

**2017 VA/DoD Clinical Practice Guideline
Rehabilitation of Individuals with Lower Limb Amputation**

**Amputation Care ECHO
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**M. Jason Highsmith, PT, DPT, PhD, CP, FAAOP
Deputy Chief, Research & Surveillance, EACE**

**Andrea Crunkhorn, PT, DPT, CSCS
Chief, Clinical Affairs, EACE**



Agenda

- Scope of the Problem
- Guideline Working Group and Project Team
- Development Process
- Grading Recommendations
- Evidence-based Clinical Practice Recommendations
- Clinical Care Algorithms



Update of 2007 Clinical Practice Guideline

- Existing evidence-based CPG is outdated – published in **2007**
 - Included **215** “recommendations,” many based on expert opinion only
- New Guideline was updated with evidence from January 2007 – July 2016
- Evaluation of new research to establish evidence-based recommendations in **key areas** of amputation rehabilitation



Scope of the Guideline

- Pre-operative rehabilitation interventions
- Surgical interventions
- Interventions in immediate post-operative period
- Gait and mobility training
- Prosthetic componentry selection
- Factors affecting patient outcomes
- Outcome measures
- Pain management
- Unique subgroup considerations



Guideline Working Group

Department of Veterans Affairs	Department of Defense
Billie Randolph, PT, PhD (Champion)	Andrea Crunkhorn, DPT (Champion)
Joseph Webster, MD (Champion)	LTC Keith P. Myers, MD (Champion)
M. Jason Highsmith, PT, DPT, PhD, CP, FAAOP	Paul Pasquina, MD (Champion)
Martin McDowell, L/CPO, LPO	Lisa D. Jones, RN, BSN, MHA, CPHQ
Leif Nelson, DPT, ATP, CSCS	Louise Hassinger, CP
Aaron Turner, PhD	MAJ John P. McCallin, MD, FAAPMR
Deb Velez, RN, MN, GNP-BC	Kelly McGaughey, PT, DPT
Patty Young, MSPT, CP	Joseph A. Miller, PhD, MS, CP
	LCDR Lynita Mullins, DO
	Annemarie Orr, OTD, OTR/L
	LTC Benjamin K. Potter, MD
	Alison Pruziner, PT, DPT, ATC

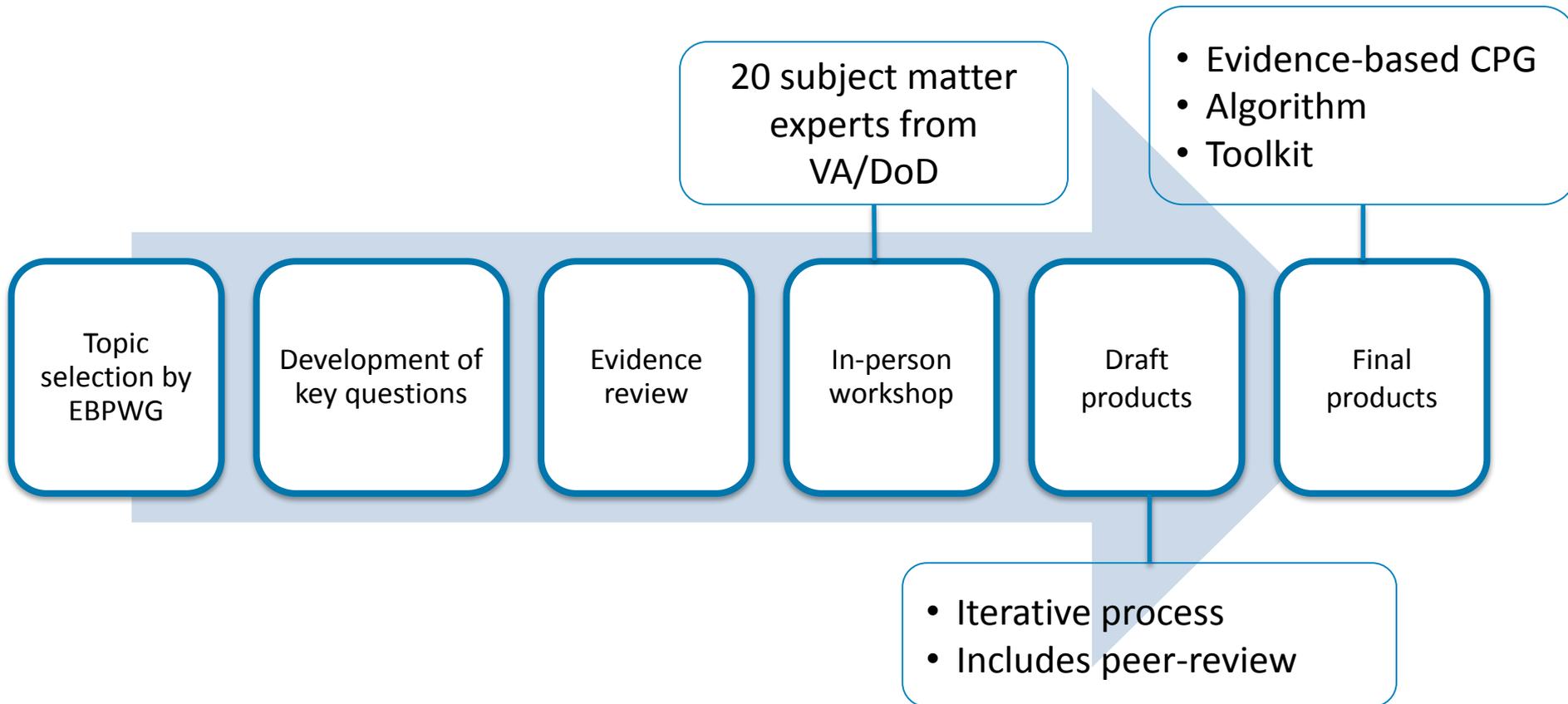


Project Team

Office of Quality, Safety and Value, Department of Veterans Affairs	Office of Evidence Based Practice, MEDCOM
<p>Eric Rodgers, PhD, FNP-BC James Sall, PhD, FNP-BC Rene Sutton, BS, HCA</p>	<p>Corinne K. B. Devlin, MSN, RN, FNP-BC Lisa D. Jones, RN, BSN, MHA, CPHQ</p>
The Lewin Group	ECRI Institute
<p>Clifford Goodman, PhD Christine Jones, MS, MPH, PMP Jacqlyn Riposo, MBA Nicolas Stettler-Davis, MD, MSCE</p>	<p>James Reston, MPH, PhD Jeff Oristaglio, PhD Amy Tsou, MD Marna Johnston, MLIS</p>
Sigma Health Consulting, LLC	Duty First Consulting
<p>Frances Murphy, MD, MPH</p>	<p>Megan McGovern, BA Anita Ramanathan, BA</p>



Guideline Development Process



Strength of a Recommendation

- Strength of a recommendation on a continuum:
 - **Strong For** (or “*We recommend offering this option ...*”)
 - **Weak For** (or “*We suggest offering this option ...*”)
 - **Weak Against** (or “*We suggest not offering this option ...*”)
 - **Strong Against** (or “*We recommend against offering this option ...*”)
- Note: Weak (For or Against) recommendations may also be termed “conditional,” “discretionary,” or “qualified”
 - Recommendations may be **conditional** based on patient values and preferences, the resources available, or the setting in which the intervention will be implemented
 - Recommendations may be at the **discretion** of the patient and clinician
 - Recommendations may be **qualified** with an explanation about the issues that would lead decisions to vary

Source: GRADE Guidelines: 15. Going from evidence to recommendation determinants of a recommendation’s direction and strength. *Journal of Clinical Epidemiology* 66 (2013) 726-735.



Grading Recommendations - GRADE

Decision Domains (4)

- Balance of desirable and undesirable outcomes
- Confidence in the quality of the evidence
- Values and preferences
- Other implications, as appropriate, e.g.:
 - Subgroup considerations
 - Acceptability
 - Feasibility
 - Equity
 - Resource use



Updating and Categorizing Recommendations

Recommendation Categories and Definitions

Evidence Reviewed*	Recommendation Category*	Definition*
Reviewed	New- added	New recommendation following review of the evidence
	New- replaced	Recommendation from previous CPG that has been carried over to the updated CPG that has been changed following review of the evidence.
	Not changed	Recommendation from previous CPG that has been carried forward to the updated CPG where the evidence has been reviewed but the recommendation is not changed
	Amended	Recommendation from the previous CPG that has been carried forward to the updated CPG where the evidence has been reviewed and a minor amendment has been made
	Deleted	Recommendation from the previous CPG that has been removed based on review of the evidence
Not reviewed	Not changed	Recommendation from previous CPG that has been carried forward to the updated CPG, but for which the evidence has not been reviewed
	Amended	Recommendation from the previous CPG that has been carried forward to the updated CPG where the evidence has not been reviewed and a minor amendment has been made
	Deleted	Recommendation from the previous CPG that has been removed because it was deemed out of scope for the updated CPG

*Adapted from the NICE guideline manual (2012) and Garcia et al. (2014).



Structure of the Clinical Practice Guideline

- Importance and consideration of patient preferences, safety, and education is reflected throughout the CPG, in the background, recommendations, and appendices
- Patient-centered care and shared decision making are described in the background section and referenced throughout the document to emphasize their use
- Recommendations were made taking into consideration all four GRADE domains



Clinical Practice Recommendation Summary

- Recommendations more narrow in scope
18 recommendations compared to 215 in 2007
- Recommendations by Phase of Rehabilitation
6 All phases, 8 peri-operative, 1 pre-prosthetic, 3 prosthetic training
- Recommendations by Strength of Recommendation
4 Strong for, 13 Weak for, and 1 Neither
- Recommendations by New vs. Prior
11 New Recommendations



Clinical Practice Recommendations

Recommendation	Strength	Category
All Phases of Amputation Rehabilitation		
1. We suggest patient education be provided by the rehabilitation care team throughout all phases of amputation rehabilitation.	Weak for	Reviewed, Amended
2. We suggest an assessment of behavioral health and psychosocial functioning at every phase of amputation management and rehabilitation.	Weak for	Reviewed, Amended
3. When assessing pain, we suggest that measurement of the intensity of pain and interference with function should be separately assessed for each pain type and location using standardized tools.	Weak for	Reviewed, Amended
4. We suggest offering a multi-modal, transdisciplinary individualized approach to pain management including transition to a non-narcotic pharmacological regimen combined with physical, psychological, and mechanical modalities throughout the rehabilitation process. (For the treatment of chronic pain, the 2017 VA/DoD CPG for the Management of Opioid Therapy for Chronic Pain recommends alternatives to opioid therapy such as self-management strategies, other non-pharmacological treatments, and non-opioids over opioids [see the 2017 VA/DoD OT CPG1]).	Weak for	Reviewed, New-replaced



Clinical Practice Recommendations

Recommendation	Strength	Category
All Phases of Amputation Rehabilitation (cont.)		
5. We recommend providers consider the patient’s birth sex and self-identified gender identity in developing individualized treatment plans.	Strong for	Reviewed, New-added
6. We suggest offering peer support interventions, including visitation by a certified peer visitor, as early as feasible and throughout the rehabilitation process.	Weak for	Reviewed, Amended
Perioperative Phase		
7. Prior to surgery, we suggest that rehabilitation goals, outcomes, and other implications be included in shared decision making about residual limb length and amputation level.	Weak for	Reviewed, Amended
8. There is insufficient evidence to recommend one surgical amputation procedure over another.	Not applicable	Reviewed, New-added



Clinical Practice Recommendations

Recommendation	Strength	Category
Perioperative Phase (cont.)		
<p>9. We suggest use of a rigid or semi-rigid dressing to promote healing and early prosthetic use as soon as feasible post-amputation in transtibial amputation. Rigid post-operative dressings are preferred in situations where limb protection is a priority.</p>	Weak for	Reviewed, Amended
<p>10. We suggest performing cognitive screening prior to establishing rehabilitation goals, to assess the patient's ability and suitability for appropriate prosthetic technology.</p>	Weak for	Reviewed, New-replaced
<p>11. We suggest that in the perioperative phase following amputation, patients receive physical rehabilitation and appropriate durable medical equipment/assistive technology.</p>	Weak for	Reviewed, New-replaced



Clinical Practice Recommendations

Recommendation	Strength	Category
Perioperative Phase (cont.)		
12. We suggest, when applicable, treatment in an acute inpatient rehabilitation program over a skilled nursing facility.	Weak for	Reviewed, New-replaced
13. We suggest the initiation of mobility training as soon as feasible post-amputation. In appropriate patients, this may include ipsilateral side weight-bearing ambulation with a pylon to improve physical function and gait parameters.	Weak for	Reviewed, New-replaced
14. We recommend instituting rehabilitation training interventions, using both open and closed chain exercises and progressive resistance to improve gait, mobility, strength, cardiovascular fitness and activities of daily living performance in order to maximize function.	Strong for	Reviewed, New-replaced

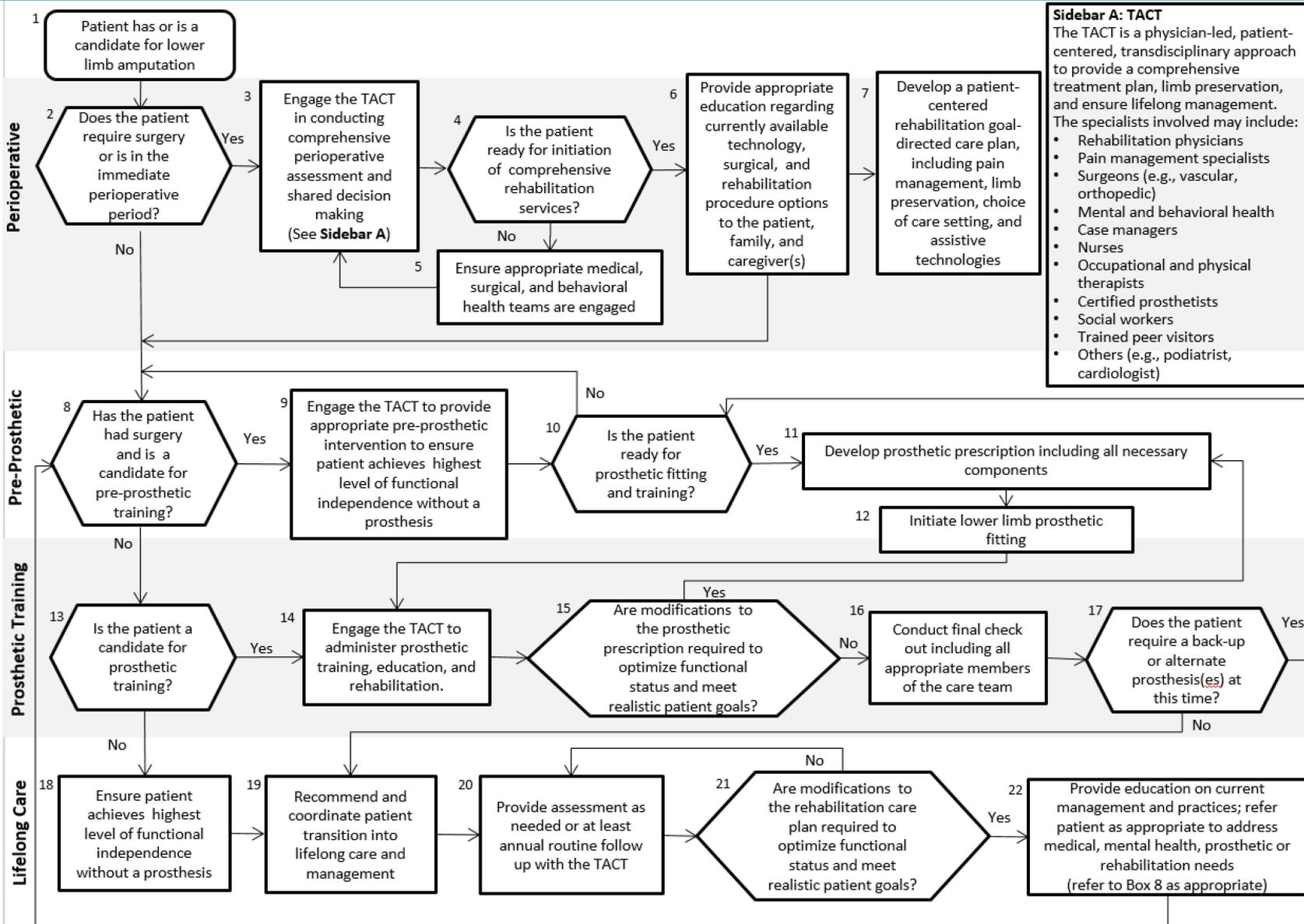


Clinical Practice Recommendations

Recommendation	Strength	Category
Pre-Prosthetic Phase		
<p>15. We suggest offering microprocessor knee units over non-microprocessor knee units for ambulation to reduce risk of falls and maximize patient satisfaction. There is insufficient evidence to recommend for or against socket design, prosthetic foot categories, and suspensions and interfaces.</p>	Weak for	Reviewed, New-added
Prosthetic Training Phase		
<p>16. We recommend the use of valid, reliable, and responsive functional outcome measures, including, but not limited to, the Comprehensive High-level Activity Mobility Predictor, Amputee Mobility Predictor, 10-meter walk test, and 6-minute walk test.</p>	Strong for	Reviewed, New-replaced
<p>17. We suggest the use of a combination of measures with acceptable psychometric properties to assess functional outcomes.</p>	Weak for	Reviewed, New-replaced
<p>18. We recommend an assessment of factors that are associated with poorer outcomes following acquired limb loss, such as smoking, comorbid injuries or illnesses, psychosocial functioning, and pain.</p>	Strong for	Reviewed, Amended



Algorithm Module A: Transdisciplinary Amputation Care Team Approach (TACT)



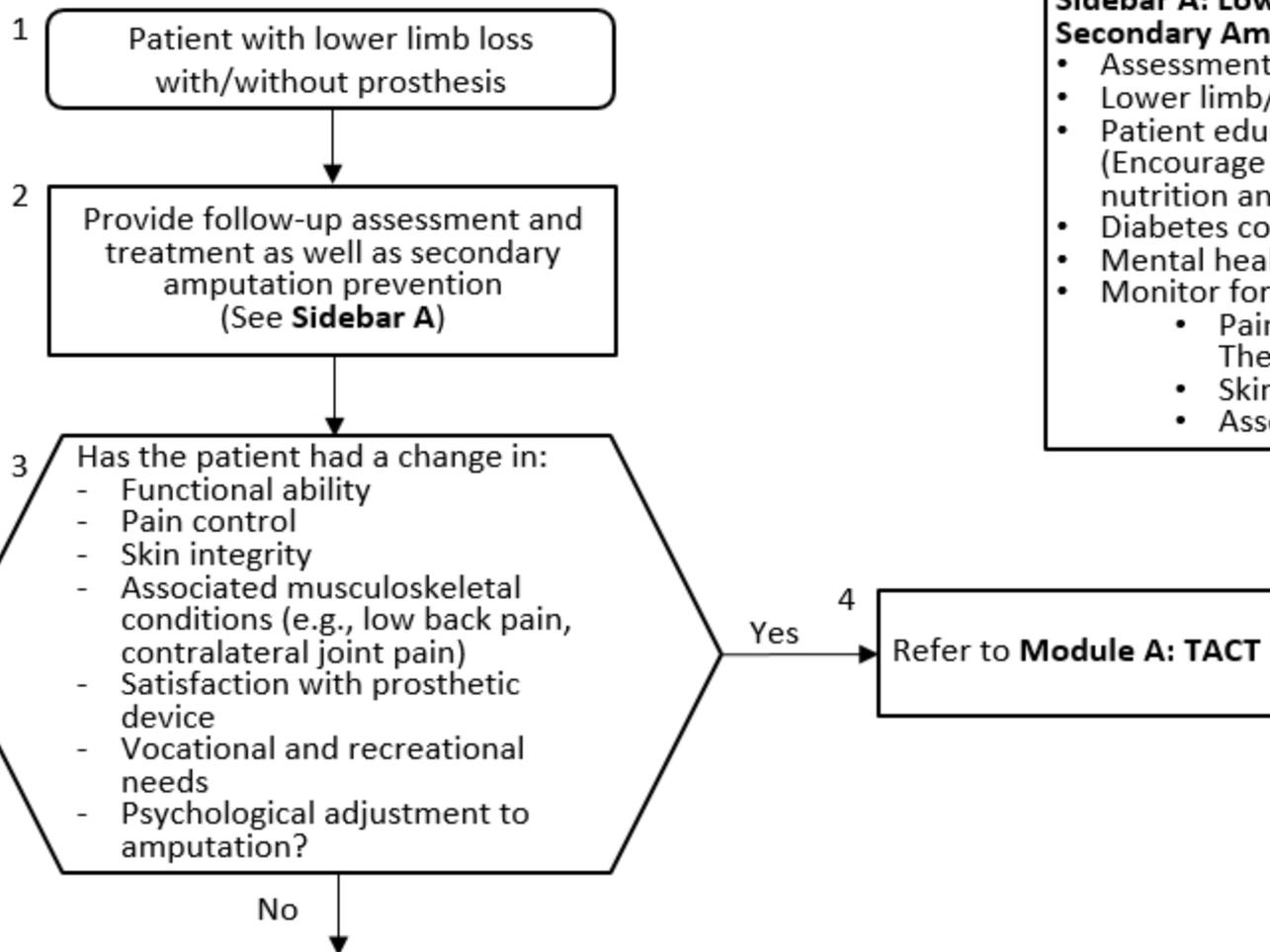
Sidebar A: TACT
 The TACT is a physician-led, patient-centered, transdisciplinary approach to provide a comprehensive treatment plan, limb preservation, and ensure lifelong management. The specialists involved may include:

- Rehabilitation physicians
- Pain management specialists
- Surgeons (e.g., vascular, orthopedic)
- Mental and behavioral health
- Case managers
- Nurses
- Occupational and physical therapists
- Certified prosthetists
- Social workers
- Trained peer visitors
- Others (e.g., podiatrist, cardiologist)

Abbreviations: TACT: Transdisciplinary Amputation Care Team



Algorithm Module B: Primary Care Follow-up and Lifelong Care



Sidebar A: Lower Limb Loss Assessment and Secondary Amputation Prevention

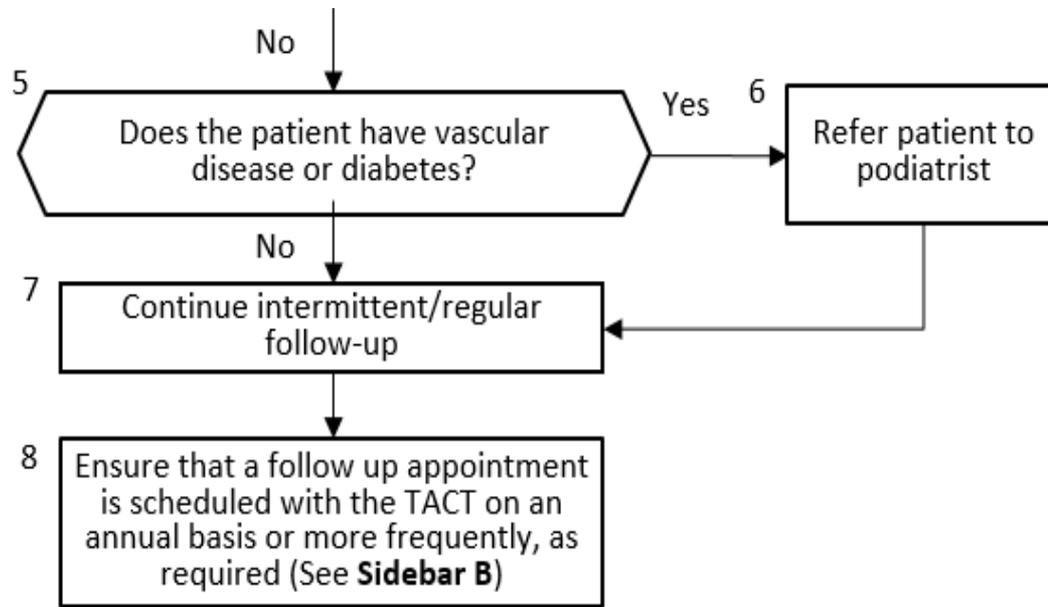
- Assessment of risk factors
- Lower limb/foot preservation care
- Patient education for lifestyle modification (Encourage exercise and cardiovascular fitness, nutrition and smoking cessation)
- Diabetes control (see VA/DoD Diabetes CPG)
- Mental health
- Monitor for:
 - Pain control (see VA/DoD Opioid Therapy CPG)
 - Skin integrity
 - Associated musculoskeletal conditions

Note: Boxes 5-7 and Sidebar B are depicted on the next slide.

- Box 3 (No) connects to box 4



Algorithm Module B: Primary Care Follow-up and Lifelong Care (cont.)



Sidebar B: TACT

The TACT is a physician-led, patient-centered, transdisciplinary approach to provide a comprehensive treatment plan, limb preservation, and ensure lifelong management. The specialists involved may include:

- Rehabilitation physicians
- Pain management specialists
- Surgeons (e.g., vascular, orthopedic)
- Mental and behavioral health
- Case managers
- Nurses
- Occupational and physical therapists
- Certified prosthetists
- Social workers
- Trained peer visitors
- Others (e.g., podiatrist, cardiologist)

Abbreviations: TACT: Transdisciplinary Amputation Care Team; VA/DoD Diabetes CPG: VA/DoD Clinical Practice Guideline for Management of Diabetes Mellitus in Primary Care; VA/DoD Opioid Therapy CPG: VA/DoD Clinical Practice Guideline for Opioid Therapy for Chronic Pain

Note: Boxes 1-4 and Sidebar A are depicted on the previous slide.

- **Box 3 (No) connects to box 5**



Questions and Discussion

