
G1: Standardized Angular Measures for Seating and Posture: A Practicum

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Learning objectives:

1. Participants will be able to describe the difference between absolute and relative angles of body segments and seating support surfaces.
2. Participants will be able to explain the difference between the thigh to trunk angle and the thigh to pelvic angle.
3. Participants will be able to demonstrate measurement procedures for 4 relative body segment angles, 5 relative seating support surface angles and 9 absolute body segment angles.

Session description:

The purpose of the workshop is to promote the adoption and use of standardized terminology and measures for the quantification of seated posture, and for the documentation and prescription of angular body and seating dimensions during assessment. In this workshop, participants will learn how to take angular measurements of a seated person's body and their seating support surfaces, based on "A Clinical Application Guide to Standardized Wheelchair Seating Measures of the Body and Seating Support Surfaces." This guide, developed by the instructor through a grant from the Paralyzed Veteran's of America Education Foundation, was written to facilitate adoption of the principles and measures contained in *ISO 16840-1:2006 Wheelchair seating – Part 1: Vocabulary, reference axis convention and measures for body segments, posture and postural support surfaces*. Participants will be required to download the clinical application guide, and read chapter one in preparation for this hands on workshop. Only a brief review of the foundational principles contained in this chapter will be provided at the beginning of the workshop, to allow more time for hands on practice in measurement. Selected angular measures from the guide will be explained in detail and measurement methodologies will be demonstrated. Participants will be divided into groups and will practice measuring the selected angles following each demonstration. Selected measures

include relative body segment angles (thigh to trunk, thigh to pelvis, thigh to lower leg, lower leg to foot); relative seating support surface angles (seat to back support, seat to lower leg support, lower leg support to foot support); and absolute body segment angles (frontal pelvic, frontal sternal, frontal trunk, sagittal trunk, sagittal pelvic, sagittal thigh, transverse trunk, transverse pelvic, transverse thigh). The clinical application of these measures will be emphasized throughout the course.

Content references:

1. Waugh, K., and Crane, B. (2013). A Clinical Application Guide to Standardized Wheelchair Seating Measures of the Body and Seating Support Surfaces (*Rev. Ed*). Denver, CO: University of Colorado Denver (363 pgs). Available from: www.assistivetechologypartners.org
2. ISO 7176-26 (2007): Wheelchairs, Part 26: Vocabulary. International Organisation for Standardization, TC-173, SC-1, WG-11.
3. Waugh, K. (2013). Glossary of Wheelchair Terms and Definitions, Version 1.0, December 2013. Denver, CO: University of Colorado Denver (120 pgs). Available from: www.assistivetechologypartners.org