

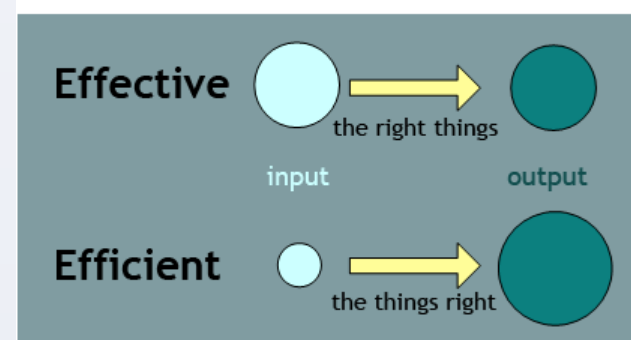
ALGORITHM FOR UPPER LIMB PROSTHETIC CONTINUUM OF CARE (Identifying the Elephant in the Room)

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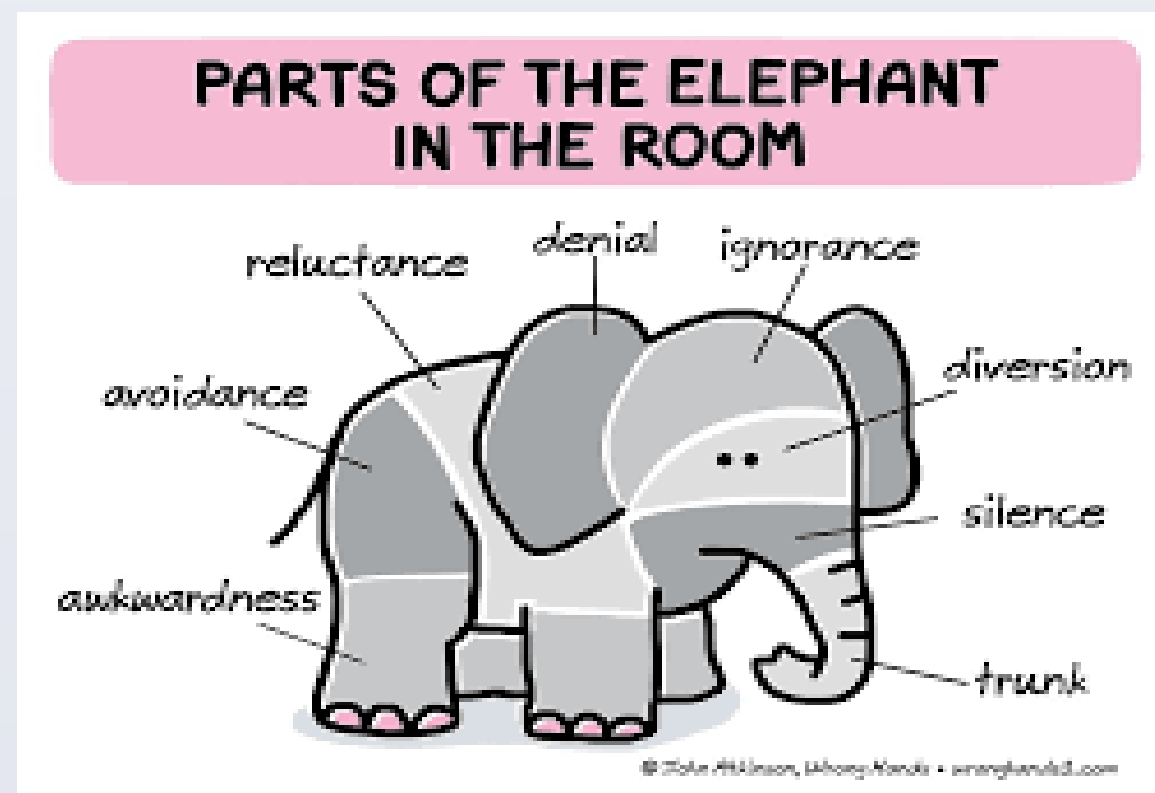
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INTRODUCTION AND PURPOSE

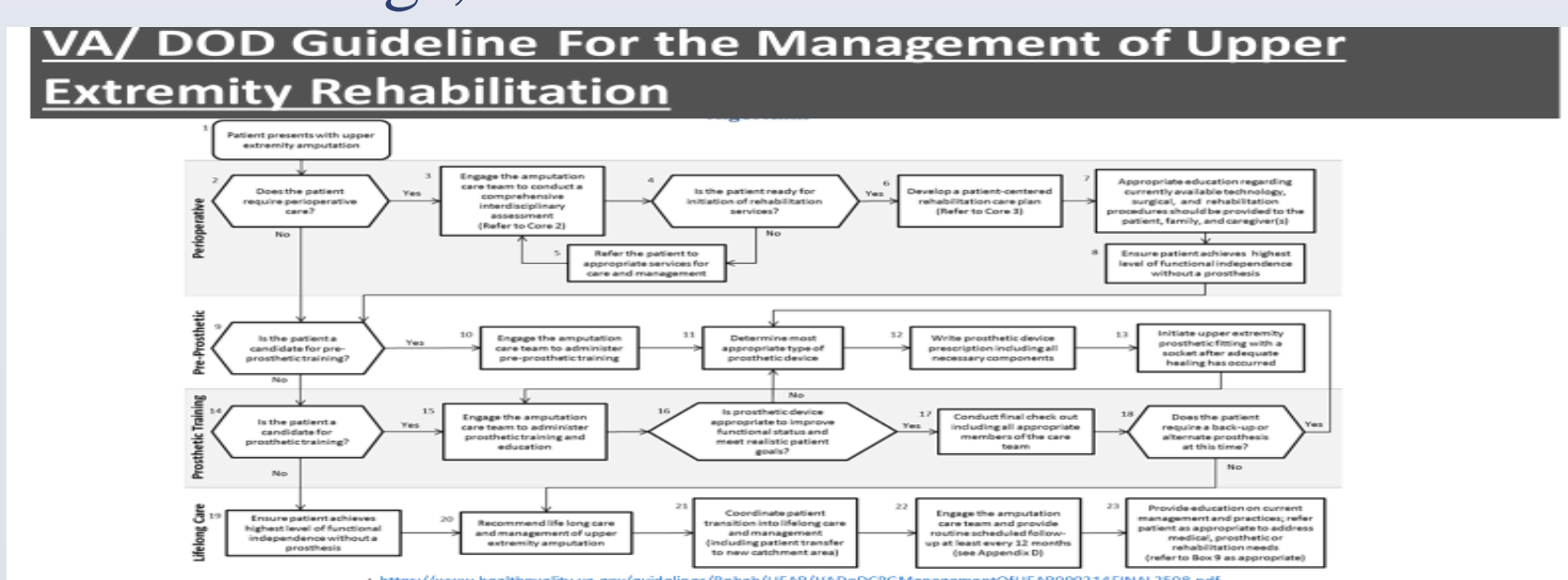
In our everchanging landscape of providing prosthetic care in the US, streamline business practices and managing the care of our patients more effectively and efficiently are essential. Having the right things to provide the most effective care and, doing things right in order to provide the most efficient care must not be overlooked.



While extremely skilled in their field of practice, many O&P clinicians and their allied care counterparts have minimal exposure in caring and treating individuals with upper limb loss. Combine minimal exposure with advanced / emerging techniques and technology and you get the “Elephant in the Room” effect. Reluctance, avoidance, ignorance and even denial affect the outcome of the prosthetic fitting.



While algorithms from the VA/DOD are intended to streamline upper limb prosthetic fittings, their detail can become overwhelming.



Unknowingly, lower limb prosthetic techniques are applied to upper limb technology by very skilled clinicians, creating challenges which reveal themselves later in the fitting process. Additionally, it is important to recognize that upper limb loss rehabilitation needs, including prosthetic prescription, therapy needs, advanced training needs and follow up care differ greatly from those of lower limb protocols.

OBJECTIVES and METHODS

The Objective of this study is to identify better ways to provide more efficient and effective clinical care to upper limb prosthetic cases, to help decrease rejection rate and increase satisfaction of fittings. Methods to achieve these objectives come from referencing relevant upper limb prosthetic literature, utilizing my 11 years of direct clinical experience fitting advanced upper limb technology and, observing unintentional clinical errors that have led to poor outcomes. Utilization of a simple checklist and a memorandum of understanding, may provide an opportunity for better outcomes.

“Checklists were first popularized by pilots into the operating theater and then out into the hospitals of the world”..... where mistakes would lead to failures.(3) Gorovitz and MacIntyre point out that there are two reasons we fail.(4):

“-Ignorance – we may err because science has given us only a partial understanding of the world and how it works. Ignorance can be corrected by answering the question “what do I do?”

“-Ineptitude – because in these instances the knowledge exists, yet we fail to apply it correctly. Ineptitude can be corrected by answering the question with “how do I do it?”

“The volume and complexity of what we know has exceeded our individual ability to deliver its benefits correctly, safely or reliably”. (3)

Creating a method for “Improved follow-up, repair, and information services, together with active involvement of clients in the selection of prostheses meeting their specific goals and needs, is recommended”. (1)(6)

CONCLUSIONS

“The function of the upper extremities is far more difficult to replace than that of the lower extremities. This is the case because the primary functions of the lower limbs are more limited and concern primarily maintenance and achievement of upright stance and various types of locomotion (e.g., walking, running, hopping, jumping, stair climbing). In contrast, the primary functions of the upper extremities include not only gross and fine motor activities but also more complex combinations of activities, such as self-care, interaction with the environment and others, and self-expression”. (2)

- A “MEMORANDUM OF UNDERSTANDING” SIGNED BY THE PATIENT AND CLINICIAN PRIOR TO STARTING AN UPPER LIMB PROSTHETIC FITTING MAY HELP TO AVERT ANY MISSUNDERSTANDINGS AND ASSIST WITH PROVIDING A COLLABORATIVE RELATIONSHIP

- “...USE OF A “CHECKLIST” PROVIDES REMINDERS OF ONLY THE MOST CRITICAL AND IMPORTANT STEPS-THE ONES THAT EVERT THE HIGHLY SKILLED PROFESSIONALS USING THEM COULD MISS”. (3)

WHAT DO I DO?

Upper Limb TR EP Checklist	
Pre Prosthetic	Delivery
<p>Done Description</p> <ul style="list-style-type: none"> PRMA Team meeting OT independent assessment Peer employee meeting Handout The Rehabilitation Journey after Upper Limb Amputation Component consideration (power vs flex wrist) Outcome measure assessment (DASH) Mys training Memorandum of Understanding 	<p>Done Description</p> <ul style="list-style-type: none"> Schedule mandatory follow-up (at least 1x week - 4 weeks) Revised setting of electronic components Stage complexity of electronic components Control programming to reduce cognitive Emphasize proper use of device and importance of OT
<p>Done Description</p> <ul style="list-style-type: none"> Determine best socket style (Mueseler, NW socket) Full on push to device Interface material (Milled silicone vs Preflex) 	<p>Done Description</p> <ul style="list-style-type: none"> Assure fit of socket is still intimate Assure setting of electronics are
<p>Done Description</p> <ul style="list-style-type: none"> Check length to contralateral side Casting and prefexion (TR design) Determine if myoelectric are incorrect location 	<p>Other</p>

HOW DO I DO IT?

Memorandum of Understanding
(Transradial unilateral prosthetic fitting)

Dear Patient,

In order to achieve the best outcomes for the fit and function of your new prosthesis, it is vital that I have thoroughly explained all the steps in takes to provide you your prosthesis and that you understand all the elements required for you to be successful. This Memorandum of Understanding outlines the time elements of your prosthetic fitting including and the commitment we must mutually agree upon. The elements include:

- The initial evaluation
- diagnostic fitting
- delivery
- follow-up process

While there may be similarities, no prosthesis is the same. This time and responsibilities list provides an outline of the commitment we must have in order to achieve the best possible outcome.

User's Responsibility	Prosthetist's Responsibility

Patient Signature Date _____
Prosthetist Signature Date

REFERENCES

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