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PLEASE DO NOT RETURN YOUR RESPONSE TO THE ABOVE ADDRESS.

We will collect your responses when we interview you individually or talk with you in a focus group.

EACE Interview protocol (healthcare provider version)

Obtain informed consent

Verify role of interviewee as a nurse, physician, therapist, psychologist, etc.

Core questions

Provider information – Please tell us a bit about yourself:

- Years of service (if military/former military)
- Deployment experiences (if military/former military)
- Experience with amputee rehabilitation care
- Experience working at C5/CFI/WRNMMC (years working here, current military/civilian/contractor/prior experience in any of these categories)

Discuss handout about traumatic amputation phases. (RAND interviewer will explain that the interview is focused on understanding the provider's role in the five phases described in the handout (see Appendix A at the end of this document), which was adapted to reflect the Amputation Coalition's phases for traumatic amputations as opposed to delayed amputations).

Amputee care pathways

1. As a [nurse, physician, therapist, psychologist, etc.], during which phases [from the handout] do you:
 - a. See the patient?

- i. How frequently do you see the patient during this time?
 - ii. To what extent do you interact with the patient's family?
- b. Stop seeing the patient?
- c. Coordinate care with providers? Which providers? Work in a team setting when caring for amputees? If so, which other providers are part of the team?
[Ask question c for each phase during which the provider engages with patients.]

Amputee rehabilitation care skills/competencies

As we mentioned previously, our goal is to define amputation rehabilitation-specific competencies that healthcare providers need to have to provide services to those who experienced deployment-related amputations. To meet our goal, we need to understand the knowledge, technical skills, interpersonal skills, abilities and other attributes you need to have to help this wounded population when they are rehabilitating.

- 2. What knowledge? Technical skills? Interpersonal skills? Abilities? Anything else? do you need in your role as a [nurse, physician, therapist, psychologist, etc.] for amputee rehabilitation care? [as they mention these, ask] How did you learn them? How do you demonstrate them to others? How is this documented (in accordance with some standard)?
- 3. What knowledge, skills (technical and interpersonal), abilities will be needed to provide amputee rehabilitation care in the next ten years? Why?
- 4. Other than what you mentioned a moment ago [in question # 2] what training (including specialty training) did you receive to prepare you to provide rehabilitation for amputees? School-based training? Post-graduate (e.g., medical residency) training? Army training? Field experience? Conferences?
 - a. For each training you just mentioned, which technical skills did you learn related to amputee rehabilitation (this may include care related to comorbidities as long as those providers stay on our final list)? [repeat for interpersonal skills, knowledge, ability]
 - i. How do you maintain this skill?
 - ii. How much "practice" is required to maintain them? Define this in terms of hours of clinical practice, hours of education and training, or other quantifiable metrics.
 - iii. Are there standards or guidance for maintaining this skill?
 - iv. How do you maintain this skill outside the field/combat setting.
 - b. Do non-amputee cases provide any relevant opportunities for maintaining skills needed for deployment-related amputee care? Do non-traumatic amputation cases provide relevant training and / or skill set maintenance opportunities for traumatic amputee care?
 - c. Are there any knowledge/skill/ability areas that should be added to professional training that would better prepare providers in your specialty for amputee care?
 - d. Are there any special considerations specific to the military?

5. To what extent do you keep up with advances in medical technologies or clinical innovations that relate to amputee care? How do you do so? How has this helped you provide care to amputees?
6. To what extent do you keep up with changes in best practices for providing quality amputee care? How do you do so? Have you applied these? With what results, in your view?
7. As the military amputee patient flow starts to slow, what knowledge/skills/abilities are you worried will atrophy? How can you sustain those skills? Training? Other patient populations?
8. What can the DoD do to support you in maintaining and even improving this knowledge/skills/abilities in preparation for the next conflict?

Amputee rehabilitation care challenges

9. What are the primary clinical challenges in providing amputee rehabilitation care and how do you deal with them?
10. Does working in a military setting create any unique challenges or advantages in providing amputee rehabilitation care?

Final question

11. We purposely asked about specific knowledge, skills, abilities needed to rehabilitate amputees. If you take a broader view of what is needed to rehabilitate amputees, are there any competencies you think are vital in rehabilitating amputees? If so, what are examples?

(Remaining questions to be used to probe for additional information if needed)

Amputee care goals

12. How do you know when amputee care has been successful?

Amputee care pathways

13. What is the optimal patient load that results in amputees receiving quality care from providers?
14. Please describe an experience during which the optimal care pathway: what was successful? What was sub-optimal? What were the factors that caused one to be successful and one to be sub-optimal?
 - a. Coordination of care to another provider? Which provider?
15. In your opinion, what are the most important procedures/services you provide to patients?

Amputee care skills/competencies

16. What recertification strategies are necessary in your discipline to ensure providers are up-to-date on best practices and new technologies?

Teamwork and communication

17. During treatment of amputation patients, what other specialists do you work closely with?
 - a. Is this in a team setting, or primarily for the purposes of handing patients off?
18. When making decisions on the care of patient, who else participates in the decision?
 - a. Which ones play a bigger role in the discussions and decision?
 - b. Are they equipped to have such discussions with you or with the patient?
19. How much communication and coordination occurs between the interdisciplinary team for each patient?
 - a. Who is involved in this communication?
 - b. How might communication be improved in the future to best serve patient needs?
20. What are the challenges associated with the multitude of care environments (acute hospitals, inpatient rehabilitation, outpatient rehabilitation centers)
 - a. How might these challenges be addressed?
 - b. Transition challenges for physicians
21. How often are patients followed up?
 - a. Are there any challenges to follow up? (patient compliance, etc)

Appendix A

Handout describing phases adapted from the Amputation Coalition to reflect traumatic amputations

We are focused on understanding your role and the knowledge, skills, abilities for phases 2 to 6 described below for this project.

1. Pre-operative phase (out of scope) – In this phase, the Service Member is healthy with no known disease process that would pose a threat to any extremity. The Service Member is exposed to an external force which threatens limb viability or results in frank amputation of one or more limbs. This phase begins with the traumatic event and lasts through point of injury care to definitive surgical treatment at the Role IV or V.
2. Post-operative phase – “The emphasis here is balancing recovery from the traumatic or surgical amputation(s) by protecting healing and beginning to shape the residual limb(s) while encouraging activity and mobility as soon as possible. May include serial surgical washouts, extended care for infection, treatment to concomitant injuries, and multiple amputations in different phases at any one point in time.
3. Pre-prosthetic phase – “By now, general activity and possibly mobility without a prosthesis hopefully is progressing well. This phase focuses largely on aerobic conditioning, strengthening the entire body, flexibility and final shaping of the residual limb(s) for eventual fitting of the preparatory prosthesis(es).” This phase may be achieved for one limb while other limb trauma or amputation remains in an earlier phase. This is prevalent with intractable infections.
4. Preparatory prosthetic training phase – “Many basic prosthetic skills must be learned before and during early weight-bearing activities in the prosthesis(es).” This phase is lengthened for multiple limb amputees.
5. Definitive prosthetic training phase – “As the individual progresses into these later phases, the therapy becomes more individually tailored given individual circumstances, components and, above all, goals.” This is the most intensive rehabilitation phase for DoD amputees, focusing on individualized treatment plans to optimize individual functional outcomes.
6. Reintegration phase – “In this phase, the individual is preparing to return to specific activities such as work or recreation or may need help in training for new activities.”
7. Maintenance (out of scope) – “This phase may occur if components, activities, or goals are changed.” Recommend renaming this “Ongoing Care.” For DoD amputees, the Ongoing Care phase represents the high level of support required to keep their activity levels not just possible (a challenge with our multilimb casualties), but as high as possible. Our commitment to our amputees includes upgrading components as technology, research and clinical knowledge continues to evolve. This allows Service Members to stay in the Service, and has allowed up to 80 to deploy post amputation. Ongoing care- This phase occurs over the life span of every amputee and reflects the healthcare community’s commitment to keep amputees’ activity levels as high as possible to include upgrading componentry.