Consequences of Loneliness: Research and Recommendations

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Assistant Professor of Medicine
May 30, 2014
Learning Objectives:

- Recognize the complexity of caring for older adults
- Distinguish between “Loneliness” and “social isolation”
- Know how to screen for loneliness
- Describe the effects of loneliness on health
- Be familiar with possible strategies for addressing loneliness
3 Cases
California, 2013:

- 94 yo woman dies after deciding to forgo cancer treatment
- She had no family, and described her friends as “professionals”—doctors, attorneys, caregivers
- One week before her death, she told a friend that she felt so alone

Is she lonely or socially isolated?
Was She Lonely?
Man, 102, dies of failure to thrive

- California 2012
- Dies in hospital because he did not have enough help at home
- He was homebound
- Had family out of state
- He had a visiting doctor, caring neighbors and maximum IHSS hours
Was He Lonely?
California 2014
Relatively healthy, except for arthritis
4 children in area
Several grandchildren
Live-in 24 hour help
Frequent social engagements
Is She Lonely?
What is Loneliness?

- Take 1 minute to think about what loneliness is.
- Turn to someone next to you, and spend 4 minutes talking about what loneliness means to you and discuss the 3 cases.
- Share as a group.
The Context:

- Why does this matter today?
The Demography of Aging

- The older population (65+) numbered 41.4 million in 2011, an increase of 18% since 2000.

- Persons >65 have an average life expectancy of an additional **19.2 years** (20.4 years for females and 17.8 years for males)

- **21.0%** of persons 65+ were members of racial or ethnic minority

- Almost half of older women (46%) age 75+ live alone.

- The 85+ population is projected to increase from 5.7 million in 2011 to 14.1 million in 2040.

References:

Wolfson, NEJM April 2001
Chen and Landefeld in *Medical Management of Vulnerable and Underserved Populations* 2007
http://www.aoa.gov/Aging_Statistics/Profile/2012/docs/2012profile.pdf
Global Aging

Figure 10. Proportion of population aged 60 or over: world and development regions, 1950-2050

- World
- More developed regions
- Less developed regions

About 28% (11.8 million) of non-institutionalized older persons live alone (8.4 million women, 3.5 million men).

Almost half of older women (46%) age 75+ live alone.

Prevalence of loneliness:
~43% of community living adults report feeling lonely (US)
~31% sometimes lonely, 5% often, 2% always lonely (UK)
Living Arrangements in >65 yo

Living arrangements of the population age 65 and over, by sex and race and Hispanic origin, 2010

http://www.agingstats.gov/Main_Site/Data/2012_Documents/docs/Population.pdf
Why Focus on Older Adults?

Why are older adults different than younger adults?

Why should we care about loneliness?
Medical Care for Older Adults: Challenges of Complexity and Heterogeneity

Pacala, JT. Grand Rounds UCSF 2011
Younger Person: Functional Domains

- Medical
- Familial/Social
- Cognitive/Emotional
- Environmental
- Financial

FUNCTION

Pacala, JT. Grand Rounds UCSF 2011
The Challenge of Complexity:

Multiple Chronic Diseases

+ 

Problems in Other Domains

= 

Functional Decline
Older Person: Functional Domains

- Medical
- Familial/Social
- Cognitive/Emotional
- Environmental
- Financial

FUNCTION
Should We Be More or Less Concerned about Our Patients in our communities?
Thinking about the 3 cases presented...

Should we be concerned about them?

If so, **WHO** would you be concerned about?

- 94 yo with cancer
- 102 yo with failure to thrive
- 82 yo old with family
Could these deaths have been prevented?

Are We Missing Ways to help prevent functional decline and death?
What is It?

Normal Aging vs. Social Isolation vs. Loneliness vs. Depression
Loneliness Defined

- Loneliness is the *subjective* feeling of being alone

- “the *distress* that results from discrepancies between ideal and perceived social relationships.”

-Cacioppo. U. Chicago 2009

http://psychology.uchicago.edu/people/faculty/cacioppo/jtcreprints/hc09.pdf
Social isolation refers to a complete or near-complete lack of contact with society. It relates to a quantifiable number of relationships.
Myths about loneliness

- It is a normal part of aging
- It is synonymous with depression
- It cannot occur if you live with others and have friends
- It does not exist in married couples
- It will go away if you join a social group
Social isolation by itself does not account for the distress that a person subjectively may feel.
Should we Screen for Loneliness?
### Loneliness Screening

3-item Loneliness Scale:

<table>
<thead>
<tr>
<th>Question</th>
<th>Hardly Ever</th>
<th>Some of the Time</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel left out</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. I feel isolated</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. I lack companionship</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Max score 9: higher score = more lonely

Effects of Loneliness on Health
Loneliness Study

- 1604 participants aged >60
- Participants in the Health and Retirement Study
- 6 year study
- Asked if they were lonely
  - classified as lonely if responded “some of the time or often to any of the 3 questions”

Outcomes:
- Death
- Decline in Function
  - ADLs
  - Other mobility tasks

Perissinotto C. JAMA (Archives) Internal Medicine 2012
Assessing Function...

- **ADLs: Activities of Daily Living**
  - Bathing
  - Dressing
  - Toileting
  - Continence
  - Transferring
  - Feeding

- **Upper Extremity Tasks**
- **Decline in Mobility**
- **Difficulty in Climbing**
Other Variables Examined:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Lonely (N = 693)</th>
<th>Not Lonely (N = 911)</th>
<th>P-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (mean, SD)</td>
<td>71.3 ± 7.9</td>
<td>70.5 ± 7.2</td>
<td>0.041</td>
</tr>
<tr>
<td>Age Category, %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-65</td>
<td>29.0</td>
<td>30.5</td>
<td>0.062</td>
</tr>
<tr>
<td>65-75</td>
<td>42.0</td>
<td>45.7</td>
<td></td>
</tr>
<tr>
<td>&gt;75</td>
<td>29.0</td>
<td>23.8</td>
<td></td>
</tr>
<tr>
<td>Female, %</td>
<td>67.1</td>
<td>53.5</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Ethnicity, %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>76.2</td>
<td>85.8</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Black</td>
<td>14.7</td>
<td>8.6</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>7.8</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1.3</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>Married or Partnered</td>
<td>62.5</td>
<td>83.9</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>SES Measures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;HS education, %</td>
<td>26.8</td>
<td>19.0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Income, median (IQR)</td>
<td>28K (16K – 46K)</td>
<td>39K (24K – 65K)</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Net worth, median (IQR)</td>
<td>147K (46K – 375K)</td>
<td>245K (88K – 554K)</td>
<td>&lt;0.001**</td>
</tr>
<tr>
<td>Working for pay, %</td>
<td>19.1</td>
<td>28.4</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Living Arrangements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Living in Urban Area, %</td>
<td>66.6</td>
<td>70.9</td>
<td>0.065</td>
</tr>
<tr>
<td>Living Alone, %</td>
<td>26.7</td>
<td>10.5</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
Who Was More Lonely?

- Women
- Non-white participants
- Slightly Older participants
- Lower socioeconomic status
- Most not depressed
## Results

<table>
<thead>
<tr>
<th>Functional Measure</th>
<th>Eligible for outcome</th>
<th>Outcome Frequency</th>
<th>Unadjusted RR/HR (95% CI)</th>
<th>Adjusted RR/HR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lonely</td>
<td>Not Lonely</td>
<td></td>
</tr>
<tr>
<td>ADLs</td>
<td>1233</td>
<td>24.8%</td>
<td>12.5%</td>
<td>1.98 (1.55, 2.53)</td>
</tr>
<tr>
<td>Upper Extremities</td>
<td>1166</td>
<td>41.5%</td>
<td>28.3%</td>
<td>1.47 (1.25, 1.72)</td>
</tr>
<tr>
<td>Tasks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>1114</td>
<td>38.1%</td>
<td>29.4%</td>
<td>1.30 (1.10, 1.53)</td>
</tr>
<tr>
<td>Climbing</td>
<td>1062</td>
<td>40.8%</td>
<td>27.9%</td>
<td>1.46 (1.23, 1.73)</td>
</tr>
<tr>
<td>Death(^b)</td>
<td>1604</td>
<td>22.8%</td>
<td>14.2%</td>
<td>1.70 (1.35, 2.15)</td>
</tr>
</tbody>
</table>
Study Conclusions:

- Loneliness is common
- It is an independent predictor of functional decline
- It is an independent predictor of death
- We still have much to learn....
Potential Mechanisms

- Increased stress response (sympathetic tone)

- Decreased
  - inflammatory control
  - Sleep
  - motor function
  - self care
  - engagement with medical community
Other Results:

- Original Investigation | July 23, 2012
- **Living Alone and Cardiovascular Risk in Outpatients at Risk of or With Atherothrombosis**

Jacob A. Udell, MD, MPH; et al.  
Additional Results:

Reported loneliness rather than social isolation is a risk factor for 10-year mortality in older men

*Evid Based Mental Health* 2012 15: 87 originally published online September 4, 2012  
doi: 10.1136/eb-2012-100943

**CONCLUSIONS**

Reporting feelings of loneliness is associated with a significantly increased risk of mortality in the next 10 years in older men, but not older women. This relationship is independent of social isolation. Reporting social isolation is not an independent risk factor for mortality in the next 10 years in older men or women.
2173 community dwelling adults

Conclusions:
- Feeling alone is a risk factor for dementia (OR 1.64 CI(1.05-2.56))
- Independent of vascular risk factors and depression
Social isolation, loneliness, and all-cause mortality in older men and women

Andrew Steptoe¹, Aparna Shankar, Panayotes Demakakos, and Jane Wardle

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Edited by Kenneth Wachter, University of California, Berkeley, CA, and approved February 15, 2013 (received for review November 12, 2012)

Both social isolation and loneliness are associated with increased mortality, but it is uncertain whether their effects are independent or whether loneliness represents the emotional pathway through approaches for support of older people. The purpose of our study was to investigate the associations of social isolation and loneliness with mortality in a representative national sample of older men and

- 6500 men and women
- 7.25 years of follow-up
- Mortality higher in socially isolated AND lonely
- Loneliness NOT independent of demographic factors
Loneliness is as dangerous as smoking 15 cigarettes a day

Holt-Lundstad, PLoS 2010
Public Messaging

Media Coverage and Beyond
An Overstatement??

Loneliness can actually kill you

ANI  Jun 28, 2012, 12.00AM IST

Tags: The National | National Institute on Aging | missing | depression | Carla Perissinotto | aging

Loneliness - the unpleasant feeling of emptiness or desolation, can be especially debilitating to older adults and may predict serious health problems and even death, say researchers.

A UCSF researcher team analyzed data in the Health and Retirement Study, a nationally representative study by the National Institute on Aging conducted on 1,604 older adults between 2002 and 2008.
This study will make you feel terrible about not calling your grandparents

By Ezra Klein, Published: April 8, 2013 at 4:13 pm  E-mail the writer

Feeling lonely won’t kill you. Actually being alone might.

A new study published in the Proceedings of the National Academy of Sciences finds that after adjusting for demographic factors and underlying health, self-reported feelings of lonesomeness have no significant connection to mortality among the elderly, but actual social isolation increases the likelihood of death by a stunning 26 percent.
Just Say Hello: The Powerful New Way to Combat Loneliness

It's a simple greeting, but its power is profound: Science reveals that social interaction can help us live healthier, happier, and longer lives. Yet too many of us are missing out on chances for connection. Sanjay Gupta, MD, reports on an epidemic quietly sweeping society—and why we should all speak up.

BY SANJAY GUPTA, MD

...speak up!

http://www.oprah.com/health/Just-Say-Hello-Fight-Loneliness
Potential Interventions
For Patients, Families, Health Care Providers and Researchers
1. ASK ABOUT LONELINESS
"If you want to avoid feeling irrelevancy, you need to maintain your friendships, maintain your family ties, stay an active part of other people’s lives in whatever way you can."

-Barbara Dane, 2012 SF Chronicle Interview
Individual, Local, National and International Outreach

Campaign to End Loneliness
CONNECTIONS IN OLDER AGE

About the Campaign

The Campaign to End Loneliness is a network of national, regional and local organisations and people working together through community action, good practice, research and policy to create the right conditions to reduce loneliness in later life. We were launched in 2011, are led by five partner organisations and work alongside 1400 supporters, all tackling loneliness in older age.
2. Encourage Patients to Talk to their Health Care Provider about Loneliness
“It’s about reminding people that they are still a part of their community. We work to encourage caring connections because that is what binds us to life”

— Dr. Patrick Arbore, Director, Grief Related Services
Institute on Aging: Emotional Support Services

3. Utilize Existing Community Programs
Other Examples of Community Resources:

- Friendship Line
- ElderWISE (working in service to elders)
- Volunteers: connecting with specific interests
- Experience Corps, Little Brothers-Friends of the Elderly
- Caring Hands/ Senior Peer Counseling
- Village Movement -- “Aging in Place”
Potential Outcomes:

- John Muir Health, Contra Costa Health Plan (CCHP) and Caring Hands work together to focus on loneliness and health.

- “Mrs. F is a 75 year old widow and participant:
  - difficulty grocery shopping and getting to appointments.
  - Her limited mobility → feelings of isolation.
  - Now has weekly friendly visitor through Caring Hands and has rides to appointments.
  - Mrs. F has stated about the program, “you have saved my life on more than one occasion.”
New Platforms and Research
Using Technology to Improve Social Health
The User Experience

- Easy to use
- In 4 senior communities
- 12 sites in June

Web-based
Works with desktop, notebooks and tablet computers
Requires broadband connection
Services for Independent Living

Holistic Approach to Care
- Secure and private space for care coordination & personal health mgmt
- Reminders & alerts
- Schedule with vetted service providers

Easy-to-use, web-based platform
- Desktop, notebook, tablet PC’s
- Care plan implementation
- Video conferencing
Personal Profile
capturing personal and social context
to personalize system behavior

Connect
using devices and people sensing
to monitor health and wellbeing

Resource Matching
senior-relevant resource reviews

Micro-communities
building community and social engagement
through neighborly service exchange
Internet and Social Media

http://www.oprah.com/health/Just-Say-Hello-Fight-Loneliness

Just Say Hello: The Powerful New Way to Combat Loneliness

It's a simple greeting, but its power is profound: Science reveals that social interaction can help us live healthier, happier, and longer lives. Yet too many of us are missing out on chances for connection. Sanjay Gupta, MD, reports on an epidemic quietly sweeping society—and why we should all speak up.

BY SANJAY GUPTA, MD

...speak up!
Internet and Social Media

Need to talk to someone?

Our listeners come from all walks of life and have diverse backgrounds.
Our Tasks Ahead:

- Funding for research on loneliness
- Determine *which* interventions work
- Spread the word
- Lookout for yourselves and...those around you
3 Cases-revisited

- **93 yo with squamous cell:**
  - Lonely, and perhaps isolated
  - Felt lonely when moved to Skilled Nursing Facility

- **102 yo with failure to thrive:**
  - Not Lonely but is isolated

- **82 yo with care**
  - Lonely, but not isolated
Learning Objectives:

- Recognize the complexity of caring for older adults
- Distinguish between “Loneliness” and “social isolation”
- Know how to screen for loneliness
- Describe the effects of loneliness on health
- Be familiar with possible strategies for addressing loneliness
In Summary:

• Loneliness is Common
• It affects Health
• It may be more distressing to patients than traditional risk factors
• It is a risk factor for death
• We can make a difference by asking about loneliness
• We can explore ways to help adults feel more connected
In memory of Jack