Aging and Health 2017

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Objectives

The Journal of Gerontology defines the issues of aging to be:
- Cognitive health
- Emotional health
- Mobility
- Nutrition
- Hormones
- Fragility
- Cardiovascular health
- Immunosenescence
- End of life issues
Mortality is lower in Europe than US: heart disease, lung disease, diabetes, hypertension.
Older Americans Have more Chronic Diseases than Europeans

Prevalence of disease in Europe and the United States by age in 2004. Prevalence by age and region at Wave 1 are computed using sample weights. A lowess filter is used to smooth the prevalence rates obtained.

Trends in Longevity and Co-morbid Conditions from 1990 to 2013


Body Mass Index = \frac{\text{weight (kg)}}{\text{height}^2 (\text{m}^2)}

BMI Categories:
- Underweight = <18.5
- Normal weight = 18.5–24.9
- Overweight = 25–29.9
- Obesity = BMI of 30+

https://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm

Volume 387, Issue 10026, 2016, 1377–1396
http://dx.doi.org/10.1016/S0140-6736(16)30054-X
**Black Gains in Life Expectancy**

In recent decades, the US black population has experienced substantial gains in life expectancy, now approaching the life expectancy of the white population. Greater decreases in cardiovascular disease for blacks accounted for 0.73 year increases in the sex difference in life expectancy.

<table>
<thead>
<tr>
<th></th>
<th>Black</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>78.4 y</td>
<td>81.4 y</td>
</tr>
<tr>
<td>Men</td>
<td>72.5 y</td>
<td>76.7 y</td>
</tr>
</tbody>
</table>

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**Table. Significant Causes of Death With the Highest Ratio of Deaths of Black to White and Total Number of Deaths From Each Cause, 2014a**

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Total No. of Deaths</th>
<th>Age-Adjusted Death Rates per 100 000</th>
<th>Black-White Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Blacks</td>
<td>Whites</td>
</tr>
<tr>
<td>Human Immunodeficiency virus Infection</td>
<td>6721</td>
<td>8.3</td>
<td>1.1</td>
</tr>
<tr>
<td>Homicide</td>
<td>15 809</td>
<td>17.2</td>
<td>3.0</td>
</tr>
<tr>
<td>Essential hypertension and hypertensive renal disease</td>
<td>30 221</td>
<td>15.6</td>
<td>7.4</td>
</tr>
<tr>
<td>Nephritis, nephrotic syndrome, and nephrosis</td>
<td>48 146</td>
<td>24.6</td>
<td>12.1</td>
</tr>
<tr>
<td>Cancer of prostate</td>
<td>28 344</td>
<td>13.9</td>
<td>7.3</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>76 488</td>
<td>37.3</td>
<td>19.3</td>
</tr>
<tr>
<td>Sepsis</td>
<td>38 940</td>
<td>10.2</td>
<td>17.9</td>
</tr>
<tr>
<td>Cancer of breast</td>
<td>41 678</td>
<td>16.4</td>
<td>11.0</td>
</tr>
<tr>
<td>Cerebrovascular disease</td>
<td>133 103</td>
<td>40.7</td>
<td>35.2</td>
</tr>
<tr>
<td>Cancer of colon, rectum, anus</td>
<td>52 234</td>
<td>18.6</td>
<td>14.0</td>
</tr>
<tr>
<td>Diseases of the heart</td>
<td>614 348</td>
<td>206.3</td>
<td>165.9</td>
</tr>
</tbody>
</table>

---

*a Adapted from Kochanek et al (Tables 12 and 16).*

*b Total number of deaths for all races and ethnicities.*
East Baltimore Community

- 20 year difference in life expectancy
- Major portion of mortality difference due to treatable conditions

**Figure 1.** Top ten causes of death in Baltimore City comparing mortality rates between Jonestown/Oldtown and Roland Park/Poplar Hill neighborhoods for 2002-2006 [3, 4].
• Built on existing programs
• Transforms patient care across continuum: *clinics, SNFs, hospitals, home, and EDs*
• Center for Medicare & Medicaid $19.9M grant
• East Baltimore Community
  7 zip codes
Johns Hopkins Community Health Partnership Vital Statistics

- Total Program Participants: 52,108
- Total Staff Trained/Hours: 1,572 staff /10,741 hours
- Total New Workers Hired and Trained: 77
- Program Participants from 7-zip code area: 18,074 (35%)
- Number/Percent of Medicare: 14,678 (28%)
- Number Dually Eligible: 3,663 (7%)
- Number/Percent Medicaid: 11,155 (21%)
- Inpatient Units: 34 (14 Johns Hopkins Bayview; 20 Johns Hopkins Hospital)
- Ambulatory Clinics: 8
- Skilled Nursing Facilities: 5
Case report

Case Study: Johns Hopkins Community Health Partnership: A model for transformation

Scott A. Berkowitza,*, Patricia Brownb, Daniel J. Brotmana, Amy Deutschendorfc, Lindad Dunbara, Anita Everetta, Debra Hickmanda, Eric Howella, Leon Purnelle, Carol Sylvesterd, Ray Zollingerf, Michele Bellantonia, Samuel C. Dursoa, Constantine Lyketsosb, Paul Rothmana, On behalf of the J-CHiP Program

Eric B. Bass, William Baumgartner, Michele Bellantoni, Scott A. Berkowitz, Romsai Tony Booyasai, Daniel Brotman, Patricia Brown, Amy Deutschendorf, Linda Dunbar, Samuel C. Durso, Anita Everett, Michael Fingerhood, Kevin Frick, Peter Greene, Lindsay Hebert, David Hellmann, Debra Hickman, Douglas E. Hough, Eric Howell, Xuan Huang, Chidinma Ibe, Sarah Kachur, Anne Langley, Diane Lepley, Curtis Leung, Constantine Lyketsos, Yanyan Lu, Shannon Murphy, Mary Myers, Tracy Novak, Kymberlee Olson, Leon Purnell, Stephanie Reel, Judy Reitz, Melissa Richardson, Regina Richardson, Mike Rogers, Paul Rothman, Carol Sylvester, Martha Sylvia, Albert W. Wu, Hunter Young, Roy Ziegelstein, Ray Zollinger

a Johns Hopkins University School of Medicine, United States
b Johns Hopkins Healthcare, United States
c Johns Hopkins Health System, United States
d Sisters Together and Reaching, United States
e Men and Families Center, United States
f Johns Hopkins Community Physicians, United States
Fig. 2. Noted Barriers to Care Among Medicaid (PPMCO) and Medicare Patients*.  
*Reported by 1507 Medicaid (PPMCO) patients and 1573 Medicare patients as of December 31, 2014.
By 2010, Bill Haynes had spent almost four decades under attack from the inside of his skull. He was fifty-seven years old, and he suffered from severe migraines that felt as if a drill were working behind his eyes, across his forehead, and down the back of his head and neck. They left him nauseated, causing him to vomit every half hour for up to eighteen hours. He’d spend a day and a half in bed, and then another day stumbling through sentences. The pain would gradually subside, but often not entirely. And after a few days a new attack would begin.

Haynes (I’ve changed his name, at his request) had his first migraine at the age of nineteen. It came on suddenly, while he was driving. He pulled over, opened the door, and threw up in someone’s yard. At first, the attacks were infrequent and lasted only a few hours. But by the time he was thirty, married, and working in corporate America, the pain had become unendurable.

We devote vast resources to surgeons and the like, while starving the physicians whose steady, intimate care helps many more.
Cognitive Health
Dementia is present in 1/3 age 85 years

Amyloid plaques are still main target for Alzheimer’s drugs

Metabolic effects are found 10 years before clinical symptoms

PET scan findings normal cognition (NC) to Alzheimer’s Disease (AD)

No drugs to prevent/reverse plaques AT THIS Time!
Caloric Restriction Delays Disease Onset and Mortality in Rhesus Monkeys
Colman RJ et al. Science 2009:325, 201-204

Human studies suggest 1800 calories/day
Emotional Health

Stress is Bad for Your Health- MI, arrhythmia, infection

Take 10!

Meditate

- Ten minutes per day can help ease anxiety.
- Sit up straight with both feet on the floor. Close your eyes. Focus first on head then slowly work way down body, relaxing all muscles and taking slow deep breaths. Focus attention on good aspects of your life — “I feel at peace, I do good things”. Block out distracting and negative thoughts.
Healthy, Restorative Sleep

Quiet, dark, cool room without electronics
Avoid caffeine, large meals 3 hours before bed time
No sleeping pill improves sleep, only level of consciousness
Experience Corps
High-Intensity Volunteering

• Experience corps volunteers (elementary school volunteers >15 hours/week) had a sustained increased at 3 years in caloric expenditure

www.experiencecorps.org
Fish oil supplements, longevity and aging

João Pedro de Magalhães¹, Michael Müller², G. Ed. Rainger³, Wilma Steegenga⁴

supplementation at either low or high dosages has no effect on the lifespan of male or female mice. Although it is still possible that fish oil supplementation has health benefits for specific age-related diseases, it does not appear to slow aging or have longevity benefits.
Review

Calorie restriction in human

http://dx.doi.org/10.1016/j.arr.2016.08.005
1568-1637/© 2016 Elsevier B.V. All rights reserved.
Reprint of: A parallel randomized trial on the effect of a healthful diet on inflammageing and its consequences in European elderly people: Design of the NU-AGE dietary intervention study

The NU-AGE dietary intervention study is the biggest randomized trial ever conducted on the effect of a healthful diet targeting the nutritional requirements of elderly and counteracting inflammageing, age related decline and contributing to increase the healthy lifespan in the elderly.
### NU AGE Diet

#### Nutrient requirements of the NU-AGE diet.

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>NU-AGE requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (MJ)</td>
<td>Individual requirement ± 0.5 MJ</td>
</tr>
<tr>
<td>Protein (EN%)</td>
<td>15–20</td>
</tr>
<tr>
<td>Carbohydrates (EN%)</td>
<td>50–60</td>
</tr>
<tr>
<td>Fat total (EN%)</td>
<td>25–30</td>
</tr>
<tr>
<td>Saturated fat (EN%)</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Trans fatty acids (EN%)</td>
<td>&lt;1</td>
</tr>
<tr>
<td>PUFA (EN%)</td>
<td>&lt;12</td>
</tr>
<tr>
<td>MUFA + PUFA (EN%)</td>
<td>8–28</td>
</tr>
<tr>
<td>Fibre (g)</td>
<td>30–40</td>
</tr>
<tr>
<td>Alcohol (g)</td>
<td>&lt;10–20c</td>
</tr>
<tr>
<td>Water (ml)</td>
<td>1500</td>
</tr>
<tr>
<td>Sodium (mg)</td>
<td>2000</td>
</tr>
<tr>
<td>Calcium (mg)</td>
<td>1200–1300</td>
</tr>
<tr>
<td>Iron (mg)</td>
<td>10</td>
</tr>
<tr>
<td>Vitamin D (μg)</td>
<td>15</td>
</tr>
<tr>
<td>Folate (μg)</td>
<td>400</td>
</tr>
<tr>
<td>Vitamin B12 (μg)</td>
<td>5</td>
</tr>
</tbody>
</table>

Alcohol servings/day: 1 women, 2 men
Vitamin D is the only vitamin supplement
Bone Mass across the Life Span with Optimal and Suboptimal Lifestyle Choices

Taylor C. Wallace; Massimo Marzorati; Lisa Spence; Connie M. Weaver; Patricia S. Williamson; *Journal of the American College of Nutrition* DOI: 10.1080/07315724.2016.1257961
Menopause: Genome stability as new paradigm

Joop S.E. Laven a,⁎, Jenny A. Visser b, Andre G. Uitterlinden c, Wilbert P. Vermeij d, Jan H.J. Hoeijmakers d

a Division of Reproductive Medicine, Department of Obstetrics and Gynaecology, Erasmus Medical Centre, Rotterdam, The Netherlands, The Netherlands
b Division of Endocrinology, Department of Internal Medicine, Erasmus Medical Centre, Rotterdam, The Netherlands, The Netherlands
c Human Genotyping Facility, Department of Internal Medicine, Erasmus Medical Centre, Rotterdam, The Netherlands, The Netherlands
d Department of Molecular Genetics, Erasmus Medical Centre, Rotterdam, The Netherlands, The Netherlands

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GWAS
Genetics
DNA repair and maintenance
Health risks
New paradigm

ABSTRACT

Menopause is defined as the age-dependent permanent cessation of menstruation and ovulation due to ovarian failure. Menopause occurs on average around the age of 51 years. Recent genome-wide association studies (GWAS) have identified over 44 genetic variants that are associated with age of onset of natural menopause. Genes linked with menopause can be classified into three major groups: genes implicated in genome stability (DNA repair), immune function and mitochondrial biogenesis. Biological and epidemiological data indicate that reproductive performance, age at menopause and longevity are interlinked through common genetic factors, which play a pivotal role in DNA repair and genome maintenance, which has been linked before with the process of ageing. Consequently, ageing of the soma as a result of inefficient DNA repair appears also to be responsible for failure to reproduce and the subsequent occurrence of menopause. In this way reproductive performance may be strongly linked to the physical condition of the soma and may be a very good predictor of general health in later life.

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Table 1

<table>
<thead>
<tr>
<th>Gene</th>
<th>Pathway</th>
<th>Function</th>
<th>Risk SNP</th>
<th>freq</th>
<th>p-value</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>APEX1</td>
<td>Base-excision repair</td>
<td>Endonuclease</td>
<td>rs1713460</td>
<td>0.30</td>
<td>2E-10</td>
<td>Day 2015</td>
</tr>
<tr>
<td>APTX</td>
<td>Base-excision and single strand break repair</td>
<td></td>
<td>rs4879656</td>
<td>0.37</td>
<td>2E-8</td>
<td>Day 2015</td>
</tr>
<tr>
<td>BRCA1</td>
<td>Homologous recombination</td>
<td></td>
<td>rs1799949</td>
<td>0.68</td>
<td>8E-11</td>
<td>Day 2015</td>
</tr>
<tr>
<td>BRE</td>
<td>Homologous recombination</td>
<td></td>
<td>rs704795</td>
<td>0.40</td>
<td>2E-15</td>
<td>Day 2015</td>
</tr>
</tbody>
</table>
Combined statin and angiotensin-converting enzyme (ACE) inhibitor treatment increases the lifespan of long-lived F1 male mice

Stephen R. Spindler - Patricia L. Mote - James M. Flegal
Aging of the immune system – focus on inflammation and vaccination

- **N**
  - Preserved number - reduced chemotaxis - reduced NET formation

- **M**
  - Higher number - skewing to M1 - less phagocytosis - less MHC I

- **DC**
  - Less LC - less Ag uptake - less migration to lymph nodes

- **NK**
  - Less CD56\textsuperscript{dim} - more CD57\textsuperscript{dim}CD56\textsuperscript{dim}CD16\textsuperscript{+} and CD56\textsuperscript{dim}CD16\textsuperscript{+}

- **T**
  - Less naive T cells - reduced Ag repertoire - less homing

- **B**
  - Less Ab switching - less Ab affinity maturation - oligoclonality

Young → Old
Goals for Johns Hopkins Geriatric Medicine Clinical Programs

✓ Coordinated System of Health Care for Older Adults
  - Shared electronic health record
  - Patient portal for communication
  - 24 hour physician access
  - Quality measures of clinical significance

✓ Team Approach
  - Primary care medical providers coordinate care of medical specialists
  - Nurse educators, case managers, behavioral health specialists, pharmacists and rehabilitation specialists
Goals for Johns Hopkins Geriatric Medicine Clinical Programs

✓ Setting of Care and Services designed to meet care needs
   Ambulatory Care Programs
   Wellness program and preventive health
   Chronic disease management
   Multi-morbidity

Acute hospital services
   Medicine and surgical needs

Post-acute services- home, inpatient settings
Stated simply…

✓ Right Care
✓ Right Time
✓ Right place
✓ Lowest Cost
✓ Highest Quality
✓ One EHR
79 year old woman with emphysema, diabetes, osteoporosis, high blood pressure, and arthritis

Disease-specific guidelines = 12 medications
## Potential Treatment Interactions for a Hypothetical 79-Year-Old Woman with 5 Chronic Diseases


<table>
<thead>
<tr>
<th>Type of Disease</th>
<th>Medications With Potential Interactions</th>
<th>Medication and Other Disease</th>
<th>Medications for Different Diseases</th>
<th>Medication and Food</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>Hydrochlorothiazide, lisinopril</td>
<td>Diabetes: diuretics increase serum glucose and lipids*</td>
<td>Diabetes medications: hydrochlorothiazide may decrease effectiveness of glyburide</td>
<td>NA</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Glyburide, metformin, aspirin, and atorvastatin</td>
<td>NA</td>
<td>Osteoarthritis medications: NSAIDs plus aspirin increase risk of bleeding Diabetes medications: glyburide plus aspirin may increase the risk of hypoglycemia; aspirin may decrease effectiveness of lisinopril</td>
<td>Aspirin plus alcohol: increased risk of gastrointestinal tract bleeding Atorvastatin plus grapefruit juice: muscle pain, weakness Glyburide plus alcohol: low blood sugar, flushing, rapid breathing, tachycardia Metformin plus alcohol: extreme weakness and heavy breathing Metformin plus any type of food: medication absorption decreased</td>
</tr>
<tr>
<td>Osteoarthritis</td>
<td>NSAIDs</td>
<td>Hypertension: NSAIDs: raise blood pressure†; NSAIDs plus hypertension increase risk of renal failure</td>
<td>Diabetes medications: NSAIDs in combination with aspirin increase risk of bleeding Hypertension medications: NSAIDs decrease efficacy of diuretics</td>
<td>NA</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>Calcium, alendronate</td>
<td>NA</td>
<td>Diabetes medications: calcium may decrease efficacy of aspirin; aspirin plus alendronate can cause upset stomach Osteoporosis medications: calcium may lower serum alendronate level</td>
<td>Alendronate plus calcium: take on empty stomach (&gt;2 h from last meal) Alendronate: avoid orange juice Calcium plus oxalic acid (spinach and rhubarb) or phytic (bran and whole cereals): eating these foods may decrease amount of calcium absorbed (&gt;2 h from last meal)</td>
</tr>
</tbody>
</table>
Multi-morbidity
J American Geriatrics Society 2012 Oct;60(10):E1-E25

3 or more medical diagnoses
Multiple medications
  Drug-drug interactions
Physical frailty
  unplanned weight loss, fatigue, muscle weakness, slow gait speed
Eight common geriatric conditions did not increase risk of adverse drug reactions when managed by geriatric medicine specialist.

Dementia, incontinence, falls, difficulty walking, impaired personal care, malnourishment, depression, prolonged bed rest.
Primary Care
Multi-morbidity Management

Prioritization of active issues
Medication management
  Adherence
  Drug-drug interactions
  High Risk Medication Strategy
  Anti-coagulation Centers
Primary Care coordinates Specialists’ Care
Effective communications across system
Preventive Health Care
Longitudinal Ambulatory Primary Care

Vaccinations
- influenza, pneumonia,
- herpes zoster, tetanus/pertussis

Physical function

Fall prevention

Vision, hearing, dental care

Geriatric Syndromes

Cancer screening

Advance directives
Geriatric Syndromes

Dementia
Osteoporosis
Osteoarthritis
Incontinence
Vision impairment
  Glaucoma, macular degeneration
Hearing impairment
Dental decay
  Malnutrition, infection, myocardial infarction
Physical Function Assessment

Activities of Daily Living

Basic Activities of Daily Living- Personal care
  bathing, dressing, toileting, feeding, ambulation
Timed 3 meter walk
Grip Strength
Independent Activities of Daily Living
  Management of home, finances, meal preparation, medications
Evidence-based Approach to Preventive Health for Older Adults

World Health Organization
Fracture Risk Assessment: FRAX

60,000 women and men studied
230,000 validation cohort

http://www.shef.ac.uk/FRAX/
Osteoporosis: Screening
Release Date: January 2011

**Recommendation Summary**

<table>
<thead>
<tr>
<th>Population</th>
<th>Recommendation</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women, 65 and Older</td>
<td>The USPSTF recommends screening for osteoporosis in women aged 65 years and older and in younger women whose fracture risk is equal to or greater than that of a 65-year old white woman who has no additional risk factors.</td>
<td>B</td>
</tr>
<tr>
<td>Men</td>
<td>The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for osteoporosis in men.</td>
<td>I</td>
</tr>
</tbody>
</table>

**Related Information for Consumers**
There is no related information for consumers.

**Related Information for Health Professionals**
- Fracture Risk Assessment Tool - FRAX. Click to read the external link disclaimer.
- Osteoporosis Risk Assessment Instrument (ORAI). Click to read the external link disclaimer.
- Screening for Osteoporosis - Clinical Summary of USPSTF Recommendation, 2011
- Fall Prevention in Community-Dwelling Older Adults - Clinical Summary of USPSTF Recommendation, 2012

**Supporting Documents**
- Final Evidence Review. Click to read the external link disclaimer. Click to read the external link disclaimer. PDF Version (PDF Help)
- Evidence Summary. PDF Version (PDF Help)

**Clinical Summary**
Clinical summaries are one-page documents that provide guidance to primary care clinicians for using recommendations in practice.
This summary is intended for use by primary care clinicians.
National Osteoporosis Foundation Exercise Programs

http://nof.org/exercise

A. Posture Exercise Example

B. Hip and Back Strengthening Exercise Example:

C. Balance Exercise Example

Prone leg lifts

Wall slide
Dietary Approaches to Health
Meta-analysis of Calcium Supplementation and Cardiovascular Risks

MJ Boland et al. BMJ 2010; 341:c3691
# Successful Innovations in Health Care for Older People With Chronic Conditions

<table>
<thead>
<tr>
<th>Model</th>
<th>Provider(s)</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outpatient geriatric evaluation management</td>
<td>Nurse, SW, physician, physical therapist</td>
<td>↑ function, $ (Reuben, Frank, et al., 1999)</td>
</tr>
<tr>
<td></td>
<td>Nurse, SW, physician</td>
<td>↑ function, $, satisfaction with care (Cohen et al., 2002)</td>
</tr>
<tr>
<td></td>
<td>Nurse, SW, physician</td>
<td>↓ depression, caregiver burden; ↑ function (Boult et al., 2001)</td>
</tr>
<tr>
<td>Disease management</td>
<td>Nurse, physician</td>
<td>↑ quality of life, function, satisfaction with care (Ofman et al., 2004; Unutzer et al., 2002)</td>
</tr>
<tr>
<td>Chronic disease self-management</td>
<td>Lay leaders</td>
<td>↑ health, ↓ hospital days (Lorig et al., 2001)</td>
</tr>
<tr>
<td>Health enhancement program</td>
<td>Nurse practitioner</td>
<td>↓ hospital days, $, disability (Phelan et al., 2002, 2004)</td>
</tr>
<tr>
<td>Case management</td>
<td>SW</td>
<td>↓ $ (Boult et al., 2000)</td>
</tr>
<tr>
<td>Transitional care</td>
<td>Advance practice nurse</td>
<td>↓ hospital admission, days, $ (Naylor et al., 1999)</td>
</tr>
<tr>
<td></td>
<td>Nurse, dietician, SW, physician</td>
<td>↓ hospital readmissions, $ (Rich et al., 1995)</td>
</tr>
<tr>
<td>Caregiver education and support</td>
<td>SW, psychologist</td>
<td>↓ nursing home admissions (Mittelman et al., 1996)</td>
</tr>
</tbody>
</table>
## Guided Care for Multi-morbid Older Adults

### Allocation of Time in a Typical Week of a Guided Care Nurse

<table>
<thead>
<tr>
<th>Task</th>
<th>Average hr/week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring patients</td>
<td>10</td>
</tr>
<tr>
<td>Coordinating transitions between sites and providers of care</td>
<td>10</td>
</tr>
<tr>
<td>Coaching</td>
<td>6</td>
</tr>
<tr>
<td>Updating the electronic health record</td>
<td>5</td>
</tr>
<tr>
<td>Educating and supporting caregivers</td>
<td>4</td>
</tr>
<tr>
<td>Accessing community resources</td>
<td>2</td>
</tr>
<tr>
<td>Communicating with primary care physicians</td>
<td>2</td>
</tr>
<tr>
<td>Supporting the chronic disease self-management program</td>
<td>1</td>
</tr>
</tbody>
</table>
Patient and Caregiver Training and Caregiver Support

Living Well
Chronic Disease Self-Management Program

Put Joy Back In Your Life
By attending the 6 sessions you will learn to:
• Manage your health conditions
• Deal with pain and fatigue
• Communicate with family, friends, and health professionals
• Develop Healthy eating habits
• Plan a fitness program

John Hopkins Bayview Medical Center
Alpha Commons Building-Second Floor
5300 Alpha Commons Drive Baltimore, MD 21224
Fridays 1:00-3:30 pm

Behavioral Health Specialist
Answers for Aging Service Coordinator, Catholic Charities
Geriatric Syndromes
Specialty Outpatient Centers

Memory Disorders Center
Dementia care
Geriatric medicine
Geriatric psychiatry
Occupational therapy

Balance Disorder Center
Otolaryngology
Physical therapy

Continence Center
Physical therapy
Urogynecology
Johns Hopkins Memory Center

http://www.hopkinsmedicine.org/psychiatry/specialty_areas/memory_center/
Alternative to Nursing Home Program of All Inclusive Care for Elderly

150 nursing home eligible older adults age > 55 years

Day hospital program

Medical, nursing, physical rehabilitation services
Elder Housecall Program

Routine and urgent medical visits to older adults who are home bound

Home Nursing, Rehabilitation services and Diagnostic studies

x-rays, EKG, laboratory studies
Protocols for acute care delivered in home
Community-acquired pneumonia
Congestive heart failure
Chronic obstructive pulmonary disease
Cellulitis
Hospital Medicine

Team of doctors, nurse practitioners, case managers, physical therapists, pharmacist

Accurate Medication Lists, Communication with Primary Care Provider
Older Surgical Patients Benefit from Geriatric Medicine Consultation

Acute Hip Fracture Service
Emergency Room → Operating Room → Physical Rehabilitation
140 patients/year
Length of acute care decreased by one day
Emergency Department Geriatric Medicine Consultations

Targeting older adults with ED visits for falls and/or confusion

Medical stability for discharge to home

Social support for discharge to home

Establish primary care
outpatient or in home medical care
### Johns Hopkins Medicine

#### Skilled Nursing Facility Collaborative

| **Transitions of Care** | - Build upon J-CHiP  
- Smooth transitions  
- Develop protocols |
|-------------------------|---------------------------------------------------------------------|
| **EHR-based Solutions** | - Utilize unified Epic platform for discharges  
- Support SNF integration of standardized protocols  
- Leverage CRISP for community transitions |
| **SNF-based interventions** | - Support QIO initiatives  
- Leverage QIO community infrastructure |
| **Opportunities to Scale** | - Disseminate and scale hospital and departmental successes |

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![Collaborative Network](image)
Palliative Care Program

Inpatient consultation to address medical, physical, psychosocial needs for a comprehensive palliative and end-of-life care plan

Faculty physician, pharmacist with pain management expertise, case manager, clergy
Take Home Messages

✓ Genes matter- about 25% heritability of longevity

✓ What we eat, drink, do, and smoke matter more


BUT…
Take Home Messages

Health Care for Older Adults

Longitudinal ambulatory care

Preventive health and management of multi-morbidity

Primary care oversees care of specialists

Coordinated system of care in multiple settings

Outpatient, hospital, physical rehabilitation, home

Advance Care Planning
Resources

National Institute on Aging
http://www.nia.com

American Geriatrics Society
http://www.ags.com

American Medical Directors Association
http://www.amda.com