

## **Outcomes of a Caregiver-Inclusive Approach to Providing Assistive Technology: A Mixed-Methods Study**

William B. Mortenson<sup>1,2</sup>, Louise Demers<sup>3,4</sup>, Marcus J. Fuhrer<sup>5</sup>, Jeffrey W. Jutai<sup>6,7</sup>, Michelle ` Plante<sup>8,9</sup>, Frank Deruyter<sup>10</sup>

<sup>1</sup>University of British Columbia, Vancouver, BC, Canada, <sup>2</sup>International Collaboration On Repair Discoveries, Vancouver, BC, Canada, <sup>3</sup>Université de Montréal, Montreal, QC, Canada, <sup>4</sup>Institut universitaire de gériatrie, Montreal, QC, Canada, <sup>5</sup>U.S. Department of Health and Human Services, Washington, DC, USA, <sup>6</sup>University of Ottawa, Ottawa, ON, Canada, <sup>7</sup>Élisabeth Bruyère Research Institute, Ottawa, ON, Canada, <sup>8</sup>West Island Health and Social Services Centre (CSSS), Montreal, QC, Canada, <sup>9</sup>Sherbrooke Hospital Centre, Montreal, QC, Canada, <sup>10</sup>Duke University, Durham, NC, USA

**Introduction:** Many community dwelling older adults with physical limitations use assistive technology (AT) and assistance from family caregivers to perform daily activities. Family caregivers report physical and emotional stress related to caregiving. Although AT is provided to reduce the need for human assistance, the impact of AT use on family caregivers has been rarely studied.

**Objective:** To determine if a caregiver-inclusive approach to AT provision decreases family caregivers' burden and increases care recipients' abilities to perform daily activities.

**Methods:** A randomized, mixed-methods, controlled trial compared a care recipient/caregiver experimental intervention (n=44) to a customary care approach (n=46). Quantitative data were obtained at baseline, and at 6, 22, and 58 weeks following the interventions. The primary outcome measure for care recipients' was the Functional Autonomy Measurement System, and for family caregivers, the Caregiver Assistive Technology Outcome Measure. Qualitative data drawn from interviews of 25 caregivers were analyzed thematically.

**Results:** There were no significant between-group differences, but in both groups caregiver burden decreased over time. This occurred despite concomitant declines in care recipients' functional autonomy. Qualitative analysis revealed themes regarding caregiver experiences with AT provision, which highlighted the perceived benefits of AT but also emphasized issues of access.

**Conclusions:** Caregivers in the customary-care group may have been more engaged in the AT provision process than expected, consequently attenuating between-group differences in outcomes. Caregiver involvement in AT allocation may have contributed to the reduction of burden in both groups. The qualitative findings suggest that constraints on accessing AT are important for family caregivers.