Financial Relationships With Commercial Entities

- Dr Siegler has received support from an approved investigator-initiated research grant from Gilead Sciences, Inc. (Updated 08/17/17)

Learning Objectives

After attending this presentation, learners will be able to:

- Describe epidemiology of HIV and aging
- Identify aging-related syndromes and the components of geriatric assessment
HIV Care and Geriatrics Have a Lot in Common

- Our patients have medical, psychological and social problems
- We know how to work in teams

The Population with HIV is Growing Older and Older

Older People with HIV Have More Multimorbidity

HIV Increases All Costs of Care
Comorbidities Are Only the Start

Aging
Geriatric (Aging-related) Syndromes

Aging Can be Described by Basic Clinical Principles

Assume Nothing:
Aging Occurs at Different Rates in Different People in Different Organs for Different Reasons

Aging with HIV Differs from Acquiring HIV Later in Life

Comorbidities Are Only the Start

Aging
Geriatric (Aging-related) Syndromes

Aging Can be Described by Basic Clinical Principles

Assume Nothing:
Aging Occurs at Different Rates in Different People in Different Organs for Different Reasons

Aging with HIV Differs from Acquiring HIV Later in Life
Environment and Genes Influence How We Develop and How We Age

Death rates of East Germans have improved since unification
(Vogel et al. Science. 2003; DOI: 10.1126/science.1090529)

Aging Leads to Diminished Reserve
Example: Renal Function

Aging Changes Often Cause:
- Uncommon presentations of common diseases
- Syndromes of multifactorial origin
Geriatric (Aging-Related) Syndromes May Have a Greater Impact Than Comorbidities

**Definition**
Clinical conditions in older persons “that do not fit into discrete disease categories” and instead “cross organ systems and discipline-based boundaries.”


**Examples**
- Falls
- Frailty
- Delirium
- Dizziness

Traditional Syndromes Differ from Geriatric Syndromes

- **Traditional**
  - AIDS (1983)
  - Rare
  - Unknown but specific cause
  - Multiple manifestations

- **Geriatric**
  - Dizziness
  - Common
  - Multiple causes
  - Defined but cross-disciplinary manifestation
Another Aging-Related Syndrome: Frailty

- "Characterized by diminished strength, endurance, and reduced physiologic function"
  - Morley et al, Frailty Consensus Panel, JAMDA 2013
- Measured as a phenotype or accumulation of deficits
- Increased risk of dependency and death
- Potentially treatable

Aging Increases the Risk of Frailty

- Frailty is not disability
- Frailty is a state of vulnerability

HIV Increases Risk of Frailty – Even after ART

- OR increased 1.5 for each decade of age
- AIDS increased risk approximately 3.5 fold

Frailty Increases Mortality Risk in Synergy with HIV

- Desquilbet et al, JAIDS 2009. doi: 10.1097/QAI.0b013e3181945eb0
- Piggott et al, 2013 PLOS ONE. doi:10.1371/journal.pone.0054910
Older HIV+ Have Significant Impairments

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>50-59 (n=244)</th>
<th>60+ (n=115)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance Problem</td>
<td>37.6%</td>
<td>33.3%</td>
<td>46.9%</td>
</tr>
<tr>
<td>Excellent or vg health</td>
<td>38.3%</td>
<td>42.1%</td>
<td>29.6%</td>
</tr>
<tr>
<td>Poor fair med adherence</td>
<td>11.2%</td>
<td>14.6%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Slow gait speed (&gt;=6.21 sec for 4m)</td>
<td>8.8%</td>
<td>6.2%</td>
<td>14.2%</td>
</tr>
</tbody>
</table>

- 85% M; 74.8% MSM
- 57.1% W (69.6% in 60+)
- 30.6% current smokers
- Median # meds: 11 (8-15)
- 40.7% had fallen in the past year
- 12.2% dependent in >= 1 ADL
- 33.7% had cognitive impairment (MoCA <26)
- 34.1% were mod-sev lonely
- 25.8% were mod-sev depressed
- Only half had normal social supports

John et al., JAIDS DOI: 10.1097/QAI.0000000000001009

Biomedical
HIV
Comorbidity
Prevention
Aging
Function
Syndromes/frailty

Educational
(HIV)
Comorbidity
Prevention
Aging
Function
Syndromes/frailty

Healthcare for Aging HIV+ is More Than Managing Viral Load and Comorbidities

- Physiologic burden
  - HIV infection
  - Comorbidity
  - Medication interactions and side effects
- Aging-related syndromes like frailty
- Psychosocial stressors
- Functional, affective and cognitive status
- Ascertaining advance directives and goals of care
Begin with the Fundamentals of Geriatric Primary Care

- Comprehensive assessment
- Creation, implementation, and monitoring of plan of care
- Communication and coordination with all parties
- Promotion of active engagement

How Can Geriatric Assessment Tools Help Us Care for People Aging with HIV?

Assess Function

<table>
<thead>
<tr>
<th>Basic Activities of Daily Living</th>
<th>Instrumental Activities of Daily Living</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dressing</td>
<td>Shopping</td>
</tr>
<tr>
<td>Bathing</td>
<td>Using phone</td>
</tr>
<tr>
<td>Eating</td>
<td>Meal prep</td>
</tr>
<tr>
<td>Toilet/continence</td>
<td>Med management</td>
</tr>
<tr>
<td>Transferring</td>
<td>Using transportation</td>
</tr>
<tr>
<td>Grooming</td>
<td>Laundry</td>
</tr>
<tr>
<td>Housework</td>
<td>Finances</td>
</tr>
</tbody>
</table>

Assess Health and Well-Being

- SF-36 Scales
  - Physical Functioning
  - Physical Component Summary Score (PCS)
  - Emotional Role Functioning
  - Mental Component Summary Score (MCS)

Summary Scores

- Physical Functioning
- General Health
- Role Functioning
- Mental Health
Assess Prognosis: Try the VACS Calculator

- Highly predictive of:
  - All cause (Justice et al. 2013) and cause-specific mortality (Tate et al., 2013)
  - Hospitalization (Akgun et al., 2013)

- Associated with:
  - Markers of chronic inflammation (Justice et al., 2012)
  - Cognitive performance (Franklin et al., 2013)
  - Functional performance (Erlanson et al., 2013)

- It is less useful as a descriptive or prescriptive tool

---

Assess Frailty

**Phenotype** (Fried et al., 2001; PMID: 11253156)

- Shrinking
  - Unintentional weight loss >10 lb lost in prior year
- Weakness
  - Grip strength <20% (adj)
  - Poor endurance/exhaustion
  - Exhaustion, weakness or fatigue by self report
- Slowness
  - 4m walk (>7s for ht <159 cm; otherwise >8s)
- Low activity
  - Lowest quintile of kilocalories expended per week (based on subject report)

- Three or more criteria = frail
- One to two criteria = prefrail

Alternative: Cumulative Deficits Model, where frailty is due to weight of multimorbidity.


Brothers et al. doi.org/10.1093/infdis/jiu258

Some Simpler Frailty Screens

**FRAIL** Questionnaire
3 or greater = frailty; 1 or 2 prefrail

- Fatigue: are you fatigued?
- Resistance: Cannot walk up 1 flight of stairs?
- Aerobic: Cannot walk 1 block?
- Illnesses: Do you have more than 5 illnesses?
- Loss of weight: Have you lost more than 5% of your weight in the past 6 months?


Gérontopôle Frailty Screening Tool (yes to at least 1, + gestalt)

- Patient living alone?
- Involuntary weight loss in the past 3 months?
- Fatigability from the past 3 months?
- Mobility difficulties for the past 3 months?
- Memory complaints?
- Slow gait speed (>4 s for 4 m)

Screen for Cognitive Impairment

- Mini-cog™
  - Remember 3 nouns
  - Draw a clock

MoCA®
(Montreal Cognitive Assessment)
- Picks up MCI
www.mocastest.org/

www.alz.org/documents_custom/minicog.pdf


MoCA® ©
(Montreal Cognitive Assessment)

People Aging with HIV Have Non-HIV Dementias

- Assess impact
- Optimize medication management
- Access CBSS
- Help patients and families prepare

Underwood and Winston 2016; doi: 10.1007/s11904-016-0324-x

Assess and Manage Bone Health

Brown et al. CID 2015 DOI: 10.1093/cid/cid1015

DOI: 10.1080/147872710.2016.1144570
Try the FRAX Screen for Fracture Risk

http://www.shef.ac.uk/FRAX/

Choose country and ethnic group

But Remember That Fractures Involve More Than Bones

And falls lead to more than fractures

Erado et al., 2016
DOI: 10.1097/COH.0000000000000258

Evaluate All Medications

- Beware of interactions
- Don’t be afraid to give medications that the patient truly needs
- Don’t be afraid to stop medications that the patient doesn’t need

Comprehensive Geriatric Assessment Can’t be Completed in an Hour - We Start with the Basics

- Goals, what’s important to them
- FRAX (http://www.shef.ac.uk/FRAX/)
- VACS (https://vacs-apps2.med.yale.edu/calculator/IC)
- PHQ-4 (depression, anxiety)
- Frailty screen (Gérontopôle)
- Strength (handgrip)
- Functional Assessment (include continence, falls)
- MoCA
- Hearing, vision
- PE, including observing gait

http://ncaeaetc.org/content/clinical-support-tools
How Might a Geriatric Approach Help People Aging With HIV?

- Attention to aging-related syndromes
- Testing for functional and cognitive impairment
- Treatment and prevention of comorbidity
  - Help with establishment of priorities, medication choice
- Prognostic scoring
- Screening
- Another voice against smoking and other high risk behaviors
- Management of social burdens
- Advance directives and goals of care

We Must Combine Components of Care

- Merging of silos v. seamless access
- Reimbursement
- Flexibility
- Long term care

Question and Answer Period

- Use the microphones or Q-cards for questions
- If you are participating via the live webcast, please email your questions to RWCCwebcast@iasusa.org