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The Other Side of the Curtain: Transitions of Care in the Emergency Department

Joe Halfpap, PharmD, BCPS
Clinical Pharmacist – Emergency Medicine
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Clinical Pharmacist – Emergency Medicine

Disclosure

- The program chair and presenters for this continuing education activity have reported no relevant financial relationships.

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What Happens in the ED… Shouldn't Stay in the ED

Role of an ED Pharmacist in Transitions of Care

Christi Jen, PharmD, BCPS
Clinical Pharmacist – Emergency Medicine
Banner Boswell Medical Center

Learning Objective

- Describe the role of an emergency department (ED) pharmacist in transitions of care (TOC)

Affordable Care Act (ACA)

Transitions of Care (TOC)

Definition of Terms

Transition of Care – The movement of a patient from one setting of care (hospital, ambulatory primary care practice, ambulatory specialty care practice, long-term care, home health, rehabilitation facility) to another.

Readmissions

https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/8_Transition_of_Care_Summary.pdf

30-Day Readmission Rates

- Chronic Obstructive Pulmonary Disease (COPD)
- Acute Myocardial Infarction (AMI)
- Heart Failure (HF)
- Pneumonia
- Stroke
- Coronary Artery Bypass Graft (CABG)
- Elective Total Hip or Knee Arthroplasty (THA or TKA)
- Unplanned Hospital-Wide All-Cause

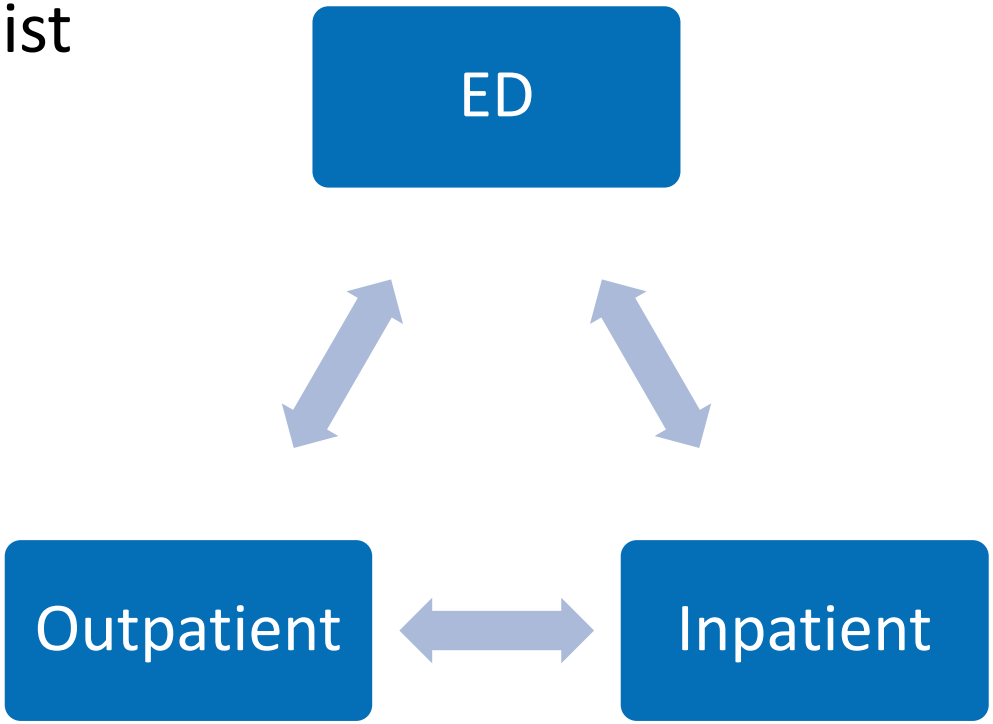
https://www.medicare.gov/hospitalCompare/Data/data-updated.html#MG16

Pharmacists in TOC

- Medication History and Reconciliation
- Discharge Counseling
- Multidisciplinary Rounds

Emergency Department and the Pharmacist

- ED serves as gateway to (re-)admission
  - 72-hour and 30-day readmission
- ED Pharmacist



ED Pharmacists' Roles

- Target patients
  - Experiencing adverse drug events
  - Require more focused disease state management
  - Non-adherent to medications or do not understand how to take their medications
  - "Frequent flyers"
- Unique Roles
  - Assist in referral to outpatient services
  - Discharge counseling and review of prescriptions
  - ED-boarded patients
  - Streamline patient transition to inpatient or observation
  - Assist in patient assistance programs

Assessment Question

The ED pharmacist has opportunities to serve in transition of care roles such as:

A. Targeting patients that may require more disease state management and referring them to outpatient clinics
B. Assisting in the management of ED-boarded patients
C. Focus on patients who frequent the ED and address drug-related concerns
D. All of the above

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Don’t Roll the Dice

Discharge Medication Review in the ED

Joe Halfpap, Pharm D, BCPS
Clinical Pharmacist – Emergency Medicine
UW Health – University Hospital

Learning Objective

- Outline a process so that the ED pharmacist may take part in the review of discharge prescriptions.

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PMH: Dialysis, MRSA Cellulitis, HTN, PE, DVT
Medications: Warfarin 5mg QD

For: Carrot Top

Address: Las Vegas Boulevard, Las Vegas, NV

Rx

Date: December 4, 2016

Bactrim DS 160/800mg tablet

Take 1 tablet by mouth twice daily for 10 days

Refills ~~NA 1 2 3 4 5~~

Signature: Doogie Howser

Labs: WBC 16, Tm 103°F, Flank Pain, Dysuria

Madison, WI 53597

For: Celine Dion

Address: Las Vegas Boulevard, Las Vegas, NV

Rx

Date: December 4, 2016

Ciprofloxacin 250mg tablet

Take 1 tablet by mouth twice daily for 3 days

Refills ~~NA 1 2 3 4 5~~

Signature: Doogie Howser

EKG: QTc 550ms

Medications: Amiodarone 200mg QD
Quetiapine 200mg QHS

For: Wayne Newton

Address: Las Vegas Boulevard, Las Vegas, NV

Rx

Date: December 4, 2016

Levofloxacin 500mg tablet

Take 1 tablet by mouth daily for 10 days

Refills ~~NA 1 2 3 4 5~~

Signature: Doogie Howser

OUTPATIENT PHARMACIST

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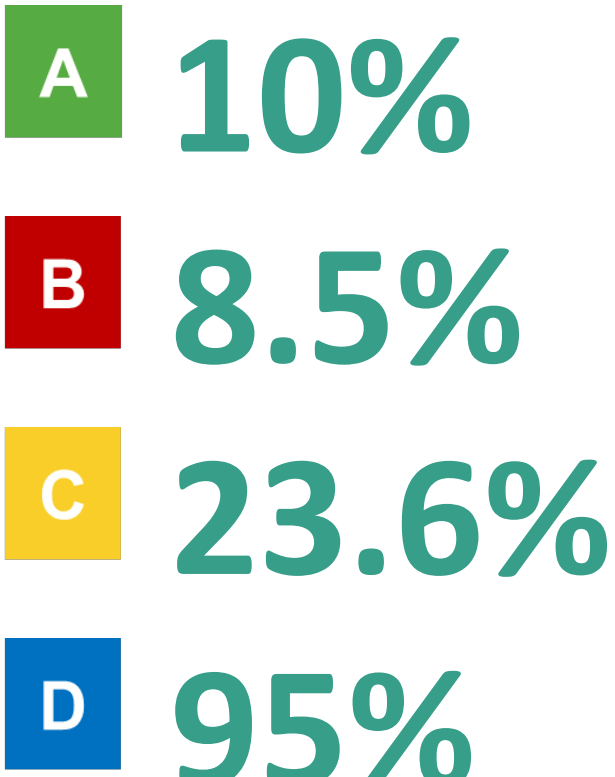
Emergency Department Discharge Prescription Interventions by ED Pharmacists



Cesarz JL, et al. Ann Emerg Med. 2013;61(2):209–214

Workflow diagram

ED Provider

ED Provider

ED Provider

ED Pharmacist

Centralized Storage/ED RN


Resident
Student
Printer
Pharmacist

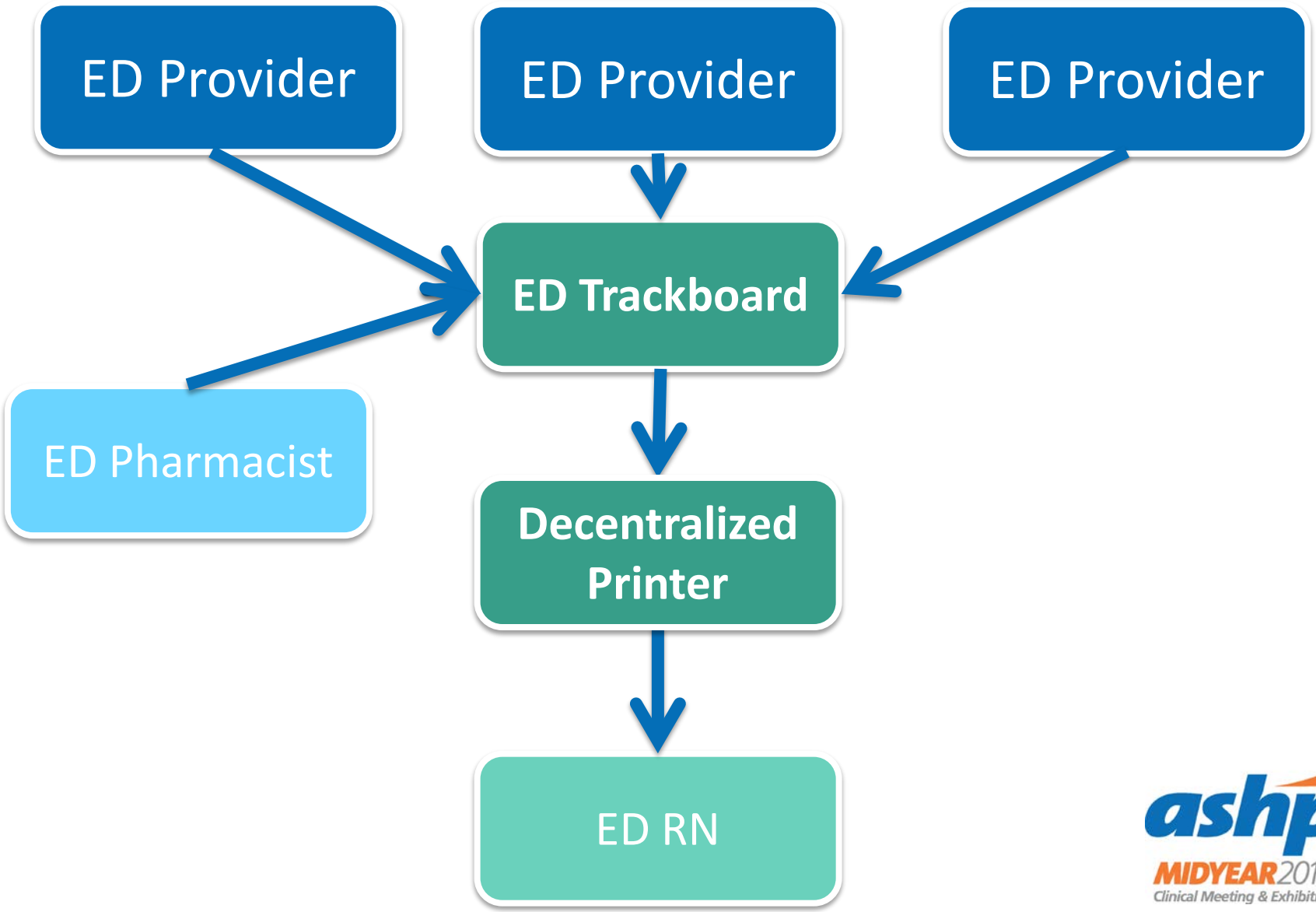
Challenges

- E-Prescribing
- Timeliness
- Discharge instructions
- Patient satisfaction
- Geography

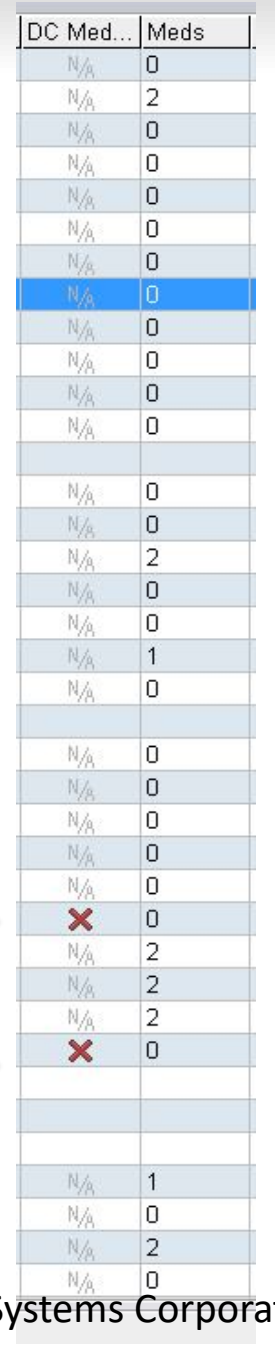
Benefits

- Safety
- Involvement
- Less call backs
- Efficiency of care

Workflow diagram

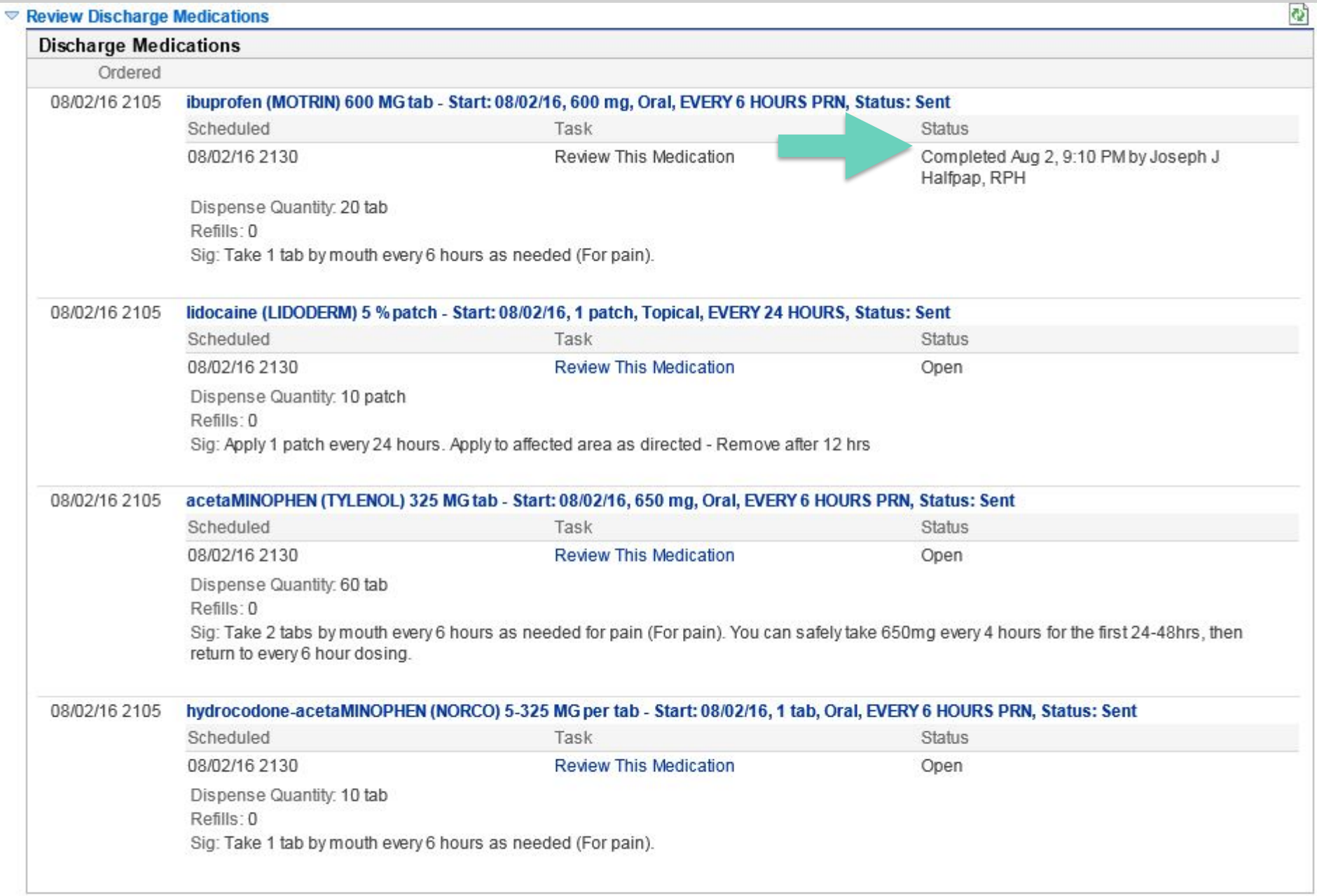


Electronic Review

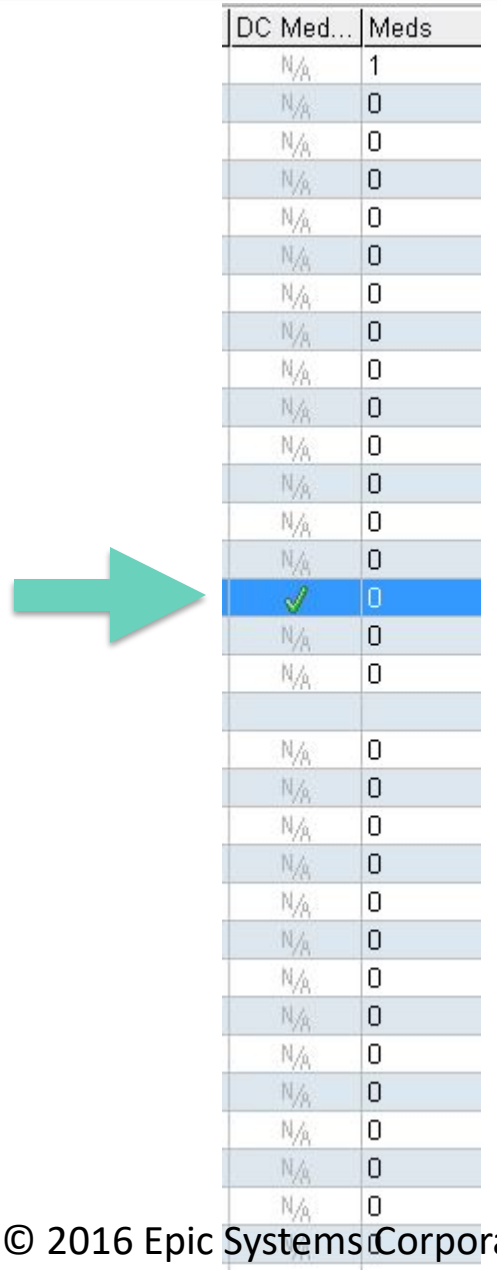


DC Med...	Meds
N/A	0
N/A	2
N/A	0
N/A	0
N/A	0
N/A	0
N/A	0
N/A	0
N/A	0
N/A	0
N/A	0
N/A	0
N/A	0
N/A	2
N/A	0
N/A	0
N/A	1
N/A	0
N/A	0
N/A	0
N/A	0
N/A	0
N/A	0
✕	0
N/A	2
N/A	2
N/A	2
✕	0
N/A	1
N/A	0
N/A	2
N/A	0

X



Electronic Review



Key Takeaways

- Key Takeaway #1
  - Reviewing discharge prescriptions is valuable
- Key Takeaway #2
  - Setting up a system for review of discharge prescriptions can be done in multiple ways

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Play the Odds and Win Big

Discharge PE patients from the ED

Joe Halfpap, Pharm D, BCPS
Clinical Pharmacist – Emergency Medicine
UW Health – University Hospital

Learning Objective

- Choose methods for ED pharmacist involvement in the follow up of DVT/PE patients.

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Case

- 57 y.o. female with mild chest pain and SOB with activity
- PMH: Anxiety, Hypertension, MCA Aneurysm – treated with Pipeline Stent – 5 months ago
- Medications
  - Aspirin 325mg daily
  - Lisinopril 20mg daily
  - Alprazolam 0.5mg twice daily as needed
  - Prasugrel 10mg daily
- Vitals HR 85, SBP 120/70, O2 Sat 99% on RA, RR 13 Temp 37.8°C
- CTA reveals – Bilateral subsegmental PE and unilateral segmental PE

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Outpatient PE/VTE Treatment

Study	Medication	Treatment Location	Outcomes 90 Days		
			Recurrent VTE	All Cause Mortality	Major Bleeding
Aujesky et al. • n=339 • PE only • RCT	LMWH/ Vit K antagonist	Outpatient n=171	0.6%	0.6%	1.2%*
		Inpatient n=168	0	0.6%	0
Zondag et al. • n=229 • PE only • OBS	LMWH/ Vit K antagonist	Outpatient	2%	1%	0.67%
Beam et al. • n=106 • VTE (PE=35) • OBS	Rivaroxaban	Outpatient	None	N/A	None

Aujesky D. et al. Lancet 2011; 378: 41–48
Zondag W. *J Thromb Haemost*. 2011;9:1500-1507
Beam D. et al. Acad Emerg Med 2015; 22:789-795

Outpatient PE/VTE Treatment

Study	Discharge Criteria	Follow up
Aujesky et al. • n=339 • PE only • RCT	PESI class I-II	Daily calls x 1 week
Zondag et al. • n=229 • PE only • OBS	Hestia Criteria	1 week clinic
Beam et al. • n=106 • VTE (PE=35) • OBS	Hestia Criteria	Phone Call 1-2 days post discharge and 3 weeks

Aujesky D. et al. Lancet 2011; 378: 41–48
Zondag W. *J Thromb Haemost*. 2011;9:1500-1507
Beam D. et al. Acad Emerg Med 2015; 22:789-795

Cost of Treating PE/DVT patients	
D/C ED – Rivaroxaban	$4,787
Standard Care	$11,128
Cost of Treating PE patients	
D/C ED – Rivaroxaban	$7,008
Standard Care	$16,416

Kahler ZP. et al. Acad Emerg Med 2015;22:796-802

Patient Satisfaction With Treatment

1-10 Likert Scale[1]	Outpatient	**9.3**
1-5 Likert Scale[2]	Outpatient	**3.8**
% Satisfied or Very Satisfied[3]	Outpatient	**92%**
	Inpatient	**95%**

Agterof MJ. Et al. *J Thromb Haemost*. 2010;8:1235-1241.
Davies, CW, et al.Eur Respir J 2007; 30: 708–714
Aujesky D. et al. Lancet 2011; 378: 41–48

Discharging carefully selected patients with pulmonary embolism from the ED is safe

A TRUE

B FALSE

Discharging carefully selected patients with pulmonary embolism from the ED results in reduced costs of care

A TRUE

B FALSE

UW Health

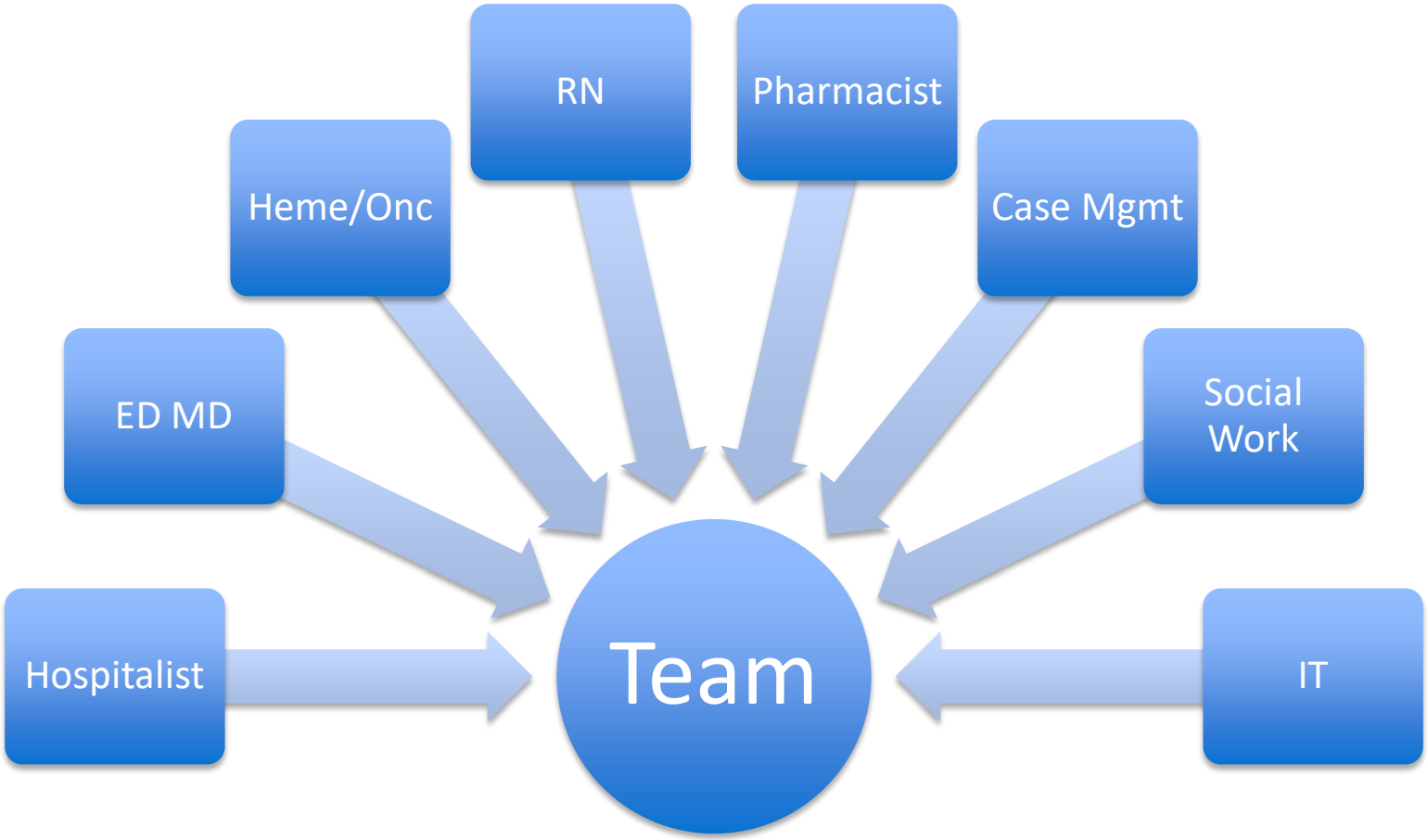
Venous Thromboembolism Management - Adult - Ambulatory/Emergency Department Clinical Practice Guideline

Table of Contents

Note: Active Table of Contents
Click to follow link

http://www.uwhealth.org/cckm

Build a Team


RN
Pharmacist
Heme/Onc
Case Mgmt
ED MD
Social Work
Hospitalist
Team
IT

Process - Roles

MD

- Dx
- Eligibility
- Review with RPH
- Orders
- PCP info
- DC Labs

RPH

- Lab Review
- Interactions
- DC Rx
- Insurance
- Teaching
- Follow-up

RN

- Admin Dose
- Injection Teaching
- D/C instructions
- Reinforce Follow-up

Process - Roles

MD

- Dx
- **Eligibility**
- **Review with RPH**
- Orders
- PCP info
- DC Labs

RPH

- Lab Review
- Interactions
- DC Rx
- Insurance
- Teaching
- Follow-up

RN

- Admin Dose
- Injection Teaching
- D/C instructions
- Reinforce Follow-up

Pulmonary Embolism Severity Index (PESI)

- Objective way to assess risk
- Developed based on US data
- Validated in Europe
- Very Low Risk/Low risk -Class I/II –Scores <86
  - – 90 day mortality from PE of 1.1%
- Meta-analysis
  - 21 studies of PESI or sPESI
  - Sensitivity for PE Related Death 0.949 (95% CI: 0.892 to 0.981)

Zhou et al. Respiratory Research 2012, 13:111
Donze J. et al. Thromb Haemost 2008; 100:943-948
Aujesky D. et al. Am J Respir Crit Care Med 2005;172:1041-1046

PESI Score- Patient Case

PESI Variable	Patient	Score
Age (1 pt/yr)	57	57
Sex (Male +10)	F	0
Hx of Cancer (+30)	No	0
Hx of Heart Failure (+10)	No	0
Hx of Chronic Lung Disease (+10)	No	0
Heart Rate ≥110 (+20)	85 – No	0
Systolic BP < 100mm Hg (+30)	120 - No	0
Respiratory Rate ≥ 30 (+20)	13 - No	0
Temp < 36°C (+20)	37.8°C - No	0
Altered Mental Status (+60)	No	0
O2 Sat < 90% (+20)	99%	0
≥ 86 admit ≤ 85 possible discharge		**57**

Exclusion Criteria

- Intracardiac thrombosis
- Central PE
- Another reason for admission
- Not appropriate for long term anticoagulation
- Stroke in last 6 weeks
- Brain, Spine, Optho surgery in last 6 weeks
- Recent Non-cutaneous surgery
- GI Bleed last 2 weeks
- Active major bleeding
- Therapeutic anticoag
- Thrombocytopenia
- Bleeding disorder
- CrCl < 30
- Hypoxia
- Hypotension
- RV strain
- Thrombolytics
- Pregnant
- Weight > 150kg

Process - Roles

MD

- Dx
- Eligibility
- Review with RPH
- **Orders**
- PCP info
- DC Labs

RPH

- Lab Review
- Interactions
- DC Rx
- Insurance
- Teaching
- Follow-up

RN

- Admin Dose
- Injection Teaching
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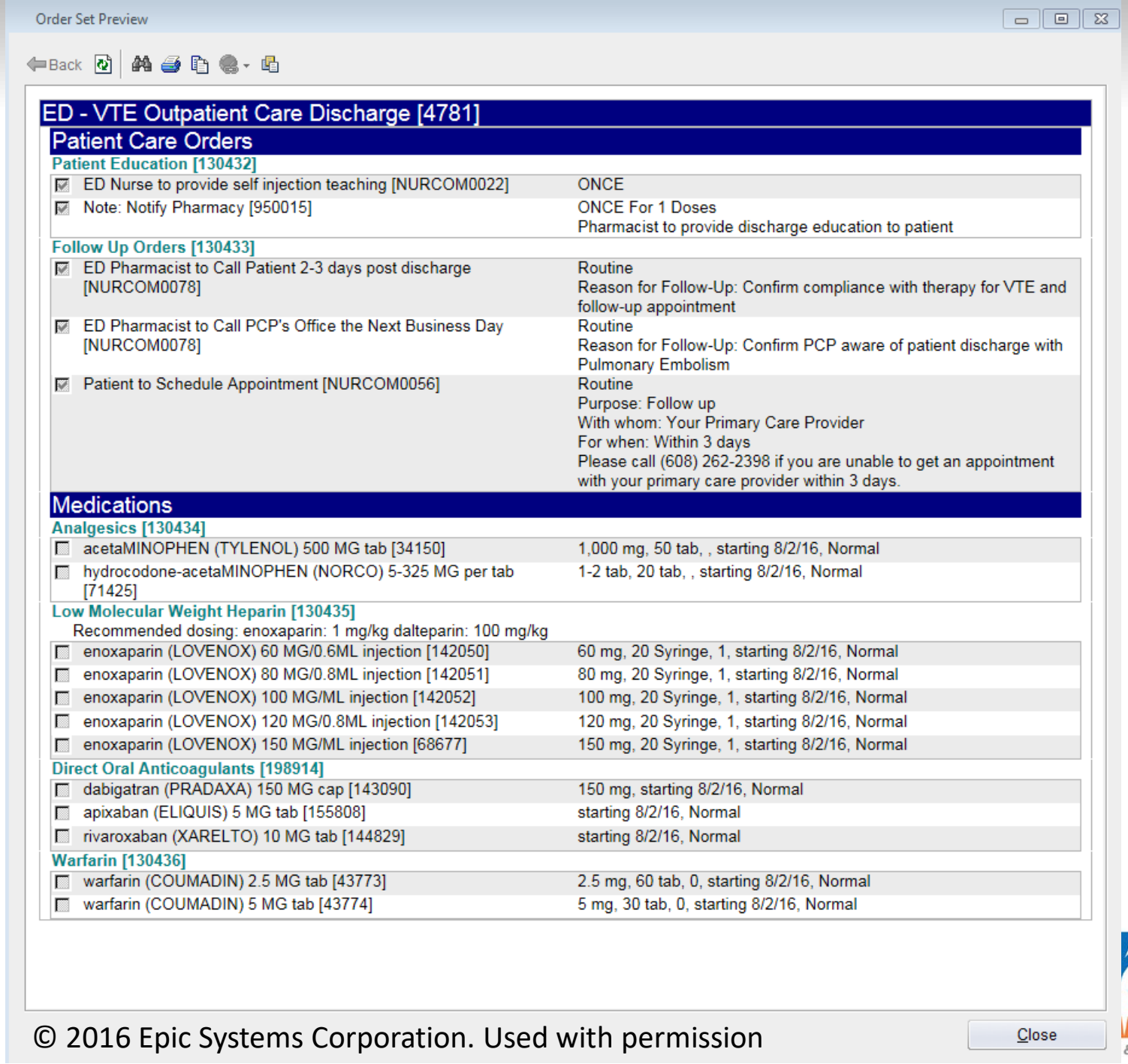


Process - Roles

MD

- Dx
- Eligibility
- Review with RPH
- Orders
- PCP info
- DC Labs

RPH

- **Lab Review**
- **Interactions**
- **DC Rx**
- **Insurance**
- **Teaching**
- Follow-up

RN

- Admin Dose
- Injection Teaching
- D/C instructions
- Reinforce Follow-up

Pharmacist Interventions

Discharge

- Aspirin/NSAIDS
- OCPs
- Pain medications
- Labs
- Insurance coverage

Case

- 57 y.o. female with mild chest pain and SOB with activity
- PMH: Anxiety, Hypertension, MCA Aneurysm – treated with Pipeline Stent – 5 months ago
- Medications
  - **Aspirin 325mg daily**
  - Lisinopril 20mg daily
  - Alprazolam 0.5mg twice daily as needed
  - **Prasugrel 10mg daily**
- CTA reveals – Bilateral subsegmental PE and unilateral segmental PE
- **Patient discussion – been on warfarin refusing to start again**
- **Insurance – state plan DOAC's covered!**

Process - Roles

MD

- Dx
- Eligibility
- Review with RPH
- Orders
- PCP info
- DC Labs

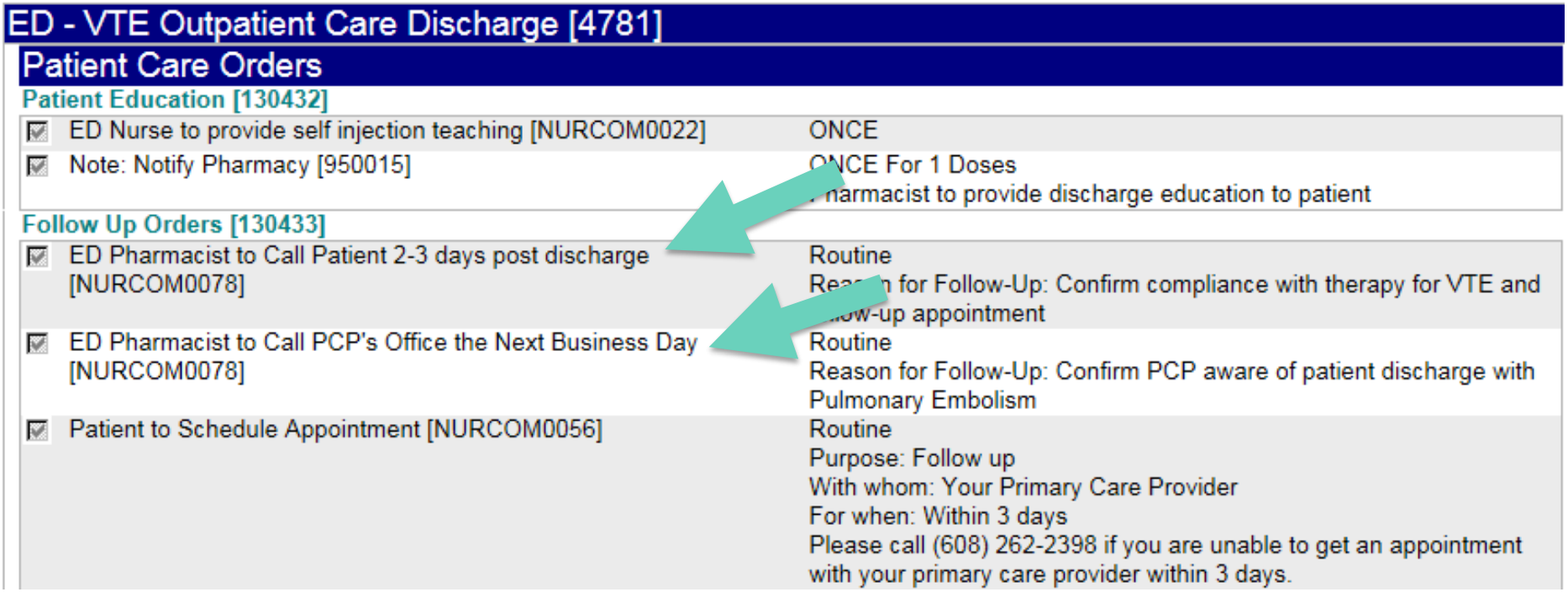
RPH

- Lab Review
- Interactions
- DC Rx
- Insurance
- Teaching
- **Follow-up**

RN

- Admin Dose
- Injection Teaching
- D/C instructions
- Reinforce Follow-up

Follow-up



ED - VTE Outpatient Care Discharge [4781]

Patient Care Orders

Patient Education [130432]

☑ ED Nurse to provide self injection teaching [NURCOM0022]	ONCE
☑ Note: Notify Pharmacy [950015]	ONCE For 1 Doses Pharmacist to provide discharge education to patient

Follow Up Orders [130433]

☑ ED Pharmacist to Call Patient 2-3 days post discharge [NURCOM0078]	Routine Reason for Follow-Up: Confirm compliance with therapy for VTE and follow-up appointment
☑ ED Pharmacist to Call PCP's Office the Next Business Day [NURCOM0078]	Routine Reason for Follow-Up: Confirm PCP aware of patient discharge with Pulmonary Embolism
☑ Patient to Schedule Appointment [NURCOM0056]	Routine Purpose: Follow up With whom: Your Primary Care Provider For when: Within 3 days Please call (608) 262-2398 if you are unable to get an appointment with your primary care provider within 3 days.

Pharmacist Interventions

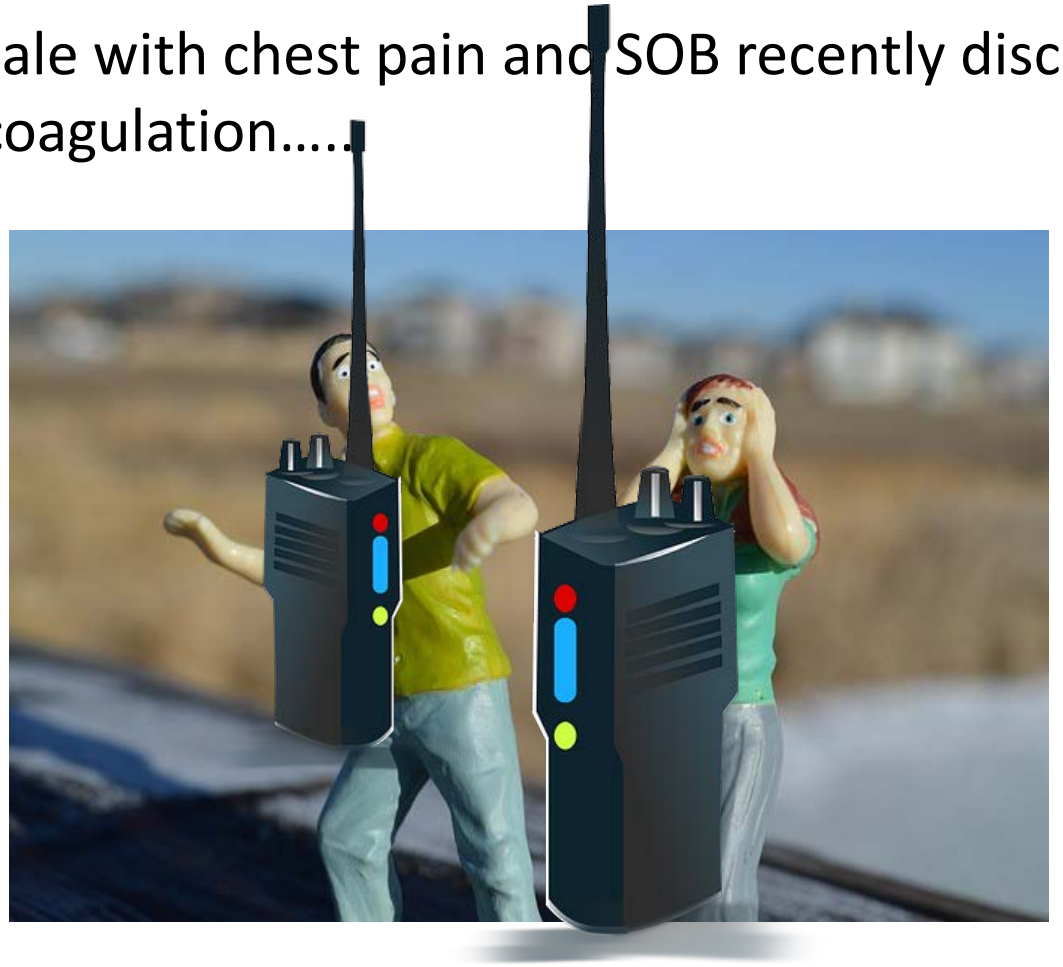
Post Discharge

- INR Draws
- ED anticoag clinic
- Patient questions
- Insurance issues/Medication access

Case

The Next Day

- 57 y.o. female with chest pain and SOB recently discharged with PE on anticoagulation…..



Key Takeaways

- Key Takeaway #1
  - Discharging VTE patients from the ED requires a team based approach
- Key Takeaway #2
  - Institutional guideline and protocols assure safe transitions of these patients
- Key Takeaway #3
  - There is value to the both the patient and organization

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the ED: Opportunities for Chronic Disease Management at Discharge

Christi Jen, PharmD, BCPS
Clinical Pharmacist – Emergency Medicine
Banner Boswell Medical Center

Learning Objective

- Evaluate opportunities for chronic disease management at discharge and communication to outside providers.

Opportunities for Chronic Disease Management

- Anticoagulation management
- Falls in the elderly
- Chronic Heart Failure (CHF)
- Chronic Obstructive Pulmonary Disease (COPD) or asthma

How many of you perform the daily culture follow-up in the ED?

Upon chart review, do you also perform the following?

A. Review the patient's concomitant medications

B. Review the patient's laboratory results

C. Both A and B

D. None of the above

Anticoagulation: Daily Culture Follow-Up

- Review discharge anti-infectives and potential for drug-drug interactions with warfarin
- Review INR and other pertinent labs
- Call patient to ensure follow-up with PCP, specialist, or anticoagulation clinic
- Communicate with provider regarding patient's ED visit:
  - Date and reason for ED visit
  - Culture results
  - Discharge anti-infective, dosing, and duration
  - INR

SAMPLE FAX

TO:		**FROM:**	
Name:	Dr. John Doe	Name:	Christi Jen, PharmD, BCPS
Company:		Date:	**8/10/16**
Dept:		No. Pages:	2 (including cover page)
Phone:	623-123-4567	Phone:	623-987-6543
Fax:	623-123-6789	Fax:	623-987-4321
Subject:	Jane Doe (DOB 5/21/1932)		

Message:

Pt was seen here in the ED on 7/31/16 for hematuria and pyelonephritis and was discharged on Levaquin 750mg PO daily x 7 days. Urine culture results came back positive for >100K Pseudomonas aeruginosa, which is sensitive to Levaquin. Patient's INR in the ED was 3.2. Please see attached results for evaluation and follow-up with patient for repeat INR check.

Thank you. Should you have any questions, please call us back at **623-832-5366**.

Christi Jen, PharmD, BCPS
Clinical Pharmacist – Emergency Medicine

Ed Physician, MD

Falls in the Elderly

- Common reason for ED visit
- Risk increases with multiple risk factors (RF)
  - Absolute risk for falls: 11% (no RF) vs. 54% (multiple RF)
- Risk factors
  - Disability
  - Poor performance on physical test
  - Depressive symptoms
  - Poor executive function
  - Previous falls
  - Polypharmacy

Delbaere K, et al. J Am Geriatr Soc 2010 Sep;58(9):1679-85.

Falls in the Elderly

- Geriatric Emergency Department Guidelines
  - American College of Emergency Physicians, American Geriatric Society, Emergency Nurses Association, and Society for Academic Emergency Medicine
  - Pharmacists as part of ED staffing requirements for ancillary services
  - Role: identify polypharmacy and high-risk medications

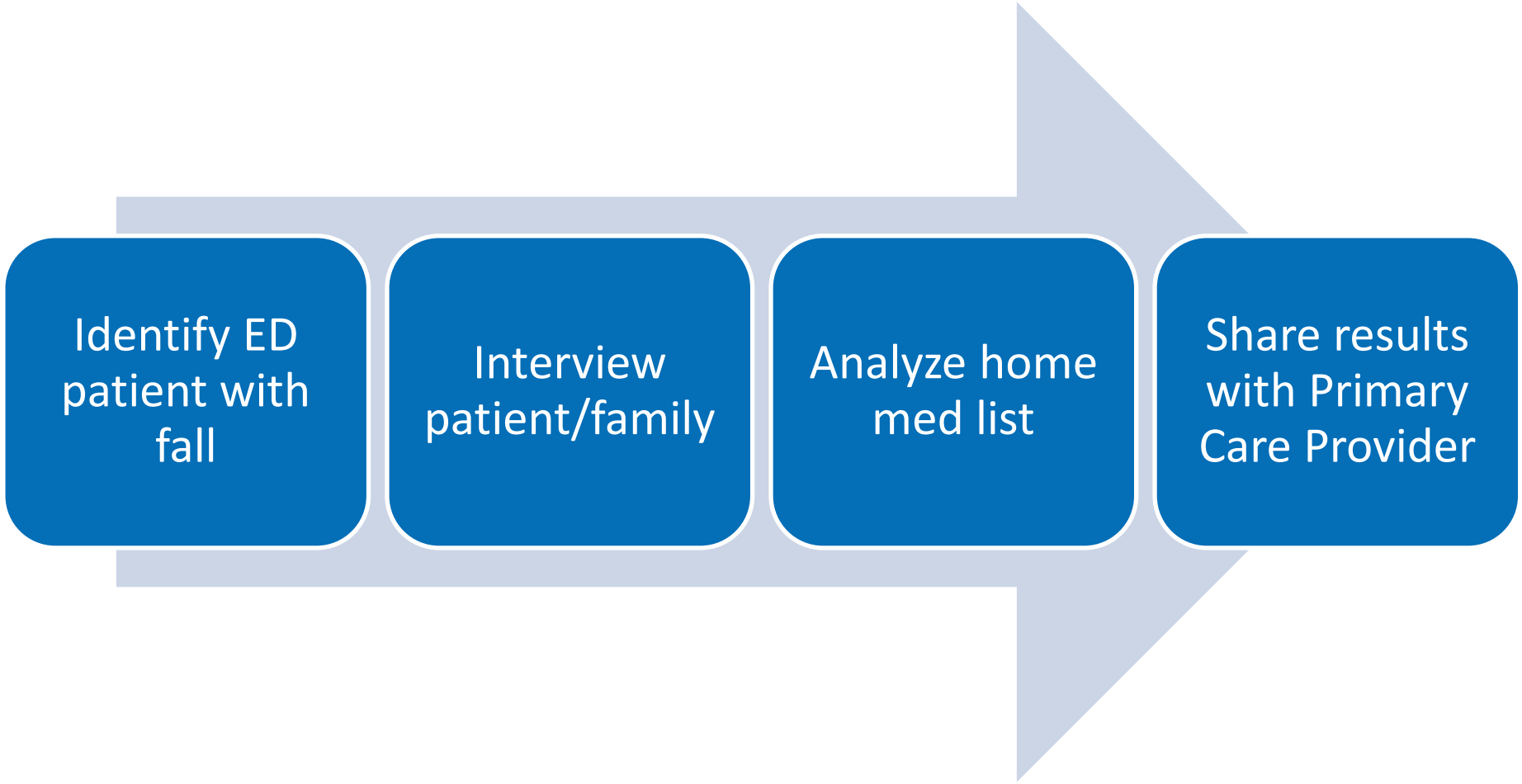
https://www.acep.org/geriedguidelines/

Guidelines for Prevention of Fall in Older Person

- American Geriatrics Society and British Geriatrics Society
  - Universal screening of all patients ≥ 65 years old for history of falls
  - Completing multi-factorial risk assessment

Summary of the Updated AGS/BGS clinical practice guidelines for prevention of falls. J Am Geriatr Soc 2011 Jan;59;(10:148-57.

Pharmacist Assessment of Fall



Medication Fall Risk Score

Medication Fall Risk Score

Point Value (Risk Level)	American Hospital Formulary Service Class	Comments
3 (High)	Analgesics,* antipsychotics, anticonvulsants, benzodiazepines†	Sedation, dizziness, postural disturbances, altered gait and balance, impaired cognition
2 (Medium)	Antihypertensives, cardiac drugs, antiarrhythmics, antidepressants	Induced orthostasis, impaired cerebral perfusion, poor health status
1 (Low)	Diuretics	Increased ambulation, induced orthostasis
Score ≥ 6		**Higher risk for fall; evaluate patient**

* Includes opiates.
† Although not included in the original scoring system, the falls toolkit team recommends that you include non-benzodiazepine sedative-hypnotic drugs (e.g., zolpidem) in this category.

- Utilize tool to minimize use of high-risk meds and decrease fall risk

http://www.ahrq.gov/professionals/systems/hospital/fallpxtoolkit/fallpxtk-tool3i.html
Used with permission. Beasley B, Patatanian E. Hosp Pharm 2009;44(12):1095-1102.. Thomas Land Publishers

Sample Communication

Date

Dear (provider name),

Your patient (patient name) was seen at the Banner Boswell Emergency Department on (date) secondary to a fall. It is recognized that the cause of falls is often multifactorial and certain medications may contribute to fall risk. As the clinical pharmacist, I have interviewed the patient/family about the circumstances surrounding the fall and reviewed the patient's current medication regimen and determined that the following agents may contribute to risk for future falls:

LIST AGENTS HERE

This information is respectfully submitted for your review and potential incorporation into the primary care plan for (patient name). Please contact me should you care to discuss this matter further.

Sincerely,

Clinical Pharmacist
Banner Boswell Medical Center –Emergency Department

ED-Based Pharmacist TOC Program at Johns Hopkins

- Goal:
  - Improve transition of care (TOC)
  - Decrease ED revisits
  - Reduce medication errors

Hohner E et al. Am J Health-Syst Pharm 2016;73:1180-7.

ED-Based Pharmacist Transition of Care Program

Johns Hopkins	Target Patients	Intervention
- Level I trauma - 1.5 FTE clinical pharmacist & 1 PGY2 EM resident	- CHF or COPD/asthma exacerbation - Known frequent ED visitors - Discharged home from ED	- ED pharmacist met with pt - Reviewed meds, adherence, current management of disease, other - Follow-up with AmCare or HBMM Program

HBMM: Home-Based Medication Management
CHF: congestive heart failure
COPD: chronic obstructive pulmonary disease

Hohner E et al. Am J Health-Syst Pharm 2016;73:1180-7.

ED-Based Pharmacist TOC at Johns Hopkins

Table 2. Pharmacist Interventions and Patient Follow-up[a]

Variable	Referred to HBMM Program (*n* = 12)	Referred to Pharmacy Clinic (*n* = 6)	All Pts (*n* = 18)
Pharmacist interventions, no.			
Medication and disease education performed	12	6	18
Therapy additions recommended	5	4	9
Adherence issues identified	9	3	12
Device administration education performed	3	1	4
Inappropriate medications identified	1	0	1
Hospital admissions resulting from ED visit, no.	3	2	5
Attended pharmacist follow-up appointment, no. pts	3	2	5
Mean ± S.D. days between ED visit and follow-up appointment	16 ± 9.5	17.5 ± 10.6	16.6 ± 8.6
Lost to follow-up, no. pts	9	4	13
Followed up with PCP within 30 days, no. pts	4	1	5
Revisited ED within 30 days, no. pts	1	3	4

[a]HBMM = home-based medication management, ED = emergency department, PCP = primary care provider.

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Used with permission. Hohner E et al. Am J Health-Syst Pharm 2016;73:1180-7.

ED-Based Pharmacist TOC Lessons Learned

- Potentially achievable but resource intensive
- Lack of resources and time
  - Enrollment, education, coordination for follow-up
  - Timely available AmCare appointments
- Need to identify pts early for discharge home
  - Timely intervention
  - Does not interfere with timely discharge
- Utilize current automated resources e.g, EMR
- Expansion to other chronic diseases e.g, diabetes, hypertension
  - Creation of Comprehensive Clinic

Hohner E et al. Am J Health-Syst Pharm 2016;73:1180-7.

UPMC Transition of Care

- Medication Access and Adherence Tool (MAAT)
  - Screen patients in the ED
  - Identify patients with potential for medication-related issues post-discharge
- Interventions
  - Medication reconciliation
  - Medication access and adherence assessment
  - Discharge follow-up for medication management

Cassano A, et al. ASHP-APhA Medication Management in Care Transitions Best Practices. Available at: http://www.ashp.org/DocLibrary/Policy/Transitions-of-Care/ASHP-APhA-Report.pdf. Accessed 2 Aug 2016.

UPMC Transition of Care: Use of MAAT

Figure 7. Pittsburgh: Medication Access and Adherence Tool

1. How sure are you that you need medications to treat your health problems?
   ❑ Not sure at all ❑ Somewhat sure ❑ Very sure

2. How sure are you that you can take your medication every day as prescribed when you are at home?
   ❑ Not sure at all ❑ Somewhat sure ❑ Very sure

3. When you are at home, how often do you skip doses of your medications or stop taking your medications?
   ❑ Very often ❑ Somewhat often ❑ Not often or never

4. How difficult is it for you to pay for your medications?
   ❑ Very difficult ❑ Somewhat difficult ❑ Not difficult at all

5. How often do you experience adverse effects from your medications?
   ❑ Very often ❑ Somewhat often ❑ Not often or never

ASHP-APhA Medication Management in Care Transitions Best Practices

Used with permission. Cassano A, et al. ASHP-APhA Medication Management in Care Transitions Best Practices. Available at: http://www.ashp.org/DocLibrary/Policy/Transitions-of-Care/ASHP-APhA-Report.pdf. Accessed 2 Aug 2016.

Learning Assessment

- The following are various ways by which an emergency medicine pharmacist may be involved in transition of care (TOC):

A During daily culture follow-up

B Upon identification of an adverse drug event

C Chronic disease state intervention

D All of the above

Key Takeaways

- Key Takeaway #1
  - Many TOC interventions by ED Pharmacists are borne out of the need to optimally serve current patient population.
- Key Takeaway #2
  - Using simple tools to communicate with providers will assist in the long-term optimal management of the patient.
- Key Takeaway #3
  - ED Pharmacists serve a critical role in improving TOC, decreasing adverse events, and improve the care of the patient.

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Past the Check-Out Time: Pharmacist Interventions for ED Boarded Patients

Christi Jen, PharmD, BCPS
Clinical Pharmacist – Emergency Medicine
Banner Boswell Medical Center

Learning Objective

- Create pharmacist-intervention strategies for transitions of care (TOC) related to ED-boarded patients

What is a boarded ED patient?

"A patient who remains in the emergency department after the patient has been admitted to the facility but has not been transferred to an inpatient unit."

- American College of Emergency Physicians (ACEP)

https://www.acep.org/Clinical---Practice-Management/Definition-of-Boarded-Patient-2147469010/

How does your institution define ED boarding of patients?

A > 2 hours

B > 4 hours

C > 6 hours

D I have no idea!

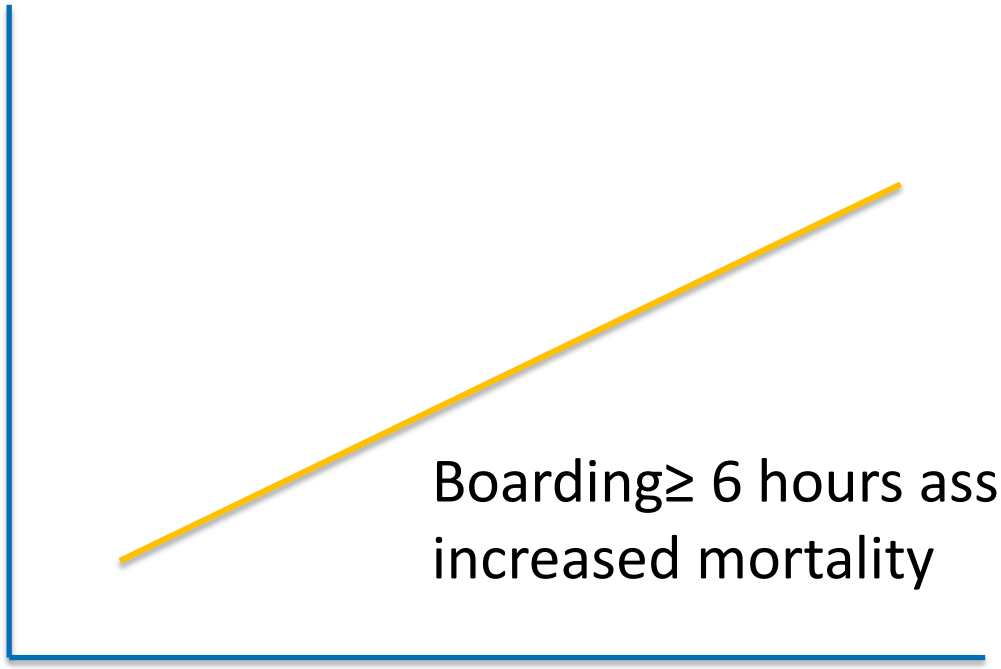
In your last shift, how many of you had at least one boarded patient?

ED Boarding

- Causes:
  - Lack of available inpatient beds and staff
  - Inefficient discharge planning
- Leads to ED crowding
- Hospital Preparedness Program of Department of Health and Human Services
  - 20% of all staffed beds available within 4 hours of disaster-related surge
  - Boarding times: surrogate marker for emergency preparedness

Coil CJ et al. Ann Emerg Med 2015;1-7.
Diercks DB, et al. Ann Emerg Med 2007;50:489-496.
Love JS, et al. Dis Med Pub Health Prep 2016;1-7.

Effect of ED Boarding of Patients



- Overcrowding
- Adverse events and sub-optimal care

Coil CJ et al. Ann Emerg Med 2015;1-7.

Affected Populations

- Critically-ill
  - Sepsis or hemodynamically unstable patients
- Cardiac: acute coronary syndrome (ACS) patients e.g., NSTEMI
- Disaster-related patients
  - Mass casualty incidents
- Boarded psychiatric patients

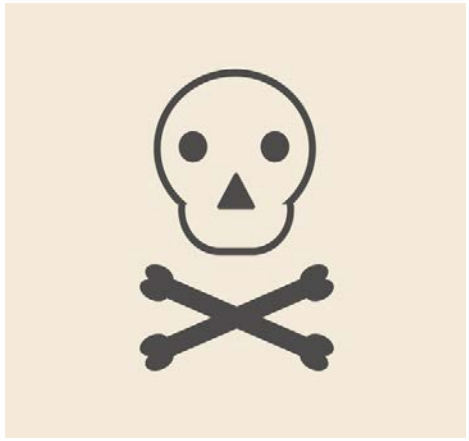
Coil CJ et al. Ann Emerg Med 2015;1-7.
Diercks DB, et al. Ann Emerg Med 2007;50:489-496.
Love JS, et al. Dis Med Pub Health Prep 2016;1-7.

Role of ED Pharmacist for Boarded Patients

- Monitor length of stay (LOS) for intervention
- Target patient populations
- Assist in management of patient
- Medication history
- Medication reconciliation
- Discharge medication reconciliation

Boarding of Psych Patients

80%



705 – 1661 mins

5.4% → 12.5%

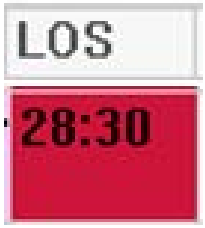
Misek RK, et al. West J Emerg Med 2015 1 Jan;16(1):71-75.

Care of the ED Boarded Psychiatric Patient (ACEP 2014 Recommendation)

- Telemedicine
- Use of treatment protocols
- Psych ED observation unit
- ED case management
- Mobile crisis interventions units
- Improving or changing billing and reimbursement
- Medical management

Identification of Boarded Psych Patient

Bed	HUS	Alerts	ESI	Name	A	Age	LOS	Reason for Visit	Pt's Complaint
15,.		NPO	2	Doe, John		30	28:30	1:Suicidal ideations	SI, thought of "slitting



Sample Patient Checklist

BBWMC Emergency Department Guidelines for the Care of Psychiatric Patients

Date: _____

Restrained on arrival?	**Y | N**	
Restrained within 4 hours of arrival?	**Y | N**	**Time:** _____
Plan of Care (IPOC) Initiated?	**Y | N**	

*Plan of care must be initiated immediately for all restrained patients.

Patient Checklist

Plan of Care (IPOC) Initiated?	Y | N
Pain assessed?	Y | N
Breakfast provided?	Y | N | NA
AM oral care provided/offered?	Y | N
If appropriate, patient allowed to ambulate?	Y | N
Bathroom needs met?	Y | N
Shower offered (minimum 1 time/day)?	Y | N
Clean purple scrubs offered?	Y | N
Lunch provided?	Y | N | NA
Diversionary activities (books, television, etc.,) offered?	Y | N
Quiet time with lights turned down offered?	Y | N
Evening meal provided?	Y | N | NA
PM oral care provided/offered?	Y | N
Inpatient bed provided within 24 hours?	Y | N
Medication history completed by medication history technician or nurse?	Y | N
Medication reconciliation / home meds addressed by provider?	Y | N

ED Pharmacy Operations for Boarded Patients

- Medication history technicians
- ED Medication Lockbox
  - Secure storage of patient's own medications
- ED Pharmacist assists in restarting medications
  - Utilize facility's meds except non-formulary
- Pyxis machines
  - Loaded most common medications
- Medication Administration Record (MAR)
  - State "In ED Pyxis" or "Send Med Request to Pharmacy"

Scheduled

atorvastatin

tine, Dosage Form: Tab,
10/21/15 21:00:00 MST
IN ED PURPLE PYXIS Pharmacy Product Note: MAY ...

levothyroxine

Dosage Form: Tab,
10/21/15 15:00:00 MST
SEND MED REQUEST TO PHARMACY -- At home, p...

levothyroxine

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(True or False) Learning Assessment

Emergency Medicine pharmacists play a vital role in ED-boarded patients by ensuring timely medication reconciliation and drug administration.

A TRUE

B FALSE

Key Takeaways

- Key Takeaway #1
  - Assist in management of patient
    - Drug therapy e.g., toxicology; repeat lab and other tests
- Key Takeaway #2
  - Medication history
    - Medications brought from home & other belongings
- Key Takeaway #3
  - Medication reconciliation
    - Timely continuation and administration of medications
    - Patient monitoring
- Key Takeaway #4
  - Discharge/transfer medication reconciliation
    - Psychiatric facilities
    - Inpatient admission

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The Other Side of the Curtain: Transitions of Care in the Emergency Department

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