

## Project Summary

### Key elements of successful housing for individuals with developmental disabilities and exceptional behavioural needs: Useful space designs and supportive residential models

The overall objective of the project was to describe successful physical space and design arrangements in housing for Ontarians with intellectual and developmental disabilities (IDD) who exhibit exceptional behaviours that challenge (BTC). To determine the key elements required for successful housing placements, the multidisciplinary team (architect, psychologists, nurse, occupational and physical therapists) adopted a mixed-methods approach with 4 'outputs'.

#### Output 1: Literature Review

The literature review is possibly the first to summarize existing research on designs and modifications to the physical environment in supported housing for individuals with IDD who exhibit BTC. Fifteen (15) articles that described the characteristics of successful housing from an architectural lens were included. The review concluded that appropriate modifications to buildings were a necessity; without appropriate adaptations there was an increased risk for placement breakdown due to a mismatch between the needs of the resident and what the physical space of the home could provide.

#### Output 2: Semi-Structured Interviews

Residence staff, administrators, a resident with IDD and health professionals were asked during interviews to describe key elements that were specifically related to physical space and design arrangements used to address BTC. Analysis of interview transcripts (n=18) identified 5 major themes which were consistent with the literature review findings. The two most commonly reported themes were physical space adaptations and descriptions of the physical environment. Quotes from participants highlighted a number of adaptations addressing BTC, adaptations for improving safety, adaptations for increasing home-likeness, and options for residence location.

#### Output 3: Case Studies

We visited high support residences (i.e. case studies) administered by 4 partner agencies located in Southern Ontario and documented their spatial layouts and space modifications. The 5 case study

descriptions include text and drawings at the community, building and dwelling scale for urban, suburban and rural buildings. Within the buildings, most residents had access to a private bedroom, living area, bathroom, as well as communal living and outdoor areas. Common modifications included hardened walls (to prevent damage), seamless installation of walls and floors, and selective use of locks and surveillance. For the case studies we also collected and aggregated data on costs (capital and operating), frequency of behaviours, frequency of prescribed as needed medication (PRN) use and staff injuries.

#### Output 4: Environmental Modifications (EM) Tool Describing Design Strategies

Using findings from the other outputs, the project created a tool depicting strategies to modify the physical environment of residences to better meet the sometimes unique and complex behavioural needs of persons with IDD. The tool aims to summarize design solutions and promote discussion between stakeholders in an effort to put effective modifications in place. Modifications to the physical environment are summarized first as a list of broad design principles and considerations when making quick fixes, renovations or new purpose-built buildings. This is followed by a comprehensive and more specific list, described with text and pictures and organized by room and living area. The EM Tool is intended to be a stand-alone document that can be used by individuals who support and care for this population as well as those involved in the design or maintenance of the residence where they live (e.g. builders, designers, architects).

#### Funding Source:

Developmental Services (DS) Research Grant Fund-Ontario Ministry of Children, Community and Social Services

#### Principal Investigator:

Robert Balogh, Associate Professor<sup>1</sup>  
Robert.balogh@ontariotechu.ca

#### Co-investigators:

Jane Casson<sup>1</sup>, Yani Hamdani<sup>2</sup>, Johanna Lake<sup>3</sup>,  
Kristin Dobranowski<sup>1</sup>, Carly McMorris<sup>4</sup>, Angela  
Gonzales<sup>5</sup>, Yona Lunsky<sup>3</sup>

#### Partner agencies:

Vita Community Living Services, REENA,  
Community Living Toronto, Bethesda Services, Lake  
Ridge Community Support Services