

PROVISION OF ACTIVE UPPER LIMB PROSTHESES AROUND THE WORLD.

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INTRODUCTION

A recent systematic review of the literature has shown that there is no evidence for a general functional superiority of body-powered or myoelectric/externally powered prostheses, but cosmesis and appearance of myoelectric hands were significantly better [1]. The purpose of this paper is to give an overview on the perspective of different health care systems around the world on the coverage of active upper-limb prosthetics.

METHOD

As no authoritative statistics are publicly available, data was collected by interviewing acknowledged professionals in the field of upper-limb prosthetic rehabilitation as well as by obtaining estimates of market sizes for body-powered and myoelectric/externally powered upper-limb prostheses from Ottobock's business unit, national market managers, and clinical prosthetists specialized in upper-limb prosthetics in various countries.

RESULTS

Countries may be placed in one of three categories upon the basic approach to the provision of active upper-limb prostheses:

1. Health care systems that grant access to all types of active upper-limb prostheses (e.g. Western and Northern Europe). In these countries, myoelectric/externally powered upper-limb prostheses are considered standard of care. However, adoption levels vary depending on differences in coverage policies. In countries whose healthcare systems cover several upper-limb prostheses at a time, 80-90% of patients use myoelectrics as their primary prosthesis. If the healthcare system covers only one prosthesis at a time, the proportion of myoelectric prostheses may decline to 50-60%.

2. Health care systems that limit access to active upper-limb prostheses primarily to body-powered devices (e.g. USA, Canada, Australia, New Zealand, Japan). In these countries, myoelectric/externally powered prostheses require approved exceptions from coverage policies and are typically used by less than 35-40% of all patients with active prostheses. However, in some specialized urban

rehabilitation clinics, the share of myoelectric prostheses may reach up to 70%.

3. Countries with health care systems that provide passive or no upper-limb prostheses to the vast majority of their beneficiaries (e.g. Eastern Europe, Latin America, Asia, Africa).

DISCUSSION

Although the scientific evidence for upper-limb prosthetics is the same around the world, coverage policies and funding vary remarkably and result in strikingly different adoption rates of active upper-limb prosthetic technologies between different countries. Among industrialized countries, the most important difference seems to be whether policies only consider prosthetic function or also psychosocial aspects for determining medical necessity of the available active prosthetic technologies and designs. Unfortunately, no data is available to conclude which strategy results in higher prosthesis acceptance rates.