

# Considerations for the Management of Amputees In Acute Care



**A Pre-Clinical Learning Module for DPT Students**

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# Hello!

**I am Terra Osmon**

(← & this is my dog Mochi 😊)

I hope you find this presentation helpful as you begin to prepare for future clinical rotations!

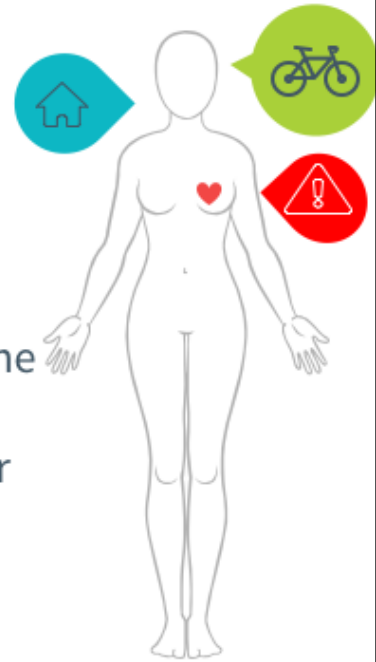
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My intention with this capstone project is to better prepare students for an acute care rotation by integrating student's current knowledge about the Acute Care setting with amputee-specific information that might not yet have been introduced in the curriculum. The goal is to expose physical therapy students to population-specific concepts in order to begin thinking critically about unique barriers, clinical considerations, and the physical therapist's important role in the Acute Care setting.

## STUDENT OBJECTIVES:

Students will ...

- ▶ Appreciate the potential barriers & social determinants of health for Amputees in the Acute Care Setting.
- ▶ Select Outcome Measures appropriate for Acute Setting & Amputee Patients.
- ▶ Understand the PT's role in Discharge Planning with respect to this population.



The DPT student's learning of the topics in the educational module will be guided by learning objectives, and will be tested with student self-examination. Student learning objectives include:

- Students will be able to identify unique barriers common to the amputee patient in the acute care setting, and how these have potential effect on the individual's health, function, and safety.
- Students will be familiar with and understand the importance of utilizing evidence based outcome measures that are appropriate for the amputee patient in the acute care setting.
- Students will have adequate knowledge to make informed clinical decisions and appropriate discharge plans for the acute care amputee patient.
- Students will appreciate how the PT's role in conjunction with interdisciplinary team contributes to global social and systemic issues, such as readmission rates and federal healthcare expenses.

# 52,195

Annual # of Medicare Beneficiaries with LE Amputations

# 23.2%

Amputees Readmitted within 30 Days of Procedure

# \$14,358 /person

Avg Cost of Readmission with Amputation Complication

STATISTICS  
(Lawson et al. 2013)

(Lawson et al. 2013)

- Annual # of Medicare Beneficiaries with LE Amputation procedures: 52,195
- Percent of Patients Readmitted Within 30 Days of Procedure (%) With LE amputation: 23.2%
  - Note: \*\*Vascular Amputation accounts for the highest rate of readmission compared to all other surgical procedures.\*\*
- Average cost of Readmission with complication: \$14,358

## POTENTIAL MEDICARE SAVINGS ANNUALLY (Lawson et al. 2013)



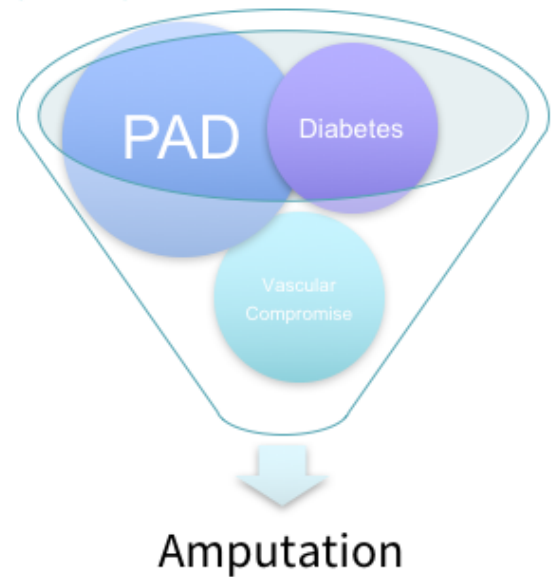
\$80.9\*  
MIL/YEAR

For the LE amputation procedures, which accounts for the greatest number of readmissions of all surgical procedures, reducing complication rates by a conservative 5% could result in prevention of 244 (2%) of readmissions per year and a savings to Medicare of \$4.0 million per year. If all complications following amputation procedure were prevented, this could result in prevention of 4,873 (40.3%) readmissions per year and a savings of \$80.9 million\* per year. Though it is unlikely to prevent all complications requiring readmission, this helps give you an idea of how even a small 5% reduction in complications can have an incredible impact on healthcare spending. (Lawson et al. 2013)

As PTs it is important to consider the barriers that amputees face that lead to their poor health outcomes and complications requiring readmission following their initial procedure. Further, if we appreciate those factors that are modifiable, this can lead to decreased readmission rates and complications for our patients, and in turn can have a positive impact on healthcare spending!

## MAJOR CAUSE(S) OF VASCULAR AMPUTATION

- ▶ Peripheral artery disease is the most common cause of LE amputation. (Dillingham et al. 2002; Ziegler-Graham et al. 2008)
- ▶ Diabetics are 10x more likely to get amputation than general public. (Pemayun et al. 2015)



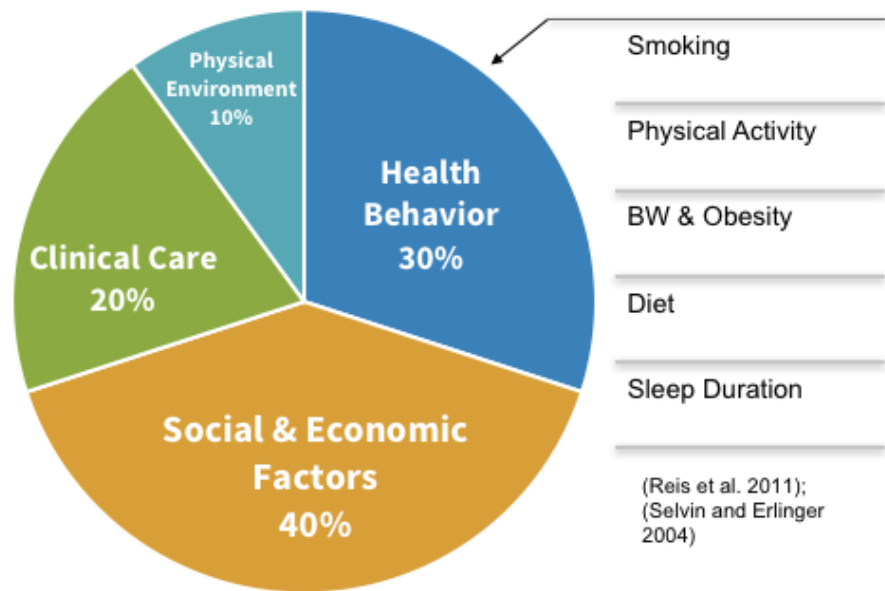
The primary cause of lower extremity amputation is peripheral vascular disease and critical limb ischemia. (Dillingham et al. 2002; Ziegler-Graham et al. 2008). LE amputation is often the only viable option due to course of disease and presence of multiple comorbidities. Those with diabetes have a 10x increase than general population of having amputation and resulting vascular compromise.

## Determinants On Health

# 30%

of factors determining health outcomes are Behaviors.

Behavior impacts:  
1) pre-morbid disease &  
2) Complications post-amputation!



Adapted from <http://www.countyhealthrankings.org/>

Many of the risk factors for these conditions are modifiable lifestyle factors which fall under the umbrella of 'health behaviors.'

- For diabetes, lifestyle risk factors include: physical activity, diet, smoking, alcohol consumption, body weight, and sleep duration.(Reis et al. 2011)
- For PVD, the same lifestyle behaviors also play a role]as well as modifiable risk factors for cardiovascular disease (ie. obesity, sedentary lifestyle, smoking, etc) (Selvin and Erlinger 2004)

When considering health behaviors of amputees, one must appreciate the fact that there was likely some premorbid health behaviors that led to the initial chronicity of disease (ie. Diabetes and PVD). Following Amputation, negative health behaviors can lead to further complications and readmission.

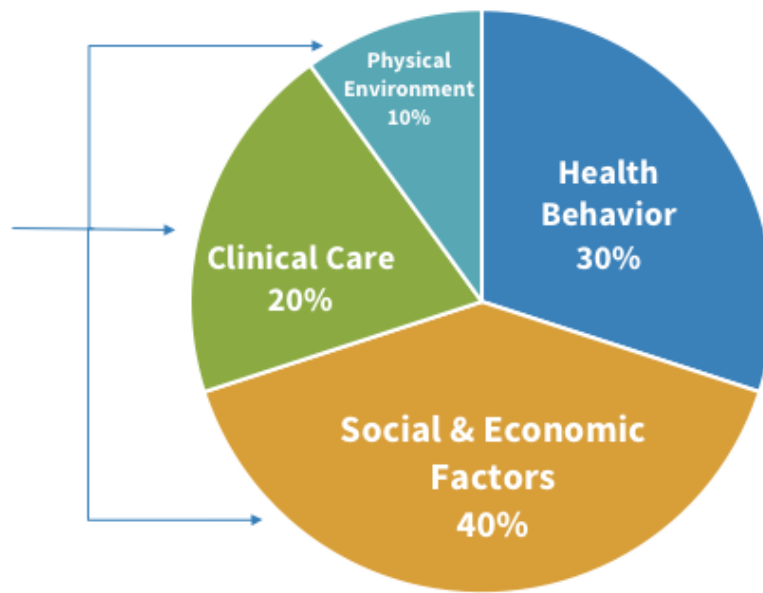
Another consideration: Psychosocial Factors evidenced to affect Health behaviors following initial amputee include rates of depression and anxiety in percentages higher than the general population, between 18-31%.(Coffey et al. 2009)

**60%**

of Factors determining a person's health are Non-Health Behavior Related.

These areas will be our focus....

## Determinants On Health



Adapted from <http://www.countyhealthrankings.org/>



# 1. Social Determinants of Health (Braveman et al. 2011)

To better understand the various barriers that are typical for amputees and the impact this may have on health outcomes.

## SOCIAL DETERMINANTS OF HEALTH

“Health is socially determined by the conditions in which we are born, grow & age, & in which we live & work” (Marmot et al. 2008; Braveman et al. 2011)



<http://www.healthscotland.scot/health-inequalities/the-right-to-health> (for all information)

Social Determinants fit into the categories including: (Marmot et al. 2008; Braveman et al. 2011)

- Economic Stability: employment, income, medical bills, financial support
- Neighborhood and Physical Environment: housing, transportation, safety parks, playground, walkability
- Education: Literacy, Language, Early childhood education, Vocational training, higher education
- Food: Hunger and Access to healthy options
- Community and Social Context: Social Integration, Support Systems, Community engagement, Discrimination
- Health Care System: Health Coverage, provider availability, provider linguistic and cultural competency, quality of care.

## SOCIAL DETERMINANTS OF HEALTH

<b>Social Determinants (Marmot et al. 2008; Braveman et al. 2011)</b>	
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<b>Health Care System</b>	Health Coverage, provider availability, provider linguistic and cultural competency, quality of care.

The overarching 'umbrella' topics their determinants/factors. We will elaborate on each of these terms to follow.

## ECONOMIC STABILITY:

Employment, income, medical bills, financial support

### Barriers specific to the amputee:

- ▶ There is a correlation between low income regions, diabetes & prevalence of amputations.(Stevens et al. 2014)
- ▶ 2 year cost of amputation is >90,000 (MacKenzie et al. 2007)

- Low SES as a factor for readmission(Kangovi et al. 2014)
- Correlation between low income regions, diabetes & prevalence of amputations.(Stevens et al. 2014) Diabetic foot ulcers result in amputations that could otherwise be prevented if there was access to affordable health prevention.
- 2 year cost of amputation is >90,000 & lack of Insurance coverage often leaves patients to pay extreme costs (ie. for prosthetic device).(MacKenzie et al. 2007)

## NEIGHBORHOOD AND PHYSICAL ENVIRONMENT: Housing, transportation, safety, etc

### Barriers specific to the amputee:

- ▶ Housing barriers in multiple level homes, navigating stairs and curbs, etc
- ▶ Lack of transportation if unable to drive and/or living in rural areas without accessible public transport.

### **Housing:**

- I.e. Trailers have unique barriers when it comes to finding assistive devices and home modifications are difficult due to lack of infrastructure
- I.e. Multiple Level Home and stairs – If unable to be iND up steps, they cannot go home. Even If they can afford electric chair lift, it takes time for install and they may need to d/c to SNF in meantime.
- Driving becomes a barrier for Amputees and transportation in one's neighborhood may be limited, especially in rural areas. This in turn leads to more social exclusion.(Ephraim et al. 2006)

## EDUCATION:

Literacy, Language, Early childhood education,  
Vocational training, higher education

### Educational Barriers Impacting Readmission:

- ▶ Lack of Health literacy leads to high readmissions due to medications. (Forster et al. 2003)
- ▶ Misunderstanding on proper diabetic management results in medical complications. (Schillinger et al. 2002)

**Health Literacy:** Readmission due to adverse drug event and other medication related issues(Forster et al. 2003); Also, lack of health literacy may impact diabetic management and lead to further complications.(Schillinger et al. 2002)

## FOOD: Hunger and Access to healthy options

### Barriers to food access:

- Low level adherence to diet due to cost of healthy alternatives being one of the biggest barriers to eating healthier foods.(Littman et al. 2015)(Pham et al. 1996)

Amongst Amputee population, evidence indicates that low level adherence to diet(Pham et al. 1996) was a result of too little money being one of the biggest perceived barriers to eating healthier foods.(Littman et al. 2015)

## COMMUNITY AND SOCIAL CONTEXT: Social Integration, Support Systems, Community engagement, Discrimination

- ▶ Social & Racial barriers common to Amputees:
- ▶ Reduced social networks are due to living alone as well as social withdrawal following amputation. (Rodríguez-Artalejo et al. 2006)
- ▶ With respect to racial disparity, African Americans are 4x more likely to have amputations than white americans.(Feinglass et al. 2008)

- Following discharge Amputees have reduced social network indicators (eg, being alone most of the day with limited or no family or friend contact by phone or in person)(Rodríguez-Artalejo et al. 2006)
- Social withdrawal due to depression and perceived social stigma
- With respect to racial disparity, African Americans are 4 times as likely to have amputations than white americans.(Feinglass et al. 2008)



## HEALTHCARE SYSTEM:

Coverage, provider availability, provider linguistic & cultural competency, quality of care

### ▷ Clinician and Systemic reasons for readmission:

▷ **therapeutic error** (Forster et al. 2003; Forster et al. 2004), **insufficient follow-up** (Jencks et al. 2009), **premature discharge, inadequate post-discharge support and/or setting** (Willis et al. 2016), & **failed handoff** (Kripalani et al. 2007)bullet

▷ **Lack of Insurance coverage may leave patients to pay extreme costs (ie. especially prosthetic device).**

- Errors on behalf of clinicians and the healthcare system leading to increase readmissions include:
  - Clinician error (ie. therapeutic error(Forster et al. 2003; Forster et al. 2004), insufficient follow up(Jencks et al. 2009), premature discharge, inadequate post-discharge support and/or setting(Willis et al. 2016))
  - System level issues such as failed handoff contribute to high readmissions (Kripalani et al. 2007) which includes ensuring that there are no gaps in patient care upon discharge or transfer.
  - With respect to policy, a lack of Insurance coverage often leaves patients to pay extreme costs (ie. for prosthetic device).

## SOCIAL DETERMINANTS & 'AAAAQ' (WHO 2017)

In order for a patient to have a full 'right to health,' the **facilities, equipment, and services** must be: (WHO 2017)

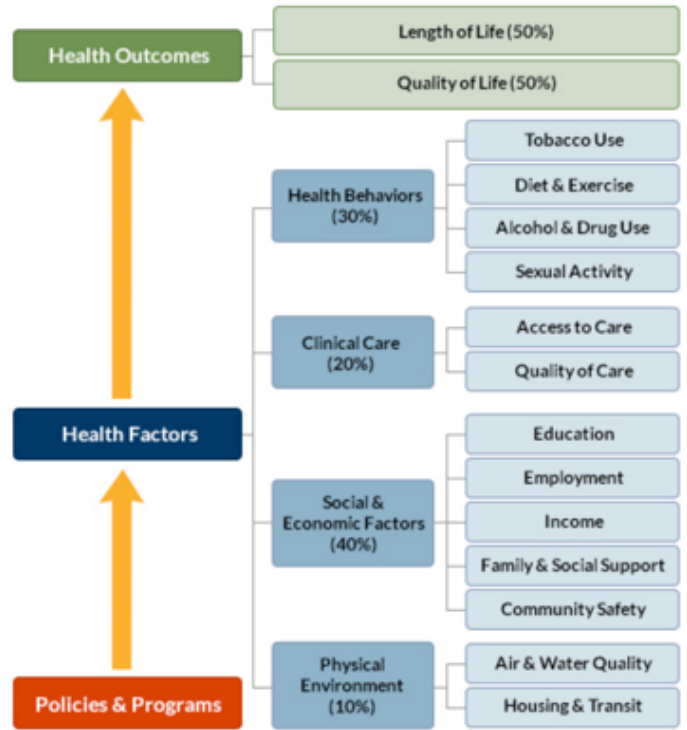
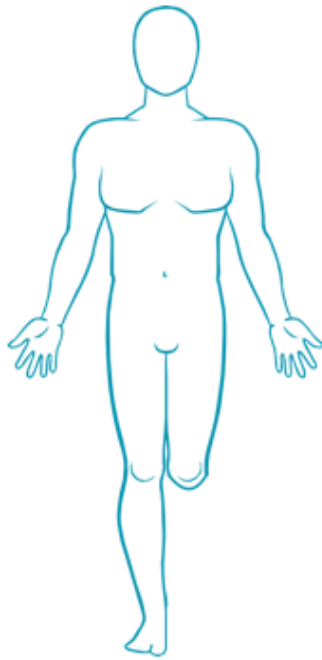
- ▷ Available, Accessible, Acceptable, Appropriate
- ▷ Of Equal Quality

PTs can have a (+) impact on patient health by providing quality care & making discharge plans with consideration for an individuals health determinants and barriers.

For individuals to have a full 'right to health', facilities, equipment, services, (etc) must be:

- available
- accessible
- acceptable
- appropriate
- of equal quality.

As PT's in the Acute Care setting, though it is good to be aware of the social determinants affected your patient, it is unlikely we are going to be able to impact all measures given the time we have with our patient. What factors should we focus on: APPROPRIATE equipment (ie it is in our skill set to determine best equipment and make recommendations- example: are they in a trailer? They may not be able to use std walker), ensuring their ACCESS to care (ie. do they need referrals, is their home suitable, transportation- if not home may not be appropriate), is their discharge location/setting APPROPRIATE



(Source: <http://www.counbyhealthrankings.org/>)

## 2. Selecting Outcome Measures

Considering the abilities and goals of the Amputee patient in Acute Care.

## OUTCOME MEASURES 'S IN THE ACUTE SETTING

### Are required to...

- ▶ Justify discharge plans, equipment needs, etc
- ▶ Accurately portray Pt deficits/progression through POC

### In the grand scheme, OM's may potentially impact...

- ▶ Hospital & departmental funding
- ▶ PT professional credibility & the value of our skilled services!

### Why use outcome measures?

- You need to accurately show OMs to justify your discharge plan. It is important that outcome measures are valid and reliable for the setting you are in. Because acute care is typically a shorter Length of stay (LOS), you need a variety of measures adaptable so you can really capture the small improvements and show progress in patient goal attainment. (ie. if the instrument is too advanced for the individual being tested– you get a floor effect; but if it is too easy, you get a ceiling effect – both have disadvantages with respect to discharge and qualifying for rehab)
- If you want funding for a hospital and/or for better equipment, you need valuable objective outcome measures to compile data to prove the WORTH of Physical therapy in the setting;
- From a global perspective, this makes the healthcare continuum more efficient and streamlined; better long-term outcomes → more funding (for the hospital); Objective OM's help support PT clinical decision making and we are able to ID prognostic indicator that tell us when people would benefit from service (ie. IP rehab), or contrarily, weeding out those who are not appropriate for certain services (ie. DC to subacute because of low tolerance).

# ZERO.

# of high quality studies evidencing the most valid/reliable outcome measures for non limb-wearing lower limb amputees in the Acute setting.\*\*\*

Current evidence is available to indicate the best measures (valid/reliable) for use in other areas of amputation rehabilitation, especially with patients donning a prosthetic. However, there is little high quality evidence for amputees in acute or post-operative stage of rehab. Future evidence is needed with respect to the Acute Setting.

With what little evidence is available, clinical judgement must be used to decide the measures appropriate for your patient. First, the therapist must consider and think critically about what a patient's functional potential and prognosis (ie. higher functioning and/or potential for future ambulation, versus lower functioning and/or amputees who you anticipate will mobilize with a wheelchair rather than prosthetics). Further, the as the LOS in the acute care setting is short, demonstrating progress becomes difficult due to longitudinal time constraints. Being said, the outcome measures selected must be able to show change with respect to this population's abilities and in a short time frame.

## OUTCOME MEASURES FOR DISCUSSION

1. Balance & Falls Risk Measures: **Modified-Tinetti, 10 meter walk (gait speed)**
2. Mobility: **Timed Up and Go (TUG) or L-Test**
3. Cardiovascular Endurance: **2 MWT or 6 MWT** (*\*standard*)
4. Amputee-specific: **AMP no PRO** (*without prosthesis*)

The outcome measures are appropriate for use in the Acute Care setting when working with Amputee Populations. Other Instruments may be appropriate depending on the patient and presentation, but in general, between literature suggestions and test difficulty these have been included. Note some tests were excluded. The Berg was excluded because inclusion criteria for using it was the patient had to have prosthetic donned on at least one limb. BACPAR suggests that the **FIM** motor portion of the exam may have some evidence in the Acute care setting, but it has been excluded because it is not an entry level exam (and it is not as practical for the setting).

A self-report measure to consider using is the **ABC Scale**, as this is able to detect a patient's fear of falling across various functional tasks.

### General Oms:

2 min walk test (or) 6 min walk test

TUG (or) L-Test (for more high functioning)

Modified Tinetti –10 meter walk (gait speed)

\*Fim motor portion -- BACPAR says FIM has some evidence in Acute population, mainly for motor portion of exam.

Amputee-Specific: Amp-No-Pro

Self-report: Activities Specific Balance Scale (ABC Scale)

## MODIFIED-TINETTI (AustPAR 2013)

- ▶ Assesses balance and gait
- ▶ Commonly used for fall screening tool as it indicates falls risk
- ▶ Scores of 19 or less indicate a moderate to high risk for falls

(AustPAR 2013)

“Assessment for balance and gait. Commonly used as a falls screening tool in public hospitals.”

Scores of 19 or less indicate a moderate to high risk for falls



## 10 METER WALK (GAIT SPEED) (AustPAR 2013)

- ▶ 14 meter walk, measurement in middle 10m.
- ▶ Measures times and aspects of walking such as velocity, cadence, and step/stride length.

(AustPAR 2013)

Measures timing and spatial aspects of walking, including velocity, cadence, and step/stride lengths. The test is carried out over 14m, but the measurement only occurs in the middle 10, leaving the first and last 2m for acceleration & deceleration.

## TIMED UP AND GO (TUG) (AustPAR 2013; Stevens et al 2009)

- ▶ References for mean TUG times for transtibial and transfemoral amputees (19.3 +/- 15.1 sec) (Stevens et al 2009)
- ▶ Valid and reliable in amputee populations.
- ▶ Simple and fast, easy for entry level students to perform

References for mean TUG times for transtibial and transfemoral amputees (19.3 +/- 15.1 sec) (Stevens et al 2009)

Valid and reliable in amputee populations.

Simple and fast, easy for entry level students to perform

## L-TEST

(AustPAR 2013; Deathe & Miller 2005)

- ▶ Expanded version of TUG developed due to TUG's ceiling effect
- ▶ change >3 seconds indicates real functional change
- ▶ report on mean times for amputees of different levels, cause of amputation, and aid usage.

(AustPAR 2013; Deathe & Miller 2005)

"This test is an expanded version of the Timed Up & Go. The patient begins seated, facing the doorway. He rises, walks 3m to the doorway, turns 90 degrees and walks another 7m down the hallway, turns 180 degrees, and returns to the starting seat. The test was developed in response to a supposed ceiling effect with the TUG. The authors stated that a change greater than 3 seconds was indicative of real functional change, and report on mean times for amputees of different levels, cause of amputation, and aid usage."

## 2 MINUTE WALK TEST (2MWT) (AustPAR 2013; Stevens et al 2009)

- ▶ Highly correlated with 6MWT
- ▶ Performed at self-selected walking speed
- ▶ (Stevens et al 2009) provides mean and range data with respect to K Classification.

Lower-Limb Amputee (K0-K1) ^	50 ± 30	4-96
Lower-Limb Amputee (K2) ^	190 ± 111	16-480
Lower-Limb Amputee (K3) ^	299 ± 102	48-475
Lower-Limb Amputee (K4) ^	419 ± 86	264-624

### (AustPAR 2013)

“Measures functional mobility over time / distance, therefore including cardiovascular fitness in the test. The 2-minute walk is said to be highly correlated with the 6-minute walk. The Six Minute Walk test is carried out at the client's self-selected walking speed.

(Stevens et al 2009) references mean and range for six minute walks for amputees under different K Classifications.

## 6 MINUTE WALK TEST (6MWT)

(AustPAR 2013; Stevens et al 2009)

- ▶ Test of mobility & cardiorespiratory endurance
- ▶ Validity and reliability in LE amputees has been validated
- ▶ The standard that all other tests are compared to.
- ▶ 2MWT may be better for low level & those with respiratory issues.

(AustPAR 2013)

“Tests mobility by assessing ability to rise from a seated position, walk 3m, turn around and return to the seated starting position.”

Stevens, P et al (2009). Clinically Relevant Outcome Measures in Orthotics and Prosthetics. Journal of Prosthetics and Orthotics, February 2009, Vol 5, No 1. [www.oandp.org](http://www.oandp.org)

## Amp No Pro

(AustPAR 2013; Gailey et al. 2002; Resnik and Borgia 2011)

- ▶ Patient specific as it assesses functional ambulation in LE amputees without a prosthetic, thus appropriate for those post-operative in acute care.
- ▶ (-) May underestimate individuals potential.
- ▶ (+) Valid, reliable, and strong correlation with 6-minute walk scores ( $r=0.69$ ,  $P.0001$ )

- "A tool used to predict the ambulatory potential of lower limb amputees, and measure function post-rehabilitation. It was developed to provide a more objective approach to rating amputees under the various K Classifications. The test can be performed with or without the prosthesis.
- AmpNoPro may underestimate potential when used with new amputees, but has been found useful in rationalising componentry during prescription of interim / temporary prostheses. Similarly, AmpPro can assist in deciding on definitive prosthesis componentry."

**“Conclusion:** The AMP with and without a prosthesis are reliable and valid measures for the assessment of functional ambulation in lower-limb amputee subjects.”

more appropriate for Acute Care as compared to AMP (because people just had amputations and do not have prosthetic donned). Further, some patients with vascular complications may never don a prosthetic.

# 3. Discharge Planning

*“The entry-level acute care clinician must be able to make clinical decisions surrounding a **safe** discharge plan and **communicate** these decisions with all members of the interprofessional medical team – including the **patient** and **caregiver(s)** – in a manner that ensures the patient receives **optimal** care.”*

*(Greenwood, PT, DPT, MS, GCS et al. 2015)*

”



## ACUTE CARE CORE COMPETENCIES FOR ENTRY LEVEL DPT'S (Greenwood, PT, DPT, MS, GCS et al. 2015)

- ▶ Determine destination, level of support, & post-acute care needs.
- ▶ Critically assess patient safety (ie. cognition, function).
- ▶ Determine equipment needs that is reasonable & necessary (ie. available funding & patient's circumstances).
- ▶ Synthesize patient's life context, including: pre-hospitalization status; age; home suitability; caregiver support; transportation needs; risk factors for re-hospitalization; & economic resources.
- ▶ Assess expectations and desires of stakeholders (e.g., patient, family, caregiver, medical services, surgical services).
- ▶ Understand regulations (ie. healthcare systems & payers).

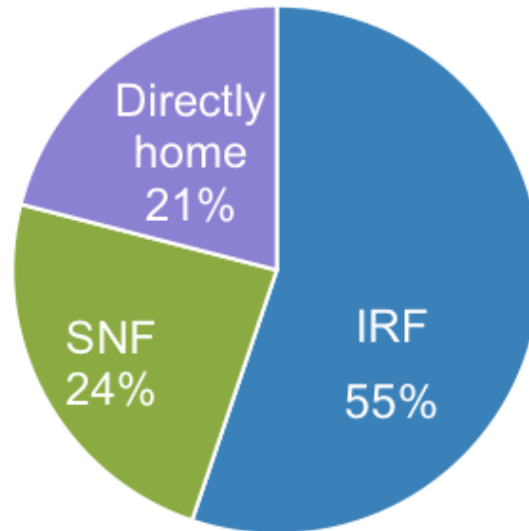
"The entry-level clinician is expected to demonstrate the following in regard to discharge planning: (Greenwood, PT, DPT, MS, GCS et al. 2015)

- Determine destination, level of support, need for continuity of care in post-acute settings (rehabilitation, outpatient, home, sub-acute or other), additional services, and follow-up needs.
  - Critically assess patient safety (cognition, function).
  - Determine optimal equipment needs, with consideration of reasonable and necessary standards, in context of available funding and patient's individual circumstances.
  - **Synthesize patient's life context**, including: pre-hospitalization status; age; suitability of home environment; caregiver support; follow-up/transportation needs; risk factors for re-hospitalization; and economic resources.
  - Assess expectations and desires of stakeholders (e.g., patient, family, caregiver, medical services, surgical services).
  - Understand regulations imposed by the healthcare systems and payers."
- (Greenwood, PT, DPT, MS, GCS et al. 2015)

## TRENDS IN DISCHARGE DESTINATION AFTER DYSVASCULAR LOWER-LIMB AMPUTATION (Dillingham et al. 2011)

### Home unlikely:

- Older
- Unmarried
- PMH of nursing home residence
- + perioperative complications



### IRF Likely:

- Married
- higher cognitive functioning
- unilateral BKA
- Medicaid coverage

### Discharge Destination after dysvascular lower-limb amputation (Dillingham et al. 2011)

- “One-hundred ninety two (55.2%) patients were discharged to an IRF, seventy-three (21%) to a SNF, and eighty-three (23.8%) were discharged directly home.
- The mean age of the sample was 63.7 years old with the majority (59.2%) being male and over one-quarter were African Americans. Over half of those reporting were poor (income < \$15K/year). On average, patients had five co-morbidities and nearly half had an amputation at the below knee (BKA) level.
- Discharge to an IRF (vs. SNF) was more likely in patients who: were married; had higher cognitive functioning; had unilateral BKA; had Medicaid coverage; and who were living in Milwaukee, WI.
- Patients were less likely to be discharged home (vs. SNF) if: they were older; unmarried; had a prior history of nursing home residence; had more perioperative complications. Reassuringly, discharge destination was not affected by gender or race.”(Dillingham et al. 2011)

## I.D. PATIENTS IN NEED OF LIFE-LONG SUPPORT POST-D/C :

Significant factors associated with being unable to have independent living status following amputation:(Taylor et al. 2005)

- ▷ Age  $\geq$ 70 years (HR 4.0, 95% CI 1.7-9.5)
- ▷ Age 60 to 69 (HR 2.7, 95% CI 1.1-6.5)
- ▷ Above-knee amputation (HR 1.8, 95% CI 1.2-2.8)
- ▷ Prior homebound status (HR 1.6, 95% CI 1.1-2.6)
- ▷ Dementia (HR 1.6, 95% CI 1.1-2.4)

(Taylor et al. 2005)

## POST-D/C LOCATION IMPACTS ON FUNCTIONAL OUTCOMES

Amputees transferred to acute inpatient rehab have better 6 month functional outcomes compared to those discharged home or to a SNF. (Sauter et al. 2013)

Following major LE amputation, individuals had better functional outcomes at 6 months when they were transferred to acute inpatient rehab when compared to those discharged home or to a SNF. (Sauter et al. 2013)

**So why doesn't everyone go to IP Rehab?** \$\$Money\$\$ . To protect for this, there is strict qualifying criteria.

Why don't  
all LE  
amputees  
qualify for  
Acute  
Inpatient  
Rehab?

Not Approved  
Approved



\$\$\$\$\$\$

## MEDICARE REQUIREMENTS FOR INPATIENT REHABILITATION SERVICES

(Medicare.gov 2017)

- ▷ IPR must be “medically necessary” & PT requires multidisciplinary therapy,
- ▷ must tolerate therapy at least 3 hours/day
- ▷ requires MD supervision 2-3 days/week.
- ▷ May remain in IPR as long as showing progress and satisfying the above.
  
- ▷ Cost with Medicare:
  - ▶ 0-60 days = 0\$\* ≥61 days=\$329/day

Medicare approved facilities are required to have 1/13 Diagnoses filling 75% of slots -  
- amputation is included as one of these diagnosis.

Further, Medicare says in order for patients to qualify for Inpatient Rehabilitation Services, it must be deemed “medically necessary”. Patients must require multidisciplinary therapy (eg, physical therapy, occupational therapy, speech therapy, orthotic or prosthetic services) and be able to tolerate at least 3 hours of therapy per day. Patients must require physician supervision at least 2-3 days/week. Patients may stay in IPR as long as they continue to show progress and tolerate 3 hours of therapy per day.(Medicare Interactive 2017)

0-60 days = 0\$ after deductible.

≥61 days: \$329/day

≥91 days: \$658/day (Medicare.gov 2017)

## MEDICARE REQUIREMENTS FOR SUBACUTE FACILITY (Medicare.gov 2017)

- ▶ Patients must have a "qualifying event" requiring 3 night hospital stay
- ▶ Must require skilled nursing or rehabilitation for at least 1 hour/day, 5 days/week.
- ▶ Medicare SNF benefits last 100 days without a new "qualifying event." (Medicare Interactive 2017)

### Medicare Requirements for Subacute Facility:

Patients must have a "qualifying event" requiring three-night hospital stay  
Must require skilled nursing or rehabilitation for at least one hour per day, five days a week. Medicare SNF benefits last 100 days without a new "qualifying event." (Medicare Interactive 2017)

## FACTORS THAT MAY AFFECT READMISSION

(Epstein et al. 2011)

Several factors that increase the likelihood of readmission may be **avoidable**. PTs have a role in prevention of readmission, including:

- ▶ Premature discharge
- ▶ Inadequate post-discharge support
- ▶ Nosocomial infections, pressure ulcers, and patient falls.

### **Factors that may affect readmission —**

Several factors that increase the likelihood of readmission may be **avoidable**, especially those that relate to us, the physical therapy clinician.

Such factors include: (Epstein et al. 2011)

- Premature discharge
- Inadequate **post-discharge support** → PT recommendations should match patient needs.
- Nosocomial infections, **pressure ulcers**, and **patient falls (& fall-related injuries)**  
→ PT can educate on prevention from complications, and provide necessary equipment and services for success.



## PT PERSPECTIVES ON DISCHARGING PATIENTS FROM ACUTE CARE (Matmari et al. 2014)

From the Physical Therapist perspective:

- ▶ Mobility status is #1 indicator of Pt readiness to DC

Be prepared to expect...

- ▶ Informal Interdisciplinary Communication

Things to be cautious of:

- ▶ Pressure for early DC of patients
- ▶ Potential for ethical dilemmas
- ▶ *Give professional recommendation and stick to it!*

Issues the PT encounters for DC planning:(Matmari et al. 2014)

“Mobility status was identified as the key factor in determining discharge readiness; other factors included the availability of social support and community resources. While inter-professional communication was identified as important, **processes were often informal**. Discharge policies, timely availability of other discharge options, and **pressure for early discharge** were identified as affecting discharge planning. Respondents also noted **a lack of training in discharge planning**; accounts of **ethical dilemmas** experienced by respondents supported these themes.”(Matmari et al. 2014)

**MP:** We are Doctors of Physical therapy with professional recommendations. Our recommendations are an important part of the chain of command. State your recommendation based on best clinical judgment, have clear communication with other disciplines, and do not alter or change your recommendation because someone asks or pressures you to. You don't have to be argumentative, but be assertive – “this is my professional recommendation”.

## PT DISCHARGE RECOMMENDATIONS PREVENT READMISSIONS (Smith et al. 2010)

- ▶ 83% of the time PT discharge recommendations are followed.
- ▶ When PT recommendations were not followed, patients were 2.9x more likely to be readmitted to the hospital.

Appreciate the importance of physical therapy professional recommendations. PTs are vital to the discharge process and patient outcomes.

PT discharge recommendations matter:(Smith et al. 2010)

It found that when the recommendations about discharge made by the physical therapist were **not** followed, patients were **2.9 times more likely** to be readmitted to the hospital.

"Overall, physical therapists' discharge recommendations were implemented 83% of the time. Patients were 2.9 times more likely to be readmitted when the therapist's discharge recommendation was not implemented and recommended follow-up services were lacking (mismatch with services lacking) compared with patients with a match."\_(Smith et al. 2010)

## LET'S REVIEW SOME CONCEPTS

### **Health Determinants**

Include genetics/Behaviors, medical care, socioecological factors, and physical environment. This should be considered when implementing patient care and making recommendations.

### **Outcome Measures**

Currently no high quality evidence indicating best outcomes to use in Acute Care with respect to Amputee patients. Some measures have been suggested during this presentation, but using critical judgment with each patient is suggested.

### **Discharge Planning**

PT should consider health determinants and validate/support their decisions with outcome measures when making discharge recommendations. Ultimately our recommendations for discharge are an important part of the discharge process and have potential impact on patient outcomes.



# QUESTIONS?

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