Transcending the Pandemic: The Age-Friendly Health System’s Call to Action

December 8, 2021

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Disclosures

• No Conflicts of Interest

• Board of Directors of the American Geriatrics Society

• Funding from HRSA
  • Geriatric Workforce Enhancement Program Grant
Objectives

- Review the Age-Friendly Health System (AFHS) initiative
- Discuss patient case using AFHS framework
- Highlight evidence-based age-friendly models of care
- Illustrate opportunities for an AFHS, post-pandemic
“Knowing is not enough; we must apply. Willing is not enough; we must do.”

Johann Wolfgang
The Facts

Older Adults

• Demography
• Complexity
• Disproportionate harm

Health Systems

• Increased older adults seeking care
• Rapidly changing payment
• Decreased health system operating margins

Note: Data for the years 2000 to 2050 are mid-range projections of the population. Reference population: These data refer to the resident population. Source: U.S. Census Bureau, Decennial Census Data and Population Projections.
Never has there been a better time for an AFHS!
An Age-Friendly Health System...

- Provides older adults with the best care possible
- Follows an essential set of evidence-based practices
- Aligns with ‘What Matters’ to the older adult & family / caregivers
- Optimizes value for all

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http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Pages/default.aspx
The 4 Ms Framework

**What Matters**
Know and align care with each older adult’s specific health outcome goals and care preferences including, but not limited to, end-of-life care, and across settings of care.

**Medication**
If medication is necessary, use Age-Friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.

**Mentation**
Prevent, identify, treat, and manage dementia, depression, and delirium across settings of care.

**Mobility**
Ensure that older adults move safely every day in order to maintain function and do What Matters.

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*(For related work, this graphic may be used in its entirety without requesting permission. Graphic files and guidance at ihi.org/AgeFriendly)*
The 4Ms Framework

• Builds on IHI Triple Aim

• Components are synergistic & reinforce one another

• Impacts key quality & safety outcomes

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http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Pages/default.aspx
A Call to Action – Are you ‘All In’?

Why Create an AFHS?

• Supports health system mission, vision and values
• Aligns critical quality & safety interventions to improve care
• Increases utilization of cost-effective services
• It’s the right thing to do for the older adults we serve
# Business Case for Age-Friendly Care

## Avoid Costs of Poor-Quality Care
- Shorten length of stay
- Lower acuity of care
- Lower readmissions & ER visits

## Deliver Care in Cost-Effective Manner
- Implement goal-concordant care plan
- Optimize care site
- Optimize resource mix

## Enhance Revenue from Higher-Quality Care
- Increase fee-generating encounters
- Share in cost savings
- Increase bed capacity

[http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Pages/default.aspx](http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Pages/default.aspx)
Steps to Becoming Age-Friendly

Ready...
- Learn about Age-Friendly Health Systems
- Inform IHI of interest in participating

Set...
- Identify an Age-Friendly champion
- Send IHI letter of commitment from senior leader
- Introduce teams to Age-Friendly framework

Go!
- Describe local application of the 4Ms
- Share your local description of the 4Ms with IHI
- Share count of patients receiving Age-Friendly care with IHI for at least three months

Age-Friendly Health Systems

An initiative of The John A. Hartford Foundation and the Institute for Healthcare Improvement (IHI) in partnership with the American Hospital Association (AHA) and the Catholic Health Association of the United States (CHA).

For related work, this graphic may be used in its entirety without requesting permission. Graphic files and guidance at ihi.org/AgeFriendly

http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Pages/Resources.aspx
IHI Recognition as an AFHS

**AFHS Participant**
- Submit description of how you are putting the 4Ms into practice via on-line survey

**AFHS Committed to Care Excellence**
- Recognition as exemplar program using 4Ms care aligned with AFHS guide and submitting at least 3 months of data

http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Pages/default.aspx
Case - Mrs. Vela

- 86 year old woman with Parkinson’s disease, osteoporosis & osteoarthritis
- Family notes declining oral intake & weight loss, progressive confusion and recurrent falls
- Family has offered to hire a home health aide but Mrs. Vela refuses
Case - Mrs. Vela

• Family has limited their visits due to the pandemic ‘to protect Mrs. Vela’
AFHS Lens

5th M of Geriatrics is Multicomplexity

Multimorbidity
Geriatric syndromes
Complex biopsychosocial situations
What is Frailty?

- Physiologic syndrome
- Decreased reserve
- Decreased resistance to stressors
- Cumulative decline across multiple systems
- Vulnerability to adverse outcomes

(Fried, et al. J Gerontology. 2001)
Frailty is Vulnerability

Minor illness (e.g., urinary tract infection)

## Frailty as a Physiologic Process

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Criteria for Frailty*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight loss</td>
<td>Lost &gt;10 pounds unintentionally last year</td>
</tr>
<tr>
<td>Exhaustion</td>
<td>Felt that everything I did in the last week was an effort or Could not get going in last week</td>
</tr>
<tr>
<td>Slowness</td>
<td>Time to walk 15 ft (cutoff depends on sex and height)</td>
</tr>
<tr>
<td>Low activity level</td>
<td>&lt;270 kcal of physical expenditure (calculated from activity scale incorporating episodes of walking, household chores, yard work, etc.)</td>
</tr>
<tr>
<td>Weakness</td>
<td>Grip strength measured hand dynamometer (cutoff depends on sex and BMI)</td>
</tr>
</tbody>
</table>

*Presence of 3 or more indicates frailty
*Presence of 1 or 2 indicates pre-frailty

Case - Mrs. Vela

• ‘Found down’ by neighbor after falling in yard
• Transferred to the ER late on Friday night
• Diagnosed with rhabdomyolysis & acute right femoral neck fracture
• Tests negative for COVID-19 in the ER
Case - Mrs. Vela

- Admitted to Orthopedic service
  - IV fluids, foley catheter, bed rest, cardiology consult

- Surgery delayed
  - Weekend, cardiac pre-operative testing, fluid overload, agitation

- On hospital day 4, she undergoes surgery
What Matters?

- Returning to her home, restoring her function, maintaining her independence, seeing her family

Mobility

- Bed rest, tethers, delay in surgery

Mentation

- Delirium, continued isolation

Medications

- Pain meds, anesthesia, diuretics
What could be different in an AFHS?

4Ms Framework

What Matters
Know and align care with each older adult’s specific health outcome goals and care preferences including, but not limited to, end-of-life care, and across settings of care.

Medication
If medication is necessary, use Age-Friendly medication that does not interfere with What Matters to the older adult, Mobility, or Mentation across settings of care.

Mentation
Prevent, identify, treat, and manage dementia, depression, and delirium across settings of care.

Mobility
Ensure that older adults move safely every day in order to maintain function and do What Matters.
Co-Management: Geriatrics-Orthopedics & Trauma Surgery

Geriatric Inpatient Consults

Acute Care for Elders Unit

GAMA Clinic

Memory Care Program

Geriatric Oncology

Hospital Elder Life Program (HELP)

Geriatric Assessment Clinic

Telehealth

Project ECHO®

GEMH & COVID-19

Nursing Homes & Assisted Living Facilities Care

Fried L and Hall W. JAGS 2008; 56 (10):1791-1795
20% of seniors who fall and break their hips lose their independence permanently.

Highland Hospital’s
Geriatric Fracture Center
Geriatric Fracture Centers (GFC)

- Targets fragility fractures
- Patient-centered & protocol-driven
- Team-based interdisciplinary care
- Co-management – Geriatrics & Orthopedics
  - Proactively identifies and addresses risk factors for harmful & iatrogenic hospital events
  - Decreased LOS, cost, mortality, infections & shorter time to surgery
Highland Hospital’s Geriatric Fracture Center
Our program is being shared around the world.

NORTH AMERICA
Ann Arbor, MI, USA
Baltimore, MD, USA
Birmingham, AL, USA
Boca Raton, FL, USA
Boston, MA, USA
Calgary, AL, CA
Charlotte, NC, USA
Chicago, IL, USA
Denver, CO, USA
Fort Worth, TX
Gainorville, FL, USA
Grand Rapids, MI, USA
Hershey, PA, USA
Houston, TX, USA
Miami, FL, USA
Montrose, CO, USA
New Orleans, LA, USA
Philadelphia, PA, USA
Rochester, NY, USA
Sacramento, CA, USA
San Antonio, TX, USA
San Diego, CA, USA
Sarasota, FL, USA
Scottsdale, AR, USA
Seattle, WA, USA
St. Paul, MN, USA
Washington DC, USA

SOUTH AMERICA
Cordoba, Argentina
Bogota, Columbia
Buenos Aires, Argentina
Ribeirao Preto, Brazil
Rio de Janeiro, Brazil
Santiago, Chile

EUROPE
Barcelona, Spain
Berlin, Germany
Birmingham, UK
Davos, Switzerland
Innsbruck, Austria
London, UK
Milan, Italy
Monte Carlo, Monaco
Oxford, UK
Paris, France
Stockholm, Sweden
Tuscany, Italy

ASIA
Bangkok, Thailand
Beijing, China
Hong Kong, China
Kuala Lumpur, Malaysia
Singapore
Swan, Korea

Medicine of the Highest Order
AGS CoCare®: Ortho Resources

- Educational Online Curriculum
- Access to Experts: Coaching Calls & Mentoring
- Co-Manager Certification
- Networking: Online Community
- Tools: Comprehensive Implementation Toolkit

ortho.agscocare.org
Adverse Events Potentially Averted by Implementing the 4Ms

- What Matters
  - Unwanted ICU care
  - Days in hospital

- Mobility
  - Injurious falls
  - Pressure sores
  - Venous thromboembolism

- Medication
  - Adverse drug events

- Mentation
  - Delirium

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http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Pages/default.aspx
4Ms Framework: Hospital

Age-Friendly Health Systems

Assess: Know about the 4Ms for each older adult in your care

- Ask What Matters
- Document What Matters
- Review high-risk medication use
- Screen for delirium at least every 12 hours
- Screen for mobility
- Align the care plan with What Matters
- Deprescribe or do not prescribe high-risk medications
- Ensure sufficient oral hydration
- Orient older adults to time, place, and situation
- Ensure older adults have their personal sensory adaptive equipment
- Prevent sleep interruptions; use non-pharmacological interventions to support sleep
- Ensure early and safe mobility
Transforming an orthopaedic unit into an “Age-Friendly” unit through implementation of the American Geriatrics Society’s CoCare® Ortho program

Shen, Jenny Y. MD; Mendelson, Daniel Ari MS, MD; Lang, Valerie J. MD, MHPE
How Co-Management Models Contribute to an AFHS

- Shorter time to surgery
- Reduced length of stay
- Reduced 30-day readmission rate
- Reduced mortality
- Reduced ICU admissions

- Reduced infections
- Increased discharges to home
- Enhanced function at discharge
- Institutional cost savings
- Awards & Commendations - JCAHO

Improved Quality – Improved Cost – Improved Patient Experience

Reproduced with permission from the American Geriatrics Society
Case - Mrs. Vela

• Post-op course complicated by delirium. She pulls out her IV and tries to climb out of bed.
• Treated with possey vest & benzodiazepines
• Discharged to SNF on day 9
AFHS Lens

• What Matters?
  • Returning to her home, restoring her function, maintaining her independence, seeing her family

• Mobility
  • Restraints, needs skilled therapy - can she participate?

• Mentation
  • Delirium, social isolation

• Medications
  • Pain meds, anesthesia, diuretics, benzodiazepines
Impact of Frailty on Mortality

E.M.P. Eeles et al., Age and Ageing 2012
Frailty + Delirium = Increased Mortality

E.M.P. Eeles et al., *Age and Ageing* 2012
AGS CoCare®: HELP
Hospital Elder Life Program

AGS CoCare®: HELP is a comprehensive program designed to prevent delirium and functional decline for hospitalized older patients, providing institutions the tools and resources to support implementation.

https://help.agscocare.org/
AGS CoCare®: HELP Interventions

- Daily visits with structured cognitive orientation
- Therapeutic activities program
- Early mobilization
- Non-pharmacologic sleep protocol
- Hearing & vision protocol
- Feeding & fluid assistance
- Nursing education

https://help.agscocare.org/
Innovative Staffing Model

- Program Director
- Elder Life Nurse Specialist
- Elder Life Specialist/Volunteer Coordinator Role
- Geriatrician Role
- Administrative Working Group

https://help.agscocare.org/
# AGS CoCare®: HELP Impact on Outcomes

<table>
<thead>
<tr>
<th>Reference</th>
<th>Results Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wang 2019</td>
<td>Modified HELP program (t-HELP), with family involvement at its core, proven to reduce post-operative delirium (2.6% vs. 19.4%) and shorten length of stay (12.2 days vs. 16.4 days)</td>
</tr>
<tr>
<td>Hsieh 2018</td>
<td>Significant reductions in delirium incidence, odds ratio 0.47, 42% reduced rate of falls</td>
</tr>
<tr>
<td>Hsieh 2015</td>
<td>44% reduced delirium incidence, 64% reduced risk of falls, 5% lower risk of institutionalization post-discharge</td>
</tr>
<tr>
<td>Rubin 2011</td>
<td>23% reduced delirium incidence, decreased hospital length of stay by .7 days</td>
</tr>
<tr>
<td>Chen 2011</td>
<td>17% reduced delirium incidence</td>
</tr>
<tr>
<td>Inouye 2009</td>
<td>2% reduction in falls</td>
</tr>
<tr>
<td>Caplan 2007</td>
<td>32% reduced delirium incidence, decreased hospital length of stay by 4.3 days, reduced institutionalization by 23%, decreased falls by 13%, decreased sitter use by 314 hours</td>
</tr>
<tr>
<td>Rubin 2006</td>
<td>15% reduced delirium incidence, decreased hospital length of stay by .3 days</td>
</tr>
<tr>
<td>Inouye 2000</td>
<td>18% reduction in cognitive decline, 19% reduction in functional decline</td>
</tr>
<tr>
<td>Inouye 1999</td>
<td>5% reduced delirium incidence</td>
</tr>
</tbody>
</table>

https://help.agscocare.org/
AGS CoCare®: HELP Program is Cost-Effective

<table>
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<tr>
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</thead>
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<tr>
<td>Hshieh (2018) American Journal of Geriatric Psychiatry</td>
<td>Savings of $1,600 to $3,800 per patient in hospital costs; $16,000 per person-year in long-term care costs</td>
</tr>
<tr>
<td>Rubin FH (2011) Journal of the American Geriatrics Society</td>
<td>&gt;$7.3 million per year savings in hospital costs (&gt; $1000 savings/patient)</td>
</tr>
<tr>
<td>Caplan GA (2007) Internal Medicine Journal</td>
<td>$121,425 per year savings in sitter costs, decreased delirium incidence</td>
</tr>
<tr>
<td>Inouye (2006) Journal of the American Geriatrics Society</td>
<td>Enhances patient satisfaction and improves nursing job satisfaction, serves as training resource, improves public relations and community outreach</td>
</tr>
<tr>
<td>Leslie DL (2005) Journal of the American Geriatrics Society</td>
<td>$9,446 per person-year in nursing home costs</td>
</tr>
<tr>
<td>Rizzo JA (2001) Medical Care</td>
<td>$831 savings per person-year in hospital costs</td>
</tr>
</tbody>
</table>

- Reduction in length of stay, room, nursing, pharmacy costs, diagnostic procedures & other costs (ICU, CCU, OR, Rehabilitation, supplies)
- Revenue generated from delirium cases prevented & back filling of beds
Highland Hospital HELP® Program 2012-19

- 267 volunteers trained, 29 active
- 85,461 patients screened; 3965 enrolled
- Average age: 84.3 years
- 22,527 interventions, 7739 unofficial visits
- Average LOS: 5.8 days without delirium vs. 7.4 with delirium
- Reduction in delirium: 7% → 2.5%
How can the Delirium Prevention Programs Contribute to an AFHS?

- Reduction in delirium
- Reduction in falls, functional decline, sitter use, restraints & institutionalization
- Reduction in LOS & 30-day readmission rate
- Less stress on nursing staff and enhanced education
- Institutional cost savings
- Hospital awards / commendations - JCAHO

Improved Quality – Improved Cost – Improved Patient Experience
Case - Mrs. Vela

In the SNF:

- Persistent delirium
- Refusal of meds & combative with care
- Rehospitalization
- Tests positive for COVID-19 in the ER
Project ECHO® GEMH and COVID-19
Project ECHO®
Extension for Community Healthcare Outcomes

- Hub & Spoke Model’ links expert specialist teams at academic hub with primary care providers & teams in local communities
- Increases workforce capacity and access in rural & underserved areas
- Zoom conferencing & telementoring
- Case presentations, didactics & CME
- Promotes subspecialty expertise over time

http://echo.unm.edu/
Outcomes of Treatment for Hepatitis C Virus Infection by Primary Care Providers

Sanjeev Arora, M.D., Karla Thornton, M.D., Glen Murata, M.D., Paulina Deming, Pharm.D., Summers Kalishman, Ph.D., Denise Dion, Ph.D., Brooke Parish, M.D., Thomas Burke, B.S., Wesley Pak, M.B.A., Jeffrey Dunkelberg, M.D., Martin Kistin, M.D., John Brown, M.A., Steven Jenkusky, M.D., Miriam Komaromy, M.D., and Clifford Qualls, Ph.D.


http://echo.unm.edu/
Sustained Viral Response: No Detectable Virus 6 months after Completion of Treatment

Table 2. Sustained Virologic Response According to Genotype and Site of Treatment.*

<table>
<thead>
<tr>
<th>HCV Genotype</th>
<th>ECHO Sites</th>
<th>UNM HCV Clinic</th>
<th>Difference between ECHO Sites and UNM HCV Clinic</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no. of patients with response/total no. (%)</td>
<td></td>
<td>percentage points (95% CI)</td>
<td></td>
</tr>
<tr>
<td>All genotypes</td>
<td>152/261 (58.2)</td>
<td>84/146 (57.5)</td>
<td>0.7 (–9.2 to 10.7)</td>
<td>0.89</td>
</tr>
<tr>
<td>Genotype 1</td>
<td>73/147 (49.7)</td>
<td>38/83 (45.8)</td>
<td>3.9 (–9.5 to 17.0)</td>
<td>0.57</td>
</tr>
<tr>
<td>Genotype 2 or 3</td>
<td>78/112 (69.6)</td>
<td>42/59 (71.2)</td>
<td>–1.5 (–15.2 to 13.3)</td>
<td>0.83</td>
</tr>
</tbody>
</table>

* The rates of sustained virologic response are not reported separately for six patients with genotype 4 or genotype 6. ECHO denotes Extension for Community Healthcare Outcomes, HCV hepatitis C virus, and UNM University of New Mexico.
Project ECHO®

ECHO Hubs and Superhubs

Partner Locations
- Superhubs (1-4)
- Hubs (384)
- Hub(s) and Participants (40)
- Participation Only (1-44)

(Last Updated: March 12, 2020)

http://echo.unm.edu/
Project ECHO®
Geriatric Mental Health (GEMH)

To support of delivery expert care to older adults with dementia or psychiatric illness by primary care practices in underserved & rural areas of NYS
NYS SNF Needs Assessment

- 30% of new admissions have a mental/behavioral health condition
- 50% have cognitive impairment
- Three-fold increased risk of hospitalization
- 1 in 5 residents will be prescribed antipsychotic medication
Project ECHO® GEMH in Long-Term Care

**UR Medicine Hub Site**
- Geriatric Psychiatry
- Geriatric Medicine
- Geriatric Psychology
- Social Work
- Pharmacy

Outreach NH
Outreach NH
Outreach NH
Outreach NH
Outreach NH
Outreach NH
Project ECHO® GEMH in Long-Term Care
• 2015 - Recruited 60 SNFs for weekly clinics
  • Patient cases and didactics
• 2017 - Added NYS Office of Mental Health ECHO
  • Interprofessional education & CME - No Cost
• Mixed methods evaluation
  • Participant satisfaction interviews & surveys
  • CMS Quality Indicator & nursing home deficiencies
Project ECHO® GEMH Outcomes

Quality Metrics
• 86% of case patients had symptom improvement
• Decrease in antipsychotics, benzodiazepine, depressive symptoms, restraints & care plan deficiencies

Cost Metrics
• No hospitalization of case patients at follow-up

Provider Well-Being Metrics
• Valued and supported
• Decreased sense of isolation
• Improved self-efficacy
Project ECHO® GEMH Outcomes

Antipsychotic Use in Long-Stay Residents - Finger Lakes Region

Data retrieved from: https://www.medicare.gov/nursinghomecompare/search.html
One Nursing Home’s Success Story

Antipsychotic Use in Long-Stay Residents

Graph showing the percentage of antipsychotic use in long-stay residents over time, from 12/31/16 to 06/30/19.
- 30.8% on 12/31/16
- 30.9% on 3/31/17
- 33.1% on 6/30/17
- 34.9% on 9/30/2017
- 32.7% on 12/31/2017
- 30.2% on 3/31/2018
- 25.3% on 6/30/2018
- 20.5% on 9/30/2018
- 17.6% on 12/30/2018
- 13.4% on 03/31/2019
- 11.1% on 06/30/2019

The graph shows a decrease in antipsychotic use over the period.
AHRQ invested $237 million of the Provider Relief Fund to launch

Partnership between AHRQ, University of New Mexico’s ECHO® Institute, and the Institute for Healthcare Improvement

University of Rochester was one of 99 sites

We trained teams at 69 regional nursing homes
National Nursing Home COVID-19 Action Network

- Year - Long Program
- Weekly 90 minute Tele-ECHO® Clinic
  - Utilized ECHO® “All teach, all learn” model
  - Expert video presentations
  - Live QI Coach education
  - Facilitated discussion of challenges & success
- $6000 participation to each NH
- $6000 per NH to ECHO® Hub Institution
99 Training Centers provided training & mentorship to 9,017 of ~15,000 eligible nursing homes across the US and PR
How can Project Echo® Contribute to an AFHS?

- Increased access to subspecialty expertise and community of practice
- Dissemination of best practices & standards of care
- Education and support of staff
- Improved quality metrics for SNF & health/quality of life for residents
- Building blocks for future innovative programs

Improved Quality – Improved Cost – Improved Patient Experience
Case - Mrs. Vela

- Eventually returned to the SNF with prolonged delirium
- Unable to participate in rehabilitation
- Remained isolated from her family
- Developed complications of COVID-19, immobility & frailty including DVT and DTI to heels
- Expired on Hospice three months after original fall
An AFHS Post-Pandemic

• What can we learn from Mrs. Vela and the pandemic?

• How can we move our health systems forward, utilize new innovations and to optimize the care of our older patients?
Frailty Combined with Loneliness or Social Isolation: An Elevated Risk for Mortality in Later Life

Emiel O. Hoogendijk, PhD,* Annelot P. Smit, BSc,* Carmen van Dam, MD,†
Noah A. Schuster, MSc,* Sascha de Breij, PhD,* Tjalling J. Holwerda, MD, PhD,*
Martijn Huisman, PhD,** Elsa Dent, PhD,*** and Melissa K. Andrew, MD, PhD***

BACKGROUND/OBJECTIVES: Frailty, loneliness, and social isolation are all associated with adverse outcomes in older adults, but little is known about their combined impact on mortality.

DESIGN: Prospective cohort study.

SETTING: The Longitudinal Aging Study Amsterdam.

PARTICIPANTS: Community-dwelling older adults aged 65 and older (n = 1,427).

MEASUREMENTS: Frailty was measured with the frailty phenotype (Fried criteria). Loneliness was assessed with the De Jong Gierveld Loneliness Scale. Social isolation was operationalized using information on partner status, social support, and network size. Two categorical variables were created, for each possible combination regarding frailty and loneliness (FL) and frailty and social isolation (FS), respectively. Mortality was monitored over a period of 22 years (1995–2017). Survival curves and Cox proportional hazard models were used to study the effects of the FL and FS combinations on mortality. Analyses were adjusted for sociodemographic factors, depression, chronic diseases, and smoking.

RESULTS: Frailty prevalence was 13%, and 5.9% of the sample were frail and lonely, and 6.2% frail and socially isolated. In fully adjusted models, older adults who were only frail had a higher risk of mortality compared with people without any of the conditions (hazard ratio [HR] range = 1.40–1.48; P < .01). However, the highest risk of mortality was observed in people with a combined presence of frailty and loneliness or social isolation (HRFL = 1.83; 95% confidence interval [CI] = 1.42–2.37; HRFS = 1.77; 95% CI = 1.36–2.30). Sensitivity analyses using a frailty index based on the deficit accumulation approach instead of the frailty phenotype showed similar results, confirming the robustness of our findings.

CONCLUSION: Frail older adults are at increased risk of mortality, but this risk is even higher for those who are also lonely or socially isolated. To optimize well-being and health outcomes in physically frail older adults, targeted interventions focusing on both subjective and objective social vulnerability are needed. J Am Geriatr Soc 68:2587-2593, 2020.

Keywords: physical frailty; loneliness; social isolation; longitudinal study; social vulnerability
Frailty, Social Isolation & Mortality

Figure 2. Kaplan-Meier survival curves for groups based on the frailty phenotype (score ≥3) and loneliness (panel A) or social isolation (panel B).
Association Between Patient Frailty and Postoperative Mortality Across Multiple Noncardiac Surgical Specialties

Elizabeth L. George, MD, MSc; Daniel E. Hall, MD, MDiv, MHSc; Ada Youk, PhD; Rui Chen, MS; Aditi Kashikar, MBBS; Amber W. Trickey, PhD; Patrick R. Varley, MD; Paula K. Shireman, MD, MS, MBA; Myrick C. Shinall Jr, MD, PhD; Nader N. Massarweh, MD, MPH; Jason Johanning, MD, MS; Shipra Arya, MD, SM

**IMPORTANCE** Frailty is an important risk factor for postoperative mortality. Whether the association between frailty and mortality is consistent across all surgical specialties, especially those predominantly performing lower stress procedures, remains unknown.

**OBJECTIVE** To examine the association between frailty and postoperative mortality across surgical specialties.

**DESIGN, SETTING, AND PARTICIPANTS** A cohort study was conducted across 9 noncardiac specialties in hospitals participating in the American College of Surgeons National Surgical Quality Improvement Program (NSQIP) and Veterans Affairs Surgical Quality Improvement Program (VASQIP) from January 1, 2010, through December 31, 2014, using multivariable logistic regression to evaluate the association between frailty and postoperative mortality. Data analysis was conducted from September 15, 2019, to April 30, 2020. Patients 18 years or older undergoing noncardiac procedures were included.

**CONCLUSIONS AND RELEVANCE** In this study, frailty was associated with postoperative mortality across all noncardiac surgical specialties regardless of case-mix. Preoperative frailty assessment could be implemented across all specialties to facilitate risk stratification and shared decision-making.
Table 2. Association Between Delirium and Adverse Outcomes in Hospitalized Middle-Aged and Older Adults with COVID-19 (N = 707)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Occurrence</th>
<th>Unadjusted estimates (95% CI)</th>
<th>Adjusted estimates (95% CI)</th>
<th>Adjusted P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-hospital death</td>
<td>129 (55)</td>
<td>2.81 (2.03–3.88)</td>
<td>1.75 (1.15–2.66)</td>
<td>.009</td>
</tr>
<tr>
<td>Length of stay, d</td>
<td>13 (8–20)</td>
<td>1.34 (1.22–1.47)</td>
<td>1.36 (1.24–1.50)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Ventilator utilization</td>
<td>122 (53)</td>
<td>1.99 (1.45–2.74)</td>
<td>1.99 (1.30–3.05)</td>
<td>.001</td>
</tr>
<tr>
<td>Admission to intensive care</td>
<td>165 (71)</td>
<td>2.78 (1.99–3.89)</td>
<td>3.32 (2.11–5.23)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Figure 1. Cox proportional hazards regression curves for in-hospital death, according to delirium occurrence, in middle-aged and older adults with COVID-19 (N = 707).
Health Care Costs Increase Directly & Significantly with Level of Delirium Severity

One-Year Medicare Costs Associated With Delirium in Older Patients Undergoing Major Elective Surgery

Ray Yun Gou, MA; Tammy T. Hsieh, MD, MPH; Edward R. Marcantonio, MD, SM; Zara Cooper, MD, MSc; Richard N. Jones, ScD; Thomas G. Travisano, PhD; Tamara G. Fong, MD, PhD; Ayesha Abdeen, MD; Jeffrey Lange, MD; Brandon Earp, MD; Eva M. Schmitt, PhD; Douglas L. Leslie, PhD; Sharon K. Inouye, MD, MPH; for the SAGES Study Group

**IMPORTANCE** Delirium is a common, serious, and potentially preventable problem for older adults, associated with adverse outcomes. Coupled with its preventable nature, these adverse sequelae make delirium a significant public health concern; understanding its economic costs is important for policy makers and health care leaders to prioritize care.

**OBJECTIVE** To evaluate current 1-year health care costs attributable to postoperative delirium in older patients undergoing elective surgery.

**DESIGN, SETTING, AND PARTICIPANTS** This prospective cohort study included 497 patients from the Successful Aging after Elective Surgery (SAGES) study, an ongoing cohort study of older adults undergoing major elective surgery. Patients were enrolled from June 18, 2010, to August 8, 2013. Eligible patients were 70 years or older, English-speaking, able to communicate verbally, and scheduled to undergo major surgery at 1 of 2 Harvard-affiliated hospitals with an anticipated length of stay of at least 3 days. Eligible surgical procedures included total hip or knee replacement, lumbar, cervical, or sacral laminectomy; lower extremity arterial bypass surgery; open abdominal aortic aneurysm repair; and open or laparoscopic colectomy. Data were analyzed from October 15, 2019, to September 15, 2020.

**CONCLUSIONS AND RELEVANCE** These findings suggest that the economic outcomes of delirium and severe delirium after elective surgery are substantial, rivaling costs associated with cardiovascular disease and diabetes. These results highlight the need for policy imperatives to address delirium as a large-scale public health issue.

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With the new day comes new strength and new thoughts.

Eleanor Roosevelt
Figure 1. Healthy aging framework around national prevention strategy in the era of COVID-19.
Rapid Integration of Home Telehealth Visits Amidst COVID-19: What Do Older Adults Need to Succeed?

Chelsea E. Hawley, PharmD,* Nicole Genovese, PharmD,† Montgomery T. Owsiany, MS,* Laura K. Triantafylidis, PharmD, BCGP,† Lauren R. Moo, MD,** Amy M. Linsky, MD, MSc,*** Jennifer L. Sullivan, PhD,**** and Julie M. Paik, MD, ScD, MPH*****

Home Video Visits: Two-Dimensional View of the Geriatric 5 M’s

Lauren R. Moo, MD

The impact of a Friendly Telephone Calls program on visits with physicians during pandemic

Nina L. Blachman MD, MHPE, Yi Shan Lee MD, Mauricio Arcila-Mesa MD, Rosie Ferris MPH, Joshua Chodosh MD, MSHS

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EDITORIAL

APPLYING THE AGE-FRIENDLY HEALTH SYSTEM FRAMEWORK TO LONG TERM CARE SETTINGS

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The 5 M’s and More: A New Geriatric Medical Student Virtual Curriculum During the COVID-19 Pandemic

Alyson Michener, MD, Emily Fessler, MD, Mariana Gonzalez, MD, MPH, and Rachel K. Miller, MD, MsED

Staying Afloat in the COVID-19 Storm: GERIAtrics Fellows Learning Online And Together (GERI-A-FLOAT)

Maria C. Duggan, MD, MPH, Anna Goroncy, MD, Colleen Christmas, MD, and Ryan Chippendale, MD

Succeeding in Aging Research During the Pandemic: Strategies for Fellows and Junior Faculty

Andrew B. Cohen MD, DPhil, Anna L. Parks MD, Heather E. Whitson MD, MHS, Susan Zieman MD, PhD, Cynthia J. Brown MD, MSPH, Cynthia Boyd MD, MPH, Kenneth E. Covinsky MD, MPH, Michael A. Steinman MD

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Optimal Resources for Geriatric Surgery

2019 Standards

facs.org/geriatrics
University of Rochester
Aging Institute (URAI)

Promoting Vitality in Aging through Collaboration, Discovery and Innovation
UR Aging Institute

Older Adults, Patients & Families

COMMUNITY

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Alzheimer's Association
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UR Aging Institute
RoAR
UR Arts & Sciences
Data Science
Engineering
Education
Business
Music
AHP
URMFG
UR Medicine
Clinicians
Investigators
Educators
Lifespan
YMCA
UR Aging Institute – The Future

- National and international renown as leader in aging
- **Interventions** that promote **Health Span** and **Rejuvenation**
- Growth and sustainability with **funding & philanthropy**
- **Greater market share** for UR Medicine as our region’s **destination of choice** for older adult care and a geriatrics-trained healthcare workforce
- Success in **managing an aging population** and its impact on individuals, families & society
- New community & UR/URMC **collaborations and partnerships** that optimize quality of life, engagement and health
- An **Age-Friendly Health System, University & Community**
Summary

• Care of older adults is optimized in an AFHS
• There is much to learn from the COVID-19 Pandemic
• Let’s take action and move forward together towards an Age-Friendly Health System!
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