



The ED-PACT Tool: *Communicating Veterans' Care Needs After ED Visits*

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no conflicts of interest

Poll #1: Which of the below roles describe you? (choose all that apply)

- a) PACT Team Member
- b) ED Provider or Staff
- c) Other Type of Clinician
- d) Researcher
- e) Quality Improvement Leader
- f) Administrative Leader
- g) Some Other Role



Objectives

- (1) Provide broad overview of the current literature on ED follow-up care
- (2) Describe the ED-PACT Tool, an innovation for improving ED follow-up care
 - a) Development Process
 - b) Key Features
 - c) Formative Evaluation Results



ED “Treat-and-Release” Visits

- ED visits resulting in discharge home or to a non-hospitalized setting (e.g., SNF)
- Nationally, most ED visits are treat-and-release visits



Patients with ED treat-and-release visits are vulnerable for adverse outcomes

- Across studies, 5-19% of patients with an ED treat-and-release visit have a repeat ED visit within 30 days¹⁻⁴
 - Among a cohort of seniors discharged from EDs in Quebec, in the 30 days following the ED visit, 1% died and 5% were hospitalized⁵
 - Among elderly, potential “sentinel event”⁶
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Follow-up Care Needs & Failures

- Patients with treat-and-release ED visits may have one or more follow-up care needs
 - Wound care, repeat laboratory or radiology tests, blood pressure re-check, sign or symptom re-evaluation
- Period following treat-and-release ED visits prone to communication failures
 - Patients may not fully understand instructions for follow-up care
 - Needs often not communicated to follow-up care providers



Patients Not Understanding ED Discharge Instructions

- Among 140 English-speaking adults discharged from academic & community EDs⁷
 - 15% did not understand ED diagnosis or cause
 - 29% did not understand ED care provided
 - 34% did not understand post-ED care instructions
 - 22% did not understand return instructions(78% had understanding deficit in one or more domains)



Many patients do not receive the ED follow-up care they need

- Among 1000 patients discharged from EDs to an outpatient referral network, with recommendation to have follow-up care appointment, 2/3rds did not receive follow-up care ⁸
- Among 250 patients discharged from an academic ED and given a follow-up care appointment, 41% did not receive follow-up care ⁹
 - 63% of those not given an appointment did not receive care



2017 NQF Stakeholder Panel Recommendations¹⁰

EDs & healthcare systems should –

- (1) expand infrastructure and enhance health information technology supporting this care transition
- (2) Develop new payment models and levers to facilitate quality improvement in this area
- (3) Establish a research agenda in support of these transitions



Post-ED Care in VA Patients

- Paucity of data
 - FY 2010-14, 38% of VA users had 1 or more VA ED visits¹¹
 - 80% of VA ED visits are treat-and-release¹¹
 - Veterans with VA ED visits are more likely to be older, have more complex medical histories compared to community ED patients¹¹
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Post-ED Care in VA Patients (cont)

- Hastings, et al
 - Among 942 older Veterans discharged home from Durham VA ED in 2003, 34% had a return ED visit, were hospitalized and/or died within 90 days¹²
 - In a national assessment of ED visits 2007-08, 53% of Veterans did not have outpatient provider follow-up within 30 days; 72% of those with repeat ED visits had no intervening follow-up¹³
 - Among 24 Veterans in a 2003 Durham ED cohort who had a diuretic newly-prescribed at ED discharge, 12 (50%) received this care¹⁴



Summary of Overview: ED follow-up care

- Patients are at high-risk for having adverse outcomes following treat-and-release ED visits
- Communication errors may result in these patients not getting the follow-up care they need
- Veterans with VA ED visits are potentially at risk
- More research and attention to this topic is needed
 - Assessment of current state post-PACT implementation



Poll #2: Reflecting on your VA facility, how would you rate the sufficiency of communication and coordination of care between the ED and follow-up care providers? (*choose one*)

- (1) Completely Sufficient
- (2) Moderately Sufficient
- (3) Minimally Sufficient
- (4) Not At All Sufficient
- (5) No opinion / Not Applicable



The ED-PACT Tool



VA



U.S. Department
of Veterans Affairs

VA Greater Los Angeles Healthcare System



Problem

- **No systematic / reliable method for communicating and arranging for post-ED follow-up needs**
 - Patients with follow-up care needs often being told by ED clinicians to walk-in to see their PACT providers
 - When uncertainty about whether the patient could walk-in, they were being told by ED clinicians to return to ED for follow-up
 - Patients being told to follow-up with PACT teams for an appointment in 2 days as a “safety mechanism” in case their symptoms got worse
 - Relied on PCPs assessing/acting on all ED-related alerts immediately
 - Some patients not getting needed care in timely fashion – returning to ED with progression of illness



My Patient

An 85 year male Veteran seen in the West Los Angeles ED and diagnosed with pneumonia and a mild CHF exacerbation. He was started on an antibiotic and his diuretic was increased. The ED doctor thought he needed close follow-up. Unsure of whether this patient could get this follow-up in primary care, told the patient to return to the ED in 2-3 days for reassessment.



Three days later, his 80 year-old wife drives them 2 hours to return to the ED, and then they wait 2 hours to see me. I walk in the room and ask how he is doing. The wife says “He is much better, his energy and breathing are both better and the swelling in his legs is completely gone.”



Objectives of ED-PACT Tool Project

- To improve communication between VA Greater Los Angeles Emergency Department (ED) and PACT clinics
- To develop, pilot, & formatively evaluate an electronic medical record-based tool to support communication of care needs for patients discharged from VA EDs

Development Step #1: Assessed the Literature

- ED follow-up care, other care transitions (e.g., hospital to home)¹⁵
- Best practices in communication across handoffs¹⁶
 - Standardize processes and forms
 - Leverage existing health information technology
 - Create “closed loop” communication systems
- Health IT literature on usability heuristics¹⁷



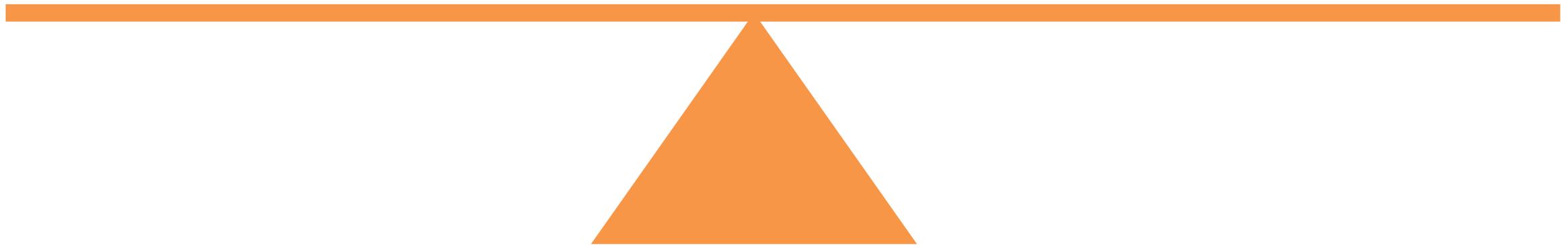
Development STEP #2 – Formed a multidisciplinary stakeholder workgroup

- 1 Organizer/Facilitator (me)
 - 2 Emergency Department Clinicians
 - 1 Primary Care Physician
 - 1 PACT RN Care Manager
 - 1 PACT Lead Clerk
 - 1 Clinical Applications Coordinator (PharmD with Primary Care Experience)
- 

Development STEP# 3 – Explored and ED & PACT processes, expectations, frustrations

Need to incorporate communications into ED workflow; multiple part-time providers with high turnover

Limits in PACT team time and in-person appointment availability



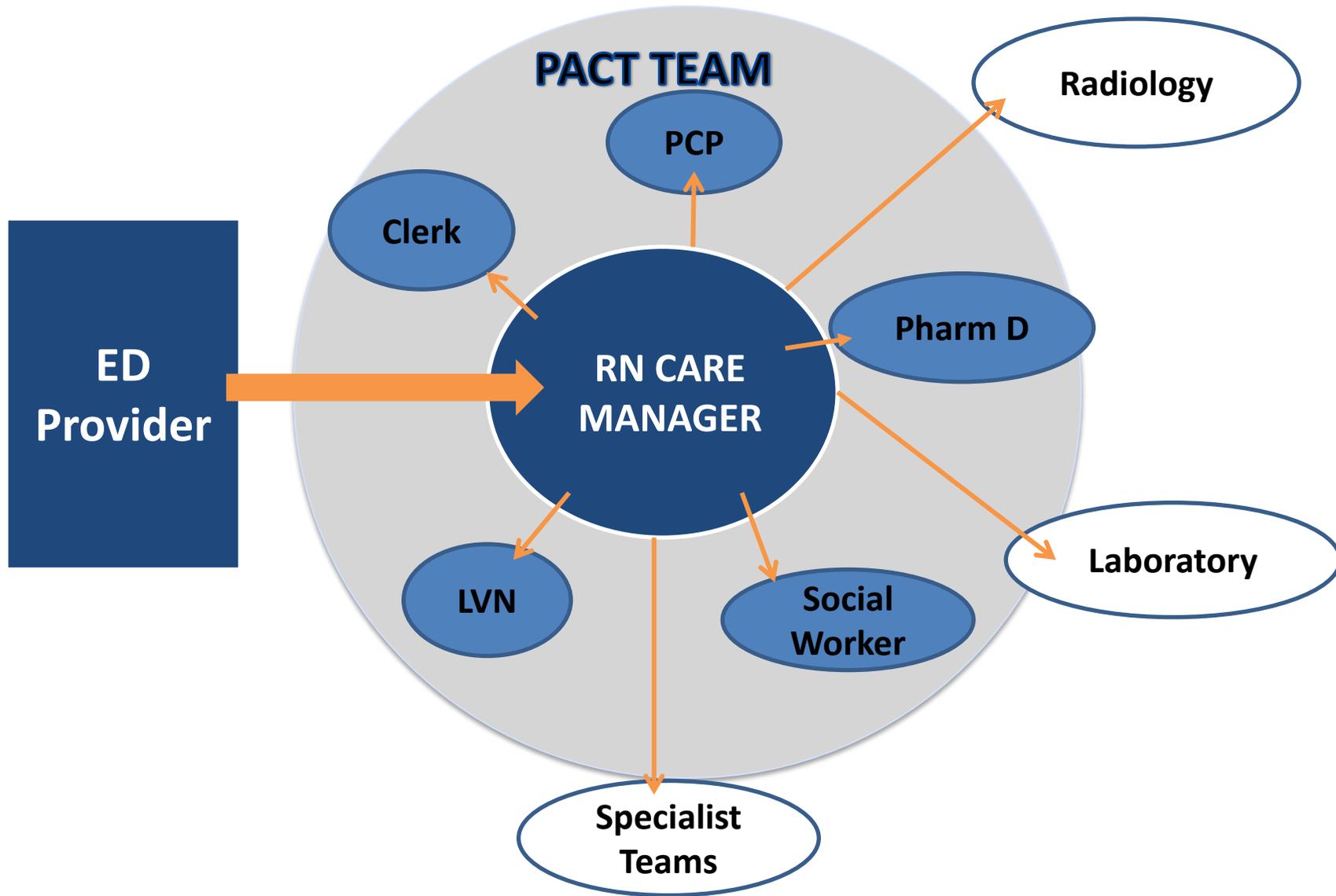
Development STEP# 4: Spread – Multiple PDSA Cycles

- Gradual roll-out across healthcare system
- Multiple revisions informed by rigorous formative evaluation
 - “Failures” investigated for root causes
- Aggressively sought buy-in & feedback from all stakeholders
 - PACT Clinic Leadership Meetings
 - In-Person RN Care Managers

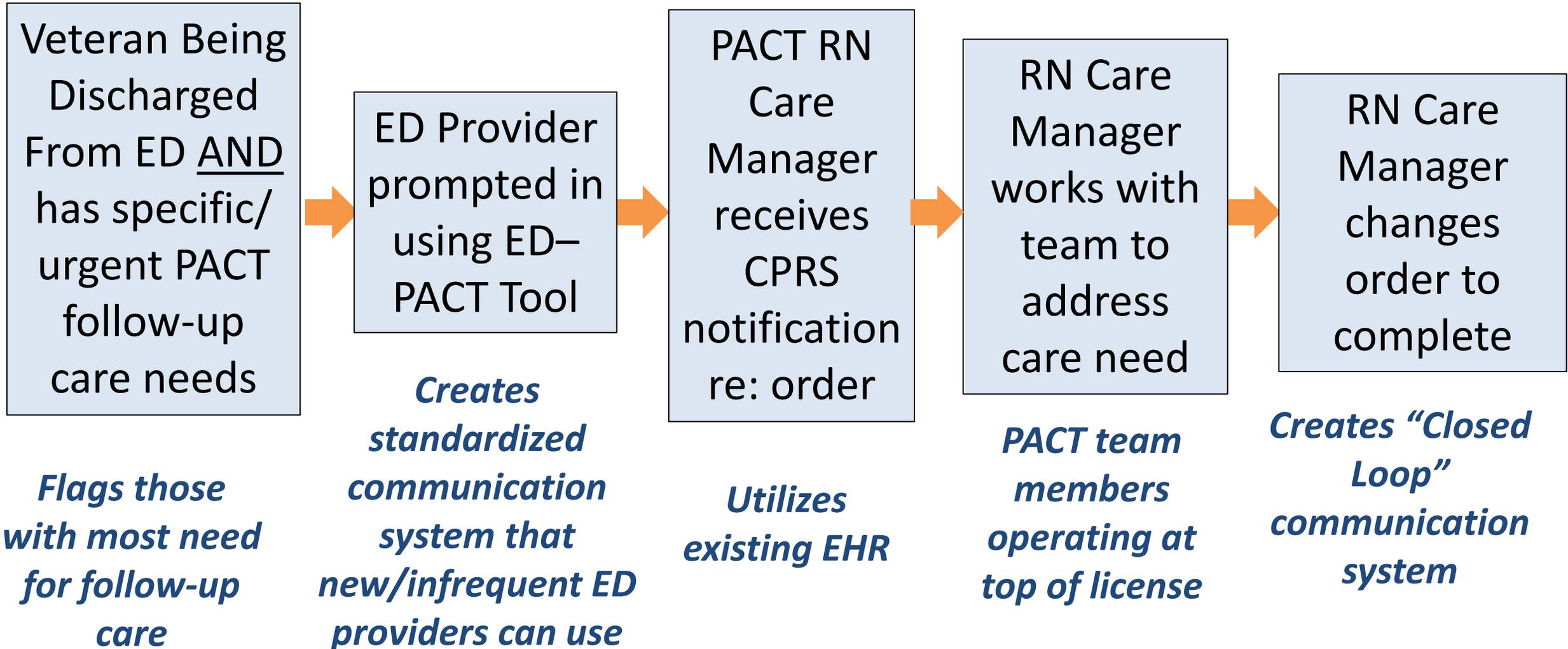


Results: What Is The ED-PACT Tool?

- A message from ED Providers to PACT RN Care Managers
- Alerts PACT RN Care Managers regarding *urgent or specific* post-ED needs of patients
- Uses order mechanism in CPRS to PACT RNs (“Care Coordination Order”)



Overview of Steps

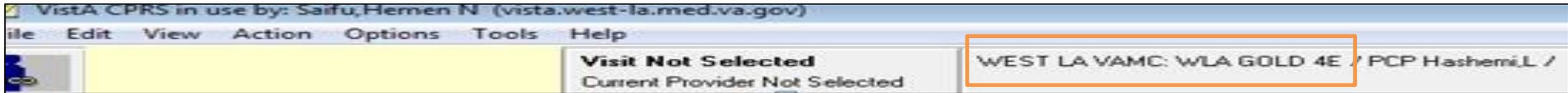


Process Initiated with ED Provider

Filling in ED Aftercare Instructions Note

- Non-Urgent, patient should follow-up with primary care provider at next routine visit.
- Specific or Urgent follow up needed (An order for the Primary care Teamlet RN Care Manager will generate after clicking 'Finish'. Please specify follow up needed).

ED Provider Selects Clinic for Order



This order sends a message to the patients PACT Team. Do not use this order if the patient is admitted to the hospital or is a resident in the CLC or DOM. Healthcare providers in those locations will provide follow up care for those patients.

Look at top ribbon and pick which site patient is assigned to

[WEST LA VAMC WLA](#)

WEST LA VAMC SEPULVEDA VAMC

WEST LA VAMC LAOPC

WEST LA VAMC BAKERSFIELD

WEST LA VAMC EAST LOS ANGELES

WEST LA VAMC GARDENA

WEST LA VAMC ANTELOPE VALLEY

WEST LA VAMC OXNARD

WEST LA VAMC SANTA BARBARA

WEST LA VAMC SAN LUIS OBISPO

WEST LA VAMC SANTA MARIA



ED Provider Fills In Templated Order

Reason for Request: ED-PACT TOOL WLA GOLD4_

ED-PACT TOOL WLA GOLD TEAM 4

PATIENT PHONE NUMBER:
Phone: (213)815-2359
Work: NONE
Cell: 3104783711

Is the patient phone number in CPRS correct: * Yes No Patient has no phone number
Contact phone number if different than CPRS/instructions given if patient has no phone number: _____

RN Care Manager - Please work with your team to initiate communicating and/or coordinating the following post-ED care needs/recommendations.

REASON FOR REQUEST:
(Select from appropriate boxes)
*
 Symptom/Sign recheck
 Blood pressure recheck
 Wound care/suture removal
 Laboratory recheck
 Radiology follow-up/reimaging
 Coordination of follow-up care with consultants/specialized testing
 Medication adjustment
 Other
(EXPLAIN IN DETAIL BELOW)
*

* Indicates a Required Field Preview OK Cancel

RN Care Manager Receives Notification (Informational Alert)

The screenshot displays a software interface with a 'Patient Selection' header. On the left, a 'Patient List' section contains radio buttons for 'Default: GMED Cordasco', 'Providers', 'Team/Personal', 'Specialties', 'Clinics', 'Wards', and 'All'. The 'Default: GMED Cordasco' option is selected. To the right, a large empty box is labeled 'Patients (GMED Cordasco)'. A 'Save Patient List Settings' button is located at the bottom right of this section. Below the patient selection area is a 'Notifications' section containing a table with one row of data.

Info	Patient	Location	Urgency	Alert Date/Time	Message	For
I	ZZDUMMY,S (29765)	TRAIN	HIGH	02/16/2016@14:25	Order placed: ED-PACT TOOL	

RN Views Care Coordination Orders

VistA CPRS in use by: Cordasco,Kristina M (vista.west-la.med.va.gov)

File Edit View Action Options Tools Help

ZZTEST_A PATIENT EDDIE (OUTPATIENT) **TRAIN Jul 10,17 08:00** No PACT assigned at any VA location /
 000-00-9983 Aug 08,1935 (81) Provider: CORDASCO,KRISTINA M

View Orders Active Orders (includes Pending & Recent Activity) - ALL SERVICES

Service	Order	Start / Stop	Provider	Nurse
Care Coordin	>> ED-PACT TOOL WLA GOLD TEAM 4 ----- PATIENT PHONE NUMBER: Phone: (310) 777-7777 Work: NONE GIVEN Cell: ----- Is the patient phone number in CPRS correct: Yes Contact phone number if different than CPRS/instructions given if patient has no phone number: RN Care Manager - Please work with your team to initiate communicating and/or coordinating the following post-ED care needs/recommendations. REASON FOR REQUEST: Symptom/Sign recheck	Start: NOW Stop: T+14	Cordasco,Kristina M	
Out. Meds	*FUROSEMIDE TAB 20MG TAKE ONE TABLET BY MOUTH EVERY DAY WATER PILL Quantity: 14 Refills: 3	Start: 06/07/17 Stop: 06/06/18	Jennings, Eric C	
	*DIGOXIN TAB 0.125MG	Start: 06/07/17	Jennings, Eric C	

Write Orders

Allergies

Consults/Procedures Order Menu

Lab Test Quick Orders Menu

Blood Bank Orders

Inpatient Medication Order Menu

Outpatient Meds/Supplies/IV Order Menu

Meds, Non-VA

Radiology/NucMed Order Menu

*** INPATIENT UNITS ***

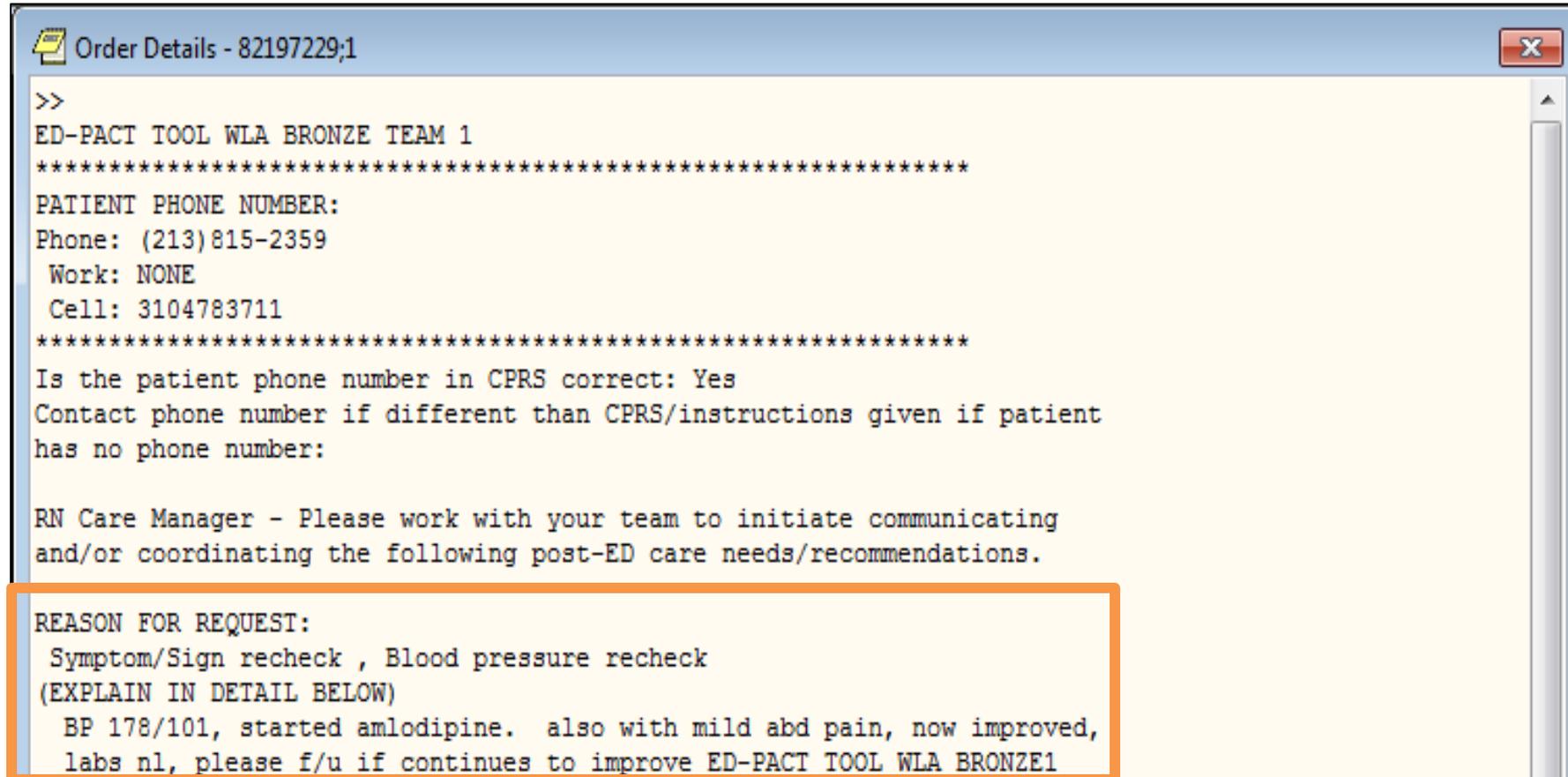
INPATIENT WARDS Order Menu

WLA CLC Order Menu

SEP CLC Order Menu

Write Delayed Orders

RN Opens Order to Read Message



Order Details - 82197229;1

>>
ED-PACT TOOL WLA BRONZE TEAM 1

PATIENT PHONE NUMBER:
Phone: (213)815-2359
Work: NONE
Cell: 3104783711

Is the patient phone number in CPRS correct: Yes
Contact phone number if different than CPRS/instructions given if patient
has no phone number:

RN Care Manager - Please work with your team to initiate communicating
and/or coordinating the following post-ED care needs/recommendations.

REASON FOR REQUEST:
Symptom/Sign recheck , Blood pressure recheck
(EXPLAIN IN DETAIL BELOW)
BP 178/101, started amlodipine. also with mild abd pain, now improved,
labs nl, please f/u if continues to improve ED-PACT TOOL WLA BRONZE1

RN Care Manager Works With PACT Team to Address Need



RN Care Manager Writes Focused Note

The screenshot displays the VistA CPRS interface for patient ZZTEST A PATIENT CHARLES (OUTPATIENT). The patient's date of birth is August 19, 1941, and the provider is KRISTINA M CORDASCO. The interface shows a list of signed notes on the left and a detailed view of a note on the right.

Visit: 05/23/16 PRIMARY CARE TELEPHONE NOTE, WLA-EMERGENCY ROOM, KRISTINA M CORDASCO, MD, MPH (May 23,16@17:59)

LOCAL TITLE: PRIMARY CARE TELEPHONE NOTE
STANDARD TITLE: PRIMARY CARE TELEPHONE ENCOUNTER NOTE
DATE OF NOTE: MAY 23, 2016@17:59 **ENTRY DATE:** MAY 23, 2016@17:59:32
AUTHOR: CORDASCO, KRISTINA M **EXP COSIGNER:**
URGENCY: **STATUS:** COMPLETED

Called patient to follow-up on recent ED visit for elevated BP and abdominal pain. Abdominal pain now resolved, taking BP meds. Patients agrees to come for BP check on Friday.

/es/ KRISTINA M CORDASCO, MD, MPH
Assistant Professor of Medicine
Signed: 05/23/2016 17:59

EMERGENCY DEPT VISIT Expanded Problem Focus, Mod - Emergency Services.
Diagnoses:
Upper Abdominal Pain, unspecified (ICD-10-CM R10.10) (Primary)

Health Factors:
ED CONS NONE

The interface also includes a menu at the bottom with options: Cover Sheet, Problems, Meds, Orders, Notes, Consults, Surgery, D/C Summ, Labs, Reports.

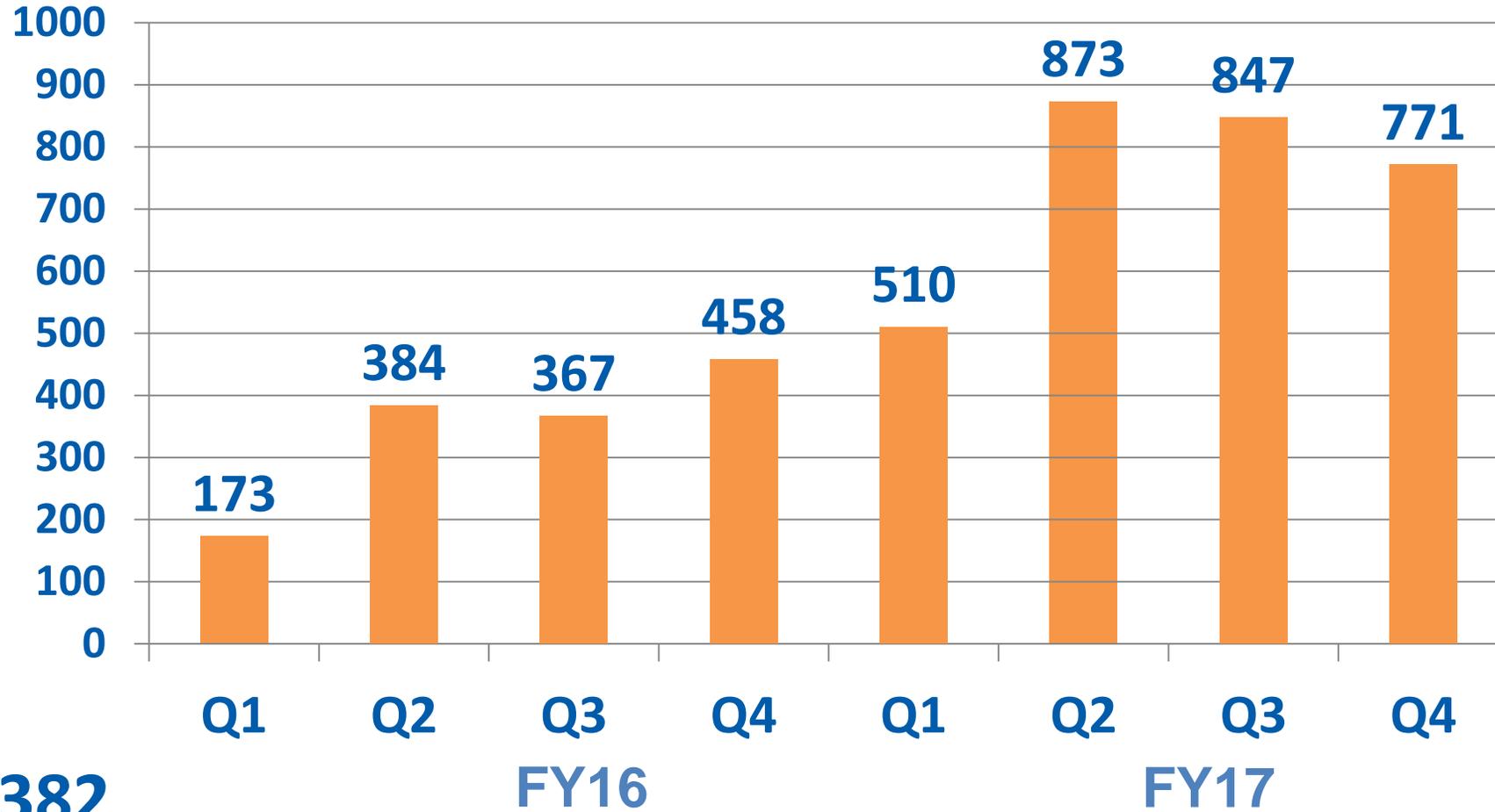
RN Changes Status of Order to “Complete”

The screenshot shows a medical software interface with a context menu open over a table of orders. The menu options include: Change..., Copy to New Order..., Discontinue / Cancel..., Change Release Event, Renew..., Alert when Results..., Complete... (highlighted with an orange box), Flag..., Unflag..., and Sign Selected... The background table shows order details for 'CORDASCO, KRISTINA M' with a service name of 'Vascular' and a manager 'Pamela Henderson'. A dialog box titled 'Complete Orders' is overlaid on the screen, containing the text: 'The following orders will be marked as complete - >>>ED-PACT TOOL HPACT TEAM 4.' and an 'Electronic Signature Code' field with 'OK' and 'Cancel' buttons.



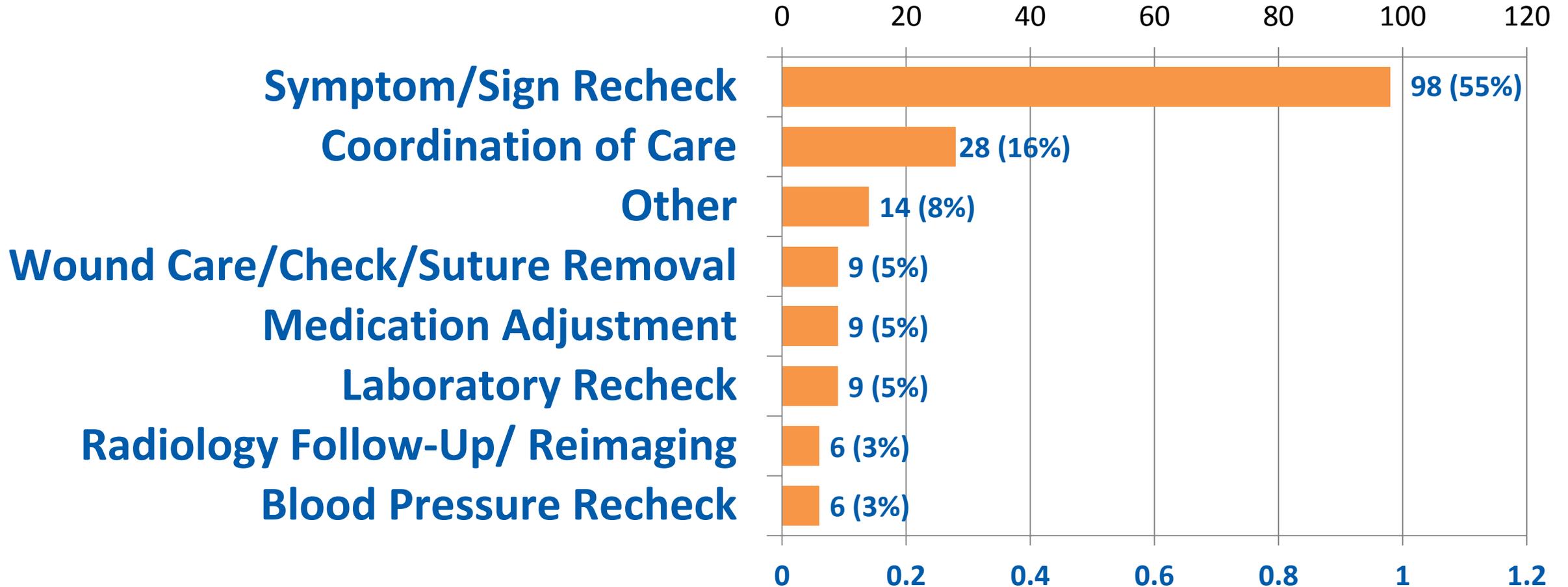
ED-PACT Tool Uses

Uses

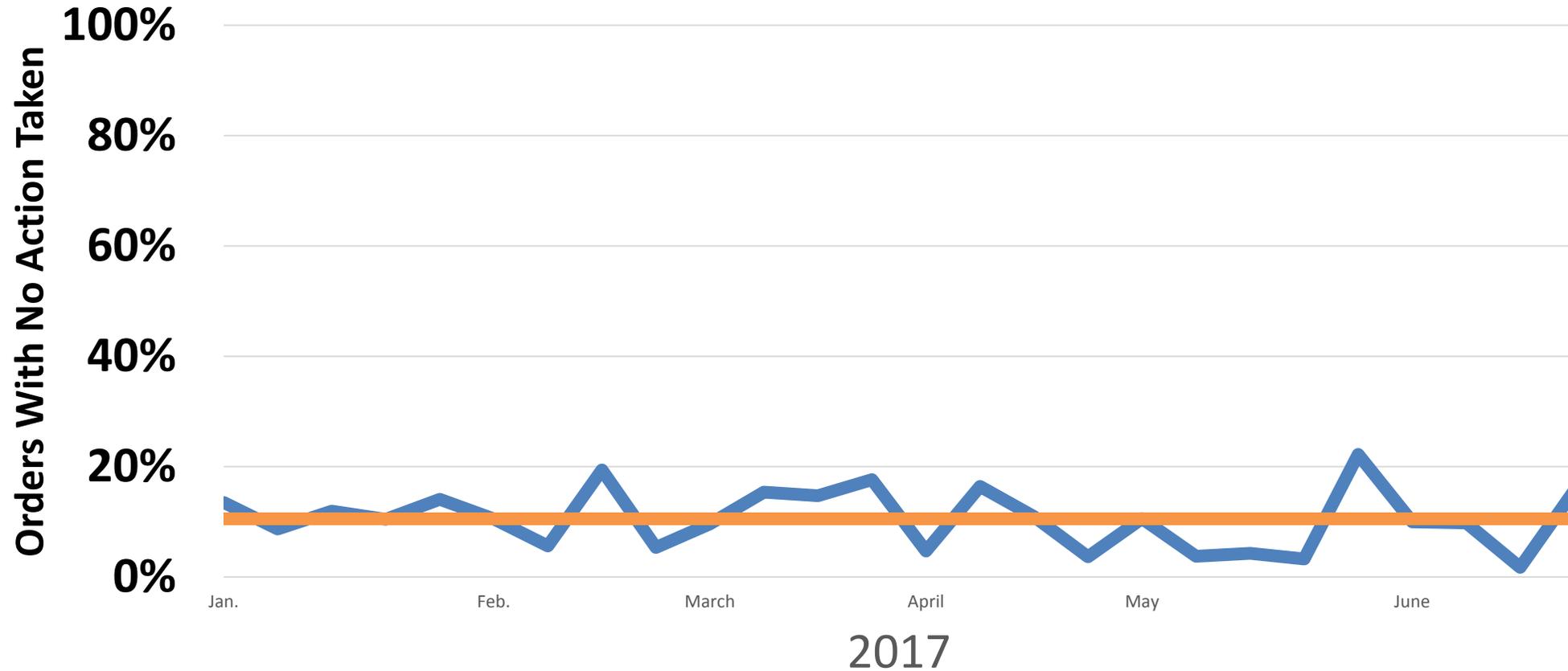


Reasons for ED-PACT Tool Orders

- Random sample of 150 patients for whom the ED-PACT Tool was used



Audit: % Orders No Clinical Action After 3 days



— Orders With No Action Taken — Mean



Reasons for Overdue Orders

- Notifications sent to wrong team
- RNs click on notifications and they disappear
- RN is on leave
 - Hasn't assigned surrogate
 - Surrogate is too busy covering 2 or more teams
- RN's CPRS profile not set up to receive ED-PACT Tool orders
 - Newly assigned RNs and floater RNs
- Patient admitted to hospital or is in domiciliary (ED-PACT Tool should not have been used)



Post-Implementation Qualitative Assessments

- **Elicited feedback from stakeholders – PACT leaders/providers, ED providers, Veterans**
 - In person meetings with each PACT clinic's Lead Physician and Nurse Manager
 - Group and individual feedback from PACT RNs
 - Ad hoc feedback from ED providers
 - Interviews with Veterans (n=9)
- **Domains**
 - Overall impressions
 - Improving the ED-PACT Tool or its implementation
 - Key players in implementation
 - Veteran experience
 - Issues to consider for sustainability at GLA



Qualitative Findings: Tool Benefits

- Reduces ED Providers' uncertainty about how and if Veterans will get needed ED follow-up care
- Helps PACT clinic manage their workflow, reduce “walk-ins,” provide care more efficiently
 - RNs Care Managers really appreciate being included in the “communication loop”
- Veterans receiving indicated care, reporting good experiences obtaining care



Qualitative Findings: Tool Challenges

- Technical

- Notification disappears if RN clicks on it
- Errors related to ED providers “misdirecting” orders (due to having to manually choose team)

- Organizational/Staffing

- Difficulties when staff are on leave or there are RN staffing vacancies



On-going Maintenance Needs

- Twice weekly audit-and feedback for overdue orders (more than 3 days since ED visit)
- Validation and updating of notifications and team names
- Rare troubleshooting with incorrectly placed orders (e.g., for Veterans not assigned to a PACT team)



ED-PACT Tool: Summary

- The ED-PACT Tool is useful in facilitating communication for urgent or specific post-ED follow-up care
- Addresses key patient safety vulnerability
- Sending messages from ED to PACT, via RN Care Manager is feasible and useful.
- Further IT development would improve the tool's value, decrease maintenance effort



ED-PACT Tool: Next Steps

- Applying for funding/recruiting collaborators to support testing of spread to other VA facilities (w/ further evaluation of implementation outcomes)
 - Developed “Implementation Workbook” describing tool/process
- Ongoing engagement with VA informatics community re: opportunities for technologic development
- Applying for funding to assess impact on clinical and Veteran experience outcomes



Collaborators

- Purnima Bharath, MA
- Fredalin Braden, RN
- Joya Chrystal, LCSW
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- Elizabeth Santana Rios, RN
- Hyun-Sung Song, PharmD
- Hemen Saifu, MPH
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Thank you to funders ~

- **Initial QI Workgroup:** VISN 22 Veterans Assessment and Improvement Laboratory (VAIL)
PACT Demonstration Lab (Office of Primary Care)
- **Tool Development, Spread & Evaluation:** VA Quality Enhancement Research Initiative (QUERI),
Care Coordination Program Project
- *Disclaimer: Views expressed herein are those of the investigators, and do not necessarily represent those of VA*



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QUESTIONS / COMMENTS

(Interested in getting copy of Implementation Workbook?)



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