“COMPLIANCE ANALYSIS OF DOCTOR’S HANDOVER PROCESS DURING SHIFT CHANGE IN MSMC-NARAYANA HEALTH CITY, BANGALORE.”

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OUTLINE

- INTRODUCTION
- REVIEW OF LITERATURE
- METHODOLOGY
- RESULTS
- DISCUSSION
- RECOMMENDATIONS
- CONCLUSION

INTRODUCTION

HANDOVER-

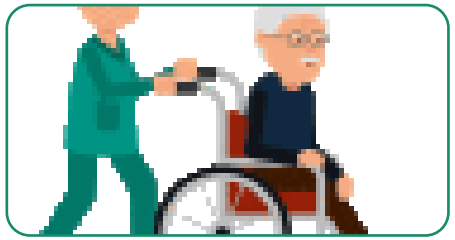
Temporary or permanent transfer of responsibility and accountability for some or all aspects of care for a patient or group of patients using both verbal and written communication.

- Incomplete handovers have the potential to cause adverse events, like physical injury to the patient, medication errors, delay in treatment and even death.
- Of all patients who reported adverse events due to handover failure, 75% were preventable.
- Renowned healthcare bodies like, World Health Organization and the US Institute of Medicine acknowledge the gaps in current handover system.
- In 2017 the Joint Commission floated a special Sentinel Event Alert highlighting the severe patient harm that can result from poor handovers and the potential for handover improvement initiatives to improve patient safety.

TYPES OF HANDOVERS

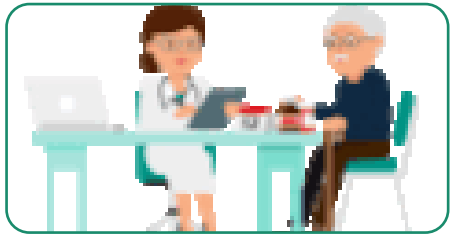
BETWEEN HEALTHCARE PRACTITIONERS

- Doctor-doctor
- Doctor-nurse
- Nurse-nurse



BETWEEN DEPARTMENTS

- ICU - OT
- WARD- DIAGNOSTIC IMAGING



BETWEEN HEALTHCARE PRACTITIONERS AND PATIENT/ATTENDANT

- During shift change handover,diverse information is shared. The doctor giving the handover communicates all elements of patient care to the doctor taking over.

- The detailed information, however, is not required to be documented in the medical record. But the hospital may want to have documentation on key elements of handover and proof that the handover occurred.

- Handover has become an area of concern as it poses a significant risk to not just patients but also clinicians and their organizations.

- With the hospitals moving increasingly towards a shift-pattern of working, the need for efficient handovers is paramount. Continuity of information and continuity of care are fundamental to ensure patient safety.

Rationale of the study

- Among all research found about handover, very little literature was found on Indian hospitals
- Analyzing the compliance for handover can help healthcare organizations identify the factors that interrupt the handover process.
- The organization included in the study wishes to get accredited by JCI. To full proof patient safety and comply with JCI standards for patient safety the organization needed to study their current handover practice, find the gaps, and improve the process accordingly.
- Potential risks posed by handover failures to clinicians and organizations reputation can also be mitigated by initiating a robust handover process.

Objectives:

- Develop an understanding of the current Handover Process Flow, across various patient areas.
- Calculate the compliance of doctor’s handover documentation with the organizational benchmark (i.e,100 percent).
- Identify the reasons for non-compliance, if any.

- Suggest measures to improve the overall compliance

METHODOLOGY

- **Research Questions:**

- What is the compliance of doctor's shift handover documentation in various departments of MSMC, Narayana Health City, Bangalore?
- What are the reasons for non-compliance, if any?
- How can the process be improved to improve the compliance?

- **Research Design:**

An observational study was conducted to analyze the extent of compliance in doctors towards patient handover during shift change in MSMC, Bangalore. Observations recorded on examination of patient files for two months was used. To understand the current handover practices, barriers, and perspective of doctors towards handover documentation, a cross-sectional survey was done which included facility rounds and semi-structured interviews with the doctors.

- **Study Site:**

- The study was taken up at Mazumdar Shaw Medical Center, Narayana Health City, Bangalore which is a comprehensive cancer center with state-of-the-art technologies. It is a 607 bedded facility which is perhaps the largest cancer center in the world.

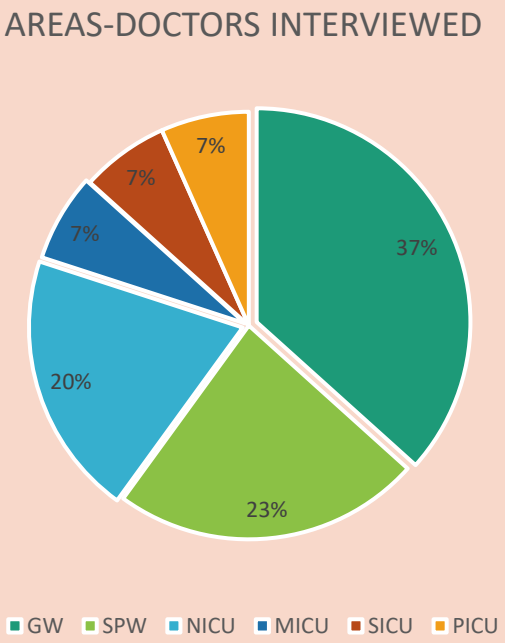
- **Duration of The Study:**

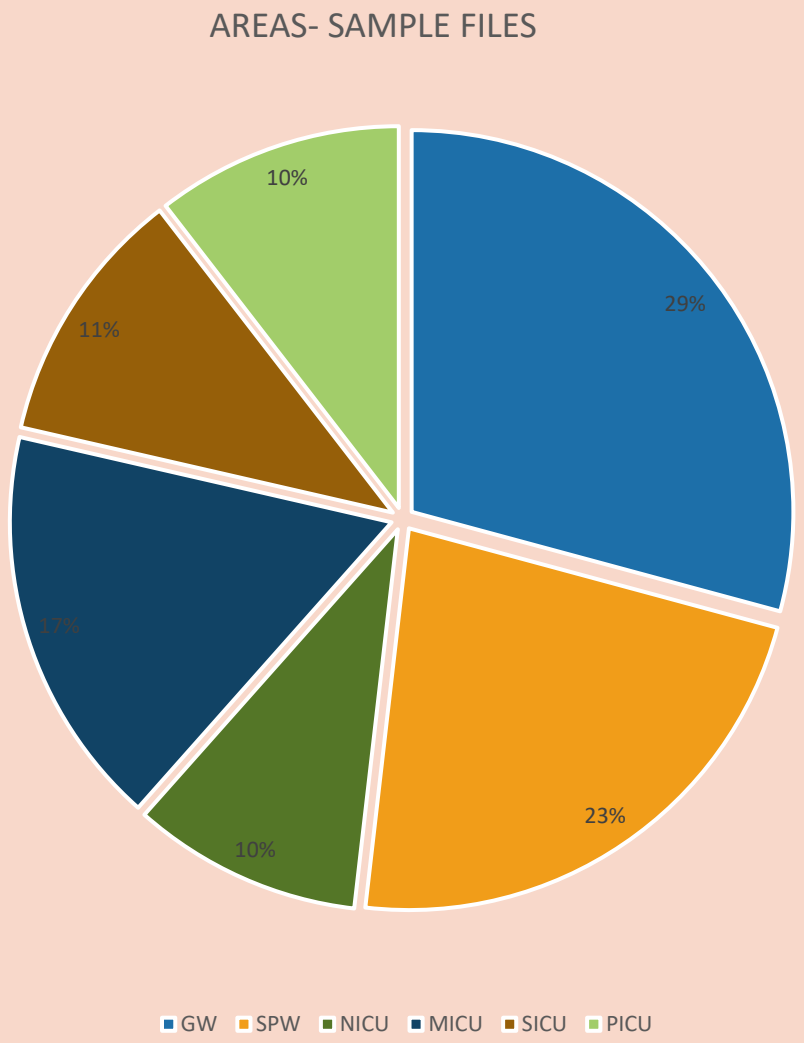
- The study was conducted for a period of three months (April – June 2021).

- **Sampling Method:**

- A non-probability convenient sampling method was used. The patient files and doctors conveniently available were included in the study.

- **Sample Size:**
- a. For cross-sectional survey done to evaluate the current handover practices and perception of doctors towards handover process, 30 resident doctors were interviewed.
- b. To analyze the compliance of doctors towards handover documentation, 411 samples were included.




AREAS- SAMPLE FILES
29%
23%
10%
17%
11%
10%
GW
SPW
NICU
MICU
SICU
PICU

- **Study Population:**

Inclusion Criteria –

- Handover records from General in-patient wards, MICU, SICU, NICU, PICU.
- Doctors assigned to the above-mentioned areas.

Exclusion Criteria –

- Handover records from areas other like OPD, OT, Dialysis, Etc.
- Doctor assigned to areas other than General & Semi-private wards, MICU, SICU, NICU and PICU.

Study Tools:

- The data for the study was collected through:

- Facility rounds- Where the existing process was observed in person.
- Semi-structured interview with the resident doctors. JCI measurable elements were used as a guideline while interviewing the doctors. (Annexure 1)
- IPSG-2 checklist to check compliance. A part of checklist contains specific question on doctor's handover documentation compliance during shift change. The responses recorded on this element were used to analyze compliance. (Annexure 2)

Data Analysis method:

- a. Cross-sectional survey: The observations made from facility rounds and semi-structured interviews with doctors were recorded as it is. 30 doctors were interviewed overall, subject to availability.
- b. The data received from IPSG-2 audit checklist responses was analyzed using Microsoft.
- excel.

- **Ethical Considerations:**

- All participants were made aware of the purpose of the study. Complete anonymity of participants was maintained throughout the study duration. The data gathered during the study phase was kept confidential and not utilized for any other unjustified reason.

- **Limitations of the study:**

- There may be potentially important variables and barriers that are not included in the study due to limitations of time and availability of doctors. The representative sample population and sample size were chosen based on convenience hence their precision cannot be guaranteed. Blinding was not taken up due to limitation of resources hence recall bias and interviewer bias could have happened.

RESULTS

- In areas like the general ward and semiprivate wards, the compliance was almost nil. There was no standard process in place to document the handover during doctor's shift change. No specific document was being used to document the process. The handovers were mostly verbal or recorded in their own notebooks by the doctors.

- SICU's and MICU's compliance were also insignificant due to similar reasons. Although in MICU a system was established in the month of April to improve the handover process. An "MICU doctors handover sheet" was introduced by the department that attempted to record the basic handover information. The increase in MICU's compliance for the month of March can be owed to the introduction of this sheet. The sheet though did capture many important aspects of handover but did not include information of the doctor taking over or the signatures of both parties.

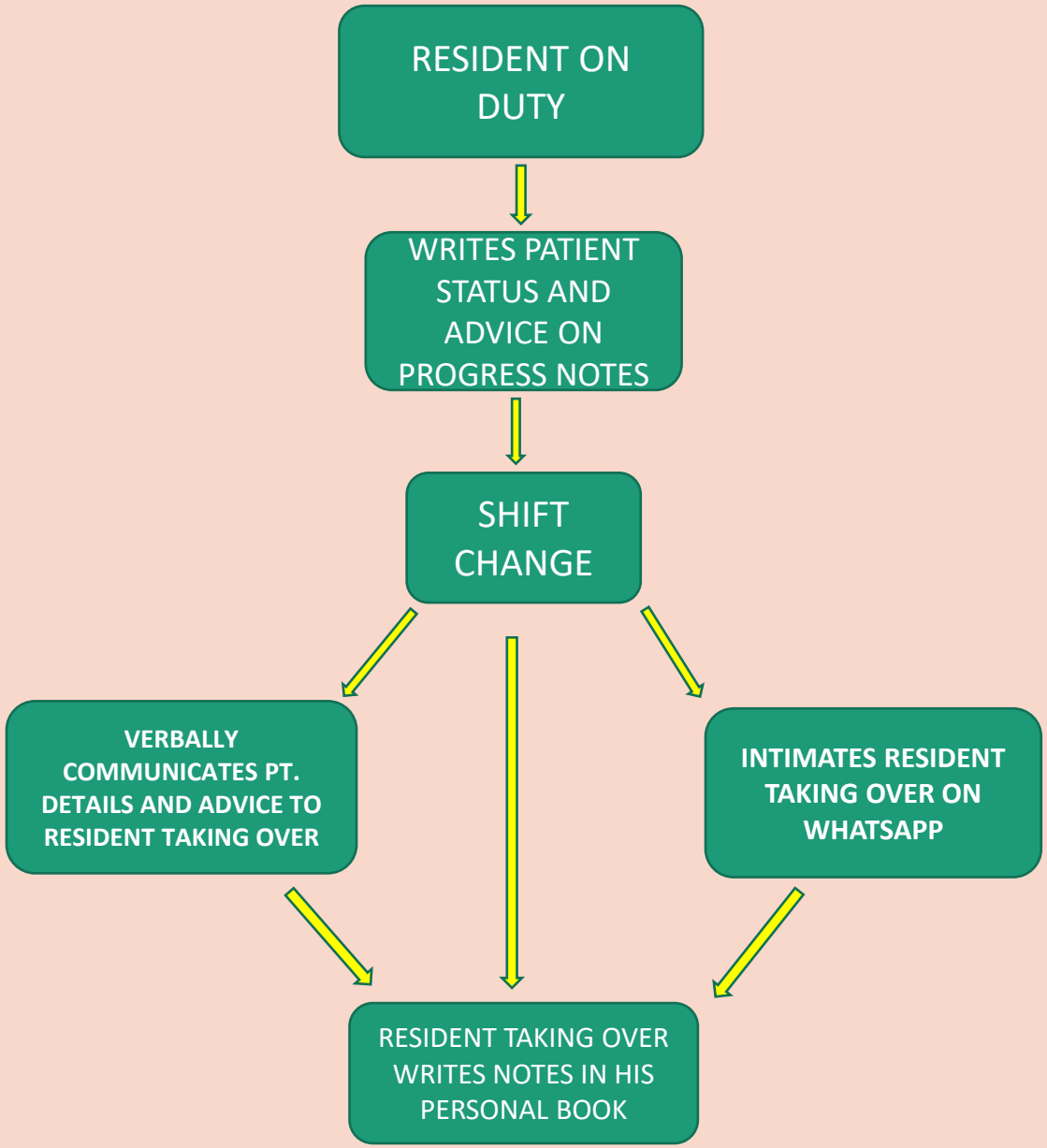
- NICU and PICU reflected better compliance than other areas. Both units have their logbook provision that helps them capture most of the required information. The non-compliance here could be due to environmental factors and not the method or process per se.

DISCUSSION

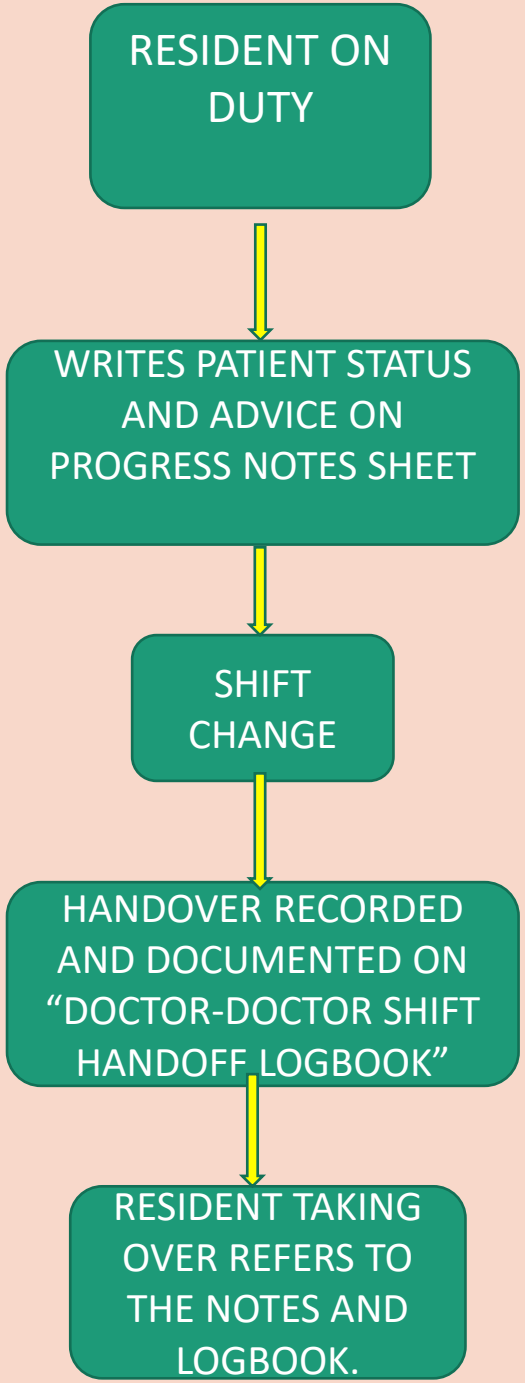
- The first step in the study was to analyze the existing status of doctor’s shift handover process. For the purpose, Facility rounds were made to study patient files and interview the doctors.

- Areas of focus for this study were: General Patient Wards, Semiprivate and Private Wards, MICU, SICU, NICU and PICU. These areas were selected as these are the main areas where doctor to doctor shift handoff process usually occurs.

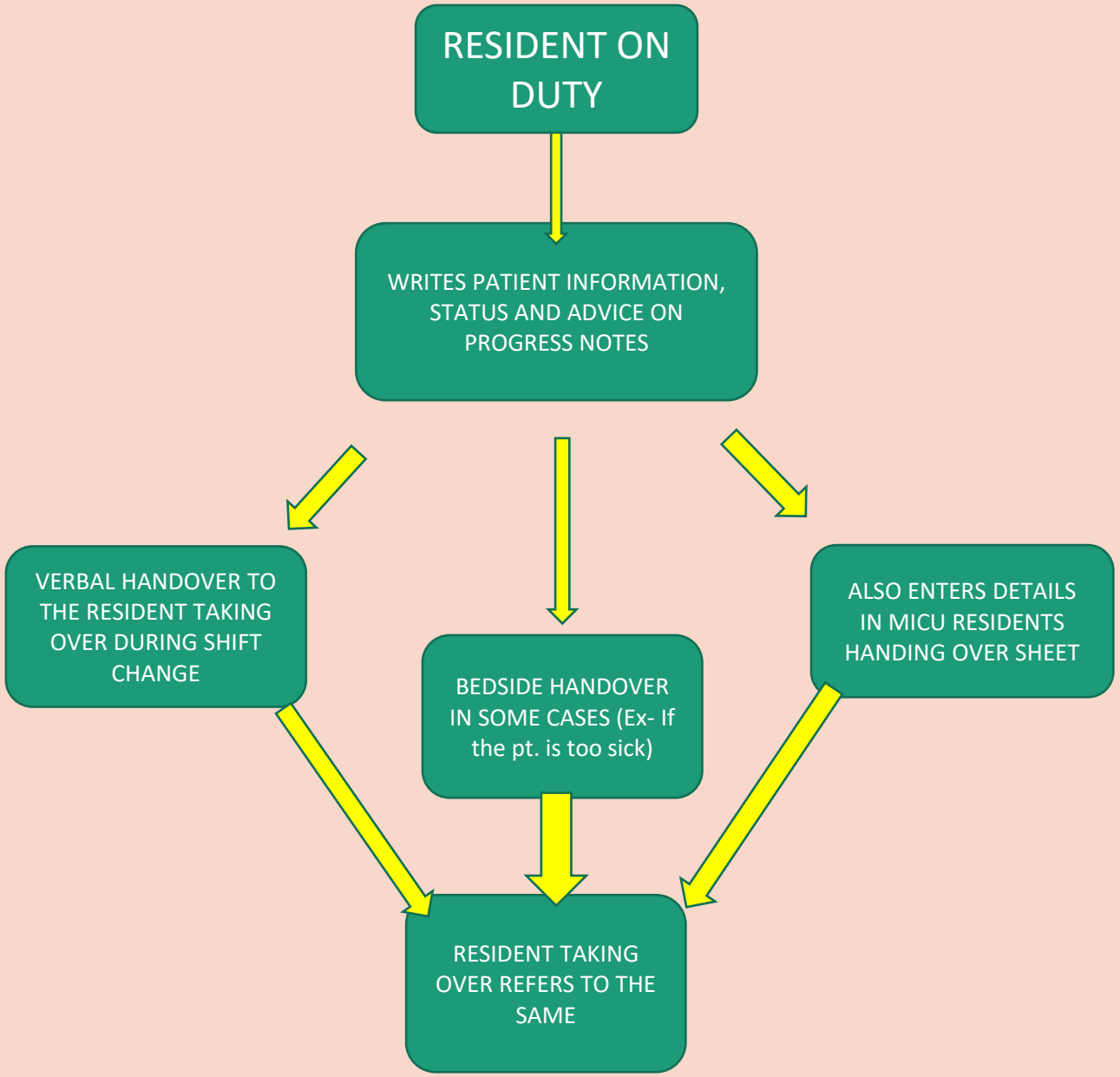
PROCESS FLOW OF HANDOVER PROCESS IN GENERAL WARDS, SEMI-PRIVATE WARDS, AND SICU



PROCESS FLOW OF HANDOVER PROCESS IN NICU & PICU



PROCESS FLOW OF HANDOVER PROCESS IN MICU



Semi-structured doctor interviews

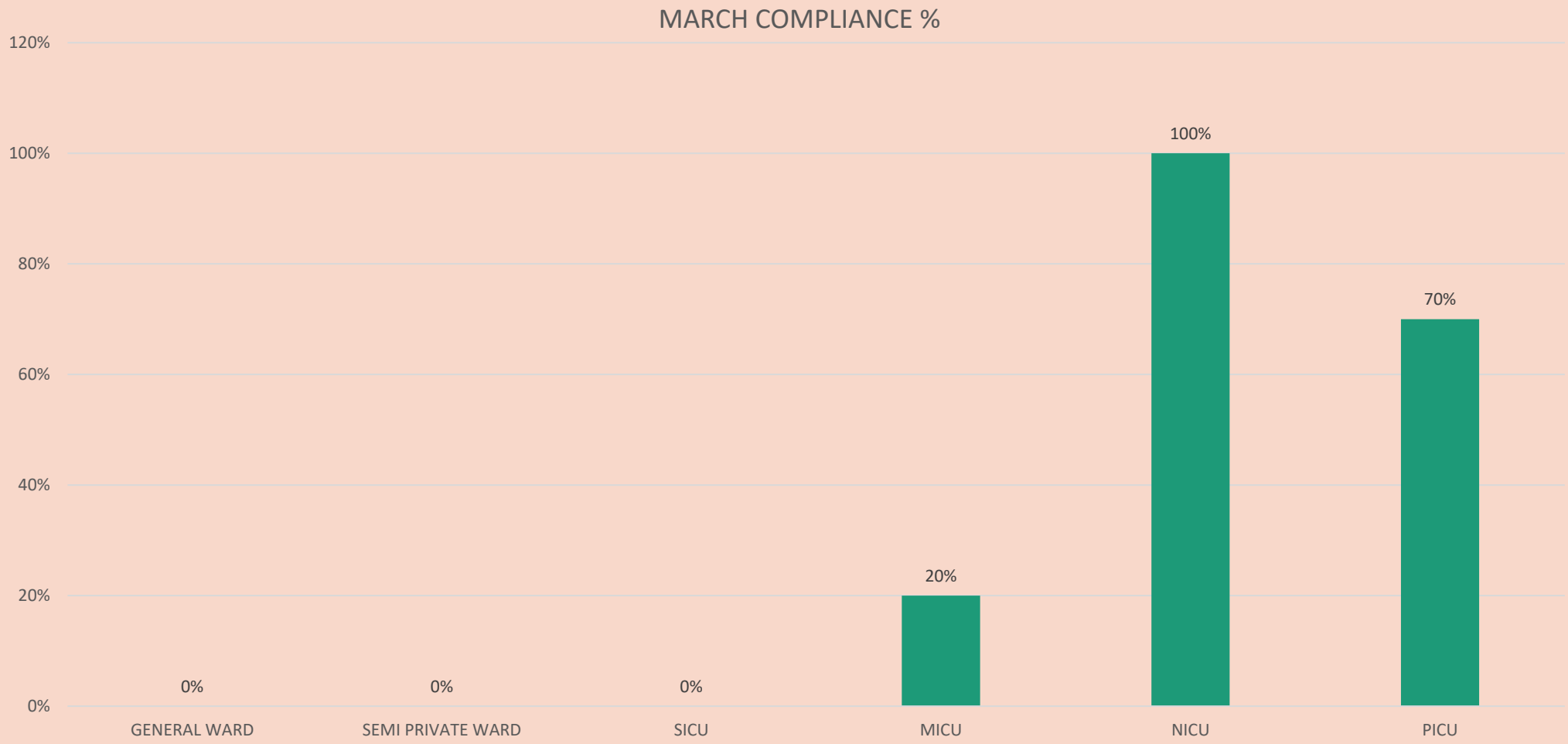
RESULTS FROM INTERVIEW

vv	Is standardized critical content being communicated between health care practitioners during handovers of patient care?	Are standardized forms, tools, or methods that support a consistent and complete handover process being utilized?	Data from adverse events resulting from handover communications are tracked and used to identify ways in which handovers can be improved?
GENERAL WARD	NO	NO	NO
SEMIPRIVATE WARD	NO	NO	NO
MICU	NO	YES	NO
SICU	NO	NO	NO
NICU	YES	YES	NO
PICU	YES	YES	NO

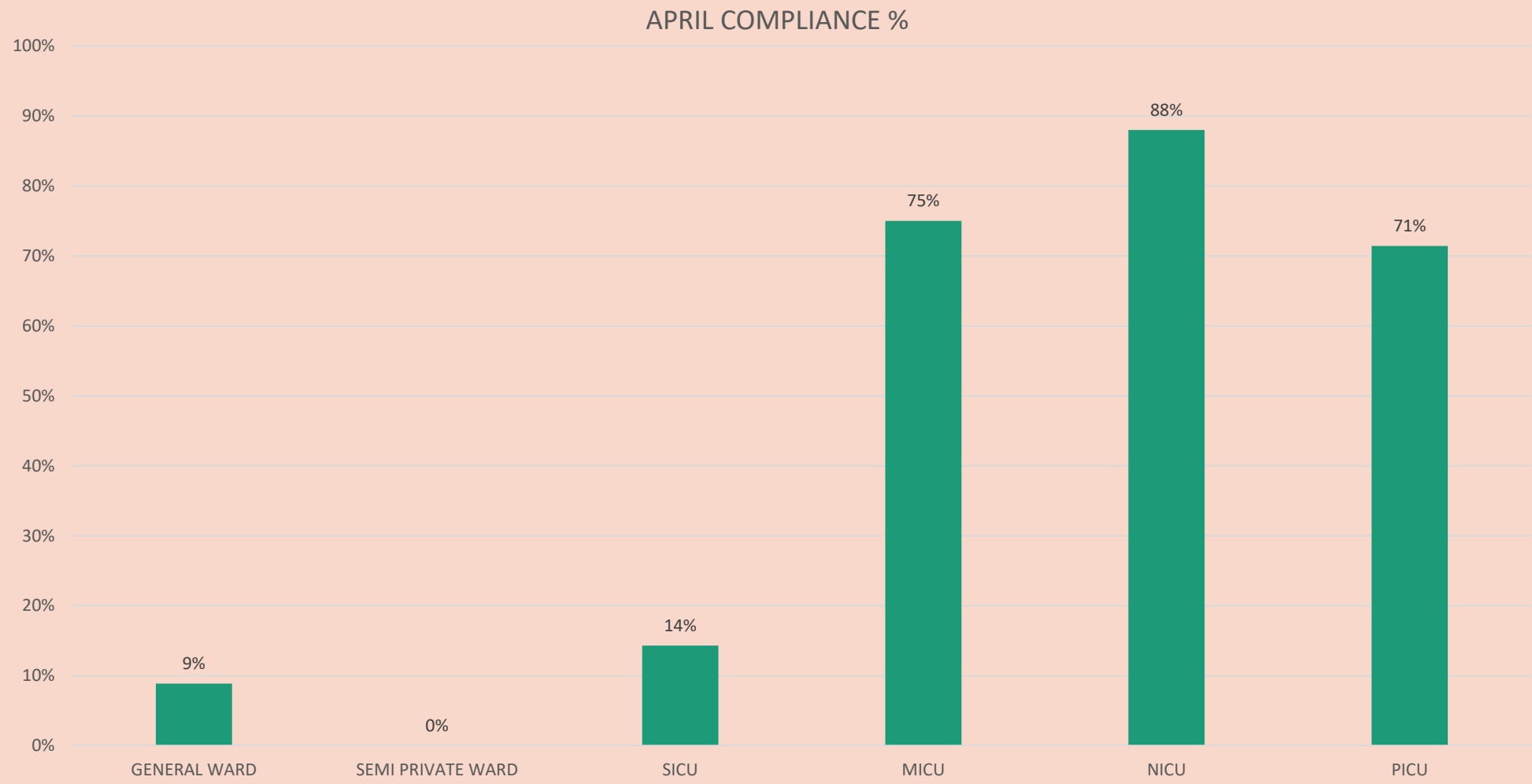
- The doctors were interviewed around the measurable elements for handover described by JCI. All patient files on the day of facility round were analyzed and all doctors in charge were interviewed.

- Consequently, it was observed that General Ward, Semiprivate Ward, and SICU lacked in both fields. These areas neither had a standardized critical content sharing practice nor any standardized documents or tools for documenting the handover process. It was found that there is no process in place to specifically track adverse events resulting from handover issues.

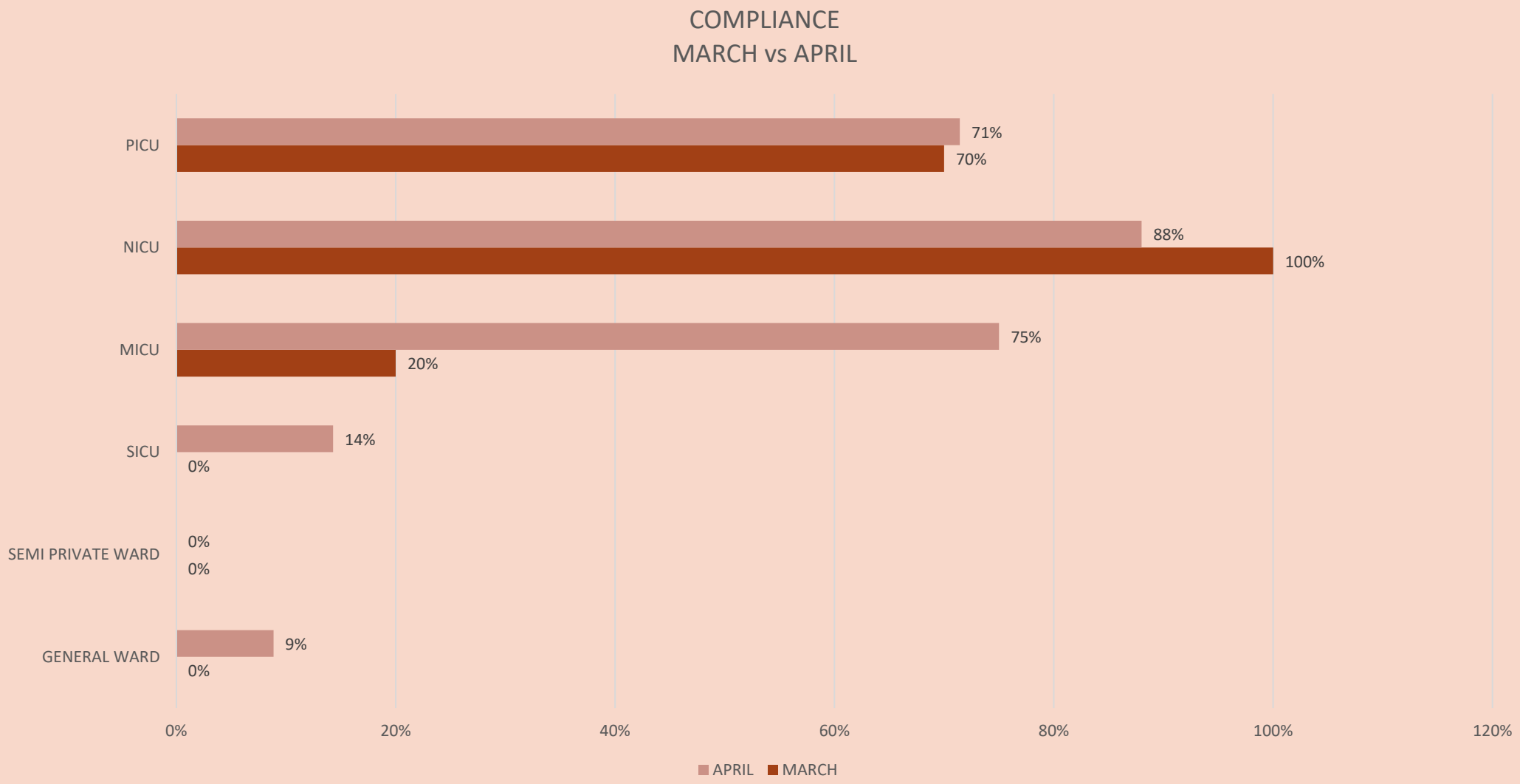
HANDOVER DOCUMENTATION COMPLIANCE-MARCH'21



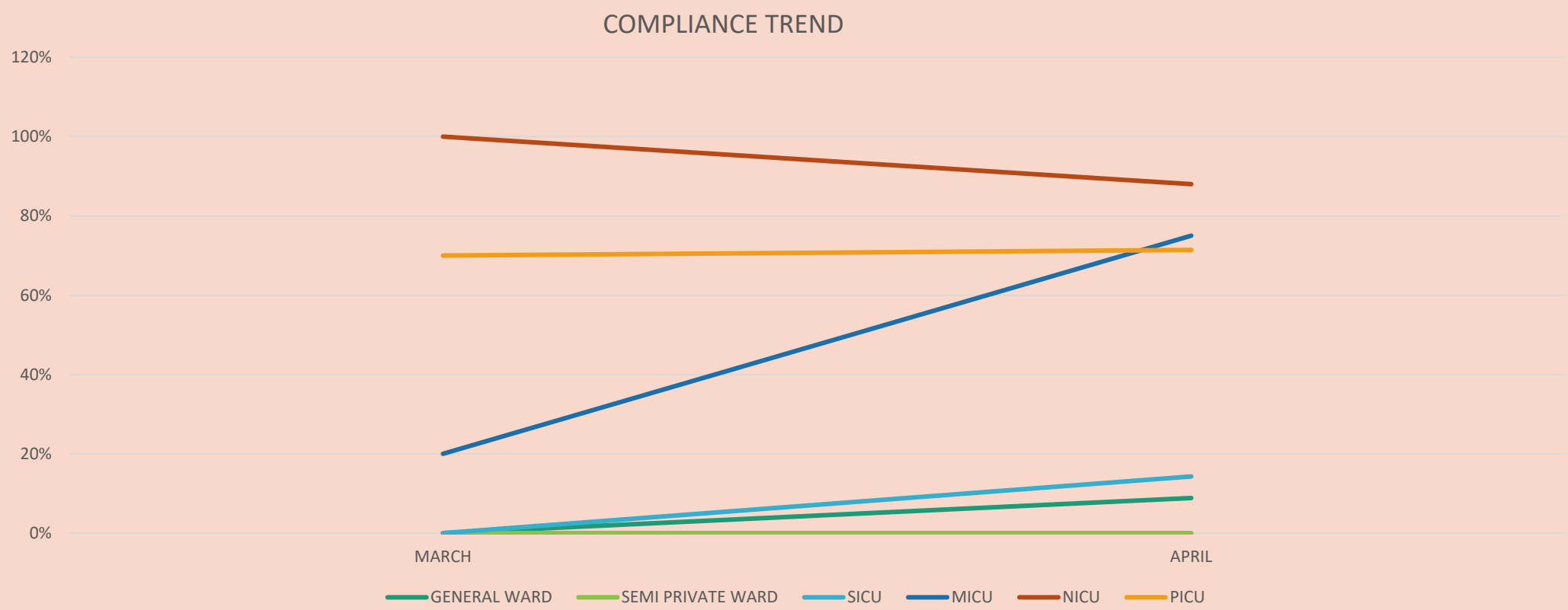
HANDOVER DOCUMENTATION COMPLIANCE-APRIL'21



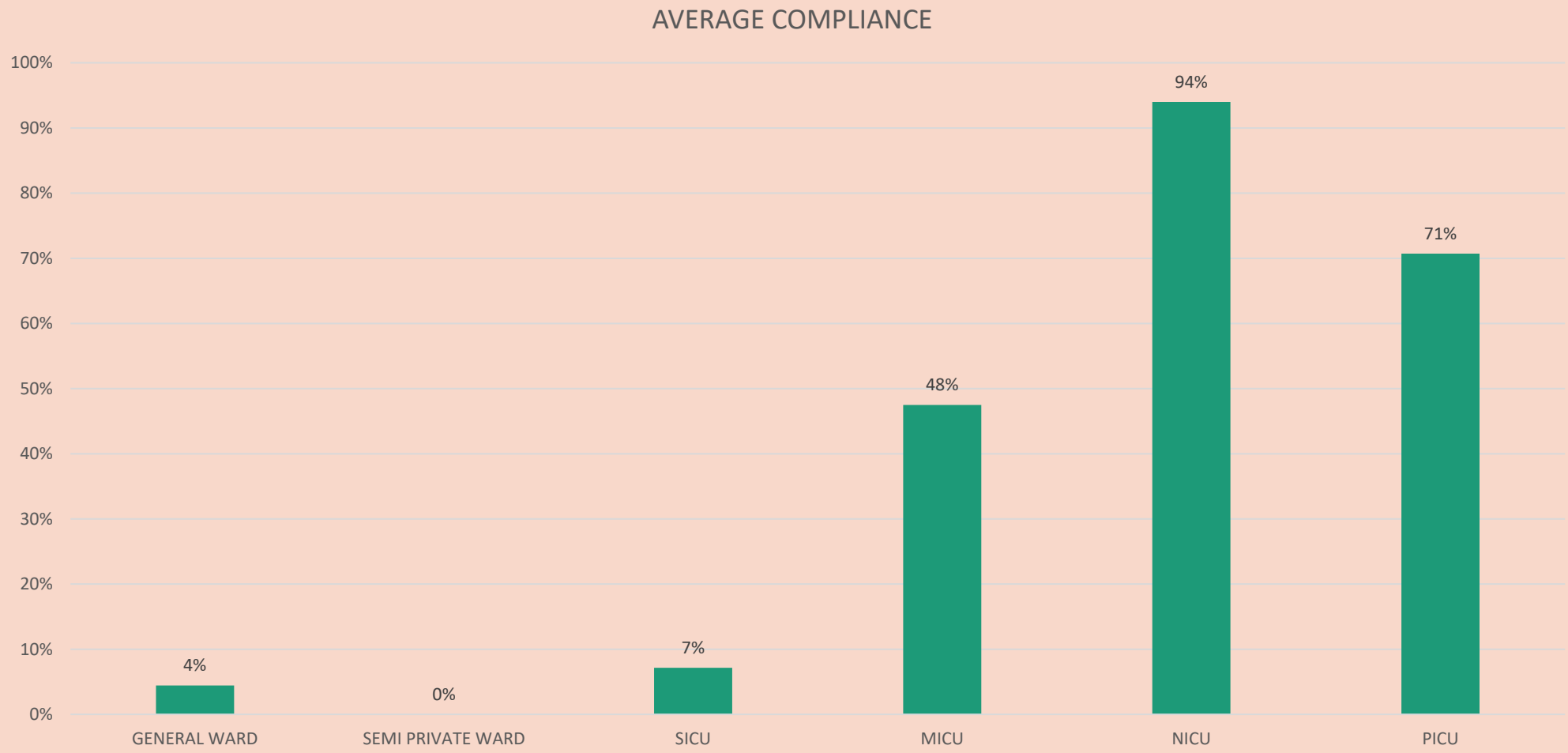
MARCH VS APRIL



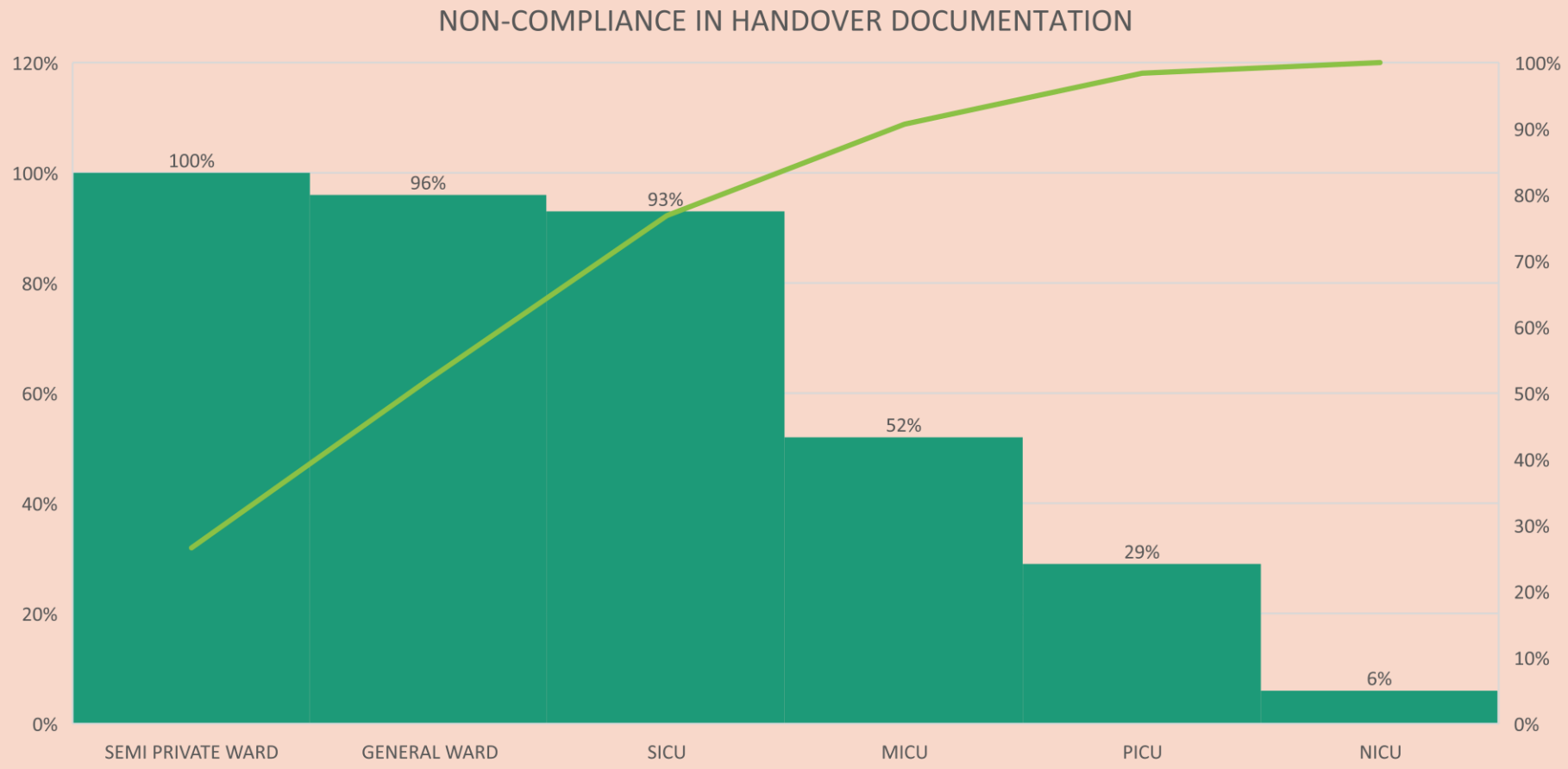
COMPLIANCE TREND MARCH-APRIL'21



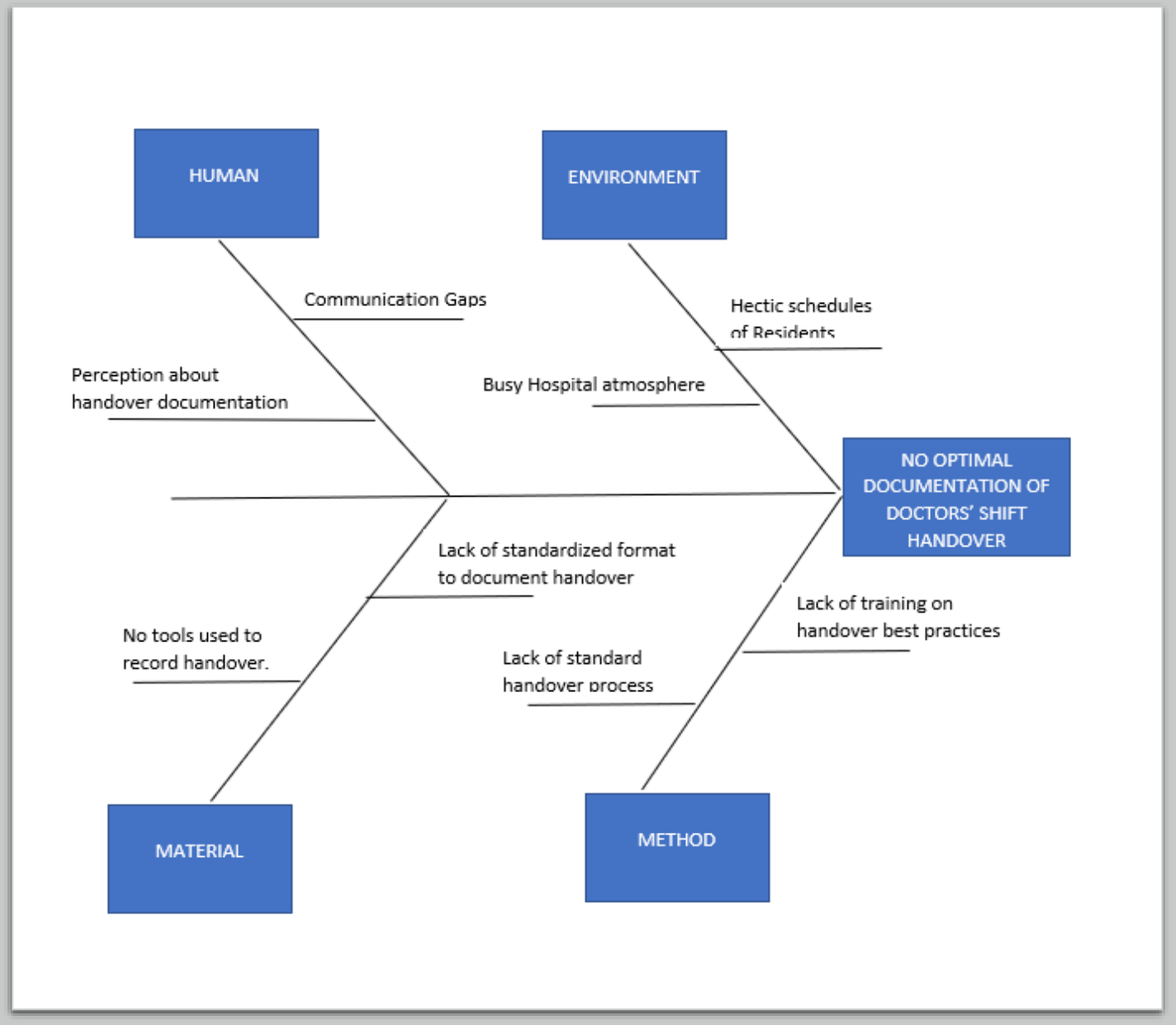
AVERAGE COMPLIANCE MARCH-APRIL'21



PARETO ANALYSIS



Ishikawa diagram showing root causes for handover non-compliance.



The potential of improper handover to cause adverse events in patient safety cannot be ignored. Hence, there is an evident need to formalize the whole process, implement the use of handover tools and training the doctors on handover best practices.

RECOMMENDATIONS

1. Standardized format to record handovers

- MODIFY PROGRESS NOTES SHEET
- HANDOVER LOGBOOK
- HANDOVER TOOLS (I-PASS, SIGNOUT, ANTICipate).

2. Strengthen overall handover process

3. Training of doctors

4. Improving the Perception of Doctors towards handover documentation

Standardized format to record handovers:

A. Include space for handover details in the progress notes sheet.

- The hospital like most other uses progress notes sheet to document doctor's daily assessment of the patient and to enter specific advice for nursing staff and other doctors looking after the patient. One way to standardize the handover process could be to modify the progress notes sheet in a way that in includes space for other handover details that are essential to be recorded along with involved doctors' credentials. This could prove to be an efficient process, as it is easy to implement, and doctors time spent on filling a separate handover document could be saved.
- Progress sheet currently in use consists of the title "Progress Sheet" and free space to record information. This sheet could be updated to include specific subheadings (Patients details, Status, Advice and Space for handover details like information on doctors taking over and doctors signing off etc.).

B Handover logbook.

- A logbook where the doctor signs off at the end of his/her shift could be easy to maintain.
- This process already exists in some departments of MSMC like NICU, SDNICU, etc.
- The handover logbook already in place has a provision to enter information like patient’s demographic details, a brief treatment summary, patient’s current condition, action list, outgoing and incoming doctor’s details.
- The same could be customized for other departments. This would ensure a standardized process for handover that captures the patient details accurately and gives a documented evidence for accountability.

C Use of handover tools like I-PASS, SIGNOUT and ANTICIpate. (1)

- Several tools are available to present the key data elements in a systemic structured format.
- I-PASS among them is one of the most well-studied tools.

I	**Illness severity**	**Identification of patient stability/acuity (i.e., stable, "watcher," unstable**
P	Patient summary	Summary statement; events leading up to admission/transfer; hospital course; assessment; plan
A	Action list	To-do list; timeline and ownership
S	Situation awareness and contingency planning	Know what is going on; plan for what might happen
S	Synthesis	Know what is going on; plan for what might happen

SIGNOUT HANDOVER TOOL

S	**Sick/ DNR**
I	**Identifying Data**
G	**General Hospital Course**
N	**New events of the day**
O	**Overall health status/ clinical condition**
U	**Upcoming possibilities with a plan**
T	**Tasks to complete overnight with plan, rationale.**

ANTICipate HANDOVER TOOL

A	**Administrative Data**
N	**New information (clinical update)**
T	**Tasks (what needs to be done)**
I	**Illness (patient condition)**
C	**Contingency planning/code status.**

Strengthen overall handover process:

- Capitalize on Information technology to optimize handover process.
- Handover templates can be integrated with the Electronic Medical Records or the HMIS. These templates could use features like auto populated fields for patient information, and other basic details on the patient. This would give Doctors more time to focus on entering the other specific details. Doctors will only have to enter expected issues and specific advice on patient condition with their credentials. Specific sub-headings for must needed handover information can be included in the template. This will ensure that no important handover information is left out.
- Templates could also be in the form of above-mentioned tools (I-PASS, SIGNOUT, ANTICIpate).
- This would not only improve the compliance but also give hospital a digital record of the handover process which is any day a good detail to have.

Training of doctors:

- Health care professionals often lack concrete training in effective handovers. What they know about handovers and the practice they follow is usually the one they observed their peers or seniors' practice. Training is effective in increasing the quality of handover not just for new doctors but also experienced professionals. All team members participating in handover shall be trained to ensure that the hospital policy and procedure is being followed during handover. There should be a designated place for handover process that is free from interruptions. Unambiguous transfer of responsibility should be avoided. This helps in optimizing the environment in which handover will be done.

Improving the Perception of Doctors towards handover documentation:

- To improve this IPSG 2 Drive has been implemented. IPSG 2 Drive is a program in which designated program champions audit handover documentation weekly. Every Thursday the data is communicated to the unit quality. Unit quality team then analyses the data and when non compliances are found the doctors are counselled and made aware of the importance of recording handover effectively. Their issues with the documentation recording are also taken into note. And all these findings are eventually discussed in the committee meeting so a substantial solution can be created.

CONCLUSION

Handover process is complex one and the hindrances can be various due to that. It has the potential to cause patient harm if not done properly. Therefore, handovers have become an area of concern for healthcare organizations and patent safety experts. As seen in this study most areas of the hospital fail to conduct a satisfactory handover. There is a clear lack of a defined process or tool to take down handovers. Many Doctors are not aware of the precise information that needs to be documented. The necessity to improve the process is evident and measures need to be taken to prevent adverse events due to poor handover communication. The key areas that can be worked upon to improve the effectiveness of handovers in this organization are, the process/protocol for handover, Tools for handover and Training of the doctors participating in handover. The organization can improve their handover effectiveness by implementing tools like I-PASS, SIGHNOUT and ANTICipate. A standardized process needs to be created, possibly integrated with the HMIS to facilitate the ease of recording handover information. This will allow the doctors to efficiently manage the time spent on documenting handovers and not be burdened by it. Training of doctors participating in handover is fundamental to the improvement process. Both junior doctors and experienced professionals can benefit from it. Effective handovers which are complete in all ways are a must for all healthcare organizations.

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