USING POWER TILT FOR MANAGING SITTING PRESSURE:
PERSPECTIVES FROM USERS AND PRESCRIBERS

LAURA TITUS OT REG. (ONT.), PhD CANDIDATE
JAN POLGAR PHD, OT REG. (ONT.), FCAOT
Western University, London, ON

Introduction
Pressure at the sitting surface can be reduced using dynamic tilt. Several studies have found a minimum of 30 degrees of tilt was needed to have a significant reduction in pressure at the buttock-seat interface. Recent research evaluating power tilt use found that tilt is being used frequently throughout the day for the benefits of comfort, postural support and function but for the purpose of pressure management tilt use is low\(^1,2,3\). One study found less than 25% of participants tilted past 30 degrees\(^1\). These findings are important to clinicians as power dynamic tilt is frequently prescribed with the intent that its use will provide a means to manage sitting pressure ulcer risk through pressure redistribution. Most people who require power tilt wheelchairs are already at risk for pressure ulcer development. Also of concern is the increasing demand for justification and evidence of efficacy of wheelchair use from consumers and funding sources as outcomes of procurement\(^4,5\), clinical practice\(^6,7,8\), and satisfaction with how the technology meets the needs of the person using the wheelchair\(^9,10,11\). A clearer understanding of the factors that contribute to this low use of tilt as a method of managing pressure is needed.

To date studies in the literature examine how power tilt is used in daily life mainly based on frequency and duration of use and amount of tilt used. Little research has examined this issue from the perspective of the adults who use power tilt within the context of their daily life. Nor has research to date solicited the perspective of therapists who prescribe power tilt regarding this issue. Gaining insights through the perspectives of these two groups of people has the potential to reduce this knowledge gap by identifying the daily life factors that influence power tilt use.

Study Purpose
The purpose of this research study is twofold.

1. To gain insight into the barriers that contribute to low use of dynamic tilt for pressure management as well as the potential facilitators of power tilt use through exploring how and why power tilt for pressure management is or is not incorporated into the daily lives of adults who uses power tilt wheelchairs.

2. The second is to determine if the knowledge gained from these insights can be translated into clinical practice and into the daily life of the adults who use power tilt.

Methods:
As a qualitative research approach, grounded theory methodology seeks to develop explanations, or provisional theories, of the phenomenon in context from the perspective of the person experiencing it\(^12,14,15,16\). In this study the perspectives of people who use power tilt wheelchairs, as well as therapists who prescribe this technology have been collected. Both groups have experience with power tilt use but from differing perspectives. The provisional theories relate to the barriers and facilitators to power tilt use for pressure management which then offers insight into the behaviour of power tilt use in the context of the participant’s daily life\(^12,14,15,17,18\).

The perspectives of both groups were collected through a series of individual interviews using grounded theory methodology. The first interview used a semi-structured structure followed by an in-depth interview with each participant using grounded theory methodology. The interviews focused on exploring how and why power tilt for pressure management is or is not incorporated into the daily lives of adults who uses power tilt wheelchairs. In addition to the interviews, the person using power tilt also completed a 3 day journal in which they recorded each episode of tilt including a description of amount of tilt, the reason for tilting, and the activities occurring in their life at that time.

The data from the interviews and journals have been analyzed using grounded theory methods resulting in many themes and concepts related to how and why power tilt is used for pressure.
management. These themes and concepts have confirmed some of the reasons for low use postulated by expert opinions as well as offering several additional considerations for power tilt use.

**Discussion:**

This paper presentation will highlight the findings from this qualitative study. The participants' perceptions of facilitators and barriers to daily use of power tilt for pressure management will be shared from both the perspective of the person who uses power tilt and of therapists who prescribe power tilt. The perspective of the first group highlights: a) how power tilt is used within daily life for the purpose of managing sitting pressures; b) perceptions of facilitators and barriers to daily use of tilt for pressure management and; c) general knowledge about tilt use such as the perception of 30 and 45 degrees of tilt and of the value of tilting. The therapist perspective related to the barriers and facilitators for power tilt use will highlight their general knowledge about tilt use, including the perception of 30 and 45 degrees of tilt, and what they believe are the barriers and facilitators to power tilt use for managing sitting pressure.

The results of this study provide valuable insight into the daily use of power tilt. The findings from this study will be used to determine if the knowledge gained can be translated into clinical practice and regular client use to begin addressing some of the issues around low use of power tilt for managing sitting pressures.

**References**

