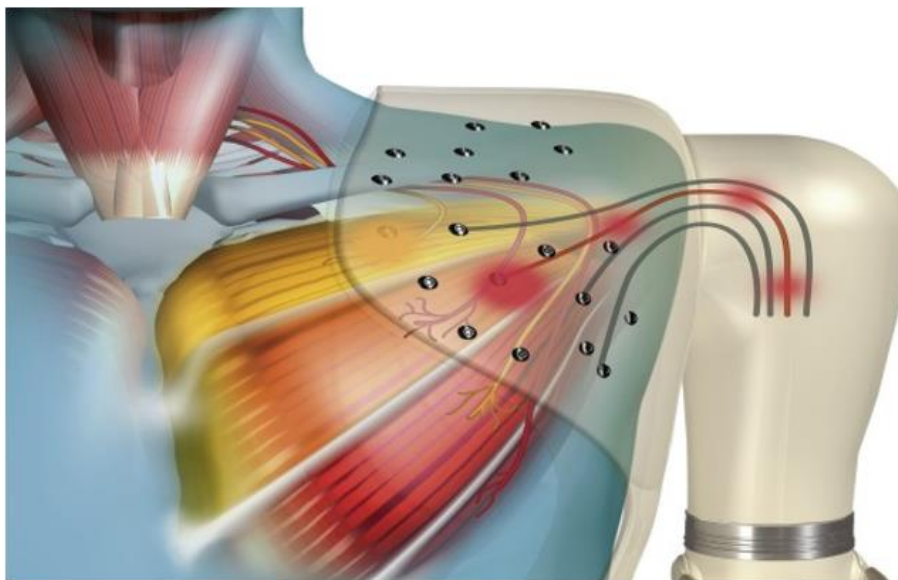
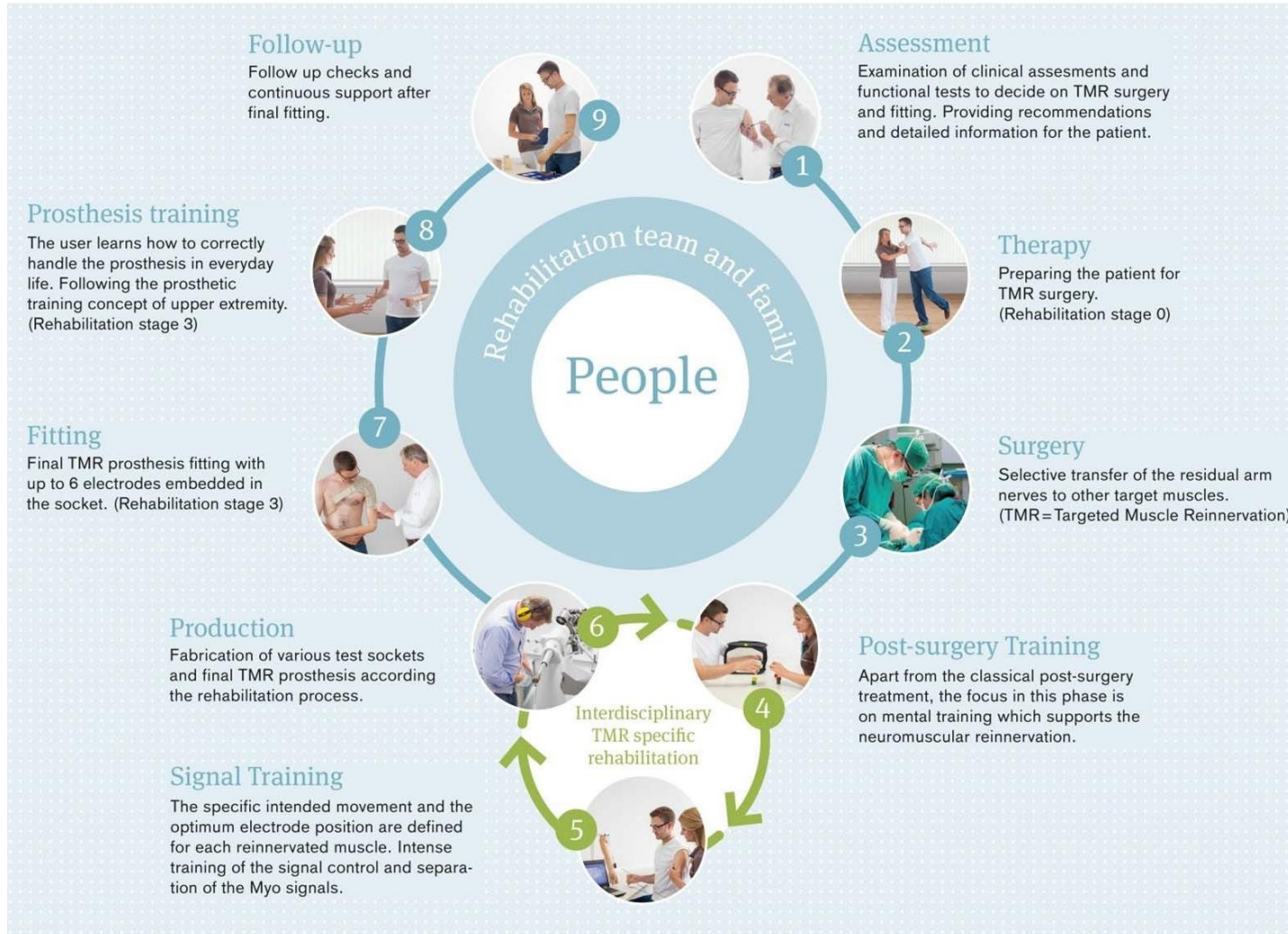


Targeted Muscle Reinnervation: Rehabilitation, Expectation Setting, and Outcome Potential

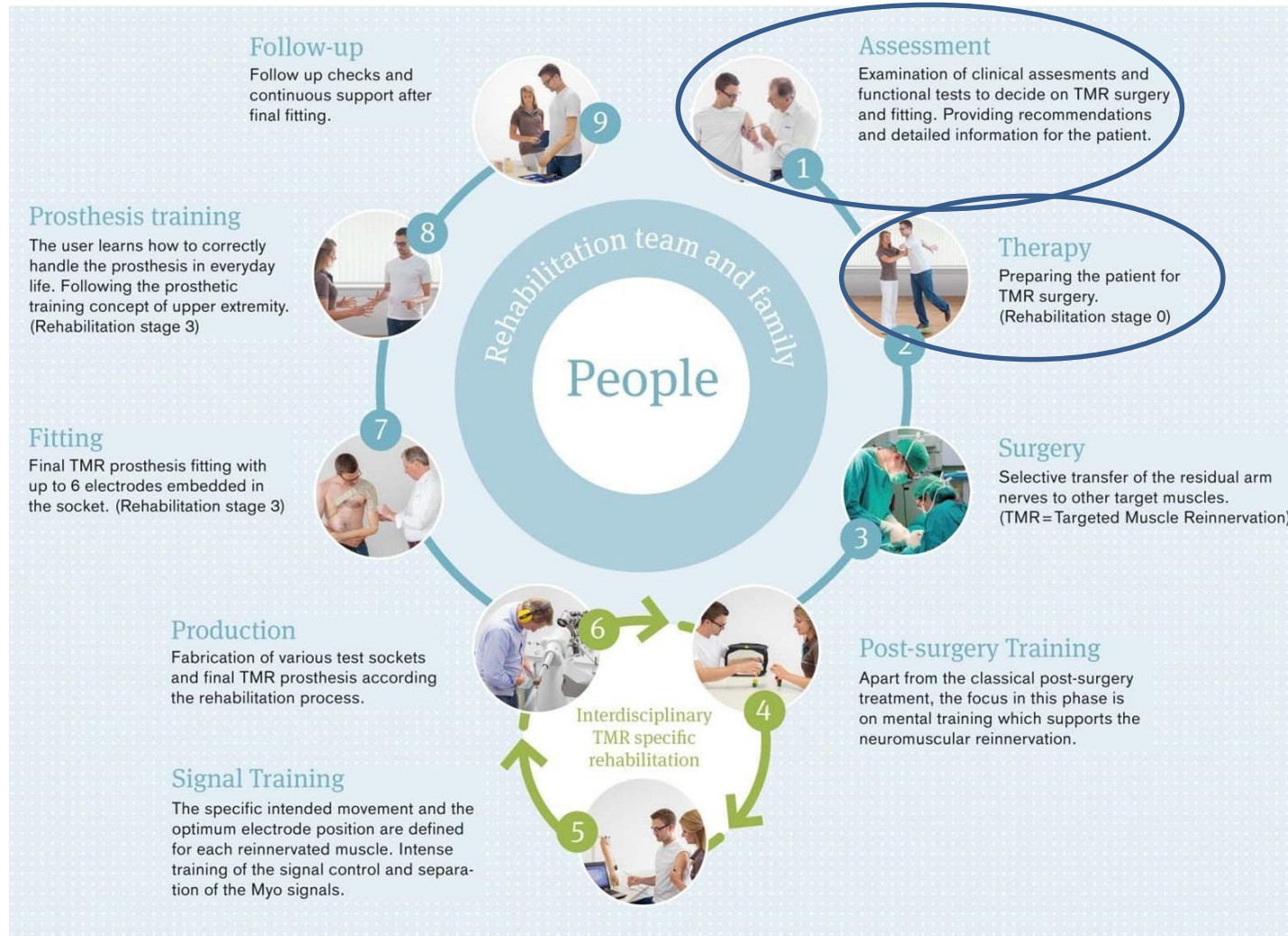


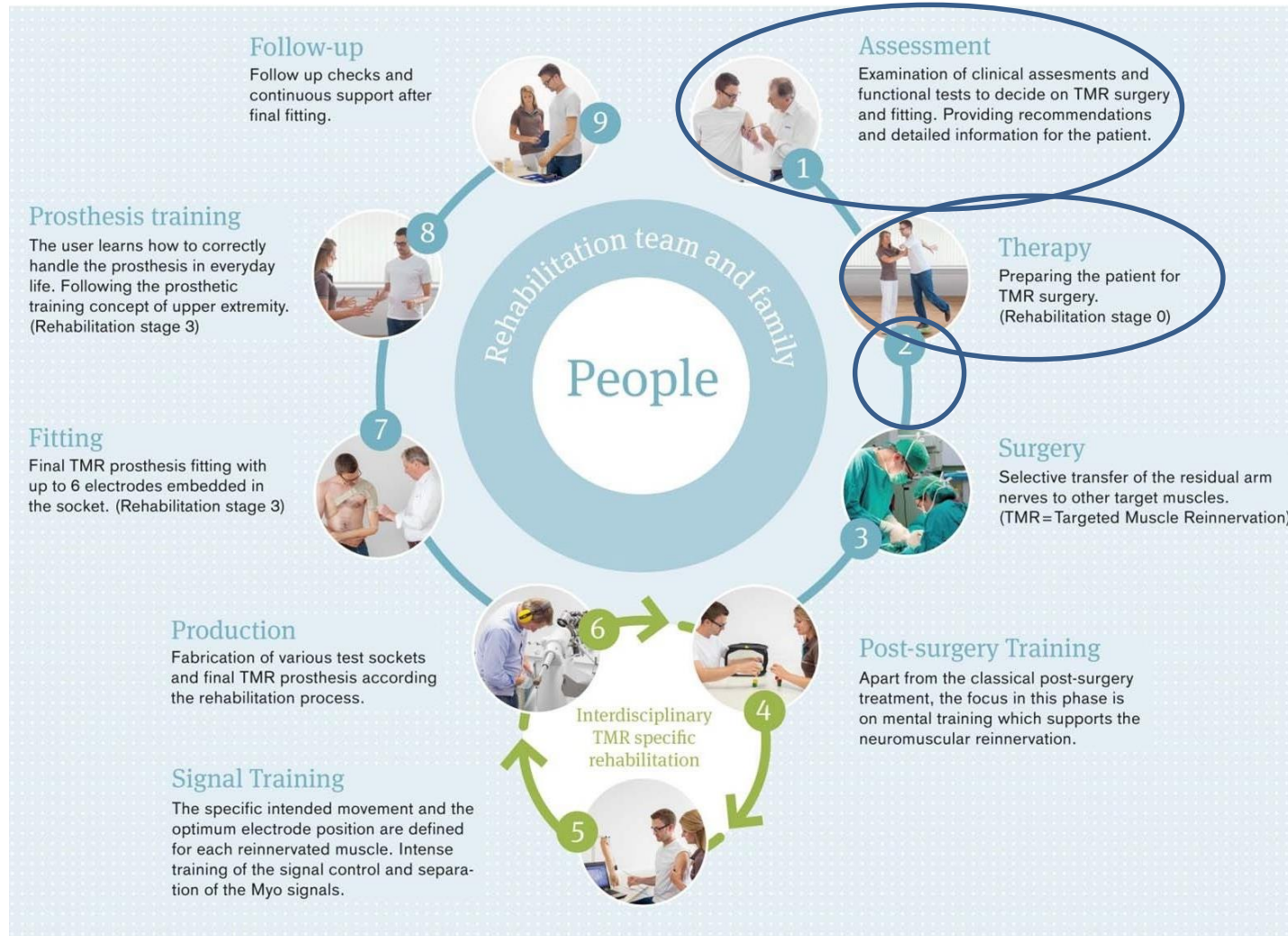
Matthew Hughes and Moose Baxter

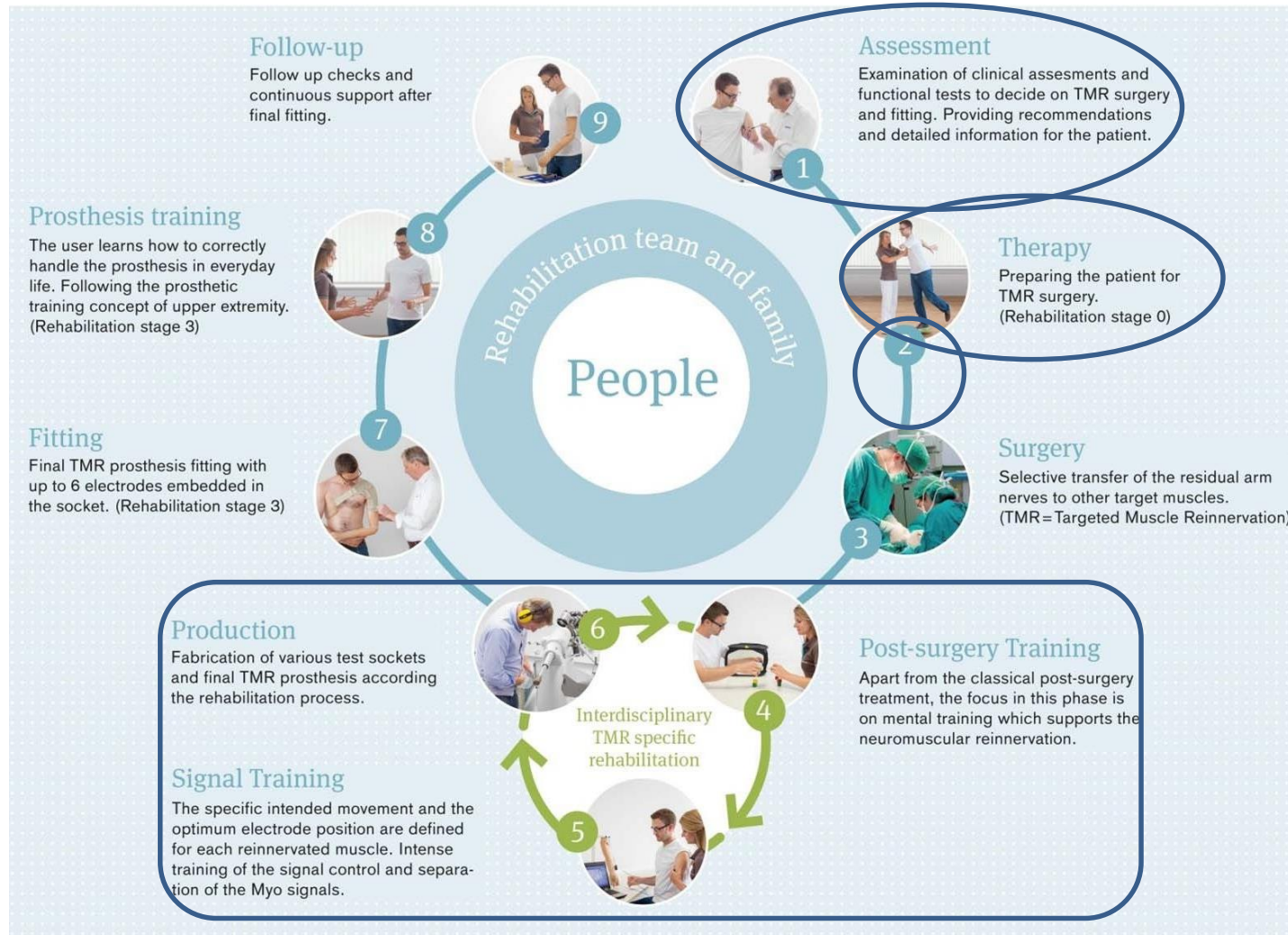
mooseb@dorset-ortho.com

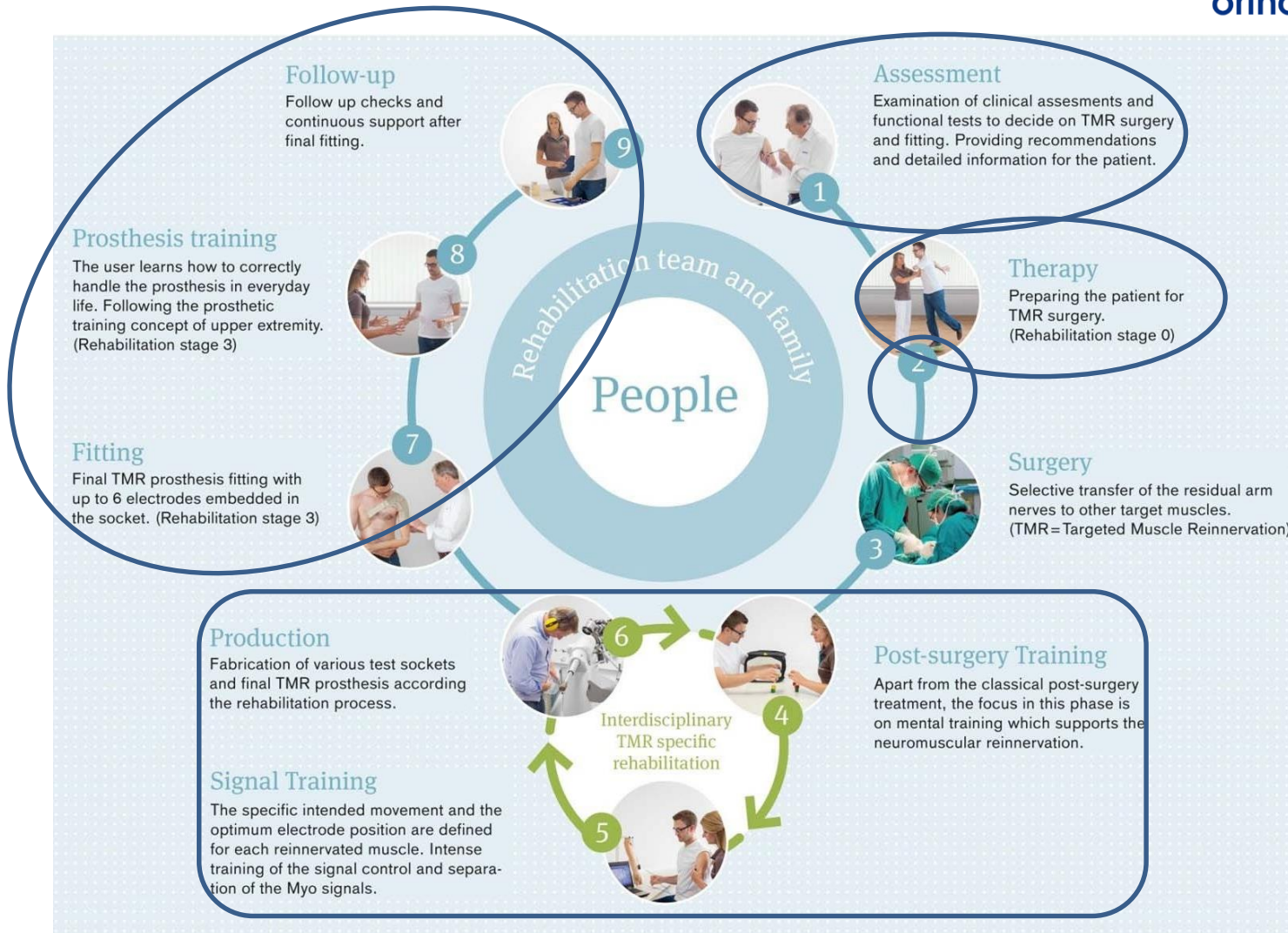










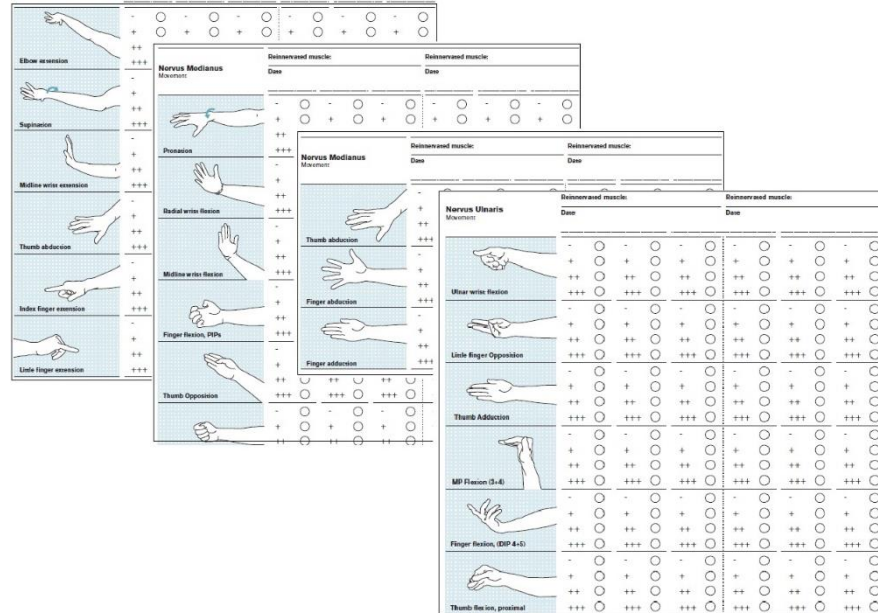


Assessment and Patient Selection

- Level of amputation, time since injury, method of injury, suitability for surgery (weight/smoking)
- Willingness/ability to engage in rehab process
- Number of existing EMG sites
- Musculature present
- Phantom pain

Therapy

- Preparation for surgery;
- Coordination
- Strength
- Balance



Movement	Strength	Nerve Medianus				Nerve Ulnaris			
		0	1	2	3	0	1	2	3
Elbow extension	+++								
Supination	+++								
Medial wrist extension	+++								
Thumb abduction	+++								
Index finger extension	+++								
Little finger extension	+++								
Wrist extension	+++								
Wrist flexion	+++								
Radial wrist flexion	+++								
Medial wrist flexion	+++								
Finger flexion, PIPs	+++								
Thumb Opposition	+++								
Thumb abduction	+++								
Finger abduction	+++								
Finger adduction	+++								
Ulnar wrist flexion	+++								
Little Finger Opposition	+++								
Thumb Adduction	+++								
MP Flexion (3-6)	+++								
Finger flexion, (DIP 4-5)	+++								
Thumb Flexion, proximal	+++								

Post-surgical:

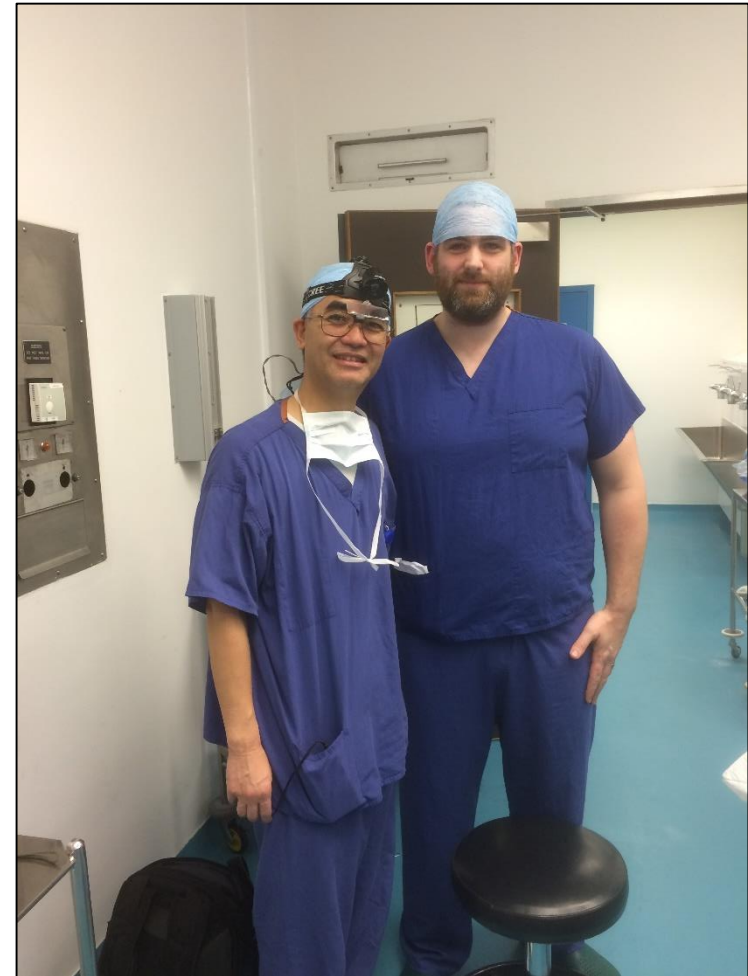
- oedema and pain management
- visualisation and mental training
- Active bilateral movement patterns of large muscle chains.

Referral for Surgery

Referral by the patient's GP for NHS surgery:

- Advice from Prosthetist to GP (details of the procedure, potential benefits and where to refer them to)

Discuss the value of a referral with the surgeon ahead of contacting the patient's GP.



Post-surgical, Pre-prosthetic Rehabilitation

- Regular visits
- Myo testing
- Tolerance to weight
- Individual electrodes and pattern recognition

TMR Prosthesis fitting

Socket design considerations

- Shape and comfort of the socket
- Electrode location and orientation
- Developing/changing with time

Component selection

- Control system
- Number of EMG sites
- Funds available
- Tolerance to weight/movement



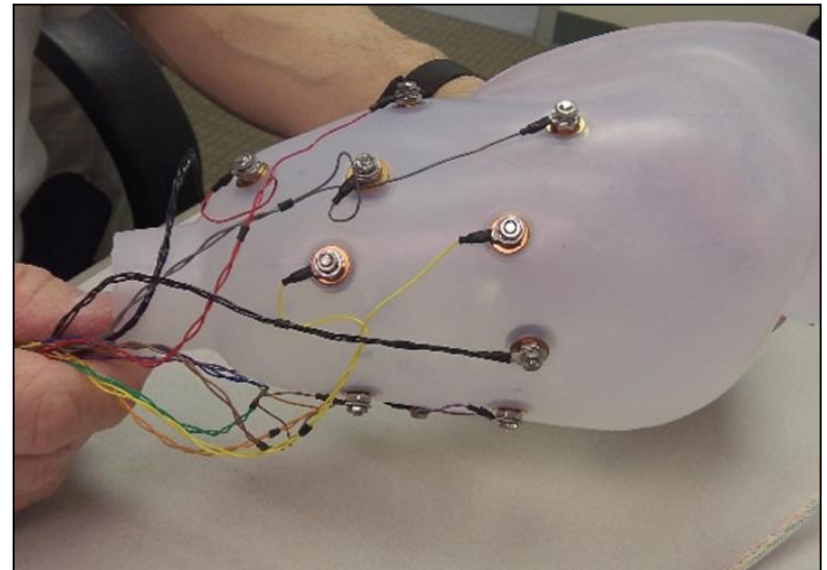
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- Control system
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Expectation Setting

- In close coordination with the surgical team
- Best and worst case scenarios of
 - Pain reduction
 - Prosthesis control
- Prosthetic component and rehabilitation
- Outcome potential

Expectation Setting



Thanks for listening!
Any Questions?