

## INTRODUCTION

DVT and PEs are the most preventable cause of death in hospitalized patients. There is evidence that routine prophylaxis reduces morbidity, mortality and cost in hospitalized patients at risk for DVT and PE as highlighted in national and international guidelines. The initial DVT or PE event increases median hospital costs by \$7,512 for DVT alone and \$18,901 for PE. The median cost incurred for subsequent post thrombotic syndrome is approximately \$25,554.

## BACKGROUND

A recent audit found 73 % of patients with active IPC orders were not wearing the devices, most lying in bed. Additionally:

- 38% of the patients with an active IPC order did equipment in rooms
- 49% of patients not wearing IPC devices had no documented reason for not wearing the devices

## OBJECTIVES

- To improve compliance with physician ordered IPC therapy
- To promote sustained compliance improvement

## METHODS & RESULTS

**Phase 1:** Root cause analysis to determine if IPC supply and demand were related to non-compliance for patients with no equipment in the rooms, including patient tracking to determine if transferring unit impacted IPC compliance.

### Results

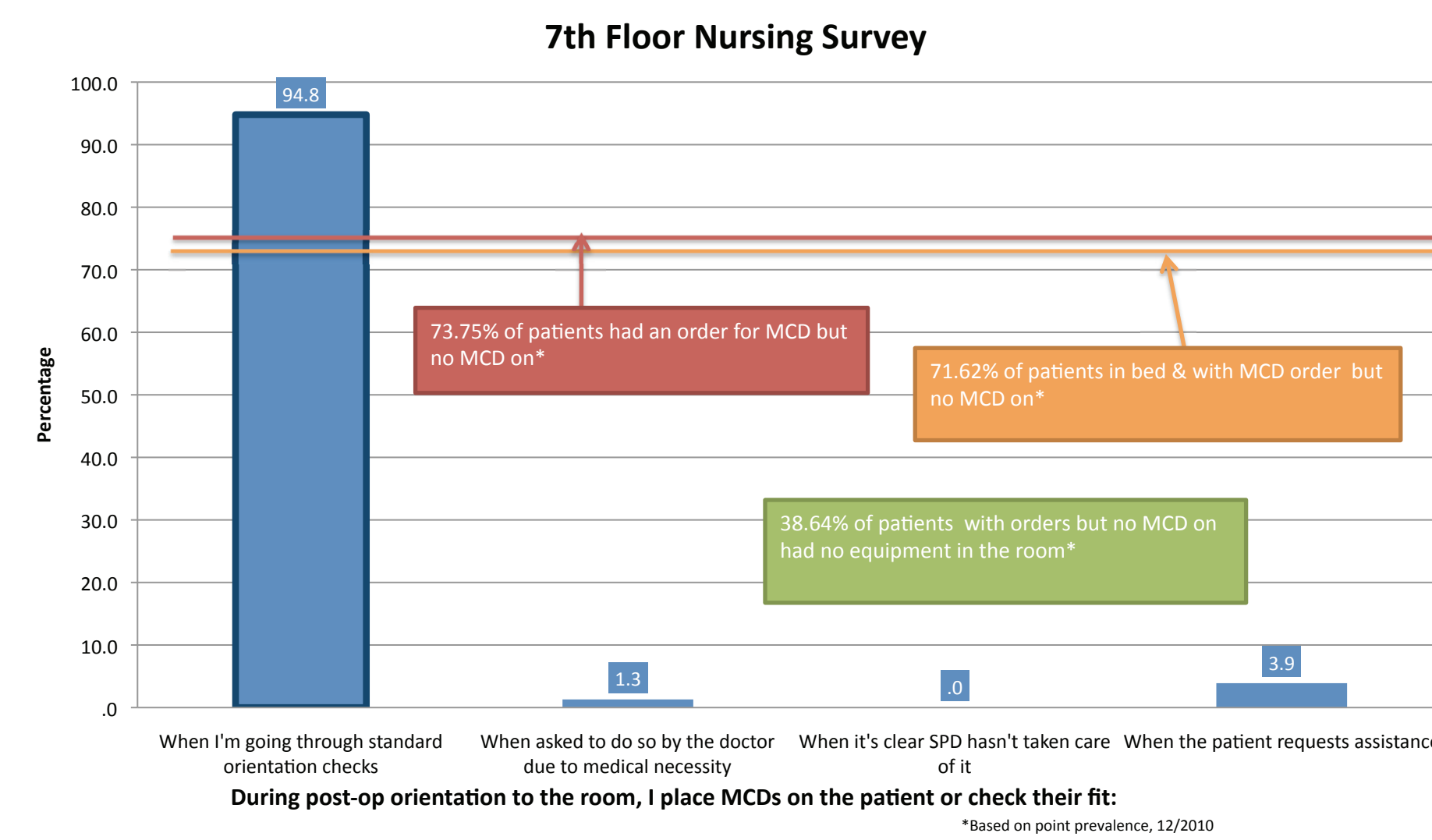
- Device supply was almost twice device demand
- Patients admitted to the surgical units were more likely to have IPCs in place if transferred from units routinely stocking IPCs on unit

## METHODS & RESULTS

**Phase 2:** Nurses surveyed to assess knowledge and perceptions about IPC therapy and DVT prevention.

### Results

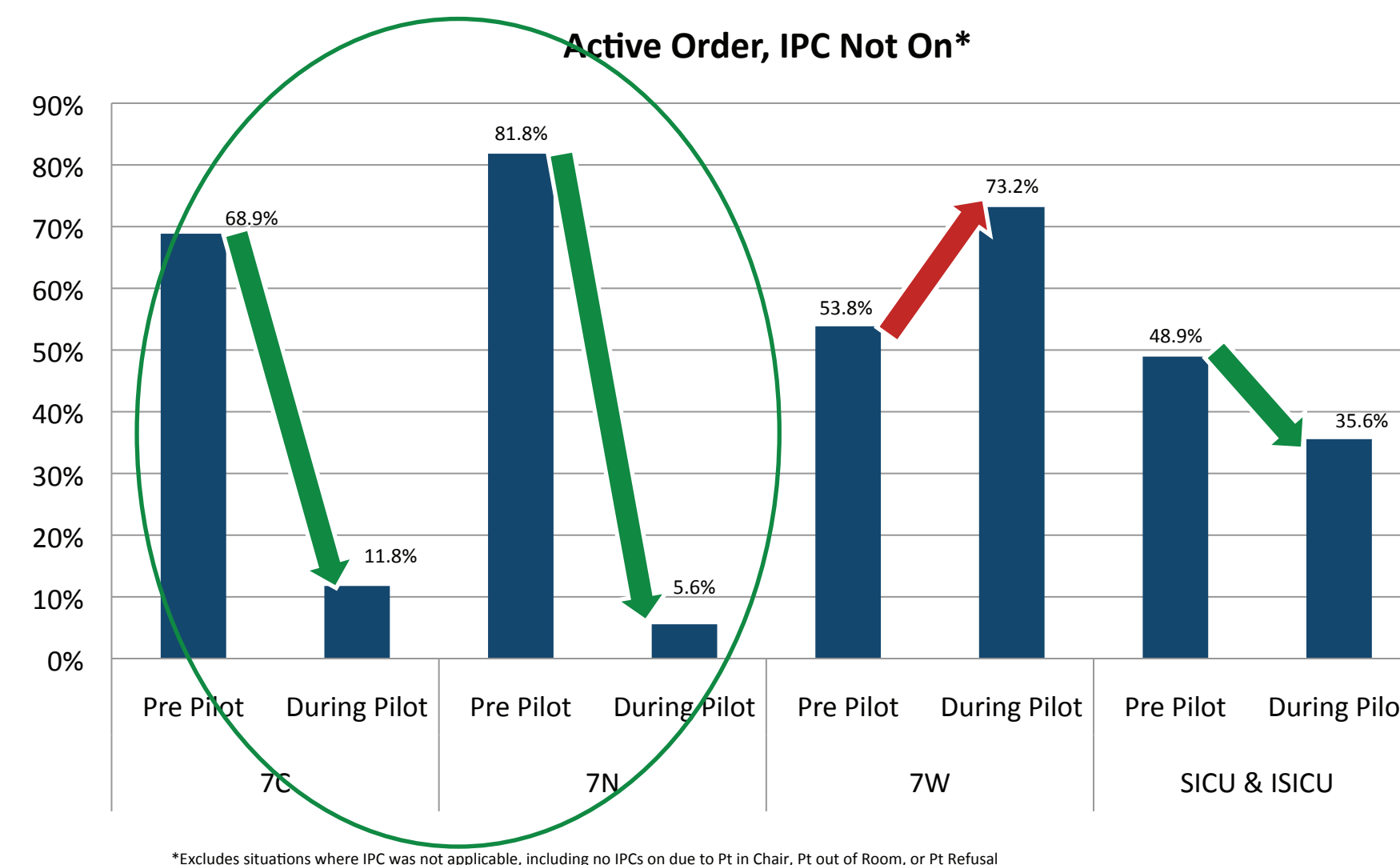
- A lack of knowledge related to risk factors for DVT
- Self reported inconsistencies in practice related to IPC
- Respondents reported checking IPCs during hourly rounding yet audits showed low compliance



**Phase 3:** Pilot project conducted on the surgical floor - two units changed practice, two units served as controls. Change in practice included housing IPCs in all beds at all times and staff nurse education by the Clinical Nurse Specialists utilizing a standardized, evidence based curriculum. Weekly point prevalence counts for the entire floor were conducted.

### Results

- A marked reduction in non-compliance occurred on pilot units.



## METHODS & RESULTS

### Phase 3:

#### Results

- Risk estimate analysis and Chi-Square analysis
- Statistically significant improvement on pilot units ( $p=0.01$ ).
- Changes in compliance on non-pilot units not significant ( $p>0.05$ )
  - During pilot, non-pilot unit patients were less likely to have IPCs on than during the pre-pilot phase.

	Pilot Units			Non Pilot Units			
		IPC On	Total		IPC On	Total	
Pre Pilot	# 70	25	95	Pre Pilot	# 41	38	79
	% 73.7%	26.3%	100.0%	% 51.9%	48.1%	100.0%	
During Pilot	# 65	50	115	During Pilot	# 68	42	110
	% 56.5%	43.5%	100.0%	% 61.8%	38.2%	100.0%	
Total	# 135	75	210	Total	# 109	80	189
	% 64.3%	35.7%	100.0%	% 57.7%	42.3%	100.0%	

Chi-Square Test								
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)		Exact Sig. (2-sided)		
Pearson Chi-Square	6.674	1	.010		Pearson Chi-Square	1.853	1	.173
N of Valid Cases	210				N of Valid Cases	189		

Shows there is a significant difference between pre and during pilot time periods because the significance level is  $p<.05$ .

Shows there is not a significant difference between pre and during pilot time periods because the significance level is  $p>.05$ .

## CONCLUSION

IPC use can improve with changes in in device accessibility, nurse education, patient education, and routine monitoring. Nursing procedure was changed at the institution to reflect the following:

- House IPC devices in all surgical patient rooms
- Implement new mandatory nursing staff education
- Implement new patient education
- Implement new monthly compliance monitoring

## REFERENCES

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