Physical Therapy in the Emergency Department

Anna Perry, PT, DPT

Introduction

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- Undergrad Rehab Science major at University of Pittsburgh *(2014-2018)*
- Graduate School PT program at Upstate Medical University in Syracuse, NY *(2018-2021)*
- Physical Therapist at Elderwood at Liverpool Skilled Nursing Facility/Short Term Rehab in CNY *(2021-2022)*
- Physical Therapist at Crouse Hospital in Syracuse, NY *(2022-present)*

Learning Objectives

1. Describe current approaches to musculoskeletal management and physical therapy practice in the emergency department (ED).
2. Contrast the role of the acute care therapist with the physical therapist in the ED.
3. Recognize the process of evaluating and determining a discharge disposition for a patient in the ED.

CROUSE HEALTH

- In operation since 1887
  - Syracuse Women's Hospital and Training School for Nurses
- Licensed for 506 acute-care adult beds and 57 bassinets (NICU)
- Serves more than 23,000 inpatients and 82,000 emergency services visits a year from a 16-county area in Central and Northern New York
- "Take me to Crouse"
  - Certified Comprehensive Stroke Center

CROUSE HOSPITAL

EMERGENCY

RAPID TREATMENT.
SAFE AS ALWAYS.

Physical Therapist Role in Acute Care

- Decreasing complications from hospitalization by increasing mobility
- **Discharge planning**
  - Where should a patient go when they no longer need to be in the hospital?
  - Prior level of function vs. current level of function
  - Dynamic process with consistent reassessment of function
- Educating other staff on how to move with patients safely
- Progressing patients' mobility within limits of medical stability to promote independence

What determines whether or not someone is safe to discharge HOME from the hospital?

- Are they MEDICALLY STABLE and cleared medically for discharge?
- Can they navigate safely in their home?
  - Stairs to navigate?
  - Tub vs walk-in shower?
  - Rugs vs hardwood floors?
  - Will a walker/wheelchair fit through the doorways?
  - Are they NWB/TTWB/PWB?
- Is someone there to assist them?
  - How do we determine if caregiver is adequate?
- Do they have the equipment needed to be safe?/can we provide it for them upon dc?
  - Raised toilet/over the toilet commode
  - Walker if weak or falling
  - Grab bars next to shower
  - Shower chair
  - Hoyer lift
  - Wheelchair
  - Crutches

Discharge recommendations if able to discharge HOME:

- Home with no rehab needs
- Home with (24/7) supervision
  - If cognitive/safety issues
  - Will they be safe if the person they live with works during the day?
- Home with family/caregiver assistance
  - If mobility issues/weakness
- Home PT
  - Homecare services 2x/week
  - Usually for homebound people
  - If other home services are necessary
- Outpatient PT
  - Need to be able to get to an outpatient clinic
  - Usually ortho/vestibular/balance needs
  - 2-3x/week

Discharge recommendations if unable to discharge HOME:

- Acute inpatient rehab (rehab hospital)
  - 3 hours/day
  - PT/OT/SLP
  - Younger population with good social supports
- Short term rehab (Skilled Nursing Facility)
  - 30-45 min 2-3x/day
  - PT/OT/SLP
  - Usually >65
- Assisted Living (meds/meals)
  - Have to be indep behind a closed door
- Independent living
  - No stairs/senior accommodating
  - Some provide dinners/bus to grocery store
- SNF/LTC
  - Only if came to hospital from SNF
  - If needing to discharge to LTC, have to discharge to STR first and transition to LTC
- Long term acute care hospital (LTACH)
  - Usually patients who are ventilator-dependent

Physical Therapist Role in the ED: Return to prior living environment vs. hospital admission

- Patient is medically stable and unable to be admitted to the hospital for medical reasons, but the ED provider isn't sure they are safe to return home
- Provider will page PT consult to the ED to determine whether or not the person can safely be discharged back to their prior living environment
- If not, they need to be admitted to the hospital for placement in a STR facility

Considerations: Return to prior living environment vs. hospital admission

- Acuity of event
  - LBP
  - UTI
  - BPPV
- Social history (living environment, support vs alone, stairs vs one-level)
- Modifications that can be made **immediately**
  - 1st floor set up
  - Providing an AD
- Need for assistance vs. independent
- Medical stability with mobility

Literature Review:

APTA[1]

- Opportunity to collaborate in the care of patients with wide range of acute and chronic problems
- Critical role in screening for appropriateness of care
- Reduces costs
- Increases patient satisfaction
- Decreases potential for readmission

https://www.apta.org/your-practice/practice-models-and-settings/hospitals/emergency-department

Literature Review

APTA[2]

https://www.apta.org/your-practice/practice-models-and-settings/hospitals/emergency-department/physical-therapy-in-emergency-care-value-of-physical-therapy

- **Wait and throughput time.**
  - Shorter time waiting to be seen by an ED provider (Pugh, 2020; Alkhouri, 2020; Bird, 2016; Salt, 2016; Sayer, 2018) and total length of stay (Pugh, 2020; Alkhouri, 2020; Bird, 2016; Salt, 2016; Sayer, 2018; Stewart, 2022) when patients were managed by a PT
- **Hospital admissions.**
  - PT management of patients in the ED reduces hospital admission rates (Gurley, 2020; Cassarino, 2021; Kesteloot, 2012; Sayer, 2018).
- **ED readmissions.**
  - Reduced risk of readmission to the ED for a subsequent fall (Lesser, 2018; Goldberg, 2020).

Literature Review

APTA[2]

https://www.apta.org/your-practice/practice-models-and-settings/hospitals/emergency-department/physical-therapy-in-emergency-care-value-of-physical-therapy

- **Patient satisfaction.**
  - High patient satisfaction (Farrell, 2014; Fruth, 2013; Guengerich, 2013; Kesteloot, 2012; Matifat, 2019; Schulz, 2016).
  - Value in level of care and education provided
- **Patient outcomes.**
  - Patients with musculoskeletal disorders managed by PTs had significantly greater reduction in pain at discharge and at f/u(Gagnon, 2021).
  - Patients seen directly by a PT used fewer prescription medications and had significantly fewer return visits to the ED (Gagnon, 2021).

Literature Review

APTA[2]

https://www.apta.org/your-practice/practice-models-and-settings/hospitals/emergency-department/physical-therapy-in-emergency-care-value-of-physical-therapy

- **Physician acceptance of PTs in the ED.**
  - ED physicians value the services PT offers to patients and the department as a whole
  - PT consultations enhanced emergency care provided to patients (Lebec, 2010).
- **Management of musculoskeletal conditions.**
  - PTs are as effective as other ED practitioners (Ferreira, 2019)
  - PTs are more time-efficient than ED physicians managing the same population (deGruchy, 2015).
- **Evidence-informed care.**
  - PTs practicing in the ED have a higher consistency with guideline-recommended care (deGruchy, 2015; Farrell, 2014; Ferreira, 2019)

Literature Review

APTA[2]

https://www.apta.org/your-practice/practice-models-and-settings/hospitals/emergency-department/physical-therapy-in-emergency-care-value-of-physical-therapy

- **Medication.**
  - Patients directly managed by PTs used significantly less prescription pain medication in the ED (Gagnon, 2021).
- **Use of imaging.**
  - Reduced imaging with PT patient management (25%) compared with medical management (57%) (Pugh, 2020).

Literature Review

JOSPT[3]

https://www.jospt.org/doi/pdf/10.2519/jospt.2009.2857

[CLINICAL COMMENTARY]

MICHAEL T. LEBEC, PT, PhD[1] • CARLEEN E. JOGODKA, PT, DPT, OCS[2]

The Physical Therapist as a Musculoskeletal Specialist in the Emergency Department

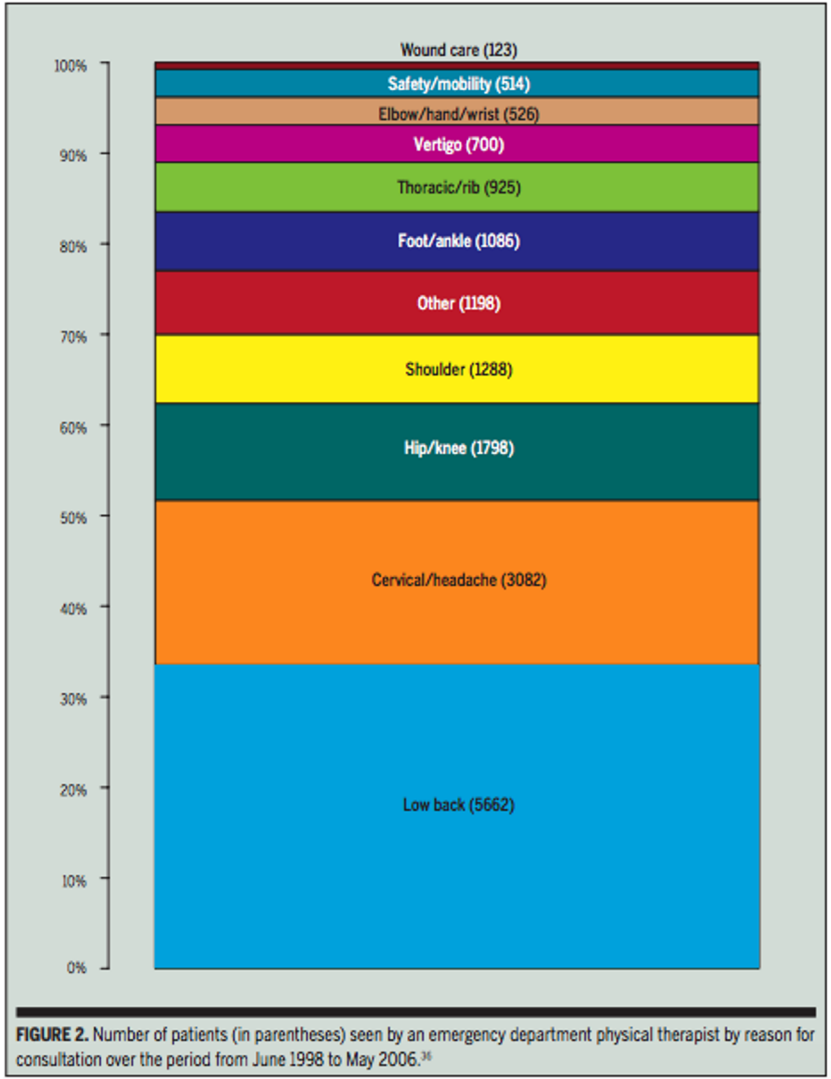

FIGURE 2. Number of patients (in parentheses) seen by an emergency department physical therapist by reason for consultation over the period from June 1998 to May 2006.[36]

Literature Review

JOSPT[3]

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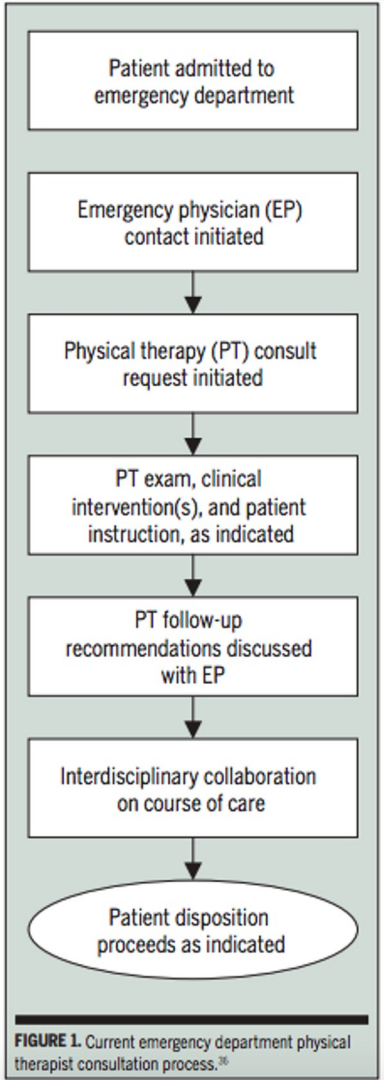


FIGURE 1. Current emergency department physical therapist consultation process.[36]

My clinical process in the ED

1. Receive consult
2. Perform chart review
3. Drive-by
4. Introduction, explanation of PT role
5. Social history
6. PT exam
7. PT intervention and education
8. Clinical communication
    a. RN
    b. ED provider
    c. SW
9. Repeat

“Practice in the hospital ED enables physical therapists to fully use their knowledge, diagnostic skills, and ability to manage acute pain and musculoskeletal injury.[4]”

-Fleming-McDonnell et. al

https://academic.oup.com/ptj/article/90/3/420/2737870

CASES

“Syncopal Event”

CHART REVIEW:

- Lester B
- 78 year old male
- Presents from Grenwick Assisted Living Facility
- Per EMS, patient was found on the ground unconscious next to his usual seat in the dining room by dining service employees, who called 911
- CTH (-)
- MRI brain (-)
- UA pending
- PMH:
  - PD
  - A-fib
  - Hyperlipidemia

SOCIAL HISTORY:

- Lives alone in Grenwick ALF
- Life alert button
- No steps
- DME:
  - Over the toilet commode
  - Walk-in shower with grab bars
  - Shower chair
  - Rollator walker
- Facility manages medications and meals
- Walks to the dining room 500 feet away 3x/day

PHYSICAL EXAM:

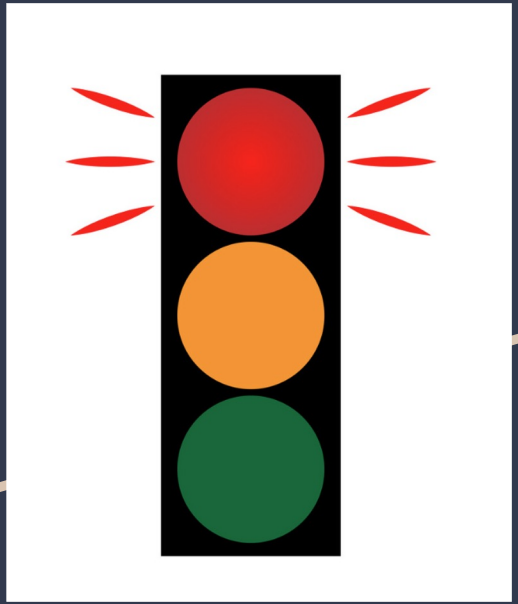
- A&Ox4
- Supine BP: 122/88
- MinAx1 for supine to sit - pull to sit
- Denies dizziness, complains of being woozy
- Sitting BP: 102/76
- ModAx1 for STS with posterior lean
- MinAx1 for static standing balance with a RW
- Posterior lean increases
- Heart rate increase in standing position

UA comes back negative.

- ED provider wants to know…
- Can Lester return to Grenwick ALF tonight?

URINALYSIS & URINE MICROSCOPY		
	Result	Reference Range
Appearance	Clear	
Color	Yellow	Yellow/Straw
Specific Gravity	1.020	1.020 - 1.025
pH	6.0	5.0 - 8.0
Blood	Negative	Negative
Protein	3+	Negative
Glucose	Negative	Negative
Leukocyte esterase	Negative	Negative
Nitrite	Negative	Negative
Bilirubin	Negative	Negative
Urobilinogen	Negative	Negative
Red blood cells	0-5/hpf	0-5/hpf
White blood cells	0-5/hpf	0-5/hpf

HECK NO!



- Needed assistance to stand
- Has to be able to ambulate >500 feet
- Unable to get assistance at Grenwick ALF
- Unaware of deficits
- Hemodynamic instability with positional changes should be further worked up with admission to the hospital
- Comorbidities
  - PD & orthostatic hypotension
  - A-fib and syncope

Clinical communication

- Let the RN know how the patient moved for me so they know how to assist them
- Find the ED provider who originally paged
- Discuss findings
- Advocate for admission for further work-up
- Recommend STR
- Find the ED social worker so they can get disposition started

“Is there anything else I can do for you before I go?”

- Educate on use of call bell if Lester wants to get up to prevent fall
- Recommend use of a RW for improved stability and add this in the chart
- Educate Lester that he may have to go to STR
- Order PT tx

“Mechanical fall at home”

CHART REVIEW:

- Karen R
- 88 year old female
- Per EMS: Patient presents from home with pain in R flank following a **mechanical fall** on her R side
- X-rays (+) for acute nondisplaced fractures on ribs 6-8 on the R side
- X-rays (-) for PTX
- UA (+)
- PMH:
  - T2DM
  - HTN
  - Dementia

SOCIAL HISTORY

- Daughter is main caretaker
- 2 story home with threshold step to enter
- Bed & bath on 1st floor
  - Walk in shower
- Daughter provides meals, manages medications
- Daughter assists with dressing, bathing, bed mobility.
- Patient’s baseline is independent with a RW
- Daughter willing to provide 24/7

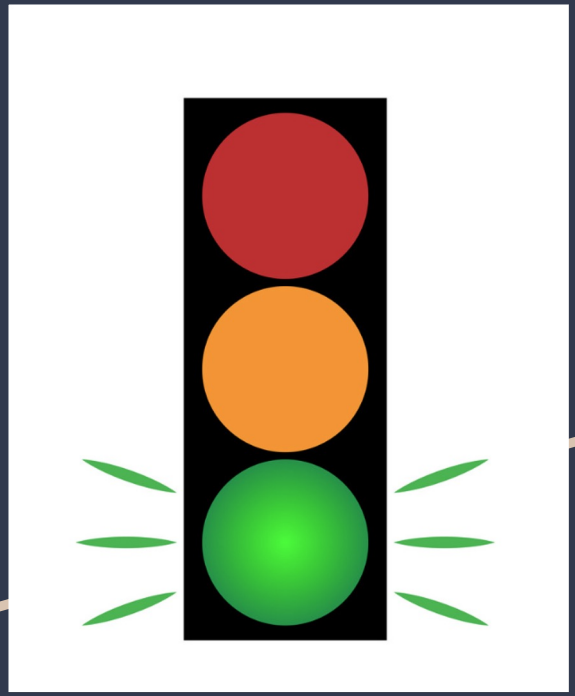
PHYSICAL EXAM

- A&Ox1
- Pain with mobility and deep breaths
- Tenderness to palpation of ribs on right side
- ModAx1 supine to sit
- MinAx1 for STS
- CGA for ambulation 50 feet with RW

ED provider prescribed broad spectrum antibiotics and recommended oral tylenol and ice

- ED provider wants to know…
- Can Karen return home tonight?

YES!



- Daughter capable and willing to assist
- Daughter going to change work schedule to provide 24/7

Clinical communication

- Let the RN know how the patient moved for you so they know how to assist them
- Find the ED provider who originally paged
- Discuss findings
- Recommend home with home PT
- Find the ED social worker so they can get disposition started

“Is there anything else I can do for you before I go?”

- Educate daughter on fall prevention at home
- Educate daughter about UTIs in older adults
- Provide ice to R thorax for rib fxs
- Discuss home PT

“Intractable Low Back Pain”

CHART REVIEW:

- Patrick K
- 57 year old male
- C/o intractable low back pain, LLE and LUE weakness, numbness/tingling
- CTH (-)
- MRI L-Spine (+) degenerative changes at L3-4 and L4-5
- Point tenderness along L-spine SPs
- NSG consulted - not a surgical candidate
- PMH:
    - HTN
    - Tobacco-use 1 ppd

SOCIAL HISTORY:

- Lives alone in an apartment
- 2 flights of steps to enter with 1 handrail
- Independent with no AD
- Works as 4th grade teacher
- Tub shower
- Girlfriend nearby cannot assist

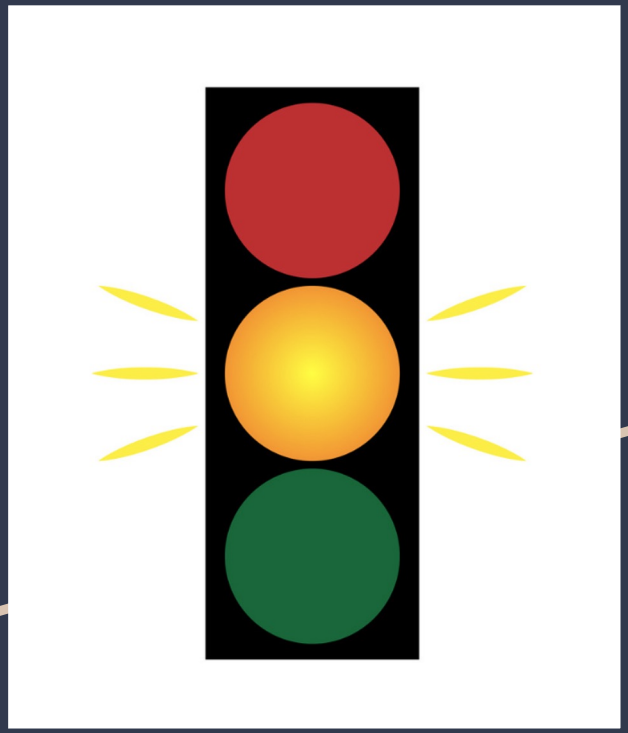
PHYSICAL EXAM:

- LUE 3-/5
- Decreased sensation L side
- ModAx1 for supine to sit
- MinAx1 for static sitting, left lateral lean
- LLE 3/5
- Finger to nose testing reveals coordination deficits
- Further mobility deferred

ED provider prescribes pain medication for LBP

- ED provider wants to know…
- Can Patrick go home?

HECK NO!



- Needed assistance to sit
- Lives alone, has no assist
- Does not have S&S consistent with DDD
- Has S&S consistent with an acute CVA
- Needs a full work-up for potential CVA
- Needs admission for placement in rehab

Clinical communication

- Let the RN know how the patient moved for me so they know how to assist them
- Find the ED provider who originally paged
- Discuss findings
- Recommend MRI brain
- Recommend admission for CVA w/u
- Recommend acute inpatient rehab
- Find the ED social worker so they can get disposition started

“Is there anything else I can do for you before I go?”

- Educate patient on using call bell so he doesn’t try to get up and fall
- Educate patient about need for MRI to rule out acute CVA
- Assist with positioning to minimize back pain on stretcher
- Educate patient on potential need for acute inpatient rehab and what this will entail
- Education on importance of smoking cessation
- Order PT tx

Selected References

1. Physical Therapy in the Emergency Department. APTA. https://www.apta.org/your-practice/practice-models-and-settings/hospitals/emergency-department
2. Physical Therapy in Emergency Care: Research on the Value of Physical Therapy. APTA. https://www.apta.org/your-practice/practice-models-and-settings/hospitals/emergency-department/physical-therapy-in-emergency-care-value-of-physical-therapy
3. Lebec MT, Jogodka CE. The Physical Therapist as a Musculoskeletal Specialist in the Emergency Department. *Journal of Orthopaedic & Sports Physical Therapy*. 2009;39(3):221-229. doi:https://doi.org/10.2519/jospt.2009.2857
4. Fleming-McDonnell D, Czuppon S, Deusinger SS, Deusinger RH. Physical Therapy in the Emergency Department: Development of a Novel Practice Venue. *Physical Therapy*. 2010;90(3):420-426. doi:https://doi.org/10.2522/ptj.20080268

Thank you!

Any questions?