Updates in Geriatrics:
What Should I Know for My Older Adult Patients?

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Disclosure

I have no financial interests or relationships to disclose.

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Learning Objectives

1. Describe the newest updates in geriatric medicine to improve the care of older adult patients.

2. Identify medications that should be avoided, stopped, or be cautious in prescribing with older adults.

3. Learn about alternatives for common older adult complaints, including joint/muscle pain.

HOW CAN I PREVENT ALZHEIMER'S DISEASE?

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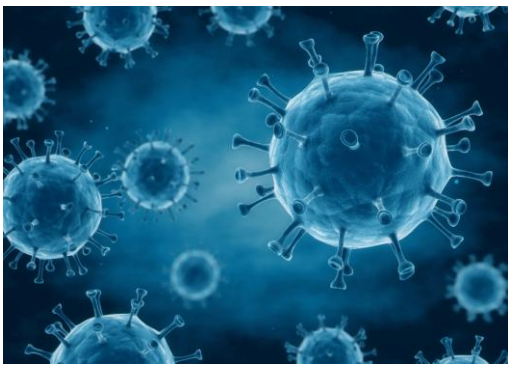
Should I Change My Diet? The Gut Microbiome

- The gut microbiome is comprised of trillions of bacteria, archaea, protozoa, viruses, and fungi.
- Bacterial cells > human cells. There are roughly 40 trillion bacterial cells in your body and only 30 trillion human cells.

  You are more bacteria than human.
- The gut microbiome shown to potentially regulate **neuroinflammation** in a variety of neurological conditions, including Multiple Sclerosis, Parkinson's disease, and Alzheimer's Disease



Shreiner AB, Kao JY, Young VB. The gut microbiome in health and in disease. Curr Opin Gastroenterol. 2015 Jan;31(1):69-75
Jackson MA et al. Signatures of early frailty in the gut microbiota. Genome Med. 2016 Jan 29;8(1):8.

6

Alzheimer's and the Gut Biome

- Can eating a certain diet affects biological mechanisms, such as oxidative stress and inflammation, that underlie Alzheimer's?
- Diet may work indirectly by affecting other Alzheimer's risk factors
  - such as diabetes, obesity, and heart disease.
- A new avenue of research focuses on the relationship between gut microbes and aging-related processes that lead to Alzheimer's.

Grabrucker et al. Microbiota from Alzheimer's Patients induce deficits in cognition and hippocampal neurogenesis. Brain 2023. https://doi.org/10.1093/brain/awad303
https://academic.oup.com/brain/article/146/12/4916/7308687

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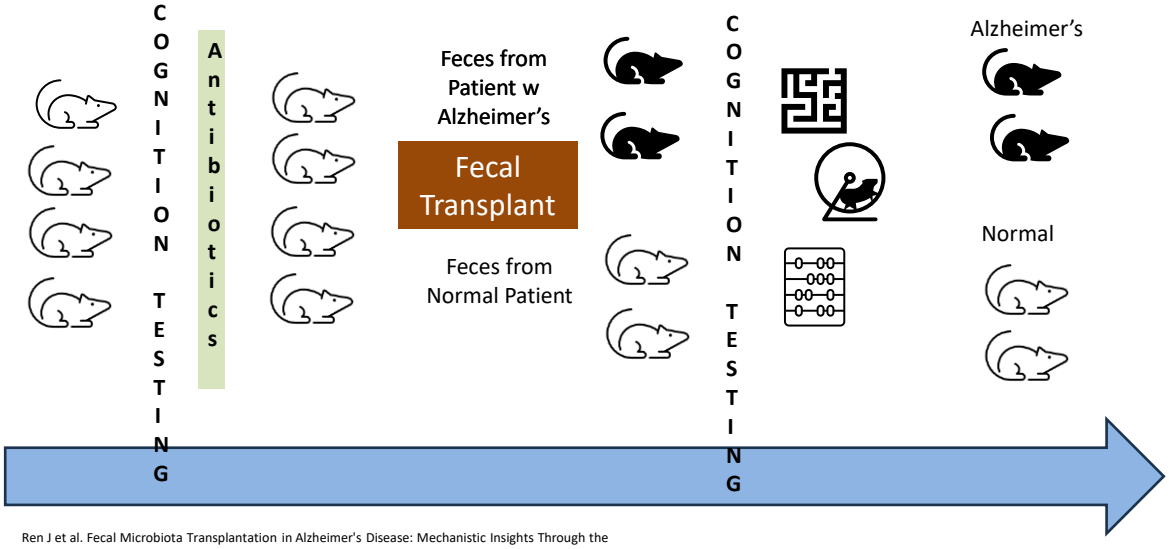
Fecal Transplantation of Alzheimer's Feces



Ren J et al. Fecal Microbiota Transplantation in Alzheimer's Disease: Mechanistic Insights Through the Microbiota-Gut-Brain Axis and Therapeutic Prospects. Microorganisms. 2025 Aug 21;13(8):1956.

8

Translated into Real Life?

- People who consume > 20% of diet from processed food = high risk for cognitive decline
  - Researchers studied 10,775 people over 8 yrs & found that >20% of daily intake of ultra-processed foods led to a 28% faster decline in global cognitive scores, including memory, verbal fluency and executive function.
  - Examples include sodas, breakfast cereals, white bread, potato chips and frozen "junk" foods.

Lee H et al. Ultraprocessed Foods and the Risk of Cognitive Impairment and Dementia in Older Americans. Amer J Pub Health 116, 981_992.

9

You Are What You Eat…

- Mediterranean Diet
  - Eating a Mediterranean diet slows some changes in the brain that may indicate early Alzheimer's disease.
  - Results point to a lifestyle change that could help reduce the risk of this type of age-related dementia.
- MIND (Mediterranean–DASH Intervention Neurodegenerative Delay)
  - Mediterranean diet with the DASH (Dietary Approaches to Stop Hypertension) diet, which has been shown to lower high blood pressure, a risk factor for Alzheimer's disease.

Fekete M et al. The role of the Mediterranean diet in reducing the risk of cognitive impairment, dementia, and Alzheimer's disease: a meta-analysis. Geroscience. 2025 Jun;47(3):3111-3130.

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Nutraceuticals? Vitamins?

- Vitamin E – NO!!!!! Increased bleeding - no longer indicated. STOP!!!!
- Gingko biloba – not been found helpful in RCT and large trials.
- Jellyfish extract (Prevagen) – company-sponsored RCT not significant

Hermann DM. Insufficient evidence for vitamin E in Alzheimer's disease. Alzheimers Dement (N Y). 2016 Aug 29;2(3):199-201.
Wieland LS et al. Ginkgo biloba for cognitive impairment and dementia. Cochrane Database Syst Rev. 2026 Feb 5;2(2):CD013661.
Grossman S et al. Prevagen: Analysis of Clinical Evidence and Its Designation as a "#1 Pharmacist Recommended Brand". Sr Care Pharm. 2022 Aug 1;37(8):335-338.

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What About Coffee and Tea?

- **Greater consumption of caffeinated coffee and tea was associated with lower risk of dementia.**
- Most pronounced association:
  - 2 to 3 cups per day of caffeinated coffee
  - 1 to 2 cups per day of tea.

- Zhang Y, Liu Y, Li Y, Li Y, Gu X, Kang JH, Eliassen AH, Wang M, Rimm EB, Willett WC, Hu FB, Stampfer MJ, Wang DD. Coffee and Tea Intake, Dementia Risk, and Cognitive Function. JAMA. 2026 Mar 17;335(11):961-974.

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Upcoming Research?

- Turmeric? – verdict out – not enough evidence (coming…)
  - *NIH - Edible Plant-derived exosome-like nanoparticles (ELNs) and phage inhibit brain inflammation by targeting microglia and gut microbiota*
- Resveratrol? – verdict out - not enough evidence (coming…)
  - *NIH study testing a grape seed extract treating Alzheimer's Disease. (Shown to benefit AD phenotypes in experimental in vitro and animal AD models)*

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Upcoming Research?

- Aron, L., Ngian, Z.K., Qiu, C. et al. Lithium deficiency and the onset of Alzheimer's disease. Nature 645, 712–721 (August 2025). https://doi.org/10.1038/s41586-025-09335-x
- Disruption of Lithium homeostasis may be an early event in the pathogenesis of AD
- Mouse model, Brain scans
- Research too early…. But micro-lithium replacement with amyloid-evading salts is a potential future approach to the prevention and treatment of AD.

14

Providers Should Not Be Offering Alzheimer's Biomarker Blood Tests to Asymptomatic Patients

- Most asymptomatic people with a positive Alzheimer's biomarker will NOT develop dementia in next 10 years
- Rubin R. Alzheimer Disease Blood Test Cleared for Primary Care, but Questions Remain About Its Use. JAMA. 2026 Jan 6;335(1):7-9. doi: 10.1001/jama.2025.21573

15

WHAT MEDS SHOULD I DEPRESCRIBE IN 2026?

16

GABAPENTIN (NEURONTIN) AND PREGABALIN (LYRICA) SEEM TO BE USED FOR A LOT OF CONDITIONS INCLUDING JOINT PAIN.

.... ARE THESE MIRACLE DRUGS?

17

Gabapentinoids Are Linked to Hip Fractures in Older Adults. Even Higher in Patients with Chronic Kidney Disease.

- Case-Case Controlled study of 28,293 Australian patients hospitalized for hip fractures, 59.5% aged ≥80 years, were dispensed a gabapentinoid before hip fracture.
- Gabapentinoid use associated with increased hip fractures (OR, 1.96; 95% CI)
- After adjusting for use of other CNS medications, the odds of hip fractures remained elevated (OR, 1.30).
- Association was higher in patients with CKD (OR, 2.41; 95% CI, 1.65-3.52).

- *Leung MTY, Turner JP, Marquina C, et al. Gabapentinoids and Risk of Hip Fracture. JAMA Netw Open. 2024;7(11):e2444488. doi:10.1001/jamanetworkopen.2024.44488*

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Older People with COPD Who Use Gabapentinoids Were More Likely to Be Hospitalized with Severe Exacerbations

- 356 Gabapentinoid users with epilepsy, 9411 with neuropathic pain, and 3737 with other chronic pain, matched 1:1 to nonusers.
- Gabapentinoid use associated with increased risk severe COPD exacerbation
  - epilepsy (HR, 1.58 [95% CI, 1.08 to 2.30]),
  - neuropathic pain (HR, 1.35 [CI, 1.24 to 1.48]),
  - and other pain (HR, 1.49 [CI, 1.27 to 1.73]) **...and overall (HR, 1.39 [CI, 1.29 to 1.50]).**
- Gabapentinoid use was associated with significantly higher risk for severe COPD exacerbations requiring hospitalization (15.1% vs. 8.3% annually).
- Gabapentin did not differ from pregabalin in risk for severe COPD exacerbations.
- *Rahman AA et al. Gabapentinoids and risk for severe exacerbation in chronic obstructive pulmonary disease: A population-based cohort study. Ann Intern Med 2024 Jan 16; [e-pub]. (https://doi.org/10.7326/M23-0849)*

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Gabapentinoids and CKD

A recent systematic review suggested higher risks of adverse drug events (eg, lethargy, drowsiness, dizziness, fall, and fractures) among patients with CKD.

American Geriatrics Society

Beers Criteria recommend dose adjustment in patients with moderate or severe CKD

-Gabapentinoids could accumulate in patients with kidney impairment and cause CNS adverse effects

Bottom Line : Don't start it. For those on it, Check to see if patients are gaining benefit .... If not, decrease then stop.

Meaadi J et al. The safety and efficacy of gabapentinoids in the management of neuropathic pain: a systematic review with meta-analysis of randomised controlled trials. Int J Clin Pharm. 2023 Jun;45(3):556-565.
2023 American Geriatrics Society Beers Criteria® Update Expert Panel. American Geriatrics Society 2023 updated AGS Beers Criteria® for potentially inappropriate medication use in older adults. J Am Geriatr Soc. 2023 Jul;71(7):2052-2081.

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What Should I Use Instead for Pain?

- Physical therapy
- Tylenol – 1000mg TID
- Topical Creams
  - Biofreeze
  - Capsaicin
  - Lidocaine

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Subclinical Hypothyroidism?

- Thyroid-stimulating hormone (TSH) levels are slightly elevated, but thyroxine (T4) levels remain normal.
- Consider reducing or stopping levothyroxine in older adults on low dosages (50mcg or less).
- Discontinuing did not change symptom scores or general health.
- Ravensberg J, Gussekloo J, Le Cessie S, Dekkers OM, Mooijaart SP, Poortvliet RKE. Discontinuation of Levothyroxine in Adults Aged 60 Years or Older. JAMA. 2026;335(17):1491–1498. doi:10.1001/jama.2026.2864

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IS METOPROLOL OR DILTIAZEM BETTER FOR PATIENTS WITH ATRIAL FIB RECEIVING DOAC (APIXABAN OR RIVAROXABAN) ..... SPECIFICALLY SERIOUS BLEEDING

23

Retrospective Cohort Study

Medicare beneficiaries (n=204,155) aged 65 years or older with atrial fibrillation who initiated apixaban or rivaroxaban use and also began treatment with diltiazem or metoprolol between January 1, 2012, and November 29, 2020.

Followed up to 365 days through November 30, 2020.

Data were analyzed from August 2023 to February 2024.

24

The Data Showed

In Medicare patients with atrial fibrillation receiving apixaban or rivaroxaban, diltiazem was associated with greater risk of serious bleeding than metoprolol, particularly for diltiazem doses exceeding 120 mg/d.

Ray WA, Chung CP, Stein CM, et al. Serious Bleeding in Patients With Atrial Fibrillation Using Diltiazem With Apixaban or Rivaroxaban. JAMA. 2024;331(18):1565–1575. doi:10.1001/jama.2024.3867

25

Bottom Line:

Consider starting beta blocker instead of diltiazem for patients with new onset atrial fibrillation.

If diltiazem is needed for rate control, try to keep the dose 120mg or lower.

Ray WA, Chung CP, Stein CM, et al. Serious Bleeding in Patients With Atrial Fibrillation Using Diltiazem With Apixaban or Rivaroxaban. JAMA. 2024;331(18):1565–1575. doi:10.1001/jama.2024.3867

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ASA and DOAC? Nope

- Consider **NOT** adding aspirin to anticoagulation regimens (DOACs) among older adults with CAD.
- Among patients with heart disease at high thrombotic risk who were receiving DOAC, adding aspirin led to higher risks of MI, CVA, PE, or acute limb ischemia than placebo, as well as higher risks of death from any cause and major bleeding.

- Lemesle G, Didier R, Steg PG, Simon T, Montalescot G, Danchin N, Bauters C, Blanchard D, Bouleti C, Angoulvant D, Andrieu S, Vanzetto G, Kerneis M, Decalf V, Puymirat E, Mottier D, Diallo A, Vicaut E, Gilard M, Cayla G; AQUATIC Trial Investigators. Aspirin in Patients with Chronic Coronary Syndrome Receiving Oral Anticoagulation. N Engl J Med. 2025 Oct 23;393(16):1578-1588.

27

MY 82-YEAR-OLD PATIENT HAS A GFR OF 10 AND WANTS TO LIVE BUT DOESN'T WANT TO DO DIALYSIS.

DO I RECOMMEND DIALYSIS?

28

For Older Adults with End Stage Renal Disease

- Observational study of 20,440 older adults (Mean age 77.9 yrs) and GFR<12
- Those in the dialysis group and those in the medical management group had no significant difference in survival.
- Those in the dialysis group had significantly fewer days at home than those in the medical management group
- Montez-Rath el al. Effect of Starting Dialysis Versus Continuing Medical Management on Survival and Home Time in Older Adults With Kidney Failure. Annals of Internal Medicine. Aug 2024; 177(9) https://doi.org/10.7326/M23-3028

29

Surgery for Older Adults?

- Surgery should not be taken lightly among older adults (65+).
- For older adults undergoing surgery, recovery takes 3-6 months and many functionally worse 6-12 months after.
- Wijeysundera DN, et al FIT After Surgery Investigators. Significant new disability after major non-cardiac surgery in older adults: a multicentre prospective cohort study. Lancet Healthy Longev. 2025 Nov;6(11):100789.

30

I'M WORRIED ABOUT MY 91-YEAR-OLD DAD LIVING ALONE AT HOME…

HOW DO I GET HIM HELP OR TO THINK ABOUT MOVING INTO A SENIOR COMMUNITY?

31

Over Time, Older People Need More Support

- Hiring in-home caregivers, moving with families, entering nursing facilities.
- Most families and older adults are unprepared for these life changes and increasing needs…. We scramble. We hope for the best.
- Planning ahead for support needs can help improve outcomes for both older adults and families. How do you plan?

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What to Do?

- Older adults are hospitalized, fall or develop Alzheimer's disease
- It's not a case of if, but when....

"So.. let's plan prior to you ever getting hospitalized...so you have a voice"

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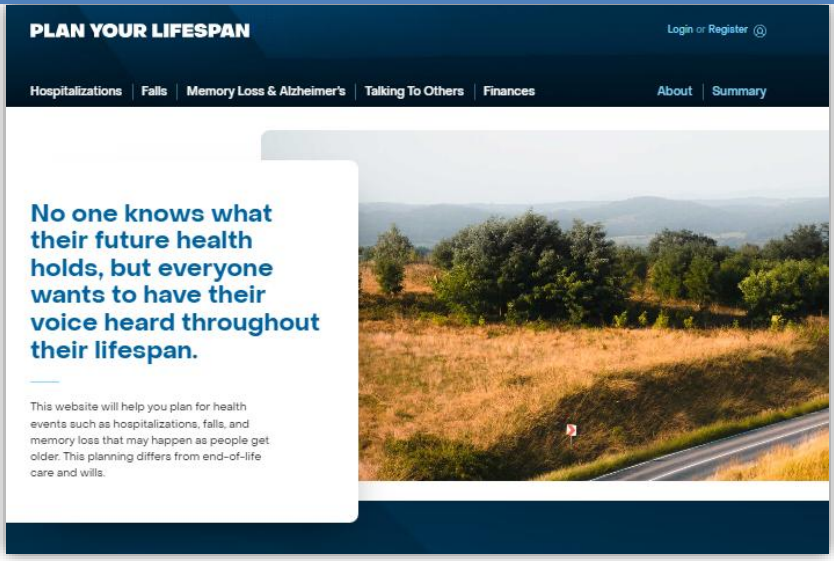
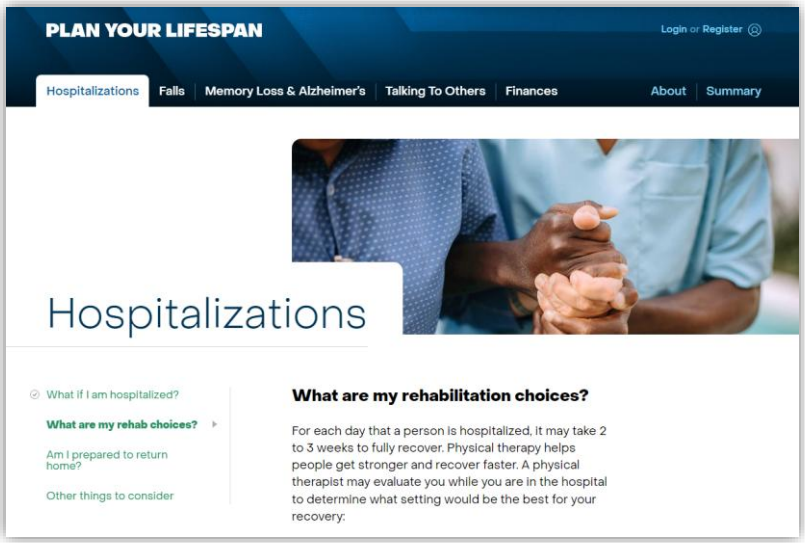
PlanYourLifespan.org



- Lee Lindquist et al at Northwestern developed this website through funding from NIH and PCORI.
- Free to use
- No ads

34

PlanYourLifespan.org



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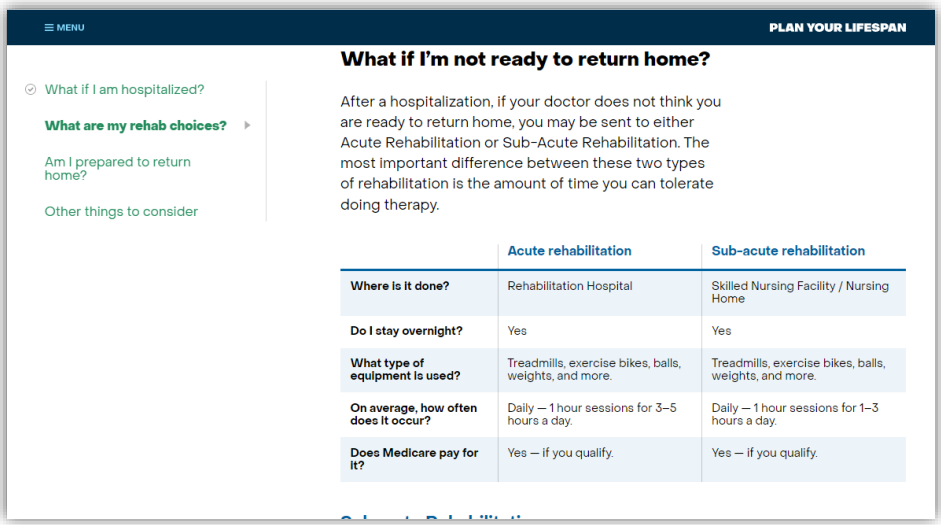

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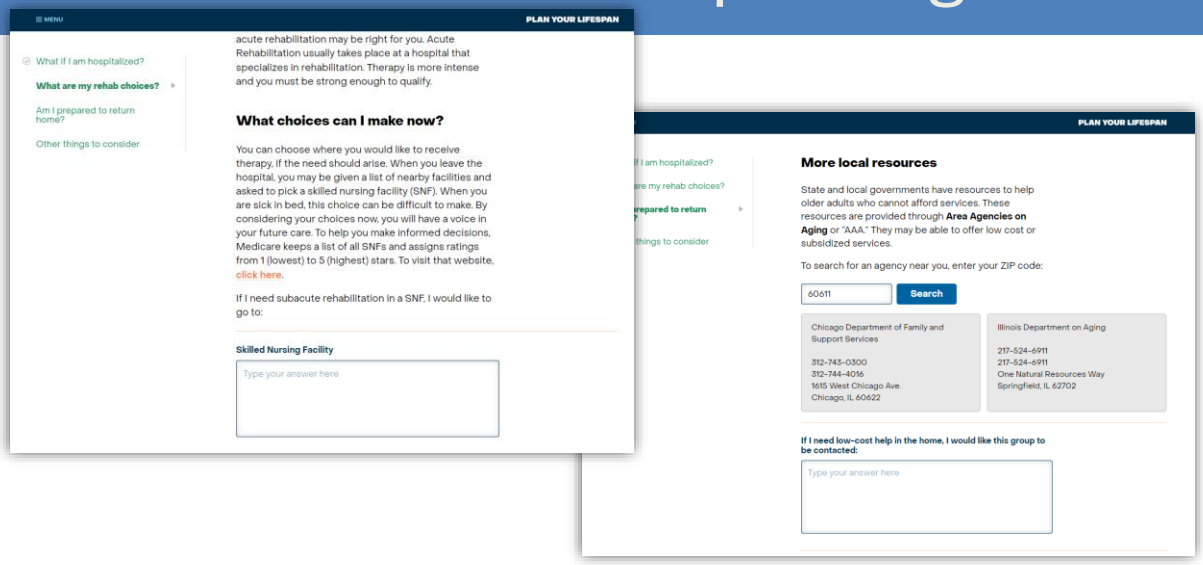

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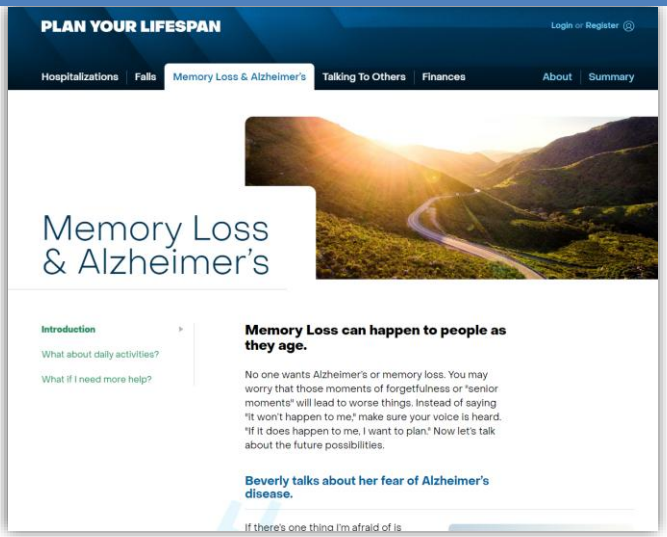

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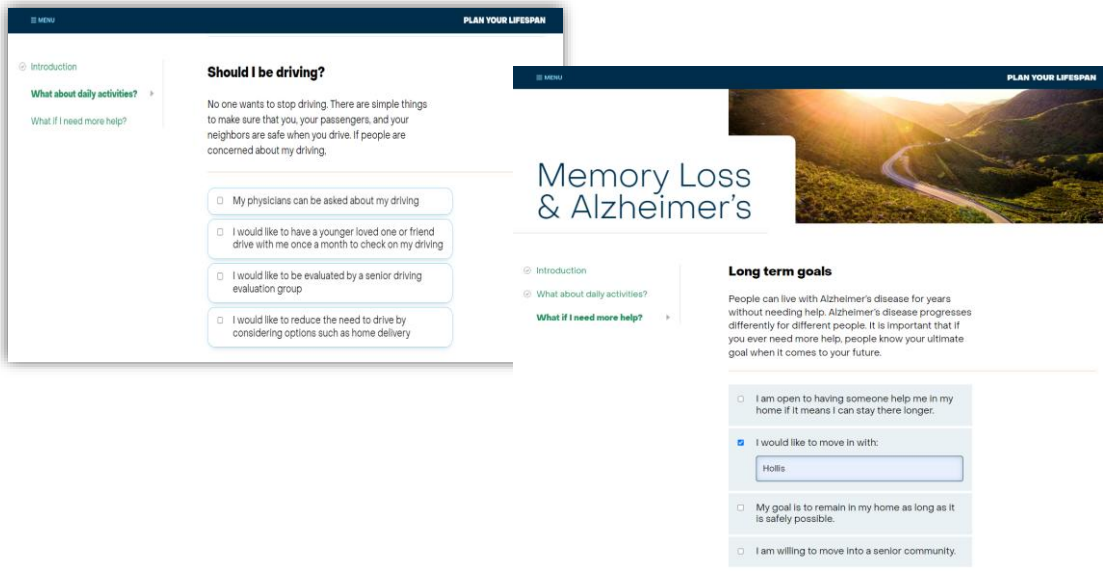

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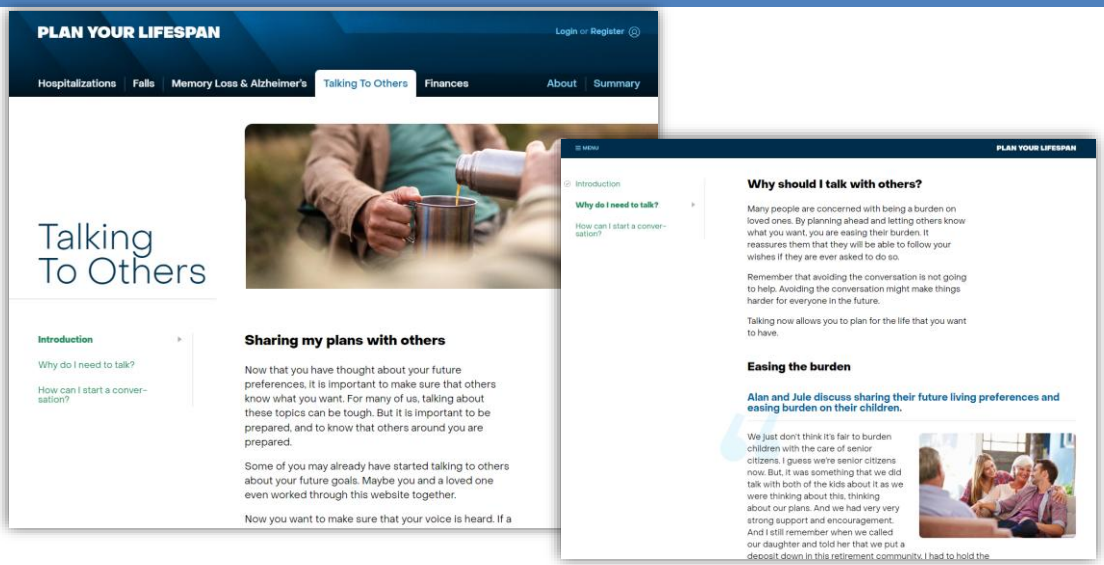
Other Sections: Communicating Plans



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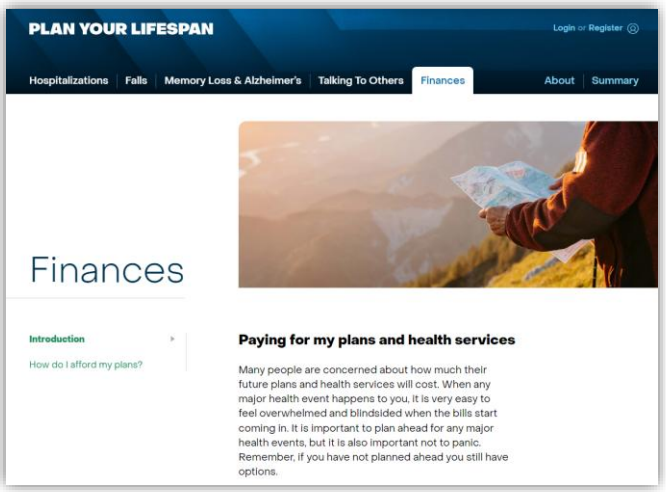
Other Sections: Finances



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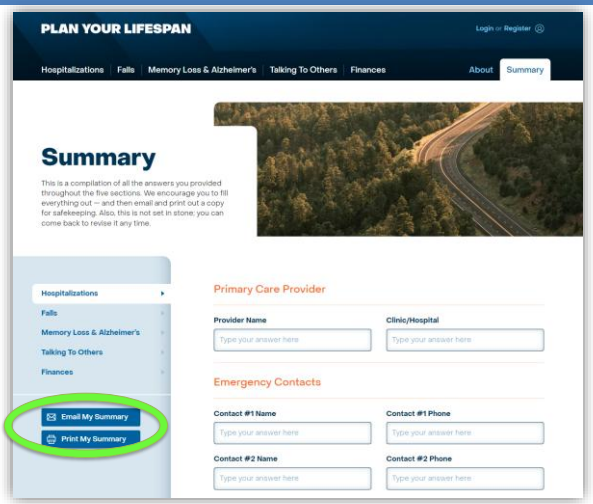
Summary to Share



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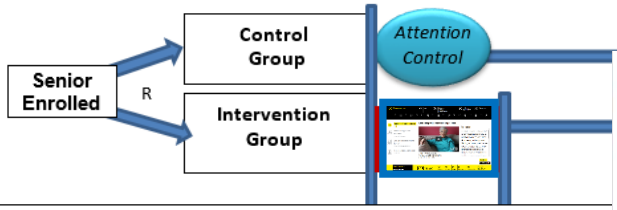
Multi-Site RCT of 400 Seniors Showed Planyourlifespan.org Improved Hospital Discharge Knowledge, Communication, and Planning.



Process Measures and Outcomes	Baseline	Immediately Post-Tool
Understanding of Home Services	X	X
Knowledge of Accessing Home Services	X	X
Awareness of Health Trajectory	X	X
Communication with Family/POA	X	
Communication with Health Providers	X	
Current Utilization of Services	X	
Satisfaction with Intervention Tool		X

ORIGINAL RESEARCH

Helping Seniors Plan for Posthospital Discharge Needs Before a Hospitalization Occurs: Results from the Randomized Control Trial of PlanYourLifespan.org

J. Hosp. Med. 2017 November;12(11):911-917

By: Lee A. Lindquist, MD, MPH, MBA, Vanessa Ramirez-Zohfeld, MPH, Priya D. Sunkara, MA, Chris Forcucci, RN, BSN, Dianne S. Campbell, BS, Phyllis Mitzen, MA, Jody D. Ciolino, PhD, Gayle Kricke, MSW, Anne Seltzer, LSW, Ana V. Ramirez, BA, Kenzie A. Cameron, PhD, MDH

Randomized Controlled Trial > Patient Educ Couns. 2017 Nov;100(11):1996-2004. doi: 10.1016/j.pec.2017.06.028. Epub 2017 Jun 27.

PlanYourLifeSpan.org – an intervention to help seniors make choices for their fourth quarter of life: Results from the randomized clinical trial

Lee A Lindquist [1], Vanessa Ramirez-Zohfeld [2], Priya D Sunkara [2], Chris Forcucci [3], Dianne S Campbell [4], Phyllis Mitzen [3], Jody D Ciolino [5], Dyanna Gregory [7], Gayle Kricke [8], Kenzie A Cameron [6]

Affiliations + expand

PMID: 28689855 PMCID: PMC6065258 DOI: 10.1016/j.pec.2017.06.028

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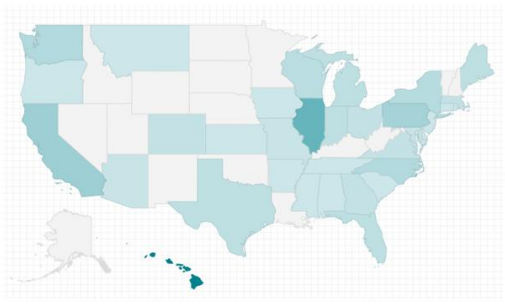
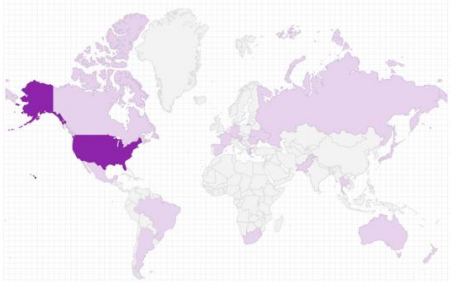
EPIC MyChart Pages Links to PlanYourLifespan

- Integrated in EPIC EHR (National) as a patient resource
- Patient MyChart Pages → Advanced Care Planning





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The Plan Your Lifespan Longitudinal Study

- ***What makes people implement their plans?)***
- We are following a cohort of 293 older adults (age >65 yrs)
- Subjects provided with PlanYourLifespan after baseline testing. Every 6 months, we ask older adults about what plans they have made and why, as well as social, cognitive health, functional, and environmental factors.

Table 5: LitCog Subject Testing with PYL Follow-up Testing (X = ongoing cognition testing time-point for LitCog subjects)

PYL Time Points (months)	1	3	6	12	18	24	30	36	42
LitCog Example Subject #1			X					X	
LitCog Example Subject #2				X					X
LitCog Example Subject #3	X						X		

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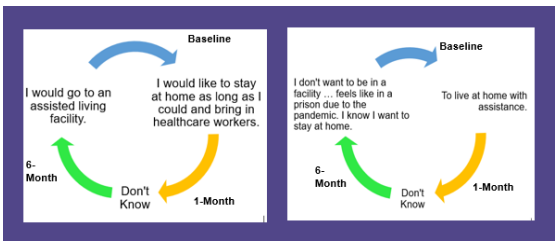
People Plan Ahead.... but They May Change Their Minds

- Of 293 subjects, 134 expressed a change to at least one of their decisions.
- People had higher decision permanence with worsening health/function.



Cohen I, Relerford R, Olvera C, Ramirez-Zohfeld V, Miller-Winder A, Lindquist LA. What Changed Your Mind? Influencers of Older Adults Changing Decisions About Aging-In-Place Versus Long-Term Care. J Am Geriatr Soc. 2025 Aug; 73(8): 2512-2516.

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Themes	Representative Quote
Personal health experience	"I had a stroke which caused me to go into these facilities. I'm glad I ended up where I did because I was not prepared."
Loved One's health experience	"My husband has a serious heart condition, and I have to think about what to do in the future"
Increased contemplation	"I think as time goes by, I feel like I kind of need to have a plan in mind."
Denying change	"No, I would imagine I would have said the same thing 6 months ago."
Social network influences	"More people who I know are making these decisions and going places."

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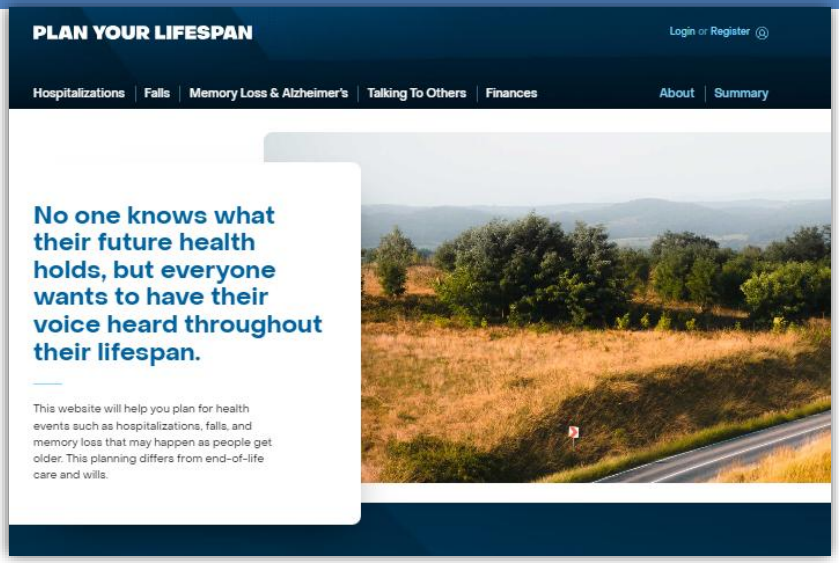
PlanYourLifespan.org



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MEASURING CAREGIVER NETWORKS OF OLDER ADULTS WITH ALZHEIMER'S DEMENTIA

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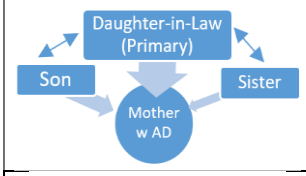
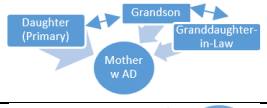
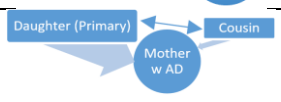
Real Life Is NOT Just 1 Senior and 1 Family Caregiver…

	My husband, her son, handles the finances, fixing things, & has helped when she goes to the hospital. He also helps me by letting me blow off steam. I do the hands-on care however on a daily basis. My husband has 3 out-of-town siblings who visit a couple of times a year. One sister, bless her heart, came to stay with her mom for a week so we could go on a family vacation
	Son and Daughter-in-law help, my brother does nothing, does not even call or visit
	There are no family members to help me
	One relative helps 2-3 hours one day a week, as they can, with maintenance of the condo.

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Purpose of the Study : It Takes a Village!

The overall goal of this study is to map the support network of older adults with Alzheimer's Disease.

- Expand the definitions of caregivers and supporters

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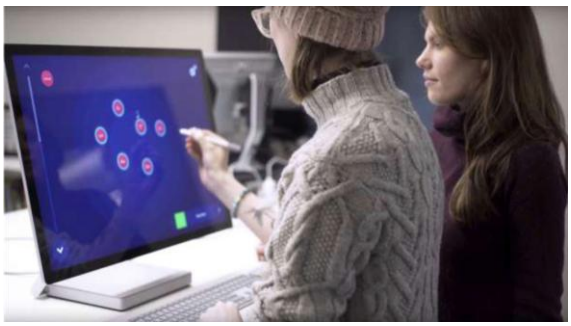
Study Procedures



Online survey: Participants complete independently. Comprised of various measures to assess the participant's well-being, stress, burden, and social support.

Virtual Interview: The Network portion of the study will consist of surveying socio-demographics, social relationships, social activities, and social support.

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We Are Actively Recruiting!

Caregiver Eligibility:

1. Provide support (e.g., emotional, social, physical, task-related) to a person with memory loss that is over the age of 65;
2. Are at least 21 years old;
3. Can understand spoken and written English; and
4. Have access to and are comfortable using the internet.

Contact caregivernetwork@northwestern.edu to discuss opportunities

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Summary

- Consider less processed foods to prevent Alzheimer's
- Mediterranean diet has best evidence to help prevent Alzheimer's
- Gabapentinoids can cause hip fractures and worsen COPD, especially in people with CKD
- Not everyone with low GFR need Dialysis
- PlanYourLifespan.org is an evidence-based resource to help seniors and families plan for their future needs.