The Amputation From a Rehabilitation Point of View – Much More Than a Surgical Act
Introduction
Disability is an umbrella term for impairments, activity limitations and participation restrictions. Disability is the interaction between individuals with a health condition (e.g. amputation) and personal and environmental factors (e.g. negative attitudes, inaccessible transportation and public buildings, and limited social supports).

WHO - Fact sheet about Disability and Health
Rehabilitation = any action taken that aims at preventing disability or, at least, decreasing the level of disability a person faces.

- Physical rehabilitation and equipment
- Accessibility
- Attitude change

Rehabilitation and equipment + Access + Attitude change
Rehabilitation Process
Take home message on impact of the Surgical Act on Disability and Rehabilitation process.

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<tr>
<th>Quality of amputation</th>
<th>Level of amputation</th>
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**Rule 1**: Appropriate limb length:
- Above Knee (AK), between the middle and distal 1/3 of the thigh;
- Below Knee (BK): between the distal 1/3 and proximal 1/3 of the leg

**Rule 2**: Preservation of joint level - As long as rule 1 should be respected, BK is better than AK;
• **Rule 3:** Through-knee amputation is better than AK amputation (even if rule 1 for AK applies), but needs appropriate technological solution in regard to fitting.

• **Rule 4:** Through knee might be better than BK if appropriate BK limb length cannot be ensured

  --> very short stump :
  - makes it difficult to control the prosthesis
  - increases energy requirement and consequent tiredness
  - requires stump/knee flexion for fitting
  - impacts on muscle shortening,
  - Changes weight bearing and alignment patterns
  - Impacts on cosmetics options due to necessary choice of exoskeletal fitting needs.
**Rule 5**: Other factors that need to be taken into account and may influence above 4 rules:
- availability of technology
- expected functional recovery
- influenced of age
- the cause of amputation,
- general conditions of patients, local context...
- cosmetic and patient’s expectations.
Conclusions and Recommendations

- Amputation usually means disability;
- In order to decrease as much as possible the level of disability and to improve the surgery’s outputs, medical services should be accompanied with rehabilitation services (Sphere Standards, WHO 2011 World Report on Disability);
- Input from rehabilitation should start pre-operatively (level of amputation) and follow-up should be provided until returning home (social inclusion);
- Early rehabilitation is possible, even in emergency situation.
Cooperation MSF – Handicap International

• Ongoing in Haiti – Aghanistan and several others in the making.
• Has potential to extend its scope to other pathologies that have severe functional impact also: SCI, Head Trauma, burn wounds,…
• Should result in systemizing rehabilitation services towards all medical projects within MSF
Resources and Contact

Resources:

Special thanks to Mister Didier Demey – technical advisor Handicap International

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Thank you!