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 days\textsuperscript{1-4}
• Among a cohort of seniors discharged from EDs in Quebec, in the 30 days following the ED visit, 1% died and 5% were hospitalized\textsuperscript{5}
• Among elderly, potential “sentinel event”\textsuperscript{6}
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 EDs
  – 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.  

- Among 250 patients discharged from an academic ED and given a follow-up care appointment, 41% did not receive follow-up care.  
  - 63% of those not given an appointment did not receive care.
2017 NQF Stakeholder Panel
Recommendations

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 visits\textsuperscript{11}

• 80% of VA ED visits are treat-and-release\textsuperscript{11}

• Veterans with VA ED visits are more likely to be older, have more complex medical histories compared to community ED patients\textsuperscript{11}
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 days\textsuperscript{12}

- 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-up\textsuperscript{13}

- Among 24 Veterans in a 2003 Durham ED cohort who had a diuretic newly-prescribed at ED discharge, 12 (50%) received this care\textsuperscript{14}
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
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)\textsuperscript{15}

- Best practices in communication across handoffs\textsuperscript{16}
  - Standardize processes and forms
  - Leverage existing health information technology
  - Create “closed loop” communication systems

- Health IT literature on usability heuristics\textsuperscript{17}
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

Veteran Being Discharged From ED AND has specific/urgent PACT follow-up care needs

ED Provider prompted in using ED–PACT Tool

PACT RN Care Manager receives CPRS notification re: order

RN Care Manager works with team to address care need

RN Care Manager changes order to complete

*Flags those with most need for follow-up care*

*Creates standardized communication system that new/infrequent ED providers can use*

*Utilizes existing EHR*

*PACT team members operating at top of license*

*Creates “Closed Loop” communication system*
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).
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 LAOPO
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

WEST LA VAMC: WLA GOLD
- WLA GOLD 1
- WLA GOLD 2
- WLA GOLD 3
- WLA GOLD 4

WEST LA VAMC: WLA BRONZE
- WLA BRONZE 1
- WLA BRONZE 2
- WLA BRONZE 3

WEST LA VAMC: WLA SILVER
- WLA SILVER 1
- WLA SILVER 2
- WLA SILVER 3

WEST LA VAMC: WLA "WH"
- WLA "WH" Team 1

WEST LA VAMC: WLA "HOM" HPACT
- WLA "HOM" HPACT 1
- WLA "HOM" HPACT 2
- WLA "HOM" HPACT 3
- WLA "HOM" HPACT 4
- WLA "HOM" ED HPACT B
- WLA "HOM" HUD VASH
- WLA "HOM" HPACT 3C
ED Provider Fills In Templated Order

Reason for Request: ED-PACT TOOL WLA GOLD TEAM 4

PATIENT PHONE NUMBER:
Phone: (213) 815-2369
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
RN Care Manager Receives Notification (Informational Alert)
**RN Views Care Coordination Orders**

<table>
<thead>
<tr>
<th>Patient Order</th>
<th>Provider</th>
<th>Order Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Eddie</td>
<td>Cordasco, Kristina M</td>
<td>D-PACT TOOL WLA GOLD TEAM 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phone: (310) 777-7777</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work: NONE GIVEN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cell:</td>
</tr>
</tbody>
</table>

**Reason for Request:**

- **Furosemide Tab 20mg**
- **Take one tablet by mouth every day. Water Pill**
- **Quantity: 14, Refill: 3**

<table>
<thead>
<tr>
<th>Actual Order</th>
<th>Start / Stop</th>
<th>Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furosemide Tab 20mg</td>
<td>06/07/17</td>
<td>Jennings, Eric C</td>
</tr>
<tr>
<td>Furosemide Tab 20mg</td>
<td>06/06/17</td>
<td>Jennings, Eric C</td>
</tr>
</tbody>
</table>
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
RN Changes Status of Order to “Complete”
ED-PACT Tool Uses

Total = 4382
Reasons for ED-PACT Tool Orders

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

- Symptom/Sign Recheck: 98 (55%)
- Coordination of Care: 28 (16%)
- Other: 14 (8%)
- Wound Care/Check/Suture Removal: 9 (5%)
- Medication Adjustment: 9 (5%)
- Laboratory Recheck: 9 (5%)
- Radiology Follow-Up/Reimaging: 6 (3%)
- Blood Pressure Recheck: 6 (3%)
Audit: % Orders No Clinical Action After 3 days

Orders With No Action Taken

2017

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
- Brian Doyle, MD, PhD
- David Ganz, MD, PhD
- Caroline Goldzweig, MD, MPH
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- Deepti Pisupati, MD
- Elizabeth Santana Rios, RN
- Hyun-Sung Song, PharmD
- Hemen Saifu, MPH
- Diane Suzuki, MD
- Mary Wilson, RN
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
References

1) Hastings DN, Oddone EZ, Fillenbaum G et al. Frequency and predictors of adverse health outcomes in older Medicare beneficiaries discharged from the emergency department. Med Care 2008; 46(8):771-777


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11) Vashi, A. Emergency Care Sensitive Conditions in the VA [PPO 14-384] Project Abstract


14) Hastings SN, Sloane RJ, Goldberg KC. The quality of pharmacotherapy in older Veterans discharged from the Emergency Department or Urgent Care Clinic. Journal of the American Geriatrics Society. 2007 55:13339-1348


QUESTIONS / COMMENTS
(Interested in getting copy of Implementation Workbook?)

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