

EVALUATION OF THE PATIENT ALIGNED CARE TEAM PHARMACY TRANSITIONS OF CARE PROGRAM AT VA LONG BEACH HEALTHCARE SYSTEM

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BACKGROUND

- 30-day readmissions are a potentially preventable adverse outcome that contributes to the financial burden of the healthcare system.
- At VA Long Beach Healthcare System (VALBHCS), a pharmacy transitions of care (TOC program was started on April 25, 2018).
- As part of the TOC program, patient aligned care team (PACT) Clinical Pharmacy Specialists (CPS) were assigned to complete post-discharge medication reconciliation within 7 days of the patient's discharge and make clinically appropriate interventions based on PACT CPS scope of practice.

OBJECTIVES

- Primary Objectives: Compare 30-day all-cause readmission rates amongst: Group 1 (Both), patients who received both CPS post-discharge medication reconciliation and nursing follow ups; Group 2 (CPS), patients who received CPS post-discharge medication reconciliation only; Group 3 (Nursing), patients who received nursing follow up only; Group 4 (None), patients who received no CPS post-discharge medication reconciliation nor nursing follow up.
- Secondary Objective: 1) Compare 30-day readmission rates related to ACSCs and 2) rates of non-adherence at 30-day readmission in patients identified as non-adherent at baseline amongst the four groups.

METHODS

- Retrospective chart review, IRB determined quality-improvement project.
- Data Source:** VHA Computerized Patient Record System and VHA Corporate Data Warehouse.
- Study Period:** Between July 1st, 2019 to September 30, 2019.
- Inclusion Criteria:** All patients discharged from VALBHCS between September 1, 2018 and September 30, 2018.
- Exclusion criteria:** 1) Post-discharge medication reconciliation consult was not ordered and 2) Consult was ordered for patients who did not meet referral eligibility criteria.
- Statistical Analysis:**
 - Descriptive, chi-square, and ANOVA statistics performed using Microsoft Excel.
 - Significance set for $p < 0.05$ for initial analysis and $p < 0.01$ for post-hoc analysis (with Bonferroni correction).

RESULTS

Figure 1: Patient Enrollment

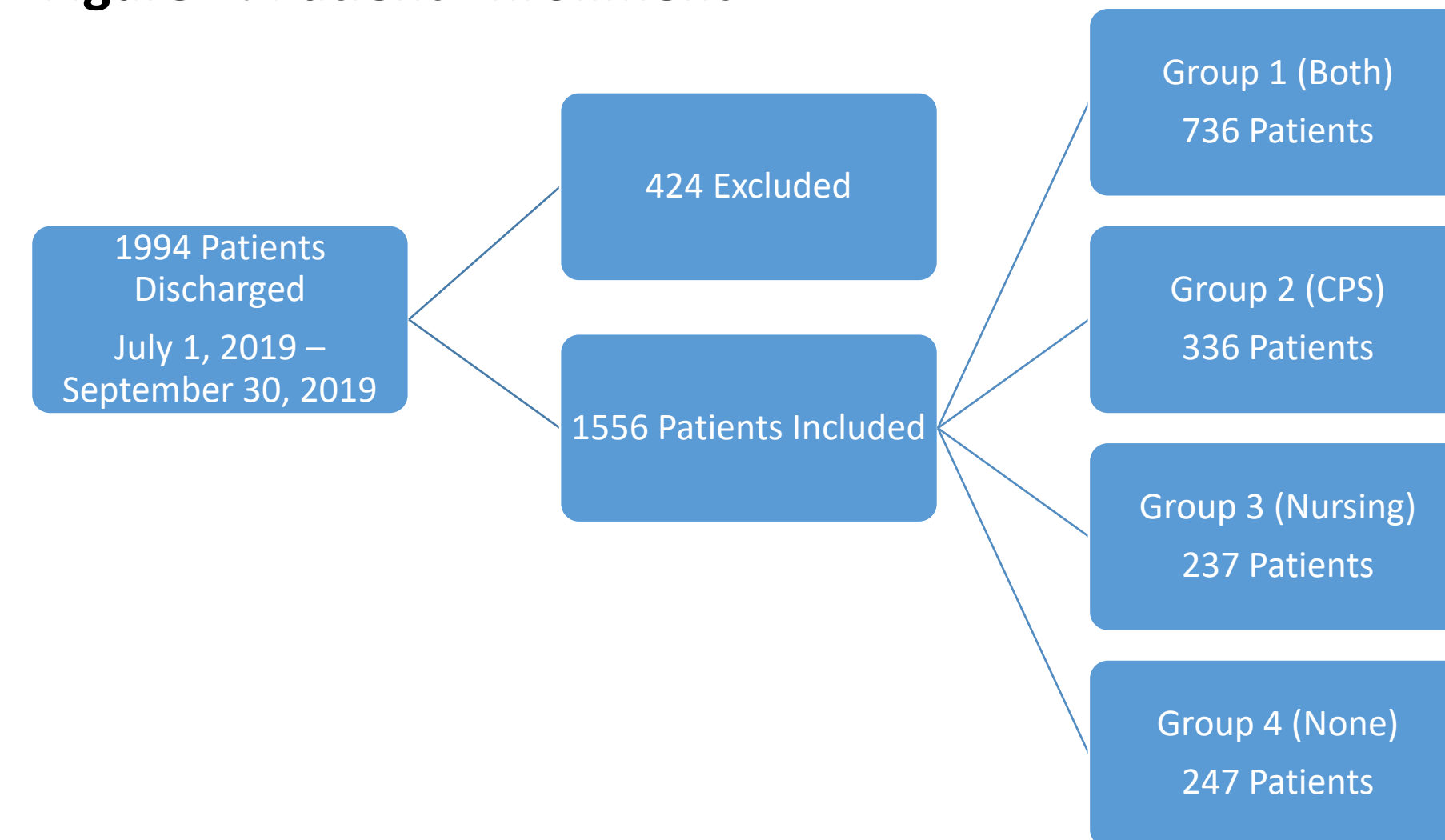


Table 1: Consulted Patients' Characteristics

	Group 1 (Both) n=736	Group 2 (CPS) n=336	Group 3 (Nursing) n=237	Group 4 (None) n=247	P-value
Average Age (SE)	65.1 (±0.55)	63.3 (±0.84)	63.4 (±1.00)	58.3 (±1.09)	<<0.001
Male (%)	701 (95.2)	326 (97)	222 (93.7)	232 (93.9)	0.21
Average Risk 3M [%] (SE)	3.56 (±0.23)	3.34 (±0.32)	4.64 (±0.56)	3.69 (±0.44)	0.12
Average # of Medications at Index Discharge (SE)	13.3 (±0.26)	12.7 (±0.38)	12.7 (±0.45)	10.4 (±0.43)	<<0.001
Average # of Supplies at Index Discharge (SE)	0.91 (±0.054)	0.77 (±0.072)	0.58 (±0.071)	0.64 (±0.11)	0.006
Average # of Days to first CPS contact attempt (SE)	3.5 (±0.067)	3.7 (±0.11)	3.9 (±0.15)	3.6 (±0.15)	0.024
Average # of Days to CPS Med. Rec. Complete (SE)	4 (±0.08)	3.8 (±0.12)	-	-	0.08
ACSC Index Discharge Diagnosis (%)	119 (16.2)	59 (17.6)	45 (19)	35 (14.2)	0.50

*Risk 3M score is the likelihood of a patient being admitted in 90 days

Figure 2: Readmission within 30 Days

Readmission within 30 Days (n=1556)

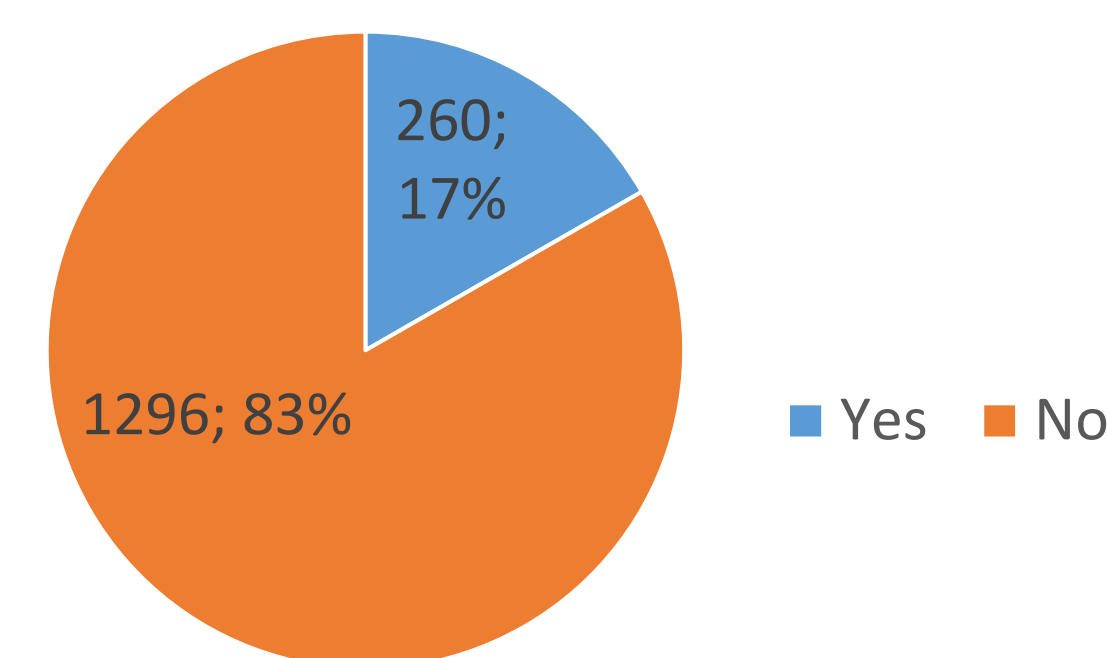


Table 2: 30-Day All-Cause Readmissions

	Group 1 (Both) n=736	Group 2 (CPS) n=336	Group 3 (Nursing) n=237	Group 4 (None) n=247	P-value
30-Day Readmission (%)	100 (13.6)	51 (15.2)	47 (19.8)	62 (25.1)	<<0.001

Table 3: 30-Day All-Cause Readmissions Post-Hoc Analysis

	Group 3 (Nursing) n=237	Group 4 (None) n=247	P-value
30-Day Readmission (%)	47 (19.8)	62 (25.1)	0.165
	Group 2 (CPS) n=336	Group 4 (None) n=247	P-value
30-Day Readmission (%)	51 (15.2)	62 (25.1)	0.003
	Group 1 (Both) n=736	Group 4 (None) n=247	P-value
30-Day Readmission (%)	100 (13.6)	62 (25.1)	<<0.001
	Group 2 (CPS) n=336	Group 3 (Nursing) n=237	P-value
30-Day Readmission (%)	51 (15.2)	47 (19.8)	0.145
	Group 1 (Both) n=736	Group 3 (Nursing) n=237	P-value
30-Day Readmission (%)	100 (13.6)	47 (19.8)	0.02

Table 4: Amcare Sensitive Conditions (ACSC) 30-Day

	Group 1 (Both) n=736	Group 2 (CPS) n=336	Group 3 (Nursing) n=237	Group 4 (None) n=247	P-value
30-Day Readmission with ACSC Diagnosis (%)	19 (2.6)	9 (2.7)	13 (5.5)	4 (1.6)	0.06
30-Day Readmission with same ACSC Diagnosis as Index Discharge (%)	4 (0.5)	4 (1.2)	6 (2.1)	2 (0.8)	0.18

Figure 3: Non-Adherence at Baseline

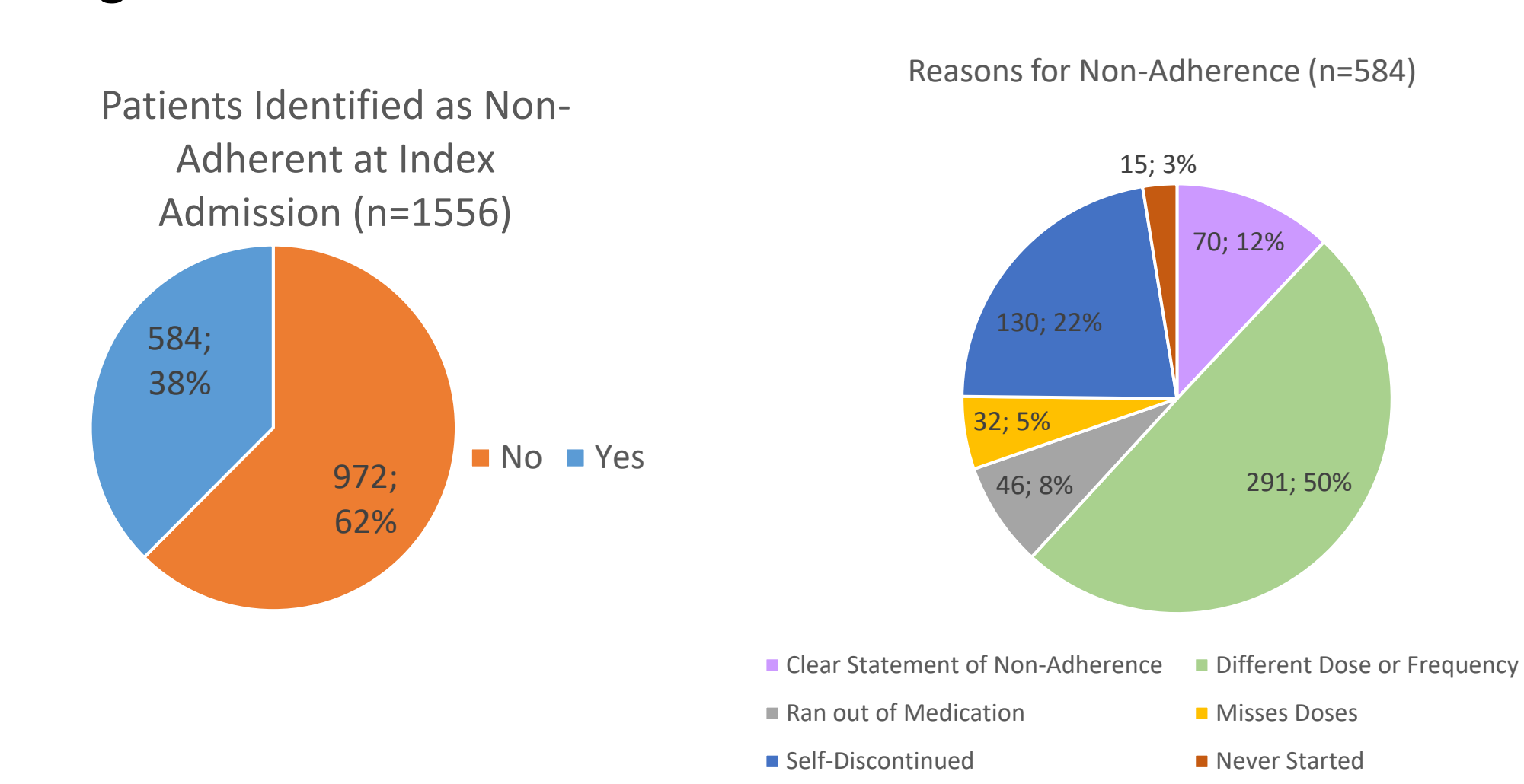


Table 5: Non-Adherence at Baseline

	Group 1 (Both) n=736	Group 2 (CPS) n=336	Group 3 (Nursing) n=237	Group 4 (None) n=247	P-value
Baseline Non-Adherence (%)	278 (37.8)	112 (33.3)	87 (36.7)	107 (43.3)	0.10

Table 6: Reasons for Non-adherence at Baseline

Reason for Non-Adherence at Index Admission (%)	Group 1 (Both) n=278	Group 2 (CPS) n=112	Group 3 (Nursing) n=87	Group 4 (None) n=107
Different Dose or Frequency	166 (59.7)	58 (51.8)	39 (44.8)	28 (26.2)
Self-Discontinued	53 (19.1)	26 (23.2)	25 (28.7)	26 (24.3)
Clear Statement of Non-Adherence	23 (8.3)	12 (10.7)	9 (10.3)	26 (24.3)
Ran out of Medication	17 (6.1)	10 (8.9)	5 (5.7)	14 (13.1)
Misses Doses	11 (4.0)	3 (2.7)	8 (9.2)	10 (9.3)
Never Started	8 (2.9)	3 (2.7)	1 (1.1)	3 (2.8)

Table 7: Non-Adherence Rates at 30-Day Readmission in Baseline Non-adherent Patients

	Group 1 (Both) n=278	Group 2 (CPS) n=112	Group 3 (Nursing) n=87	Group 4 (None) n=107	P-value
Non-Adherence at 30-Day Readmission (%)	19 (6.8)	13 (11.6)	13 (14.9)	17 (15.9)	0.03

Table 8: Non-Adherence Rates at 30-Day Readmission in Baseline Non-adherent Patients Post-Hoc Analysis

	Group 3 (Nursing) n=87	Group 4 (None) n=107	P-value
Non-Adherence at 30-Day Readmission (%)	13 (14.9)	17 (15.9)	0.856
	Group 2 (CPS) n=112	Group 4 (None) n=107	P-value
Non-Adherence at 30-Day Readmission (%)	13 (11.6)	17 (15.9)	0.357
	Group 1 (Both) n=278	Group 4 (None) n=107	P-value
Non-Adherence at 30-Day Readmission (%)	19 (6.8)	17 (15.9)	0.006
	Group 2 (CPS) n=112	Group 3 (Nursing) n=87	P-value
Non-Adherence at 30-Day Readmission (%)	13 (11.6)	13 (14.9)	0.489
	Group 1 (Both) n=278	Group 3 (Nursing) n=87	P-value
Non-Adherence at 30-Day Readmission (%)	19 (6.8)	13 (14.9)	0.020

Table 9: Reasons for Non-adherence at Readmission

Reason for Non-Adherence at Readmission (%)	Group 1 (Both) n=19	Group 2 (CPS) n=13	Group 3 (Nursing) n=13	Group 4 (None) n=17	Total n=62
Different Dose or Frequency	12 (63.2)	8 (61.5)	5 (38.5)	3 (17.6)	28 (45.2)
Clear Statement of Non-Adherence	1 (5.3)	2 (15.4)	4 (30.8)	10 (58.8)	17 (27.4)
Self-Discontinued	4 (21.1)	1 (7.7)	2 (15.4)	3 (17.6)	10 (16.1)
Misses Doses	0	1 (7.7)	2 (15.4)	1 (5.9)	4 (6.5)
Never Started	1 (5.3)	1 (7.7)	1 (7.7)	0	3 (4.8)
Ran out of Medication	1 (5.3)	0	1 (7.7)	0	2 (3.2)

DISCUSSION

- Results from this study suggest that the PACT CPS TOC program has a positive impact on 30-day all-cause readmission rates compared to patients who receive no follow up.
- Post-discharge follow up from both CPS and nursing appear to have a positive impact on 30-day all-cause readmission rates and improved adherence in baseline non-adherent patients.
- The PACT CPS TOC program appears to not have a significant impact on ACSC 30-day readmission rates.

CONCLUSION

- The PACT CPS TOC program appears to provide additional benefit to lower 30-day all-cause readmission rates and improved adherence at readmission in combination with the existing PACT nursing TOC program.

DISCLOSURE

The authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

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