



Clinical Safety & Effectiveness Cohort 15 Team 3

**Improving Heart Failure Follow Up After Discharge:
An Evidence Based Method For Reducing 30-day Readmission Rates**



Educating for Quality Improvement & Patient Safety

The Team

- Division

- CS&E Participant: Jason Phillips, Internal Medicine Chief Resident Quality and Safety
- Haritha Saikumar, Internal Medicine PGY-2
- Special thanks to Tera Moore Pharm. D., Associate Chief of Clinical Pharmacy Programs and Linda Nye RN with VA Quality Management as well as the entire VA Heart Failure Workgroup.
- Medicine Team B Cohort
- Edna Cruz, Facilitator M. Sc., RN, CPHQ

- Sponsoring Department:

- Patricia Wathen, MD, Internal Medicine Program Director
- David Dooley, MD, ACOS for Education at ALMVA

The Cohort 15 Team 3



Background

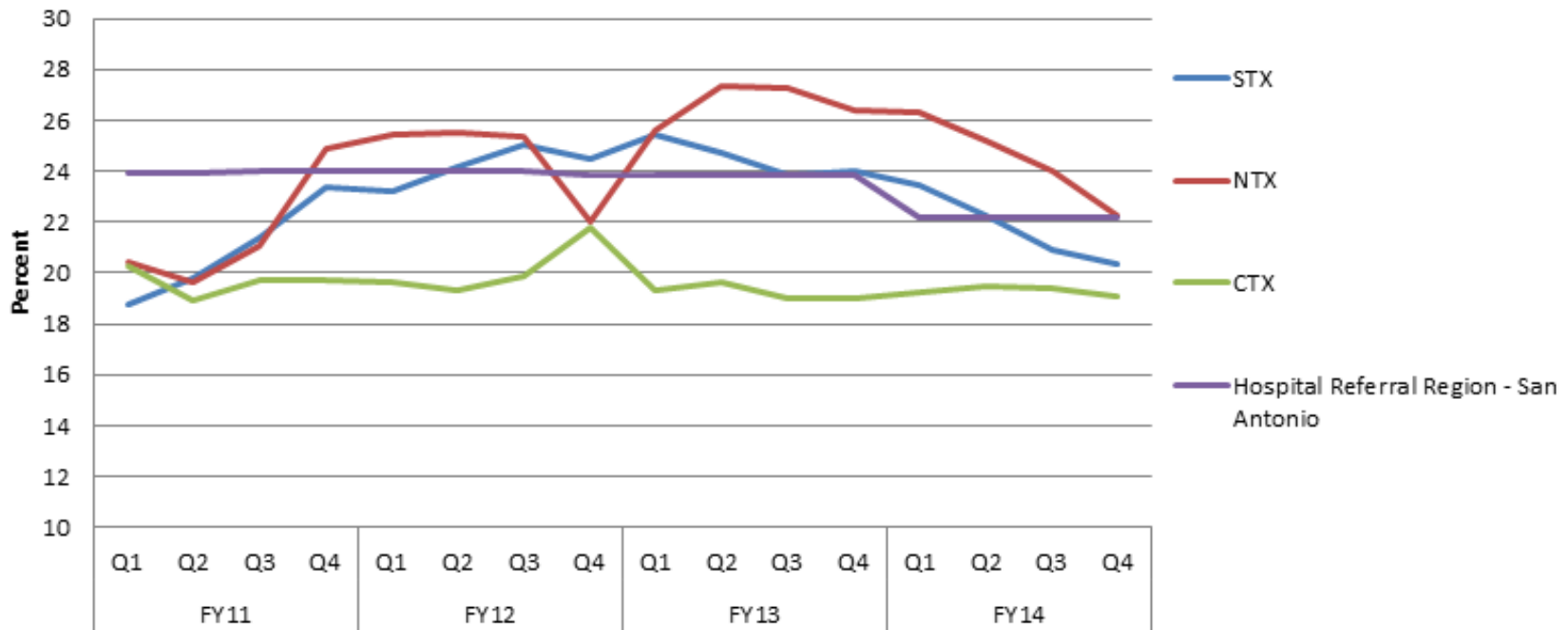
- The heart failure readmission rates at the Audie L. Murphey Veterans Affairs (ALMVA) hospital are consistently higher than the national average (26.5% from October 2012-September 2013 compared with 23% nationally)¹ Efforts have been made locally to address education of patients in the hospital with marginal success.

1. Centers for Medicare and Medicaid. *Hospital compare on medicare.gov*.

<http://www.medicare.gov/hospitalcompare/compare.html#cmprTab=3&cmprID=45090F%2C450213&loc=78229&lat=29.5060908&lng=-98.577596>

Regional VA Comparison

Rate-Adjusted CHF Readmission Rate (RSRR)



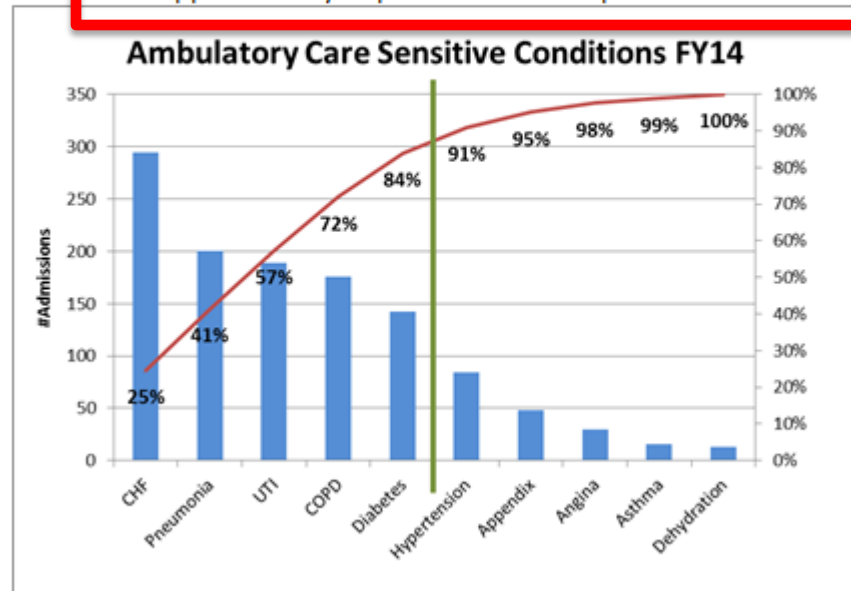
VA National Averages

CHF RSRR (Rolling 3 years)	Q3 FY14	Q4 FY14
VHA National Aggregates		
5th %-tile	18.53	17.86
Mean	20.22	19.52
95th %-tile	22.36	21.75
Dallas (Level 1)		
	23.98	22.26
San Antonio (Level 1)	20.91	20.33
Temple (Level 2)	19.38	19.08

Most Recent Data

FY14 Data:

- 294 patients admitted with diagnosis of CHF (ACSC total=1,192)
- CHF hospitalizations comprise 25% of ACSC
- Approximately 25 patients admitted per month with CHF



ACSC = conditions that are largely avoidable or preventable if ambulatory care is provided in a timely and effective manner.

Why does reducing readmissions matter?

Patient Factors:

- Better quality of life.
 - More days at home.
 - More time with family.
 - Less travel.
- Less exposure to hospital acquired illnesses (ie. pneumonia, MRSA).

Monetary Factors:

- Reduction in hospital resource demand (personnel, supplies, medications, beds).
- Centers for Medicare and Medicaid have reduced payments for readmission.
- **Readmissions Adjustment Factor =**
 - For FY 2013 1% reduction
 - For FY 2014 2% reduction
 - For FY 2015, 3% reduction

Why focus on early follow-up?

- Trends in care with greater segmentation of providers into inpatient vs. outpatient.
- Days immediately following discharge are a vulnerable period.
- Care is often complicated and coordination is important in preventing readmission.¹
- Often there are additions or changes in therapies that may have unknown effects or even worsen a patient's clinical status or other co-morbid conditions.²



*Helping Cardiovascular Professionals
Learn. Advance. Heal.*

¹ Peikes D, Chen A, Schore J, Brown R. Effects of care coordination on hospitalization, quality of care, and health care expenditures among Medicare beneficiaries: 15 randomized trials. *JAMA*. 2009;301(6):603-618.

² Leendertse AJ, Egberts AC, Stoker LJ, van den Bemt PM. Frequency of and risk factors for preventable medication-related hospital admissions in the Netherlands. *Arch Intern Med*. 2008;168(17):1890-1896.



Quality Improvement for Institutions



The Hospital to Home (H2H) Initiative, led by the ACC and the Institute for Healthcare Improvement, is an important resource for hospitals and cardiovascular care providers interested in improving transitions from hospital to "home," and equally important in avoiding any federal penalties associated with high readmission rates. H2H is an online learning community of individuals and facilities committed to reducing readmissions and improving patient care.

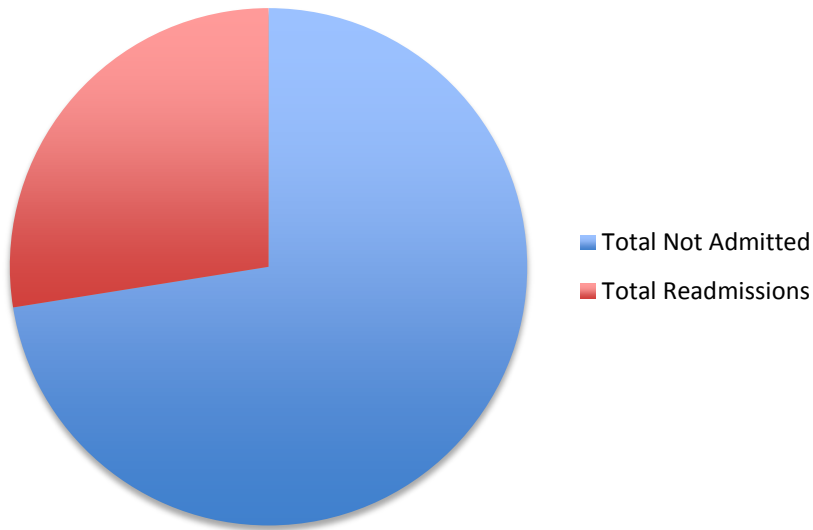
The H2H initiative challenges communities to better understand and tackle readmission problems through the use of simple, targeted, and actionable strategies in three core concept areas: Early Follow-up, Post Discharge Medication Management, and Patient Recognition of Signs and Symptoms.

The goal of the H2H SY7 Challenge is for all patients discharged with a diagnosis of HF/AMI to have a follow-up appointment scheduled/cardiac rehab referral made within 7 days of hospital discharge. To achieve this goal, H2H Community members are challenged to meet eight success metrics that break improvement approaches down into small, simple, and targeted strategies.

You can participate in the initiative and access the tool kit by registering for free at www.h2hquality.org to gain access to online resources, listservs and webinars.

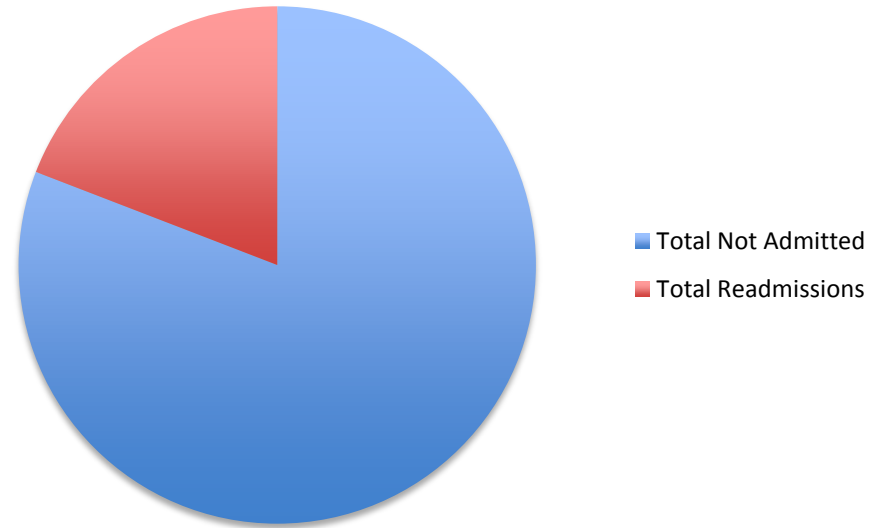
Change in Readmissions and Follow-up Visits as Part of a Heart Failure Readmission Quality Improvement Initiative

Jason Ryan, MD, MPH, Sangwook Kang, PhD, Steven Dolacky, MD, Joseph Ingrassia, MD, Raj Ganeshan, MD
University of Connecticut Health Center, Farmington.



2008 (52/189 patients)

intervention was from 2009-2010



2011 (40/209 patients)

27.5% vs 19.1% (8.4% decrease) p= 0.024

AIM Statement

- During the months of November-December, we will increase the number of 7 day follow up appointments to 100% for all patients discharged from the internal medicine service with the diagnosis of acute decompensated heart failure.

AIM Statement Test

- **SPECIFIC**- All heart failure patients discharged from the internal medicine teams at the ALMVA hospital.
- **MEASURABLE**- data on HF readmissions is already collected by the quality management department at the ALMVA.
- **ACHIEVABLE**- a pilot project can be conducted within a two month period.
- **REALISTIC**- VA leadership is already focused on this core measure and has placed its support behind this project.
- **TIMELY**- This project will improve patient care and should additionally reduce readmissions and their associated costs.

Project Milestones

- Team Created August 2014
- AIM statement created September 2014
- Background/Brainstorm Sessions August 4, October 6, 2014
- Workflow and Fishbone Analyses October 14, 2014
- Interventions Implemented Oct 31-Dec 31, 2014
- Data Analysis July 2014-Jan 2015
- CS&E Presentation January 23, 2015

Current Process

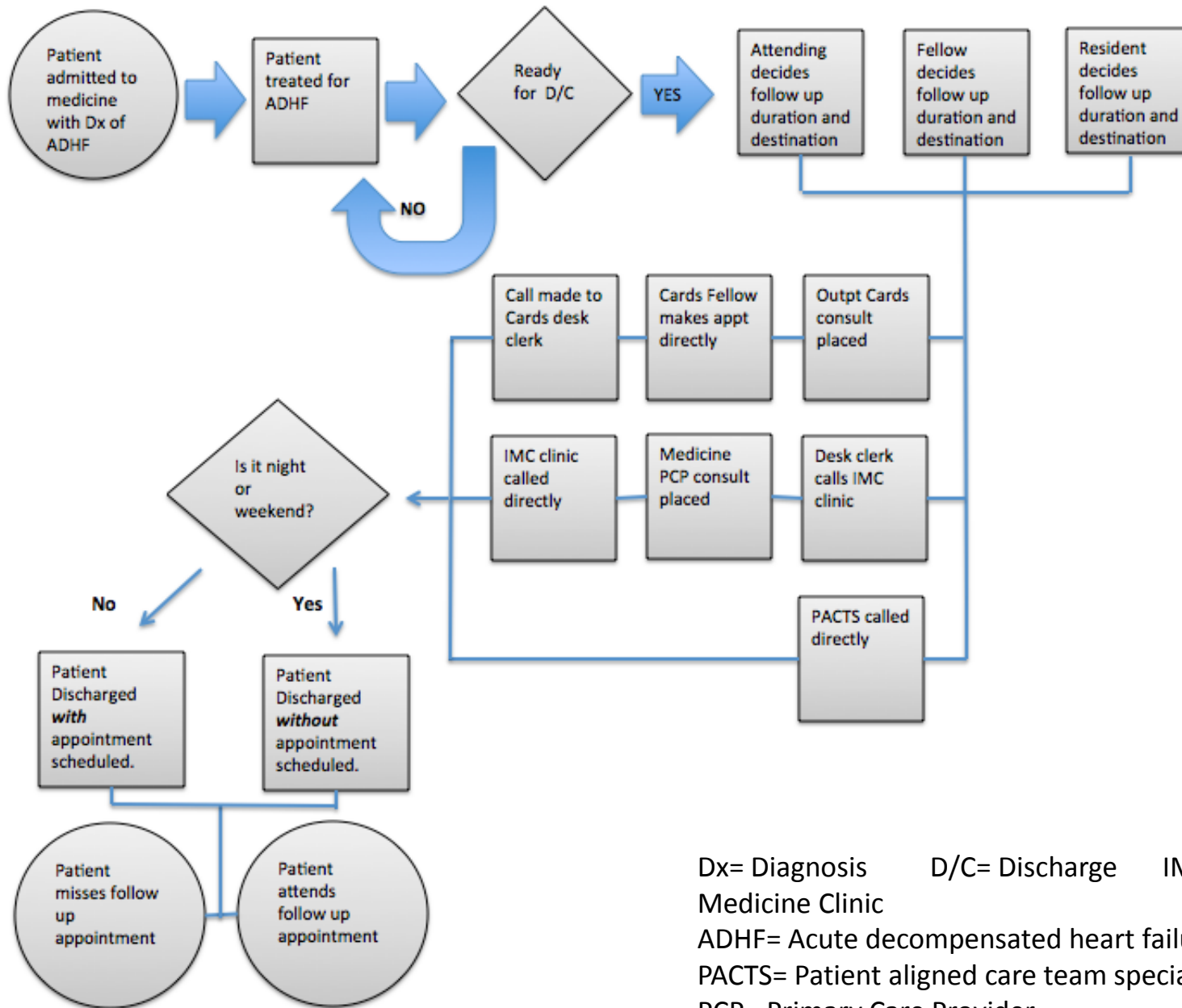
- At the ALMVA hospital, a quality management team reviews all patients who receive the diagnosis of acute decompensated heart failure during their admission for coding purposes.
- The VA Heart Failure Workgroup meets at least monthly to discuss the current state of readmissions and methods to improve our rates.
- Ward teams largely independent in scheduling follow up.

Structure of a Ward Team:

Up to 8 members overseeing up to 20 patients



Current Process

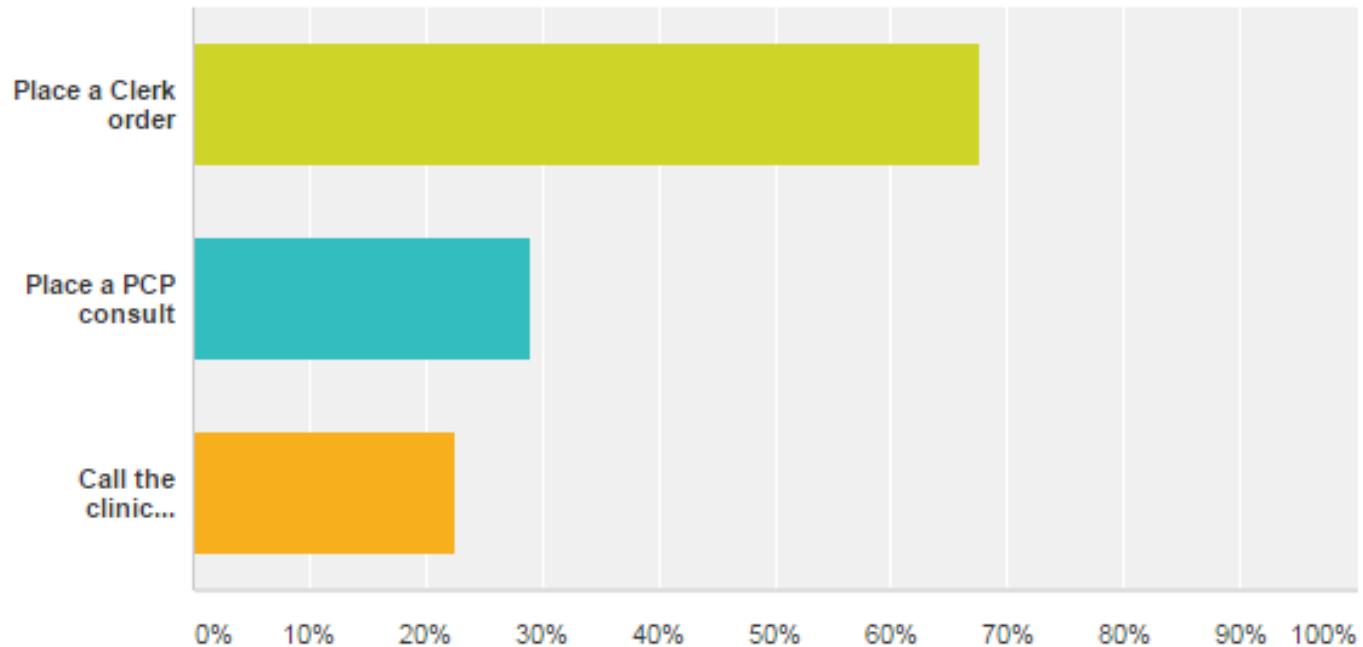


Dx= Diagnosis D/C= Discharge IMC= Internal
 Medicine Clinic
 ADHF= Acute decompensated heart failure
 PACTS= Patient aligned care team specialist
 PCP= Primary Care Provider

Survey Monkey sent out to all Internal Medicine Residents

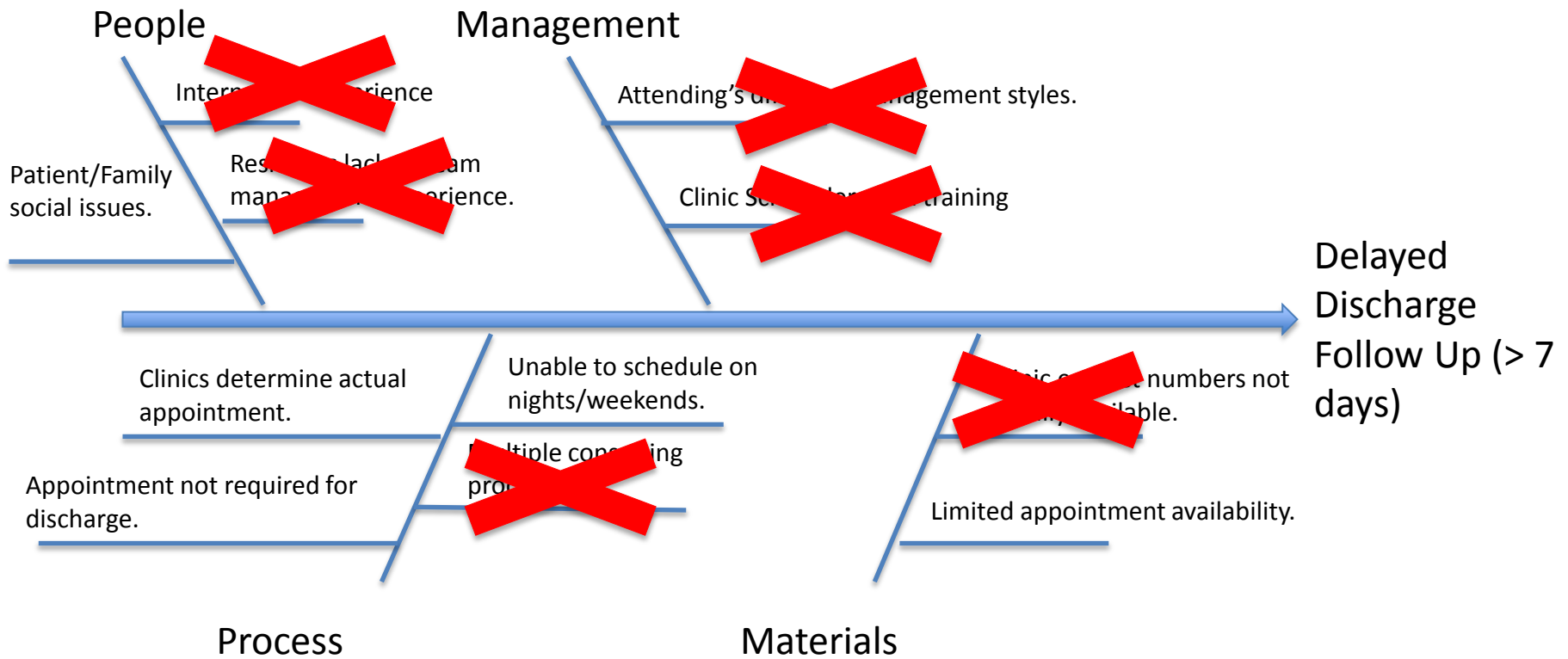
How do you ensure your heart failure patients get follow-up?

Answered: 31 Skipped: 0



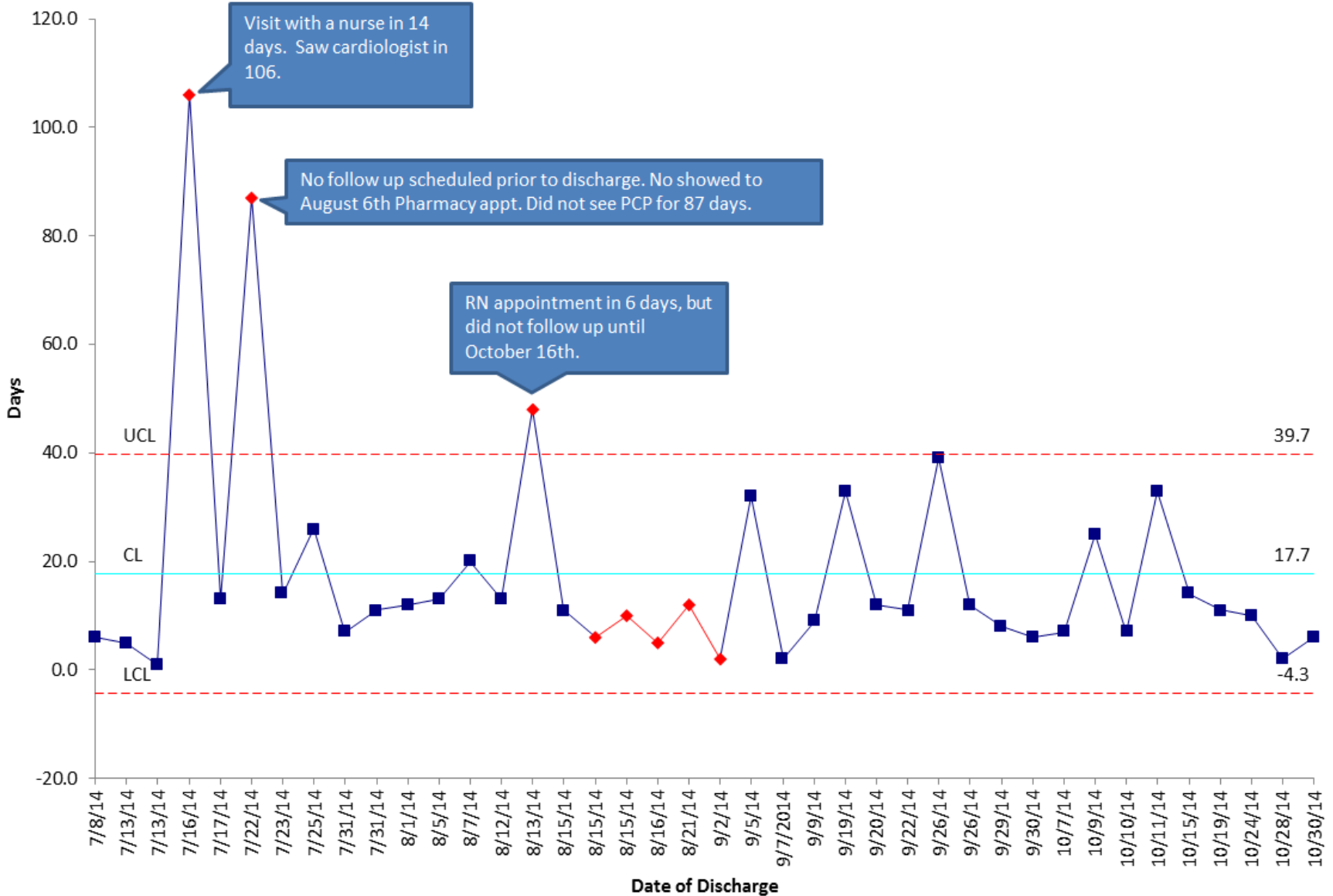
Answer Choices	Responses
▼ Place a Clerk order	67.74% 21
▼ Place a PCP consult	29.03% 9
▼ Call the clinic (Cardiology, IMC, PCP) yourself	22.58% 7

Cause and Effect: Reducing Heart Failure Readmission Rates



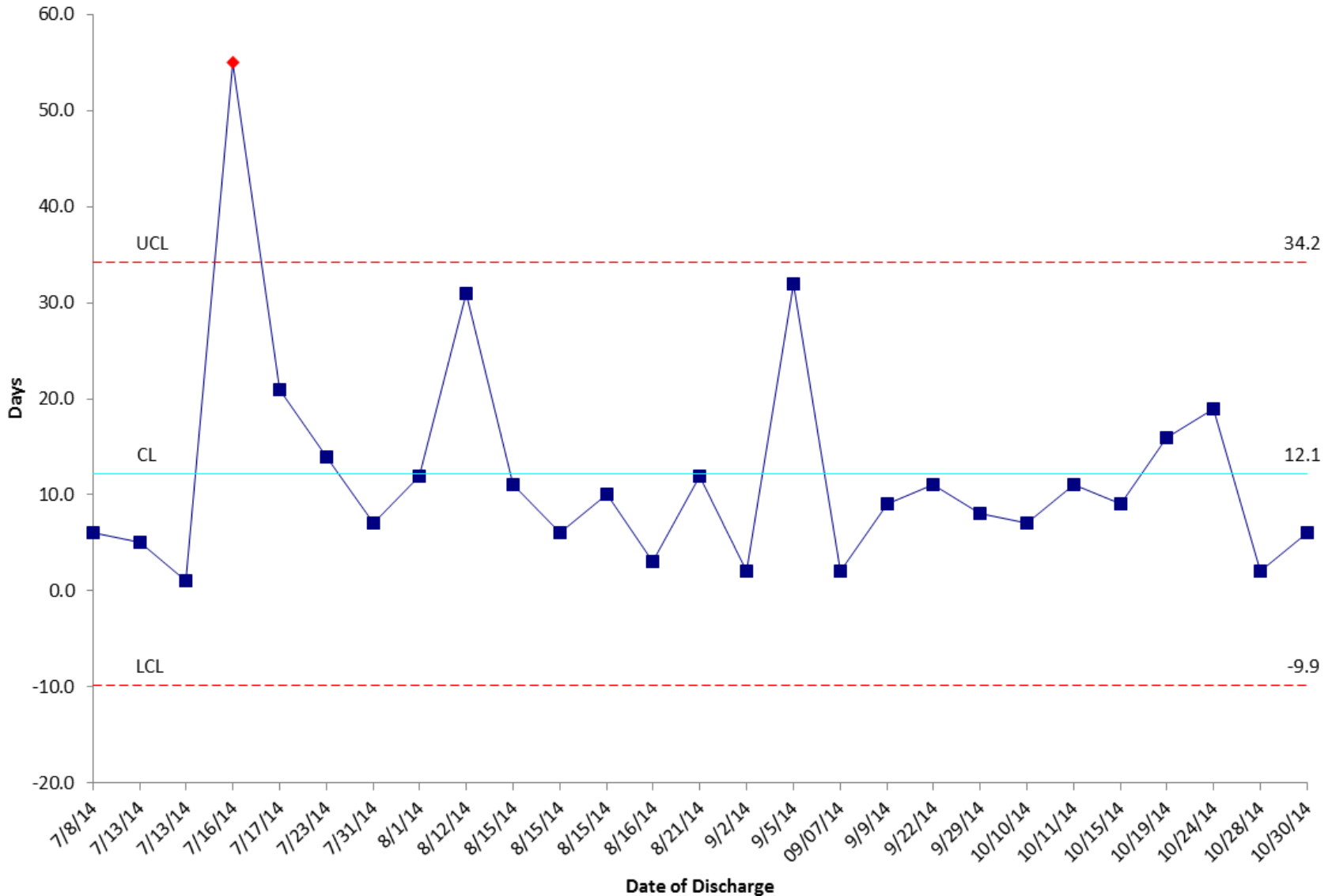
Preliminary Data

July-October Days Until Follow Up



Preliminary Data

July-October Days Until Scheduled Appointment



PLAN: Intervention

All patients admitted to Inpatient Medicine Teams A, B, C, F, and P will be discharged with plan to follow up within 7 days. This will be accomplished by:

- 1) Heart Failure workgroup discussed project implementation on 10/6/2014. Confirmed cardiology availability and internal medicine clinic policies.
- 2) Each VA medicine team will be visited on 10/31/2014 to discuss the new requirement and an announcement with the new instructions posted in each room.
- 3) Each week the medicine teams will be visited and asked how the implementation is going.
- 4) Medicine cohort team will meet every 5 weeks and discuss the project.

DO: Implementing the Change

- October 14th, announcement made at the VA Hospitalist monthly meeting.
- October 31st, each ward team was visited personally and introduced to project.
- Two flyers were hung in each ward room displaying the numbers to call.
- November 3rd, each ward team was visited to follow up any problems over the weekend.
- November 5th, met with cohort to review project process and pre-intervention data.
- November 19th, Survey-Monkey questionnaire sent to ask about awareness of the project.
- November 20th, e-mail reminders sent to each ward team at the VA.
- December 9th, visited all the ward team rooms and confirmed flyers were in place and residents were aware of the project.
- December 19th, visited all the ward teams again.

HEART FAILURE QUALITY IMPROVEMENT PROJECT

STARTING NOVEMBER 1st:

WHO: Any patient who is admitted and diagnosed with **DECOMPENSATED** heart failure

WHAT: Request follow up within 7 days of the discharge date.

HOW: 3 options for follow up are available as below.

1st Try calling Cardiology clinic: dial ext 10712 for the desk clerk. (Should *not need a new consult* if seen by cardiology within the last 2 years).

If desk clerk is unable to accommodate your request and the patient has EF <35%, NYHA class III-IV symptoms, or has been admitted twice in last 6 months, please call the cardiology clinical nurse specialist (Rose Martinez) at: 210-203-6553.

If the patient does not meet these criteria, call IMC clinic below.

2nd Try calling IMC clinic: call 210-949-3045. They will ask if you know the “color” of the patient’s primary team. If you do not know it, select any color option and they will direct you appropriately. The clinic has a policy to get all heart failure patients into the clinic within a week.

Also, please include the patient’s primary care physician as an additional signer on your discharge summary (will be listed at top of CPRS in the format: IMC/Attending/Resident).

3rd PACTS pharmacist: if both of the above cannot accommodate the patient within 7 days, place an outpatient consult for PACTS (listed as PACT Pharm MTM). Choose the indication “Cardiovascular disorders-CHF” and request 7 day follow up. *You still need to refer to their PCP or cards for a close-follow up visit*, but for the purpose of the study we need to get patients in to a provider in 7 days.

****EXCEPTIONS**:** 7 day follow up NOT required if the patient is being discharged on hospice or going to a skilled nursing facility with physician care.

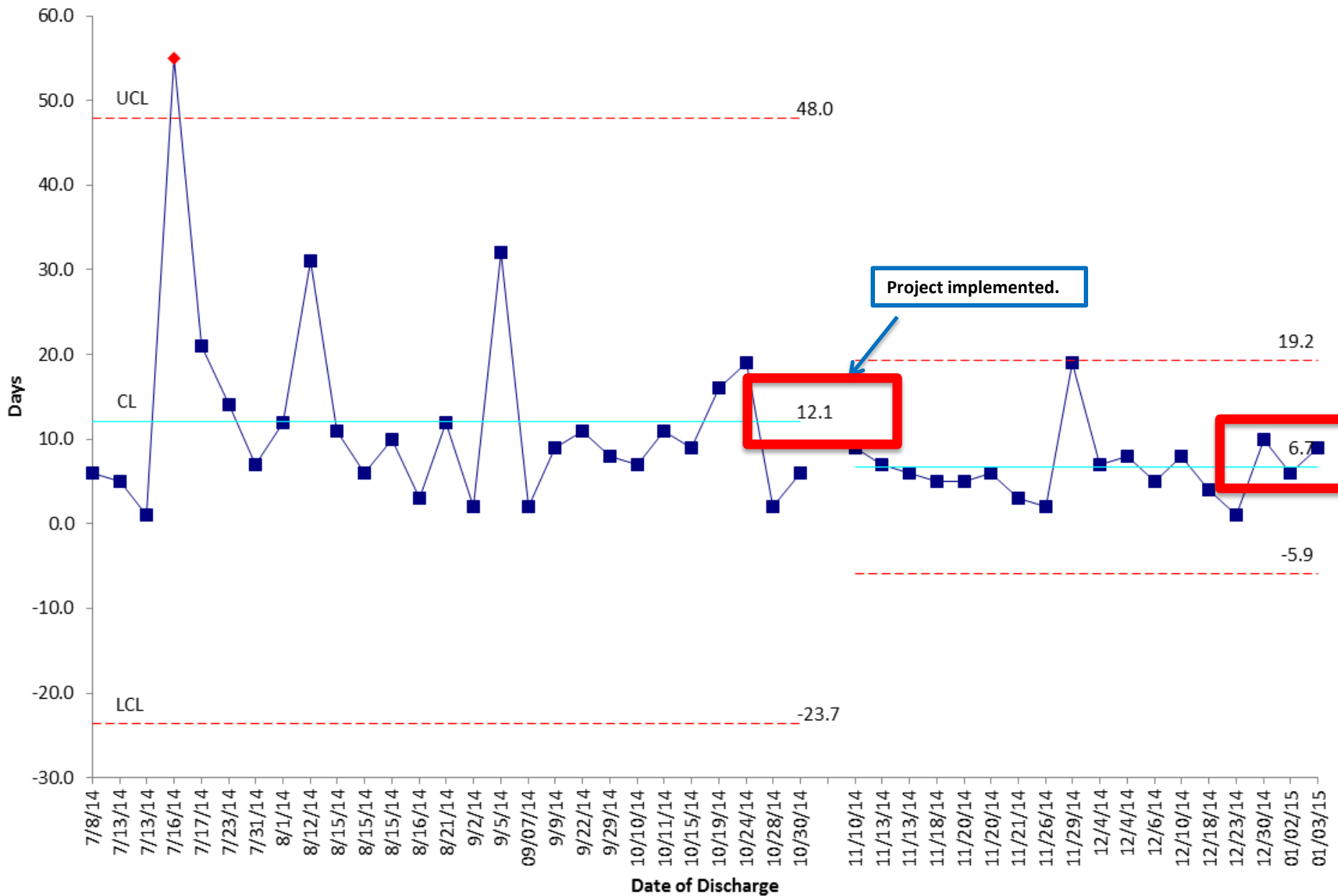
The VA already keeps track of our CHF admissions and time to clinic appointments. We will be tracking not only time to clinic appointments, but also looking to see if this reduces re-admissions.* Thank you for your participation. If you encounter any difficulties or have any questions, please contact Jason Phillips at 210-416-0442 or PhillipsJ3@uthsca.edu.

*Ryan, J., Kang, S., Dolack, S., Ingrassia, J., & Ganeshan, R. (2013). Change in readmissions and follow-up visits as part of a heart failure readmission quality improvement initiative. *The American Journal of Medicine*, 126(11), 989-994.e1.

Comments about the Data

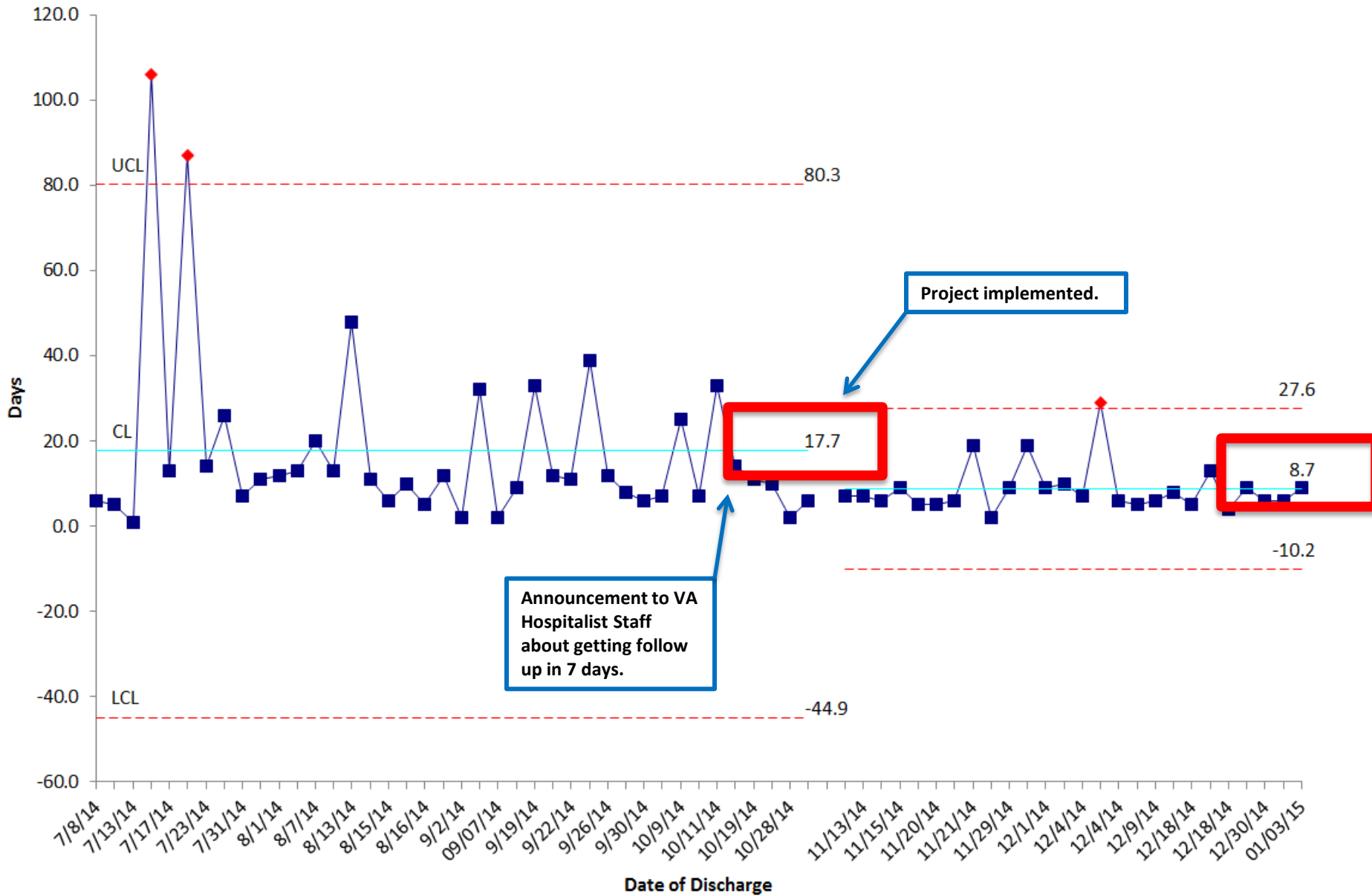
- Excluded patients who were discharged on:
 - hospice
 - to a skilled nursing facility
- Excluded patients who were discharged from cardiology service.
- Total of 66 visits included in the final data. Looked at both time to when a visit was scheduled and when the patient actually followed up.

July-December Days Until Scheduled Appointment*



***Chart above excludes the 21 patients who were discharged without any appointment.**

Time to Follow Up for Patients Admitted July-December



By the Numbers:

- 9/26 appointments made within 7 days compared with 11/40 prior to intervention (34% vs 27.5%).
 - **6.5% increase in 7 day appointments.**
- 8/26 patients had no appointment at discharge compared with 13/40 prior to intervention (30% v 32.5%)
 - **2.5% increase in appointments made prior to discharge.**
- 15/26 completed appointments within 7 days.
 - **Our 7 day completed follow up rate was 57% (compared to 47% prior to this project).**
 - *(Not quite 100%.....)*

Return on Investment

INPATIENT COSTS

DRG Code	# of Unique Pt Visits at VA last year	Cost per day	Avg Length of Stay	Total Cost Per Discharge
291 (HF and Shock w/ MCC)	34	3,054	9.8	16,269
292 (HF and Shock w/ CC)	124	2,260	5.7	7,462
293 (HF and Shock w/o CC or MCC)	65	2,491	4.8	6,465
TOTAL	223	7,805	6.766666667	10,065

OUTPATIENT COSTS

	VISN 17 Outpatient Site Average Cost
Primary Care Clinic	\$250
Cardiology Clinic	\$286

Patient Workload

25 discharges/month across all specialties.
 14 discharges/month from Medicine Service.
 If average days to follow up decreased from 18 to 9, that is a **50% increase in outpatient visits.**

Decrease in readmissions expected to be 8%.
 $223 * 0.08 = 17.84$ **less admissions per year**

From my data, cardiology saw 24 outpatient visits while medicine saw 30 and pharmacy saw 9.

RETURN ON INVESTMENT

<u>Numerator/Net Return</u>	
Conservative Estimate of Decrease	17.84 less admits * 7,462 cost per d/c \$133,122 saved
<u>Denominator/Investment Costs</u>	
No increase in personnel required.	
50% increase in outpt visits	7 * 250 = 1750 per month for medicine 7 * 286 = 2002 per month for cardiology Avg cost: \$1,876
<u>Return on Investment</u>	
133,122 ÷ 1876 = 70.9	For every \$1.00 invested, \$70.90 is gained.

Lessons Learned:

- Comment from resident survey: “I have received very little instruction on how to navigate patients between the inpatient and outpatient systems at the VA in regards to HF patients. *They're basically treated like the rest of our patients.....*”
- Residents are accustomed to placing orders in CPRS and having to call clinics was time consuming and inefficient.
- Residents have SHORT ATTENTION SPANS! Despite multiple reminders and methods of spreading the word about the project, many people claimed not to have heard about it.

Lessons Learned Continued:

- The IMC at ALMVA already had a policy to get patients seen within 7 days, and then every week for a month, twice in the second month, and at least once in the third month.
- Outside clinics are frequently using RN's for rapid follow up which further delays licensed provider follow up.
- Tele-health was also used frequently and seemed to delay time to follow up.

ACT: Sustaining the Results

- This pilot project showed the dramatic impact that a simple change in education can have.
- Since education is the weakest form of improvement, a proposal has been made to create a “Heart Failure Discharge Consult” order within CPRS. This would allow residents to have one uniform, computerized process which fits into their current workflow.
- Results of this project were presented to the VA Heart Failure Workgroup on 1/15/2015.

Conclusions

- This brief pilot project demonstrated that increased follow up is possible despite current issues with the overall process. While we did not achieve our goal of 100%, dramatic improvement was noted.
- A great deal of effort was put into clinician reminders, and this will need to be addressed if we are to sustain the goal of 7 day follow up.
- Only time will tell if overall readmissions are affected, but current evidence and standard of care suggests that it will!

Thank you!

