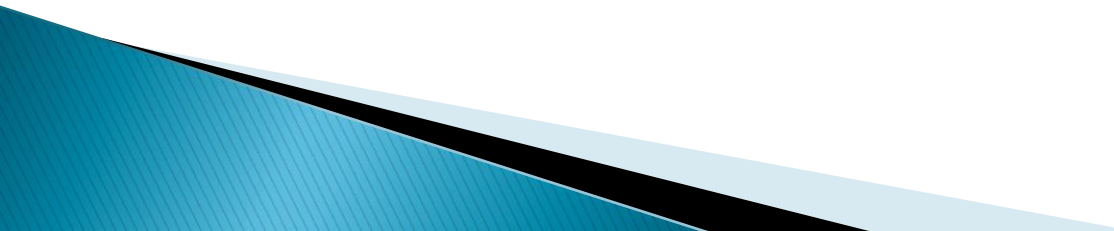


# A study on “Initiation of Tracer Methodology as a Continuous Quality Improvement tool” in Super Specialty Hospital, Gurgaon

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Roll no -1510

# Contents

- Introduction
  - Rationale
  - Research question
  - Objectives
  - Research methodology
  - Data collection
  - Data analysis
  - Findings
  - Discussions
- 

# Introduction

## Tracer methodology

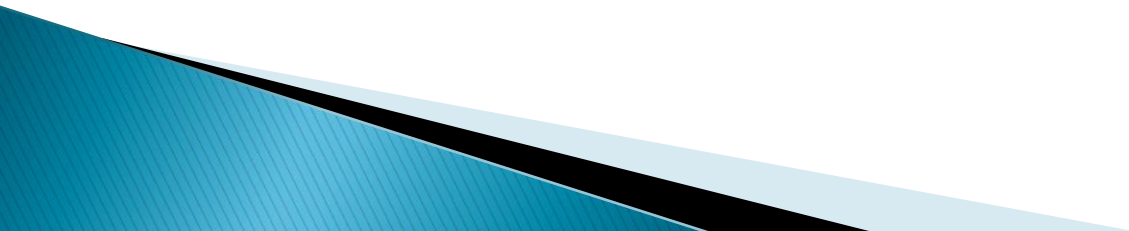
- It is adopted by Joint Commission in its new accreditation process;
  - unveiled in pilot testing in 2002 and 2003
  - launched formally as part of the new survey process in 2004
- Flexible & straightforward management tool.
- This is accomplished by following the path of those systems in question
  - by observing the process as it is demonstrated by staff
  - by observing the care experiences of those individuals who receive care, treatment, or services from the organization
- There are two types of tracers:
  - Individual
  - System

# Rationale

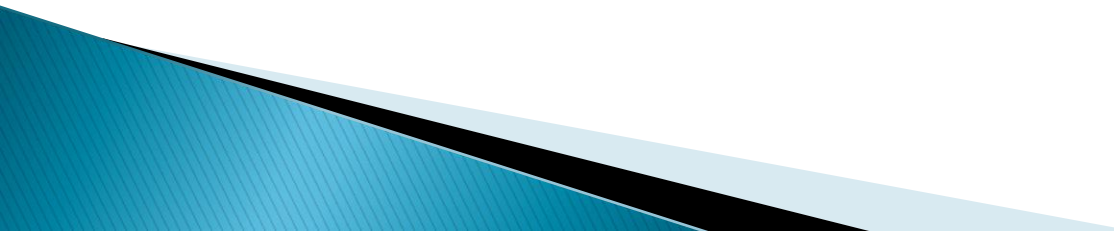
- Organization got JCI accreditation on August 2013
  - level of compliance have gone done
  - end of 2016 organization is expecting the reaccreditation audit
  
- Program of tracer methodology started for the following purpose
  - As a tool for continuous quality improvement
  - For finding gaps in the standards and policies
  - To view hospital process from the lens of patients
  - To rectify hospital's policies in accordance to JCI guidelines and standards

# Research Question

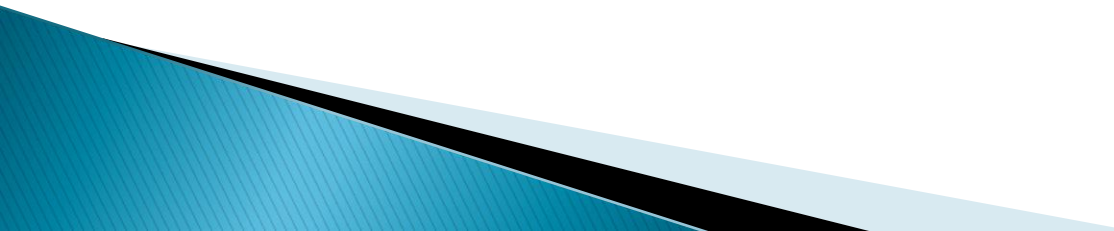
Are departments/institutions abiding with the norms and standards laid down?



# Objectives

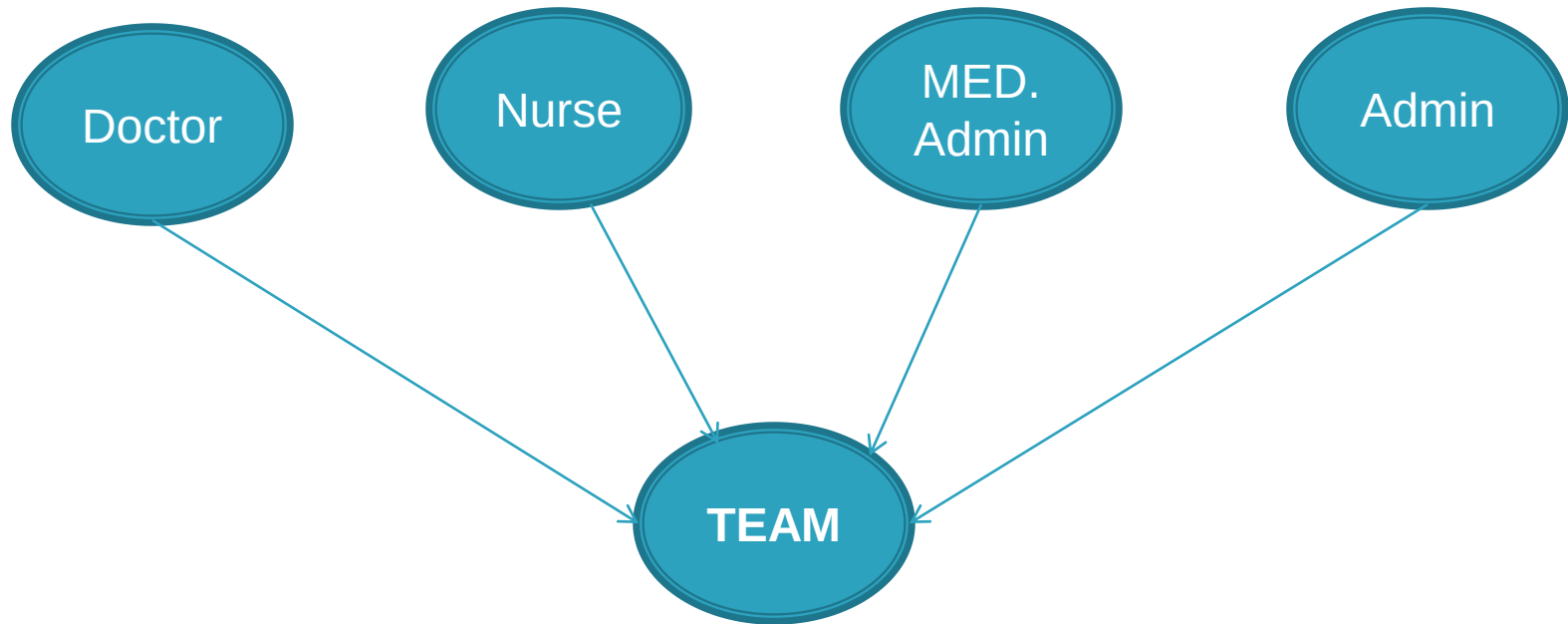
- ▶ To understand norms and standards laid by hospital for various departments/institutions.
  - ▶ To assess the non compliances of various departments/institutions for these norms/ standards.
  - ▶ To make suggestions to overcome these non compliances.
- 

# Research Methodology

- ▶ **Research design-** Qualitative descriptive study
  - ▶ **Study area-** Medanta The Medicity, Gurgaon
  - ▶ **Study population-** All institutes of hospital
  - ▶ **Study period-** 3 months
  - ▶ **Sampling technique-** Purposive (non sampling technique)
  - ▶ **Sample size-** Total number of tracer audits done by investigators in all institutes of hospital.
- 

# Data collection (1/2)

## ➤ Technique



**Total 9 teams were made**

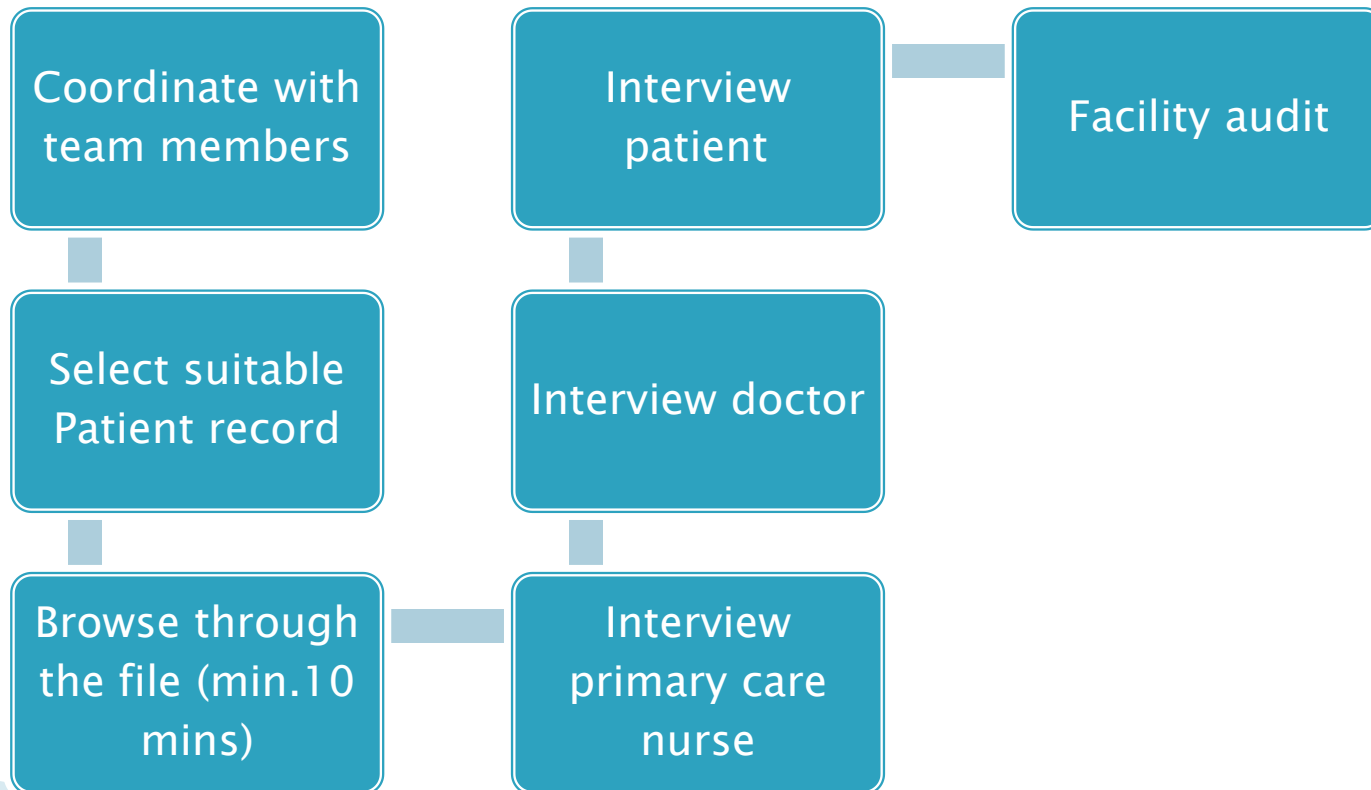


# Data collection (2/2)

## ➤ Tools –

- Personal interview- unstructured questionnaire
- Observation – observation checklist

➤ Following is the general path one need to follow in tracer audit-



# Data analysis

Exception report sent by each team



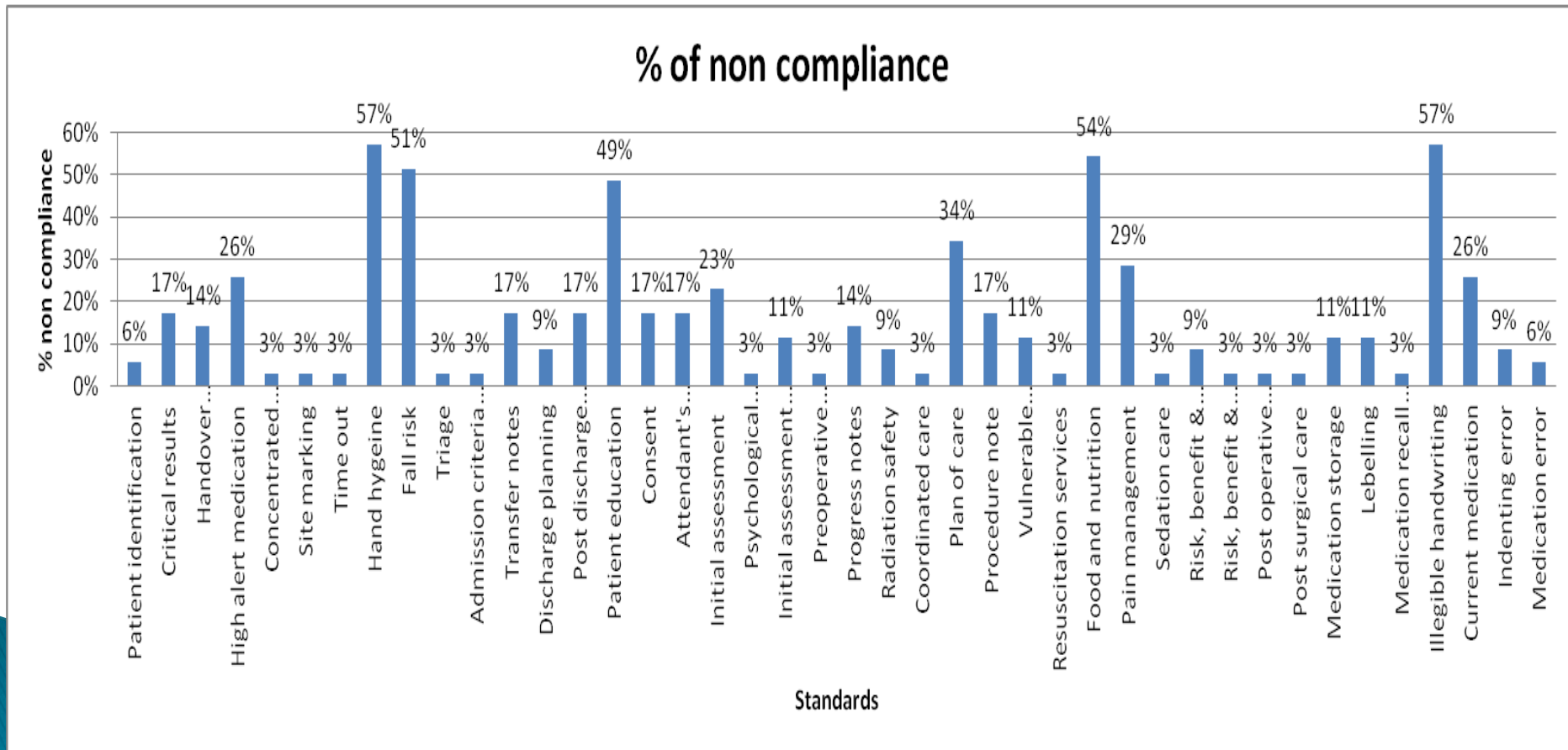
Coded into JCI standard



All Analysis is done on it

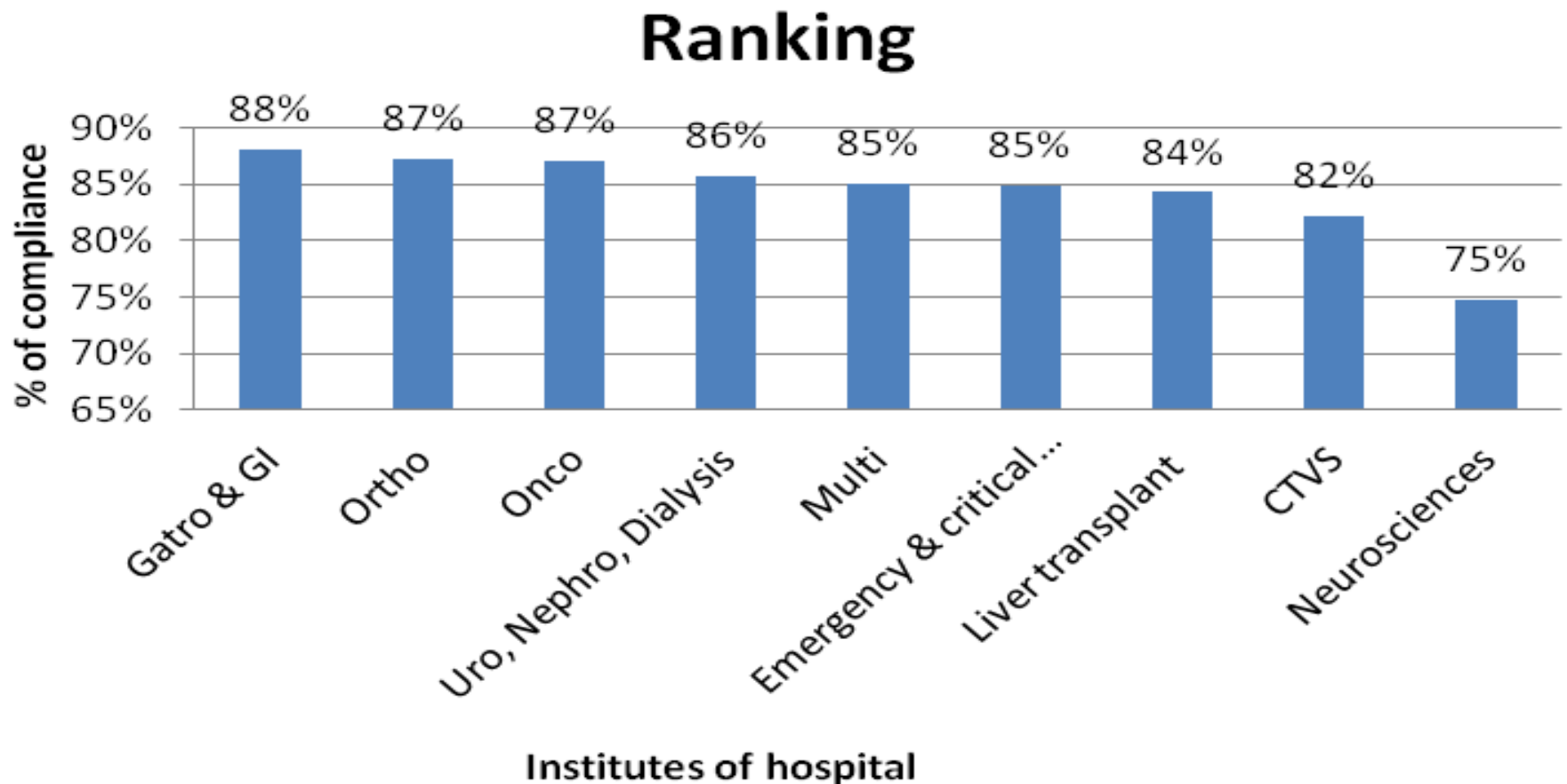
# Findings

## 1. Percentage non compliance among diifferent standards



# Findings

2. Ranking of all institutes on the basis of compliances to the standards.



# Findings

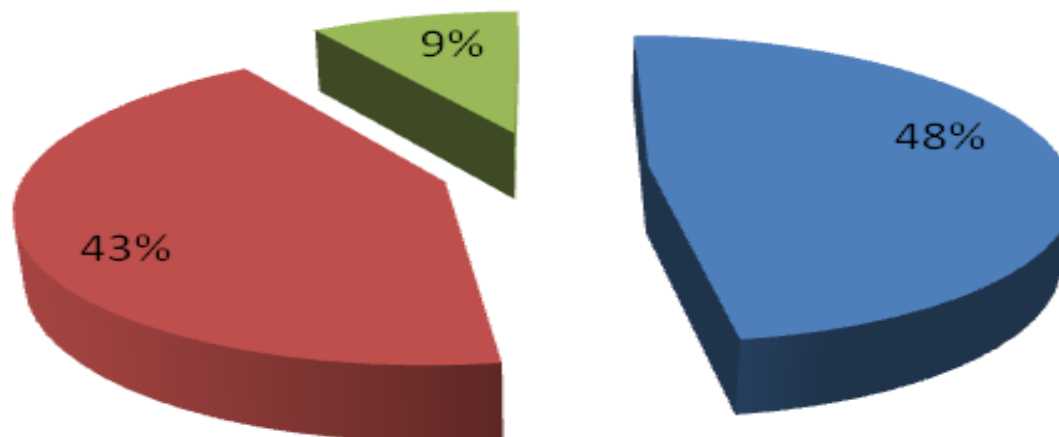
## 3. Standards scoring according to JCI

### Non compliance

- Fully met- 0%-10%
- Partially met- 11%-50%
- Not Met- 51%-100%

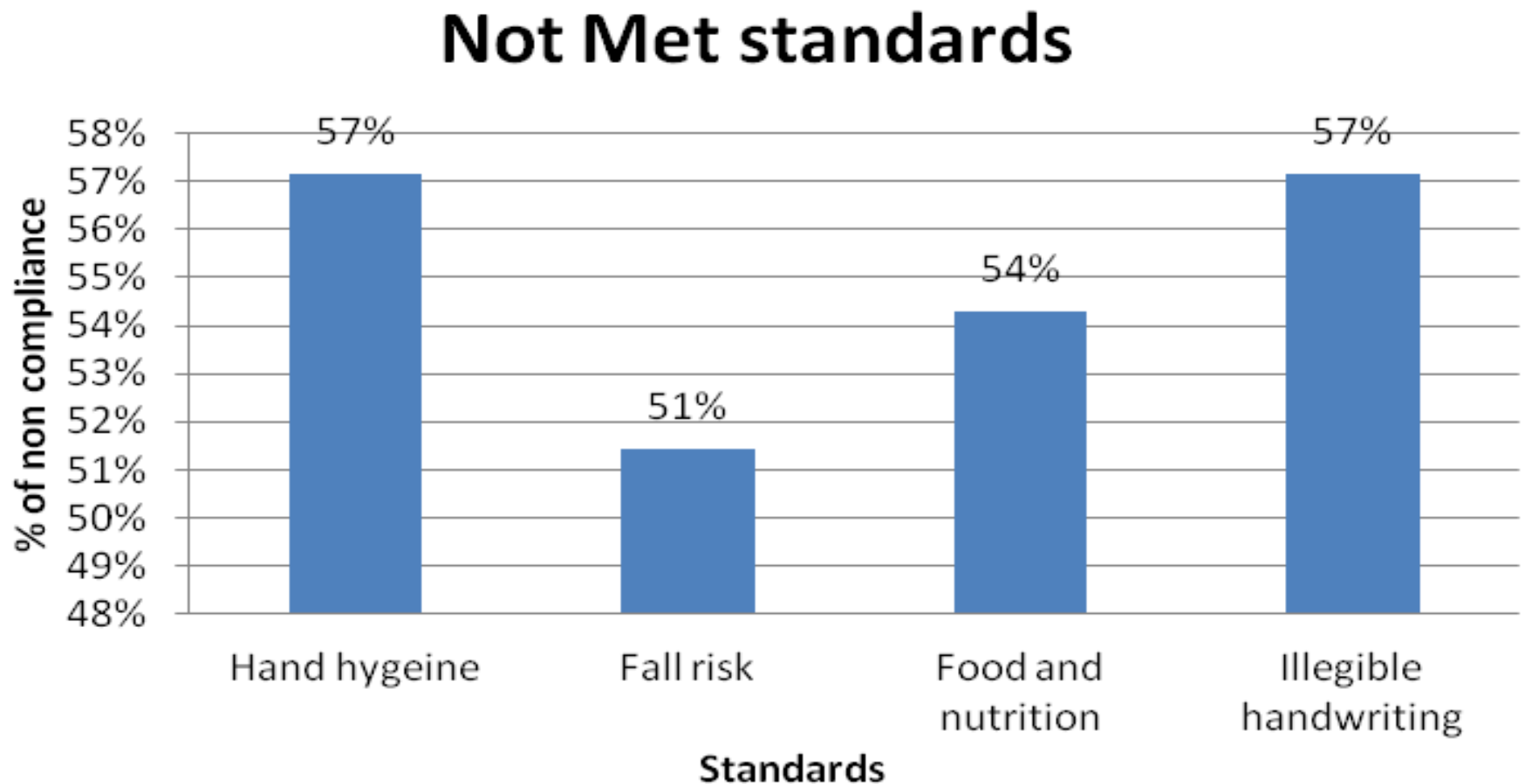
### % of scoring of standards

■ Fully met ■ Partially met ■ Not met



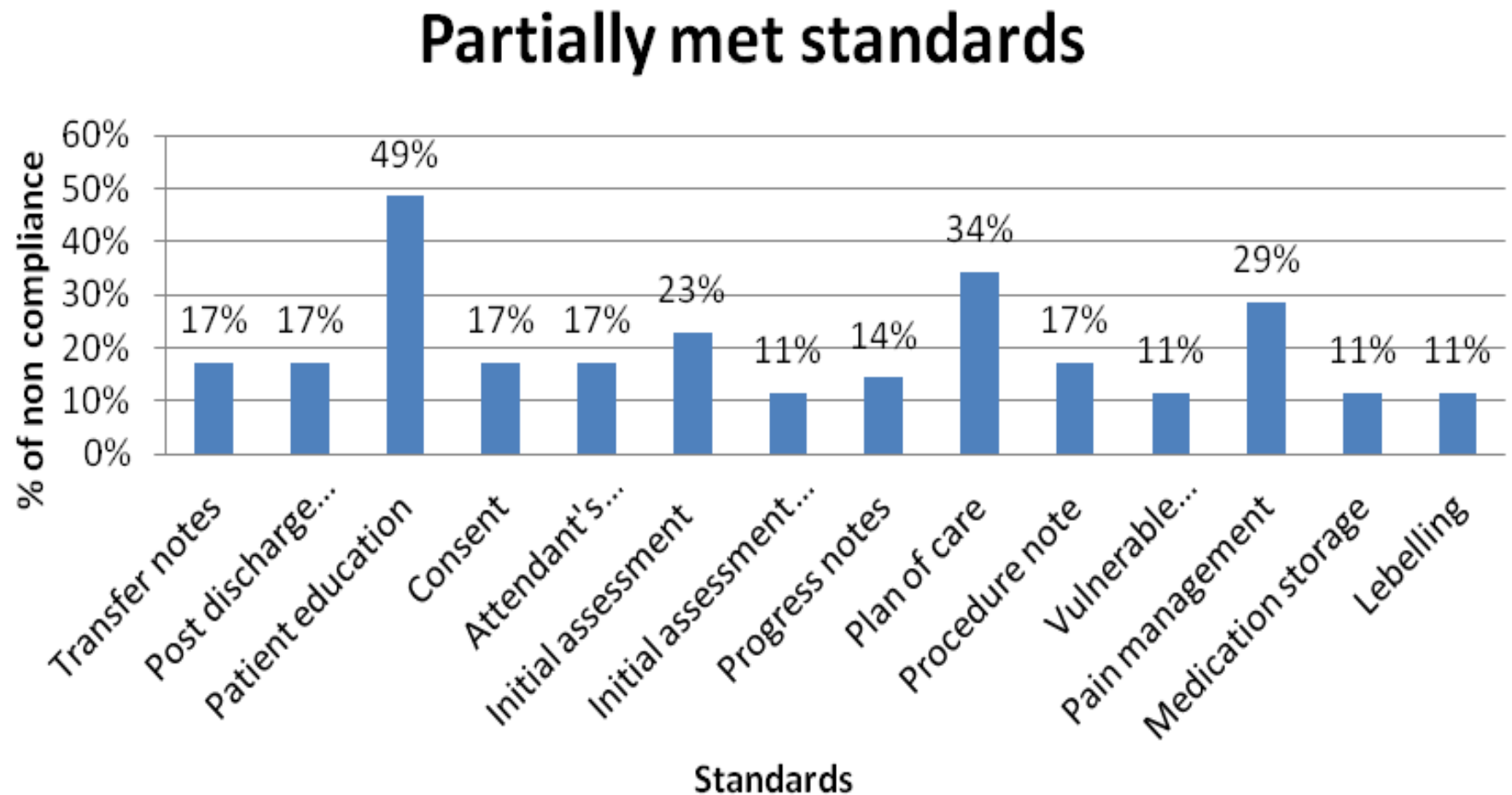
# Findings

## 4. Not met standards.



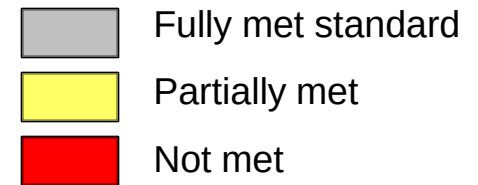
# Findings

## 5. Partially met standards.



# Findings

## 6. Not met standards- institute wise non compliance



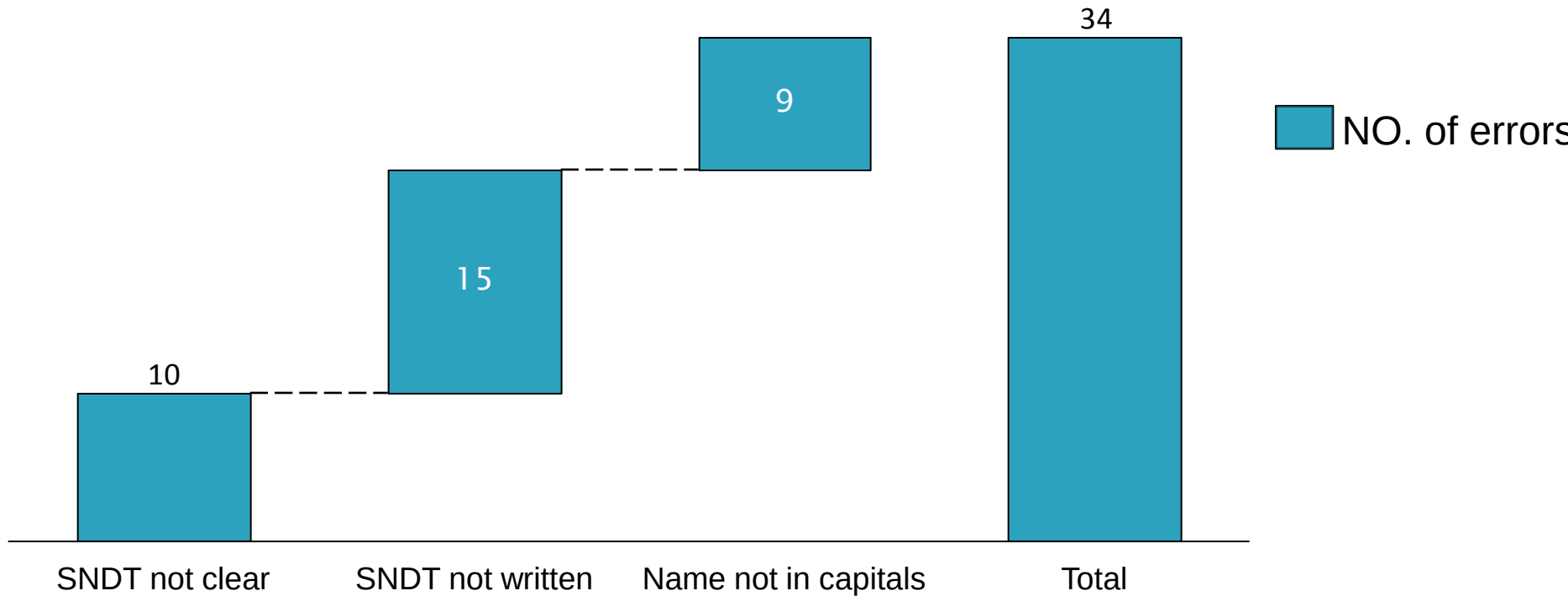
| Institute/standard        | Illegible handwriting | Hand hygiene | Fall risk | Food and nutrition | High alert medication | Pain management | Plan of care |
|---------------------------|-----------------------|--------------|-----------|--------------------|-----------------------|-----------------|--------------|
| Liver transplant          | 60%                   | 60%          | 40%       | 60%                | 40%                   | 20%             | 20%          |
| CTVS                      | 75%                   | 75%          | 75%       | 25%                | 0%                    | 75%             | 50%          |
| Gatro & GI                | 60%                   | 60%          | 60%       | 60%                | 40%                   | 40%             | 40%          |
| Uro, Nephro, Dialysis     | 100%                  | 0%           | 0%        | 100%               | 100%                  | 0%              | 0%           |
| Ortho                     | 67%                   | 33%          | 67%       | 0%                 | 0%                    | 33%             | 0%           |
| Neurosciences             | 20%                   | 60%          | 80%       | 40%                | 60%                   | 60%             | 60%          |
| Onco                      | 60%                   | 60%          | 40%       | 60%                | 20%                   | 20%             | 20%          |
| Multi                     | 50%                   | 50%          | 50%       | 50%                | 50%                   | 20%             | 40%          |
| Emergency & critical care | 50%                   | 50%          | 0%        | 75%                | 67%                   | 33%             | 33%          |



# Findings

## 7. Errors / issues in major non compliance standards

### a. Types of errors in Illegible handwriting

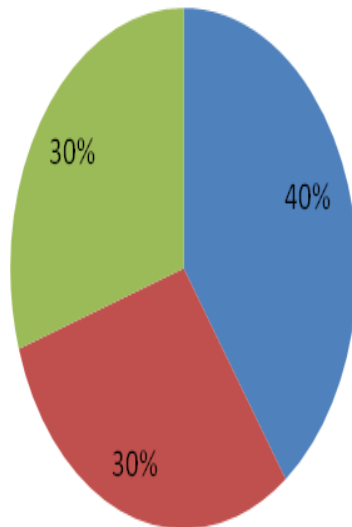


# Findings

- b) Hand washing non compliance among different carders of hospital

Hand washing % of non compliance

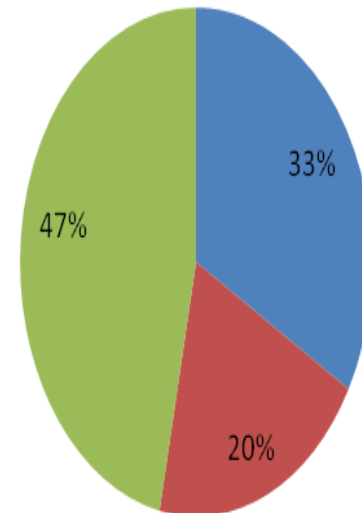
doctors nurses others



- c) Moments of hand hygiene non compliance

Moments % of non compliance

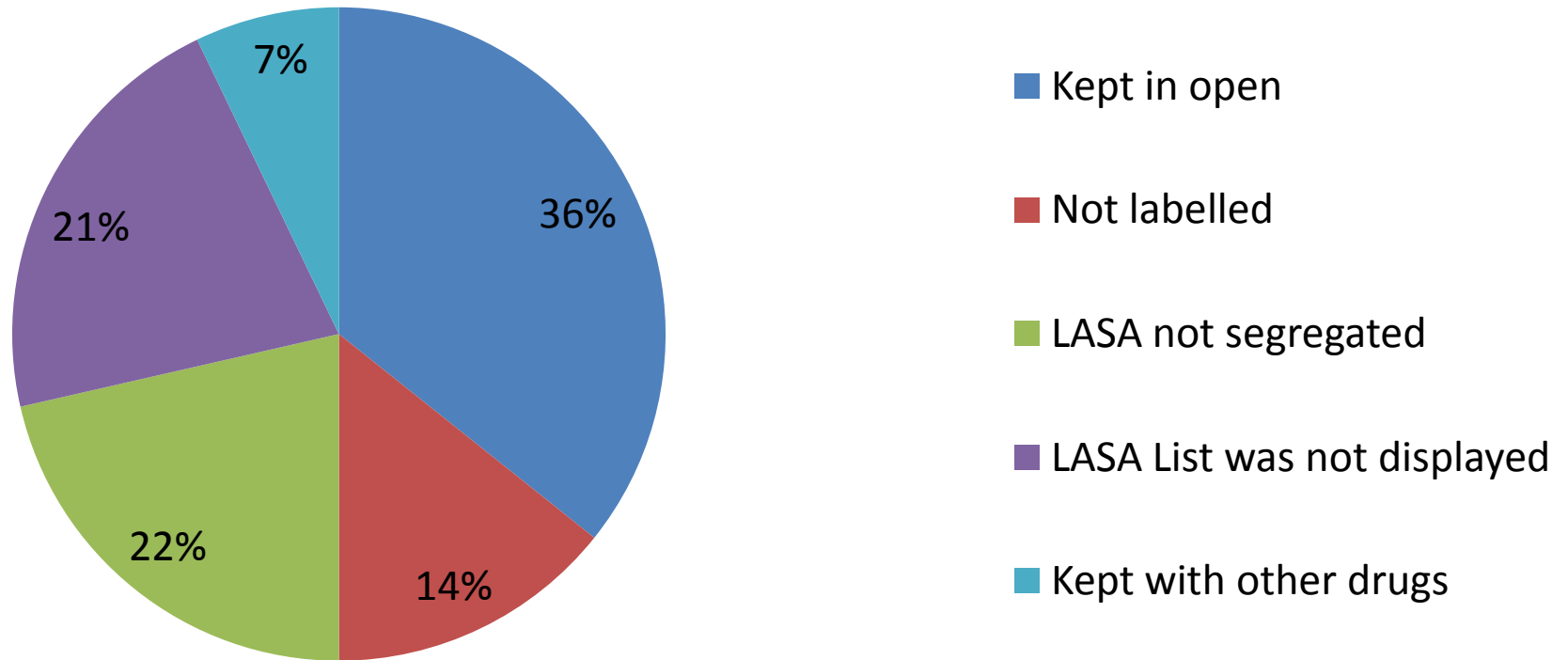
doctors nurses others



# Findings

## d) Errors related to High Alert Medications (HAM)

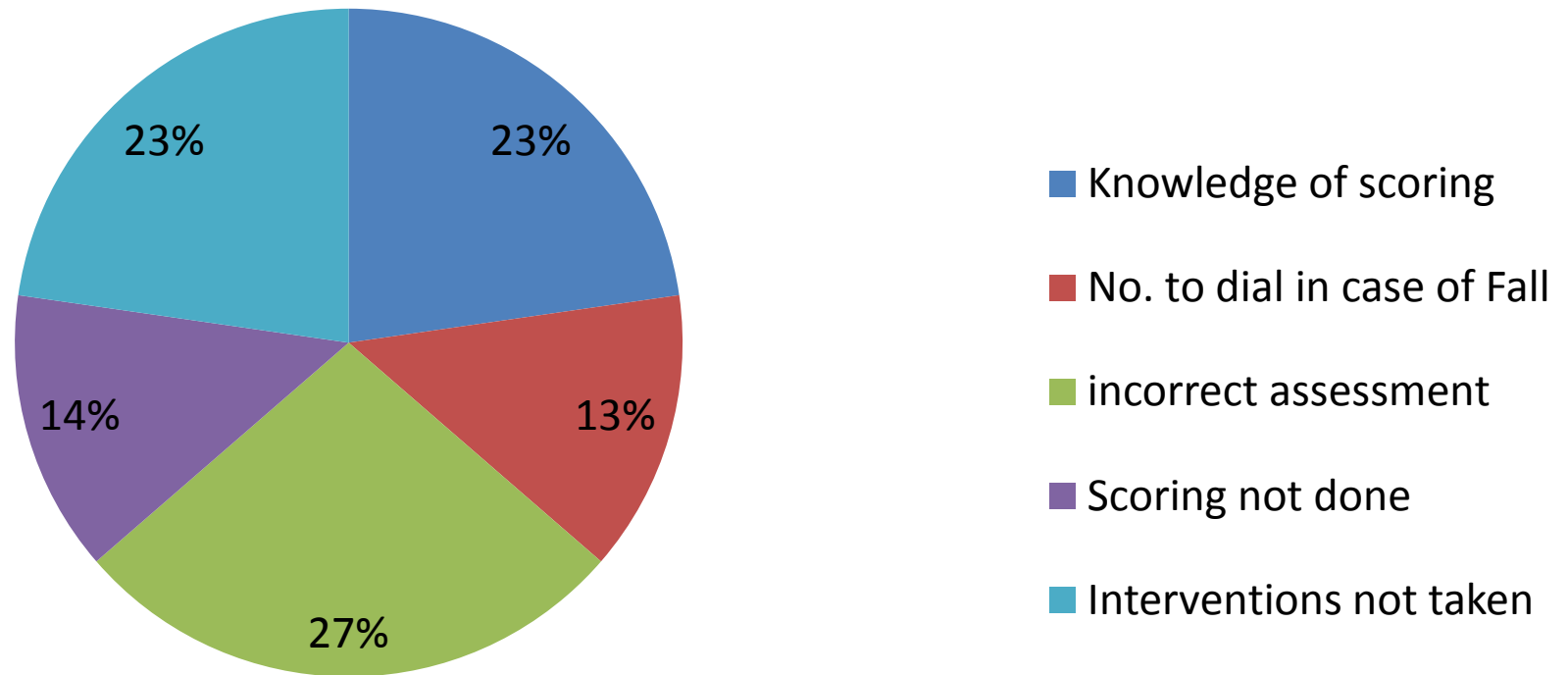
**HAM non compliance**



# Findings

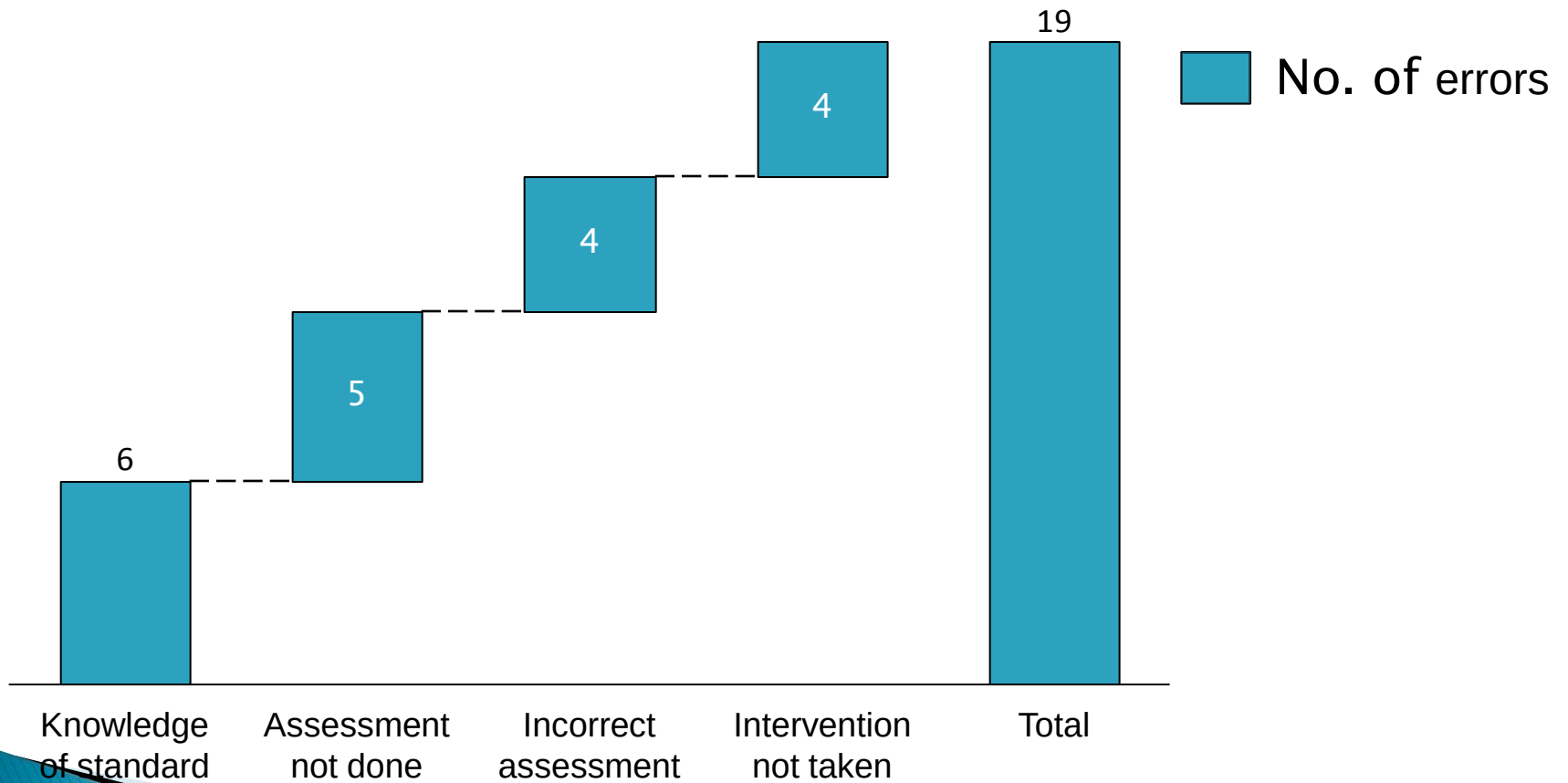
## e) Errors in fall risk prevention

**Fall Risk Prevention % of non compliance**



# Findings

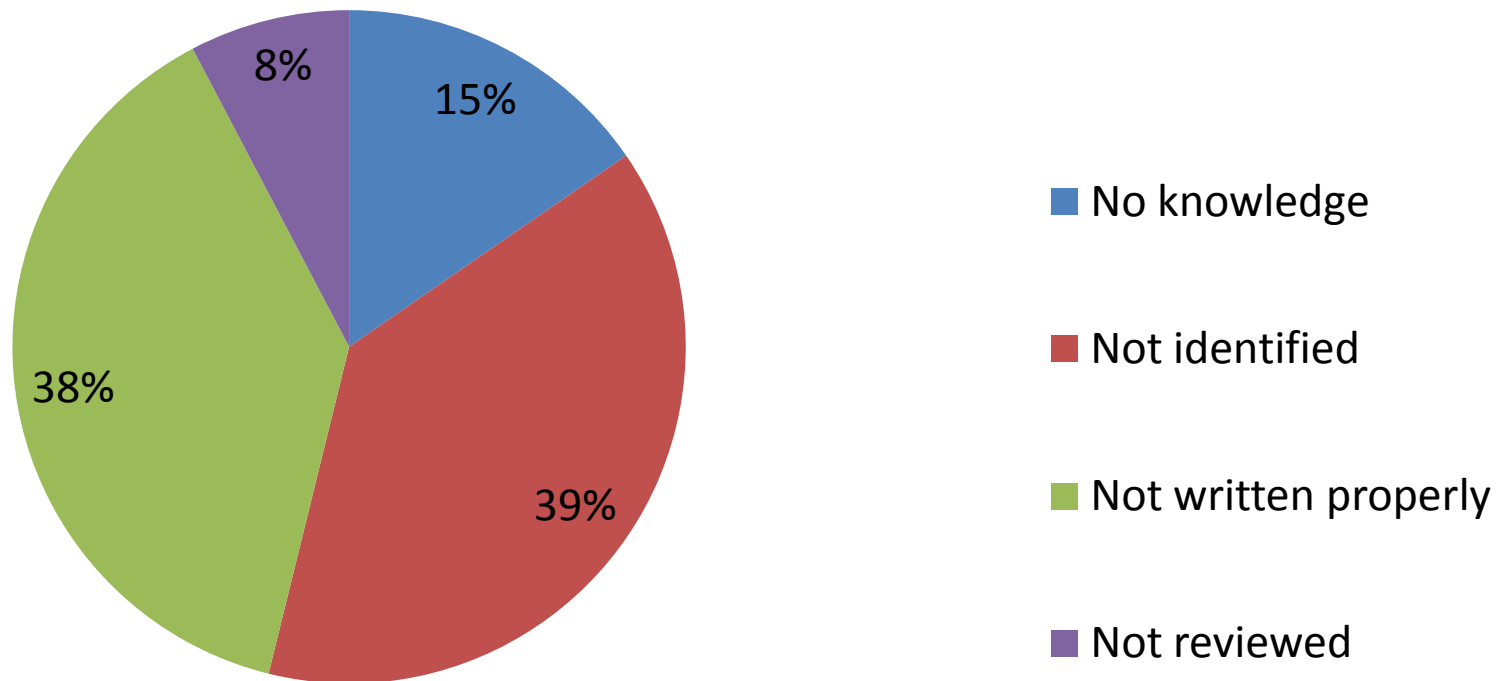
## f) Errors in Pain management



# Findings

## g) Errors in plan of care

**Plan of care % of non compliance**



# Discussion

## Hypothesis testing

- ▶ **Null hypothesis ( $H_0$ )** - Non compliance of this hospital is similar to non compliance of average of other hospital.
- ▶ **Result** – is calculated using following formula

$$z = \frac{x - p}{\left( \frac{p \cdot q}{n} \right)^{1/2}}$$

z= scoring

x= % of non compliance in study hospital

p=% average of other hospital

q= 1-p

n= number of sample

- ▶ **Finding –**
  - If  $z > 1.96$  (At 95% confidence interval)= Reject Null hypothesis
  - If  $z \leq 1.96$  = Not reject Null hypothesis
- ▶ **Probability** - p value according to z value (calculated from z table)

# Discussion

## Hypothesis testing- **Illegible Handwriting non compliance**

- ▶ **Null hypothesis-**

- ▶ Non compliance audited in study hospital- 57% ( $x = 0.57$ )

- ▶ % average from other hospitals- 15% ( $p = 0.15$ )

- ▶ **Result** – by using the formula

$$z = 5.0191$$

Since  $z > 1.96$ , so ***Reject Null Hypothesis***

- ▶ **Finding-**  $p = 0.001$  (Alpha value  $= 0.05$ )

- ▶ **Discussion-** highly significant and illegibility is really a major issue for the hospital to handle.

- ▶ **Recommendations / suggestions-**

- ▶ Training of doctors
- ▶ Reaudits of illegibility



# Discussion

## Hypothesis testing- **Fall risk prevention**

- ▶ **Null hypothesis-**

- ▶ Non compliance audited in study hospital- 51% ( $x = 0.51$ )

- ▶ % average from other hospitals- 35% ( $p = 0.35$ )

- ▶ **Result** – by using the formula

$$z = 1.985$$

Since  $z > 1.96$ , so ***Reject Null Hypothesis***

- ▶ **Finding-**  $p = 0.024$  (Alpha value  $= 0.05$ )

- ▶ **Discussion-** Highly significant and is really a major issue for the hospital to handle.

- ▶ **Recommendations / suggestions-**

- ▶ Training of nurses

- ▶ Reaudits of Fall prevention protocols.

# Discussion

## Hypothesis testing- **Hand hygiene**

- ▶ **Null hypothesis-**

- ▶ Non compliance audited in study hospital- 57% ( $x = 0.57$ )

- ▶ % average from other hospitals- 52.5% ( $p = 0.525$ )

- ▶ **Result** – by using the formula

$$z = 0.533$$

Since  $z < 1.96$ , so ***Do Not Reject Null Hypothesis***

- ▶ **Finding-**  $p = 0.291$  (Alpha value  $= 0.05$ )

- ▶ **Discussion-** Not significant and is a common issue across all hospital.

- ▶ **Recommendations / suggestions-**

- ▶ Training of staff

- ▶ Poster depicting correct hand hygiene and moments

- ▶ Reaudits of Fall prevention protocols.

# Discussion

## Hypothesis testing- **High Alert Medication (HAM)**

- ▶ **Null hypothesis-**

- ▶ Non compliance audited in study hospital- 9% ( $\alpha = 0.09$ )

- ▶ % average from other hospitals- 5% ( $p=0.05$ )

- ▶ **Result** – by using the formula

$$z = 1.087$$

Since  $z < 1.96$ , so ***Do Not Reject Null Hypothesis***

- ▶ **Finding-**  $p=0.425$  (Alpha value  $=0.05$ )

- ▶ **Discussion-** Not significant and is a common issue across all hospital.

- ▶ **Recommendations / suggestions-**

- ▶ Training of staff

- ▶ Poster depicting correct hand hygiene and moments

- ▶ Reaudits of Fall prevention protocols.