response time being a significant indicator of the culture of the organization can adversely impact both service as well as clinical outcomes by increasing risks of Patient fall, adverse events etc.

Call bells were being perceived as mere noise and an interruption to nursing tasks by some nurses owing to alarm desensitization which stems from attending non-nursing call bells. Though the nurses recognize call bell as an important way for patients to request assistance they also are disillusioned by the fact that majority of the call bells they attend are non-value add calls. Frequent interruptions by patients calling for non-nursing purposes takes away the nurses from their critical role and is a distraction and stress during the interventions and interactions with patients.

A study of more than 170,000 health care workers (including 47,692 registered nurses) in 138 acute care health care organizations revealed that the role of the RN is characterized by excessive numbers of activities, a loss of focus on the professional components of nursing and significant activity overlap with other job classes. Additionally, the study found that these characteristics were related to reduced morale, decreased patient and physician satisfaction with care and increased health care costs.[4]

Inadequate patient and family education in terms of expectations for staff responses with the lack of clarity on roles and responsibilities of staff in the ward adding to the current problem.

The issue continued to remains a constant sore spot despite repeated trainings and our solutions had been inadequate to solve this problem.

II. Material And Methods

This comparativesurvey was carried out in Apollo hospitals across 4 locations - Bengaluru, Chennai, Delhi & Kolkata between2nd April 2016 to 2nd June 2016.

Study design: Comparativesurvey

Study Location: Wards of Apollo Group of Hospitals across Bengaluru, Chennai, Delhi & Kolkata

Study duration: 2nd April 2016 to 2nd June 2016.

Sample size: Questionnaire based survey: 100 patients and 100 staff nurses from all 4 units

Time motion study :25 patients from each unit of Apollo group [total 100] and staff nurses 38 Bengaluru, 38 Chennai, 68 Delhi, 35 Kolkata[total 179]

Sampling technique:Convenient sampling

III. Methodology

Questionnaire based survey was conducted on 2nd April 2016 to 4th April 2016 to collect data from patients to understand patient Expectation/ Experience regarding to expected Call bell response duration in an urgent situation, Expected Call bell response duration in a non - urgent situation, perceptions on responsibility for attending call bell, Perceived average call bell response time, Satisfaction to call bell response and the same was conducted from staff nurses to understand Staff Expectation/ Experience related to types of call received/ Shift with maximum patient calls/ Most frequent non value add jobs/ Causes of delay in attending calls .

Time Motion Study conducted across 4 locations over a duration of 4 days between 11thApril 2016 to 15th April 2016.Focused analysis done using real time observations across 4 locations conducted on 29th April 2016 studying 850 patients, 260 nurses, 4603 Call Bells over a duration of 1 day to help understand in detail trends picked up in the time motion study. Tool kit was created based on the learnings from the data was created.

One day post implementation study was conducted on 02nd June 2016 in single room wards which had the maximum call bell load to understand the impact of toolkit implementation .Descriptive and inferential statistics was used to analyse the data.

IV. Results

Thedescriptive analysis of the pre-test shows that the expectation of patients for answering call bells is very high with 70% expecting a response in less than 2 min.Call bells have tradition viewed as a Nurse's job and the same was visible in the survey results which sought the patient's opinion and experience on who should attend call bells. Most of the call bell [59%] was responded in 2-5minutes. More than 1/3rd of our patients participated in the study were dissatisfied with the call bell response. The staff nurses participated in the study has expressed that majority of the call [78%] are of non-clinical needs. Majority of the causes [78%] for delay in attending call bells was attending other patients. Results of the time motion study states that Majority of the call bells [60%] are non-clinical in nature and non-urgent [61%] and among the 3 shifts

morning shift saw the highest number of step counts [6024] .Housekeeping needs was the single largest reason [70%] for non-clinical calls. The study shows that 2.9 minutes is the response time that is the time from pressing of a call bell till it is answered and 9.9 minutes is the resolution time that is the time from pressing of call bell till the patient request/need is met. A tool kit was prepared based on the learnings from the analysis of the data collected by questionnaire and time motion study. Pilot study was done at a ward in Delhi unitfor a duration of 1 day covering 4 staff nurses taking care of 24 patients per shifts.

Pilot done at Platinum (VIP) ward, **Delhi** for a duration of 1 day covering 4 staff nurses taking care of 24 patients per shifts.
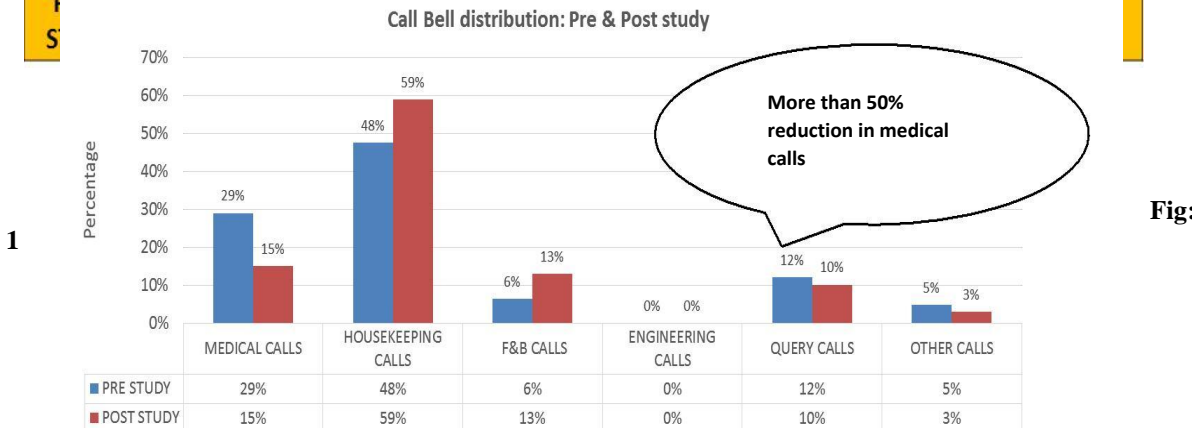
The comparison of the pre-test and post-test data revealed a stark contrast and impacts were explicitly visible.

- The implementation of the Call Bell toolkit lead to a substantial reduction in the number of call bells for non-clinical reasons as these needs were met in a proactive manner
- There was a marked reduction in the total and average number of call bells because in general call bells for all the departments came down
- Owing to hourly rounding the patient monitoring became more effective and the results of the same were visible in the rates of Patient fall and Hospital acquired Pressure Ulcers.
- The staff was also freed up from non-clinical tasks and they reported satisfaction at being able to dedicate more time to patient care.
- The response and resolution time were also reduced due to decrease in volume of call bells.
- The implementation of team based approach was well appreciated by nurses who earlier felt like lone soldiers in a tough war zone
- The use of pocket cards was well received by nurses as it eliminated the need to rely upon memory

Table 1 shows that there was drastic reduction in total call bell and call bell per patients.

Table :1 - The result of Pilot study

Patient S.No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total Patient (Occupancy)	Total Call Bell	Call Per Patient
PRE STUDY	4	7	3	3	19	6	9	2	10	4	5	7	6	11	16	5	3	4							18	124	7

Call Bell distribution: Pre & Post study

	MEDICAL CALLS	HOUSEKEEPING CALLS	F&B CALLS	ENGINEERING CALLS	QUERY CALLS	OTHER CALLS
PRE STUDY	29%	48%	6%	0%	12%	5%
POST STUDY	15%	59%	13%	0%	10%	3%

More than 50% reduction in medical calls

Fig: 1 states that there is reduction in the medical call after the implementation of tool kit.
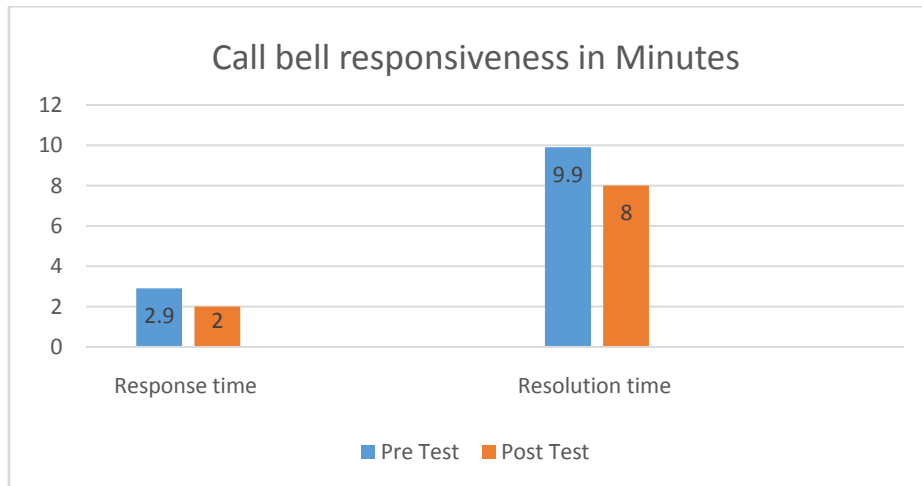
Fig2 shows that there is reduction in response and resolution time after implementation of tool kit
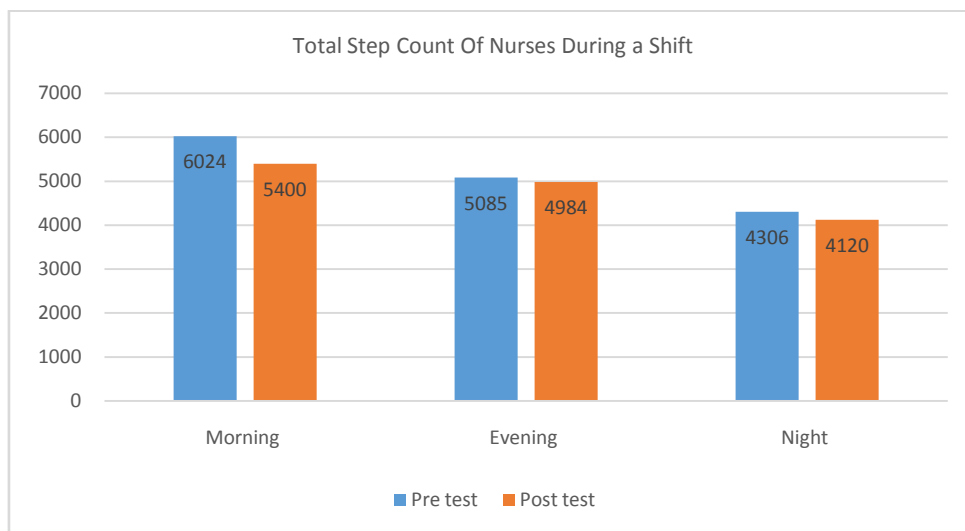

Fig3 reveals that there is a reduction in the step count of morning shift after the tool kit implementation

Call Tool Kit for reducing call response and resolution time

1 C - HOURLY ROUNDING PILLOW CARD

Sorry I missed you!

We provide hourly rounding on our unit to ensure you receive very good care

If you need anything upon your return please let us know

I will be back in about an hour

I am now going to take care of my other patients, in case you feel that your medical condition is deteriorating please use the call bell

Apollo
HOSPITALS
TOUCHING LIVES

1 D - HOURLY ROUNDING COMPETENCY CHECKLIST (NURSING)

HOURLY ROUNDING COMPETENCY CHECKLIST - NURSING					
DATE					
NAME					
DEPARTMENT					
EVALUATOR	SELF ASSESSMENT		EVALUATOR		COMMENTS
	YES	NO	YES	NO	
INTRODUCTION					
Knock on door prior to entering – ask permission					
Use good eye contact.					
EXPLAIN HOURLY ROUNDING UPON ADMISSION					
Explain the purpose of hourly rounding (initial visit)					
Use key words "care based on your clinical condition"					
Describe rounding schedule (8am-10pm q1hr, 10pm-8am q2hr.)					
ADDRESS 5P'S PAIN...POSITION...POTTY...PEACE...PLACEMENT					
How is your pain?					
Are you comfortable?					
Do you need to go to the bathroom?					
Is the environment soothing and relaxing?					
PERFORMED SCHEDULED TASK					
Complete consultant's ordered treatments, procedures					
Complete nursing care as needed					
Administer scheduled medications if any					
Check environmental safety (side rails, bed lock etc.)					
CLOSING					
We will round again in about an hour					
Is there anything else that I can do for you? I have time now.					
Document your rounding on rounding log					

All the staff nurse to be evaluated on induction and periodically thereafter

TOOLKIT 1 A - WELCOME NOTE

WELCOME TO INDRAPRASTHA APOLLO HOSPITAL

The forerunner of integrated healthcare globally

AT APOLLO HOSPITAL

Our goals are

SP's – Pain, Position, Placement, Potty, Peace

The most important aspects of your care

VERY GOOD CARE for

EVERY PATIENT by

EVERY NURSE

EVERY DAY at

EVERY TIME

Thank you for allowing us to be a part of your healthcare team

Admitting Nurse

Cultivating the culture of quality at the grass roots

FRONT

You will be visited by one of our STAFF NURSE

EVERY HOUR from 6 am to 10 pm

And

EVERY TWO HOUR from 10 pm to 6 am

We will not wake you if you are sleeping unless there is a need of your clinical condition warrants

During this time we will

Check on your well being

Monitor your comfort, pmain and pain

Help you move and change position

Assist in toilet needs

We anticipate your personal needs and monitor your wellbeing on an active hourly basis.

If at any time during your stay you feel you are not receiving care based on your clinical condition and service as expected, please let us know immediately so that we can address your concerns.

BACK

1 B - HOURLY ROUNDING POCKET CARDS - NURSING

POCKET CARD - NURSING   Indraprastha **Apollo** HOSPITALS

How is your pain?	**Pain**
Are you comfortable?	**Position**
Do you need me to move any utility nearer to you?	**Placement**
Do you need to use the washroom?	**Potty**
Is the environment soothing and relaxing? (Check lights/ draw curtain)	**Peace**

Communicate when you will return: "I will be back in about an hour".
Close with key words: "Is there anything else I can do for you".
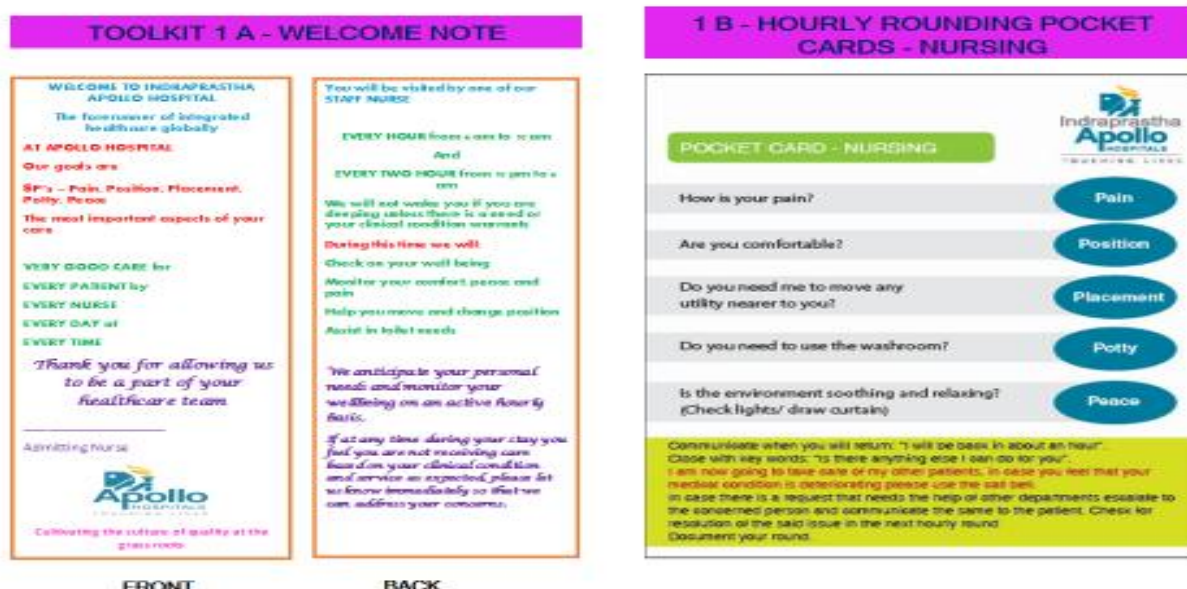I am now going to take care of my other patients. In case you feel that your medical condition is deteriorating please use the call bell.
In case there is a request that needs the help of other departments escalate to the concerned person and communicate the same to the patient. Check for resolution of the said issue in the next hourly round.
Document your round.

Use of following aids to implement Toolkit 1:

Item	Intended User	Frequency	Purpose
1A - Welcome Note	Given to every patient by the staff nurse in the patient's room	On every admission	To explain why we round hourly, and if anything is needed during the patient's stay
1B - Hourly Rounding Pocket Cards - Nursing	To be issued to all the nursing staff in the units and new staff while orientation	Every time an hourly round is performed	To orient the staff for the important parameters that needs to be checked during hourly rounds
1C - Hourly rounding Pillow Cards	To be placed by the nursing staff on the pillow when patients are out of the room	Every time an hourly round is performed	It communicates to the patient that staff came by to check on them during hourly rounds

2A - POCKET CARD - HOUSEKEEPING	2 C - HOURLY ROUNDING COMPETENCY CHECKLIST- HOUSEKEEPING

POCKET CARD - HOUSEKEEPING

Smile and ask the following questions:

- **Potty** — Do you need to use the washroom/urinal/ bedpan?
- **Placement** — Is the environment soothing and relaxing? (Check lights/ draw curtain/television)
- **Peace** — Do you need me to move any utility nearer to you? (Water/ phone)
- **Perimeter** — Check and ask for cleanliness of the room/washroom?
- **Pillow** — Do you need extra pillows/ blanket/ bed sheet/ towel?

Communicate when you will return: "I will be back in about an hour"

Close with key words: "Is there anything else I can do for you"

I am now going to assist other patients, in case you feel the need for washroom, please use the call bell

In case there is a request that needs the help of other departments, escalate to the concerned person and communicate the same to the patient. Check for resolution of the said issue in the next hourly round

Document your round

HOURLY ROUNDING COMPETENCY CHECKLIST - HOUSEKEEPING

	SELF ASSESSMENT		EVALUATOR		COMMENTS
DATE					
NAME					
DEPARTMENT					
EVALUATOR	YES	NO	YES	NO	
INTRODUCTION					
Knock on door prior to entering - ask permission					
Use good eye contact					
EXPLAIN HOURLY ROUNDING					
Explain the purpose of hourly rounding (initial visit)					
Describe rounding schedule (8am-10pm q1hr)					
ADDRESS 5P'S PLACEMENT… PEACE…POTTY… PERIMETER… PILLOW					
Do you need me to move any utility nearer to you (Water/phone etc)					
Is the environment soothing and relaxing? (Lights/Curtains/Television)					
Do you need to go to the bathroom or use bedpan/ urinal or commode?					
Check and ask the cleanliness of your room/ washroom?					
Do you need extra pillow/ towel/ bed sheet/blanket?					
PERFORMED SCHEDULED TASK					
Maintain AC temperature					
Empty the urine bag if needed					
Replenish water jars at bed side					
Check environmental safety (side rails, bed lock etc.)					
CLOSING					
We will round again in about an hour					
Is there anything else that I can do for you/? I have time now.					
Document your rounding on rounding log					

All the Housekeeping staff to be evaluated on induction & periodically thereafter.

TOOLKIT 4 - NIGHT CARE BUNDLE

In order to reduce the number of query calls during night shift – Department of Nursing/ Housekeeping/ F&B to use the following aids listed as Item:

Item	Intended User	Frequency	Purpose
4A – Night care bundle standard scripts	Nursing/ Housekeeping/ F&B staff	During every night shift	An integrated proactive approach by all healthcare team to minimize the number of query calls during night and early morning
4B- Night care bundle checklist	To be used by the assigned staff nurse Countercheck by Shift in charge	Weekly audits- 2 months post implementation- monthly	To ensure a sense of safety and comfort to the patient

TOOLKIT 4 A – NIGHT CARE BUNDLE STANDARD SCRIPTS

NURSING — Between 9 pm to 10 pm

> Hello Mr/Ms _____, I am here to give you your night medications, after which I expect you will be sleeping.

> I will come every 2 hours to check on your well-being.

> I will not wake you up, unless there is a need to do so.

> Do call in case of any emergent need/ deterioration in your condition.

> You should wake up by _____ for your morning care activities like checking vitals/ medication/ hygiene needs.

> Good night!

HOUSEKEEPING — Between 9 pm to 10 pm

> Hello Mr/Ms _____, I am here to check the basic utilities in your room.

> The water has been refilled and bed sheets/pillows have been provided.

> Kindly tell me the timing you want your room to be cleaned tomorrow morning. We will try our best to service your room as per your preferred time frame.

> Good night!

F&B — During clearing of meal plates

> Hello Mr/Ms _____, I am here to clear your dishes.

> Your morning tea and breakfast will be served at _____ am and _____ am.

> In case you need our services please dial _____.

> Good night!

Monthly Reporting Tool

MEASURE	APR	MAY	JUN	JUL	AUG	SEP	OCT
Total number of discharged patients							
Total number of call bell related Patientcomplaints							
Total number of call bell related issues escalated							
Total number of Breakdowns/ Repairs for Call bells							
Number of cases where Response time exceeded beyond the target							
Number of cases where Resolution time exceeded beyond the target							
Nursing footsteps reduced							

V. Discussion

The project deployed the use of varying research methodologies to understand the problems and then deployed an evidence based approach customized to our unique circumstances to mitigate it.

The study was carried out to help understand the general and specific challenges that our current situation posed. A deep dive into the data helped us in comprehending the reasons that were responsible for call bell loads and subsequently call bell complaints.

A toolkit that addressed all major challenges identified during the study was created and subsequently circulated for implementation.

The toolkit was a great opportunity to create a patient centric approach that enabled the responsibility of attending call bells to be passed one to every member of the healthcare milieu thereby putting the patient first in the true sense.

TOOLKIT 8 - Comprehensive audit tool

Feedback to be collected from random patients...Weekly audits done for the first 2 months post implementation followed by monthly audits

WARD:		Date:		
S.No	Patient Label			
	Check Points	Yes	No	Remarks
1	Did our staff come every hour to check on you during the day?			
2	Did our staff come every 2 hours to check on you during night?			
3	Did our staff enquire about your pain?			
4	Did our staff carry out necessary interventions to minimize pain?			
5	Did they ensure that all items that you need are kept within reach?			
6	Did they pay attention to your personal needs when they came for rounds?			
7	Did they enquire about your toilet needs?			
8	Did they provide you comfortable position?			
9	Did they enquire about peace and surroundings?			
10	Were your needs/ queries addressed appropriately?			
11	Are you satisfied with the response of our staff with to your calls and needs?			
12	Did our staff informed you about the timings for morning meals?			
13	Did our staff informed you about the timings for Morning care activities?			
14	Did our staff enquire about the timings for room service?			
15	Are you satisfied with the communication of the information?			

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