Home Safety: The Unique Role of Occupational Therapy

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Objectives

• Outline the unique perspective of OT related to home safety
• Highlight potential roles with populations not normally considered for home modifications
• Summarize potential assistive technology options for home safety
• Outline the broad scope of OT evaluation tools related to home safety
• Identify potential innovative methods to increase access
• Review funding sources
• Summarize the growing research evidence supporting OTs’ role in Home Safety evaluations.
Potential OT Roles in Productive Aging

- Environmental modifications and Home Safety
- Fall Prevention
- Assistive technology prescription and training
- Health and Wellness including mental health
- Management of chronic conditions while improving/maintaining participation
- Caregiver support and training
- Community Mobility and Older Drivers
- Role transitions
- Transitions related to moving and maintaining participation
Occupational Therapy: A unique perspective

• Person-Environment-Occupation
  • Person factors
    • Physical abilities, cognition, vision, hearing, values and interests, safety judgement
  • Environment factors
    • Accessibility, tasks environment match, safety concerns and demands, supports, resources
  • Occupation (task) demands
    • Attention, problem solving, physical demands, environmental interaction, safety concerns and demands
Advantages beyond CAPS or ADA environment for Home Safety

• Focus on unique Person-Environment-Occupation fit
• Identify training, compensation or adaptation needs that includes before and after modifications to maximize utilization
• Background and training allows for understanding of future needs
• Skilled in working with clients with unique needs and or cognitive challenges
• Liaison between contractors and client
Persons with visual impairments/low vision

• Home safety evaluation for hazard removal
• Lighting changes that are task and person specific
• Adaptations to improve safety
  • Automation of some lighting
  • Color contrasts for changes in rooms, elevations etc.
  • Magnification options for some tasks
  • Medication management strategies
• Adaptations to improve task effectiveness
  • Adapting closets and cabinets to find items
  • Setting routines and habits to support participation
Persons with Dementia

• Caregiver support and training
• Client and care-giver centered evaluation
• Environmental modifications for safety and increasing function
  • Decreasing distractions
  • Improving safety
  • Facilitating task initiation/completion
  • Electronic supports to facilitate participation and safety
• Task modifications for cognitive changes
  • Structure to allow initiation, reduce steps, backward chaining
  • Caregiver training
• Able to match these modifications to person’s functional level

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Assistive Technology for Home Safety

• 3 main types of technologies in this area
  • Redundant alerts for persons who are hard of hearing
  • Alarms to signal for help
  • Assistance/compensation for persons with physical and or cognitive challenges

• Examples:
  • Door alarms, wandering alerts
  • Locked medication dispensers with alarms
  • Voice and remote activation
  • Fall sensors and vitals monitoring
  • Stove motion sensors
  • Electronic/telehealth supported cottages
OT Home Safety Evaluation Tools

• Increasing research looking at standardization and scoring of safety risk and performance.

• HomeforLife Design computer app evaluation
  • www.homeforlifedesign.com

• In-Home Occupational Performance Evaluation
  • (I-HOPE; Stark, Somerville, & Morris, 2010),

• Safety Assessment of Function and the Environment for Rehabilitation—Health Outcome Measurement and Evaluation
  • (SAFER-HOME v3; Chiu et al., 2006),

• Home Falls and Accidents Screening Tool
  • (Home FAST; Mackenzie, Byles, & Higginbotham, 2000)
OT Falls Assessments and Home Hazards

• Home Safety Self Assessment Tool
  • (HSAT; Horowitz, Nochajski, & Schweitzer, 2013)

• Rebuilding Together Home Safety checklist
  www.rebuildingtogether.org

• Performance Assessment of Self-care skills (PASS-Home)
  • www.pitt.edu/~facaffs/acie/holm.html

• Cougar Home Safety Assessment v.4
  • www.misericordia.edu/images/ot/finalcougar07.pdf

• Kitchen Safety Evaluations: The Safe at Home Tool- Looks at recognizing unsafe situations
  • www.une.edu/com/research/researcher.asp?RID=30
OT Falls Assessments and Home Hazards Cont.

• Activities Specific Balance Confidence Scale

• Falls Efficacy Scale
  • http://www.rehabmeasures.org/PDF%20Library/Falls%20Efficacy%20Scale.pdf

• Decision on which to use is based on client needs, goals, occupations to be covered, and environmental context.
Remote Access and Home Safety

• Not always trained OT professional available to visit
• Allows for efficiency (e.g. long drive times not billable)
• Most require a trained aide/caregiver to be available
• Video taping, photography, and remote viewing
  • A standardized protocol is being developed
  • Effectiveness of remote home safety assessments
  • https://www.ncbi.nlm.nih.gov/pubmed/28326967
• Telehealth
  • In real time evaluation (VA in NC developing protocols for this)
  • Improves communication and problem solving
  • Allows for training and follow up, communication with remodeler etc
  • Currently not reimbursable from Medicare/Medicaid for OTs

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Older Driver Safety and OT

• CarFit
  • fitting the driver to the vehicle to maintain safety
  • Education related to vehicle safety features

• Driving Skills
  • Driving Rehabilitation Specialist
  • Evaluation safety to drive or need for further training and follow up
  • “Lost” driver prevention for drivers with dementia
  • Resuming driving after illness or injury

• Alternatives to driving
  • Evaluation of safe community mobility options
  • Training and support to change habits and routines
Funding sources for Occupational Therapy

• Medicare
• Medicaid
• Medicaid Waivers – Potential coming in WA Area Agency on Aging
• Commercial Insurance
• Private payment
• Lack of resources overall for the coverage for the amount of work involved.
What does the research say?

• **Well Elderly Study 2** (2011 NIH funded)
  - 460 older adults in socio-economically disadvantaged populations in LA area
  - Randomized controlled trial
  - OT Lifestyle Redesign program over 6 months including education and evaluation of home safety hazards.
  - Favorable changes in bodily pain, vitality, social functioning, mental health, composite mental functioning, life satisfaction and depressive symptomatology
  - Significantly greater increment in quality-adjusted life years
  - OT provides cost effective way to reduce health decline and promote well being in older population.
    - [http://jech.bmj.com/content/early/2011/06/01/jech.2009.099754.full#T1](http://jech.bmj.com/content/early/2011/06/01/jech.2009.099754.full#T1)
What does the research say? Cont

• CAPABLE Study
  • 281 older adults
  • Medicaid/Medicare demonstration program
  • OT, handyman and nurse
  • After 5 months
    • Improved performance in ADLs, IADL (grocery shopping, medication management etc)
    • Improved symptoms of depression
  • [link](http://content.healthaffairs.org/content/35/9/1558)
Higher hospital spending on OT is associated with decreased readmission rates (2016)

- Of 19 cost factors evaluated OT was only one that made a difference for patients with heart failure, pneumonia, and acute MI
- OT’s unique role in evaluation of function, social and environmental issues seen to contribute
- Home safety evaluations and home modification recommendations key feature
- Functional cognitive evaluations for issues like kitchen safety, medication safety
What does the research say? (Cont)

• **OT Home Safety Assessment** significantly reduces falls
  • 238 persons >70 yrs community dwelling in England, history of fall in past year RCT
  • Intervention: OT Home Safety Evaluation versus trained assessor
  • Followed over 1 year OT group had significantly less falls.

• **Home Hazards Removal Program (HARP)** study upcoming
  • 300 individuals randomized to OT Home Safety Evaluation, home modifications, safety education, facilitating social support
  • Results still coming but initial pilot positive on all outcomes
What does the research say? (Cont)

• **Systematic Review** 36 studies, multiple diagnoses, community dwelling older adults
  - Strong evidence for single and multicomponent interventions that included home modifications for reduction in rate and risk of falls
  - OT primary interventionist
  - Moderate evidence for improved caregiving for persons with dementia

• **Scoping Review** **Home Modifications for persons with Dementia**
  - Review of home modifications available
  - Outcomes improved from client centered and caregiver focused approach
  - Improved client task performance
  - Improved caregiver self efficacy
What does the research say? (Cont)

• HomECare Re-ablement Study
  • RCT first phase 30 persons older community dwelling person with medical concern/recent hospitalization
  • OT home safety evaluation, intervention and modifications vs trained enablement worker without OT input for 6 weeks
  • Outcomes: personal and extended ADL, quality of life, falls and use of health and social care services
  • Both improved but greater improvement in OT intervention group
Conclusion

• Occupational therapy is a vital part of the team that allows a person to age successfully at home

• Evidence shows that a Home Safety Evaluation by an OT can:
  • Decrease health decline
  • Reduce falls
  • Increase participation
  • Increase quality of life
  • Reduce hospital readmissions
  • Decrease costs

• The evaluation is tailored to the individual client and their context
Thank you!