

## Wheelchair “Tuning”

### Summary

This workshop brings together 3 separate studies carried out at WestMARC in Glasgow:

*Challenges in objectively “tuning” the wheelchair in a practical clinical environment*

**John Colvin**, Consultant Clinical Scientist

*Introducing stability measurements in a routine clinical environment*

**Owen Mills**, Trainee Clinical Scientist

*Measuring effort in occupant wheelchair propulsion*

**Colin Mair**, Trainee Clinical Scientist

**Martin Cox**, Trainee Clinical Scientist

Each study has looked at how well we measure a particular common goal. These common goals conflict and “tuning” is the act of finding the balance that best suits the user’s needs.

### Aims and Objectives

1. To present how the measurement of stability, the measurement of effort of wheelchair users and the pushing forces exerted by carers have been validated and introduced into a clinical environment.
2. To present the current limitations of these measures and the challenges and benefits of using them collectively in NHS services.

### Background

In today’s challenging financial environment it is important that wheelchair service staff can demonstrate the value added from their services. Choosing the correct wheelchair and seating is an important element of this but it is also important to demonstrate that the equipment provided has been set up in a fashion that best meets the user’s needs. For many users and services the goals that are set are interdependent and often conflicting e.g. stability and efficiency.

Objectively measuring characteristics such as stability and efficiency remains a challenge for the researcher in a test environment. At WestMARC we have established a programme of work to introduce these measures into a practical clinical environment and to explore their usefulness and their limitations.

### Learning Objectives

1. To gain an awareness of the Westmarc approach to the measurement of stability, energy expenditure and pushing forces.
2. To raise awareness of when and how these measures can be practically used by wheelchair service staff.