

Assistive Devices/Technology

In medical rehabilitation, there are main three principles: restoration, compensation and adaptation. Whenever neuromusculoskeletal or movement function is impaired, it should be restored, generally with exercise therapy. When a part of the body has impaired function, one should learn how to use a remained good/normal part to compensate the lost function e.g. using the left hand instead of the impaired right hand for self-care activities. And, when a body part is amputated e.g. a limb loss, an artificial limb is prescribed and an amputee is trained how to use a prosthesis to perform both basic and instrumental activities of daily living.

The World Health Organization has emphasized the importance of assistive device/technology such as a prosthesis or an orthosis; whether acquired commercially, modified or customized, it is used to increase, maintain or help a person to perform a task or activity. According to the Community-based Rehabilitation (CBR) which is a strategy within general community development for rehabilitation, equalization of opportunities, poverty reduction, and social inclusion of people with disabilities, an assistive device/technology is a necessary product mentioned in the CBR matrix. Prostheses and orthoses are counted as assistive devices/technology that those with disabilities need to improve their performance. However, PO services are limited in the ASEAN economic community and researches on PO have been seldomly published in this Journal.

In Thailand, the Sirindhorn School of Prosthetics and Orthotics was established in 2002 and later certified by the International Society of Prosthetists and Orthotists (ISPO). The school has produced a certain number of certified prosthetists and orthotists (CPO) who provide PO services not only in Thailand but also in other low to middle income countries in Asia.

For continuous improvement, service effectiveness and efficiency should be monitored, evaluated and reported. A study from Sirindhorn School of PO about relationship between service provision and the use of trans-tibial prostheses is published in this issue. Moreover, the Prosthetic Profile of the Amputee (PPA), a common measurement tool used in prosthetic services and research, was translated into Thai, and validity and reliability of the Thai version of the PPA is also published in this issue.

Besides prostheses, orthoses are commonly prescribed by rehabilitation physicians (physiatrists). Nowadays, commercially prefabricated orthoses provide easier access for those who need them. In this issue, there are two interesting articles on orthoses. One is a study on effectiveness of prefabricated silicone toe separator on hallux valgus, and the other study is the effect of obesity on thoracolumbar flexion control of Jewett Hyperextension brace. These two articles point out factors related to effectiveness and limitation of prefabricated orthoses. A proper size of an orthosis should be properly selected to make a person accept and use it without inducing complications. Moreover, another interesting article is about a school screening program for scoliosis. With such screening, one could early detect those who need a proper spinal orthosis and exercise; and, a brief educational video does improve correct knowledge about scoliosis among pupils at school.

The above-mentioned articles published in this issue remind us that rehabilitation physicians' role is not only to restore functions but also to prevent impairment and disability that may occur if not early detected or treated properly. And one of rehabilitation treatment which can be used/prescribed to improve functions is an assistive device/technology.

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