

## Session J-Home Health Care and Hospital Workers

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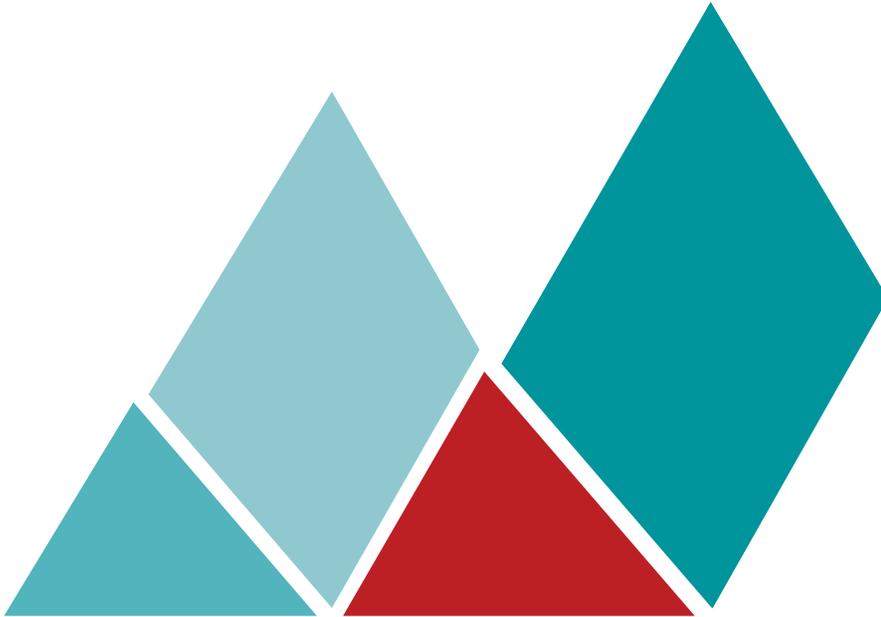
### Virtual Simulation Training in Home Healthcare

Home healthcare providers (HHPs) must be equipped with the knowledge and skills to assess home environments to effectively manage hazards that affect their own health and safety. Existing training approaches are limited in scope and emphasize passive over active immersive learning methods. Using gaming simulation, this study developed and evaluated a virtual simulation training system (VSTS) to address the wide range of health and safety hazards faced by home healthcare workers when working in client's homes.

**Methods:** Our interdisciplinary team used a mixed-methods participatory approach that included focus groups, interviews, questionnaires, and hands-on user usability assessments of the developing simulation. Continuous usability, usefulness, and desirability (UUD) evaluations provided critical input to assure realistic interactive learning experiences. The methods allowed for the iterative development and evaluation of the VSTS.

**Results:** Home healthcare nurses, aides, therapists, and managers (n=68) described exposures to multiple types of hazards in client homes, including but not limited to animal and human waste, clutter, mold, dim lighting, tobacco smoke, pests, faulty outlets, aggressive pets, lifting/moving patients, tight spaces, trip hazards such as throw rugs, and the lack of safety equipment. A majority of HHPs described hazard management decisions that represented less-than-optimal making do approaches to managing the encountered hazards. These findings were used in developing and UUD testing (N=24) of the innovative VSTS that simulates a client's home environment. The VSTS includes three interactive training modules (fire/electric/burn hazards; slip/lift/trip hazards; environmental hazards) which focus on hazard identification and appropriate course of action.

**Discussion:** The VSTS currently is undergoing efficacy testing to determine its ability to prepare home healthcare workers to recognize, assess, and respond to hazards in the home using appropriate risk perception and decision-making processes. This training approach should improve HHP risk assessment and decision-making for managing hazards to improve worker health and safety.



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