

Impact on Further Utilization of Hospital Services Among Discharged Frail Elders

An Evaluation of Integrated Care and Discharge Support Service in Kowloon Central Cluster

Mak YF¹, Chan LT¹, Chui ESM², Lui NTC², Ngai JSC², Kwan SY², Leung KF³, Lau PMY⁴
Li PCK¹, Cheung H⁵

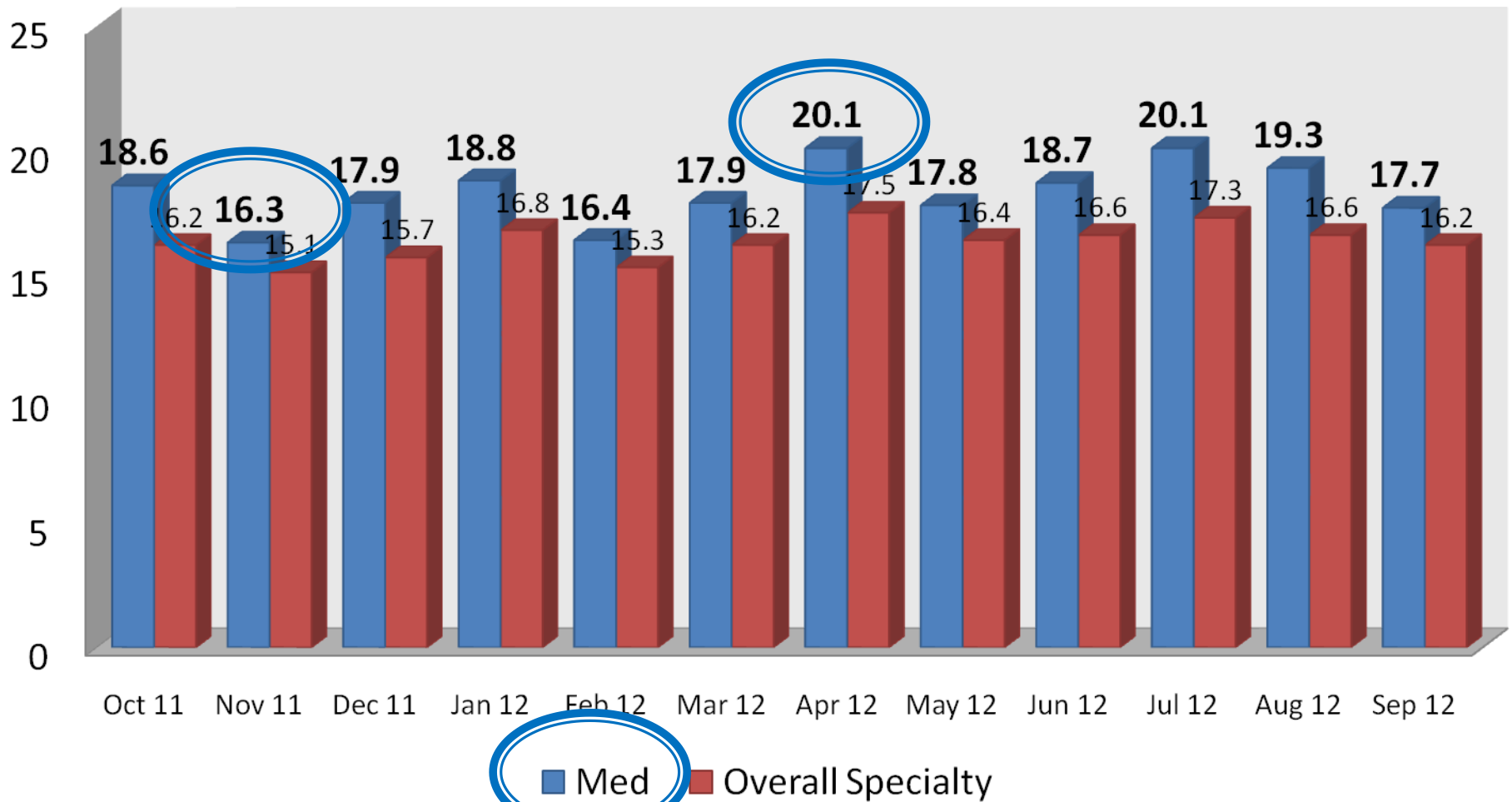
¹Department of Medicine, QEH; ²Central Nursing Division, KH; ³Occupational Therapy Department, QEH; ⁴Physiotherapy Department, QEH; ⁵HCE, KH

Older People are major clients

- ▶ 15.5 % of our catchment population.
- ▶ occupied **56.2%** of the KCC bed-days (2011–12)



High Unplanned Readmission rates of Older people (28-days) ≥ 60 years in QEH



Unplanned Readmission

“Many of these readmissions are avoidable”



Obama 2009
Health Care Reform

ICDS / ICM Services



Linked Nurse



Home Support Team



鄰舍輔導會家居支援隊



Case Managers



GDH, CGAT



Enhanced CNS



Call Centre



Objectives

- (1) Evaluate the **impact of Case Management and Home Support Team** service of ICDS/ICM
- (2) On the **utilization of hospital based services**
 - AED attendance rate
 - Medical readmission rate
 - Average length of stay (LOS)

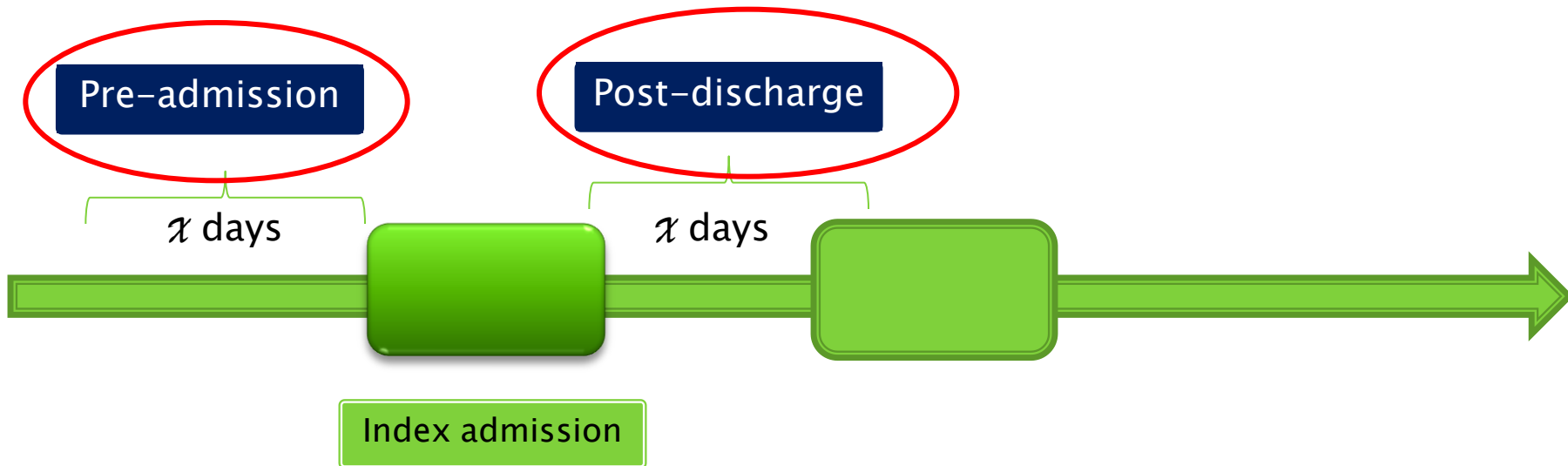


Methodology

- Retrospective analysis
 - ▶ Patient list
 - Out-patient Appointment System (OPAS)
 - Patient based analysis
 - ▶ Data
 - Clinical Data Analysis and Reporting System (CDARS)
 - ▶ Study period
 - 1 Oct 2011 (starts Program) to 30 Sept 2012
 - ▶ Paired t test – p value of <0.05 being significant.

Methodology

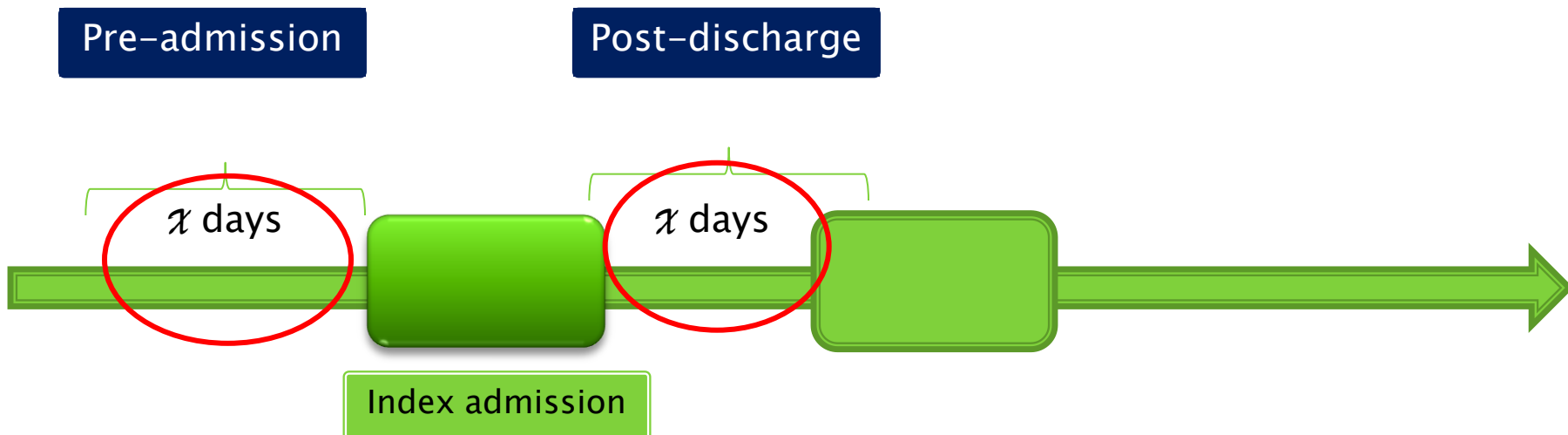
Comparisons :



- 3 different time frames (χ days)
 - 28-day
 - 90-day
 - 180-day

Methodology

► Comparisons :

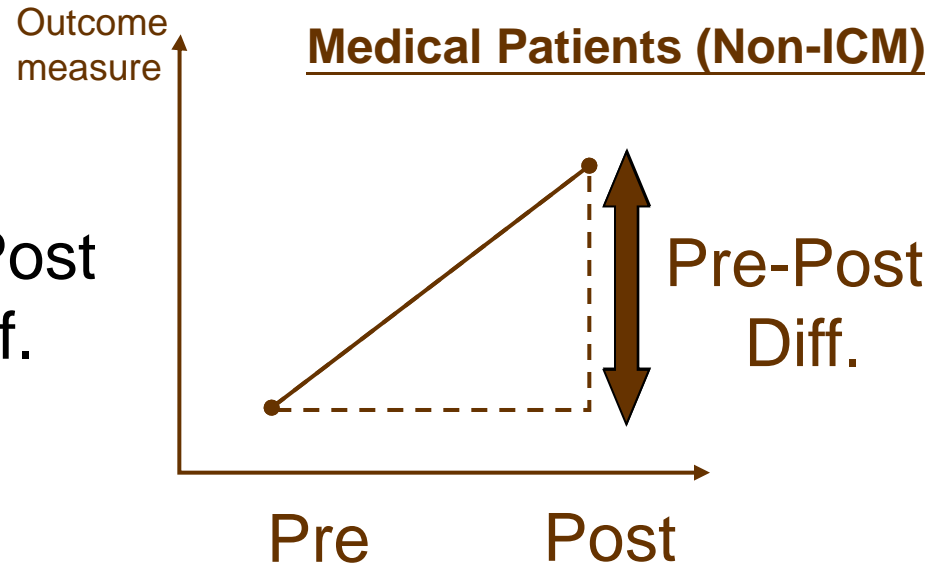
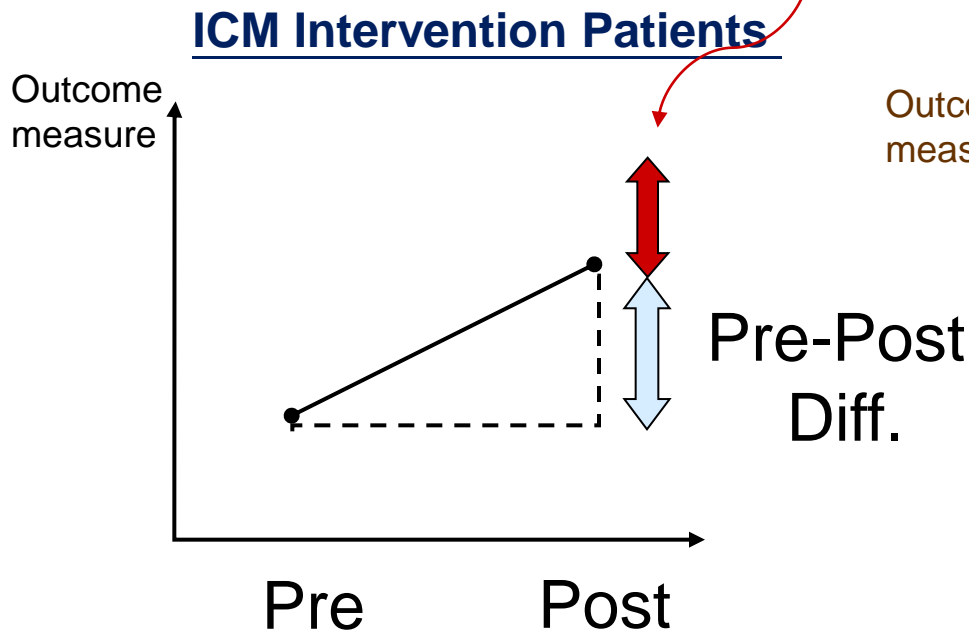


x days	No of Med pt (>60 yr)
28 days	14955
90 days	12854
180 days	9183

Percentage Change in Outcome Measures

Expected (Post) if NO intervention

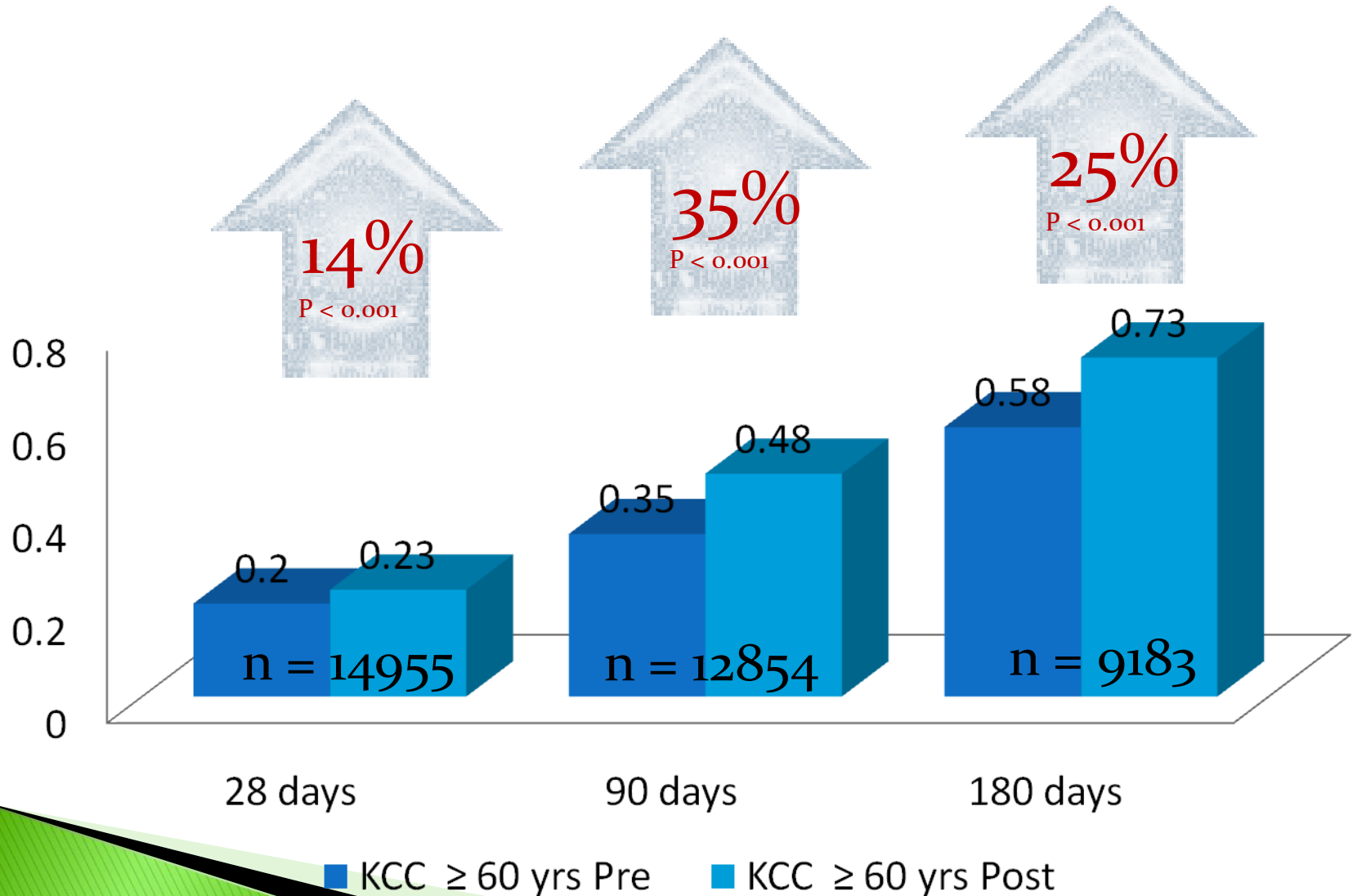
$$= \text{Pre}_{\text{ICM}} (100\% + \% \text{Changes of Pre-Post Diff}_{\text{Non-ICM}})$$



$$\Delta \text{ Outcome} = \frac{\text{Expected (Post)} - \text{Actual (Post)}}{\text{Expected (Post)}}$$

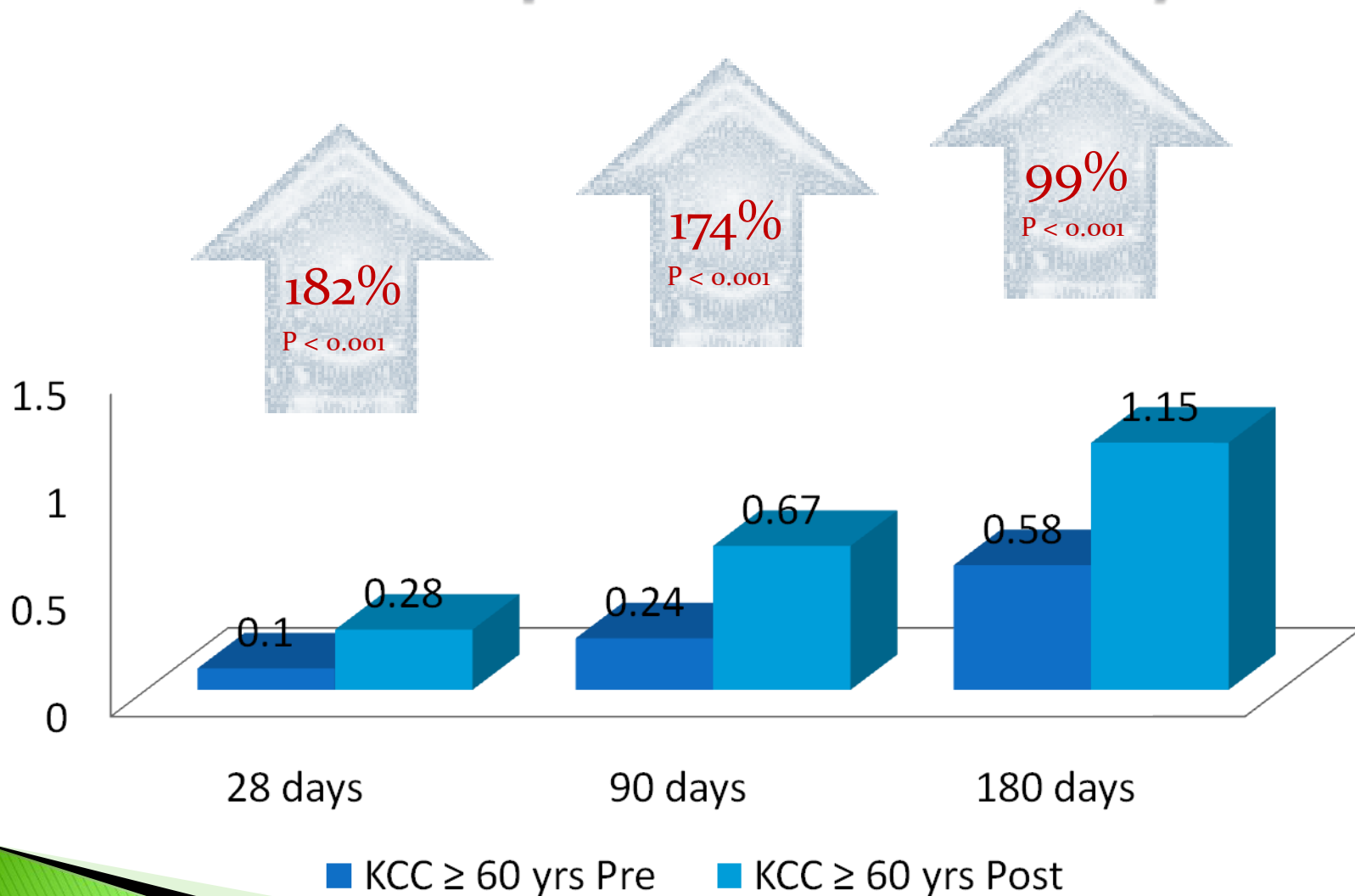
AED Attendance

All Medical patients ≥ 60 years



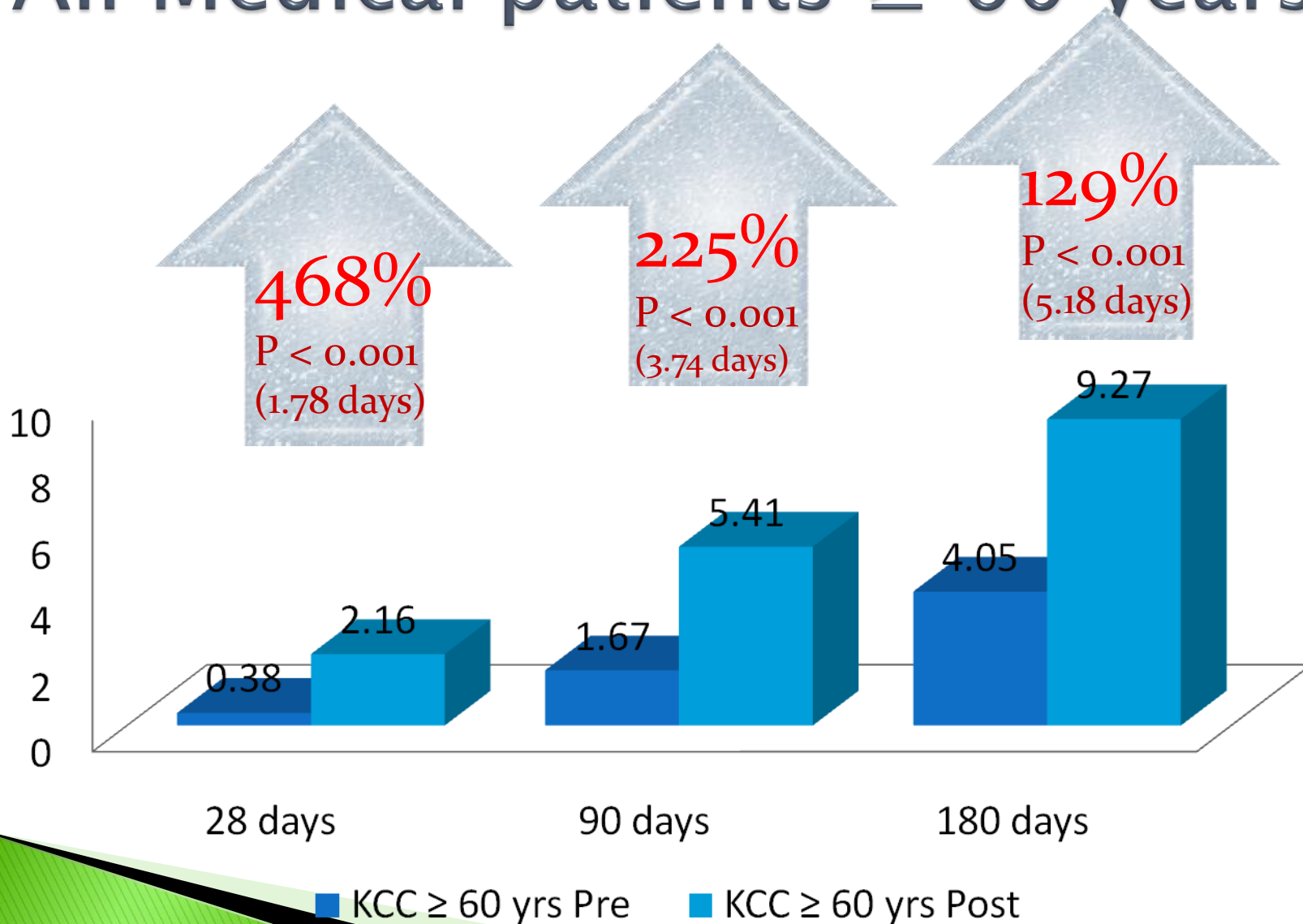
Medical Readmission Rate

All Medical patients ≥ 60 years



Average Length of Stay (days)

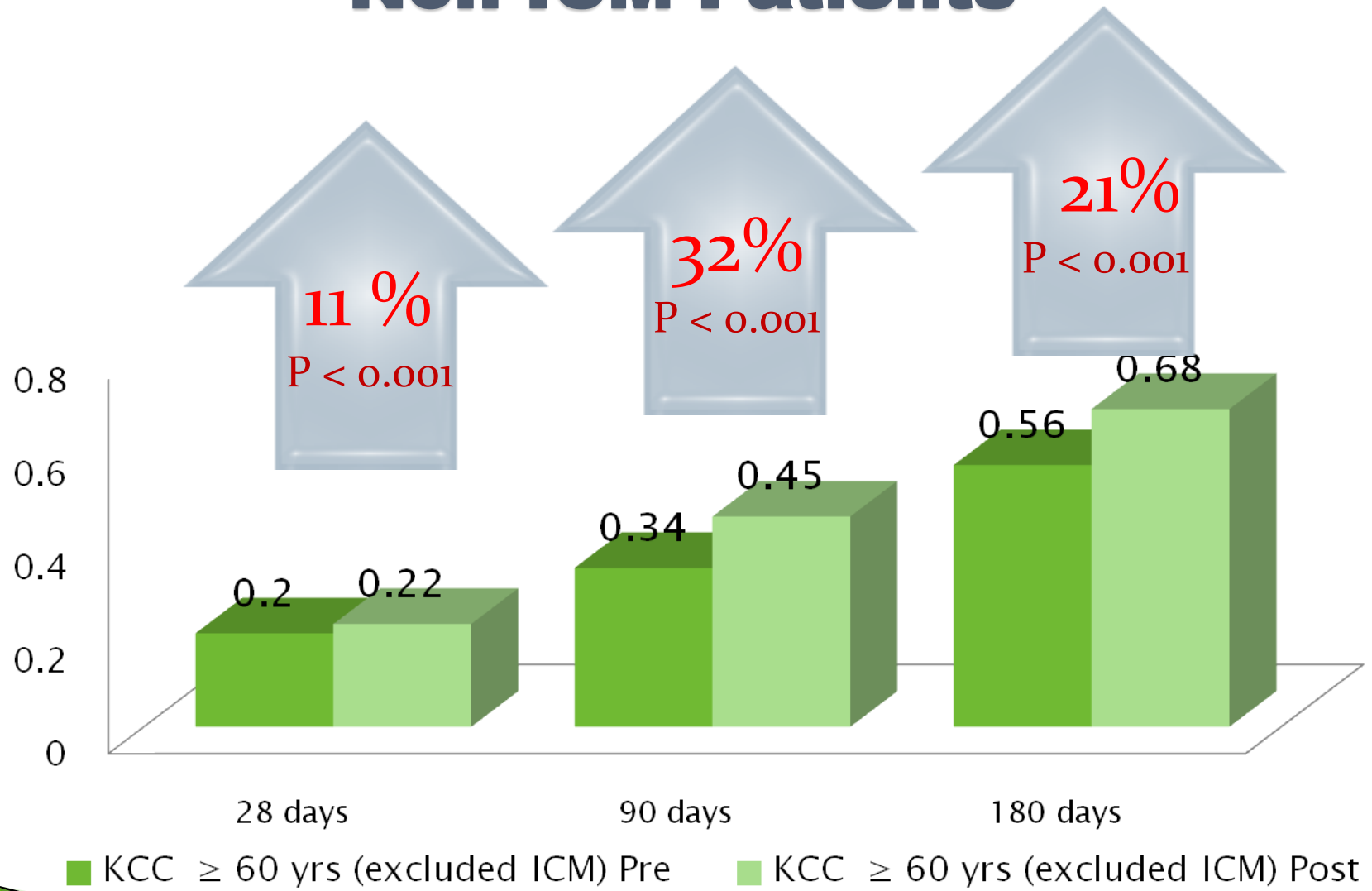
All Medical patients ≥ 60 years



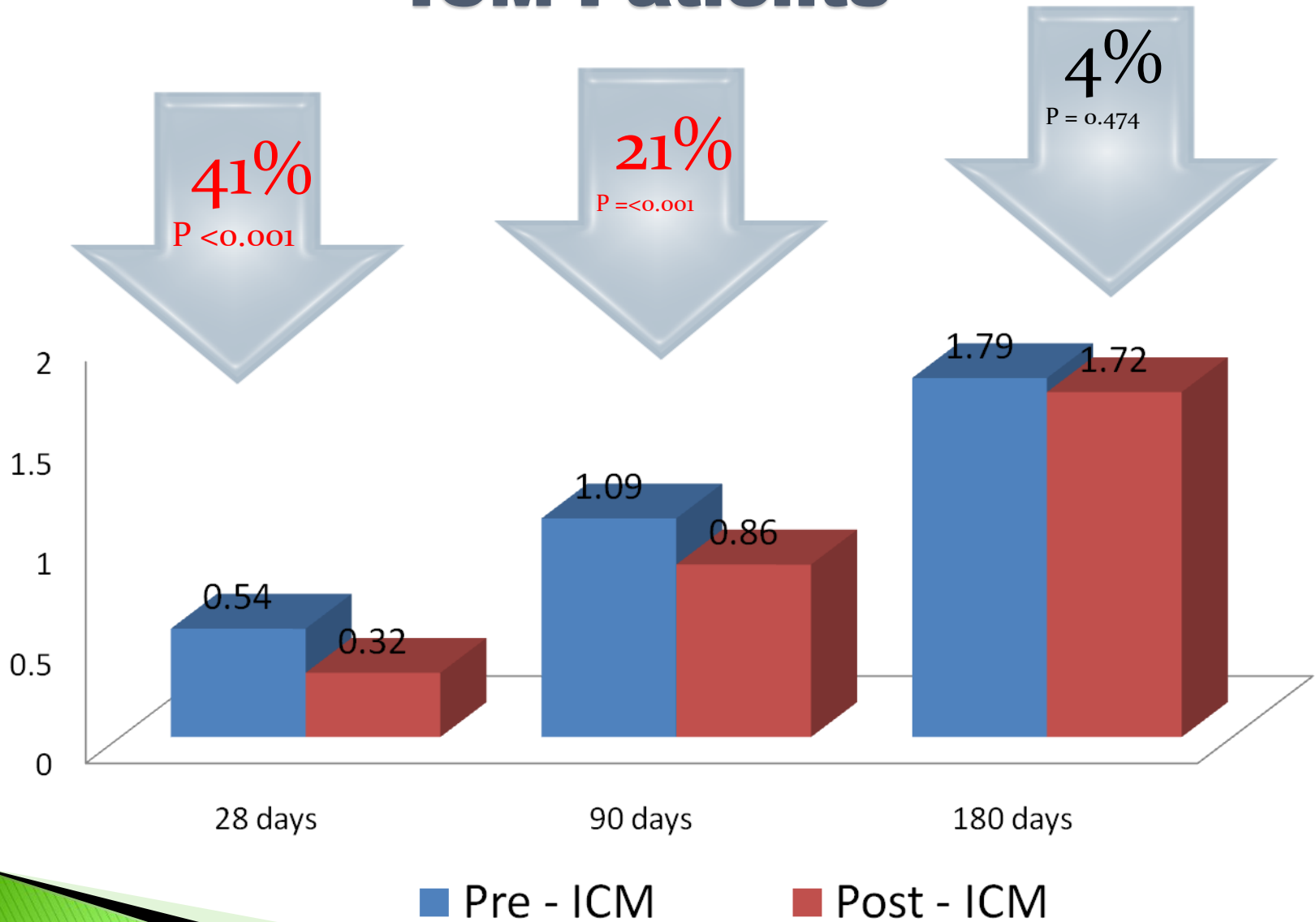
Compare non-ICM patients with ICM Patients

	Non-ICM Medical ≥ 60 yrs	ICM ≥ 60 yrs
28 days	13948 patients	1075 patients
90 days	11942 patients	895 patients
180 days	8507 patients	565 patients

AED Attendance Non-ICM Patients



AED Attendance ICM Patients



Reduction in AED Attendance with ICM intervention

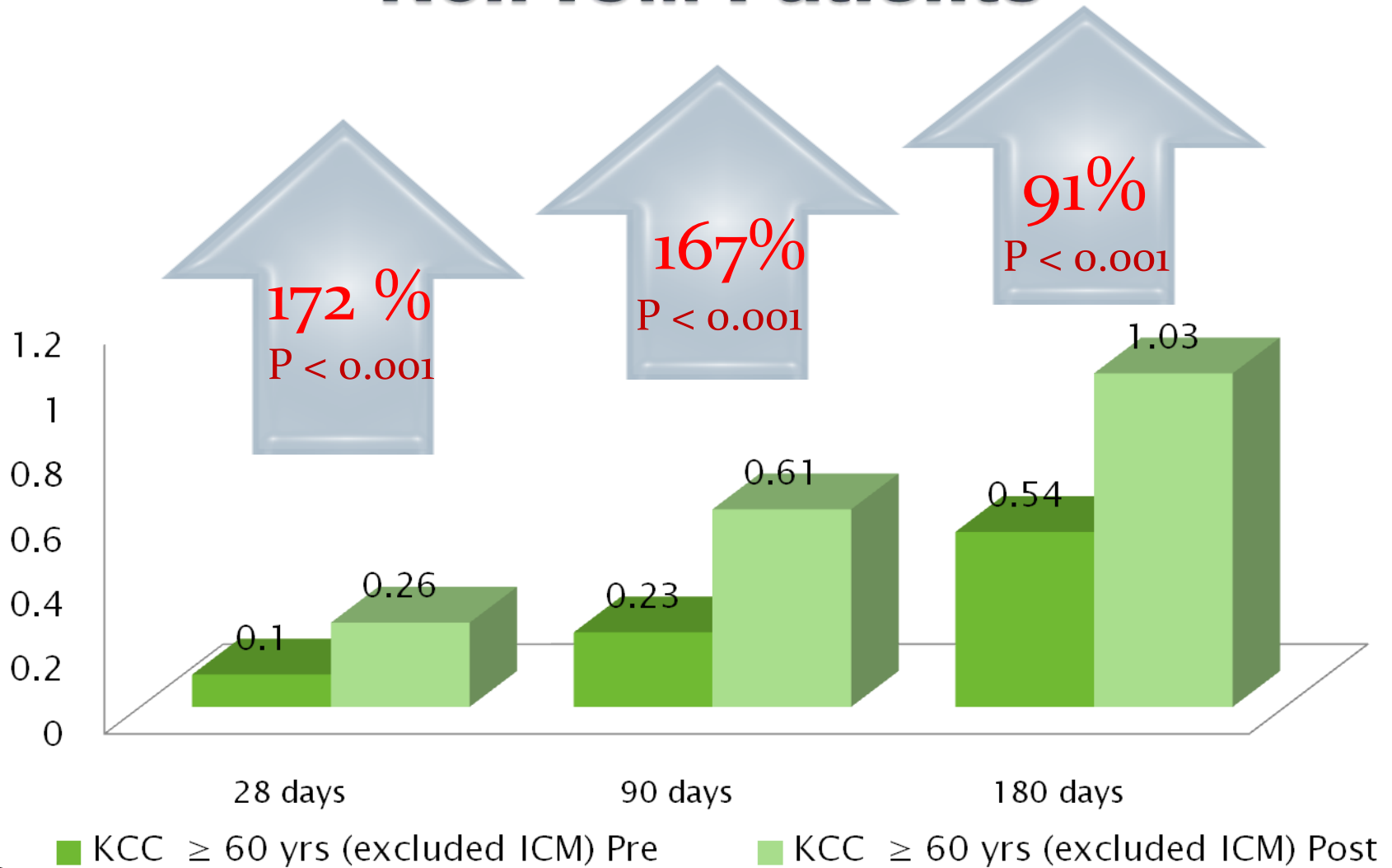
47%
(28-days)

40%
(90-days)

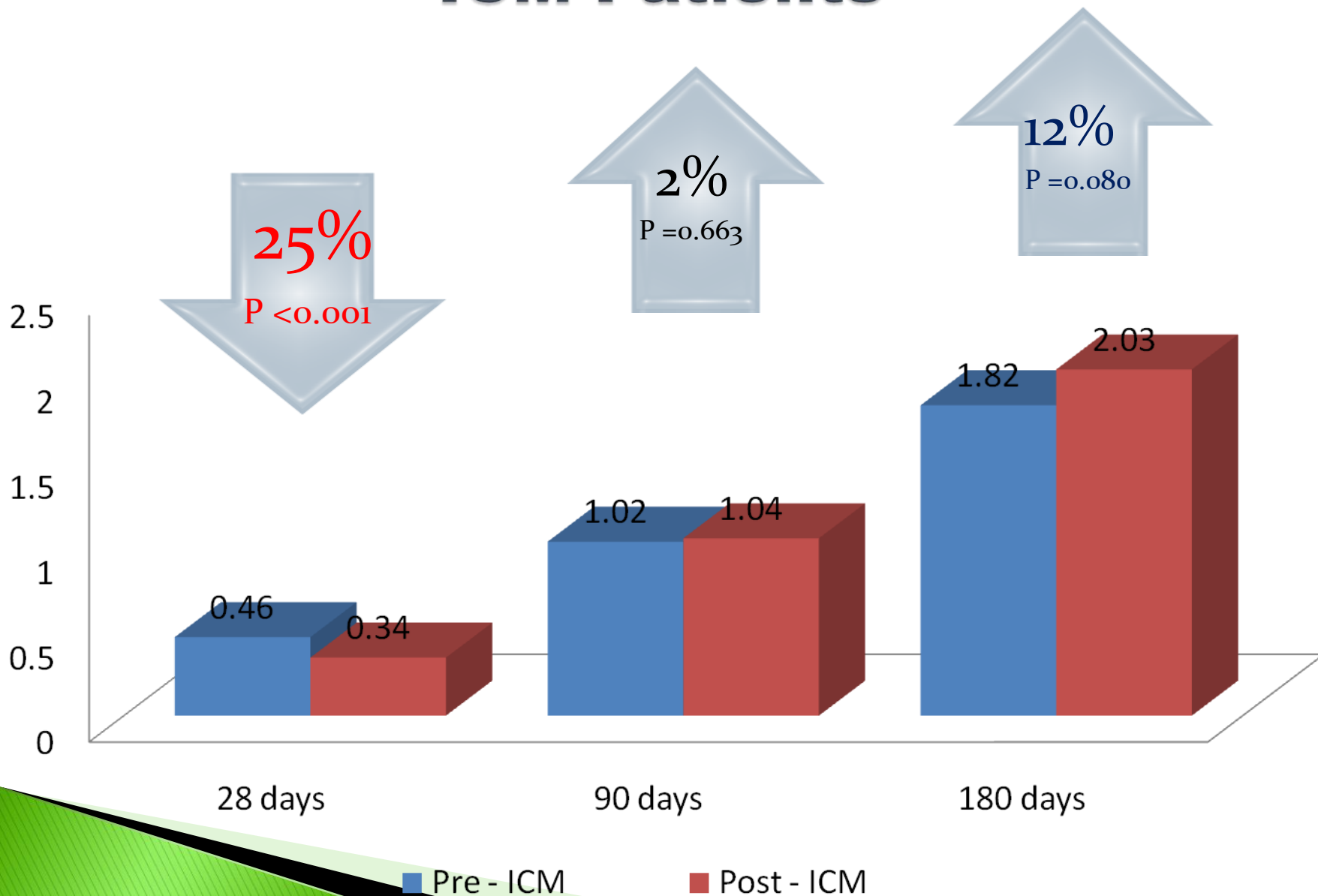
21%
(180-days)



Medical Readmission Rate Non-ICM Patients



Medical Readmission Rate ICM Patients



Reduction in Medical Readmissions with ICM Intervention

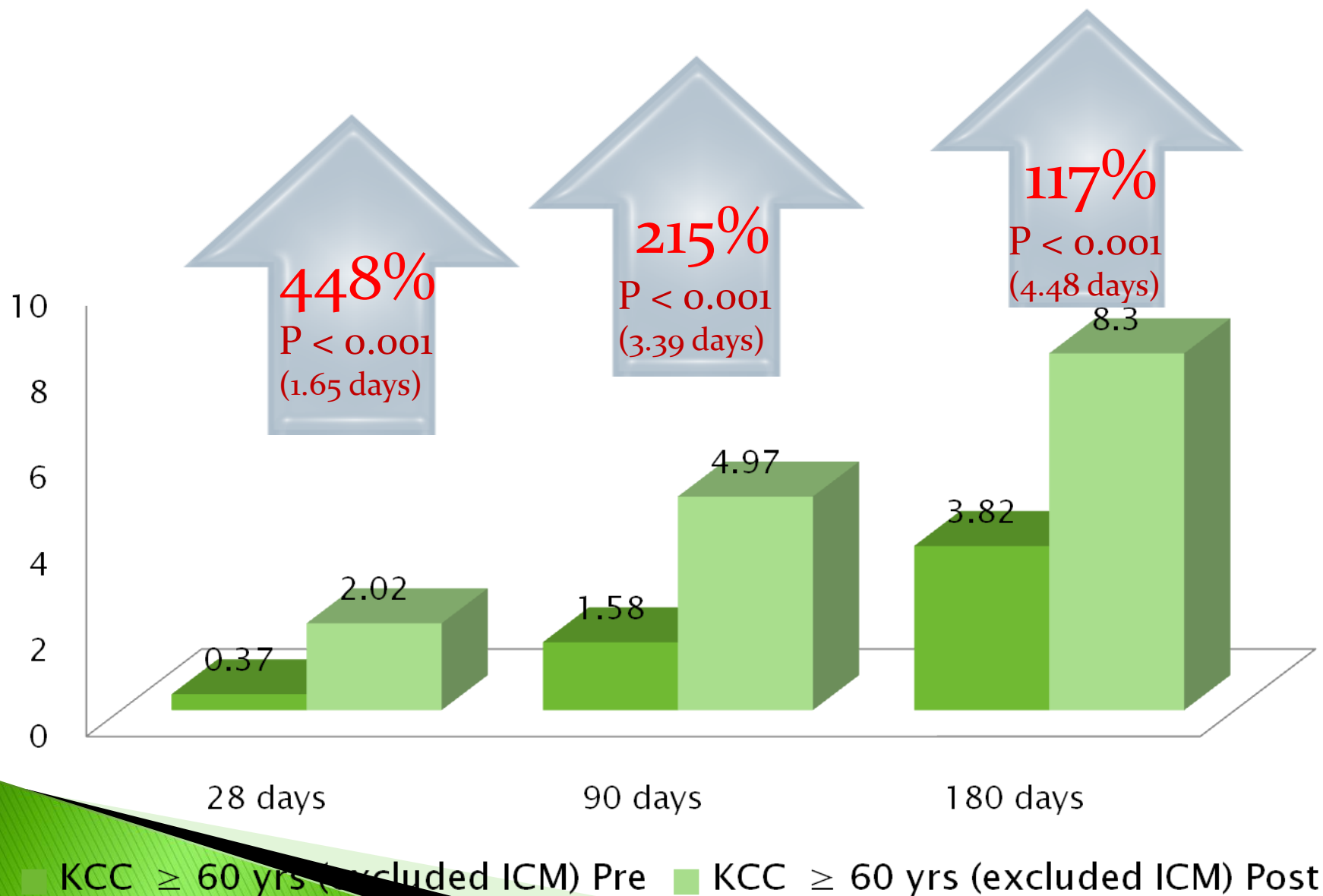
72%
(28-days)

62%
(90-days)

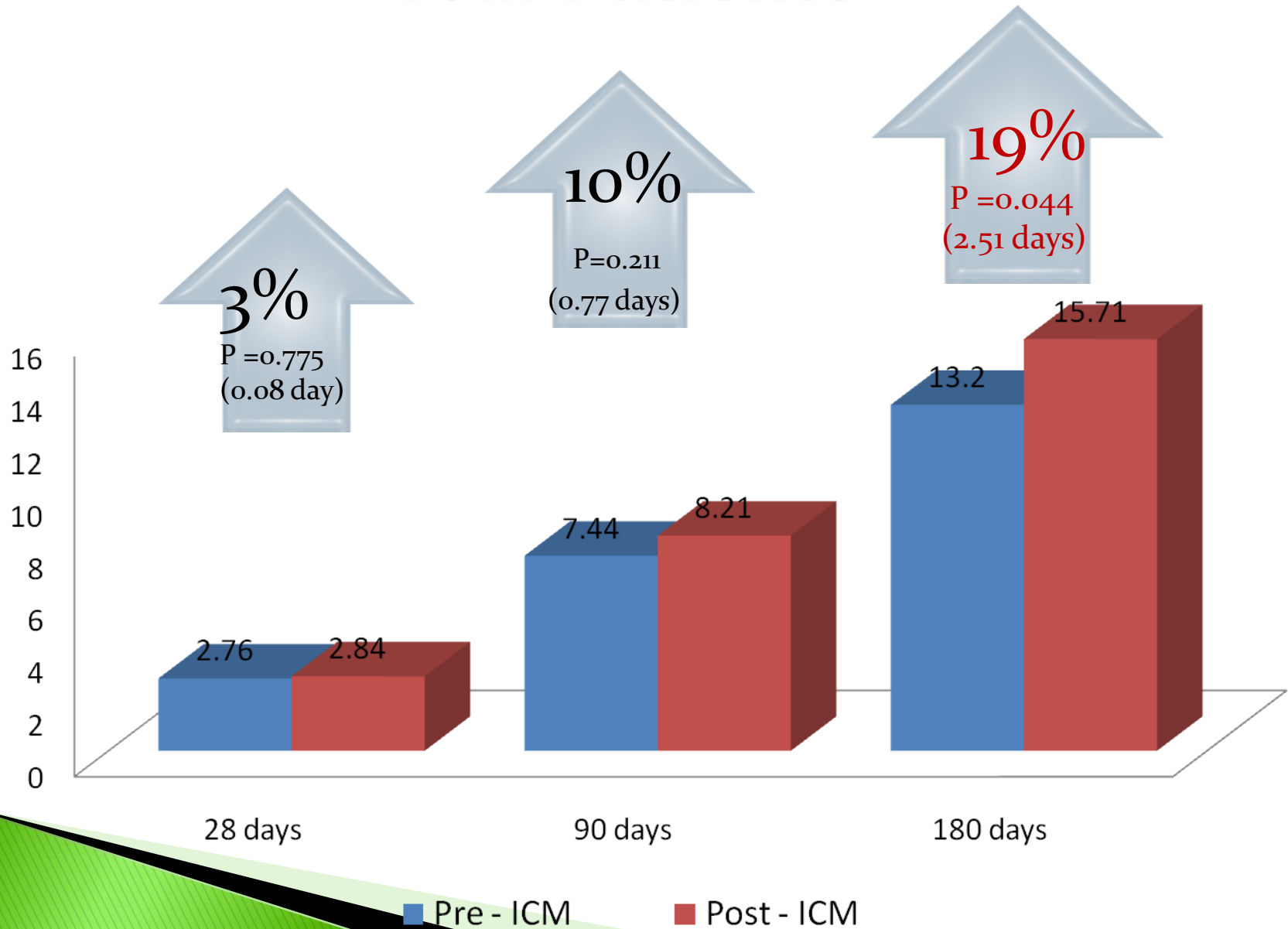
41%
(180-days)



Average Length of Stay (days) Non-ICM Patients



Average Length of Stay (days) ICM Patients



Reduction in Length Of Stay

81%

(28-days)

65%

(90-days)

45%

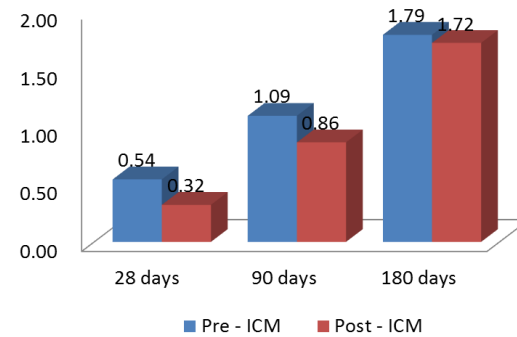
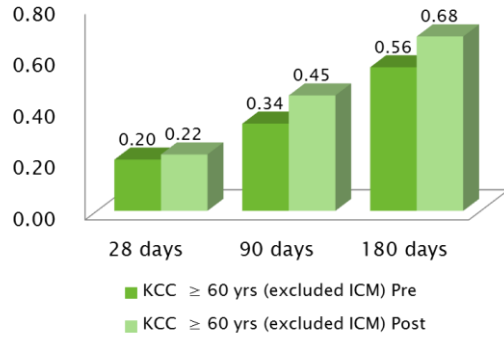
(180-days)



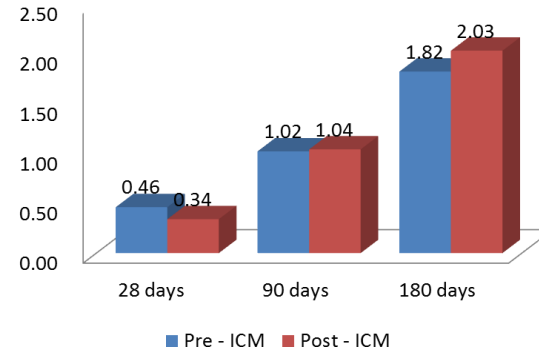
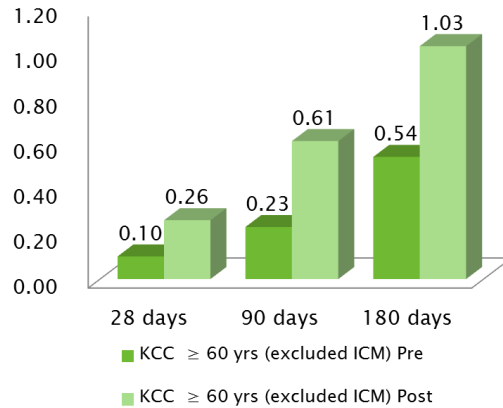
Non-ICM Patients

ICM Patients

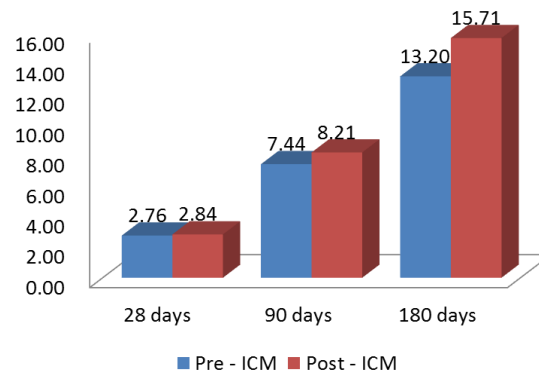
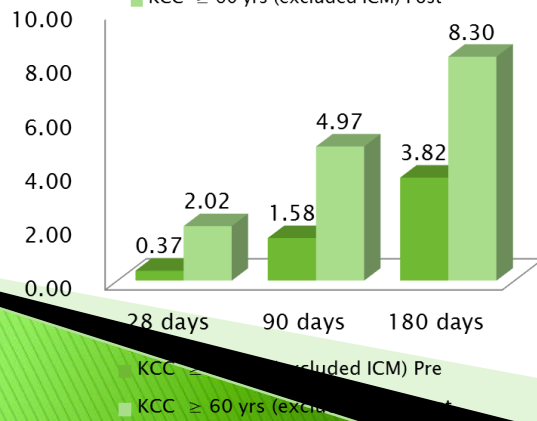
AED Visit



Re-admission



LOS



Summary

		No intervention (all Med pt aged ≥ 60)	Intervention (Frail elders)	Estimated Changes
AED visits	28 days	↑ 11%	↓ 41%	↓ 47%
	90 days	↑ 32%	↓ 21%	↓ 40%
	180 days	↑ 21%	↓ 4%	↓ 21%
Unplanned readmissions	28 days	↑ 172%	↓ 25%	↓ 72%
	90 days	↑ 167%	↑ 2%	↓ 62%
	180 days	↑ 91%	↑ 12%	↓ 41%
LOS	28 days	↑ 448%	↑ 3%	↓ 81%
	90 days	↑ 215%	↑ 10%	↓ 65%
	180 days	↑ 117%	↑ 19%	↓ 45%
Characteristics		Unplanned readmissions in 1st month or subsequent AED visits first 3 months	Stay healthy in community Not at cost of LOS	

Conclusion

- ▶ Hospitalization predicts poor outcome for older people
- ▶ ICDS/ICM is Effective gatekeeper –
 - Keep frail elderly stay healthy
 - Reduce hospital service utilization of frail elderly
- ▶ Not by delaying admissions
- ▶ Not at the cost of increasing subsequent LOS



九龍中聯網支援長者離院綜合服務
Kowloon Central Cluster -
Integrated Care and Discharge Support for Elderly Patients



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- ▶ QEH Quality and Standards Department
- ▶ Neighbourhood Advice–Action Council Home Support Team



The End