The Multidisciplinary Team

A multi-disciplinary team (MDT) provides a coordinated approach to comprehensive care. Members of the team from various areas of specialty provide input based on areas of expertise to ensure all aspects of care are considered. The ideal team should, at the very least, consist of a physician (preferably a physical medicine and rehabilitation physician), a physical therapist, an occupational therapist and a prosthetist. Additionally, equally valuable clinicians to include are nurses, social workers, recreational therapists, rehabilitation psychologists, and surgeons.

	Pre-Amputation: From initial discussion of amputation to admission for amputation	**Peri-Operative: From hospitalization admission to discharge to rehabilitation setting**	**Post Amputation: From acute hospitalization through initial rehab goals**	**Prosthetic Training: Associated with prosthesis related functional goals**	**Lifelong Care: From time of discharge from therapy services through to end of life**
Focus Areas	MDT team/PM&R consult Functional implications of amputation Home safety evaluation Psychosocial wellbeing	Pain management Residual limb protection and compression Contralateral foot/limb management	Promote highest level of independence with and without prosthesis for all patients. Mobility, ADL, community access goals without a prosthesis (all patients) Pre-prosthesis training (if indicated)	Prosthesis management (donning, doffing, sock ply management, etc.) Gait and other mobility training ADL training Floor recovery techniques	Routine amputation specialty team clinic • Prosthesis fit and function • Durable medical equipment (DME) needs • Functional goals • Contralateral limb/ foot Psychosocial wellbeing

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1. Pain Management	Assess for and manage existing pain Develop a perioperative pain management plan	Assess and treat residual limb pain (RLP), phantom limb pain (PLP), and phantom limb sensation (PLS) Provide treatment plan for RLP, PLP, PLS, including: patient education, narcotic use, regional anesthesia, psychosocial interventions, nonpharmacologic interventions (i.e., exercises, soft tissue mobilization, tapping, residual limb compression, etc.)	Assess and treat residual limb pain (RLP), phantom limb pain (PLP), and phantom limb sensation (PLS) Provide treatment plan for RLP, PLP, PLS, including: patient education, wean use, psychosocial interventions (i.e., exercises, soft tissue mobilization, tapping, residual limb compression, etc.), Graded Motor Imagery (GMI)	Assess and treat residual limb pain (RLP), phantom limb pain (PLP), and phantom limb sensation (PLS) Provide treatment plan for RLP, PLP, PLS, including: patient education, wean narcotic use, psychosocial interventions, nonpharmacologic interventions (i.e., exercises, massage, etc.), Prosthetic sock ply management, Graded Motor Imagery (GMI)	Reassess and adjust treatment for residual limb pain (RLP), phantom limb pain (PLP), and phantom limb sensation (PLS) Assess and treat contributing musculoskeletal problems

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2. Medical Management					
2.1. Comorbid and Concurrent conditions	Assess medical risk factors for poor wound healing or reamputation (e.g., endstage renal disease on hemodialysis, etc.) Assess medical risk factors for poor functional prognosis (e.g., end-stage renal disease on hemodialysis, tobacco use, diabetes, etc.) Evaluate and consider other medical problems affecting function (e.g., polytrauma) Initiate medical interventions, specialty consultations, and education as needed Assess sensation of all extremities	Complete initial assessment of medical comorbidities and consult experts as appropriate, especially if not addressed preoperatively Initiate medical interventions and education as needed Consider concurrent injuries or conditions that may affect success in rehabilitation	Continue medical interventions and education as needed Evaluate and consider other medical problems affecting function (e.g., polytrauma)	Assess changes in medical comorbidities, and perform interventions and education as needed Assess and optimize medical comorbidities affecting residual limb volume and health	Address musculoskeletal problems and other comorbidities that impact function Reconcile pharmacologic medication list focusing on side effects that may negatively impact function with or without a prosthesis Reinforce preventative care and whole health Refer to specialty care as needed to address comorbidities

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2.2 Contralateral Lower Limb Management	Contralateral foot/limb assessment Referral to specialists for routine preventive care or evaluation/ management of new concerns Prescribe appropriate footwear and orthoses Manage comorbidities affecting foot/limb health and footwear/orthosis fit Patient education about foot/limb protection and care	Contralateral foot/limb risk assessment and regular skin checks Contralateral foot/limb protection while supine, seated, or weight bearing Referral to specialists as indicated Prescribe appropriate footwear and orthoses Patient education about foot/limb protection and care	Continued foot/limb evaluation and risk assessment Contralateral foot/limb protection while supine, seated, or weight bearing Referral to specialists as indicated Assess footwear or orthoses as appropriate for functional progression Patient education about foot/limb protection and care	Continued foot/limb evaluation and risk assessment Contralateral foot/limb protection while supine, seated, or weight bearing Referral to specialists as indicated Assess footwear or orthoses as appropriate for functional progression Patient education about foot/limb protection and care	Regular foot/limb risk assessment and management; referral to specialists as appropriate Patient education about foot/limb protection and care

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3. Behavioral Health and Psychosocial Function	Perform psychosocial assessment Perform cognitive assessment (may inform prosthesis candidacy, return to driving, etc. Offer counseling for adjustment and other concerns Provide resources based on needs Consider pharmacologic interventions for management of psychological symptoms or brain injury/dysfunction Offer peer support services Provide education and information on advance care planning	Evaluate and address psychosocial needs Offer counseling for adjustment and other concerns Consider pharmacologic interventions for management of psychological symptoms or brain injury/dysfunction Offer peer support services Provide education and information on advanced care planning	Continue psychosocial evaluation and address psychosocial needs Complete cognitive assessment (may inform prosthesis candidacy, return to driving, etc.) Offer counseling for adjustment and other concerns Consider pharmacologic interventions for management of psychological symptoms or brain injury/dysfunction Offer peer support services Provide education and information on advance care planning	Address psychosocial needs and concerns Provide resources (e.g., transportation, clothing allowance, support groups, community resources) Offer counseling for adjustment and other concerns Consider pharmacologic interventions for management of psychological symptoms or brain injury/dysfunction Offer peer support services Provide education and information on advance care planning	Offer counseling for adjustment and other concerns Provide outreach follow-up Provide resources (e.g., transportation, clothing allowance, support groups, community resources) Consider pharmacologic interventions for management of psychological symptoms or brain injury/dysfunction Offer peer support services Provide education and information on advance care planning

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4. Residual Limb Management	Optimize limb prior to surgery by addressing skin issues, strength limitations, range of motion limitations, etc. Assess functional and prosthetic implications of residual limb length and amputation level Assess sensation of the affected limb.	Local wound care and advanced wound care specialist for surgical incision and other wounds (e.g., negative pressure wound therapy). For complex wound healing or other vascular challenges, recommend considering a WOCN Consult predischarge- in collaboration with surgeon's recs Monitor the surgical wound for signs and symptoms of ischemia or infection Control edema and shape residual limb (e.g., elastic bandage wrapping or shrinker application) Protect residuum using rigid dressings (e.g., rigid cast, rigid removable device, etc.) for transtibial amputations Consider for transfemoral amputations. Promote ROM and strengthening of proximal joints and muscles	Continue local wound care, limb shaping, edema management, and protection of the residuum Patient education on residual limb management and desensitization techniques Advance ROM and strengthening of proximal joints and muscles Consider longer term residual limb protection for those with higher fall risk or skin risk (when not using prosthesis or if not a prosthesis candidate)	Reinforce use of residual limb compression (e.g., shrinker) when out of prosthesis Progressive prosthesis wear schedule Consider early prosthesis use only during therapy if there are safety concerns Educate on skin checks and pressure points, skin hygiene, sock ply management, and wear schedule	Assess residual limb condition and intervene as needed Re-emphasize importance of skin checks and pressure points, skin hygiene and sock ply management

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5. Patient Education	• Pain management • Manage expectations regarding pain postamputation (e.g., May not be resolved w/ amputation) • Patient safety/fall precautions • Prevention of complications • Procedural/ Recovery Issues • Level of amputation • Prosthetic options • Post-operative dressing • Sequence of amputation care • Equipment Role of the multidisciplinary team and members • Psychosocial anticipatory guidance • Expected functional outcomes	• Positioning • Rehabilitation process • Pain management • Residual limb care • Edema control ACE wrapping or shrinker use • Wound care • Prosthetic timeline • Equipment needs • Coping methods • Prevention of complications • Contracture prevention • Safety and falls prevention	• Positioning • Rehabilitation process • Pain management • Residual limb care • Edema control • Application of shrinker • Prosthetic timeline • Equipment needs • Coping methods • Prevention of complications • Continuum of care/annual follow-up • Contracture prevention • Safety and falls prevention	• Prosthetic goals and expectation management • Pain management • Residual limb care, including • edema management • Energy expenditure • Prosthetic education • Donning & doffing • Care of prosthesis • Skin integrity • Sock management • Equipment needs • Coping methods • Weight Management • Contracture prevention • Safety and falls prevention	• Pain management • Equipment needs • Prosthetic goals and expectation management • Prevention of complications • Weight management • Safety and falls prevention • Continuum of care/Annual follow-up

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6. Prosthesis Management	Patient visit / education Preliminary assessment of prosthesis candidacy by amputation specialty MDT Provide patient and family education addressing expectations, timeline and anticipated goals	Limb care (see residual limb management) Management of postoperative dressing: • Casting changes • Regular fit checks of rigid removable dressing (RRD) • Soft dressing	Re-assessment of prosthesis candidacy by amputation specialty MDT Discussion of realistic goals w/ prosthetic use Generate initial prosthetic prescription (if indicated), if cleared for weightbearing/ prothesis fitting by surgical team. Develop and train for safe back-up or alternative mobility and ADL strategies when not using prosthesis (all patients)	Prosthetic fabrication, fitting, alignment, and modification Teach donning/doffing of prosthetic system Prosthetic gait and ADL training Prosthesis management training (e.g., sock ply management, volume management, skin checks) Suspension and interface training/ management Educate on prosthesis maintenance and cleaning (e.g., how to clean liners and sleeves)	Prosthetic fabrication, fitting, alignment and modifications Re-assess prosthesis prescription and functional goals Annual visits for assessment of: • Components • Supplies • Socket fit • Activity specific components • Assistive device for prosthetic ambulation

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7. Discharge Planning	Discuss and educate the patient and family on potential: • DME needs • Home modifications • Rehabilitation setting options (IRF, SNF, home with home care, home with outpatient care) • Timeline of phases of rehabilitation • Anticipated lifelong care needs	Determine appropriate rehabilitation setting (IRF, SNF, home w/ home care, home w/ outpatient care) Determine caregiver and social support system Initiate discharge care education Arrange peer support/ visitation with patient	Develop discharge plan for intermediate care setting, independent living, etc. Determine caregiver and social support system Continue discharge care education Arrange peer support/ visitation with patient Schedule follow up with multidisciplinary team MDT to determine readiness and timeline for prosthesis	Establish goals for initial prosthetic training Schedule follow up with multidisciplinary team Schedule follow up with prosthetist. Re-engage with PT and OT as goals progress and change	Implement annual follow-up schedule to address future prosthesis adjustments and replacements Reevaluate goals and functional status and re-engage in PT and OT

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8. Rehabilitation					
8.1 Range of Motion	Assess ROM in all joints proximal to planned/possible amputation and on contralateral side Treat identified contractures Educate on contracture prevention and initiate full body ROM home exercise program	Initiate full body ROM home exercise program Educate on proper positioning to prevent contractures of hip, knee and ankle contractures	Progress full body ROM home exercise program to include lengthening of specific muscle groups (hip and knee flexors)	Advance stretching program Maximize ROM for prosthetic fit and training and include in home exercise program	Readdress ROM of LE and review home stretching program, if needed
8.2 Strengthening	Assess for preoperative strength deficits of UE and LE Create a home exercise program to strengthen and optimize UE and LE Addressing deficiencies and maximize above ROM strength, balance, etc.	Initiate strengthening program to optimize safe functional mobility and in preparation for potential prosthesis use. Target areas prone to overuse injuries (e.g., shoulders, low back, etc.).	Continue strengthening program to optimize safe functional mobility and in preparation for potential prosthesis use (specifically hip and knee musculature). Target areas for strengthening to reduce overuse injuries (e.g., shoulders, low back, etc.). Integrate trunk and core stabilization exercises. Create HEP and provide exercise supplies	Progress therapeutic exercise program for all extremities Provide home exercise program when discharged from therapy	Educate on maintenance of strength for long-term activity

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8.3 Cardiovascular	Assess current cardiovascular (CV) fitness for increased energy requirement for prosthetic use Educate regarding increased energy demand in walking with a prosthesis	Incorporate a CV component into the therapy program Reinforce cardiac precautions as determined by cardiology team (heart rate, blood pressure, perceived exertion scales)	Advance CV aspect of program to meet needs of patient Maintain cardiac precautions Encourage reducing risk factors	Increase ambulation endurance to reach community distances and integrate into home exercise program Maintain cardiac precautions Encourage reducing risk factors	Encourage cardiology and primary care follow up for continuous monitoring of CV fitness Encourage reduction of CV risk factors
8.4 Balance	Assess preoperative balance considering central and/or peripheral neurologic conditions	Initiate a balance progression in static and dynamic sitting and standing	Progress sitting balance and single limb standing balance	Advance balance activities to equalize weight over bilateral lower extremities Challenge balance with advanced activities	Reassess balance as it relates to gait

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8.5 Mobility	Assess current mobility and use of assistive devices and/or DME	Establish upright tolerance Initiate and progress to independent bed mobility, rolling, and transfers Initiate wheelchair mobility Progress to single limb gait in parallel bars	Progress single limb gait from parallel bars to use of assistive device Progress to independent wheelchair mobility Seating and Mobility evaluation for appropriate custom wheelchair Floor recovery strategies	Increase symmetry of weightbearing, maximize weight shift, equalize step length, facilitate trunk rotation, teach reciprocal gait pattern Progress out of parallel bars to use of appropriate assistive device Progress to advanced skills such as climbing/descending stairs, curbs, ramps and gait on uneven terrain Increase ambulation endurance to community distances	Address changes to medical status affecting prosthetic use (e.g., diabetes, heart disease, limb and goals) Reassess gait and retrain gait as necessary

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9. Functional Activities and ADLs	Assess preoperative activity level and independence with basic ADLs and IADLs to help establish post operative goals and expectations	Promote functional independence with basic ADLs such as eating, dressing, grooming, bathing, toileting. Ensure patient safety with basic transfers, including toilet/bedside commode, wheelchair, bedside chair, car transfers,etc.	Educate on adaptive techniques for dressing, bathing, grooming, and toileting without a prosthesis. Assess for DME needs to promote functional independence with ADLs Initiate wheelchair management and safety education. Educate patient and family on understanding that non-prosthesis independence is an important set of functional goals	Instruct in proper care of prosthesis, suspension system, skin management, and donning/doffing of prosthesis. Promote independence with functional transfers, ADLs, and IADLs (laundry, cooking, house management, etc.) with and without prosthesis Educate on fall recovery and functional transitions from floor	Reassess functional status and educate on adaptive strategies to promote independence as status changes. Educate patient and caregiver on energy conservation, injury prevention, home safety, and DME needs as patient status changes.

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10. Community					
10.1 Vocation and recreation	Obtain preoperative vocation and recreational interests	Offer and promote trained peer visitation	Initiate outings into the community without prosthesis Train in use of public transportation without prosthesis, if appropriate Complete vocational rehabilitation evaluation Complete recreational training activities without prosthesis	Initiate vocational and recreational activities with a prosthesis Train in the use of public transportation with a prosthesis if appropriate	Provide education on opportunities and precautions for long term sport specific, recreation skills of resources, and prostheses or assistive devices that are available Provide counseling and contact information regarding opportunities in sports and recreation (Paralympics, golfing, fishing, hunting, etc.)
10.2 Home Evaluation	Determine patient's current home set-up, available durable medical equipment, and potential safety concerns. Educate on potential home modifications to promote functional independence and safety.	Assess patient's home for accessibility and safety if not already completed. Provide information on home modifications	Assess patient's home for accessibility and safety if not already completed	Assess prosthetics needs that may improve home safety (e.g., shower leg, shorties)	Continue assessment of DME needs to ensure home accessibility and safety as functional status changes

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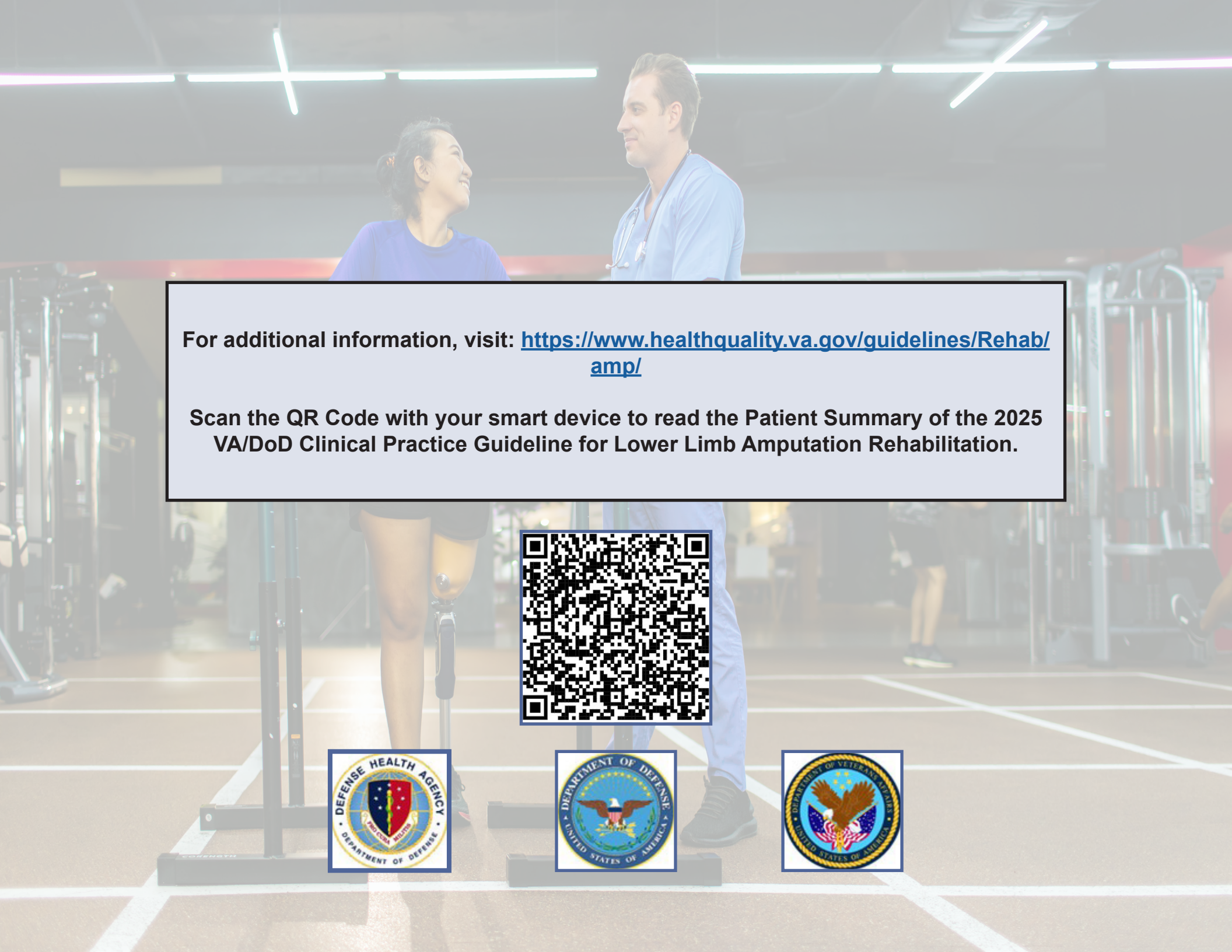
10.3 Transportation and Return to Driving	Educate on potential adaptations needed for return to driving. Educate patient and family on variance between state requirements and insurance policies for driving with LLA.	Provide patient with alternative transportation options if caregivers unable to assist with transportation.	Evaluate patient for adaptations to promote return to driving. Recommend scheduling with Certified Driving Rehabilitation Specialist (CDRS)	Complete driver's training with adaptive equipment as needed Educate patient and family on variance between state requirements and insurance policies for driving with LLA.	Provide resources for alternative transportation options as needed.
11. Equipment	Determine DME and assistive devices available.	Assess living environment including stairs, wheelchair access, and bathroom accessibility for safe discharge to home Educate regarding potential home modifications, including ramp, accessible shower, etc.	Seating and Mobility evaluation to assess, measure, and order appropriate wheelchair Provide appropriate assistive device to promote independence with mobility Assess for personal equipment Assess for home adaptation and equipment	Provide appropriate assistive device for mobility with or without prosthesis	Provide appropriate assistive device and DME for mobility with or without prosthesis Provide appropriate wheelchair if ambulation is no longer an option



For additional information, visit: https://www.healthquality.va.gov/guidelines/Rehab/amp/

Scan the QR Code with your smart device to read the Patient Summary of the 2025 VA/DoD Clinical Practice Guideline for Lower Limb Amputation Rehabilitation.