

# Hospitalist Paging Standardization: A Lean Six Sigma Project to Improve Patient Safety, Interdisciplinary Communication and Satisfaction

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## Background

- Data from the Joint Commission's sentinel event program have demonstrated that communication problems are the most common root cause of serious medical errors (1).
- Section on Hospital Medicine was affected by recurrent delays in providers assessing patients when they were reaching floors. This was especially prominent with outside facility transfers.
- Delivery process in today's healthcare system involves numerous interfaces and multiple health care practitioners with varying levels of education and occupational training.
- During a 4-day hospital stay, a patient may interact with 50 different employees, including physicians, nurses, technicians and others (2).
- Efficient and effective clinical process is required to handle information exchanged in these fluid teams. Because fluid teams are so common, it is critical to develop strategies and protocols that do not rely on individuals having worked together to ensure safety (3).

## Introduction

- Upon further brainstorming with nursing staff it was evident that there was confusion in reaching the correct provider on call and pages were being sent to off shift providers. The Wake-On Call System layout for hospitalist was confusing for nursing staff.
- A Paging Standardization Quality Improvement Project was undertaken to understand and identify defects associated with paging process and standardize it to reduce variation.

## Methods

DMAIC model for Lean Six Sigma was utilized for this quality improvement project. The various deliverables associated included:

- Define:** Project charter, Stakeholder Analysis, Brainstorming
- Measure:** Process Mapping
- Analyze:** 5 Whys, Root Cause Analysis
- Improve:** Change management, Pilot Testing
- Control:** Standardization, Institutionalization, Process Sigma level

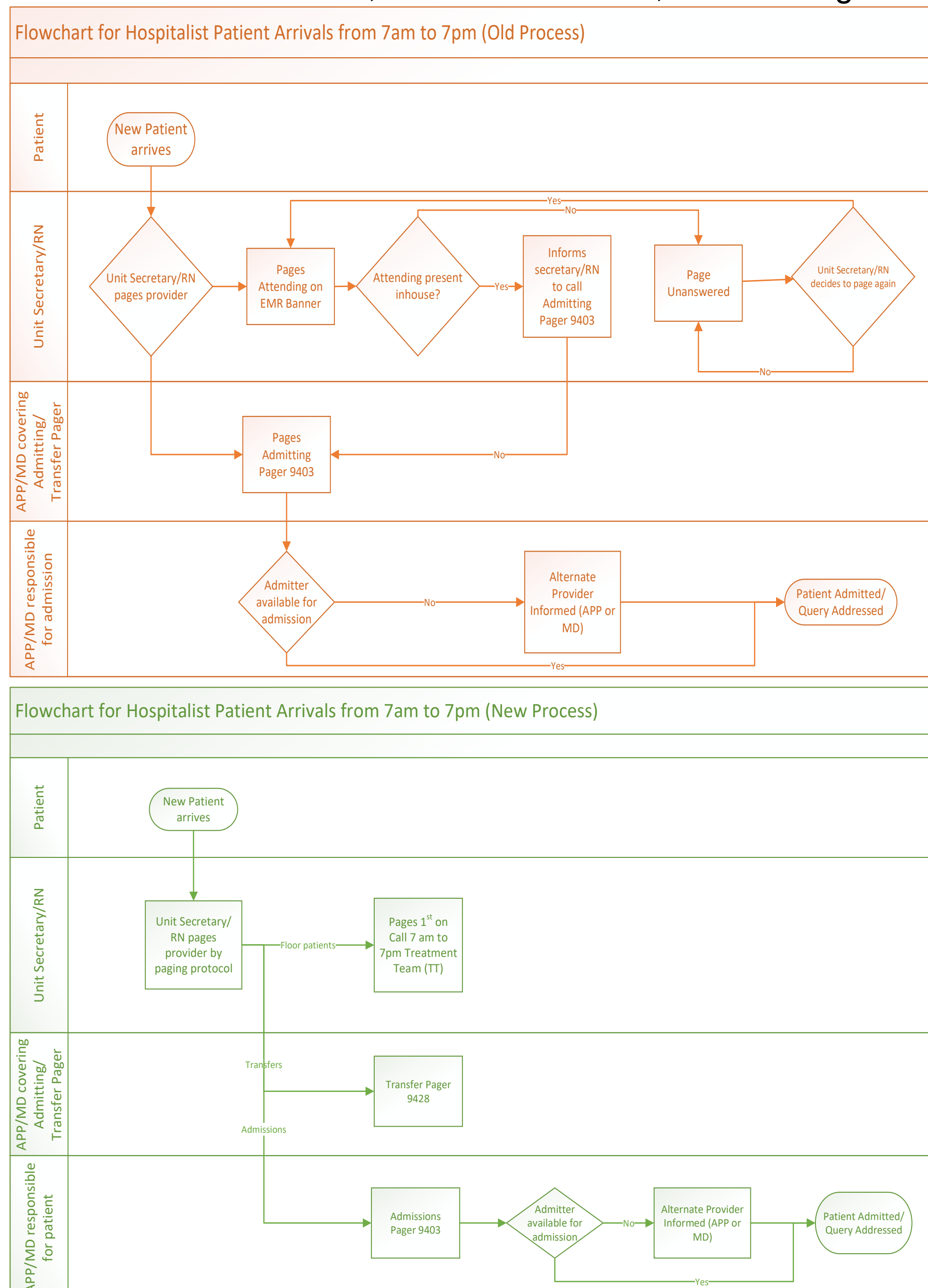


Figure 1. Pre and Post Implementation Process Maps

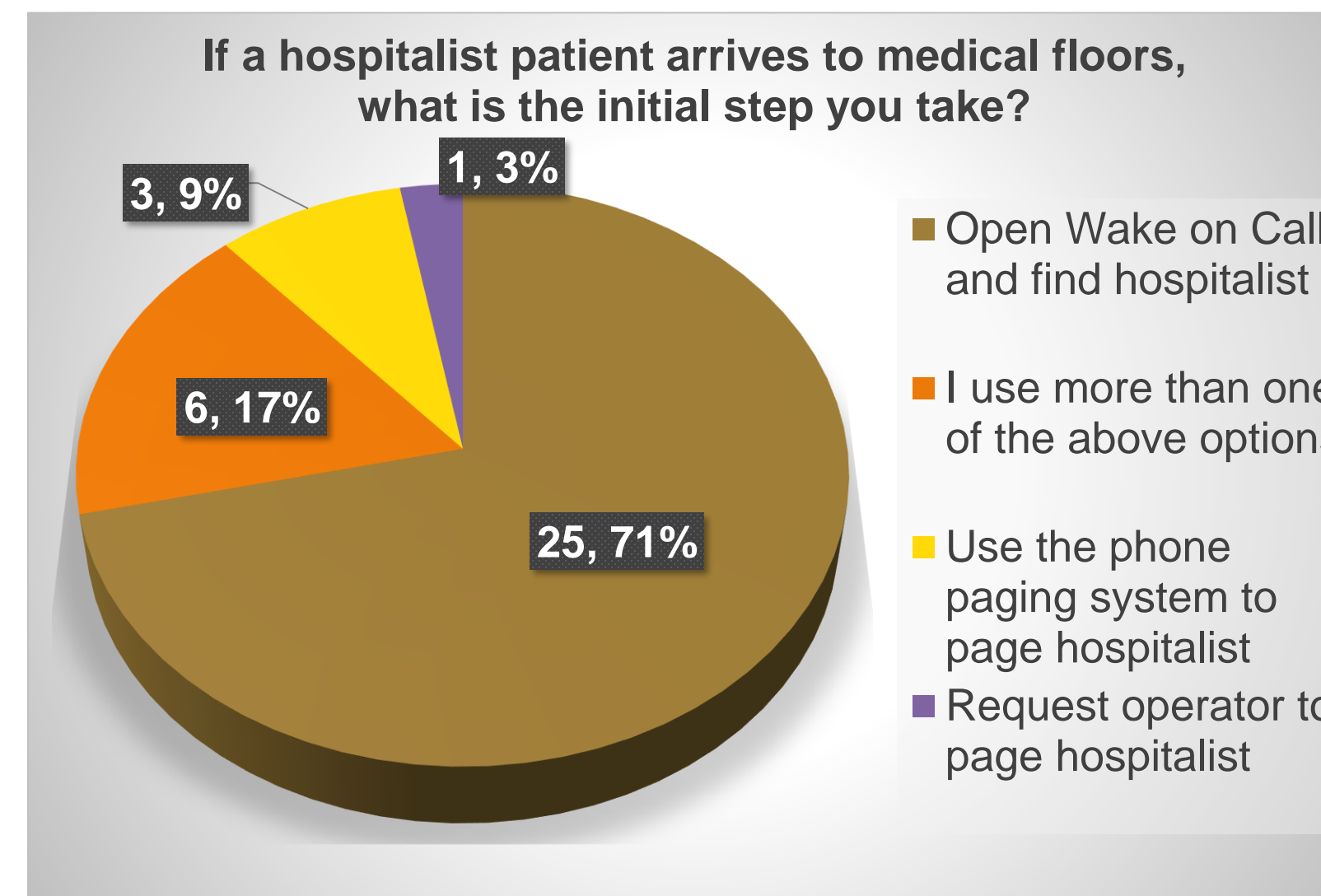


Figure 2. Nursing Survey Question Pie chart  
How difficult is the current paging system for hospitalist?

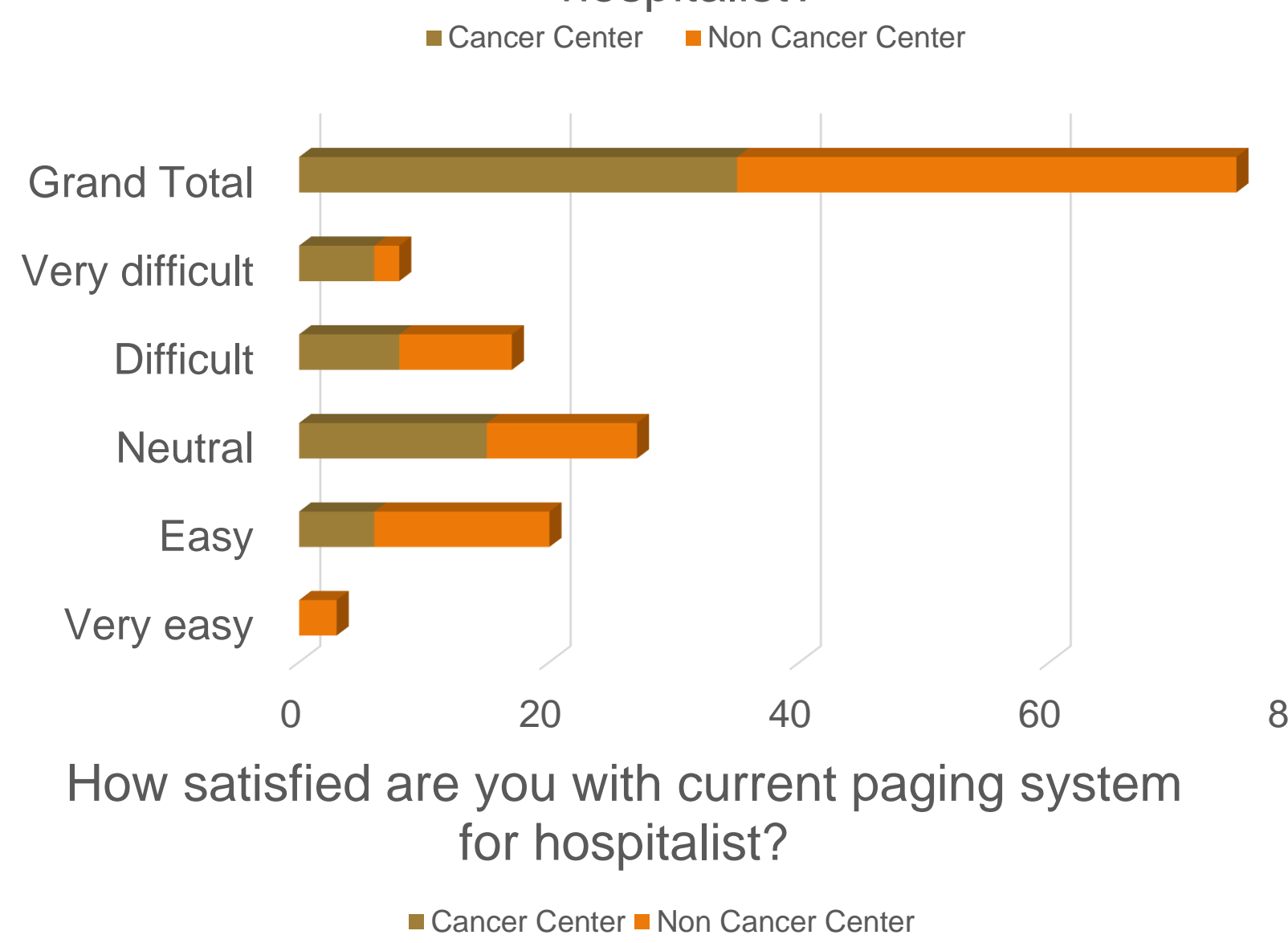


Figure 3. Nursing Survey Questions

## Results

After brainstorming and root cause analysis it was found that the existing hospitalist paging process was dysfunctional and non-standard. It was also noticed that staff was not aware that hospitalist have separate 7 am to 7 pm 1<sup>st</sup> on Call column.

How satisfied are you with current paging system?	Non-cancer Center N (%)	Cancer Center N (%)	p-value
Very dissatisfied	6 (15%)	1 (2.9%)	<b>0.034</b>
Dissatisfied	14 (35%)	13 (37.1%)	
Unsure	5 (12.5%)	13 (37.1%)	
Satisfied	13 (32.5%)	8 (22.9%)	
Very satisfied	2 (5%)	0 (0%)	

Figure 4. Nursing Satisfaction between Cancer Center and other departments

## Wake On-Call Before

## Wake On-Call After

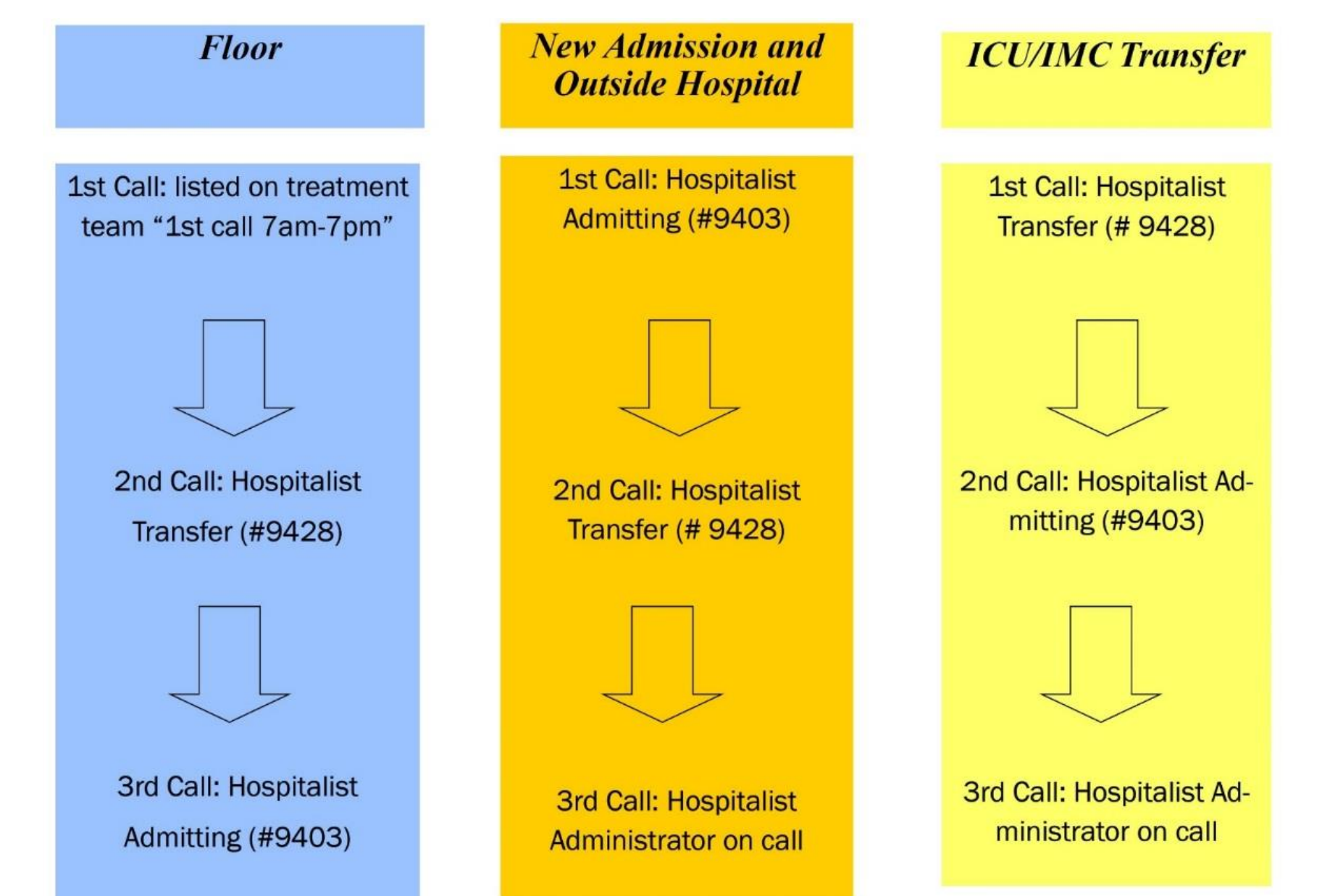


Figure 5. Nursing Flowchart

## Hospitalist Paging Guideline

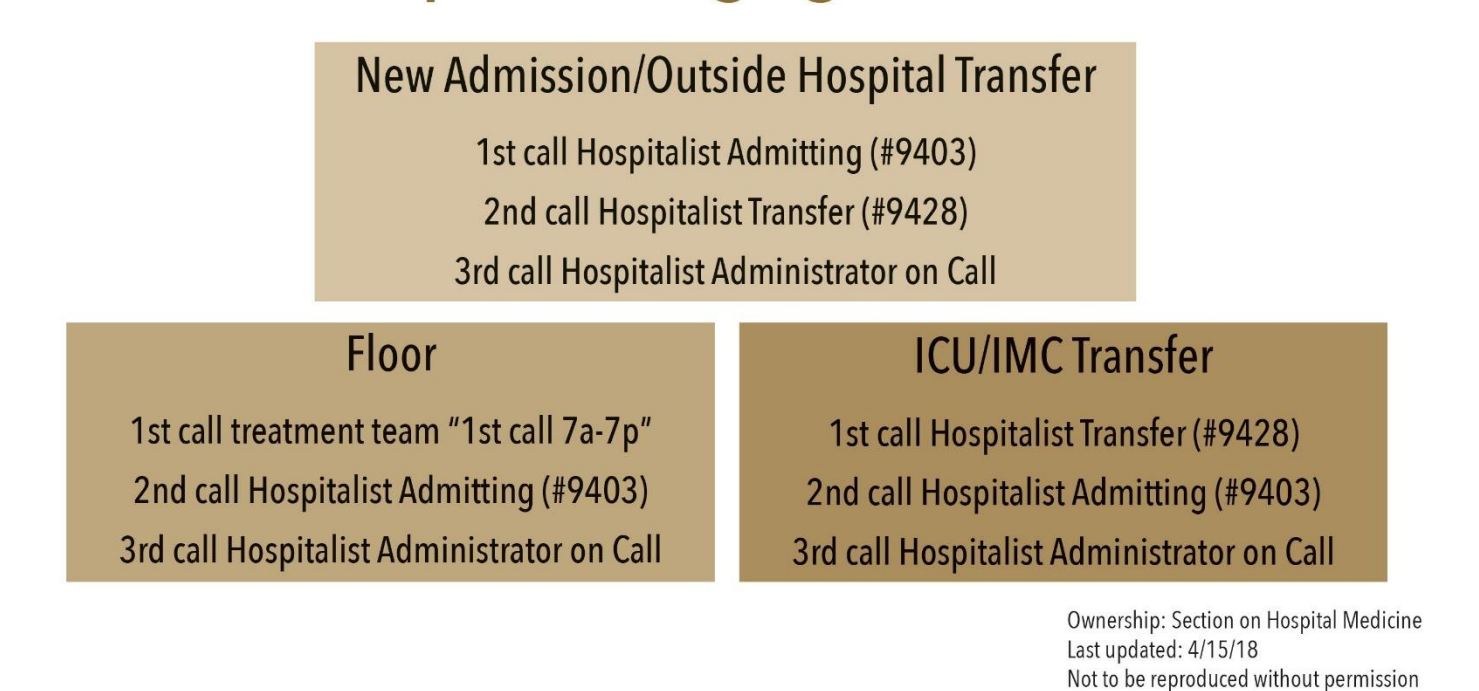


Figure 6. Nursing ID badge buddies

## Next Steps:

- Post implementation survey to be conducted to assess nursing satisfaction.
- Process Sigma Level pre and post implementation will be calculated.

## References

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