alzheimer's association®
GREATER MICHIGAN CHAPTER

Institute of Gerontology

We Are Pleased to Present

National Speakers
Universal Issues

Issues in Aging

Virtual Event:
*Join us on **Zoom***

MONDAY • APRIL 19, 2021 • 9 AM - 3:40 PM

2021: *Team Approach to Frailty Care*

AGENDA:

8:45 am | Sign In

9:00 am | *Cannabinoids for Agitation in Dementia: Clearing the Smoke*

Krista Lanctot, PhD, Senior Scientist Sunnybrook Research Institute, Professor of Psychiatry and Pharmacology, and Vice-Chair, Dept. of Psychiatry, University of Toronto

10:25 am | 5 minute slide break

10:30 am | *Caregiving in Diverse Populations*

Sheria Robinson-Lane, PhD, RN, Asst. Professor University of Michigan, Dept. of Systems, Populations and Leadership

12:00 pm | Lunch & email check

12:30 pm | *Aging in Place: Key to Good Life*

Susan Stark PhD, OTR/L, Assoc. Professor Occupational Therapy, School of Medicine Washington University in St. Louis

2:00 pm | *Love is Listening: Dementia Without Loneliness*

Michael Verde, MA
Founder of Memory Bridge
Bloomington, Indiana

3:30 pm | Q&A and Evaluations

6 CREDITS FOR:

Social Workers • Nurses
Nursing Home Administrators
Occupational Therapists
OTAs • Physical Therapists
PTAs • Case Management
Educators &
General Attendance

Professionals $30
Student/Family Caregivers $15

REGISTER HERE

OBJECTIVES:

- Be aware of current treatments for agitation in dementia
- Know the pharmacologic rationale for cannabinoid use in dementia
- Describe results for the most recent nabilone trial
- Discuss national trends in caregiving
- Identify dementia-specific concerns related to caregiving
- Describe clinical implications and research directions
- Understand how the home environment can influence behavior
- Define home modifications
- Recognize the primary source of suffering of people with dementia is emotional isolation
- Recognize that the chief contributing factor to the emotional isolation of people with dementia
- Distinguish recognizing a unique person from caring for a "person with dementia"
- Describe the differences phenomenologically between "care" as an action verb and "care" as a being verb

Any questions?
Contact: Donna MacDonald
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www.iog.wayne.edu
www.alz.org/gmc

Refund Policy: Registrations accepted on a first-come, first-served basis. Substitutions are accepted at any time. No-shows and late cancellations will apply payment for this event to any future WSU, Institute of Gerontology event.

WAYNE STATE UNIVERSITY

2021 Issues In Aging

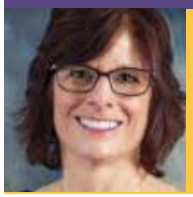
ANNUAL ONE-OF-A-KIND CONFERENCE

SAVE THE DATE
Nov. 5, 2021

This conference brings togather healthcare professionals, caregivers and those living with Alzheimer's into a shared conversation

A Meaningful Life with Alzheimer's Disease

Learn about state-of-the-art research, treatments and caregiving options for those living with cognitive decline. This is a collaboration between the WSU, Institute of Gerontology and the Greater Michigan Chapter of the Alzheimer's Association.



Alzheimer's Disease . . .
Diabetes of the Brain?
Scherrie Keating, RN
BSN, CDCES, CDC, NDPP, Life Coach, CDP

Impactful Caregiving - Step by Step
Jill Gafner Livingston
BSBM, CDP, CADDCT

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Stay up to date. View WSU, Institute of Geronotology lists at:
url will go here

Institute of Gerontology

Cannabis for Agitation in Sementia: Clearing the Smoke

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Research Summary:

Neuropsychiatric symptoms associated with illness include mood changes, apathy, aggression and cognitive changes. These are common sequelae of many central nervous system disorders such as dementia, traumatic brain injury, cerebrovascular disease and stroke. Dr. Lanctôt's goal is to optimize treatment of these neuropsychiatric symptoms.

Her research addresses this goal by determining the underlying neurobiology of neuropsychiatric symptoms, examining predictors of treatment response, using novel pharmacological agents and carefully considering adverse drug events. Dr. Lanctôt's early focus was on the neurobiology of behavioural disorders associated with dementia. The goal of this research was to determine if behavioural subtypes can be linked to underlying neurochemical or neuropathologic dysfunction. A variety of tools including neuroimaging, serum biomarkers and pharmacologic challenges are used in combination with pharmacotherapeutic trials. Her group also identifies and assesses novel pharmacologic, exercise and dietary interventions for neuropsychiatric symptoms.

This research will contribute to our understanding of the link between dysfunction in various neurotransmitters, proteins, lipids and metabolites and neuropsychiatric symptoms. As such, it may provide the background for novel therapies and allow Dr. Lanctôt's team to predict response to interventions based on neurobiological subtypes.

A second focus of her research evaluates the impact of pharmacologic treatments at a population level, which includes measuring relevant health outcomes and quality of life, and modelling cost-benefit, cost-effectiveness and cost-utility of pharmacotherapies.

Cannabis for agitation in dementia: clearing the smoke

Krista L. Lanctôt, PhD
Director, Neuropsychopharmacology;
Senior Scientist, Sunnybrook Research Institute;
Professor of Psychiatry and Pharmacology,
Vice-Chair, Basic and Clinical Science,
University of Toronto

UNIVERSITY OF TORONTO

Sunnybrook
HURVITZ BRAIN SCIENCES PROGRAM

Issues in Aging Conference, April 19, 2021

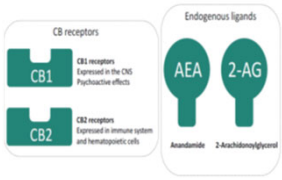
THE ENDOCANNABINOID SYSTEM (ECS)

CFPC CoI Templates: Slide 1

Faculty/Presenter Disclosure

- Relationships with commercial interests:
  - Grants/Research Support: Cerevel (paid to institution)
  - Speakers Bureau/Honoraria: none to declare
  - Consulting Fees: BioXcel Therapeutics, Inc., Cerevel Therapeutics, Praxis Precision Medicines, Kondor, ICG Pharma
  - Other: none to declare
- Not related to content of presentation

Endocannabinoid system (ECS)

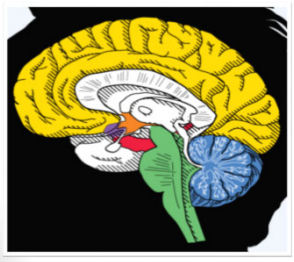


- widespread neuromodulatory system in the CNS
- comprised of cannabinoid receptors, endogenous cannabinoids (endocannabinoids)
- identification triggered exponential growth of studies exploring ECS as a possible therapeutic target

Learning objectives

- At the end of this presentation learners will:
  - list the major cannabinoid receptors and their functions
  - summarize the evidence supporting use of cannabinoids in Alzheimer's disease
  - describe new results on efficacy and safety of nabilone for treatment of agitation in dementia

Stimulation of the ECS has psychotropic effects



- Launch poll 1

Stimulation of the ECS has psychotropic effects

Cerebral cortex
- Altered consciousness, perceptual distortions, memory impairment, delusions & hallucinations

Hypothalamus
- ⇑ appetite

Brain stem
- Antinausea, ⇑ HR, ⇓ BP, drowsiness, ⇓ pain

Hippocampus
- Memory impairment

Cerebellum
- ⇓ spasticity, impaired coordination

Amygdala
- Anxiety +/-, ⇓ hostility

Available cannabinoids

Cannabinoid	MOA	Indication
dronabinol (Marinol ®)	• synthetic THC • CB1/CB2 partial agonist	Antiemetic Appetite and weight loss (AIDS)
nabilone (Cesamet ®)	• THC derivative • CB1/CB2 partial agonist	Antiemetic
THC and cannabidiol (Sativex ®)	• Cannabis extract • CB1/CB2 agonist + CB1 antagonist	Neuropathic pain in multiple sclerosis
THC (Namisol ®)	• pure natural THC (>98%)	n/a
Cannabidiol (Epidiolex®)	• CB modulator	Lennox-Gastaut syndrome and Dravet syndrome

Cannabis

- 2 major neuroactive components in cannabis
  - Δ9-tetrahydro-cannabinol (THC) psychoactive
  - cannabidiol (CBD) non-psychoactive
    - non-psychoactive indicates lack of a 'high'
- Different strains have different ratios
  - *C. sativa* usually has higher THC:CBD ratios than *C. indica*
  - *Sativa* strains often have more psychotropic effects, and are more stimulating
  - *Indica* strains are typically more sedating
- THC activates the endocannabinoid system
- CDB enhances endocannabinoid signaling
  - interacts with many non-endocannabinoid signaling systems: It is a "multi-target" drug

Devinsky et al 2014

CANNABINOIDS FOR AGITATION IN ALZHEIMER'S DISEASE (AD)

CBD and THC

- CBD may potentiate some of THC's effects
  - reduces THC's psychoactivity to enhance its tolerability and widen its therapeutic window
  - counteract some functional consequences of CB1 activation in the brain, possibly by indirect enhancement of adenosine A1 receptors activity
- preparations with high CBD:THC ratios are less likely to cause psychotic symptoms compared to low CBD:THC ratios

Devinsky et al 2014

CB1 and CB2 activation in Alzheimer's disease (AD): possible benefits

Clinically
- Mild sedation
- Anti-anxiety
- Increase appetite
- Decrease pain
- Improve agitation?

Pathological processes
- Endocannabinoid signaling modulates numerous AD pathological processes [Aso & Ferrer 2014]
  - neuroinflammation
  - excitotoxicity
  - mitochondrial dysfunction
  - oxidative stress
- Loss of endogenous cannabinoids in AD leads to loss of protection from excitotoxicity

Reviewed by Liu et al, 2016

What is the prevalence of agitation in persons with Alzheimer's?

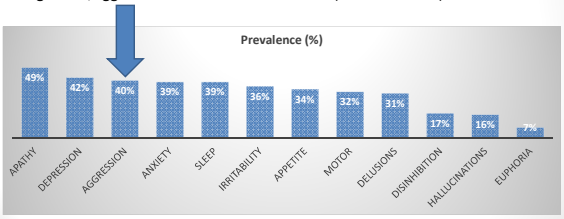
LAUNCH POLL 2

Agitation–impact

- Caregivers
  - caregiver burden [Rabins et al 1982, Nygaard 1988, Keene 1999]
  - institutionalization [Steele et al 1990, Cohen 1993, Okura 2011]
  - principal management problem in nursing homes [Cohen-Mansfield 1986]
- Patients
  - physical restraints [Evans 1988]
  - health problems (falls & weight loss) [Merriam et al 1988, Marx 1990]
  - functional decline [Lopez et al 1999]
  - risk of death [Walsh et al 1990, Allen et al 2005]

Agitation as a treatment target: Prevalence

- Meta-analysis of 48 studies in AD
- Agitation/aggression is common in AD – 40% (95% CI 33-46%)



Zhao et al., 2016

Agitation is well-defined in AD

- Diagnostic criteria for agitation in cognitive disorders:
  - in patients with cognitive impairment or dementia
  - behavior consistent with emotional distress
  - manifesting excessive motor activity, verbal aggression, or physical aggression
  - cause excess disability and are not solely attributable to another disorder (psychiatric, medical, or substance-related)


Agitation in cognitive disorders: International Psychogeriatric Association provisional consensus clinical and research definition

Cummings et al, 2015

Agitation is common in AD

- 10% in people with mild cognitive impairment [Ryu et al 2011]
- 15% in people with dementia presenting to memory clinics [Brodaty et al 2015]
- 30% in those living in the community [Borsje et al 2015, Lyketsos et al 2002]
- 20%–50% of those with moderate-to-severe AD experience agitation [Lyketsos et al 2002, McKeith & Cummings 2004, Pitalka et al 2004]

The unmet need

- Nonpharmacologic interventions
  - First line therapy for agitation
  - Nonresponders
  - Limited efficacy for severe agitation
- Pharmacotherapy
  - No medications that are both safe and efficacious

Cannabinoids trials in AD

THC—2 negative trials
- N=22 dementia and NPS, double-blind, repeated cross-over, 2 wks, no change NPS (van Den Elsen 2015a)
- N=24 dementia and NPS, double-blind 6 wk RCT, no change NPS (Van den Elsen 2015b)

Dronabinol (synthetic THC)—positive trials, few study participants/short duration
- 11 anorexic + AD, cross over 2.5 mg/d for 6 weeks, ⇓ CMAI agitation 2°, tolerability issues (Volicer et al 1996)
- 24 AD + agitation, 2.5 mg/d for 2 weeks (n=7), ⇓ nocturnal motor activity, tolerated (Mahlberg et al, 2007)
- 2 AD + nighttime agitation, cross-over 2.5 mg/d for 2 weeks, ⇓ nocturnal motor activity, tolerance (Walther et al., 2011)

Nabilone (THC analogue)—no trials
- Case study (N=1), AD + NPS, 0.5 mg BID x 6 wks, ⇓ agitation, well tolerated (Passmore, 2008)

Nabilone trial


ScienceDirect

Regular Research Article

Randomized Placebo-Controlled Trial of Nabilone for Agitation in Alzheimer's Disease

- Double blind, placebo-controlled, cross-over trial in 38 patients with agitation and AD
- efficacy and safety of nabilone (1-2 mg/d) versus placebo (6 weeks each)

Société Alzheimer Society CANADA

Alzheimer's Drug Discovery Foundation

CBD trials in AD

Efficacy
- No trials
- in Parkinson's disease, 400 mg/day of CBD was shown to decrease psychotic symptoms over 4 weeks (Zuardi 2009), improve sleep disturbances (Chagas 2014) and improve quality of life (Chagas 2014)

Intervention

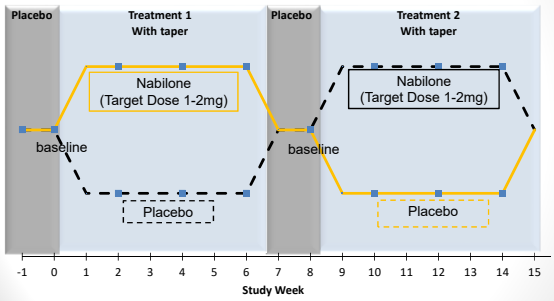
- nabilone
  - synthetic derivative of THC
  - CB1 and CB2 partial agonist
  - high oral bioavailability
  - duration of action 8-12 hours, given b.i.d.
  - marketed for nausea and vomiting associated with chemotherapy
- target dose 1-2 mg/d
  - Week -1: placebo run-in
  - Week 0: 0.25 mg qhs x 3 nights, then 0.25 mg BID for four days
  - Week 1: 0.5 mg once daily
  - Week 2: 0.5 mg BID (1 mg/d)
  - Weeks 3-4: increased to a maximum of 1 mg BID (2 mg/d total) or decreased based on tolerability
  - that dose maintained until down-titration

THE NABILONE TRIAL FOR AGITATION IN AD

Study Participants (n=39)

Inclusion	Exclusion
• ≥55 years of age • Diagnosis of AD or mixed AD (major NCD) • Moderate-to-severe stage dementia (sMMSE ≤24) • Clinically significant agitation (NPI A/A ≥4) • Stable dose of cognitive enhancer (≥ 3 months)	• Change in psychotropic medications (≤1 month) • Contraindications to nabilone (history of hypersensitivity to cannabinoid) • Delusions or hallucinations • Current significant cardiovascular disease • Other psychiatric/neurological conditions, previous or current abuse of/dependence on marijuana

Study Design



Patient characteristics (n=38)

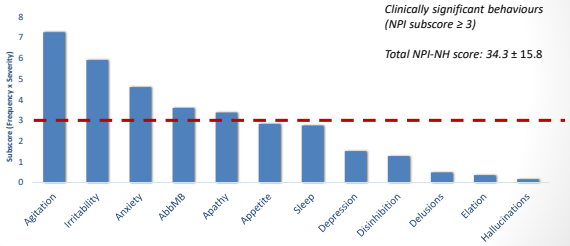
Baseline Characteristics	
CMAI	67.9±17.6
Met IPA criteria for agitation	97%
NPI-NH total	34.3±15.8
NPI-NH agitation/aggression	7.1±3.3
NPI-NH total caregiver distress score	12.7±7.9
MMSE	6.5±6.8
CGI severity	
Moderately ill	50%
Markedly ill	29%
Severely ill	18%
Extremely ill	3%

Primary Outcome
- Agitation (CMAI)

Secondary Outcomes
- Behaviour (NPI-NH)
- NPI-NH aggression/agitation
- Cognition (sMMSE, ADAS-cog or SIB)
- Global Change (CGIC)
- Caregiver distress (NPI-NH)
- Safety (TEAE and drop-outs)

Exploratory Outcomes
- Pain (PAIN-AD)
- Nutritional Status (Mini-Nutritional Assessment-SF)

Neuropsychiatric Symptoms (NPI-NH)



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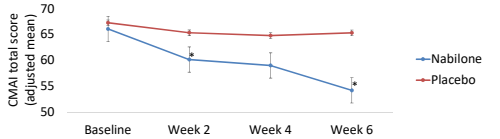
Patient demographics (n=38)

Baseline Demographics	
Age	87±10
Sex (%M)	77%
% inpatient	72%
No. concomitant psychotropic medications	1.8±0.7
antidepressant	87 %
cholinesterase inhibitor	53%
atypical antipsychotic	45%
memantine	29%
benzodiazepine	5%

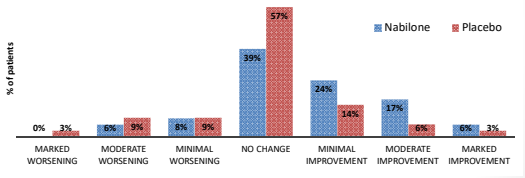
Agitation improved significantly during nabilone compared to placebo phase



- estimated treatment difference [95% CIs] on CMAI was b= -4.0 [-6.5 to -1.5], p=0.003 favouring nabilone
- no cross-over effect (t(32)=1.6, p=0.11), no treatment order effect (t(31)=0.2, p=0.85)
- *significant differences
  - Week 2--nabilone: 62.5±19.2 versus placebo 68.3±16.3, (t(32)= -2.39, p=0.03);
  - Week 6/endpoint-- nabilone: 55.8±15.9 versus placebo: 65.9±13.7, (t(32)=-3.8, p=0.001)

CGIC during nabilone versus placebo phases

- CGIC "minimal" to "marked" improvement (McNemar's test, p=0.09)
  - 47% improved during nabilone
  - 23% improved during placebo



Tolerability

- mean nabilone dose 1.6±0.5mg/day
  - 53% 2 mg/day, 13% 1.5 mg/day, and 34% 1 mg/day
- more sedation during nabilone (17 vs. 6 McNemar's test, p=0.02)
  - no differences in treatment-limiting sedation (5 vs. 1 McNemar's test, p=0.22)
  - did not contribute significantly to response
- no difference in
  - falls (8 vs. 7 McNemar's test, p=1.0)
  - SAEs (5 vs. 4 McNemar's test, p=0.69)
  - study discontinuations (3 vs. 2 McNemar's test, p=0.08)
  - deaths (1 vs. 1)

Agitation–secondary outcomes

- NPI-NH total significantly lower (b= -4.6 [-7.5 to -1.6], p=0.004) during nabilone
- NPI-agitation/aggression was significantly lower (b=-1.5 [-2.3 to -0.62], p=0.001) during nabilone
- NPI-NH total caregiver distress scores were significantly lower (b= -1.7 [-3.4 to =0.7], p=0.041), during nabilone
- CMAI IPA subdomain scores (physical aggression + physical nonaggression + verbal aggression) treatment difference also favoured nabilone over placebo (b= -3.8 [-5.8 to -1.7], p=0.001)

Weight loss and pain

Weight loss

- common in AD
  - About 1/3 of patients with AD, with risk increasing as the disease progresses
- consequences
  - loss of muscle mass and strength, greater risk of falls, more functional dependence and lower quality of life
- associated with agitation

Pain

- common in AD [Pickering et al 2000] but difficult to identify [Herr 2001]
- may be undertreated [Pickering 2000, Herr 2001]
- associated with agitation [Husebo et al 2011, 2013]

Cognition

- significant difference in cognition (MMSE) (b= 1.1 [0.1 to 2.0], p=0.026) that favoured nabilone
  - MMSE ≤15 (n=25), there was a significant difference in SIB score (b= -4.6 [-7.3 to -1.8], p=0.003), that favoured placebo
  - ADAS-Cog scores (n=3) not analyzed

Results: PAIN-AD

- PAINAD: The total score ranges from 0-10 points
  - 1-3=mild pain; 4-6=moderate pain; 7-10=severe pain
  - ranges based on a standard 0-10 scale of pain, but have not been substantiated in the literature for this tool
- Baseline average 2.6±1.4
- There were no treatment differences on the PAINAD scale (b= 0.03 [-0.22 to 0.27], p=0.82)

Results: MNA-SF

- MNA-SF: Max 14 points.
  - 0-7 malnourished; 8-11 at risk of malnutrition; 12-14 normal
- Baseline average 8.7±2.9
- There were significant treatment phase differences on the MNA-SF score (b= 0.2 [0.02 to 0.4], p=0.03), favouring nabilone
- Average baseline weight: 67.9±14.1 kg
- No significant difference in weight change (kg) (b=0.01 [-0.69 to 0.71], p=0.97)

Responder Analysis: NPI

	CGI Responder (n = 17)	CGI Non-responder (n = 19)	T or χ^2	df	P-value
Delusions	0.6 ± 1.1	0.5 ± 1.1	-0.306	34	0.762
Hallucinations	0.2 ± 0.8	0.2 ± 0.5	-0.367	34	0.716
Agitation	6.7 ± 3.0	8.2 ± 3.1	1.538	34	0.133
Depression	2.4 ± 3.3	0.7 ± 1.4	-2.062	34	0.047
Anxiety	6.8 ± 4.5	2.9 ± 3.8	-2.798	34	0.008
Elation	0.8 ± 2.1	0 ± 0	-1.618	16	0.125
Apathy	4.7 ± 3.2	2.4 ± 3.4	-2.052	34	0.048
Disinhibition	0.9 ± 1.8	1.4 ± 2.7	0.697	34	0.491
Irritability	6.5 ± 3.1	5.7 ± 4.3	-0.580	34	0.566
Aberrant Motor Behaviour	4.4 ± 4.5	3.1 ± 3.7	-0.913	34	0.368
Sleep	2.6 ± 4.3	3.2 ± 3.5	0.477	34	0.636
Appetite	3.3 ± 4.3	2.2 ± 3.4	-0.929	34	0.359
Total	39.8 ± 16.4	30.5 ± 14.6	-1.809	34	0.079

Responder Analysis: demographics and vitals

	CGI Responder (n = 17)	CGI Non-responder (n = 19)	T or χ^2	df	P-value
Male	11 (64.7%)	16 (84.2%)	1.820	1	0.255
Age	83.0 ± 12.3	90.2 ± 7.2	2.098	25.3	0.046
Weight in kg	70.7 ± 13.7	65.1 ± 15.0	-1.169	34	0.250
Height in cm	167.5 ± 8.8	164.2 ± 12.3	-0.904	34	0.373
BMI	25.2 ± 4.4	23.9 ± 3.7	-0.967	34	0.341

Biomarkers of nabilone response

- Oxidative stress and neuroinflammation
  - mechanistically relevant for ECS
  - cytokines previously associated with agitation [Ruthirakuhan et al 2018]
  - lower baseline TNF-α associated with decreases in agitation in the nabilone phase only (b=1.14, p=.045)
- 24-S-hydroxycholesterol (cerebrocholesterol (CChol))
  - elevated brain cholesterol (reduced serum CChol), associated with reduced membrane fluidity, preventing ligand binding to CB1
  - reduction in the production of CChol due to neuronal cell death
  - CChol associated with baseline agitation (CMAI IPA) (F(1,36)=4.95, p=.03)
  - did not predict response to nabilone

Ruthirakuhan et al 2019a, b

Responder Analysis: Baseline scales

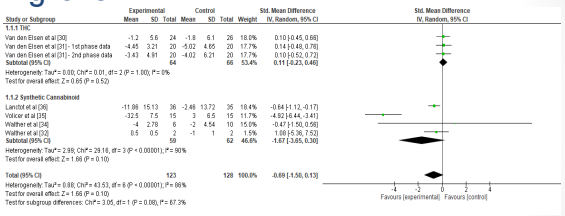
	CGI Responder (n = 17)	CGI Non-responder (n = 19)	T or χ^2	df	P-value
sMMSE	8.7 ± 7.8	4.6 ± 5.4	-1.785	32	0.084
CMAI Total	74.4 ± 17.0	63.8 ± 16.9	-1.866	34	0.071
Physical Aggressive	21.9 ± 11.2	22.4 ± 11.6	0.112	34	0.911
Physical Non-aggressive	25.7 ± 8.2	22.7 ± 8.1	-1.106	34	0.277
Verbal Aggressive	8.1 ± 3.8	8.1 ± 3.7	-0.005	34	0.996
Verbal Non-aggressive	18.7 ± 6.8	10.7 ± 4.7	-4.146	34	<0.0005
MNA-SF	8.4 ± 3.0	9.1 ± 2.8	0.717	34	0.479
PAIN-AD	3.3 ± 1.3	2.2 ± 1.4	-2.561	34	0.015

Study summary

- placebo controlled double-blind cross-over trial
  - no significant carry-over or treatment order effects detected
  - nonpharmacological interventions before trial, placebo run-in and washout, variable dose
- nabilone treatment was associated with a significant reduction in agitation over 6 weeks
- tolerability good
  - increased sedation warranting cautious dosing
  - questions remain regarding cognitive effects
- pilot study with a relatively small sample size
- signal and feasibility support future studies

Lanctôt et al 2019

Meta-Analysis of Cannabinoids for Agitation



- no effect as a group on agitation (standard mean difference: -0.69, P = .10)
- significant heterogeneity (χ^2_6 = 43.53, P < .00001, I^2 = 86%)
- trend for greater difference in agitation with synthetic over THC (χ^2_1 = 3.05, P = .08)
- larger effect on agitation with greater cognitive impairment (B = 0.27, t_6 = 2.93, P = .03)

Ruthirakuhan et al 2019

Survey of elderly cannabis users

Subject characteristics at intake visit	
Sample size	9,766
% Female	60%
Age (mean (SD))	73.2 y (6.8)
Prior cannabis use (n=7,230)	15.5%
Disorder system – Pain	67.7%
-- Oncological	10.1%
-- Psychiatric	7.9%
-- Neurological	7.0%
-- Others	7.3%

- Data from commercial medical cannabis provider based in Canada Oct 2014 to Oct 2020
- 9766 older users (23.1% of sample)
- Most (67.7%) referred for chronic pain. Neurological and psychiatric disorders in 14.9%
  - 44.5% OTC analgesics
  - 21.4% on antidepressants
  - 12.3% benzodiazepines

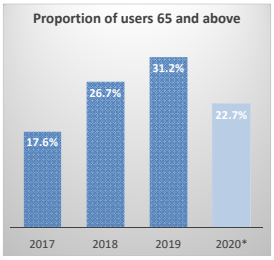
Tumati et al 2021

Nabilone for Agitation Blinded Intervention Trial

- Treating agitation in patients with Alzheimer's disease
- Multi-centre, randomized, parallel-group placebo-controlled study (n=108)
- 1-2mg of nabilone over 8 weeks
- Investigators
  - K Lanctôt (PI), N Herrmann (co-PI), G Marrotta (QI), SE Black, A Burhan, D Gallagher, Z Ismail, D Seitz, B Pollock, T Rajji
- 5 sites: Toronto (3), Whitby, Calgary
  - CCNA Team 11 LTC Facilities

√ Launch Q1 2021

Proportion of elderly users increasing



86% use cannabis oil			
	Almost exclusively CBD	Mostly CBD, some THC	Equal parts CBD and THC
N	**2,733**	**1,844**	1466
%	**45.2 %**	**30.5 %**	24.3 %

*fewer subjects in 2020 sample: 8,869 in 2019 to 5,644 in 2020

What do you think is the major reason for using medical marijuana among elderly?

LAUNCH POLL 3

Cannabidiol (CBD)

- CNS effects
  - neuroprotective [reviewed in Watt & Karl, 2017]
  - anxiolytic [reviewed in Margallo-Lana et al., 2001]
  - analgesic [reviewed in Boychuk, Goddard, Mauro, & Orellana, 2015]
  - anticonvulsive, sedative, antipsychotic, antiinflammatory and neuroprotective properties [Scuderi et al 2009]
- Safety
  - CBD is metabolized by cytochrome P450 enzymes 3A4 and 2C19 [Alsherbiny 2018]
  - *in vitro* and *in vivo* data suggest that CBD can inhibit CYP1A2, CYP2C19 and CYP3A4, which may result in drug-drug interactions [Alsherbiny 2018, Qian 2019]
  - clinical relevance yet to be established

Summary

- increasing interest in the use of cannabinoids as a therapeutic intervention in dementia, particularly for agitation
- pharmacologic rationale exists for use of cannabinoids
- limited studies assessing the efficacy of THC and related compounds for agitation
- recent trial of a nabilone for agitation shows promise
  - efficacy, but concerns around sedation
- ongoing trials

The WALLET Study:
A Study of Memory Change and Money Management

The IOG study — WALLET (Wealth Accumulations & Later-life Losses in Early cognitive Transitions) — is recruiting men and women age 60 and older who manage their own household finances, but feel like their memory is slipping. All screenings done remotely. To learn more, CLICK HERE
Questions?
Contact Vanessa at 313-664-2604 or vrorai@wayne.edu

Participants will be **compensated**

•

All financial records will be de-identified and information kept **confidential**

•

Interviews will take place **over the telephone**

Peter Lichtenberg, PhD
Principle Investigator
and Director of the
Institute of Gerontology
Wayne State University

Institute of Gerontology

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Caregiving in Diverse Populations

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grices@med.umich.edu

Interests:

- Gerontology
- Health disparities
- Informal caregiving for dementia
- Adaptation and coping
- Mixed-methods

Dr. Sheria Robinson-Lane is a gerontologist with expertise in palliative care, long-term care, and nursing administration. She has focused her career on the care and support of older adults with cognitive and/or functional disabilities. Dr. Robinson-Lane is interested in the ways that older adults adapt to changes in health, and particularly how adaptive coping strategies effect health outcomes. Her research is focused on reducing health disparities for minority older adults with cognitive impairments and their informal caregivers. Prior to coming to coming to the University of Michigan School of Nursing, Dr. Robinson-Lane completed an NIH-funded advanced research rehabilitation training program in community living and participation with the University of Michigan Medical School.

Caregiving in Diverse Populations

Sheria Robinson-Lane, PhD, RN, MHA
Assistant Professor
Department of Systems, Populations, and Leadership
University of Michigan School of Nursing

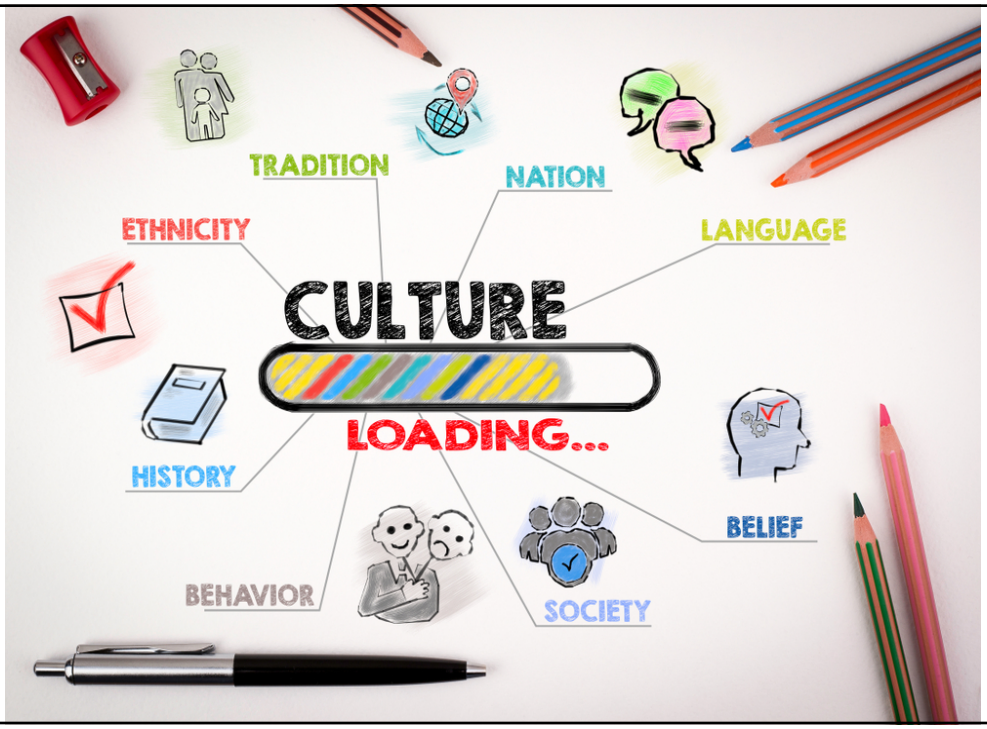
Funding

- Michigan Center for Urban African American Aging Research (P30AG015281)
- UMSN Center for Complexity and Self-Management of Chronic Disease (P20NR015331)
- Michigan Alzheimer's Disease Research Center/ Claude D. Pepper Older American Independence Center (P30AG053760/ P30AG024824)
- National Institute on Aging (K01AG06542001A1)

Objectives

- Discuss national trends in caregiving
- Identify dementia specific concerns related to caregiving
- Describe clinical implications and research directions

Describing Diverse Populations: Race and Ethnicity



"…if you look back in slavery days…all we had was each other to keep each other going. From young to old, we took care of everyone. I think that's what we had to do. We were there for the sick. We were there for the babies. We were there for the White people's babies…I think it's just the caring nature that's just in us, that just passed from generation to generation."

The Meanings African American Caregivers Ascribe to Dementia-Related Changes: The Paradox of Hanging on to Loss

Allison Lindauer, PhD, APRN, Theresa A. Harvath, PhD, RN, FAAN, Patricia H. Berry, PhD, RN, ACHPN, FPCN, FAAN, Peggy Wros, PhD, RN Author Notes

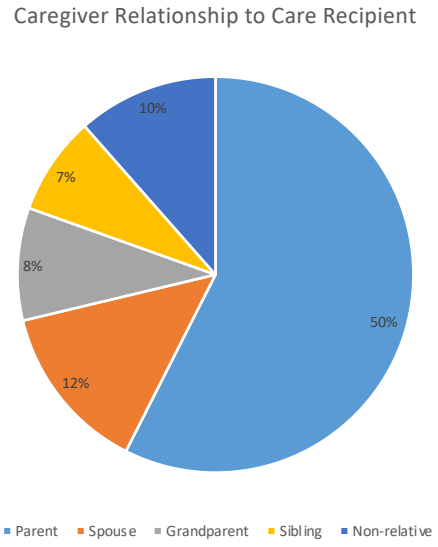
16 Million Caregivers

Age and Caregiving

	Caregiver Age			
	18-49 (n=552)	50-64 (n=546)	65-74 (n=217)	75+ (n=237)
Recipient age 50-74	56%	23%	38%	21%
Recipient age 75+	25%	65%	53%	74%

Caregiving in the US 2020

Caregiving Relationships



Caregiving in the US 2020

4.5 Years

Types of Assistance Provided

Instrumental Activities of Daily Living	Activities of Daily Living
• Telephone Use • Shopping • Transportation • Paying Bills • Preparing Meals • Laundry • Housework • Taking Medications	• Getting in and out of bed and chairs • Getting dressed • Using the toilet • Bathing or showering • Feeding • Dealing with incontinence

Dementia family caregiving is associated with the **most** negative health outcomes

Health Disparities

Preventable differences in disease burden, injury, violence, or opportunities to achieve optimal health:

- Disease risk
- Diagnosis
- Disease progression
- Treatment response
- Caregiving
- Access to care
- Quality of life
- Education
- Socioeconomic status
- Lifetime and lifestyle differences

Black Dementia Family Caregivers

- High intensity care
- Long care trajectories
- Increased likelihood of:
  - poor health
  - lower income
  - future dementia diagnosis
  - premature death

Black Dementia Family Caregivers

- Increased risk for Alzheimer's disease and other cognitive impairments
- Dementia related diagnoses late stage
- Income variances that affect care options
- Lower Education
- Lower Income
- Increased co-morbidities and overall disease burden

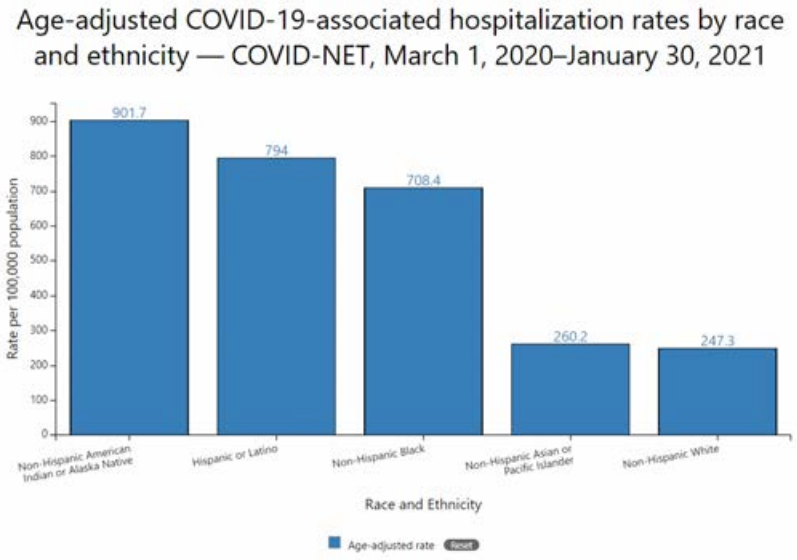
Black Dementia Family Caregivers

- Poor Utilization of Support Services
  - geographical constraints
  - health system membership requirements
  - disease state specific
  - not culturally responsive in design

Dementia Family Caregiving Concerns

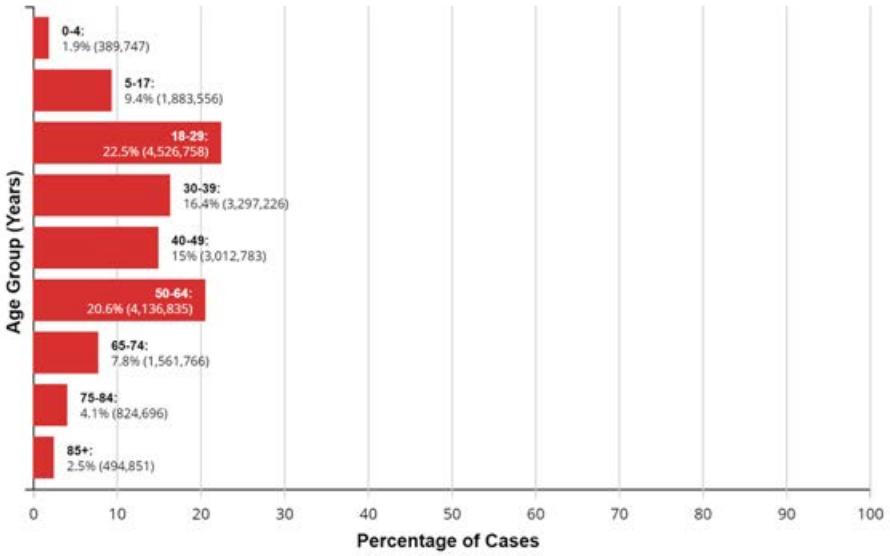
- Hypertension
- Obesity
- Diabetes
- Depression
- Worsening overall health

COVID-19 Hospitalizations



cdc.gov/coronavirus

COVID-19 Mortality by Age



COVID.CDC.gov

Social Isolation and Loneliness Risk

Behavioural Science Section / Mini-Review

Loneliness and Health in Older Adults: A Mini-Review and Synthesis

Ong A.D.[a] · Uchino B.N.[c] · Wethington E.[a, b]

Author affiliations

Corresponding Author

Keywords: Mortality · Loneliness · Social isolation · Older adults · Health · Morbidity

Gerontology 2016;62:443-449

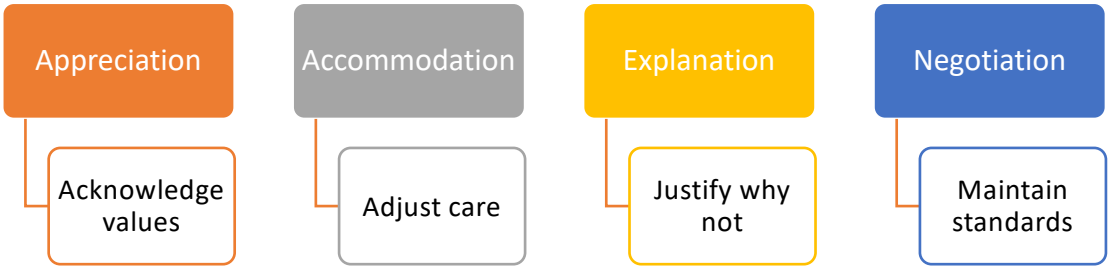
- Single Women
- Few social contacts
- Worsening Health
- Limited Education
- Low Income

Social Isolation Effects on Health

- Decreased Gait Speed
- Poorer Cognition
- Depression
- Worsening Health
- Impaired day-time functioning
- Poor Sleep Quality
- Increased Death

A Closer Look at Risk: Health Disparities

Culturally Congruent Care



(Schim & Doorenbos, 2010)

Culturally Responsive Protocols

1. Engage focus groups prior to study implementation
2. Consider population "facts" and evaluate for bias
3. Implement targeted recruitment strategies
4. Managing hard-to-reach populations

Connect to the Right Support

- Available support services vary by county
- Families often unaware of available programs
- Key resources:
  - Area Agencies on Aging
  - Senior Centers
  - Houses of worship
- Use low level tech to stay connected
- Complete advance directives

Recognize Assist Include Support and Engage (RAISE) Family Caregivers Act of 2018

Family Caregiver Advisory Council

- Promote person/family centered care
- Engage person/family in assessments and service planning
- Improve dementia education
- Expand respite options
- Reduce financial insecurity

National Alliance for Caregiving 2021

Next Steps

- Investigate relationships between health and adaptive coping strategies
- Leverage technology as a tool to provide education, connect caregivers with one another, and identify resources
- Develop community informed interventions

Thanks to the TEAM

Project Manger
Kayla DeMarco

Research Assistant
Nicholas Mazzara

UROP Students
Jada Jackson
Jessica Lipchin
Rachel Zhang

Doctoral Student
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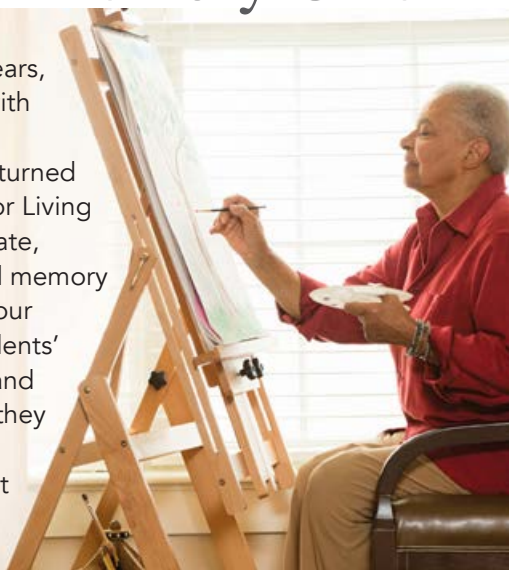
Trusted Memory Care



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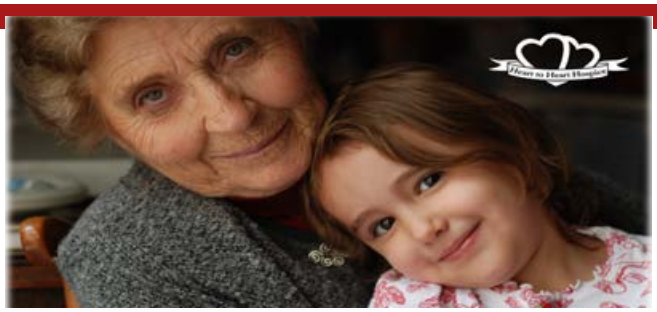

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Successful Aging thru' Financial Empowerment (SAFE) and its research is supported by grants from: National Institute of Justice, Foundation for Financial Health, Michigan Aging and Adult Services PREVNT program, Michigan Health Endowment Fund, State of Michigan, Wayne State University Technology Commercialization, American House Foundation and the Mery Thompson Foundation.

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Aging in Place: Key to Good Life

Susan Stark, PhD, OTR/L, FAOTA
Associate Professor of Occupational Therapy,
Neurology and Social Work
Washington University, St. Lious

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Clinical Interests:
Home modification interventions to support aging in place, implementation of evidence-based interventions

Research Interests:
Community dwelling older adults with chronic health conditions face functional decline that impacts their ability to live independently. They are more likely to require assistance performing their daily activities and are at a substantially greater risk of falling. Compensating for impairments with environmental support and self-management strategies can lessen the impact of functional decline, reduce the risk of falling and reduce the demand on health systems and care-givers. Dr. Stark's clinical translational research seeks to develop and test the efficacy and effectiveness of compensatory interventions aimed at improving an older adults ability to age at home safely, elucidate their mechanism of action and implement programs to improve health outcomes.

Wayne State
Institute of Gerontology
Issues in Aging

MONDAY • APRIL 19, 2021

Aging in Place: Key to Good Life

Susy Stark, PhD

Disclosures

No Stocks or business interests

No Speakers bureaus

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National Institutes of Health (NIH) NCATS TL1TR002344-01

NIH, NIA 1UH2HL125141-04

US Department of Housing and Urban Development MOHHU0040

National Institute on Disability, Independent Living, and Rehabilitation Research: 90DPCP0001-01-00

NIH, NICHD, R01 1R01AG057680-01A1

National Alzheimer's Collaborating Center 2017-01

I practiced as a **home care therapist** before becoming a clinical translational scientist

My lens: how the **environment can influence behavior**.

I began my career developing evidence to support **home modifications** for people with disabilities (adults and older adults).

I grew up in Alma, Michigan!

Susy Stark, 2021

Overview for today

Falls and function
Home modifications to improve function
Home Hazard Removal to prevent falls

Susy Stark, 2021

"aging in place"

The vast majority of older adults want to age in place, so they can continue to live in their own homes or communities.

Where do older adults live?

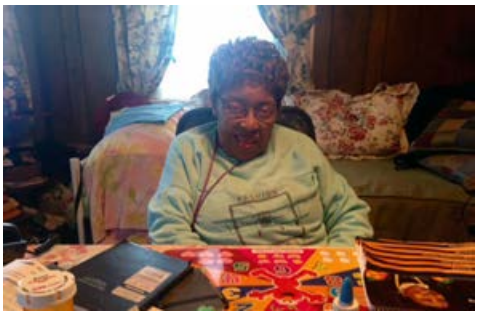
4% live in institutions

(nursing homes)

2.4% live in situations with supportive services

Most live "at home"

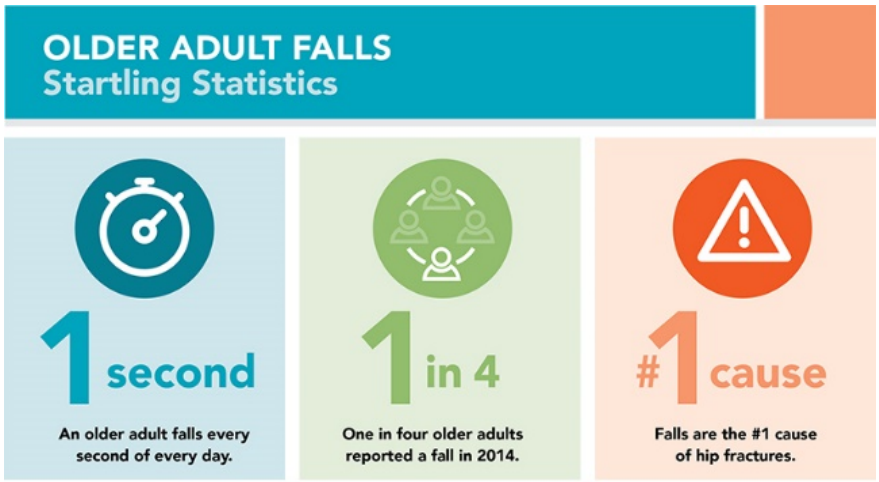
90% of older adults live in single-family homes and apartments; 80% own them



50% of older adults have lived in current home for 25+ years

One third live alone

Falls are prevalent and debilitating



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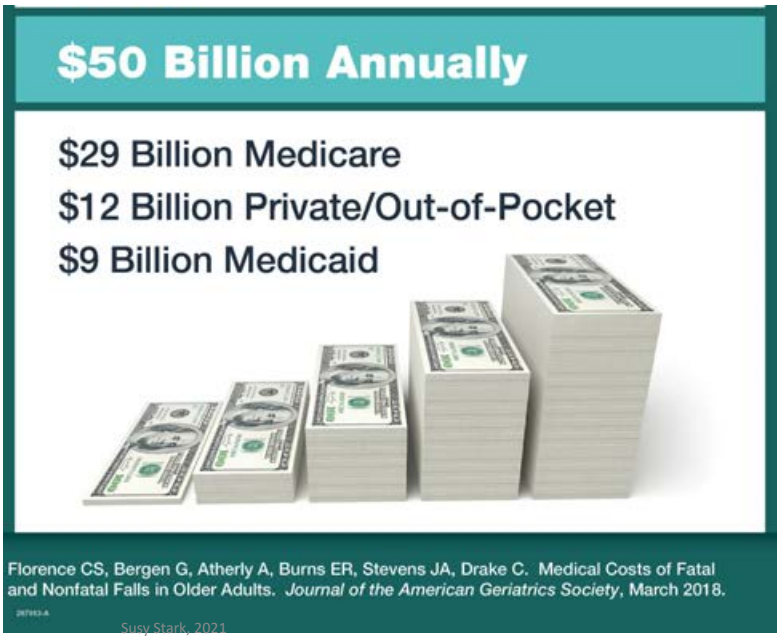
Falls are costly



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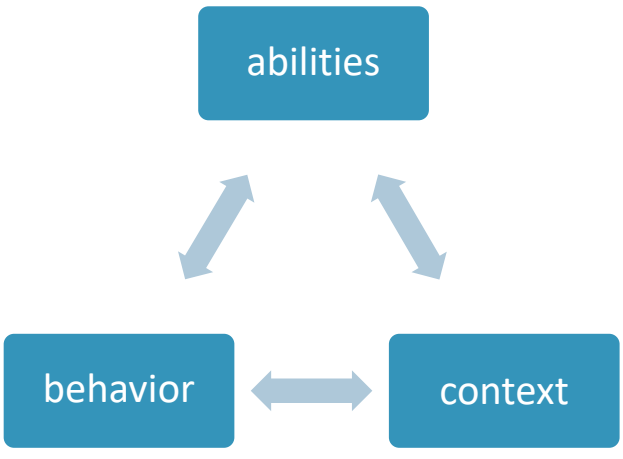
Falls are deadly

Susy Stark, 2021

Factors contributing to falls



5/11/16 Huff Post

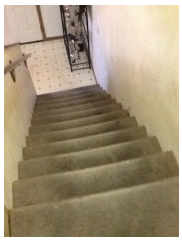
Susy Stark, 2021

Number of risk factors predicts fall risk

If your number of health problems is:	Your chance of falling is:
0	(1 person in 10 will fall)
1	(2 people in 10 will fall)
2	(3 people in 10 will fall)
3	(6 people in 10 will fall)
4 or More	(8 people in 10 will fall)

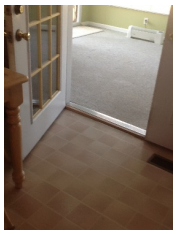
http://www.yalescientific.org/2010/04/the-genius-behind-fall-prevention/

Barriers in the home

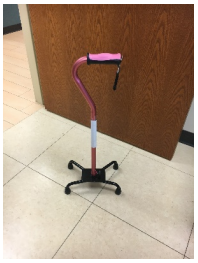


Lack of railings, low contrast

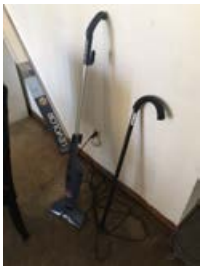
narrow doorways, thresholds, mats/rugs, objects reducing space



Home modifications



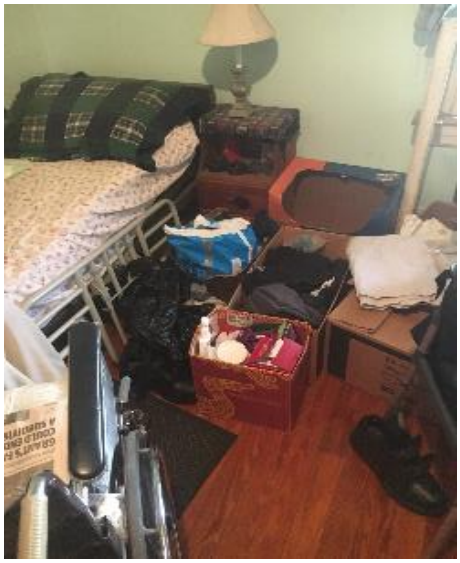
Pink cane for increased contrast and improved adherence



Bidet for independent toileting

Before

After



Getting in and out of bed

- Arthritis (no functional mobility)
- Stand-pivot transfers or uses a walker

Going up and down the stairs
- Cataracts
- R side Hemiparesis

Accessible units sometimes pose barriers

Susy Stark, 2021

People report having modifications, but they could be risky

Assessment needs to be in the home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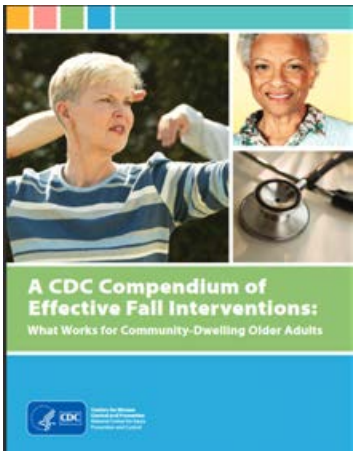
Sometimes barriers are family made!

Before

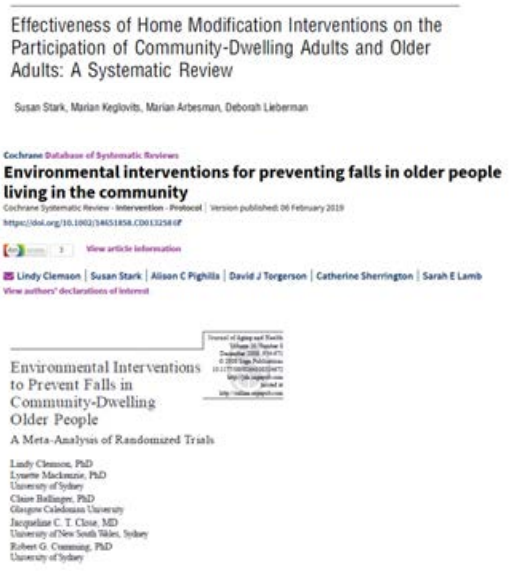
After

Does removing home hazards reduce falls?



YES

What works?


Effectiveness of Home Modification Interventions on the Participation of Community-Dwelling Adults and Older Adults: A Systematic Review

Susan Stark, Marian Keglovits, Marian Arbesman, Deborah Lieberman

Cochrane Database of Systematic Reviews

Environmental interventions for preventing falls in older people living in the community

Lindy Clemson | Susan Stark | Alison C Pighills | David J Torgerson | Catherine Sherrington | Sarah E Lamb

Environmental Interventions to Prevent Falls in Community-Dwelling Older People

A Meta-Analysis of Randomized Trials

- ✓ **assessment** of an individual's **abilities**, the home **environment** and performance goals
- ✓ **intervention plan** to remediate barriers
- ✓ **implementation** or supporting the implementation of the plan
- ✓ **training** the client or caregiver to complete their daily activities using the environmental support

Susy Stark, 2021

A Randomized Controlled Feasibility Trial of Tailored Home Modifications to Improve Activities of Daily Living and to Prevent Falls

Emily Somerville, MSOT, OTR/L
Marian Keglovits, OTD, MSCI
Danielle Cobbs, OTD
Jane Conte, Med

Hu, Yi-Ling, MSOT,
Carpenter, Christopher, MD, MSc,
Hollingsworth, Holly, PhD,
Yan, Yan, MD, PhD.

Department of Housing and Urban Development (HUD) Grant #MOLHH0196-09 and the Barnes Jewish Hospital Foundation

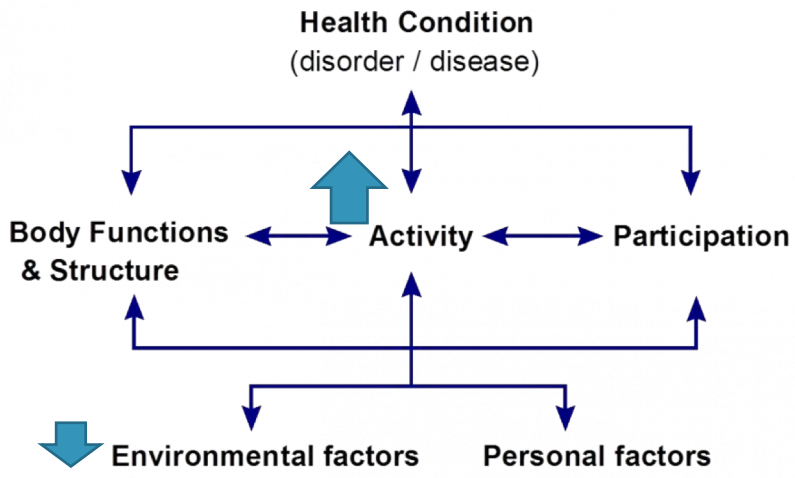
Susy Stark, 2021

Home modifications to reduce falls?

- One-half of falls occur in the home (each room of the house); Environmental factors are implicated in up to 53% of falls among community-dwelling older adults
- Diminished ADL ability is closely associated with falls; ADL status diminishes after a fall
- ADL performance is modifiable
- One highly effective intervention to improve ADL performance and prevent falls is providing environmental supports such as home modifications

Susy Stark, 2021

Enablement theory: ICF



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Purpose

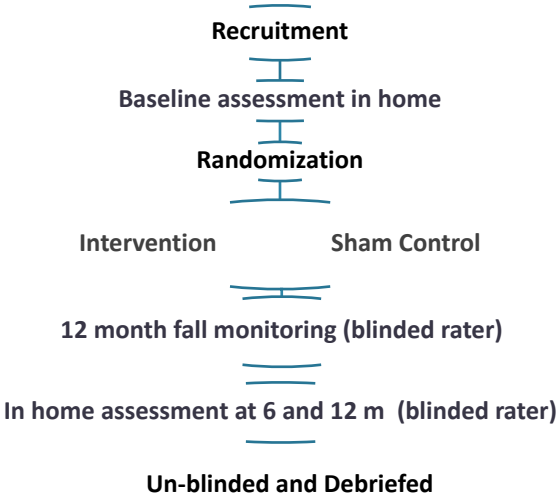
Focus on environment's role in the relationship between falls and ADL function

Examine the efficacy of a home modification intervention targeting ADLs on the outcome of

- Risk (and rate) of falls (prospectively collected)
- Fear of falling
- ADL

Susy Stark, 2021

Double blind, Sham control trial design



Susy Stark, 2021

Participants

Inclusion

Fall within 1 year

65 years of age or older

Community dwelling (45 mile radius)

1 or more ADL/IADL difficulty

Mobility impairment

Exclusion

Chronic substance abuse (Short Michigan Alcoholism Screening Test)

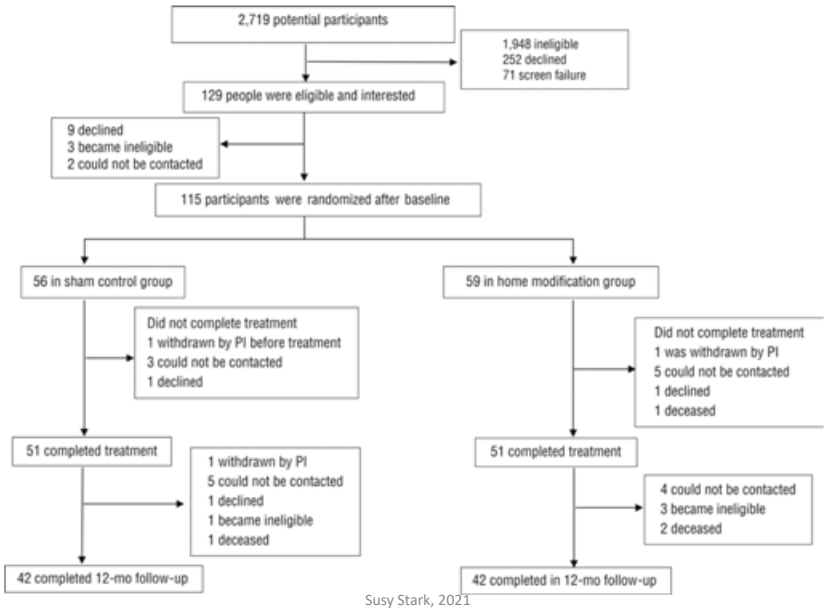
Significant cognitive impairment (Short Blessed Test >10)

Reside in assisted living facility

New onset neurological condition (PD, Stroke)

Full time WC dependent

Susy Stark, 2021



Susy Stark, 2021

Participants (n=115)	Control	THM
Age, mean ± SD	78.0 ± 7.5	78.4 ± 7.4
Female, n (%)	35 (76)	35 (76)
White race, n (%)	34 (74)	32 (70)
Married, n (%)	11 (24)	17 (37)
Years education, mean ± SD	13.0 ± 2.3	14.3 ± 3.4
Live alone, n (%)	18 (39)	20 (44)
Total number of previous falls, mean± SD	3.0 ± 3.0	3.6 ± 3.5
Use assistive mobility device, n (%)	38 (83)	39 (85)
Cognition, mean ± SD	3.4 ± 3.5	2.6 ± 3.2
Number of daily medications, mean ± SD	8.7 ± 3.3	9.1 ± 3.0

Susy Stark, 2021

Sham control

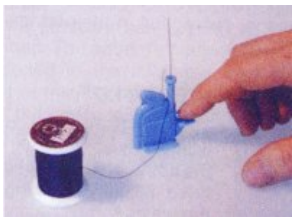
(6) 90-minute sessions/ 8 weeks

2 pieces of ADL equipment and training to use

OT naive to outcome of interest

Scripted protocol






Susy Stark, 2021

Home Modification Intervention

Intervention	Target	Essential Ingredients *Active Ingredients*	Mechanism of Action
Home modifications	Daily activity performance	Home Modification and Training *Tailoring* *Client-centered*	Reducing press improves outcome behavior

Manualized; visit x visit grid; standardized tailoring

(6) 90-minute sessions with trained OT interventionist

5-8 problem activities

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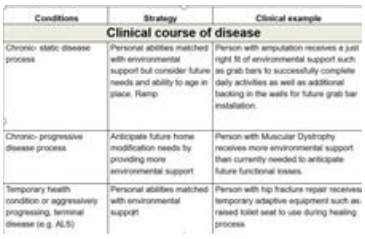
OT Tools

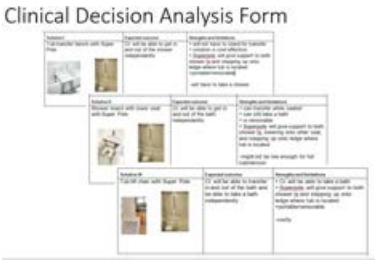
In Home Occupational Performance Evaluation

Clinical Reasoning Guideline

Clinical Decision Analysis



Conditions	Strategy	Clinical example
Clinical course of disease		
Chronic- static disease process	Personal abilities matched with environmental support but consider future needs and ability to age in place. Ramp	Person with amputation receives a just right fit of environmental support such as grab bars to successfully complete daily activities as well as additional backing in the walls for future grab bar installation.
Chronic- progressive disease process	Anticipate future home modification needs by providing more environmental support	Person with Muscular Dystrophy receives more environmental support than currently needed to anticipate future functional losses.
Temporary health condition or aggressively progressing, terminal disease (e.g. ALS)	Personal abilities matched with environmental support	Person with hip fracture repair receives temporary adaptive equipment such as raised toilet seat to use during healing process



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Clinical Reasoning Guideline: Factors expert OT's consider during the home modification clinical reasoning process

Intrinsic (6)

- Clinical Course of disease
- Personal Assistance Preferences
- Ability to Maintain Modifications
- Compliance
- Literacy Level
- Readiness for Change

Extrinsic (9)

- Financial Resources
- Social Support
- Physical Assistance Available
- Lives with Others
- Condition of Home
- Available Space
- Rules and Regulations
- Weather conditions
- Portability of Intervention

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Conditions	Strategy	Clinical example
Clinical course of disease		
Chronic- static disease process	Personal abilities matched with environmental support but consider future needs and ability to age in place. Ramp	Person with amputation receives a just right fit of environmental support such as grab bars to successfully complete daily activities as well as additional backing in the walls for future grab bar installation.
Chronic- progressive disease process	Anticipate future home modification needs by providing more environmental support	Person with Muscular Dystrophy receives more environmental support than currently needed to anticipate future functional losses.
Temporary health condition or aggressively progressing, terminal disease (e.g. ALS)	Personal abilities matched with environmental support	Person with hip fracture repair receives temporary adaptive equipment such as raised toilet seat to use during healing process

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Clinical Decision Analysis Form

Solution I	Expected outcome	Strengths and limitations
Tub transfer bench with Super Pole  	Ct. will be able to get in and out of the shower independently	+ will not have to stand for transfer + solution is cost effective + Superpole will give support to both shower tx and stepping up onto ledge where tub is located +portable/removable - will have to take a shower

Solution II	Expected outcome	Strengths and limitations
Shower board with lower seat with Super Pole  	Ct. will be able to get in and out of the bath independently	+ can transfer while seated + can still take a bath + is removable + Superpole will give support to both shower tx, lowering onto other seat, and stepping up onto ledge where tub is located -might not be low enough for full submersion

Solution III	Expected outcome	Strengths and limitations
Tub lift chair with Super Pole  	Ct. will be able to transfer in and out of the bath and be able to take a bath independently	+ Ct. will be able to take a bath + Superpole will give support to both shower tx and stepping up onto ledge where tub is located +portable/removable -costly

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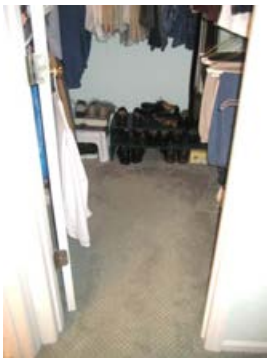
Why tailoring matters Jane Bergen

81 years old Left BKA s/p CA tx
Strong and healthy
Lives in own home
OT home modifications post surgery
Experienced a fall in the home 6 months later

Susy Stark, 2021

Dressing height of shelving, width of door, lack of seating



Use front bedroom as closet

Remove door from closet

Trim bottom portion of door frame

Lower shelves

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Moving around the home /width of door

Remove door from door frame

offset hinges & modified door knob to make sure it still opened all the way

Susy Stark, 2021

Intervention

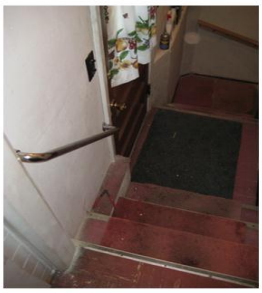
- 90% delivered;

  84.39 minutes/ session x6
- 13 weeks
- No major protocol deviations
- 931$/6.7 activities
- 91% still used at 12 months

A. Before: toilet too low, unable t o rise from toilet; dependent for toileting hygine

A. After: bidet and toilet riser; fold down grab bar; independent and safe toileting

A. Before: no handrails to enter living area



B. After: new handrails; independent in entering living area

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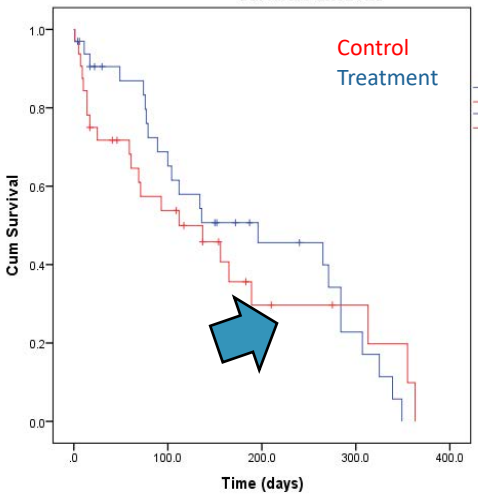
Fall outcomes

- 222 falls over 365 days
- 67 fallers (of 100 participants) (range 1-24)
- No difference in fall rates over 365 days between groups



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Hazard ratios for falls by time and location of fall

		All falls				Indoor Falls		
		Prob	HR	CI		Prob	HR	CI
365 days	p=.001				p=.012			
Member of control		0.49	1.21	0.71-2.05		0.25	1.46	0.76-2.81
Age		0.08	1.04	0.99-1.07		0.01	1.06	1.02-1.12
Barriers		0.19	0.99	0.98-1.00		0.43	0.99	0.98-1.01
Marital Status		0.19	0.89	0.74-1.07		0.07	0.81	0.65-1.01
Previous falls		0.00	1.17	1.09-1.27		0.01	1.16	1.05-1.28
260 Days	p=.001				p=.003			
Member of control		0.12	1.59	0.88-2.85		0.04	2.20	1.05-4.63
Group * time		0.04	0.25	0.07-0.94		0.03	0.18	0.04-0.83
Age		0.07	1.04	0.99-1.08		0.01	1.07	1.02-1.12
Barriers		0.16	0.99	0.98-1.00		0.37	0.99	0.98-1.01
Marital Status		0.20	0.89	0.74-1.07		0.07	0.81	0.65-1.02
Previous falls		0.00	1.18	1.09-1.28		0.001	1.18	1.07-1.30

Note: n= 97

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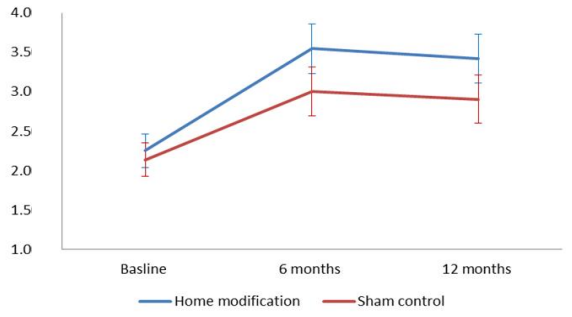
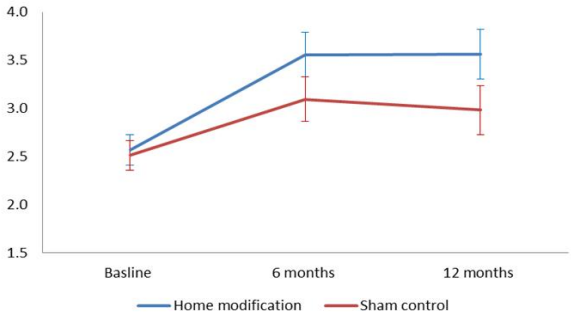
Self Rated Performance



Self Rated Satisfaction with Performance



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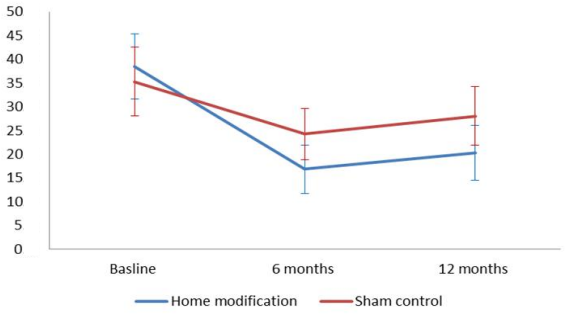
Observed Performance



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Daily Activity Performance Scores of Study Groups

Assessment	Sham Control, *M* (*SD*)	Home Modification, *M* (*SD*)	Interaction Effect
Self-rated performance[a] (*n* = 81)			
Baseline	2.5 (0.6)	2.6 (0.4)	
6 mo	3.1 (0.8)	3.6 (0.7)	*F* = 5.57; *p* = .005
12 mo	3.0 (0.9)	3.6 (0.7)	
Self-rated satisfaction with performance[a] (*n* = 81)			
Baseline	2.1 (0.7)	2.3 (0.7)	
6 mo	3.0 (1.1)	3.5 (0.9)	*F* = 3.15; *p* = .046
12 mo	2.9 (1.1)	3.4 (0.9)	
Objective activity performance score[b] (*n* = 68)			
Baseline	35.3 (3.6)	38.4 (3.4)	
6 mo	24.2 (2.7)	16.8 (2.6)	*F* = 4.13[c]; *p* = .024
12 mo	28.0 (3.1)	20.3 (2.9)	

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Conclusions

- Home modifications to reduce ADL is not effective in reducing falls
- The tailored home-modification program is feasible.
- Reduces the risk of falls at 6 months
- Positive effect on daily activity performance that was maintained at 12 months.
- May require booster session and fall-hazard awareness training during intervention

Susy Stark, 2021

A Hybrid Randomized Controlled Trial/Process Evaluation of a Home Hazard Removal Program delivered in an Area Agency on Aging

Emily Somerville, MSOT, OTR/L
Marian Keglovits, OTD, MSCI
Jane Conte, MEd
Melody Li, MSOT, OTR/L
Hu, Yi-Ling, MSOT, Yan, Yan, MD, PhD.

Department of Housing and Urban Development (HUD) Grant # MOHHU0024
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Purpose

- Examine the feasibility of delivering HARP in an Area Agency on Aging
- Examine the efficacy of a HARP intervention targeting home hazard removal and self-management on the outcome of rate of falls over 1 year

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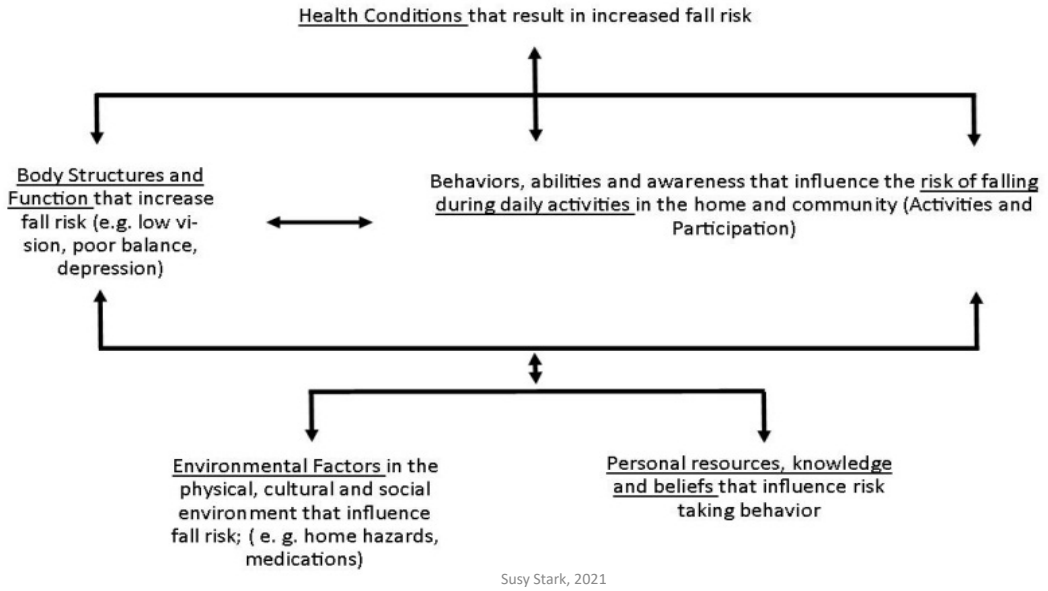
Enablement Theory: ICF



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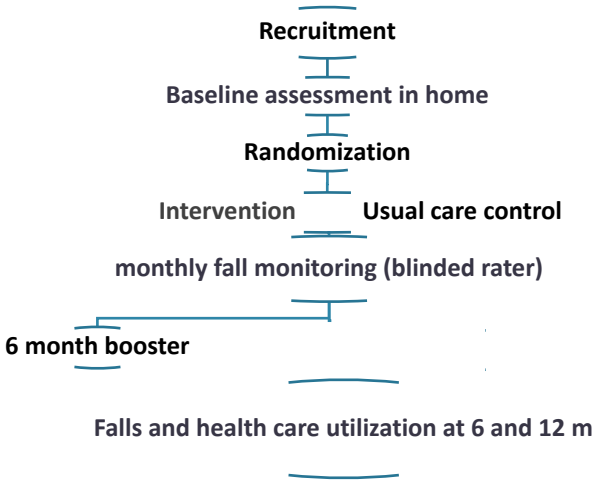
Randomized controlled trial design



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Participants identified from Area Agency on Aging

Previous fall or worried about falling
Receiving Area Agency on Aging service
65 years of age or older
Community dwelling

- Are you 65 years of age or older?
- Are you someone who has fallen in the past 12 months or are worried about falling in the future?

If you answered YES to these questions, you may be eligible to participate in a home hazard removal research study!

Participants will receive a $5 grocery gift card each month for 12 months and may be eligible for free home modifications.

Susan Stark, in cooperation with the St. Louis Area Agency on Aging (SLAAA) and the Mid East Area Agency on Aging (MEAAA), is seeking participants for a study to determine the effectiveness of a home hazard removal program to reduce falls in older adults.

Please contact Jane at (314) 932-1011 for more information.

Washington University in St.Louis
School of Medicine

Susy Stark, 2021

Home Hazard Removal Program (HARP)

Intervention	Target	Essential Ingredients *Active Ingredients*	Mechanism of Action
Home Hazard Removal Program	Behavior; Removing home hazards	Home Hazard Removal & Self Management *Tailoring* *Client-centered*	Reducing press improves outcome behavior

- Manualized; visit x visit grid; standardized testing
- (1-2) 60 minute sessions with trained OT interventionist
- 1 booster sessions (60 minutes) at 3 months

Susy Stark, 2021

Session 1

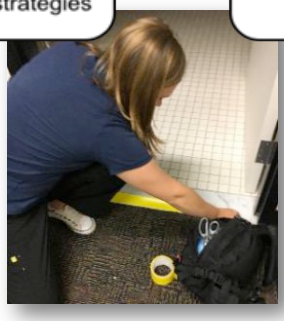
- Identify home hazards to completing problematic activities
- Determine baseline abilities
- Provide initial recommendations for home modifications
- Teach awareness/self-management strategies

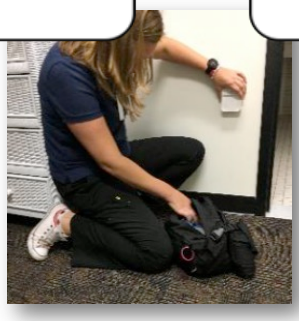
Sessions 2-3

- Implement additional modifications
- Training on modifications
- Continue to educate client and caregiver on awareness/self-management strategies

Booster session

- Identify and remove new home hazards
- Problem solve adherence with previous modifications





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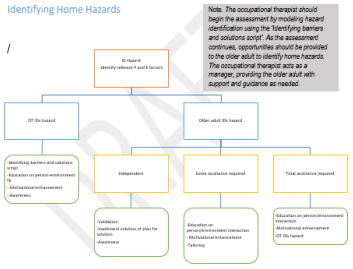
Therapist's tools



"The next item on the list is the steps. Do you see anything about the steps that might cause you to fall? (allow older adult to respond) or 'What makes walking up and down the steps difficult or dangerous for you?'

Yes, I think it might be hard to see the steps well with the low light. Can you think of any ways to make it easier to see the steps?' …….. 'Replacing the light bulb is a great idea to improve the lighting. Some other ideas to help with the low light are to put contrasting tape on the edge of the steps or using motion sensing lights on the stairway. What ideas do you think will work the best for you?"

Table 5. How to interact to promote self-management

	What works in the context of HARP	*What does not work*
Assess		
	• Standardized assessments of personal and environmental factors and fall risk behavior with feedback to the older adult • Assessment of progress and identification of behaviors that influence fall risk and goal attainment	• Intervention implementation without assessment or baseline information • Assuming the older adult has the same values and goals as the clinician
Advise		
	• Feedback based on the person-environment factors of the individual and the effect these factors have on fall risks • Client identification of priority activities and shared decision making between the client and clinician • Tailor recommendations to the person and environment (p-e factors and)	• Information overload • Clinician-imposed interaction style • Standardized recommendations • Lecturing on behaviors or decisions made by the client

Manualized

Training and certification program.

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Characteristics of sample

Participants	Control (n=155)	HARP (n=155)
Age, mean	74.7	75.1
Female, n (%)	118 (79)	111 (79)
African American race, n (%)	83 (55)	78 (56)
Widowed, n (%)	53 (36)	60 (44)
Years education, mean ± SD	13. 5	13.6
Live with someone, n (%)	115 (78)	111 (79)
Total number of previous falls, mean± SD	1.8	1.5

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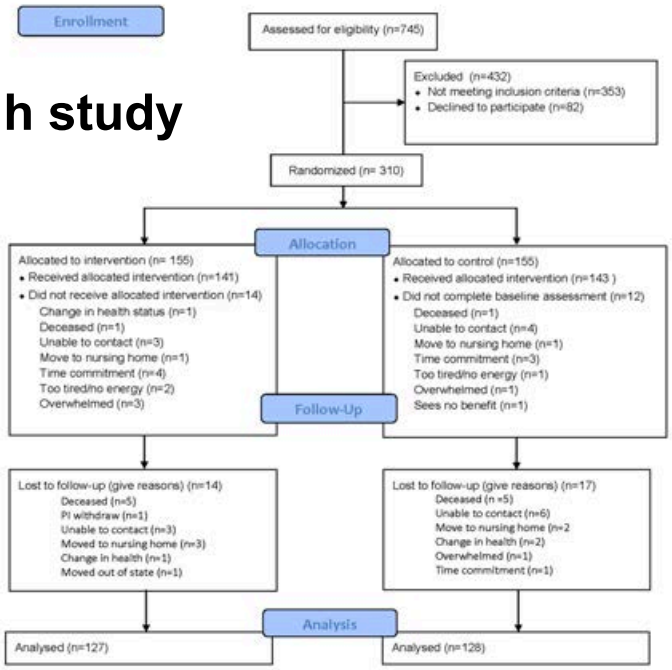
Flow through study



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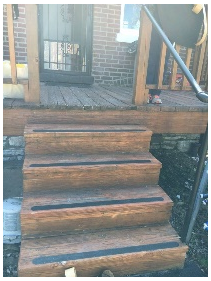
Intervention

- 91% baseline visits delivered; 93% booster visits delivered
- 99% of program elements provided, average of 130 minutes for the baseline visits and 73 minutes for the booster visit
- No major protocol deviations
- ~ 259$ in equipment
- 92.1% still used at 12 months



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Case study: Ms. F

69 year old African American woman
Undergoing breast cancer treatment
Lives in town home alone
Good family support

High fall risk
Incontinence
Muscle weakness
Fatigue

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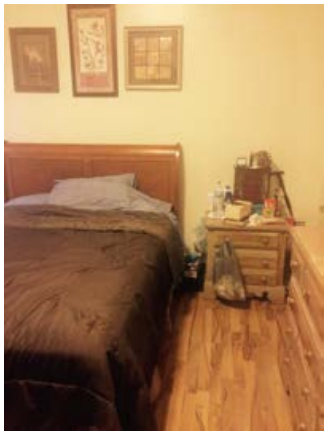
Hazards
- Distance to bathroom
- Lack of hand support near bedside



Hazard removal
- Add commode near bed
- Add bed cane to side of bed
- Training with OT on equipment use

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Hazards
- High edge of tub
- Lack of back on shower chair
- Lack of hand support near toilet


Hazard removal
- Replace chair with tub transfer bench with back
- Add toilet safety rails
- Training with OT on using equipment


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Most frequent modifications

Type of mod	#
grab bar	95
secured rug	44
bath seating	40
raised toilet seat	33
kitchen seating	32
Reacher	24
non-skid treads	21
bed rail	21
toilet safety rail	18
night lights	17
railing	16
cushion	16
rollator/walker	14
step stool	13
contrasting tape	12

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1: Grab bars




Susy Stark, 2021

#2: Securing rugs


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#3: Bath/shower seating

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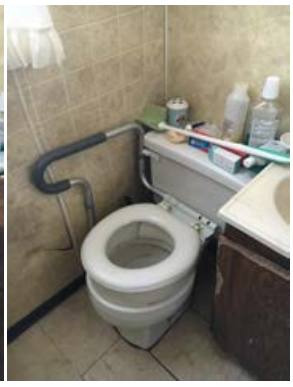
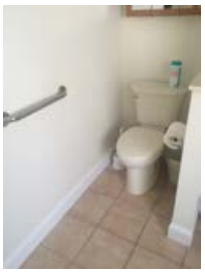
#4: Raised toilet seats





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#5: Kitchen seating




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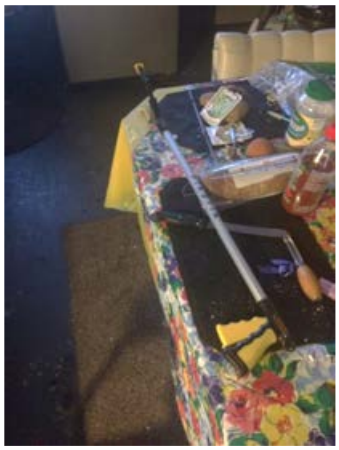
#6: Reachers

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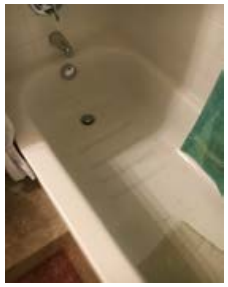
#7: Non-skid treads

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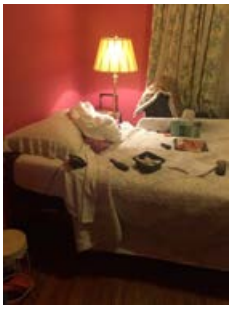
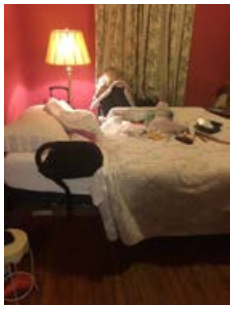
#8: Bed rails

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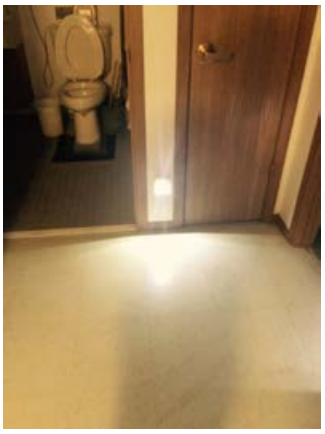
#9: Toilet safety rails

Susy Stark, 2021

#10: Automatic lights



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Falls in two groups at 6 and 12 months

Falls	Control	HARP	Relative Risk (95% CI)
Total Sample	n= 136	n=131	
Falls at 6 m	1.1	0.7	.62 (.39–.98)
Falls at 12 m	2.3 (6.6)	1.5 (3.5)	.62 (.40-.95)

Fall injury rates calculated as total number of events; Incidence rate ratio calculated for comparing the rate of falls in the HARP v control groups: 6 months unadjusted, 12 months adjusted for fall risk

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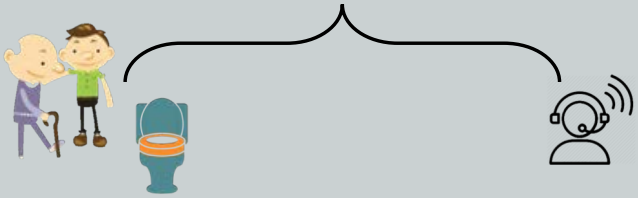
RCT: Home Hazard Removal Program

Older adults at risk of falling Area Agencies on Aging, St. Louis Missouri

Randomized (n=310)

Intervention:
Home hazard removal + self-management skill training
n=155



Usual Care:
annual assessment and phone referral
n=155

SO….

- The outcome you target is important. Just addressing function does not reduce falls (can we do both?)
- Occupational therapists have important tools that can permit them to make a significant impact by addressing barriers in the home.
- Tailoring matters!

Susy Stark, 2021

Thanks! You can find me at:

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Twitter:	@PEPLaboratory @cedarmidwest
YouTube:	WUSM PEPL
Instagram:	StarkLab_OT
Websites:	starklab.wustl.edu/ cedarmidwest.org

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Seeking Volunteers for Memory Research

Wayne State University is conducting a study to better understand potential biomarkers that may predict cognitive loss and even the earliest signs of Alzheimer's disease. We are seeking African American participants both male and female, ages 65 and over. Eligible volunteers will undergo:

- Clinical Neurological Assessments
- Memory Testing
- Electro-Encephalogram Testing (EEG) (Recordings of tiny electrical signals from the top of the head.)

Contact the **ELectra Study** at **(313) 577-1692** or send an email to **voyko@wayne.ed**

Institute of Gerontology

Parents CHANGING Spaces

A Free Senior Living Referral Service

Let et us help you!
Our Complimentary Referrels Include:

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- Assisted Living
- Residential Care Homes
- Memory Care
- Skilled Nursing
- Respite/Short Term Stay

844.7.PARENT (844-772-7368)

www.parentschangingspaces.com

For more information or a tour, contact me,

Tracey Proghovnick
248-661-1836 TTY# 711
tproghovnick@jslmi.org

or visit **jslmi.org**

Eugene & Marcia Applebaum Jewish Community Campus

WEST BLOOMFIELD

- Edward I. & Freda Fleischman Residence/ Louis C. & Edith B. Blumberg Plaza
- Dorothy and Peter D. Brown Memory Care Pavilion
- Lillian & Samuel Hechtman Apartments
- Norma Jean & Edward Meer Apartments
- Dorothy and Peter Brown Jewish Community Adult Day Program, West Bloomfield & Southfield

A. Alfred Taubman Jewish Community Campus

OAK PARK

- Margot & Warren Coville Assisted Living and Memory Care Community
- Anna & Meyer Prentis Apartments
- Harriett & Ben Teitel Apartments

People of all faiths and beliefs are welcome

Jewish Senior Life
Residences • Programs • Services

Supported by The Jewish Federation of Metropolitan Detroit

Financial Vulnerability Survey

A Free Resource to Empower & Protect Seniors When Needed

A 17-question survey that can be completed by older adults or administered to them. Results will indicate the older adult's degree of vulnerability to financial exploitation and appropriate next steps to educate and protect them.

The Financial Vulnerability Survey is recommended for attorneys, medical staff, financial screeners, senior housing managers and other professionals working with older adults and wanting to assess their risk of being financially exploited.

To learn about the Financial Vulnerability Survey and other assessments **Visit: OlderAdultNestEgg.com.**

Watch a brief overview and get started today!

Peter Lichtenberg, PhD, ABPP
Director, Institute of Gerontology, WSU
and OlderAdultNestEgg.com creator

Reliable • Replicable • Efficent

Institute of Gerontology

The Caring of People with Dementia as a Calling

Michael Verde, MA
Founder of MemoryBridge.org
Bloomington, Indiana

michael@memorybridge.org

Michael Verde founded Memory Bridge in 2003. To date, Memory Bridge has connected over 8,000 people with and without dementia to each other in one-to-one relationships. What people with dementia most need from us—is us. Memory Bridge exists to end the emotional isolation of people with dementia. We bridge people with and without dementia to each other in life-changing ways. Our educational programs are hosted on three continents

Michael speaks across the world on the subjects of literature, world religions, and communicating with people with dementia. His clients include Northern Trust Bank; Chevron; St. Christopher's Hospice, England; Alzheimer's Association of Australia; the Federal Reserve Bank of Chicago, and the Vero Beach Museum.

Michael graduated with honors from the University of Texas's prestigious Plan II Honors program. He earned a M.A. in literary studies from the University of Iowa, and a M.A. in theology from the University of Durham, England, where he graduated at the top of his international class.

Michael taught English for 10 years. At Lamar University where he began his teaching career he was named Teacher of the Year in his third year of teaching.

In 2011, Memory Bridge was awarded Indiana University's Educational Peace Prize to bring the Memory Bridge school initiative to South Africa.
He is currently pursuing a PhD in the area of empathetic education at Indiana University.

MEMORY BRIDGE

Memory Bridge exists to end the emotional isolation of people with dementia. Through human connection, we aspire to turn loneliness into companionship, healing what medicine cannot cure.

Issues in Aging

The Care of People with Dementia as a Life Calling

Person-Centered Care

- The most commonly recognized gold standard of care of persons with dementia in English-speaking countries
- What does it mean?

Dawn Brooker, *Professor of Dementia Studies and Director of the University of Worcester Association for Dementia Studies, UK*:

- "Many of us live with the knowledge that although the words [person-centered care] sound good, the lived experience of care for people with dementia—particularly for those living in long-term care—is anything but good."
- "In our discussions with practitioners, researchers and people with dementia and their families, it is obvious that the concepts in person-centered care are not easy to understand or articulate in a straightforward manner."

Commonplace Descriptions of Person-Centered Care from a National Institute of Health Journal

- Carers described person-centered care as:

'individualized care', 'seeing the person and not the medical condition' and 'tailoring care around the person'.

The term was often presented as a short-hand descriptor of 'good practice' or 'quality care' that staff aspired to deliver.

Commonplace Descriptions of Person-Centered Care from a National Institute of Health Journal

Those interviewed offered these examples:

- addressing patients by their preferred name,
- being flexible about such care routines as washing and serving breakfast,
- providing a choice of meals, respecting privacy, personalizing bed space (family photographs)
- involving patients in decision-making on treatment and care.

Examples of person-centered care given in a recent prominent article explicating person-centered care

- Early

1. Tom has always been a very independent man. Although he was diagnosed with Alzheimer's disease, he wants to remain as independent as possible. He goes through his day as he always did, although now his wife Joan is always there for support if needed. Joan sometimes has to assist with a task, help with finding the right word, or give a friendly reminder. She also continues to include Tom in decisions, including treatments, future care and finances.

Examples of person-centered care given in a recent prominent article explicating person-centered care

- Late

Emily was an avid gardener. Her yard was perfectly kept with many varieties of plants, which she grew from seed. She loved fragrant bushes, especially lavender. One side of her yard was filled with beautiful bushes. Throughout the progression, she stayed involved in gardening. In the later stage of Alzheimer's disease, care providers looked through seed catalogues with her, and talked about different varieties. They kept fragrant cut flowers and plants in her room, especially lavender when available. They kept a small satchel of dried lavender under her pillow, and also used a nice lavender lotion to moisturize her hands and feet.

Tom Kitwood on Person-Centered Care

- The primary aim of person-centered care is the maintenance and promotion of personhood.
- "Personhood is a standing or status that is bestowed upon one human being, by others, in the context of relationship and social being."
- Person-Centered dementia care is "a true process of meeting between persons."

A Quick Comment by Kitwood

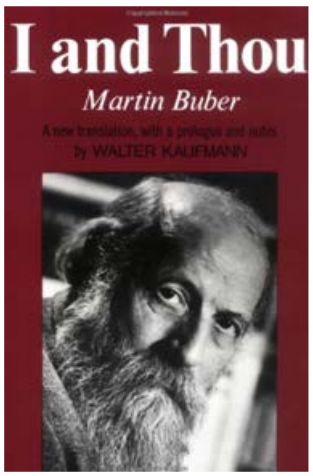
- There is a very sobering fact to take into account, in relation to those who have dementia:

It is that the most thorough assessment can be carried out, the most efficient 'care planning' undertaken, the most comprehensive care provided—totally in the I-It mode, without any of the meeting of which Buber speaks ever having taken place.

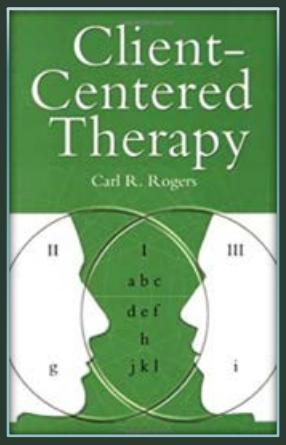
The Sources of Kitwood's Conception of Person-Centered Care

- Martin Buber's *I and Thou*
- Carl Roger's client-centered therapy
- George Herbert Mead's symbolic interactionism
- Spiritual traditions, especially Christianity and Buddhism

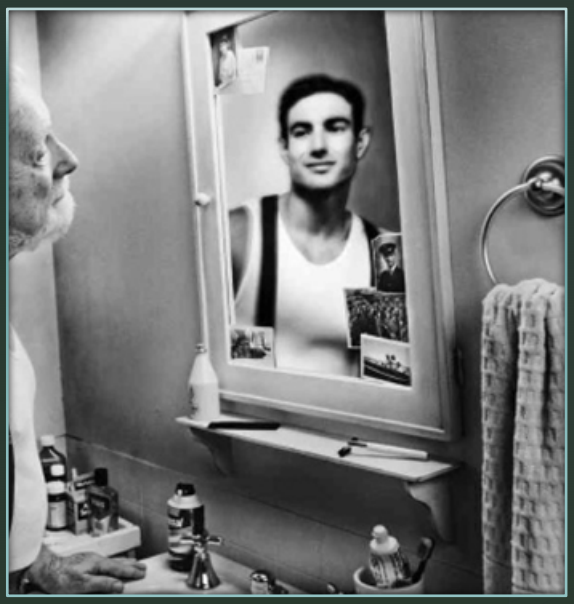
Martin Buber's I and Thou



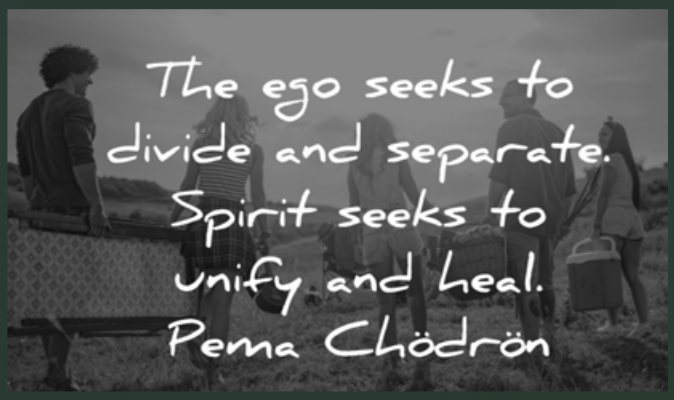
Carl Roger's Client-Centered Therapy



George Herbert Mead's "symbolic interactionism"



Spiritual Traditions



How I Now Imagine Person-Centered Care

- Person-centered care to me is:

When I meet another person and relinquish control, offer profound, accepting attention, and allow the life calling to life between us to presence.

How I Now Imagine Person-Centered Care

- Letting Go
- Letting In
- Letting Be

Person-Centered Care in Action

- Naomi and Sallie
- Naomi and Gladys

Concluding Remarks

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