



Lower Extremity Amputation Care by Therapists – Adult – Inpatient/Ambulatory Clinical Practice Guideline

Note: Active Table of Contents – Click to follow link

EXECUTIVE SUMMARY	3
SCOPE	4
METHODOLOGY	4
DEFINITIONS:	5
INTRODUCTION	5
<i>Phases of Recovery</i>	<i>6</i>
RECOMMENDATIONS.....	7
1. <i>Pre-Amputation Phase</i>	<i>7</i>
2. <i>Acute Post-Amputation Phase</i>	<i>9</i>
3. <i>Acute Rehabilitation Phase</i>	<i>13</i>
4. <i>Community Reintegration Phase/Return to Home</i>	<i>17</i>
5. <i>Long Term Management.....</i>	<i>21</i>
UW HEALTH IMPLEMENTATION.....	24
<i>Patient Resources: Health Facts for You</i>	<i>24</i>
<i>Durable Medical Equipment</i>	<i>24</i>
<i>Assessment Tools</i>	<i>24</i>
<i>Community Resources</i>	<i>25</i>
APPENDIX A. EVIDENCE GRADING SCHEME(S)	28
APPENDIX B: SAMPLE DOCUMENTATION.....	29
REFERENCES	58

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Executive Summary

Guideline Overview

This clinical guideline is a guide for the rehabilitation process for adult patients after lower extremity amputations. It was developed by Physical Therapists and Occupational Therapists at University of Wisconsin Hospital and Clinics in collaboration with vascular surgery, the physical medicine and rehabilitation department, and local prosthetists. An evidence based approach was utilized in development of this standard of care.

Key Practice Recommendations – presented in order of phases of care

- Prevent knee and hip flexion contractures in each phase of recovery for maximal functional outcomes and eventual prosthetic use as well as preventing skin breakdown.¹⁻³ (*UW Health Low quality evidence, strong recommendation*)
- Strengthen all four extremities and trunk to prevent deconditioning during recovery and to reach highest functional outcome.¹⁻³ (*UW Health Low quality evidence, strong recommendation*)
- Protect residual limb and manage edema to aid healing and limb shaping, and to facilitate pre-prosthetic care. Prevent additional skin breakdown and maintain health of contralateral lower extremity to avoid delay in prosthesis fitting. Use of rigid removable dressing is recommended for decreased time in wound healing, decreased time to prosthetic, and decreased time to independent walking.⁴⁻⁹ (*UW Health High quality evidence, conditional recommendation*)
- Begin planning for long-term home management immediately and continue through all phases of care. This should be an interdisciplinary approach, and should include social support, any environmental barriers, need for ongoing services, and durable medical equipment. (*UW Health Very low quality evidence, strong recommendation*)
- Collaborate with team to safely progress functional mobility and engagement in self-cares as appropriate at each phase of recovery in order to meet patient's goals for return to community. High level, acute inpatient rehabilitation with interdisciplinary approach is recommended for best functional outcomes.^{10,11} (*UW Health Low quality evidence, strong recommendation*)
- Address phantom limb pain and phantom limb sensation with use of mirror therapy.¹²⁻¹⁷ (*UW Health High quality evidence, strong recommendation*)
- Provide fall prevention education and implement fall prevention techniques at all phases of care.¹⁸⁻²⁰ (*UW Health Low quality evidence, strong recommendation*)

Scope

Disease/Condition(s): Adults with lower extremity amputations

Clinical Specialty: Physical Therapy, Occupational Therapy, Physical Medicine and Rehabilitation, Vascular, Trauma, Orthopedics, Burn

Intended Users: Physical Therapists, Physical Therapist Assistants, Occupational Therapists, Occupational Therapy Assistants across practice environments including acute care, acute rehabilitation, subacute rehabilitation, home health, and outpatient therapies.

Objective(s): This clinical guideline is a guide for the rehabilitation process for adult patients after lower extremity amputations across the phases of recovery. It was developed by Physical Therapists and Occupational Therapists at University of Wisconsin Hospital and Clinics in collaboration with vascular surgery department, trauma surgery department, and local prosthetists. An evidence based approach was utilized in development of this standard of care.

Target Population: Adults with lower extremity amputations

Interventions and Practices Considered:

- Mirror therapy
- Edema management
- Pre-prosthetic training
- Durable medical Equipment recommendations and procurement
- Home exercise program prescription
- Fall prevention
- Therapeutic exercise
- Mobility retraining
- Activities of daily living and instrumental activities of daily living retraining
- Self-management training

Major Outcomes Considered:

By following these recommendations, patient will have the opportunity to achieve maximal functional outcomes in mobility, activities of daily living, work, leisure, and social participation.

Methodology

Methods Used to Collect/Select the Evidence:

Electronic database searches (e.g., PUBMED) were conducted by the guideline author(s) and workgroup members to collect evidence for review. Expert opinion and clinical experience were also considered during discussions of the evidence.

Methods Used to Formulate the Recommendations:

The workgroup members agreed to adopt recommendations developed by external organizations and/or arrived at a consensus through discussion of the literature and expert experience. All recommendations endorsed or developed by the guideline workgroup were reviewed and approved by other stakeholders or committees (as appropriate).

Methods Used to Assess the Quality of the Evidence/Strength of the Recommendations:

Recommendations developed by external organizations maintained the evidence grade assigned within the original source document and were adopted for use at UW Health.

Internally developed recommendations, or those adopted from external sources without an assigned evidence grade, were evaluated by the guideline workgroup using an algorithm adapted from the Grading of Recommendations Assessment, Development and Evaluation (GRADE) methodology (see **Figure 1** in [Appendix A](#)).

Rating Scheme for the Strength of the Evidence/Recommendations:

See [Appendix A](#) for the rating scheme(s) used within this document.

Recognition of Potential Health Care Disparities: Patients who receive lower extremity amputations have been associated with health disparity related to gender and ethnicity.²¹ Fall risk with injury is also increased for women and racial minorities. Rehabilitation professionals should insure fall prevention exercises and recommendations are provided to all patients with lower extremity amputations and should ensure women and racial minorities receive this education.¹⁸

Definitions:

Types of amputations included in this document:

Transmetatarsal Amputation (TMA): Foot amputation in which an incision is made through the mid to proximal metatarsal shafts to remove the distal structures; amputation of the forefoot

Below the knee amputation (BKA) or Transtibial amputation (TTA): Removal of a portion of the tibia, fibula and foot, but preserving the knee joint

Above the knee amputation (AKA) or Transfemoral amputation (TFA): Removal of the lower leg, foot and knee joint, but preserving a portion of the femur

Introduction

Currently, over 1.6 million people are living after limb loss in the United States. This number is expected to more than double by 2050.²² Causes of lower extremity amputation include vascular deficits, trauma, or oncologic issues, with vascular conditions being the leading cause of amputation.²² Within vascular, peripheral vascular disease and diabetes, are the main factors leading to lower extremity amputation.²³ Limb loss impacts a person's ability to engage in regular activities including mobility, self-cares, relationships, and productivity. Rehabilitation is an important part of the process after amputation to provide opportunity for people to return to fully functioning members of society.

Complications of lower extremity amputation include residual limb pain, phantom limb pain, contractures, infection, residual limb dehiscence, hematoma, atrophy, blood clots, skin break downs or pressure sores.²³

The relationship a patient develops with a prosthetist is crucial as this relationship will impact the rest of their life. It is important for patients to be aware of their insurance coverage and to find prosthetists and rehabilitation professionals that are approved providers.

Limb shaping – Following surgery, a patient's operative limb will be edematous. Depending on healing and protocol of the patient's surgeon, methods will be chosen to assist in controlling this edema and shaping the limb for eventual prosthetic use. These methods may include elastic bandages, amputee shrinker socks, tubular compression, and rigid removable dressings.

Phases of Recovery

1. Pre-amputation phase: *the period of time prior to the surgical procedure for an amputation.*
2. Acute post-amputation phase: *the period of time from post op day #0 to approximately 10-14 days post-operative (approximately until the staples or sutures are removed)*
3. Acute rehabilitation phase: *the period of time focusing on improving function to return to safe mobility and self care skills, most often before returning home. This phase most often occurs in an inpatient rehabilitation unit or skilled nursing facility, but may also include home health therapy. This phase may overlap with phase 2.*
4. Community reintegration phase/return to home: *the period of time after an amputation when a person has returned home and is beginning to reintegrate into their previous roles and functional tasks. A person may be receiving home health therapies or outpatient therapies.*
5. Long term management phase: *the period of time when a person has achieved stable function skills including mobility and self care skills, they have returned to previous roles or modified their roles. Most people in this phase or no longer receiving skilled therapy and are at a self-maintenance level of care.*

Patients will progress through the phases of recovery at slightly different rates. The phases of recovery may overlap. Lengths of the phases are also impacted by healing and rehabilitation. Physician preferences and technique will also vary from patient to patient and with the unique needs of each patient.

This clinical guideline reviews areas of consideration for each of the phases of recovery for patients who encounter any rehabilitation professional. The areas of consideration include rehab goals, precautions, pain management and pain control, mobility, self cares, exercises, medical management, edema control, wound and skin care, positioning, medical professionals involved, and psychological management.

Recommendations

1. Pre-Amputation Phase <i>the period of time prior to the surgical procedure for an amputation</i>	
<p>At this stage, education and counseling are the primary goals. Patients are often in physical as well as emotional pain as they adjust to the idea of amputation. Developing rapport, providing emotional support, and answering any questions they may have will assist in the post-operative phase as the patient and family will already be familiar with you as a therapist, and have some idea of what to expect from the process.</p>	
<u>Considerations</u>	
Rehab Goals	Goals may include: <ul style="list-style-type: none"> • Education, what to expect (e.g., length of limb, length of time it may take to get to prosthetic, disposition options and role of physical therapy [PT] and occupational therapy [OT] services) • Discussion of home modification • Pre-operative mobility assessment
Precautions	Fall risk Weight bearing status dependent on physician orders
Pain Control/Management	Variable per patient, managed by physician.
Mobility	Recommend bringing a comfortable, supportive shoe for the non-operative foot to allow for mobility post-operatively. The patient may need an assistive device to perform mobility.
Self Cares	Maintain level of functioning. May need adaptive equipment to perform self cares. Education in foot care
Exercises	Maintain range of motion (ROM) and strength in all extremities.
Medical Management Considerations	Management per medical/surgical team. Considerations for therapists may include: <ul style="list-style-type: none"> • wound care • pain management Clinic/nursing staff may issue educational materials on what to expect. (Below and Above Knee HFFY 7105 , HFFY 4887) (Transmetatarsal HFFY 4892)
Edema Control	If edema present and Ankle Brachial Index (ABI) is less than 0.5 then NO compression is recommended for lower extremity. If ABI is 0.8-0.5, then approval for compression from the Vascular Medicine provider is needed.

1. Pre-Amputation Phase <i>the period of time prior to the surgical procedure for an amputation</i>	
Wound/skin care	Per physician or wound/skin team. May have wound vac.
Positioning	Keep affected extremity elevated. Maintain ROM. Position per comfort or physician (MD) order.
Equipment	Potential needs include: shower chair, wall mounted grab bars, walker, cane, wheelchair, crutches.
Prosthetics	Education on role of prosthetists. Consider options for prosthetists. Investigate insurance coverage.
Medical Professionals that may be involved at this phase	Vascular, Burn, or Orthopedic surgeon, Physical Medicine and Rehabilitation (PMR) physician, home health services, wound nursing, PT, dietician
Psychological Management	Provide education on rehabilitative process, functional outcomes, and an initial introduction to prosthetic process. Consider a health psychology referral if needed.
Therapy Assessment Options	Timed Up and Go (TUG) Sensory assessment with Semmes-Weinstein monofilaments. Use 10g monofilament to assess the intact foot for protective sensation, and if not present, to educate the patient about risks and coordinate protective footwear prescription Ankle Brachial Index (ABI)
Bilateral Amputees	If the patient has had a prior amputation on the opposite limb, ask the patient if they use a prosthetic. Recommend bringing any appropriate equipment they already own (e.g., shrinker socks, prosthetic, wheelchair) to the hospital. Educate on the importance of good edema control for the non-surgical limb, so that their prosthetic will still have proper fit once cleared for mobility. If the patient no longer has a shrinker sock, the patient may wear their roll-on gel liner for edema control. Ask the patient for their prosthetist's contact information, and ask if they can be contacted if needed for pre-prosthetic limb care.
Immediate Intra-Operative Prosthesis (IPOP)	Assess upper extremity strength to ensure that the patient will be able to support weight in ambulation due to weight-bearing restrictions. Consider social support, and if the patient's rehabilitation facility and home will be close to a prosthetist to be able to maintain IPOP

2. Acute Post-Amputation Phase

the period of time from post op day #0 to approximately 10-14 days post-operative

Patients will be at varying levels of mobility and acceptance post-operatively. Goals at this phase include progressing functional mobility, providing education, and facilitation to next level of care. The therapist's role in recovery for a new amputee is very important. In the acute care setting, we have a great opportunity to start them on a path to acceptance and independence.

<u>Considerations</u>	
Rehab Goals	<p>Goals may include:</p> <ul style="list-style-type: none"> • Initiate upper extremity (UE) and lower extremity (LE) home exercise programs (HEP). • Patient will perform bed mobility with stand-by assistance. • Patient will maintain seated balance at edge of bed while performing activities of daily living (ADLs) • Patient will perform bed to chair and commode transfers with assist. Use of walker, gait belt, seated slideboard as needed. • Progress to ambulation with appropriate assistive device and use of gait belt. • Patient will propel wheelchair 150 feet with bilateral upper extremities, demonstrate good use of brakes, with stand-by assist and verbal cues. • Patient will verbalize understanding of limb protection and use of compression, rigid removable dressings, and knee immobilizers as applicable • Patient will demonstrate non-pharmacological pain relief techniques such as gentle skin desensitization and mirror therapy. • Assist patient and family in progressing to most appropriate next level of care with ongoing therapies after hospital discharge.
Precautions	<p>Fall risk Fall prevention strategies: bed in lowest position, bed alarm, chair alarm, consistent rounding for toileting, pain, possession checks Knee immobilizer for BKA Heel weight bearing shoe for TMA Non weight bearing (NWB) post op BKA and AKA, heel weight bearing for TMA</p>
Pain Control/Management	<p>Nerve blocks, managed by physician Oral medications, managed by physician Gentle residual limb massage (tapping/rubbing through soft dressing) may be completed. Educate the patient on hand hygiene prior to limb massage with healing incision. Assess for phantom pain or sensation:</p> <ul style="list-style-type: none"> • Utilize mirror therapy^{13,14} (HFFY 7540)

2. Acute Post-Amputation Phase	
<i>the period of time from post op day #0 to approximately 10-14 days post-operative</i>	
	<ul style="list-style-type: none"> • Current best evidence shows that mirror therapy for 15 minutes for at least 4 weeks has statistically significant reduction in phantom limb pain¹². • Notify physician for possible consideration of medication management. <p>Cryotherapy or superficial thermal modalities if appropriate (consider sensation and vascularization prior to initiating).</p>
Mobility	<p>Seated balance Transfers based on assessed ability (seated slideboard versus stand pivot, use of mechanical lift if unable to safely perform manual transfer) Wheelchair Short distance ambulation if appropriate/cleared by PT In more advanced patients, may assess stairs</p>
Self Cares	<p>Begin edge of bed ADLs Progress to commode transfers Education in foot care</p>
Exercises	<p>Upper Extremity (UE) Exercises: focus on initiating UE exercises to prevent hospital deconditioning, begin exercises to support pressure relief and increased use of UEs during functional mobility. Supine LE Exercises: progress (pending tolerance) to positioning, dressings, nerve blocks, and lines. May remove knee immobilizer for exercises</p>
Medical Management Considerations	<p>Management per medical/surgical team. Considerations for therapists may include:</p> <ul style="list-style-type: none"> • Post-operative dressings • IVs, lines and drains • Foley catheter • Oxygen • Nerve block • Pain management • Suture removal per surgeon • Consider blood sugar levels if applicable
Edema Control	<p>Post-operative dressing Elastic wrap (see HFFY 4409) or tubular compression garment with MD order. Shrinker sock with MD order. Use sock donner for comfort and to prevent shearing (HFFY 7679). Peri-operative casting to residual limb (dependent on surgeon orders)</p>
Wound/skin care	<p>Suture care per primary medical provider Peri-operative casting to residual limb (dependent on surgeon orders).</p>

2. Acute Post-Amputation Phase	
<i>the period of time from post op day #0 to approximately 10-14 days post-operative</i>	
Positioning	<p>For patients with BKA, keep knee in extension with immobilizer. Check appropriate fit to be sure straps do not cause pressure on patella.</p> <p>For patients with BKA and AKA, avoid keeping limb on a pillow at all times to prevent hip flexion contracture.</p> <p>Patients should get out of bed 2-3 times per day.</p> <p>Pressure relief techniques with frequent position changes are suggested to maintain skin integrity (HFFY 7616).</p>
Equipment (for in hospital use, possibly for home if discharging directly home)	<p>From Central Supply (CS):</p> <p>Order bedside commode or drop arm commode</p> <p>Walker or crutches</p> <p>Possibly cane for TMA</p> <p>Wheelchair: consider residual limb support, anti-tippers, possible need for lightweight or high-strength lightweight chair</p> <p>Seated slideboard</p> <p>Heel weight bearing shoe for TMA</p> <p>Knee immobilizer (usually placed in OR post op), should be checked post-operatively for proper fit.</p> <p>If the patient is discharging directly home, then coordinate equipment with Case Manager.</p>
Prosthetics	<p>If ordered, PT or local prosthetist may fabricate a Rigid Removable Dressing for patients with BKA post-op day 3-5 for protection and limb shaping. (HFFY 6592) Rigid Removable Dressings (RRD) are associated with reduced time to wound healing, initial prosthetic casting, and independent walking.^{5,6} They have also been shown to have comparable results to conventional non-removable post-op casting.⁴</p> <p>Shrinker sock should be applied for patients with BKA post-op day 3-5 for edema management and limb shaping.</p> <p>Discussion with prosthetist should be offered to the patient and facilitated if appropriate. Provide the patient with information on local prosthetic services.</p> <p>If the surgeon orders intra-operative prosthetic, close collaboration between therapy and prosthetist is required.</p>
Medical Professionals that may be involved at this phase	<p>Surgeon, anesthesiologist, PMR physician, Nurse Practitioner (NP), registered nurse (RN), nursing assistant (NA), PT, OT, social worker (SW) or case manager (CM), health psychologist, prosthetist, dietician</p>
Psychological Management	<p>Be sensitive to language. Many patients find use of the word “stump” to be disheartening and offensive. Suggested alternatives are “residual limb” or “surgical leg”.</p> <p>Assess/acknowledge the patient’s readiness to view and touch residual limb prior to initiating exercise or self cares.</p> <p>Consult health psychology if patient amenable and appropriate.</p>

2. Acute Post-Amputation Phase	
<i>the period of time from post op day #0 to approximately 10-14 days post-operative</i>	
Therapy Assessment Options	<p>Range of motion for upper extremities and lower extremities</p> <p>Manual muscle test for upper extremities and lower extremities</p> <p>ADL assessment</p> <p>Mobility assessment</p> <p>Pain – phantom and/or surgical</p> <p>Sensation – upper and lower extremity</p> <p>Edema</p> <p>Skin integrity – observation of incision and residual limb, observation of non-surgical limb</p> <p>Cognition and learning assessment</p> <p>Activity tolerance</p> <p>Social history, determining home environmental supports and barriers, societal roles³</p>
Bilateral Amputees	<p>Check skin integrity of both limbs.</p> <p>Post-surgically, edema in non-surgical limb will often be a barrier to prosthetic use, so good edema control is important throughout hospital stay.</p> <p>While bilateral amputees are unable to utilize mirror therapy, recent evidence supports patient observation of the therapist's limbs moving while attempting the movements in their phantom limbs as it may significantly reduce phantom pain in bilateral amputees.¹⁶</p> <p>Seated balance at edge of bed will be a more challenging consideration for a bilateral amputee compared with a unilateral amputee due to loss of stabilizing limb.</p> <p>Patients with bilateral above-knee amputations may consider direct anterior or posterior scooting transfers (as opposed to lateral).</p>
Immediate Intra-Operative Prosthesis (IPOP)	<p>In most cases, patients will be Touch Down Weight-Bearing on their surgical limb.</p> <p>Cast should be supported during exercise program and transitional movements to prevent pressure/chafing on a fresh incision. If possible and therapist feels comfortable, the foot piece may be removed to decrease weight of device during exercises.</p> <p>Have close contact with the prosthetist, post contact information in the patient's room, so all staff may call with any questions, concerns, or in case of sudden need to remove cast.</p> <p>While the elastic support can be loosened at rest, it should be tightened before any mobility or ambulation is attempted. It should be snug, to prevent any pistoning of the limb inside the cast.</p>

Sample Documentation can be found in [Appendix B](#), or click links below:
[Sample Acute Post-Amputation Phase Physical Therapy Evaluation](#)

[Sample Acute Post-Amputation Phase Occupational Therapy Evaluation](#)
[Sample Acute Post-Amputation Phase Physical Therapy Progress Note/Rigid Removable Dressing Documentation](#)
[Sample Letter of Medical Necessity for Wheelchair](#)
[Sample Occupational Therapy Home Access Questionnaire](#)

3. Acute Rehabilitation Phase	
<i>the period of time focusing on improving function to return to safe mobility and self care skills, most often before returning home. This phase most often occurs in an inpatient rehabilitation unit or skilled nursing facility, but may also include home health therapy. This phase may overlap with phase 2.</i>	
Acknowledging the loss of a limb and preparing for needed adaptation are key concepts in this phase of recovery. Interdisciplinary team approach is utilized to address patient needs comprehensively.	
<u>Considerations</u>	
Rehab Goals	<p>Goals may include:</p> <ul style="list-style-type: none"> • Modified Independent with ADLs • Modified independent with transfers and bed mobility • Independent with home exercise program • Independent with residual limb care including daily skin checks • Modified Independent with wheelchair mobility x 500- 1000 feet, including thresholds, ramps and accessing hallways and bathrooms. • Independent with car transfers, including management of all assistive devices. • Independent with floor transfers or be able to direct caregivers in proper technique. • Modified independence with IADLs with use of adaptive equipment/techniques, including light meal preparation, home management • Family training as needed to assist with all of the above if independence is not achieved
Precautions	<p>High fall risk Fall prevention strategies: bed in lowest position, bed alarm, chair alarm, consistent rounding for toileting, pain, possession checks. May be non weight-bearing on surgical limb. May wear post-op shoe for TMA, or a knee immobilizer for BKA patients.</p>
Pain Control/Management	<p>Desensitization strategies Mirror Therapy for phantom pain or sensations is recommended.^{13,14} (HFFY 7540) Current best evidence shows that mirror therapy for 15 minutes for at least 4 weeks has statistically significant reduction in phantom limb pain.¹² Compression socks, require MD order. Use of sock donner is recommended for comfort and to prevent</p>

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	<p>shearing (HFFY 7679) Oral medications, managed by physician Cryotherapy or superficial thermal modalities if appropriate (consider sensation and vascularization prior to initiating). Back pain prevention.²⁴</p>
Mobility	<p>May use a walker, crutches and/or wheelchair. Should work on transfers to varying surfaces with assistive devices if needed. Should practice standing and progress to gait if able. Wheelchair skills training as fall prevention strategy.²⁵</p>
Self Cares	<p>May use adaptive equipment to assist with dressing, showering and toileting Self care may be performed at edge of bed or in a wheelchair Provide education in foot care Educate patient in compensatory strategies for absent or diminished sensation.</p>
Exercises	<p>Bilateral UE's in all major muscle groups Trunk strengthening Bilateral LE strengthening especially hip, glutes and knee musculature Prone Bilateral LE strengthening and stretching Back pain prevention exercises – core strengthening</p>
Medical Management Considerations	<p>Management per medical/surgical team. Considerations for therapists may include:</p> <ul style="list-style-type: none"> • Bladder management as needed, if Foley not discharged yet. • Bowel management if needed.
Edema Control	<p>Rigid Removable Dressing- see below, under Prosthetics Elastic wrap (see HFFY 4409) or tubular compression garment with MD order Shrinker sock with MD order. Use sock donner for comfort and to prevent shearing (HFFY 7679)</p>
Wound/skin care	<p>Have quality footwear for sound limb. Use 10g monofilament to assess the intact foot for protective sensation, and if not present, educate the patient about risks and coordinate protective footwear prescription. The therapist should have good awareness of residual limb dressing changes. Begin educating patient on residual limb care Instruct patient in daily skin inspection for both lower extremities with use of mirror. Provide education on wound healing properties of RRD.⁶</p>

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	Staples should be removed 10-14 days post operatively when cleared by surgeon.
Positioning	No pillows should be used under the knee for BKA patients. Encourage prone positioning to avoid hip and knee contractures and back pain prevention. Provide instruction in pressure relief for wheelchair users (HFFY 7616).
Equipment	For use during admission, then definitive recommendations for DME at discharge may include: Wheelchair: consider residual limb support, anti-tippers, possible need for lightweight or high-strength lightweight chair. Postural support may be necessary, especially for bilateral amputees. Pressure relieving cushion Appropriate assistive device i.e. standard vs front wheeled walker, axillary crutches, seated slideboard Bathroom equipment i.e. commode, transfer tub bench Patients benefit from consultation with DME vendors for best fit of wheelchair, cushion at discharge (see vendor list in appendix). Wheelchair gloves Elastic shoelaces
Prosthetics	Patient should receive information of a local prosthetist in the area to have future follow-up. The local Madison, WI prosthetist may perform a meet and greet to hand out general amputee information. Refer the patient to their local Amputee Clinic. If ordered, PT or local prosthetist may fabricate a Rigid Removable Dressing (RRD) for patients with BKA post-op day 3-5 for protection and limb shaping. (HFFY 6592) Rigid Removable Dressings are associated with reduced time to wound healing, initial prosthetic casting, and independent walking. ⁶ They have also been shown to have comparable results to conventional non-removable post-op casting. ⁴
Medical Professionals that may be involved at this phase	PMR physician, PT, OT, prosthetist, health psychology, case manager, social worker, rehab nurse
Psychological Management	A health psychology consult can be considered for coping with limb loss. Considerations of changing social and family roles. Be sensitive to language. Many patients find use of the

3. Acute Rehabilitation Phase

the period of time focusing on improving function to return to safe mobility and self care skills, most often before returning home. This phase most often occurs in an inpatient rehabilitation unit or skilled nursing facility, but may also include home health therapy. This phase may overlap with phase 2.

	<p>word “stump” to be disheartening and offensive. If interested in peer mentor, the patient should be responsible to contact Amputee Coalition of America, see list of community resources for information. Your prosthetist may also be able to assist the patient in setting up peer mentoring. Discussing sexuality and implication after an amputation is important.^{26,27}</p>
<p>Therapy Assessment Options</p>	<p>2 minute walk test 6 minute walk test Amputee Mobility Predictor (AMP) Berg Balance Scale Borg Rating of Perceived Exertion Scale Four Step Square Test Functional Gait Assessment Functional Reach Test Sensory assessment with Semmes-Weinstein monofilaments , on sound limb Single limb stance (SLS) Timed up and go (TUG) Timed up and go dual task (TUGDT)</p>
<p>Bilateral Amputees</p>	<p>May need a wheelchair re-assessment, could benefit from more stable cushion and/or postural support, anti-tippers if not already present. Consider need for lightweight or high strength lightweight chair, or possibly power wheelchair. Seated balance may be an increased concern during ADL’s due to loss of a stabilizing limb during reaching activities. Patients with bilateral above-knee amputations may consider direct anterior or posterior scooting transfers (as opposed to lateral).</p>
<p>Immediate Intra-Operative Prosthesis (IPOP)</p>	<p>In most cases, patients will be touch down weight-bearing on their surgical limb. Cast should be supported during exercise program and transitional movements to prevent pressure/chafing on a fresh incision. If possible and therapist feels comfortable, the foot piece may be removed to decrease weight of device during exercises. Have close contact with the prosthetist, post contact information in the patient’s room so all staff may call with any questions, concerns, or in case of sudden need to remove cast. While the elastic support can be loosened at rest, it should be tightened before any mobility or ambulation is</p>

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Sample Documentation can be found in [Appendix B](#), or click links below:

[Sample Letter of Medical Necessity for Wheelchair](#)

[Sample Acute Rehabilitation Phase Occupational Therapy Initial Evaluation](#)

[Sample Acute Rehabilitation Phase Occupational Therapy Discharge Summary](#)

[Sample Occupational Therapy Home Access Questionnaire](#)

4. Community Reintegration Phase/Return to Home

the period of time after an amputation when a person has returned home and is beginning to reintegrate into their previous roles and functional tasks. A person may be receiving home health therapies or outpatient therapies.

Goals at this phase include progressing functional mobility, providing education, and transition to prosthetic use as appropriate. In the home health or outpatient setting, therapy can engage the multidisciplinary team to provide support and engage family to assist with adjusting to the new norm.

<u>Considerations</u>	
<p>Rehab Goals</p>	<p>Goals may include:</p> <ul style="list-style-type: none"> • Independent donning and doffing of prosthetic components • Independent assessment of fit of prosthesis with management of fit with use of amputee ply socks • Achieve normal scar mobility • Achieve the ability to independently attain equal weight bearing left and right in static stand. • Achieve equal lateral and anterior/posterior weight shifting performance bilaterally, and learn to use proprioceptive input of the limb against the socket interface to better control the prosthesis. • Independent floor to upright transfers • Establish wearing schedule of prosthesis (initial goal of 1-6 hours, long term goal 6-12 hours) • Establish progressive walking with prosthesis schedule (initial goal 1-3 hours, long term goal of 8-12 hours) • Stepping over obstacles, stepping sideways, stepping backwards if allowed (patients with AKA not allowed unless in Genium knee due to forefoot loading resulting in loss of knee control)

4. Community Reintegration Phase/Return to Home

the period of time after an amputation when a person has returned home and is beginning to reintegrate into their previous roles and functional tasks. A person may be receiving home health therapies or outpatient therapies.

	<ul style="list-style-type: none"> • Patient will tolerate household distances (100 feet) on indoor or level outdoor surfaces with appropriate gait device and prosthesis in place • Progress to ambulation without use of gait device if safe with minimal gait deficits • Safely ascend/descend 12 stairs with use of gait device utilizing step-on or step-over-step as appropriate (AKA's: C Leg can perform step-over-step descending, step-on for ascending. Genium knee can perform step-over-step ascending/descending) • Safely ascend/descend a standard curb with gait device as needed. • Initiate gait training on grass, gravel, stones or other uneven terrain. • Safely ascend/descend coded ramp with gait device as needed. • Walk with prosthesis and gait device at varying speeds • Improve aerobic capacity as indicated by reduced perceived rate of exertion during the 2 or 6 minute walk test • Maximize independence of functional mobility with and without prosthesis • Achieve independence with car transfers with prosthesis, including management of all assistive devices. • Normalize gait pattern: eliminate/reduce asymmetry, achieve a base of support of 2-4 inches, eyes looking a minimum of 5 feet in front, achieve trunk rotation and arm swing. • If not progressing to prosthetic, achieve independence with wheelchair skills, such as ramps, curbs, and community distances.
<p>Precautions</p>	<p>Ongoing falls risk Closely monitor skin tolerance and maintain intact skin</p>
<p>Pain Control/Management</p>	<p>Use of scar mobilization Use of compression Use of medication, managed by physician Desensitization of residual limb Mirror therapy can continue independently at home to reduce phantom pain symptoms as needed^{13,17} (HFFY 7540) Current best evidence shows that mirror therapy for 15</p>

4. Community Reintegration Phase/Return to Home

the period of time after an amputation when a person has returned home and is beginning to reintegrate into their previous roles and functional tasks. A person may be receiving home health therapies or outpatient therapies.

	minutes for at least 4 weeks has statistically significant reduction in phantom limb pain. ¹²
Mobility	Ambulate with normal gait pattern (see Rehab Goals above) Independent ambulation within the home with or without assistive device and prosthesis Independent ambulation over outdoor terrain with or without assistive device and prosthesis Education on safe falling techniques and floor to upright transfers with environmental objects for assist.
Self Cares	Independent use of prosthesis with static standing activities with performance of personal cares. Provide education in foot care Provide education on importance of not shaving residual limb to prevent skin injury and ingrown hairs. Provide education on how to prevent further limb loss (HFFY 7104) Provide education on return to sexual activity (HFFY 7108) and considerations for driving ²⁸
Exercises	Perform appropriate stretching and strengthening for lower extremities and core. Use balance activities static and dynamic, with eyes open and eyes closed, on various surfaces. Have the patient perform endurance activities, including distance walking/treadmill.
Medical Professionals that may be involved at this phase	Ongoing pain management needs, skin issues and concerns, prosthetic/equipment assessment and prescriptions, coordination of therapy services
Edema Control	Use of RRD, residual limb shrinker or roll on gel liner (HFFY 6592)
Wound/skin care	Closely monitor skin pre and post use of the prosthesis, visually and tactilely. Educate patient on performing regular skin inspections independently. Provide education on need for careful and thorough rinsing of all prosthetic components after use of cleaning products to prevent skin irritation. Recommend performance of scar mobilization, minimum of two times per day. Semmes-Weinstein Monofilament test: Use 10g monofilament to assess the intact foot for protective sensation, and if not present, to educate the patient about risks and coordinate protective footwear prescription Achieve normal skin and scar mobility.

4. Community Reintegration Phase/Return to Home

the period of time after an amputation when a person has returned home and is beginning to reintegrate into their previous roles and functional tasks. A person may be receiving home health therapies or outpatient therapies.

	Continue use of RRD when not wearing prosthesis.
Positioning	Instruction in prone lying for 5-10 minutes 1-2 times per day for both AKAs and BKAs, especially for the more sedentary patients. Provide instruction in pressure relief for wheelchair users (HFFY 7616)
Equipment	Most appropriate gaiting device – front wheeled walker, four wheeled walker, forearm crutches, axillary crutches, canes, walking sticks. Ongoing use of the wheelchair as needed.
Prosthetics	Monitor shape of limb. Monitor circumferential measurements. Document all prosthetic components (contact prosthetist as needed to obtain this information). Maintain contact with prosthetists regarding appropriate times to return for reassessment and adjustments to prosthesis as limb matures.
Medical Professionals	Physical Therapist Maintain contact with prosthetist Continue Rehab MD appointments as needed Prosthetic Clinic intervention with Physical Medicine and Rehabilitation team (first Friday morning of every month at UW Rehab Clinic, Middleton) Health Psychology intervention as indicated. Occupational Therapy intervention as indicated. Vocational Rehabilitation/Division of Vocational Rehab as needed for return to school or work.
Psychological Management	Aesthetics of the prosthetic. Empower the patient to self-advocate for their needs and ongoing prosthetic management, including comfort, fit, and personal activity goals. Encourage discussing sexuality with a healthcare professional. ^{26,27}
Therapy Assessment Options	2 minute walk test 6 minute walk test Amputee Mobility Predictor (AMP) Berg Balance Scale Borg Rating of Perceived Exertion Scale Four Step Square Test Functional Gait Assessment Functional Reach Test Sensory assessment with Semmes-Weinstein monofilaments , on sound limb

4. Community Reintegration Phase/Return to Home <i>the period of time after an amputation when a person has returned home and is beginning to reintegrate into their previous roles and functional tasks. A person may be receiving home health therapies or outpatient therapies.</i>	
	Single limb stance (SLS) Timed up and go (TUG) Timed up and go dual task (TUGDT)
Bilateral Amputees	Maintain upper body and core strength and activity tolerance in order to maximize function with two prosthetics or from a wheelchair level. Ambulating with two prosthetics requires increased energy cost.

Sample Documentation can be found in [Appendix B](#), or click links below:
[Sample Outpatient Physical Therapy Evaluation Note](#)

5. Long Term Management <i>The period of time when a person has achieved stable function skills including mobility and self care skills, they have returned to previous roles or modified their roles. Most people in this phase are no longer receiving skilled therapy and are at a self-maintenance level of care.</i>	
Goals at this phase include training in advanced prosthetic use and wheelchair modification and skills. Patients are encouraged to maintain contact with their interdisciplinary team as needed to address and ongoing or new concerns.	
<u>Considerations</u>	
Rehab Goals	Goals may include: <ul style="list-style-type: none"> • Return to social roles within family and community • Patient takes responsibility for own health care • Independent ambulation within home, with or without use of gait device • Ambulation for community distances (1,000 ft) as tolerated, with or without use of gait device • Independent with advanced prosthetic skills such as multi-directional turns, quick starting and stopping, braiding, tandem walking, etc.) • Independent wheelchair skills for community distances as needed, such as ramps, curbs
Precautions	Increased falls risk continues Skin issues can continue to present

5. Long Term Management

The period of time when a person has achieved stable function skills including mobility and self care skills, they have returned to previous roles or modified their roles. Most people in this phase are no longer receiving skilled therapy and are at a self-maintenance level of care.

Pain Control/Management	<p>Use of medication as needed, managed by physician. Continue use of compression as needed. Address back pain, which is common 6 months post-amputation.²⁴ Mirror therapy can continue independently at home to reduce phantom pain symptoms as needed^{13,17} (HFFY 7540) Current best evidence shows that mirror therapy for 15 minutes for at least 4 weeks has statistically significant reduction in phantom limb pain.¹²</p>
Mobility	<p>Independent performance of basic mobility skills Independent performance of floor to and from upright without use of an environmental object for support.</p>
Self Cares	<p>Self-assessment on a daily basis of skin condition, bilaterally if there are vascular issues. Provide education on how to prevent further limb loss (HFFY 7104) Use mirror, magnified if needed. Discuss return to sexual activity (HFFY 7108) and driving considerations²⁸</p>
Exercises	<p>Ensure ongoing stretching/flexibility and strengthening. Core strengthening of pelvis, trunk and shoulder girdle muscles is recommended. Encourage ongoing upright balance exercises and Ongoing cardiovascular activities</p>
Medical Management	<p>Continue with primary care physician. Follow up with PMR or surgical team as recommended. Prosthetic Clinic intervention with Physical Medicine and Rehabilitation if indicated for new prosthetic, components, pain, or skin concerns (first Friday morning of every month at UW Rehab Clinic, Middleton) If patient is hospitalized for unrelated medical or surgical concerns, it is important to address edema control during inpatient hospitalizations to ensure their prosthetic will continue to have a proper fit.</p>
Edema Control	<p>Limb volume changes may continue as well as ongoing reshaping of the limb. Use of prosthesis is likely to control edema. Assess the need for ongoing use of the RRD or residual limb shrinker when the patient is not using the prosthesis. Consider use of shrinker sock or roll-on gel liner if the patient is having any surgical procedure, as any surgery may cause systemic edema including in the residual limb.</p>

5. Long Term Management

The period of time when a person has achieved stable function skills including mobility and self care skills, they have returned to previous roles or modified their roles. Most people in this phase are no longer receiving skilled therapy and are at a self-maintenance level of care.

Wound/skin care	Maturation of the suture line Achievement of normal skin/scar mobility Contralateral lower limb preservation
Positioning	Ongoing prone positioning 1 to 2 times per day for 5-10 minutes.
Equipment	Appropriate ambulatory assistive device or wheelchair. Device may vary depending on the types of surfaces and longer distances, such as indoor or outdoor surfaces, shopping malls, parking lots, and may vary based on weather conditions.
Prosthetics	Likely transition from preparatory to definitive prosthesis Attend to weight changes as a 10# change would prompt a return to the Prosthetist. Regular and ongoing check-up appointments are necessary to maintain proper fit and functionality of prosthesis. Weight change of 10 pounds or more likely will prompt new fitting.
Medical Professionals that may be involved at this phase	Continue to follow with the Prosthetist for adjustments. Vocational Rehabilitation may be considered, PMR physician, nursing, PT, OT, Social Work, Health Psychology
Psychological Management	Health Psychology intervention, peer mentoring, and social support including family, friends, co-workers may all be considered.
Therapy Assessment Options	Initial OP Physical therapy intervention likely completed. Patient may return to therapy with a new consult (if no direct access) if new problems present, to progress skills as strength improves to allow for new functional goals, or if the patient becomes more tolerant of prosthetic use.
Bilateral Amputees	Maintain upper body and core strength and activity tolerance in order to maximize function with two prosthetics or from a wheelchair level. Ambulating with two prosthetics requires increased energy cost.

UW Health Implementation

Potential Benefits:

Improved consistency of care between clinicians across practice areas to improve functional outcomes of adults with lower extremity amputation.

Potential Harms:

- Risk of skin breakdown may be associated with rigid dressings if improperly used or skin checks not performed regularly.
- Delay in prosthetic fitting and use or potential to not attain prosthetic fitting.

To mitigate harms of implementation, Home Exercise Programs should be reviewed and customized as appropriate for each patient, and Clinical judgment should always be used by the issuing therapist.

Pertinent UW Health Policies & Procedures

1. None identified

Patient Resources: Health Facts for You

1. HFFY #7105- [Above and Below Knee Amputations Complications and Management](#)
2. HFFY #4892- [Transmetatarsal Amputation \(TMA\)](#)
3. HFFY #4409- [Ace Wrapping Lower Extremity \(Leg\) Stump](#)
4. HFFY #6592- [Instructions for Wearing a Limb Protector](#)
5. HFFY #4887- [Below and Above the Knee Amputations: What You Need to Know about Limb Loss](#)
6. HFFY #7108- [Sexuality – Life after Limb Loss](#)
7. HFFY #7540- [Mirror Therapy – Patient and Family Information](#)
8. HFFY #6615- [Preventing Pressure Ulcers](#)
9. HFFY #7106- [Above and Below Knee Amputations Why Do Amputations Occur](#)
10. HFFY #7616 <https://www.uwhealth.org/healthfacts/wound-skin/7616.html>
11. HFFY #7679- [Using an Amputee Sock Donner](#)
12. HFFY #5878- [Neuropathic Pain](#)
13. HFFY #7104- [Above and Below Knee Amputations: Preventing Further Limb Loss for Non-Traumatic Lower Extremity Amputations \(LEA\)](#)
14. HFFY #6626 [Home Safety – Preventing Falls](#)
15. HFFY #7616 [Pressure Ulcer/Bed Sore/Decubitus Ulcer Relief](#)

Staff Resources: Companion Documents

Durable Medical Equipment

Local Supplier Contact Information: [Click here for internal UW Health document](#)

For users external to UW Health, please contact the patient's insurance company to confirm coverage and preferred providers.

Assessment Tools

Click links for external websites, including references for these assessment tools

- [2 minute walk test](#)
- [6 minute walk test](#)

- [ABI](#)
 - [ABI Worksheet](#)
- [Amputee Mobility Predictor \(AMP\)](#)
- [Berg Balance Scale](#)
- [Borg Rating of Perceived Exertion Scale](#)
- [Dynamic Gait Index](#)
- [Four Step Square Test](#)
- [Functional Gait Assessment](#)
- [Functional Independence Measure \(FIM\)](#)
- [Functional Reach Test](#)
- [Sensory assessment with Semmes-Weinstein monofilaments , on sound limb](#)
- [Single limb stance \(SLS\)](#)
- [Timed up and go \(TUG\)²⁹](#)
- [Timed up and go dual task \(TUGDT\)](#)
- Consider language of K levels in documentation to assist the prosthetist with determining patients K level.
 - K levels, categories defined by Medicare as anticipated functional status
 - K0: Prosthesis does not enhance quality of life, no ability to transfer or ambulate with prosthesis.
 - K1: Has potential to use prosthesis for transfers and ambulation on level surfaces; household ambulatory
 - K2: Ambulates on uneven surfaces and can negotiate environmental barriers; limited community ambulatory
 - K3: Ambulates with variable cadence; has vocational, therapeutic or exercise activity beyond simple locomotion.
 - K4: Exceeds basic ambulation skills, exhibits high impact, stress, energy levels; active adults, children and athletes.

Community Resources

Prosthetic Clinic: The Prosthetic Clinic is a multidisciplinary clinic that addresses the needs of patients who have undergone amputation.

Our staff sees patients with amputations at all levels of the upper and lower extremities. Our evaluation process includes a physician, prosthetist and physical therapist, and we also have nurses with expertise in skin and wound care available.

Services

- Thorough evaluation of all patients, with input from physicians, prosthetists and physical therapists
- Development of a management plan that allows for maximum patient independence and mobility

UW Health Prosthetic Clinic: (608) 263-6540

<http://www.uwhealth.org/physical-therapy-occupational-therapy-speech-therapy/prosthetics/11379>

Websites:

- Amputee Coalition of America: <http://www.amputee-coalition.org/>

- American Orthotic Prosthetic Association www.aopanet.org
- Video on Mirror Therapy at Walter Reed:
http://www.youtube.com/watch?v=YL_6OMPYwnQ
- American Board for Certification in Orthotics, Prosthetics, and Pedorthotists:
<http://www.abcop.org/Pages/default.aspx>

Support Groups:

Peer counseling <http://www.amputee-coalition.org/>

American Amputee Foundation, Inc. (AAF)

PO Box 250218
Hillcrest Station
Little Rock, Arkansas, USA 72225
501.666.2523

- Provides various forms of peer support, new amputee packet, & information and referrals to other resources and providers.

Amputation Resource Foundation of America, Inc.

- <http://www.amputeeresource.org/>
- Their mission: To disseminate timely and useful information, to perform charitable services, and to conduct research to enhance productivity and quality of life for amputees in America.

Amputee Coalition of America

(Local chapter associated with UnityPoint Meriter Hospital)
202 S Park Street
Madison, WI
Contact: Barb Tomas at 608.267.6000(W) or 608.249.8565(H)

- <http://www.amputee-coalition.org/>
- The Amputee Coalition of America (ACA) is a national, non-profit amputee consumer educational organization representing people who have experienced amputation or are born with limb differences.
- Offer peer visitors at hospitals or homes in the Madison area, or over the phone conversations.

National Amputation Foundation [NAF]

73 Church Street
Malverne, New York, USA, 11565
516.887.3600

- <http://www.nationalamputation.org/>
- NAF is comprised of amputee volunteers who offer their support to fellow amputees and their families, and provide the patient with the opportunity to relate to another person who has been through a similar experience. NAF supports the new amputee in returning to as normal a life as possible within the sphere of his or her potential.

- NAF publishes a monthly newsletter, *A M P* that is included in membership fees of \$25.00 dollars a year. There are pamphlets available and they sponsor an "Amp to Amp" program where an AMP member who has returned to a normal life will visit a new amputee.

Unlimited Potential/Rehab Institute of Chicago

345 E Superior Street
Chicago, IL
Contact: 312.238.1160

- Meets the 3rd Sat of the month from 10am - 12pm

Wisconsin Amputee Support Group

DePere, WI
Contact: John Dederich at 920.336.7063 (VM)

Guide to Physical Therapy Practice

Practice Pattern: 4 J Impaired Gait, Locomotion, and Balance; Impaired Motor Function secondary to lower extremity amputation

Guideline Metrics

Intradepartmental Chart Reviews, Clinical Case Presentations, Percentages of patients with lower extremity amputations discharged to Inpatient Rehabilitation.

Implementation Plan/Clinical Tools

1. Guideline will be posted on uConnect in a dedicated location for Clinical Practice Guidelines.
2. Release of the guideline will be advertised in the Physician/APP Briefing newsletter.
3. Content and hyperlinks within clinical tools, documents, or Health Link related to the guideline recommendations (such as the following) will be reviewed for consistency and modified as appropriate.

SmartTexts

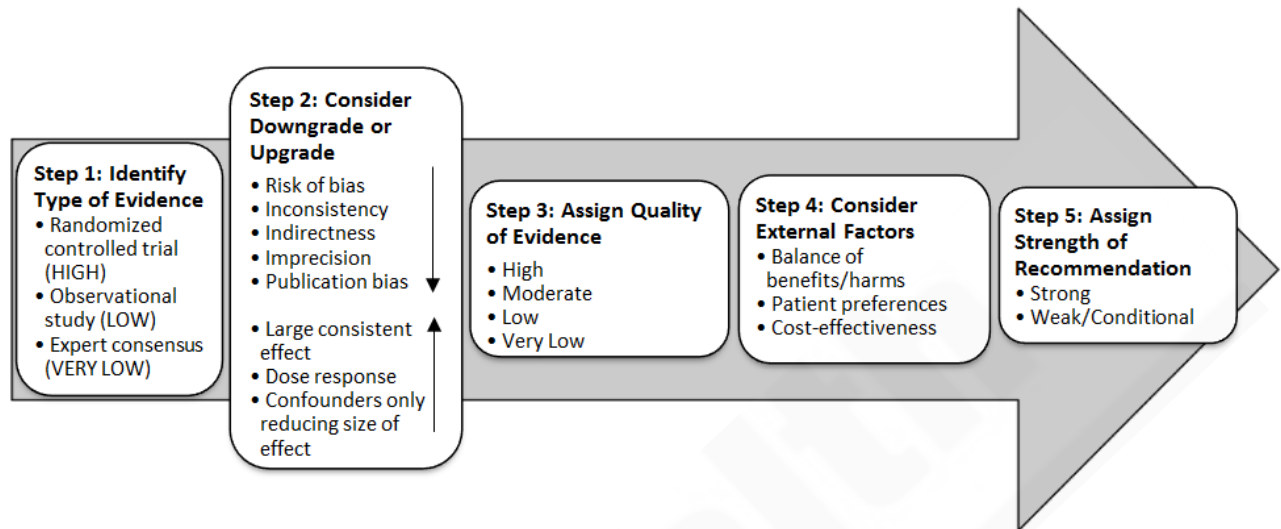
Rehab IP PT Medsurg Eval Amputee

Disclaimer

Clinical practice guidelines assist clinicians by providing a framework for the evaluation and treatment of patients. This guideline outlines the preferred approach for most patients. It is not intended to replace a clinician's judgment or to establish a protocol for all patients. It is understood that some patients will not fit the clinical condition contemplated by a guideline and that a guideline will rarely establish the only appropriate approach to a problem.

Appendix A. Evidence Grading Scheme(s)

Figure 1. GRADE Methodology adapted by UW Health



GRADE Ranking of Evidence

High	We are confident that the effect in the study reflects the actual effect.
Moderate	We are quite confident that the effect in the study is close to the true effect, but it is also possible it is substantially different.
Low	The true effect may differ significantly from the estimate.
Very Low	The true effect is likely to be substantially different from the estimated effect.

GRADE Ratings for Recommendations For or Against Practice

Strong	The net benefit of the treatment is clear, patient values and circumstances are unlikely to affect the decision.
Weak/conditional	Recommendation may be conditional upon patient values and preferences, the resources available, or the setting in which the intervention will be implemented.

Appendix B: Sample Documentation

Sample: Acute Post-Amputation Phase Physical Therapy Evaluation

Physical Therapy Initial Evaluation Medical Surgical Service

Patient: Test Patient **MRN#:** 1234567

Unit: D4/5 Rm:D4/566

Treatment Completion Time(s): 3:50 PM

PT Treatment

Minutes of Physical Therapy Time : 60

Evaluation/Treatment performed: Initial Evaluation, including chart review and documentation, for 60 minutes

Consult received for Test Patient for Evaluation and Treatment for Therapy Diagnosis Below, Mobility/ADL training and s/p left foot amputation.

Precautions and Contraindications:

Observations/Precautions

Isolation Precautions: Enhanced Isolation Precautions

Fall Risk Factors: Strength impairments (new BKA)

Left Lower Extremity Weight Bearing Status: Non-weight bearing (guillotine BKA)

Right Lower Extremity Weight Bearing Status: As tolerated

Current Hospitalization:

Referring Provider: Johnson

Date of Referral: 3/09/2013

Patient Active Problem List:

Diabetes mellitus type II [250.00]

Hyperlipidemia [272.4]

Hypothyroidism [244.9]

CAD (coronary artery disease) [414.00]

Pulmonary nodule [793.11]

Chronic foot ulcer [707.14]

Weakness of right leg [729.89]

Polyneuropathy in diabetes [250.60, 357.2]

Hypertension [401.9]

Medical Diagnosis: gangrene of left foot, s/p BKA

History of Present Illness: Test Patient is a 53 year old female admitted on 3/12/2014 with a 13-year-history of DM type 2 controlled by insulin who presents with a one week history of an "infected" foot. Per the patient, she had a "callus" on the bottom of her left forefoot for several months that had not been bothering her until a few weeks ago when it "cracked" and began to bleed. At that time she began to see a podiatrist who attempted to treat the callus. It continued to worsen, however, and about a week ago she noticed that it became "infected" with increased redness and pain with ambulation. She admits to chills and nausea/vomiting during this time,

but is not sure if this is related to her foot. She endorses difficulty keeping food down over the last couple of weeks.

Pt is now s/p below knee amputation.

Past Medical/Surgical History:

has a past medical history of Diabetes mellitus Hypothyroid; essential hypertension hyperlipidemia; Obesity; Unspecified sleep apnea; Osteoarthritis; Cellulitis; and Foot abscess, right., has past surgical history that includes tonsil and adenoidectomy

Subjective: Patient is agreeable to participation in the therapy session. Pt reports she is actually okay with this happening, that she has had difficulty with this foot/leg for a long time, but that she is nervous about moving on one leg. Reports some weakness in her right hip following a fall some time ago. "I had some Physical Therapy for it, they say I walk a little funny." "I really, really want to get in to the rehab here."

Patient participation is not impaired by pain.

Pain Assessment

Pain Present: No (nerve blocks in place)

Social History/Prior Level of Function:

Home Situation

Lives with: Alone (but says a sister can come stay with her if needed)

What is your occupation?: clerical work

Permanent Residence: House, single story

Housing Accessibility: Ramp

Assistive Gait Device : None

Objective:

Observation of Patient / Vital Signs: Patient is in bed with PICC line, Foley catheter and sciatic and femoral nerve blocks in place. Patient's medical condition is appropriate for Physical Therapy intervention at this time.

Height: 175.3 cm (5' 9") Actual Weight: 122.925 kg (271 lb)

Cognition and Interaction: Pt is alert and oriented x 4.

Musculoskeletal Exam Lower Extremities:

Right LE: pt able to achieve 0° ankle position but only with overpressure. Knee and hip range of motion within functional limits.

Strength: R Hip Flexion: 3+/5, R Knee Extension: 4/5, R Ankle Dorsiflexion: 5/5

Left LE: L knee extension: able to achieve 0° via quad set. L knee flexion: 30° in supine.

Observation of residual limb: incision clean and well approximated, bulbous shape, edematous.

Sensory Examination: intact to light touch right LE, not fully assessed L LE today secondary to dressings. No complaints of phantom pain or sensations at this time.

Functional Mobility:

Bed Mobility

Bed Mobility: Requires assistance for bed mobility

Supine to Sit: Stand-by assistance (with head of bed elevated)

Sit to Supine: Minimal assistance

Sit to stand: Pt unable to achieve full stand. Able to perform 3 seated boosts (lifting ~1-2 inches off the bed) with min A and right knee blocked.

Treatment Activities: evaluation as above. Discussion of role of Physical Therapy, education on rehab and answered questions on prosthetics use. Issued home exercise program including right ankle pumps, bilateral quad sets, gluteal sets, bilateral knee flexion, single-leg bridging, hip abduction in side-lying and hip extension in side-lying.

Clinical Impression: Pt is a 53 year old year old female presenting with gait and mobility deficits s/p left below knee amputation. Pt was independent prior to admission, is very motivated to participate with therapies, and has an accessible home. She has good potential to progress to community ambulation with variable cadence. Anticipate she will be a good candidate for acute inpatient rehab. Will attempt seated slideboard transfer at next session given patient's good ability to boost, but difficulty achieving full stand.

Therapy Diagnosis: MUSCULOSKELETAL: Impaired motor function, muscle performance, ROM, gait, locomotion and balance associated with amputation

Recommended Disposition: Acute rehabilitation candidate due to:

Ability to participate: Based on progress demonstrated in therapy sessions, anticipate patient will be able to participate in 3 hours of daily therapy.

Willingness to participate: Patient is motivated to participate.

Environmental concerns: Patient has no environmental barriers, will likely have support available if needed at discharge.

Patient's potential for functional improvement is good. Factors favorable to functional recovery include high motivation level. Factors which may impede functional recovery include past medical history/co-morbidities as listed above in active problem list. Patient required and benefited from skilled hands on and/or verbal instruction throughout the session. She requires ongoing skilled Physical Therapy services, which may be delegated to a PTA, in order to regain function and achieve the goals listed below.

Long Term Goals to be achieved by discharge from acute inpatient hospitalization:

- 1) Pt. supine to/from sit with stand-by assist.
- 2) Pt. transfers with mod A, use of seated slideboard as needed.
- 3) Pt. ambulates 10 feet with front wheeled walker or parallel bars, mod A.
- 4) Pt will propel manual wheelchair 50 feet with B UE's, stand-by assist.
- 5) Pt will consistently perform home exercise program independently.

Plan:5-6x/week

Physical Therapy Interventions:, Therapeutic Activities, Therapeutic Exercise, Gait Training, Wheelchair management, Education and Training for Patient Self Management, Orthotics/Prosthetics Management and Training and Rigid Removable Dressing if ordered by physician

Patient had input and is in agreement with goals and treatment plan.

Information provided by: Cindy Smith PT #4321, 3/13/2014 ,3:50 PM



Sample Post-Amputation Phase Occupational Therapy Evaluation:

Occupational Therapy Initial Evaluation Medical Surgical Service

Patient: Patient A **MRN#:** 0012345

Unit: D4/5

Patient Class: Inpatient

Time of Treatment: ____

Minutes of Occupational Therapy: ____

Consult received for Patient A for Evaluation and Treatment and Mobility/ADL training. Patient A is a 53 year old female admitted on ____ (date).

Precautions and Contraindications:

Observations/Precautions

Precautions: Precautions identified

Fall Risk Factors: Balance impairments (new BKA)

High Fall Risk per nursing assessment

Current Hospitalization:

Referring Provider: Dr. Lowerextremity

Date of Referral: ____ (date)

Medical Diagnosis: Left below-knee amputation

History of Present Illness: Patient A is a 53 year old female now status post left below-knee amputation on ____ (date).

Past Medical/Surgical History:

Subjective: Patient is agreeable to participation in the therapy session.

RN cleared patient for participation in therapy.. Patient's medical condition is appropriate for Occupational Therapy intervention at this time.

Patient participation is not impaired by pain.

Pain Assessment

Pain Present: Yes

Current Pain Location: left residual limb

Pain Severity: 2/10

Pain Scale Used: Numeric Rating Scale (0-10)

Social History/Prior Level of Function:

Home Situation

Lives with: Spouse

Prior Level of Function: Requires some assistance from family

Prior Assistance Required: IADLs; Driving

What is your occupation?: retire

Permanent Residence: House, single story

Housing Accessibility: Stairs to entrance

Number of Levels in Dwelling: Multiple levels, can live on main level

Number of Steps to Enter Home: 4
Rails to Enter: 1
Number of Stairs between Levels: (flight to basement with rail)
Location of Toilet: Main level
Location of Tub/Shower: Tub/shower on main level
Location of Laundry: Not on main level

Objective:

Observation of Patient / Vital Signs: Patient is in bed with peripheral IV and 2 left lower extremities nerve blocks in place.
Skin Integrity: Impairment observed
LLE Skin Impairment: Edema
Cognition and Interaction
Level of Consciousness: Alert
Orientation Level: Oriented X4
Affect: Appropriate to circumstances
Attention: Attends to directions
Memory: No deficits noted
Follow Commands: All commands and directions followed without difficulty

Basic ADL and Instrumental ADL:

Basic ADL Skills
Method of ADL Assessment: Observation
Eating (includes set-up of food items): Complete Independence
Grooming - Level of assistance for retrieving items and grooming : Supervision/Setup
Lower body dressing (includes retrieving items) : Maximal (patient performs 25%-49% of task) (from edge of bed)
Toileting (clothing management and hygiene): Maximal (patient performs 25%-49% of task)
Toilet transfer: Moderate (patient performs 50-74% of task)
Toilet transfer - Devices or equipment used : commode
Functional Mobility: Moderate assistance

Musculoskeletal Examination:

Active ROM Upper Extremities
AROM Left UE: Within Functional Limits
AROM Right UE: Within Functional Limits
Strength Upper Extremities
Overall Strength Left UE: 4/5 overall
Overall Strength Right UE: 4/5 overall

Sensory/Oculomotor Examination:

Patient wears glasses. Able to read clock and menu in room. No complaints of visual changes.
Sensory Assessment
GENERALIZED SENSATION: Impairment identified
LUE Sensation Impairment: (diminished sensation due to diabetic neuropathy)
RUE Sensation Impairment: (diminished sensation due to diabetic neuropathy)

Functional Mobility:

Bed Mobility
Bed Mobility: Requires assistance for bed mobility
Rolling to left: Minimal assistance

Supine to Sit: Moderate assistance
Transfers
Sit to Stand: Moderate assistance
Stand to Sit: Minimal assistance
Stand Pivot Transfer: Moderate assistance
Device Used - standing transfer: Walker
Toilet Transfers: Moderate assistance
Device Used - toilet transfer: Drop arm commode

Treatment Activities: OT eval, pt educated in role of OT and plan of care, ADL, from edge of bed, patient educated in initial upper extremities home exercise program including shoulder flexion/overhead press, shoulder forward press, shoulder abduction, and wheelchair push ups. Recommend use of water bottle in room for resistance with shoulder exercises.

Clinical Impression: Patient is a 53 year old female admitted status post left below-knee amputation on ____ (date). Patient currently presents with ADL, IADL, and functional mobility deficits post op. Patient with slight weakness in bilateral upper extremities, will need improved upper extremity strength for safety and improved independence with ADLs and functional mobility. Began ADL retraining today and instruction in initial upper extremity home exercise program. Patient will benefit from inpatient rehab at discharge from acute care to maximize level of independence prior to discharge to home.

Therapy Diagnosis: Deconditioned, Impaired ADL and IADL and Impaired Functional Mobility
Recommended Discharge Disposition: Acute rehabilitation facility due to Ability to participate:
Based on progress demonstrated in therapy sessions, anticipate patient will be able to participate in 3 hours of daily therapy.
Willingness to participate: Patient is motivated to participate.
Environmental concerns: Patient has environmental barriers but does have good social support available at discharge.

Patient A required and benefited from skilled hands on and/or verbal instruction throughout the session. The patient requires ongoing skilled Occupational Therapy services, which may be delegated to an OTA, in order to regain function and achieve the goals listed below. Patient's potential for functional improvement is good. Factors favorable to functional recovery include high motivation level and good social support. Factors which may impede functional recovery: past medical history/co-morbidities as listed above in active problem list.

Goals: To be achieved within one week from date of evaluation.

1. Patient to demonstrate ability to complete UB dressing/bathing with supervision/setup.
2. Patient to demonstrate ability to complete LB dressing/bathing with minimal assistance.
3. Patient to demonstrate ability to sit edge of bed for ADL tasks with supervision/setup for 20 minutes.
4. Patient will demonstrate independence with upper extremity home exercise program to increase independence with activities of daily living.
5. Patient to complete toileting including transfer to bedside commode with minimal assistance.

Plan: 4-5 days per week.

Occupational Therapy Interventions:

Community/Work Re-integration Training
Self-care/Home Management Training
Therapeutic Activities
Therapeutic Exercise
Patient had input and is in agreement with goals and treatment plan.

Submitted by: *Cindy Jones, MOT, CLT Pager 1234- 10/27/2014 - 11:29 AM*



Sample Acute Post-Amputation Phase Physical Therapy Progress Note/Rigid Dressing Fabrication Documentation

Physical Therapy Progress Note Medical Surgical Service

Patient: Test Patient **MRN#:** 1234567
Unit: D4/5 Rm: D4/562

Treatment Completion Time: 11:29 AM
Minutes of Physical Therapy Time : 58

Precautions and Contraindications:
High Fall Risk per nursing assessment

Medical Diagnosis: s/p left below knee amputation

Subjective: Patient is agreeable to participation in the therapy session. Patient participation is not impaired by pain, though did state some phantom pain experienced earlier this morning.

Objective: Pt is in bed with peripheral IV and dressings in place.

Ace Wrap and dressings removed.

Observation of limb: Incision clean and well-approximated, very minimal serosanguinous drainage noted at medial border of incision. Bulbous shape, edematous.

Telfa dressing applied, Shrinker sock, size 5x24, applied with use of amputee sock donner.

Rigid Removable Dressing (RRD) fabricated and applied.

Treatment Activities: Fabrication and application of RRD as above. Pt and nursing staff educated on donning/doffing RRD and shrinker sock. Written instructions about removing RRD at night to sleep, and checking skin every 4 hours for first 48 hours issued to nursing staff. Additional limb socks and suspension sock issued to patient.

Assessment: Tolerated well. Anticipate discharge to acute rehabilitation for ongoing therapies, with follow-up with prosthetist for further pre-prosthetic limb care. May benefit from trial of mirror therapy to address phantom pain.

Recommended Disposition: Acute Rehabilitation with ongoing Physical Therapy

Plan: Patient would benefit from continued skilled therapy services 5-6x/week with focus on LE strengthening, pre-prosthetic limb care, and progression of functional mobility while patient remains in acute care.

Information provided by: Cindy Smith PT #4321, 10/27/2014 ,11:34 AM



**Sample Acute Rehabilitation Phase Occupational Therapy Initial Evaluation
Occupational Therapy Initial Evaluation
Acute Inpatient Rehabilitation**

Patient: Joe Patient **MRN#:** 1234567
Unit: B4/4

Treatment Completion Time(s): 830, 1300
Minutes of Occupational Therapy Time: 60, 30
Scheduled Minutes of Therapy: 30, 30

Evaluation/Treatment Performed: Initial Evaluation, including chart review and documentation, for 60 minutes

Other Billed Treatment Interventions including: Occupational Therapy Interventions:
Self-care/Home Management Training for 15 minutes. Transfer train to bedside commode at height of 22". Patient transfers with contact guard assist from 22" and minimal assist from height of ~20" from wheelchair. Some difficulty with lower surface.
Therapeutic Exercise performed for 15 minutes. Patient performs arm bike for >10 minutes at level of 4. He is able to push wheelchair room to/from clinic independently.
Patient issued home access form. Initiated recommendations for durable medical equipment discussed

Consult received for Joe Patient for Home Safety Evaluation, Mobility/ADL training and ROM/Strengthening/Endurance.

Precautions and Contraindications:

Observations/Precautions

Precautions: Precautions identified

Fall Risk Factors: Strength impairments; Balance impairments

Lower Extremity Orthopedic/WB Precautions: Weight bearing or other precautions

Left Lower Extremity Weight Bearing Status: Non-weight bearing

Right Lower Extremity Weight Bearing Status: As tolerated

Left Upper Extremity Weight Bearing Status: As tolerated

Right Upper Extremity Weight Bearing Status: As tolerated

High Fall Risk per nursing assessment

Current Hospitalization:

Referring Provider: , MD

Date of Referral: 00/00/0000

Medical Diagnosis: Left below knee amputation

History of Present Illness: The following is a summary of the patient's history obtained via chart review: Joe Patient is a ** yo male who underwent left below knee amputation. He has been recovering well post op and his pain is controlled with his current pain regimen. Prior to surgical procedure, he has been on disability. He was admitted to inpatient rehabilitation.

Patient Active Problem List:

Elevated blood pressure reading without diagnosis of hypertension [796.2]

Dyslipidemia (high LDL; low HDL) [272.4]

GERD (gastroesophageal reflux disease) [530.81]

Debility [799.3]
Impaired mobility and ADLs [799.89]
DVT prophylaxis [V58.61]
Constipation [564.00]
Obesity [278.00]

Past Medical/Surgical History:

has a past medical history of Metatarsal fracture; Hypertension; and Hypercholesteremia

Subjective: Patient is agreeable to participation in the therapy session.

Patient participation is not impaired by pain. Pain Assessment

Pain Present: Yes

Current Pain Location: LLE (incision and occasional phantom pain)

Pain Severity: (1-2/10)

Pain Scale Used: Numeric Rating Scale (0-10)

Social History/Prior Level of Function:

Home Situation

Lives with: Parent/parents

Prior Level of Function: Requires some assistance from family

Prior Assistance Required: Home management; IADLs; Meal preparation; Shopping (Patient assists with stove top cooking)

Have you had any falls in the last year?: Yes

Describe: "just walking"

How many times have you fallen in the past 6 months?: 2 or more

Were you injured as a result?: No

Have you limited what you do because you are afraid of falling?: Yes

What is your occupation?: disabled

Permanent Residence: House, multiple story

Housing Accessibility: Stairs to entrance; Stairs between floors

Number of Levels in Dwelling: Multiple levels

Number of Steps to Enter Home: 12

Rails to Enter: 2

Number of Stairs between Levels: 6

Rails Between Levels: 1

Location of Toilet: Main level

Location of Tub/Shower: Tub/shower on main level

Location of Laundry: Not on main level

Assistive Gait Device (prior to admission): None

ADL Equipment (prior to admission): Transfer tub bench; Hand held shower hose; Wall mounted grab bar(s) for tub/shower; Non-skid tub mat for tub/shower; Reacher

Objective: Patient's medical condition is appropriate for Occupational Therapy intervention at this time.

Cognitive-Perceptual Examination:

Cognition and Interaction

Level of Consciousness: Alert

Orientation Level: Oriented X4

Affect: Appropriate to circumstances

Basic ADL and Instrumental ADL:

Basic ADL Skills

Method of ADL Assessment: Observation

Eating (includes set-up of food items): Modified Independence

Grooming - Level of assistance for retrieving items and grooming : Minimal/Contact guard assist (patient performs 75-99% of task) (standing at sink)

Grooming - Tasks performed: wash and dry hands; wash and dry face; brush teeth/dentures; apply deodorant

Grooming - Devices or equipment used: none

Upper body dressing (includes retrieving items): Minimal/Contact guard assist (patient performs 75-99% of task) (for retrieval of clothing)

Upper body dressing - Garments donned/doffed: pullover shirt

Lower body dressing (includes retrieving items): Minimal/Contact guard assist (patient performs 75-99% of task) (for retrieval, Max A with sock and shoe)

Lower body dressing - Garments donned/doffed: elastic waist pants/shorts; underwear (not a disposable brief); sock(s);lace-up shoe(s)

Upper and lower body dressing - Devices or equipment used: reacher

Toileting (clothing management and hygiene): Minimal/Contact guard assist (patient performs 75-99% of task)

Toileting - Devices or equipment used: grab bar(s); assistive gait device; toilet safety frame

Toilet transfer: Minimal/Contact guard assist (patient performs 75-99% of task)

Toilet transfer - Type of transfer: stand-pivot

Toilet transfer - Devices or equipment used: toilet safety frame

Assistive Gait Device: Walker, 4 wheeled; Gait Belt

Functional Mobility and Balance:

Balance: Some imbalance in standing on right lower extremity with one-hand support

Musculoskeletal Examination:Upper Extremity Range of Motion:

LEFT Upper Extremity: Active ROM: Within Normal Limits

RIGHT Upper Extremity: Active ROM: Within Normal Limits

Upper Extremity Strength:

LEFT Upper Extremity: 5/5

RIGHT Upper Extremity: 5/5

Neuromotor Examination:

Motor Tone and Spasticity

Motor Tone (General): No deficits observed

Movement Quality

Upper Extremity Movement Quality: No deficits observed

Visual Examination:

Vision Assessment

Subjective Report: No report of blurred vision, double vision or dizziness

Sensory Examination:

Sensory Assessment

GENERALIZED SENSATION: Intact light touch, pin prick, temperature (upper extremities)

Selected OT Assessments: initial evaluation, role of OT discussed, initiated bathroom equipment assessment and issue of home access form

Clinical Impression: Joe Patient is a ** year old male admitted for left below knee amputation. Patient currently presents with low activity tolerance, incision and phantom pain and decreased standing balance/tolerance due to recent amputation. Patient lives with his parents in a multi-level home with multiple steps to enter and to the main level. Patient will be required to negotiate stairs for safe discharge home. This environmental obstacle may be a barrier to his discharge plan. Patient states that his father has already purchased many of the bathroom equipment recommendations. Plan to address further with patient/family that obtained items are most appropriate for the patient. Patient will benefit from skilled OT services for increased activity tolerance, increased standing balance and tolerance, increased independence and safety with self-cares, IADLS and functional transfers.

Patient's potential for functional improvement is good. Factors favorable to functional recovery include high motivation level, good social support, prior level of function, age and agreeable to treatment. Factors which may impede functional recovery: past medical history/co-morbidities as listed above in active problem list and environmental barriers. Joe Patient required and benefited from skilled hands on and/or verbal instruction throughout the session. He requires ongoing skilled Occupational Therapy services, which may be delegated to an OTA, in order to regain function and achieve the goals listed below. Patient will benefit from interdisciplinary services to maximize independence and facilitate a safe discharge plan.

It is anticipated that he will require a length of stay of **10-14 days** pending the team discussion.

Therapy Diagnosis: Deconditioned, Impaired ADL and IADL, Impaired Functional Mobility and Weakness

Expected Disposition: Home (with parents) with Home exercise program

Goals:

Short Term Goals to be achieved within one week

ADL/DME GOALS:

The patient will complete grooming while standing at sink with supervision/set up

The patient will complete dressing and toileting with stand by assistance

The patient will complete toileting and toilet transfers with stand by assistance

The patient will complete bathing with minimal assistance

Upper Extremity/Physical Goals:

The patient will tolerate standing while performing one-handed activities for up to 10 minutes at a time with stand by assistance

The patient will tolerate upper extremity exercises for up to 20-30 minutes

Long Term Goals to be achieved by discharge from acute inpatient rehabilitation:

ADL/DME GOALS:

The patient will complete eating, grooming and upper body dressing with modified independence, using adaptive equipment as needed.

The patient will complete lower body dressing and toileting with modified independence, using adaptive equipment as needed.

The patient will perform toilet transfers with modified independence, using adaptive equipment as needed.

The patient will perform bathing and tub/shower transfers with supervision, set up or cues.

The patient/caregiver will demonstrate good understanding of home modifications and/or durable medical equipment recommended for home, in order to optimize independence and safety in self-care.

The patient will perform light household management tasks with supervision, set up or cues.

The patient will perform heavy household management tasks with maximum assistance.

The patient will perform meal preparation involving hot food and sharps with supervision, set up or cues.

UPPER EXTREMITY/PHYSICAL GOALS:

The patient/family will demonstrate follow through of home exercise program.

The patient will demonstrate incorporation of work simplification and/or energy conservation strategies during ADL/IADL activities.

Plan: Patient will require Occupational Therapy services through the length of inpatient stay.

Patient will be seen for 90 minutes of therapy 5 out of 7 days

Occupational Therapy Interventions:

Self-care/Home Management Training

Therapeutic Activities

Therapeutic Exercise

Wheelchair Management

Patient had input and is in agreement with goals and treatment plan.

Submitted by: Sue Smith , OT

**Sample Acute Rehabilitation Occupational Therapy Discharge Summary
Occupational Therapy Completion Note
Acute Inpatient Rehabilitation**

Patient: Joe Patient **MRN#:** 12345678
Unit: B4/4 Rm: B4/416

Precautions and Contraindications:
High Fall Risk per nursing assessment

Rehab Admission Date: 00/00/0000
Rehab Discharge Date: 00/00/0000

Past Medical History: history of Metatarsal fracture; Hypertension; and Hypercholesteremia.,

Current Hospitalization: Patient Active Problem List:
Elevated blood pressure reading without diagnosis of hypertension [796.2]
Dyslipidemia (high LDL; low HDL) [272.4]
GERD (gastroesophageal reflux disease) [530.81]
Debility [799.3]
Impaired mobility and ADLs [799.89]
DVT prophylaxis [V58.61]
Constipation [564.00]
Obesity [278.00]
Skin sore [709.9]
Phantom limb pain [353.6]
Phantom pain [353.6]

Basic ADL Status at Discharge:

Feeding: Modified Independence

Oral Facial Hygiene/Grooming: Modified Independence

Grooming - Tasks performed : brush or comb hair; apply deodorant

Grooming - Devices or equipment used: none

Upper Body Dressing: Modified Independence

Upper body dressing - Garments donned/doffed : pullover shirt

Lower Body Dressing: Modified Independence

Lower body dressing - Garments donned/doffed: elastic waist pants/shorts; underwear (not a disposable brief);sock(s);lace-up shoe(s)

Upper and lower body dressing - Devices or equipment used: none

Toileting: Modified Independence

Toileting - Devices or equipment used: grab bar(s);assistive gait device; toilet safety frame

Toilet Transfer: Modified Independence

Toilet transfer - Type of transfer: stand-pivot

Toilet transfer - Devices or equipment used : grab bar(s);assistive gait device; toilet safety frame

Bathing: Supervision/Setup

Bathing - Location performed: shower

Hygiene: CHG (Hibiclens) bath during therapy session

Bathing - Body parts washed/dried: entire body

Bathing - Devices or equipment used: long handled sponge; handheld showerhead; grab bar (s)

Tub/Shower Transfer: Supervision/Setup

Tub/shower transfer - Type of transfer: shower transfer; actual - wet; stand-pivot
Tub/shower transfer - Devices or equipment used: grab bar(s); other (commode chair in shower)
Functional Mobility During ADL: Supervision/set up
Assistive Gait Device : Walker, front wheeled

Instrumental ADL Status at Discharge:

Instrumental ADL

IADL Skills: Assessed

Emergency Communication: Patient is independent in telephone use to request assistance/call 911

Financial Management: Patient is independent with basic money management (completing simple money transaction, making change etc.)

Medication Management: Patient is modified independent managing medications

Home Management: Requires supervision with light household management tasks (dusting, folding laundry, washing dishes, etc)

Meal Preparation: Requires supervision for hot meal preparation or handling knives/sharp tools from wheelchair level. Limited tolerance to time up in standing with use of walker and assist to transport items if using walker.

Shopping: Requires supervision for shopping tasks, including ambulation or wheelchair propulsion in store, dynamic balance to retrieve items, proper selection of items and payment)

Driving: A driver readiness screen/evaluation is recommended before patient returns to driving

Supervision in the home: Patient may be left alone, with structure and caregiver check-ins by phone or in person

Supervision in the community: Patient requires close supervision at all times while in the community

Upper Body Physical Status at Discharge:

Upper Extremity Range of Motion:

LEFT Upper Extremity: Active ROM: {Within Normal Limits (HEP handout provided)

RIGHT Upper Extremity: Active ROM: {Within Normal Limits (HEP handout provided)

Upper Extremity Strength:

LEFT Upper Extremity: 5/5

RIGHT Upper Extremity: 5/5

Upper Extremity Range of Motion:

LEFT Upper Extremity: Active ROM: WFL overall

RIGHT Upper Extremity: Active ROM: WFL overall

Upper Extremity Strength:

LEFT Upper Extremity: WFL overall

RIGHT Upper Extremity: WFL overall

Cognitive Status at Discharge: Within normal limits

Vision/Visual Perception at Discharge: No blurred or double vision

Clinical Impression/Recommendations: Joe Patient is a ** year old male admitted to the acute rehabilitation unit following left below knee amputation. Joe Patient has demonstrated the ability to perform all household mobility tasks required to access his home safely and appropriately with use of a bariatric front wheeled walker. He will require a family member or friend to be present whenever negotiating the stairs, as they will have to carry the front wheeled walker up/down the stairs for him as he bumps up/down the stairs. He has met all of his long term goals and has displayed great motivation throughout treatment sessions. All recommended durable medical equipment has been purchased and obtained. Joe Patient is being discharged with a home exercise program to complete daily. Pt has great family support and is highly motivated. He has great support and it is anticipated he will continue to increase his independence with strength and speed for self-cares and IADL's.

Long Term Goals: ADL/DME GOALS:

The patient will complete eating, grooming and upper body dressing with modified independence, using adaptive equipment as needed. met

The patient will complete lower body dressing and toileting with modified independence, using adaptive equipment as needed. met

The patient will perform toilet transfers with modified independence, using adaptive equipment as needed. met

The patient will perform bathing and tub/shower transfers with supervision, set up or cues. met

The patient/caregiver will demonstrate good understanding of home modifications and/or durable medical equipment recommended for home, in order to optimize independence and safety in self-care. Met

The patient will perform light household management tasks with supervision, set up or cues. met

The patient will perform heavy household management tasks with maximum assistance. Met

The patient will perform meal preparation involving hot food and sharps with supervision, set up or cues. Met from wheelchair level.

UPPER EXTREMITY/PHYSICAL GOALS:

The patient/family will demonstrate follow through of home exercise program. Met

The patient will demonstrate incorporation of work simplification and/or energy conservation strategies during ADL/IADL activities. Met

Reason for Completion of Occupational Therapy: Discharged from facility, patient had been progressing toward goals.

Patient and Family/Caregiver Education: Handouts/resources were provided to patient.

Discharge disposition: Home with Home exercise program

Submitted by: Susie Smith OT

**Occupational Therapy Rehabilitation Department
Home Access Questionnaire**

Patient's Name: _____ Date: _____
Therapist's Name: _____
Therapist Phone #: _____

HOME ASSESSMENT:

The information below is being requested about your home so that we may adequately plan for your discharge. This will allow us to recommend assistive equipment if necessary and offer suggestions for any possible home modifications to increase your safety.

Types of Living Situation

Ranch Style _____ Condo _____ Apartment _____
Two-story _____ Multilevel _____

Entrance

How many steps into the entrance _____ Width of this entrance _____
What is height of each step _____ Are hand rails installed _____
If home is multilevel please state number of steps to areas used _____

Bedroom

Is there a bedroom on the main level yes _____ no _____ Width of entrance _____
What is the height of bed, floor to top of mattress _____

Bathroom

Is there a bathroom on the main level yes _____ no _____
Full Bath _____ ½ Bath _____
Door Width _____
Overall length x width of bathroom _____

Sink: Height _____

Is there clearance beneath the sink? yes _____ no _____

Toilet: Height _____

Are there safety rails present yes _____ no _____

Tub: Is it a combination tub/shower _____ tub _____ shower _____

Are there grab bars installed yes _____ no _____

Fiberglass _____ tile enclosure _____

Shower curtain _____ doors _____

If you have shower doors what is the width of the opening _____

What is the height of the side of the tub _____

If a shower stall what is the height of shower lip _____

What is the size of shower floor _____

Do you have access to a raised toilet seat _____ bath bench _____ commode _____

Would you like information on ramp specifications? _____

**Occupational Therapy Rehabilitation Department
Home Access Questionnaire**

BATHROOM LAYOUT

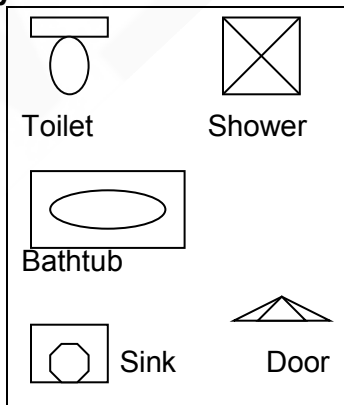
Please draw the layout of your bathroom using the diagram available.

Bathroom 1

Bathroom 2

The image shows two large, empty rectangular boxes side-by-side, intended for drawing the layout of Bathroom 1 and Bathroom 2. A faint watermark reading 'UNIVERSITY OF WISCONSIN' is visible diagonally across the page.

Key



NOTES:

Sample Letter of Medical Necessity for Wheelchair

CERTIFICATE OF MEDICAL NECESSITY/VENDOR EQUIPMENT PRESCRIPTION

Patient: Test Patient

Date of Birth: 3/30/1954

Medical Record Number: 2935710

Wt Readings from Last 1 Encounters:

02/24/14	82.237 kg (181 lb 4.8 oz)
----------	---------------------------

Ht Readings from Last 1 Encounters:

02/17/14	1.676 m (5' 6")
----------	-----------------

Diagnosis: Foot infection [686.9] s/p right below-knee amputation

History of Present Illness: The following information was obtained from the medical record: Patient is a ** year old male Post OP Day #8, S/P R ankle guillotine amputation, now POD#5 s/p definitive BKA right leg for a right plantar abscess and streaking cellulitis. Pt with history of left BKA.

Past Medical/Surgical History: Patient has a past medical history of Diabetes mellitus, type 2; Diabetic retinopathy; Renal failure; Peritoneal dialysis; Hypertension; Cataract; Diabetic neuropathy; Diabetic nephropathy; Hyperkalemia; deceased donor kidney transplant; Diabetic foot; Steroid long-term use; PDR (proliferative diabetic retinopathy); Osteoporosis; Status post amputation of leg; Diabetic Foot - RLE; and Atherosclerosis of extremity artery with intermittent claudication. He also has no past medical history of History of anesthesia complications or Family history of anesthesia complication., has past surgical history that includes unlisted procedure femur/knee; eye service or procedure; OR - Peritoneal Catheter Placement; renal transplant; Stent Removal; amputation; below knee amputation left; cataract removal; and amputation.

Social History: Pt lives with his wife in a home with all needs on main level. Pt has 1 step to enter (over threshold). Pt has a walk-in shower with seat. Pt has a left prosthetic (and recently ordered a new one through Prosthetics Labs). Pt has a front wheeled walker, and "an old, hand-me-down" manual wheelchair

Objective-

Cognition and Interaction: Pt is alert and oriented x 4.

Musculoskeletal Exam Upper Extremities: WFL B UE's

Musculoskeletal Exam Lower Extremities: B BKA, WFL at hips and knees.

Functional Mobility:

Supine to sit: independent

Sit to stand: modified independent with left prosthetic and front wheeled walker

Stand Pivot Transfer: modified independent with left prosthetic and front wheeled walker

Ambulation: Pt requires contact-guard assist to safely ambulate 150 feet with front wheeled walker hopping on left prosthetic. Fatigue during ambulation, requiring several rest breaks.

Recommended Equipment:**High Strength Lightweight Wheelchair, 18x16:**

Patient is unable to ambulate to accomplish his mobility related ADL's. He does not have the ability to stand to accomplish these activities. He is unable to use any ambulatory assistive device to accomplish these activities. He is able to use a high strength lightweight manual wheelchair sufficiently to accomplish these types of tasks while in a seated position. A standard wheelchair and lightweight wheelchair cannot be used for these activities because they are not adjustable enough to accommodate his needs and are too heavy. The weight of the chair combined with his body weight exceeds his ability to propel himself on a daily basis without limiting his independence and increasing his risk for overuse injuries to his shoulders as he will be using the chair for several hours each day. He requires a lower seat to floor height and the seat will need to be sloped to promote upright posture. These accommodations cannot be made in a less adjustable chair. A high strength lightweight wheelchair will enable patient to be able to better accomplish his mobility related ADL's.

Adjustable Tension Upholstery:

This back upholstery can be adjusted to provide correct postural support for patient while seated in the manual wheelchair. This back is adjusted with 1 inch Velcro tension straps inside the upholstery. This will allow tension to be applied in the lumbar area to provide support for corrected posture in sitting. The remaining straps can be adjusted to a looser setting to accommodate the shape of the trunk. This item is required because standard upholstery will not provide enough support for his low back or enough postural support to prevent low back pain and sliding out of the chair. Patient requires additional support while seated. The adjustable tension upholstery is the least costly alternative and adds the least amount of weight to the wheelchair.

Adjustable Height Desk Armrests:

The height adjustable feature is necessary to accommodate and support his upper arm and shoulder to improve spinal alignment and prevent trunk flexion caused by the weight of his arm and shoulder girdle. The height adjustable feature is also necessary for approximation to table tops and work surfaces. Standard height armrests are not able to be adjusted to accommodate patient.

Right Residual Limb Support:

Patient has a below knee amputation. This device provides a surface to support his residual limb. This device will protect and elevate the limb in knee extension preventing hamstring tightness and dependent edema. He will be less likely to develop contractures and swelling of his residual limb with this passive support.

General Use Seat Cushion:

This basic foam curve cushion is required to alleviate pressure on patient's seated surface. He sits for periods greater than 2 hours in his wheelchair which puts him at risk for skin breakdown and discomfort while sitting in his chair.

Anti-Tippers:

Anti-tippers are required to prevent the wheelchair from tipping over backwards. This is especially needed with ascending ramps, due to uncontrolled extensor tone, due to behavior issues, due to uncontrolled sit to/from stand and due to the weight of the oxygen tank mounted to the rear of the wheelchair.

Equipment Justification: Patient has a mobility limitation that significantly impairs his ability to participate in mobility-related activities of daily living (MRADLs). Patient would be unable to independently prepare meals or transport them to the table in order to eat independently, would be unable to stand and reach into closet for clothing in order to dress independently, and would be unable to safely access the bathroom for independent toileting and bathing. Patient is unable to safely ambulate without assistance of one due to his diagnosis of right below-knee amputation, with history of left below-knee amputation. Patient's mobility limitations are not resolved by the use of an appropriately fitted cane or walker. His home is accessible and has adequate maneuvering space and access between rooms to use the recommended equipment.

Without the requested equipment he would be unable to accomplish the MRADL entirely, would be at heightened risk of morbidity or mortality from attempting to perform the MRADL, or would be unable to complete the MRADL within a reasonable time frame.

DURATION OF NEED FOR EQUIPMENT: Indefinite

This equipment is medically necessary to provide the greatest degree of safety and independence in the home and community settings. If further clarification is desired, please do not hesitate to call (608) 263-8060. Thank you for your attention to fund this medically necessary equipment.

Cindy M Smith, PT - 2/24/2014 - 8:35 AM

Dr. John Johnson, MD

Sample Outpatient Physical Therapy Evaluation Note

MIDDLETON REHAB NEURO

6630 University Ave

Middleton, WI 53562

Phone 608-263-8412

Patient M, A L

SEX: F

UWH#: 123456

DOB: 01/01/1980

DATE OF SERVICE: 07/01/2016

INITIAL PHYSICAL THERAPY EVALUATION

MEDICAL DIAGNOSIS: Left above-knee amputation performed on April 01, 2016, by Dr. Vascular.

PHYSICAL THERAPY DIAGNOSES: Difficulty in walking and muscular weakness.

REFERRING PHYSICIAN: Dr. Rehab

REASON FOR REFERRAL: The patient is to be seen to progress towards prosthetic ambulation as her wound heals.

TIME OF EVALUATION: The patient was seen for 60 minutes of evaluation.

SUBJECTIVE: The patient arrived in her manual wheelchair with her roommate who provided transportation and assist with management of her manual wheelchair in and out of the vehicle. She relates that currently she is rarely at home alone during the day or night.

The patient was able to independently self-propel the manual wheelchair from the waiting room into the physical therapy gym primarily using her BUE.

HISTORY:

History of present condition: The following information was obtained through the medical record. Patient is a 42-year-old female with a remote history of lymphoma. She presented with upper respiratory symptoms, septic shock and then developed acute respiratory failure secondary to MSSA and influenza B pneumonia.

Hospital course was complicated by Pseudomonas following a trach placement, left lower extremity ischemia requiring an above-knee amputation on 04-01-16, onset of atrial fib and cardiomyopathy likely secondary to sepsis, severe hypoxia treated with ECMO and AKI and ATN requiring hemodialysis.

PAST MEDICAL/SURGICAL HISTORY: The patient has a remote history of lymphoma and a history of migraines.

No past surgical history is on file.

PAST TREATMENTS: The patient was followed by Physical and Occupational Therapy while hospitalized.

PATIENT CONCERNS/GOALS: The patient reports her primary concerns currently include her nerve type pain along the lateral aspect of the left lower extremity and at times in the lower aspect of her buttocks, decreased strength, slow wound healing of the left residual limb and general deconditioning.

The patient reports that her goals include using a prosthesis appropriately, learning to walk efficiently with a reasonable gait pattern, navigating varying terrains, as well as negotiating stairs.

SOCIAL HISTORY: The patient resides with her roommate in a multiple level condo with 2 steps to enter the home without railings and 14 stairs between levels with one railing.

WORK STATUS: The patient reports that she works for a nonprofit agency in the media and relations department. She states some travel will be required with this newly developed position but that would not be expected for a few months. She states that she is able to do a fair amount of computer work from home. The patient reports that her roommate's position requires travel on a frequent basis.

PRIOR FUNCTIONAL LEVEL: The patient was independent in performance of all activities of daily living, as well as her MRADLs, worked a full-time schedule and traveled frequently.

FUNCTIONAL ACTIVITIES:

Bed mobility: The patient demonstrates slightly slowed performance of basic bed mobility skills that included sitting to and from supine, alternate side lying, assuming a prone position and scooting in sitting and supine.

Transfers: The patient is able to perform sit to stand with use of her bilateral upper extremities for push off and the right lower extremity. The patient once in standing is able to transfer to the left or right with preference to use her upper extremities for support to improve ease and safety.

Balance: The patient reports that she has not had any falls since her discharge to home. Patient demonstrates intact sitting balance tolerating shifting of weight in all directions. With standing the patient requires at least single UE support.

Gait: The patient is currently using a front-wheeled walker for ambulation. She is able to ambulate short indoor and outdoor distances tolerating at least 100 feet. With stairs the patient is ascending using an axillary crutch and one railing. To descend the stairs, she currently is performing this in a seated position 'bumping' down the stairs, as she has concerns with her ability to negotiate steps safely and securely.

IMPAIRMENTS:

Strength:

Muscle action	RLE	LLE
Hip flexion	4 +	3+

Hip abduction	4-	3+
Hip extension	4-	3+
Knee extension	5	NA
Knee flexion	4+	NA
Ankle dorsiflexion	4+	NA
Ankle plantarflexion	4	NA

Range of motion: The patient demonstrates full active range of motion at the hips and right knee in all planes.

Skin: All sutures/staples have been removed. Good approximation of the suture line is noted except where the wound presents. The open area demonstrates on the suture line slightly lateral to midline. She is currently packing this as instructed by Vascular Surgery. She also demonstrates a small amount of fairly clear exudate at midpoint of the distal end of the left limb. She covers both of these area with a gauze bandage. Residual limb presents with good color. Skin is warm. Several small patches of dried and flaky skin present on the distal aspect of the left limb.

Scar mobility minimally diminished.

Limb presents moderately long in length and is cylindrical in shape

Edema: Firmness to palpation noted in the distal one third of the residual limb.

Endurance: The patient reports that she is aware that her tolerance to activity is quite limited at this time related to her recent illness. She is working to increase her tolerance to activity, but finds this to be progressing quite slowly.

Cognition: The patient was able to remain on task and asked and answered questions appropriately. It appears her long-and short-term memory are intact.

Wheelchair propulsion: The patient is easily able to propel her manual wheelchair over indoor level surfaces both on our tile as well as on the thin carpeting. The patient states she has no issues at home, with use of the wheelchair. She does report that for longer distances propelling the wheelchair is quite fatiguing and occasionally requests assistance.

Pain: The patient is reporting ongoing pain in the left residual limb. The pain is primarily located on the lateral aspect of the residual limb. She feels that pain is at its lowest point in the morning approaching but not at a 0-1/10. The pain does increase up to a 5 to 6/10 level at times. She reports that she is not certain that the current medication is helping with her pain but is taking this as instructed.

EQUIPMENT: The patient has a Patriot manual wheelchair and a Comfort Company basic seat cushion. She has received this with assistance through National Seating and Mobility. The patient has a front-wheeled walker and axillary crutches at home as well.

Home Exercise Program: The patient reports that she has misplaced the exercise program issued to her while an inpatient on rehab. She performs the exercises that she remembers

which includes hip abduction in side lying, lying prone performing hip extension, and use of weights for strengthening of her bilateral upper extremities.

The patient was trained in 3 new exercises and these include supine bridging with use of the right foot for weightbearing and use of the left residual limb up to parallel with the right. Once in the up position, the patient is to rotate the left pelvis upwards towards the ceiling without losing alignment of the right lower extremity to encourage pelvis protraction. The other exercises include standing strengthening of the hip abductors and extensors on the left with use of the TheraBand for resistance. Currently, she cannot perform this exercise on the right, as she does not yet have a prosthesis to allow static standing.

Patient Instructions: The patient is encouraged to perform her home exercise program: 1 to 2 times per day and utilize the wheelchair for propelling within her tolerance as well as walking with use of the front-wheeled walker to build endurance and strength. Patient is to handle her residual limb with clean hands to provide desensitization. She is to closely monitor her skin and care for it as instructed including the open area. The small areas of dried skin should be treated with small amount of lotion rubbed into a washcloth that is used to gently scuff off the dried skin avoiding any of the open areas. She is to cease use of lotion once the health of the skin is normal. She is to continue use of the stump shrinker 23 out of 24 hours/day until she is ready to transition to a gel sleeve.

CLINICAL OBSERVATION: The patient demonstrates signs and symptoms consistent with a left above knee amputation with an ongoing, non-healing wound on the left lateral aspect of the suture line, as well as some drainage at the distal end of the left lower extremity. She is followed by Vascular Surgery regarding these aspects. The patient continues to demonstrate some significant decrease in her LE muscle strength that will impact her use of the prosthesis for gaiting. The patient has nerve type pain on the left lateral aspect of the left lower extremity that may interfere with her ability to tolerate use of a prosthesis. Her tolerance to activity is compromised. She is scheduled in Prosthetic clinic on 7-6-16 and will discuss this pain with Dr. Rehabilitation.

A delay in fitting and use of a prosthesis is anticipated related to the open wounds.

The nerve pain is concerning and will likely be addressed by Dr. Rehabilitation in clinic.

Based on the patient's diagnosis and potential progress modifiers, treatment with a customized home exercise program in Physical Therapy is appropriate at this time.

The patient demonstrates a willingness to actively participate in her rehabilitation and demonstrates a good understanding of her role.

GOALS:

1. The patient's home exercise program will be reviewed and revised as appropriate to facilitate improvement in strength, balance and endurance in preparation for prosthetic use for gaiting.
2. The patient will correctly and consistently perform her home exercise program on a 1 to 2 time per day basis using the written/pictorial instructions.

3. The patient will continue to ambulate short distances with use of the front-wheeled walker or axillary crutches to assist with building endurance.
4. Patient is to continue to self-propel the manual wheelchair to work on upper extremity strengthening and improving endurance.
5. The patient will demonstrate an improvement in left hip extension and abduction by one-half to 1 grade using the manual muscle test to allow improved ambulation performance with the prosthesis.
6. The residual limb skin will demonstrate good hydration to ensure tolerance to use of a prosthesis with use of lotion only as instructed.
7. The surgical suture line will demonstrate complete healing to ensure tolerance to use of the prosthesis.
8. The patient's surgical suture line will demonstrate normal skin mobility to better ensure tolerance to use of the prosthesis.
9. The patient will 'handle' the residual limb with clean hands at least twice daily to desensitize the limb in preparation for prosthetic use to ensure tolerance to use of the prosthesis.

Additional goals will be developed as further testing is completed and she once she receives her roll-on sleeve and prosthetic socket.

ADDITIONAL TESTING: Once the prosthesis is in use testing will likely include the Timed Get Up and Go test, 2 or 6-minute Walk Test, Functional Reach Test, 10 m Walk Test, Dynamic Gait index or Functional Gait Assessment, Berg Balance Scale score are likely to establish baseline and allow comparison of performance and assess progression with use of the prosthesis. Use of the Sensory Organization Test may be utilized as well as videoing of gaiting.

TREATMENT STRATEGIES: The primary strategy will be use of prosthetic training, though today evaluation was performed and treatment strategies will be dependent on her wound status. Treatment with physical performance testing, therapeutic exercise, therapeutic activity, manual therapy, and gait training may be possible.

Contextual factors: The following factors that may influence her rehabilitation include: Positive factors include motivational levels, social support, and prior level of function. The negative factors would include her wound and ongoing left residual limb pain.

PLAN: The patient will be seen in approximately 3 weeks to modify and upgrade her home exercise program. We will then make decisions as to her return to therapy date depending on how her wound is healing and when she might be able to utilize a prosthesis. The home exercise program needs to be upgraded, but she is able to perform the current exercises independently at home without physical therapy intervention.

The findings, goals, and treatment plan were discussed with the patient, and her father was present as well. They agreed to the above.

Submitted by: Cindy Johnson, PT



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