Driving Discharge Process Excellence through the Innovative & Customized STRIDE (Strategic Targeted Reengineering Initiative for Discharge Efficiency) Mechanism

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Introduction

- Complex high-risk process characterized by fragmented, haphazard & non-standardized care that leads to multiple issues regarding efficiency & effectiveness of the process

- A problem in the realm of health systems across the globe which requires advanced assessment and solutions

- Delayed discharge process impacts hospital profitability and patient satisfaction in the community
Literature on Discharge Process & Quality Improvements

• 15-30% of patients have med discrepancies during hospitalization
• Age, high-risk meds, and polypharmacy are risk factors
• Patients with med discrepancies twice as likely to be readmitted

Evidences on Discharge Education

- Nurses spend an average of 8 minutes on discharge
- Less than half of patients understand their discharge diagnosis, medications, etc.

**Patients’ Understanding of Their Treatment Plans and Diagnosis at Discharge**

CONCLUSIONS: Less than half of our study patients were able to list their diagnoses, the name(s) of their medication(s), their purpose, or the major side effect(s). Lacking awareness of these factors affects a patient’s ability to comply fully with discharge treatment plans. Whether lack of communication between physician and patient is actually the cause of patient unawareness of discharge instructions or if this even affects patient outcome requires further study.

Evidence on Communication Fallacies

No studies on effects of MD-RN communication on quality of discharge or readmission, but the following were revealed in various studies:

- RNs more likely than MDs to cite poor communication as reason for delays in discharge
- 30% of observed hospitalists did not communicate with nurse verbally at all during admission
- MD-RN agreement on plans for medication changes was 59% overall


Rothberg et al. The Relationship Between Time Spent Communicating and Communication Outcomes on a Hospital Medicine Service. JGIM. 2011
The Global – Local Congruence and it’s impact on us

• Multiple QI Analysis over the past months showed delays in Discharges

• Scattered issues communicated to the Quality Team by Consultants & RMOs on the Quality of the Discharge Mechanism and Readmission Rates

• The growing dissatisfaction among the Nurses in relation to the various communication gaps between them and the Physicians

• Feedback and Complaints of Patients and Patient Kin about the Discharge Process Delays, Miscommunication, etc.
Objectives

• Identification of fallacies

• Addressing them by minimizing the discharge time

• Reducing the readmission rates and ALOS which would in turn lead to greater patient satisfaction as well as increased profitability
Materials & Methods

- Study Period: **March 2016 – September 2016**

- Study Design: **Prospective Intervention type**

- A **multipronged approach**, both **quantitative & qualitative** including implementation of **Lean Six Sigma Methodology** and other **Industrial Engineering Principles**

- **Probabilistic Risk Assessment (PRA), Process mapping & Failure Mode and Effects Analysis.**

- **Deming’s Wheel** - Large Improvement Projects (**LIP**) backed by a large number of Small Improvement Projects (**SIP**)
Sampling

- **Sample Size:**
  - **Pre Phase:** 654 Discharges
  - **Post Phase:** 805 Discharges

- **Sampling Method:** *Stratified Random Sampling* (Discharges were selected from all floors & Specialties)

- **Data Collection Modality:** The data collection was done from various points using a checklist as well as cross checked with the Hospital HMIS for Quantitative Data. Qualitative Data was collected through various interview sessions with Careproviders and Managerial Personnel, Focused Group Discussions with various Consultants of Various specialties and all other stakeholders of the Discharge Process.

- **Analysis:** Data Analysis was done using SPSS Version 22, Minitab Version 17.3 and Microsoft Excel – Normal and Statistical Functions.
Discharge Process Mapping

1. Discharge ordered by consultant (Day: - 1)
2. Discharge Notification at Nursing Station (Day: - 1)
3. Intimation to the patient or patient party regarding discharge (Day: 0)
4. Pharmacy refund and clearance done (Day: 0)
5. Draft Discharge Summary prepared (Day: 0)
6. Discharge Summary completed by RMO (Day: 0)
7. Discharge Summary corrected by Consultant (Day: 0)
Day 0
Discharge Summary transcribed by typing pool

Day 0
Discharge Summary finalized by Consultant

Day 0
Discharge Summary received by ward

Day 0
Final Bill Card sent to Billing/Credit Cell/TPA Desk

Day 0
Final Bill and Discharge Summary sent for approval to Corp./TPA Company

Day 0
Final Approval given by Corporate/TPA Company

Day 0
No Dues/Gate Pass/Billing Clearance Issued

For Cash Patients
**Fishbone Analysis**

**DEPARTMENT**
- Delay in nursing procedures towards discharge
- Delay in preparation of final bill
- Discharge Delays in arranging medication from pharmacy
- Multiple departments involved with no correlation

**PEOPLE**
- Delay in Consultant rounds
- Uncoordinated individualistic work
- Inadequate manpower in MT Desk
- Low Quality midline Medical Professionals
- Intern & Trainee Nurses
- Underutilization of night manpower
- Preplan Unavailability of consultants for signing

**PATIENT**
- Patients wait for lunch
- Patient party delay in reporting to ward
- Patient’s apprehension about post hospitalization care
- Patient party delays in arranging for transportation
- Patient psychological state

**MANAGEMENT**
- Lack of rational audits on discharge process
- Accountability delineation issue
- No concept of Discharge lobby
- No concept of specialized discharge facilitator

**PROCESS**
- Delay in claim processing for corporates
- Unplanned Discharge > Planned Discharge
- Long Process of Discharge Summary Preparation
- Delay in Insurance claim processing

**NON VALUE ADDING ACTIVITY**
- In-house transportation delays
- Multiple corrections in discharge summary at various levels

**COMMUNICATION**
- Pre-information to pharmacy/lab about a patient’s Discharge
- Lack of prior information to patient party

**DISCHARGE EDUCATION**
- Improper Handovers
- Pre-information to Billing/insurance desk/corporate desk
- Pre-information to Quality Nurse Educators
- Varying skill levels of nursing staff

**IHFTTAIPEI**

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## Process FMEA on Discharge Process

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Potential Failure Mode</th>
<th>Delay in Discharge</th>
<th>Potential cause(s)/Mechanism(s) of Failure</th>
<th>Severity</th>
<th>Occurrence</th>
<th>Detection</th>
<th>RPN (SxOxD)</th>
<th>Corrective Actions Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Increased % of Unplanned Discharge</td>
<td>Potential Effect(s) of Failure</td>
<td>Less action time for Consultants, Nursing &amp; other staff to complete all formalities for Discharge</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>72</td>
<td>Planned: Unplanned ratio is modified, Planned Discharge is increased by a substantial percentage to 91% at present</td>
</tr>
<tr>
<td>2.</td>
<td>Large no. of people involved in Discharge decision making</td>
<td>Prolonged hospitalization &amp; increase in ALOS</td>
<td>No Concrete decision on discharge resulting in increase in ALOS</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>63</td>
<td>Streamlining of opinions by meetings &amp; standard guidelines. Patient condition Awareness is stressed by CMS</td>
</tr>
<tr>
<td>3.</td>
<td>Lesser Involvement of Patient &amp; Patient Kin in the Discharge process</td>
<td>Delayed discharge lesser coordination on discharge decisions</td>
<td>No fixed point of contact for patient kin. No particular delineation of responsibility related to patient / patient kin Communication about discharge</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>336</td>
<td>DFO’s act as liaison agents between the treating team &amp; the patient kin so that the information flow is regularized &amp; transparent. On the day of admission the point of contact is decided &amp; discussions are only made with the same person each time/every time</td>
</tr>
</tbody>
</table>
### Process FMEA on Discharge Process

| 4. Delay in Summary preparation & finalization | • Delay in Discharge  
• Mistakes due to last minute preparation of Discharge Summary | • Multiple corrections in Discharge Summary  
• All Discharge Summary preparations not started from Date of Admission  
• Difference of Observation between primary consultants & Midline Medical Professionals | 8 | 7 | 3 | 168 | Discharge summary preparation starts from the Date of Admission and signed by the consultant one day prior to the discharge. Frequent training of Midline medical professionals by the Primary Care Consultant on discharge summary preparation. |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 5. Improper Handovers related to discharge in various transition points of care | • Errors in Discharge Communication  
• Delay in Discharge | Communication links not completed resulting in faulty transmission & receiving of patient information at several places, leading to errors | 8 | 6 | 6 | 288 | NICE (Nursing Interaction & Communication Excellence) developed based on Organizational Behavior techniques of Transactional analysis to impart training based on specific mind states. |
| 6. A large number of investigations (Lab/Radiology) ordered/planned on the Date of Discharge | Delay in performing investigation which results in delay in discharge | Investigations (Lab/Radiology) being performed on the day of discharge automatically increases the time for the patient to get his samples sent & investigation reports to come which are then seen by the Primary Care Consultant to take the final decision on discharge | 8 | 7 | 3 | 168 | All investigations (Lab/Radiology/ Others) are completed one day prior the date of Discharge |
## Process FMEA on Discharge Process

<table>
<thead>
<tr>
<th></th>
<th>Issue Description</th>
<th>Severity (1 to 10)</th>
<th>Frequency (1 to 10)</th>
<th>Likelihood (1 to 10)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Delay in Consultant Rounds on the Date of Discharge</td>
<td>8</td>
<td>7</td>
<td>4</td>
<td>224</td>
</tr>
<tr>
<td></td>
<td>Delay in finalizing patient discharge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The final approval from the primary consultant being mandatory for a patient under him/her to be discharged led to delays when there were several occasion where the consultant rounds were delayed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Lack of a consistent process of medication order for Discharge patients.</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td>108</td>
</tr>
<tr>
<td></td>
<td>Improper medication usage post discharge which leads to readmission</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Faulty medication usage at home post discharge as a resultant process of improper &amp; inconsistent process of conciliation of discharge medications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Lack of an auditing / monitoring system for Discharge process</td>
<td>9</td>
<td>10</td>
<td>3</td>
<td>270</td>
</tr>
<tr>
<td></td>
<td>No defined fixation of expected timelines of discharge time, Improper haphazard systems with no defined benchmarks resulting in scattered &amp; skewed discharge time</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Without defined timeliness the discharge process being highly complex &amp; involving multiple stakeholders frequently had times in different intervals, not even being properly monitored</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Frequent addresses by Top Management to all consultants to start their rounds by 8 am & finish by 9 am. Weekly monitoring & Status update to CEO & BOD by CMS & DMS
- Medications are reconciled the day prior and patient friendly medication instructions given by the STRIDE Advocate at the time of discharge
- A rational discharge audit has been put in place, which has been given a Kick Start / head splurge by the STRIDE Mechanism with statistical process control. Standard monitoring systems & defined process maps with a team which monitors it live
<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td>Delay in medicine refund for extra medications</td>
<td>Increases in Discharge time &amp; Discharge delays</td>
<td>Doing it on the same Date of Discharge increases the time span for Discharge.</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>224</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>All medicines which are not used after reconciliation is refunded to the pharmacy the previous day latest by 12 midnight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Various issues from the patient side</td>
<td>Delay in wheeling out time</td>
<td>Several issues such as the following: i) Patients who are interested to take lunch &amp; go. ii) Patients who haven’t arranged for commuting vehicles &amp; arrange it at the last minute iii) Arranging funds in cases of critical patients with higher ALOS &amp; bigger treatment cost</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>504</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Most of the time, there are beyond management control, however the following steps have been taken which had impacted results: i) We have arranged packed lunch at our canteen / Cafeteria complimentary on the Date of Discharge ii) We have streamlined our communication to the patient kin &amp; we advise them to keep all vehicular arrangements ready by 10 am on the Date of Discharge</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Control Chart - Pre Intervention Phase
Correlation with Satisfaction

\[ y = 0.002x - 0.0685 \]

\[ R^2 = 0.9821 \]
The STRIDE Mechanism – Interventions for Discharge Process Efficiency
**STRIDE MECHANISM**

Large Improvement Projects fuelled by Small Improvement Projects

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**Clinical Discharge**

1. Completion of Discharge Summary 1 day prior to Discharge
2. Expected Laboratory investigations or studies before discharge
3. Discharge Education and Counselling
4. Education about when & how to obtain urgent care

**Administrative Discharge**

1. Arrangement of Discharge medications before 9 am the same day
2. Arrange for follow up appointments
3. Preparation of final bill
4. Cancellation of pending / wrongly entered tests
STRIDE MECHANISM

**Large Improvement Projects fuelled by Small Improvement Projects**

- Online on the move HMIS Supported Tablet/ Hand Held Device based Discharge Summary preparation
- Use of DRAGON Software
- Elimination of typing pool concept
- Development of standard templates for Discharge Summary across all specialties – Super specialty
All Calls are made for discharge to patient Kin the previous day latest by 8:00pm & they are advised to come to the hospital latest by 9:00am.

Pharmacy refund of medicine & consumables completed the earlier day before 10:00 pm.

Billing card updation for Improper Billing Entries & Cancelled Tests latest by 2:00 am.

SMS Alerts for pending bills provided when (deposit amount drops down) pending amt. exceeds INR 10000/-

Cut off time for No dues Provided is fixed at 10:00 am and compliance is monitored.

Concept of Discharge Lobby for outlier cases (i.e. due to patient related reasons).

Handover of Patient valuables & other items done in less than a minute.

Handover of Patient valuables & other items done in less than a minute.
Reduction of Unplanned Discharges

- Decrease % of Discharge on Request (Better patient counseling on various risk factors of Discharge on Request).
- Peer review of Discharge criteria’s & scenarios specialty wise for standard cases.
- Consultant briefings by Top management every week based on available Statistics.
- All investigations (Lab/Radio/others) to be completed the previous day.
- Better understanding of patient needs.
DISCHARGE EDUCATION

Language Assistance – Translators/Interpreters (Local) in Discharge Education process: Bhutanese: NE Region (Assamese): Odiya Bengali

NICE Protocol aided Discharge Education through Patient Queries Management System (PQMS) & Specialty Wise – Transactional Analysis Theory (PAC Model)……

Readback / Teachback Mechanism

Education through Nursing Team & Discharge Facilitation Team

Medicine Schedule & Reconciliation

PDCP template created
**Discharge Process Mapping Pre Vs Post**

**Day: -3/-4/-5**

- Planning for discharge starts from the day of admission and Expected Date of Discharge is tracked

**Day: -2**

- Patient/Patient Kin Counseling on Discharge by DFO

**Day: -1**

- Discharge order by consultant
- Discharge Notification at Nursing Station
- Intimation to the patient or patient party regarding discharge

**Day: -1**

- Discharge Time Ordered by Consultant
- Discharge Notification at Nursing Station by DFO
- Intimation to the patient or patient party regarding discharge by DFO
Discharge Process Mapping
Pre Vs Post

Day: 0

Pharmacy refund and clearance

Draft Discharge Summary prepared

Discharge Summary completion by RMO

Discharge Summary corrected by Consultant

Discharge Summary transcribed by typing pool

Day: -1

Final Bill Card sent to Billing / Credit Cell / TPA Desk

Final Bill & Discharge summary sent for approval to Corporate/TPA company

Final Approval by Corporate/TPA company

For Cash Patients

No Dues/Gate Pass Issued by Billing

No Dues received by ward

Day: 0

For Cash Patients

No Dues received by ward

Day: 0
Discharge Process Mapping
Pre Vs Post

Day: 0

- Discharge Summary finalized by Consultant
- Discharge Summary received by ward
- Final Bill Card sent to Billing / Credit Cell / TPA Desk
- Final Bill and Discharge Summary sent for approval to Corp / TPA company
- Final Approval given by Corporate / TPA Company
- No Dues / Gate Pass / Billing Clearance Issued

Day: 0

- Feedback form Completed
- Handover of Documents to the patients and Discharge Education through customized PDCPs
- Patient Wheeled out

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Discharge Process Mapping
Pre Vs Post

Day: 0

- No Dues received by Ward
- Feedback form Completed
- Discharge Education and Handover of Documents & Medicines to the patients
- Patient Wheeled out
Post Discharge Care Plan - Deliverables
Post Discharge Care Plan Example:
Introductory Page

Bring this Plan of ALL Appointments

Post Discharge Care Plan for:
XXXXXXXXXXXXXXXXXXXX

Date of Admission: ...................... Date of Discharge: ......................
Any queries about this, Please contact your Discharge Facilitation officer
9800202000

For any Emergency contact
9800881600 / 9800885000
## Post Discharge Care Plan Example: Medications Page

### EACH DAY follow this schedule:

<table>
<thead>
<tr>
<th>What time of day do I take this medicine?</th>
<th>Why am I taking this medicine?</th>
<th>Medication Name</th>
<th>How much do I take</th>
<th>How do I take this medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>After lunch</td>
<td>To prevent clots in blood vessel &amp; also relief pain &amp; inflammation</td>
<td>Ecosprin</td>
<td>150 mg</td>
<td>orally</td>
</tr>
<tr>
<td>Breakfast &amp; dinner</td>
<td>Chances of Heart Attack &amp; Stroke</td>
<td>Clopilet</td>
<td>75 mg</td>
<td>orally</td>
</tr>
<tr>
<td>After dinner</td>
<td>Reduces cholesterol</td>
<td>Atrova</td>
<td>40 mg</td>
<td>orally</td>
</tr>
<tr>
<td>Morning &amp; Evening</td>
<td>If the patient's have high blood pressure &amp; reduces the heart attack</td>
<td>Eplinice</td>
<td>25 mg</td>
<td>orally</td>
</tr>
<tr>
<td>After lunch &amp; Dinner</td>
<td>To control high blood pressure &amp; to prevent sleep disturbances</td>
<td>Dytor</td>
<td>20 mg</td>
<td>orally</td>
</tr>
<tr>
<td>After Breakfast &amp; Dinner</td>
<td>For severe pain in chest</td>
<td>Flavedon-MR</td>
<td>35 mg</td>
<td>orally</td>
</tr>
<tr>
<td>Morning &amp; Evening</td>
<td>Lowers the heart rate</td>
<td>Ivabrad</td>
<td>5 mg</td>
<td>orally</td>
</tr>
<tr>
<td>Morning &amp; Evening</td>
<td>To control the amount of cholesterol in blood</td>
<td>Udiliv</td>
<td>300 mg</td>
<td>orally</td>
</tr>
<tr>
<td>Breakfast, after Lunch &amp; Dinner</td>
<td>To prevent hyperacidity</td>
<td>Syp Potklor with Digene gel</td>
<td>10 ml</td>
<td>orally</td>
</tr>
<tr>
<td>Before Lunch</td>
<td>To prevent hyperacidity</td>
<td>pan D</td>
<td>40 mg</td>
<td>orally</td>
</tr>
</tbody>
</table>
Post Discharge Care Plan Example: Diagnosis Information

My Medical Problem
Minimally invasive procedure to open up blocked coronary arteries, allowing blood to circulate unobstructed to the heart muscle)

Percutaneous Transluminal Coronary Angioplasty

What to Expect at Home
You may have pain in your groin area, arm, or wrist. This is from the catheter (flexible tube) that was inserted to do the procedure. You may also have some bruising around and below the incision.
The chest pain and shortness of breath you likely had before the procedure should be much better now.

Self-care
In general, people who have angioplasty can walk around within 6 hours after the procedure. Complete recovery takes a week or less. Keep the area where the catheter was inserted dry for 24 to 48 hours.

When to Call the Doctor
Call your doctor if:
I) There is bleeding at the catheter insertion site that does not stop when you apply pressure.
II) There is swelling at the catheter site.
Your leg or arm below where the catheter was inserted changes color, becomes cool to touch, or is numb.

Diagnosis
Name
Definition
Tips
Visualization
# Post Discharge Care Plan Illustration: Appointment Page

**Bring this Plan to ALL Appointments**

<table>
<thead>
<tr>
<th>What is My main Medical problem?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post PTCA Checkup</td>
</tr>
<tr>
<td>When are my appointments?</td>
</tr>
<tr>
<td><strong>Monday</strong> mm/dd/yy at XX:XXpm</td>
</tr>
<tr>
<td><strong>Dr. XXXXXXX</strong></td>
</tr>
<tr>
<td><strong>Address : XXXXXXXXXXXXXXXX</strong></td>
</tr>
<tr>
<td>For a follow up</td>
</tr>
<tr>
<td>Call – 980088XXXX</td>
</tr>
</tbody>
</table>

---

**Appointment**
- **Date**
- **Provider**
- **Location**
- **Reason**
- **Phone #**
Post Discharge Care Plan Example:
Patient Activities Page

Question for Dr. XXXXXXXXXX
Day during F/U appointment
Tuesday, July 20, 2017, 10.30 am

Check the box and write notes to remember what to talk about with dr. xxxxxx

I have question about:
● My medicines ............................................................................................................
● My Pain ........................................................................................................................
● Feeling stressed ...........................................................................................................

What other questions do you have? .................................................................
..............................................................................................................................
..............................................................................................................................
..............................................................................................................................

Pending Tests

Dr. xxxxxxxxxxxxxxxxxxxxxxx
When I Left the hospital, results from some tests were not available
Teachback

1. Analyze recall & comprehension: Ask patient to demonstrate
2. Explain discharge instructions to patient
3. Clarify & tailor the instructions
4. Reassess recall & comprehension: Ask patient to demonstrate
**PATIENT DISCHARGE RECORD**

**INSTRUCTIONS:**
1. The care provider who discharges the patient must complete this check list.
2. Original copy of record to be given to the patient.
3. Duplicate copy to be filled in patient's medical record.

<table>
<thead>
<tr>
<th>Step</th>
<th>Instruction</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Identification Band removed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Remaining Medications Given to Patient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>X-Rays / USG / Pathology Report / ECG Returned to Patient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Dr’s Appointment made for Patient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Urinary Catheter removed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>IV Cannula Removed, IV Site not inflamed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Discharge Summary Given to Patient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Dressings (Changes / Removed)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Discharge Instructions Given (Specify):**

**Pending Investigation Reports (To be collected within 3 months):**

- Patient Discharged To:  
  - Home [ ]  
  - Others [ ]

- Patient Accompanied by:  
  - Name: [ ]  
  - Relationship: [ ]

- Final Diagnosis / Operation (Including Dates):

- Nurse’s Name / Designation: [ ]

- Date & Time: [ ]

- I have received the Discharge Advice, understood them, and I am able to manage to continuing care of the patient.

- All previous records, personal belonging of the patient, etc. have been checked and received by me.

- Attendant’s Signature: [ ]

- Date: [ ]

- Time: [ ]

- Patient’s Signature: [ ]
Template - VSD DEVICE CLOSURE

<table>
<thead>
<tr>
<th>Name</th>
<th>Sex: M/F</th>
<th>Consultant</th>
<th>Bed No.</th>
<th>IP No.</th>
</tr>
</thead>
</table>

**PATIENT LABEL**

| Height: ___ cm | Weight: ___ kg | SPO2: ___% | DAP: ___mGy Cm² | AK: ___ mGy. | Fluoroscopy Time: ___ min | Puncture Time: | Crossing Time: | PLF Time: |

**DIAGNOSIS:**
- ___ mm PERIMEMBRANOUS VENTRICULAR SEPTAL DEFECT.
- SUCCESSFUL VSD DEVICE CLOSURE DONE WITH AMPLATZER DUCT OCCLUDER II [____ mm] DEVICE.

**PROCEDURE:** VSD Device Closure.

**SEDATION:** Procedure done under Sedation

Heparin: ___ IU  Hb = ___ gm/dl

**Haemodynamic data:** Chamber Pressure (mm of Hg)Saturation (%) with OxygenRFA

PA:
SVC:
IVC:

Qp: Qs = ___.

**PROCEDURE:**
RFA (5F) and RFV (6F) accesses were obtained. LV angiogram showed ___ mm perimembranous VSD with LR shunt. The VSD was crossed with 5F JR catheter & 0.025 x 260 cm J tip Terumo wire from LV. The wire was placed in the LPA. (An arteriovenous loop was made by snaring the wire from LPA). 5F Launcher catheter passed over the Terumo wire and was placed in RV. The ___ x ___ mm amplatzer duct occluder II device (Lot No.: ___) was deployed antegradely under fluoroscopic and transthoracic echocardiographic guidance. Finally the device was released which took its predefined shape. Post procedure Echo showed VSD device in situ, no residual shunt, no PE, good biventricular function.

**RECOMMENDATION:**
- Medication as per discharge summary.
- Infective Endocarditis prophylaxis for 6 months
- Review after 7 days in Paediatric Cardiology OPD with Echo & ECG reports

**Date:______**

**Time:______**

**Patient’s Signature:______________________________**

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**A Unit of Durgapur Medical Centre Pvt. Ltd.  CIN: U85110WB1987PTC042580**

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**IHFTTAIPEI**

41st World Hospital Congress
Name: [Blank]  Age: [Blank]  Sex: M/F
Consultant: [Blank]  Bed No.: [Blank]  IP No.: [Blank]  

**FINAL DIAGNOSIS:**
1. PERIMENOPAUSAL / POST MENOPAUSAL BLEEDING.
2. HYSTEROSCOPY + ENDOMETRIAL BIOPSY DONE ON [Date].
3. HISTORY OF PRESENT ILLNESS:
   A [Age] years old female came with complaints of abnormal uterine bleeding/post menopausal bleeding since [Days] days. Post menopausal status since [Years] years. LMP [Date].

**OBSTETRIC HISTORY:**
P-L: [Blank]

**MEDICAL HISTORY:**

**SURGICAL HISTORY:**

**ON PHYSICAL EXAMINATION:**
She was conscious, alert and oriented to time, place and person x 3. There was no pallor, icterus, clubbing, cyanosis, edema or lymphadenopathy.
Vitals: BP: [Blood Pressure] mmHg, Pulse: [Heart Rate]/min, RR: [Respiratory Rate]/min, SpO2: [%].
RS: Bilaterally normal vesicular breath sound.
CVS: S1 S2 audible, no murmur.
Per abdomen: [Blank]
Genitalia:
P/S: Cervix and vagina healthy, bleeding through os +/-.
B/E: Uterus normal size/atrophic, antverted, mobile, fornices free.
CNS: No neurological deficit.

**RELEVANT INVESTIGATIONS:**
PROCEDURE PERFORMED: HYSTEROSCOPY + ENDOMETRIAL BIOPSY.
DATE OF PROCEDURE: [Date]
ANESTHESIA: Short GA / Spinal
ANESTHETIST: [Name]

**HOSPITAL COURSE:**
After discussing the risk and benefits of the surgery with the patient and her attendants, informed consent was obtained. Preoperative anesthetic clearance was obtained and then she was taken up for the surgery. She was transferred to the operation theatre. After proper identification of the patient, operative site was identified. She was prepped and draped under aseptic condition.

**PRIMARY SURGEON / GYNAECOLOGIST:** Dr. Dipanwita Sen
**SECONDARY SURGEON:** Dr. Sudip Samanta / Dr. Thulasi

**BLOOD LOSS:**
PROCEDURE IN DETAILS / OPERATIVE FINDINGS:
UCL: [Height] inches.
On Hysteroscopy:
1. Endocervical canal normal.
2. Endometrium atrophic / hyperplastic / normal.
4. No abnormal growths / SOL noted.
5. Endometrial curettage done, curetting sent for HPE.
The patient tolerated the procedure well without any complications. Sponge, instrument and needle counts were found to be correct at the end of the procedure.

**CONDITION AT DISCHARGE:** Stable.
**ADVICE ON DISCHARGE:**
Diet: Normal nutritious diet, no restriction.
Drink plenty of water.
- Keep wound clean and dry.
- Light exercises as explained.
- Abstinence for 6 weeks.
- Do not lift heavy weight for 3 months.
- Sutures absorbable, does not need removal.

**MEDICATIONS:**
- Tab CRERTUM 500mg one tablet twice daily after meals for 5 days.
- Tab PYRIGESIC 1000 mg one tablet twice daily after meals for 2 days, thereafter SOS (for pain).
- Tab PAN 40 / PANTIUM 40 / PROTERA-D one tablet once daily in empty stomach for 5 days.

**FOLLOW UP:**
- Obstetrics and Gynecology OPD in 2 weeks with histology report. You can book prior appointment by calling 9800881629 and 9800202000 OR 0343-6620200 (at TMH).

**Date:** [Date]  **Time:** [Time]  **Patient’s Signature:** [Signature]
Template - GENERAL MEDICINE

DIAGNOSIS:

COMPLAINTS AND FINDINGS:
This patient is ___ years old male/female patient, was admitted in the ICU/ General Ward from the emergency department /MOPD with complaints of

SIGNIFICANT FINDINGS:
BP - ______mm Hg, Pulse - ______/min, RR - ______/min, SpO2 - ______%,
Temp - _______degree F, CBG - _______mg/dl.
Chest –Normal vesicular breath sound, no added sound.
CVS –S1 S2 audible, no murmur.  CNS –Conscious, oriented.
Per abdomen – Soft, non tender, no organomegaly.

INVESTIGATION:
CRP-______, Procal -______, Urea -______, Creatinine -______, Sodium -______,
Potassium -______, Chloride -______, Total Protein -______, Albumin -______, Globulin -______,
Bilirubin Total -______, Indirect Bilirubin -______, SGOT -______, SGPT -______, GGT -______,
Alkaline Phosphate -______, Amylase -______, Lipase -______, Hba1C -______
Viral Serology -______
Urine RE/ME -__________ Urine C/S -
Echocardiography -
CT scan of Brain -
CT scan of whole abdomen -
USG whole abdomen -
MRI Brain -

STATUS ON DISCHARGE:
Hemodynamically stable /Discharge on request.

HOSPITAL COURSE:
This patient was admitted in the general ward from the emergency department with above mentioned complaints. Relevant investigations were done. She was managed conservatively and treated with IV Fluids, IV PPI (40mg), sodium supplementation and other supportive medication. Patient responded well to the treatment at now she is being discharged in hemodynamically stable condition.

Date : _______________ Time : _______________ Patient's Signature : ____________________________

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Control Chart - Post Intervention Phase

Control Chart of Post Intervention

- Individual Value
- Observation
- UCL = 85.64
- X = 43.33
- LCL = 1.02
Errors related to various facets of Discharge

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<th>Sl. No.</th>
<th>Heads</th>
<th>No. of Errors</th>
<th>No. of Errors</th>
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<td></td>
<td>Pre</td>
<td>Post</td>
</tr>
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<td>Typing Error</td>
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<td>Billing Card Errors</td>
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<td>Pharmacy Refund Errors</td>
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<td>Medication Reconciliation Errors</td>
<td>23</td>
<td>5</td>
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<tr>
<td>5</td>
<td>Communication Errors - Between Hospital Personnel</td>
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<td>8</td>
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<tr>
<td>6</td>
<td>Communication Errors - Between Hospital Personnel and Patient Kin</td>
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<td>6</td>
<td>Clinical Judgment Errors</td>
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<td>7</td>
<td>Improper Handovers</td>
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<td></td>
<td>Total</td>
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<td>56</td>
</tr>
</tbody>
</table>
Interventions for reducing Readmissions

• Effective discharge planning
• Counselling on disease & post hospitalization care through customized PDCPs
• Assessment of co-morbidities & addressing them before discharge
• Home visits in selected patients (Facility for Sr. Citizens)
• Specific counselling on LSM (Life Style Modification)
• 56% Lower same cause readmission rate*
• 42% Lower all-cause readmission rate*

(*30 Days post discharge)
Conclusion

• Discharge time decreased to less than 45 mins
• Patient Satisfaction with the Discharge Process increased from 68% to 91%
• Other Errors were reduced by 35% (p<0.05)
• Sigma Level achieved was 4.8
• Readmission rate showed a sharp decline
• A best practice proposition for 360 degree improvement of the Hospital Discharge Process
• Great impact on Care delivery, Patient Satisfaction and Safety.
References

- Analysis, Modeling and Improvement of Patient Discharge Process in a Regional Hospital: Nancy Khurana
- Re-engineering the Hospital Discharge: An Example of a Multifaceted Process Evaluation, David Anthony, VK Chetty, Anand Kartha, Kathleen McKenna, Maria Rizzo DePaoli, Brian Jack
• (VIDEO) - - - Debrishi Chatterjee.mp4
Annexures

- DISCHARGE TIME OUT..docx
- PATIENT EXPERIENCE SURVEILLANCE.pdf
- IHF Discharge Data FINAL - Copy.xlsx
Thank You