COVID as a Natural Resilience Experiment: The Pandemic Experience as a Stressor

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- Papa Health: Consulting fees

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Outline

1. How is the pandemic a stressor?

2. What populations have been disproportionately at risk?

3. How can we incorporate length of time of the pandemic into our model of a stressor?

4. What are available data sources?

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Just What Older People Didn't Need: More Isolation

The coronavirus pandemic could sharpen the health risks of loneliness. But there are ways to connect.

Paula Span, New York Times 4-13-2020

JOURNAL OF THE **AMERICAN GERIATRICS SOCIETY**

AGS Geriatrics Healthcare Professionals
Leading Change. Improving Care for Older Adults.

Letter To The Editor | Free Access

"Social Distancing" Amid a Crisis in Social Isolation and Loneliness
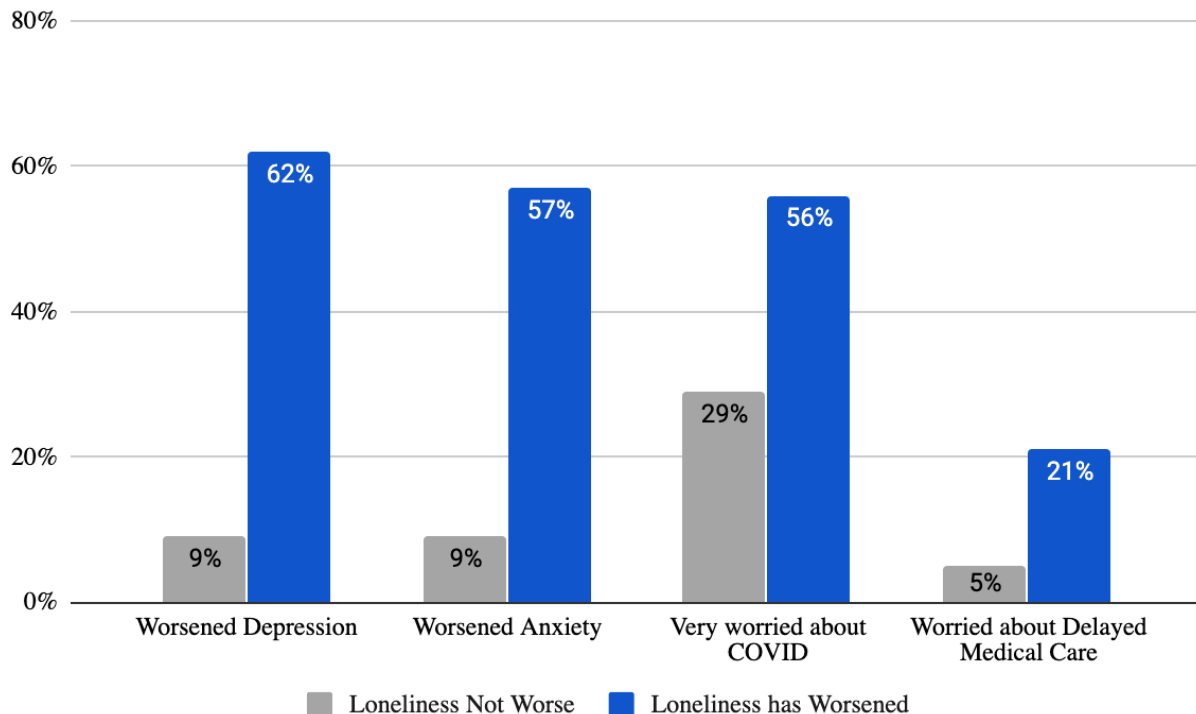
Thomas K.M. Cudjoe MD, MPH ✉, Ashwin A. Kotwal MD, MS

First published: 02 May 2020 | https://doi.org/10.1111/jgs.16527 | Citations: 19
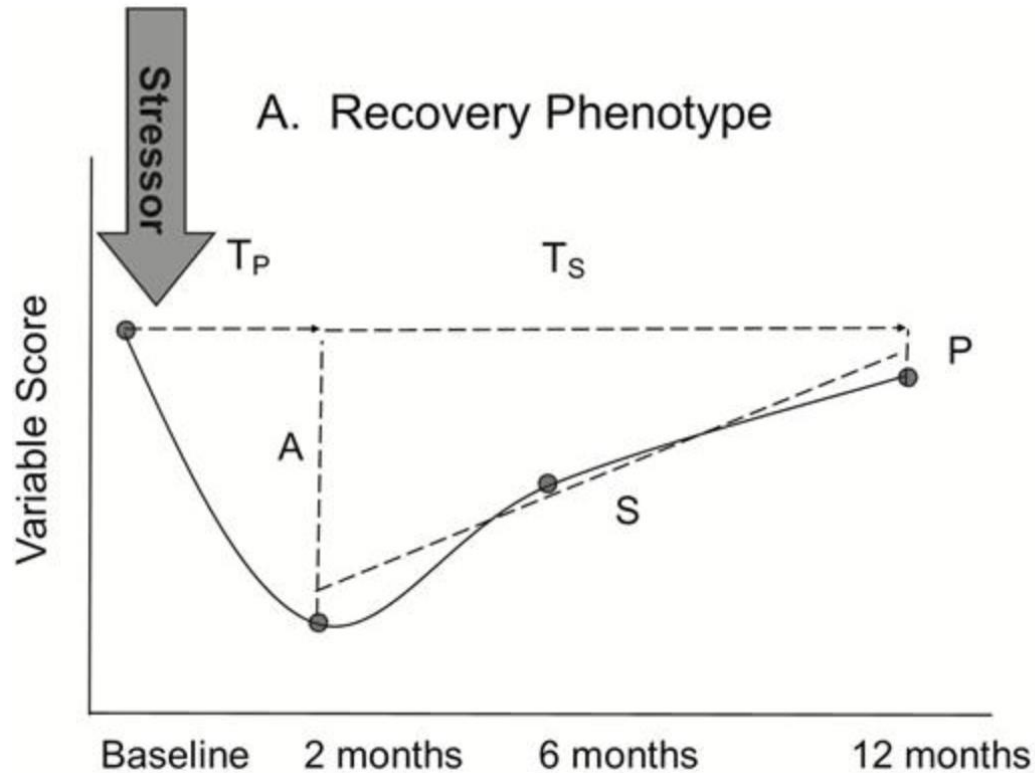
Shelter-in-place orders

Frequent feelings of loneliness: 29%

How have your feelings of loneliness changed due to COVID-19?
- Worse: 54%
- Same or Better: 46%

Kotwal, A., Holt-Lunstadt, J….Perissinotto, C. **Social Isolation and Loneliness Among San Francisco Bay Area Older Adults During the COVID-19 Shelter-in-Place Orders.** *Journal of the American Geriatrics Society.* (9-23-2020).

A. Recovery Phenotype

Loneliness **decreased** in the early months since shelter-in-place

Kotwal, A., Perissinotto, C. *J Amer Ger Soc* (ACCEPTED); Luchetti et al. American Psychologist (2020); Hamm et al. Am J of Ger Psych (2020).
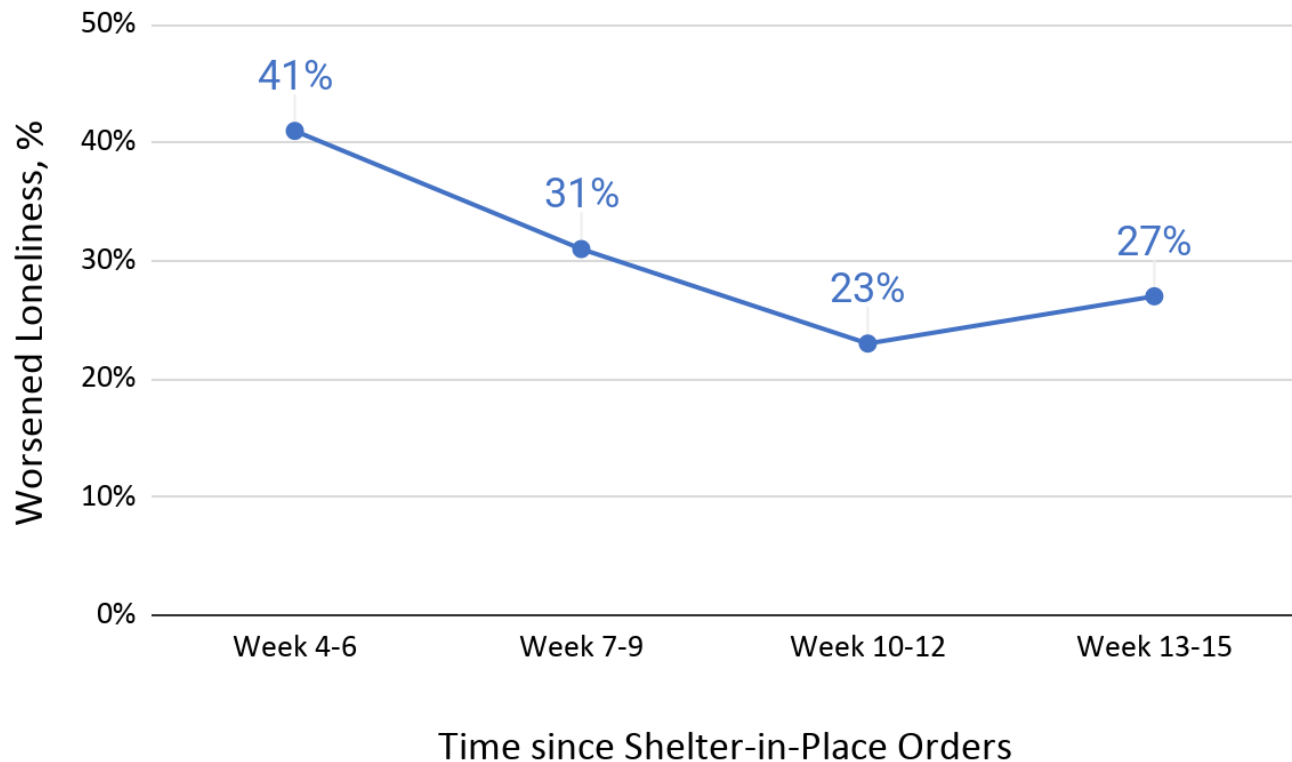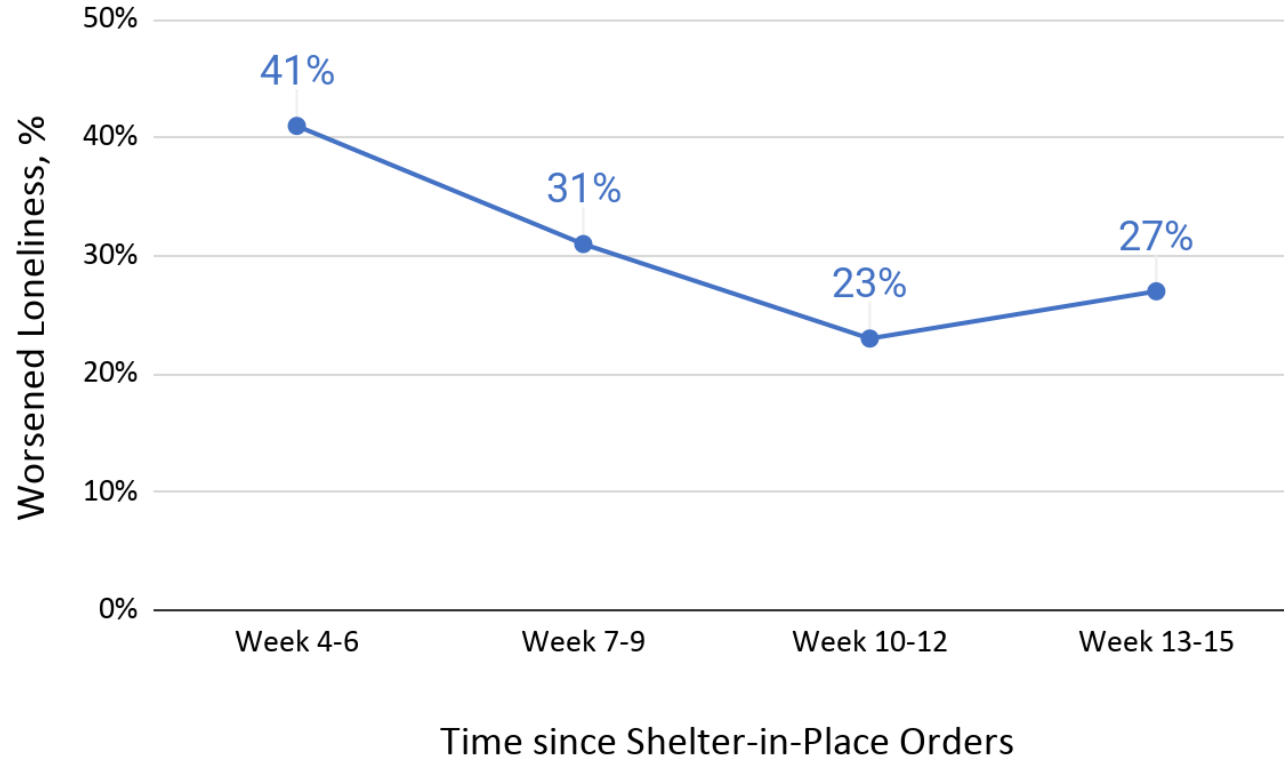
Subgroup with worsened loneliness

Kotwal, A., Holt-Lunstadt, J….Perissinotto, C. **Social Isolation and Loneliness Among San Francisco Bay Area Older Adults During the COVID-19 Shelter-in-Place Orders.** *Journal of the American Geriatrics Society.* (9-23-2020).

Three general patterns

1. **Loneliness Increases**

Kotwal, A., Holt-Lunstadt, J….Perissinotto, C. **Social Isolation and Loneliness Among San Francisco Bay Area Older Adults During the COVID-19 Shelter-in-Place Orders.** *Journal of the American Geriatrics Society.* (9-23-2020).
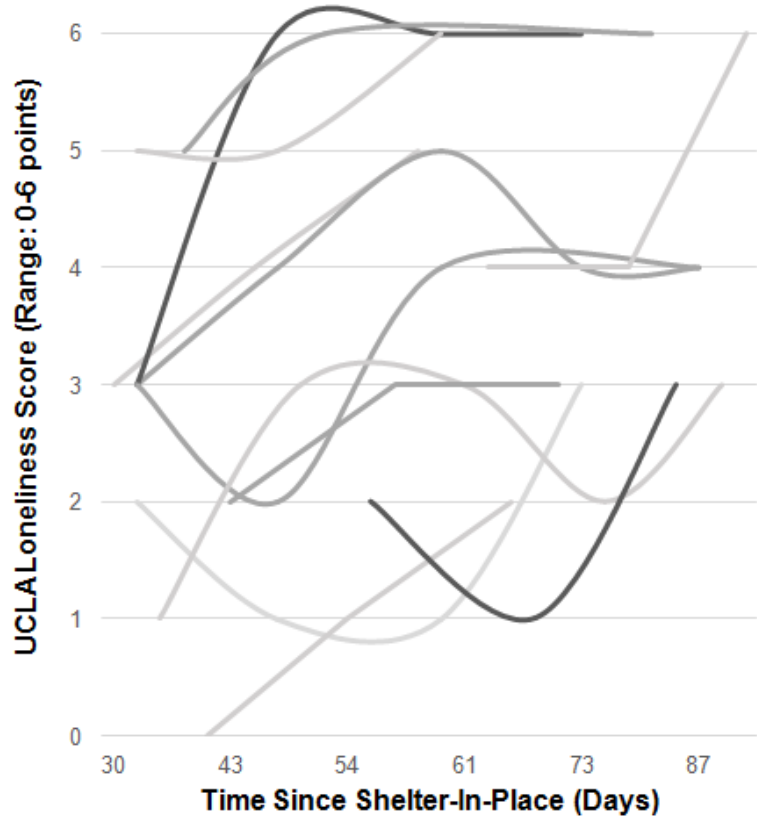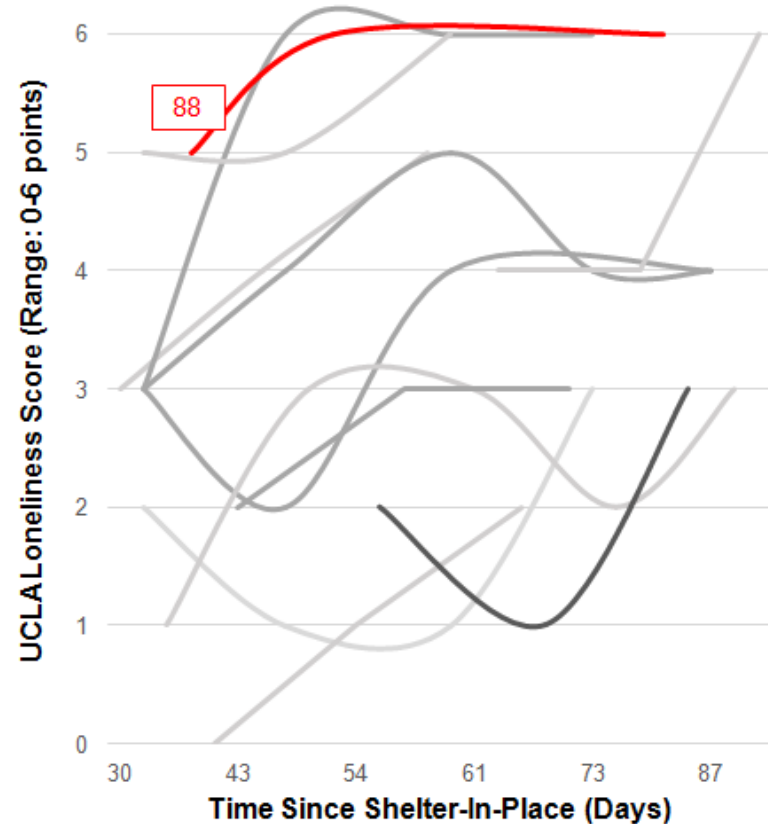
Three general patterns

1. Loneliness **Increases**

"Before the virus I was socializing and seeing people a lot, but I feel a lot more lonely and isolated."
Follow-up: "I love technology, but have had trouble keeping up. Technology is something I feel comfortable with, but totally out of date."

64 year old Female #88
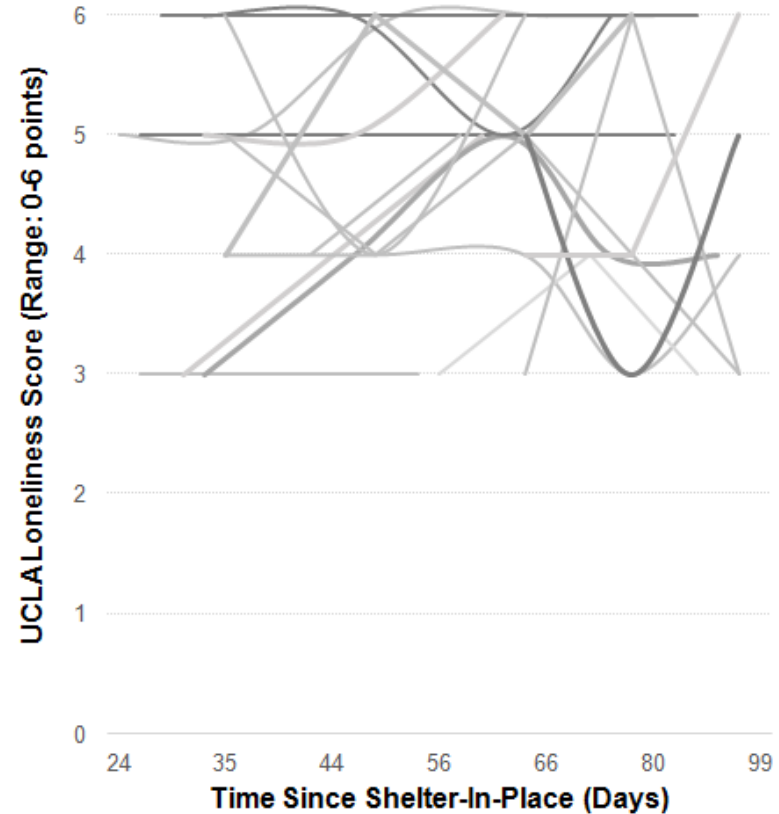**Technology concerns**

Kotwal, A., Holt-Lunstadt, J….Perissinotto, C. **Social Isolation and Loneliness Among San Francisco Bay Area Older Adults During the COVID-19 Shelter-in-Place Orders.** *Journal of the American Geriatrics Society.* (9-23-2020).

Three general patterns

1. Loneliness Increases
2. **Remains High**

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Three general patterns
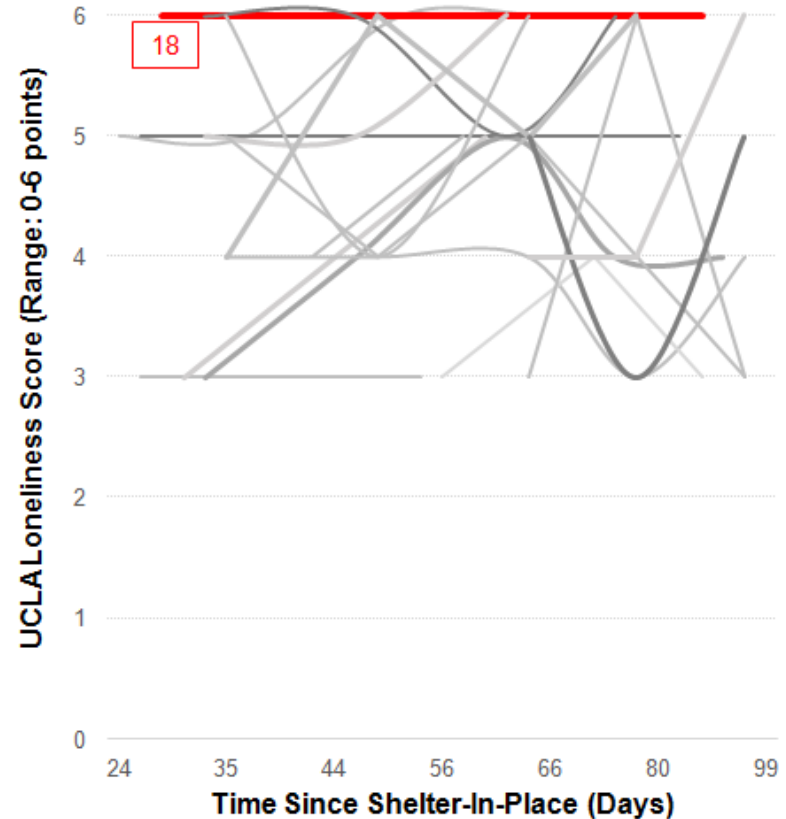
1. Loneliness Increases
2. **Remains High**

"I'm so used to not doing anything. This has been terrible."

Follow-up#1: This has been the hardest thing I've had to do in my entire life. The isolation has made my mental and physical health worse.

Follow-up#2: The longer the coronavirus situation, the more on edge people are.
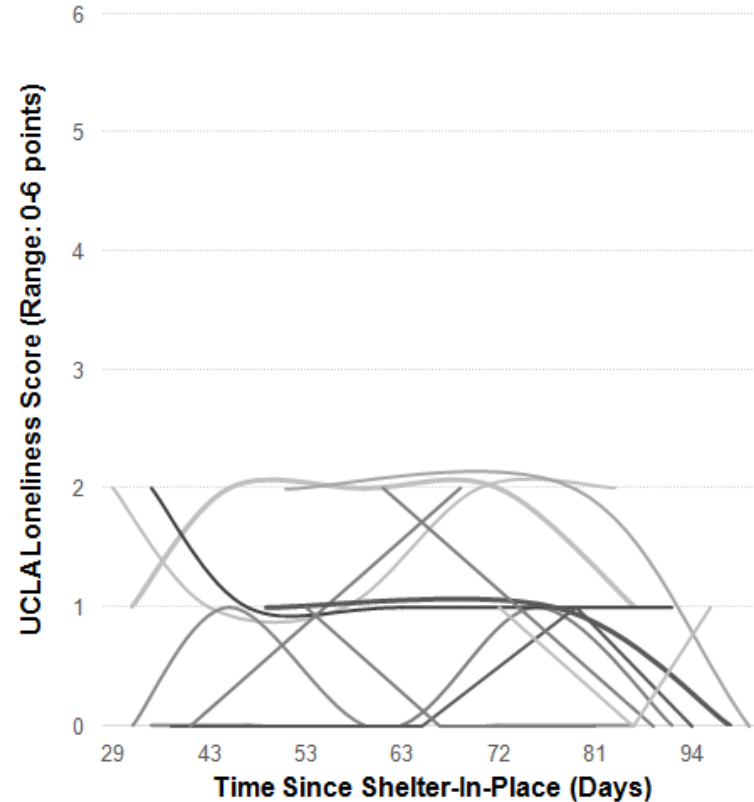
66 year old Female [#18]
Emotional coping

Kotwal, A., Holt-Lunstadt, J….Perissinotto, C. **Social Isolation and Loneliness Among San Francisco Bay Area Older Adults During the COVID-19 Shelter-in-Place Orders.** *Journal of the American Geriatrics Society.* (9-23-2020).

Three general patterns

1. Loneliness increases
2. Remains high
3. **Loneliness is mild**

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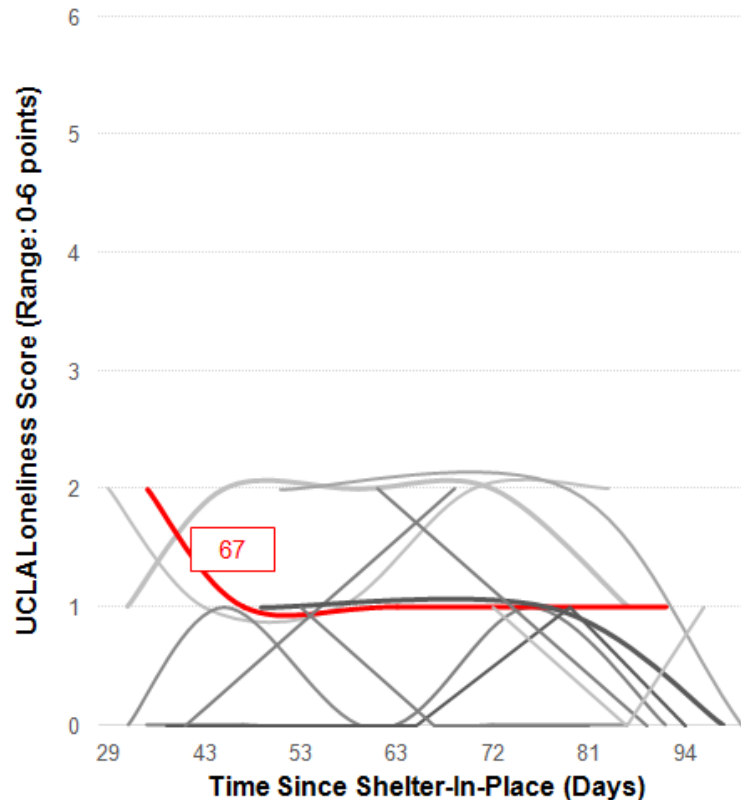
Three general patterns

1. Loneliness increases
2. Remains high
3. **Loneliness is mild**

"I'm in my assisted assisted living facility. I've been a little isolated and we're confined so we're safe, but life's pretty dull."

81 year old Male [#67]
Boredom

Kotwal, A., Holt-Lunstadt, J….Perissinotto, C. **Social Isolation and Loneliness Among San Francisco Bay Area Older Adults During the COVID-19 Shelter-in-Place Orders.** *Journal of the American Geriatrics Society.* (9-23-2020).

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Key Considerations

1. We need multidimensional measures of collective stressors, and mixed-methods can elucidate mechanisms
   - <u>Psychological health</u>: depression, anxiety, PTSD
   - <u>Social health</u>: Multi-dimensional social isolation scales, loneliness (sub-clinical), social support
   - <u>Disrupted health behaviors</u>: substance use, physical activity, screen time, preventive health
   - <u>Technology use</u>

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Outline

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2. **What populations have been disproportionately at risk?**
3. How can we incorporate length of time of the pandemic into our model of a stressor?
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Nursing Home Settings

- Worsened mood and increased psychotropic medication use

- Physical effects including weight loss and loss of function

- Feelings of guilt, fear, and worry among family members

- Increased staff workload, stress, and burnout

> " I miss my family and I'm very lonely and depressed. "

> " I miss hugs and touch, especially from my family members! "

> " I have no cognitive impairments. However [there is] the isolation, loneliness, not seeing my spouse for over 100 days. My spouse was usually here two times a day. "

> " Covid-19 has limited my visits with my son; there is no hope. "

Altarum.org; Barnett ML et al. Changes in Health and Quality of Life in US Skilled Nursing Facilities by COVID-19 Exposure Status in 2020. *JAMA.* 2022;328(10):941–950; Low et al. Safe Visiting is Essential for Nursing Home Residents During the COVID-19 Pandemic: An International Perspective. J Am Med Dir Assoc. 2021 May;22(5):977.

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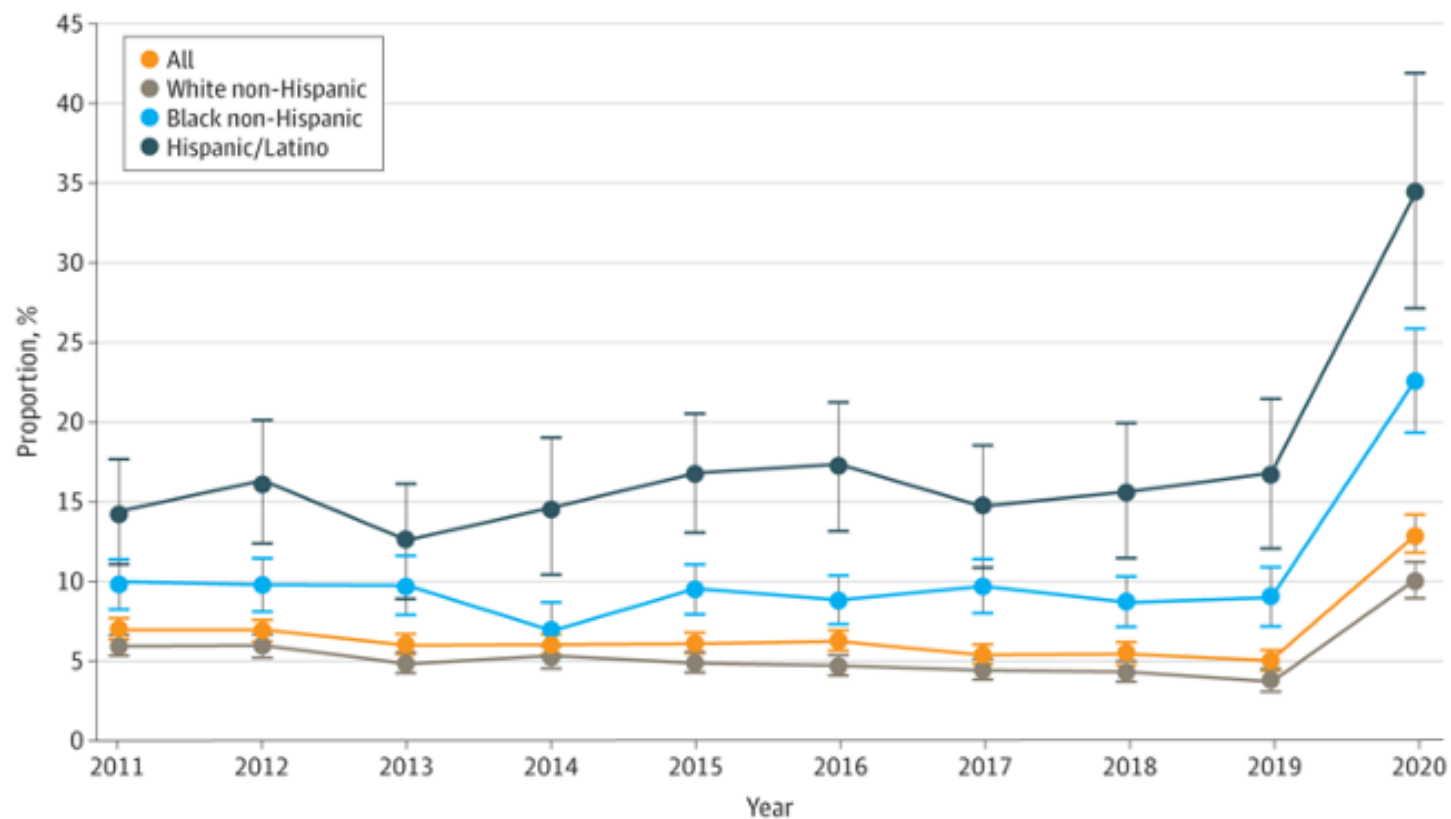
Proportion of Community-Dwelling Older Homebound Adults Aged 70 Years or Older, 2011-2020
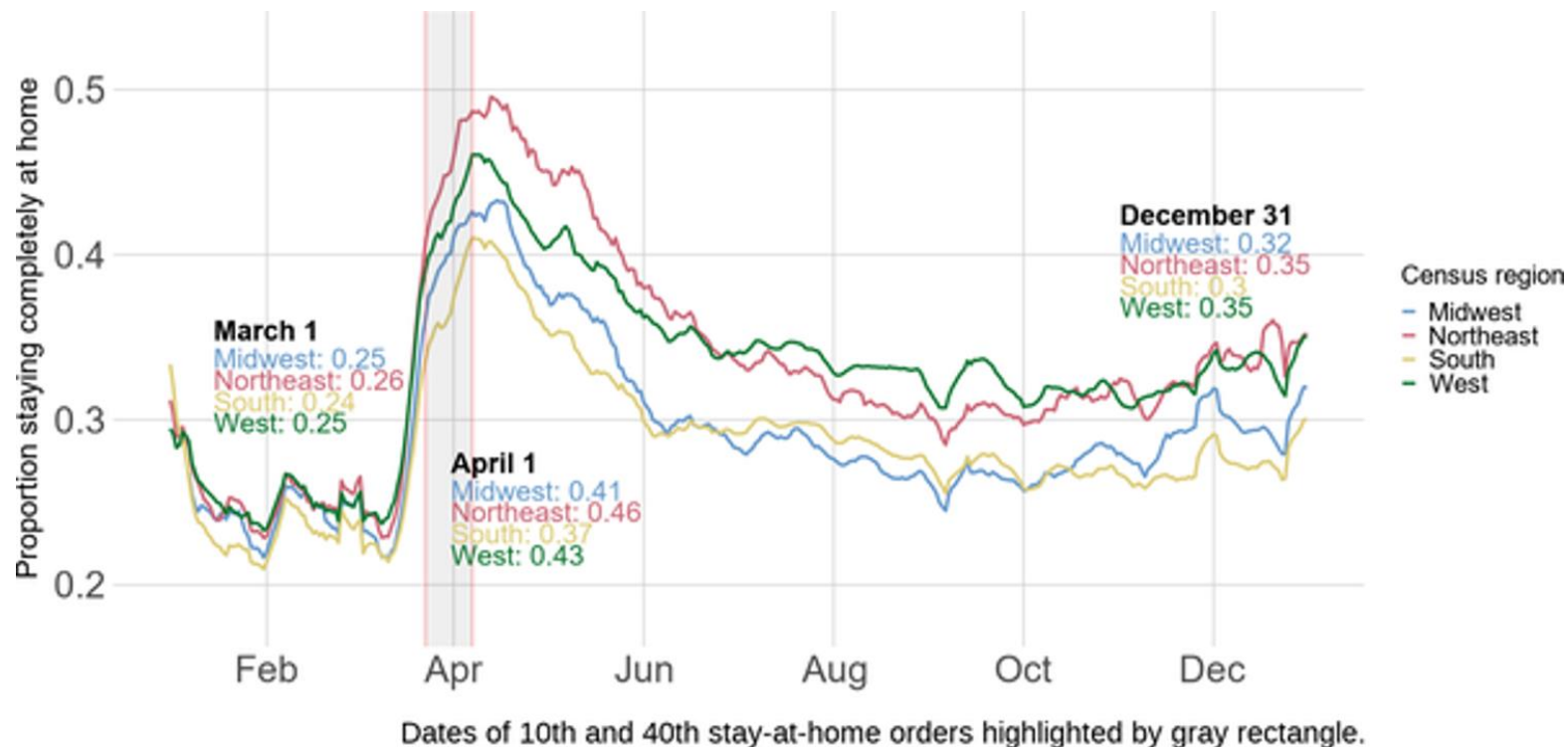
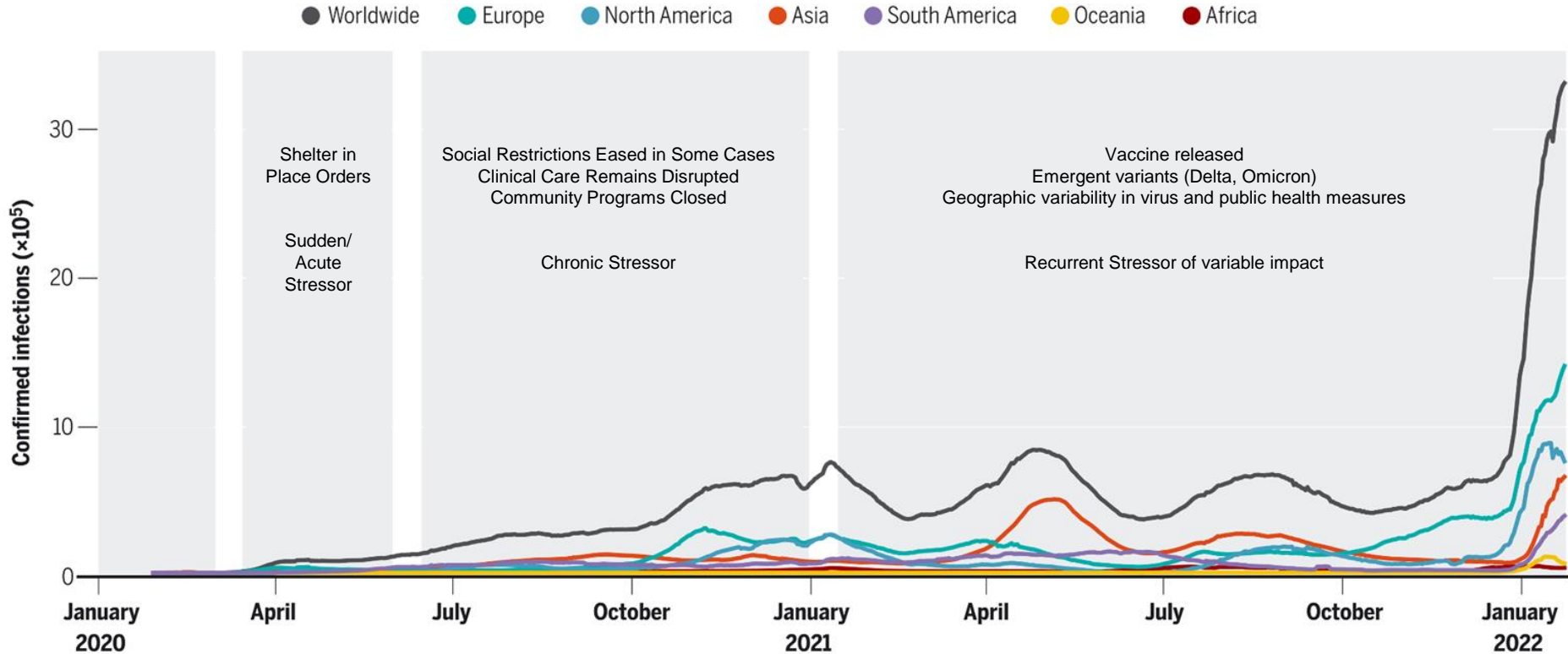**Stay-at-home patterns by Census region.**

Key Considerations

1. We need multidimensional measures of collective stressors, and mixed-methods can elucidate mechanisms

2. We should consider varied living situations and different communities nationally and globally
   - <u>Long-term care</u>: Nursing home, Assisted Living Facility
   - <u>Home</u>: Independent at home, Home with Help, Homebound, Homeless
   - <u>Hospitalized</u>: acute care, intensive care
   - <u>National and Global differences</u>:
     - Regional differences in public health restrictions
     - Racially and ethnically minoritized communities

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Time
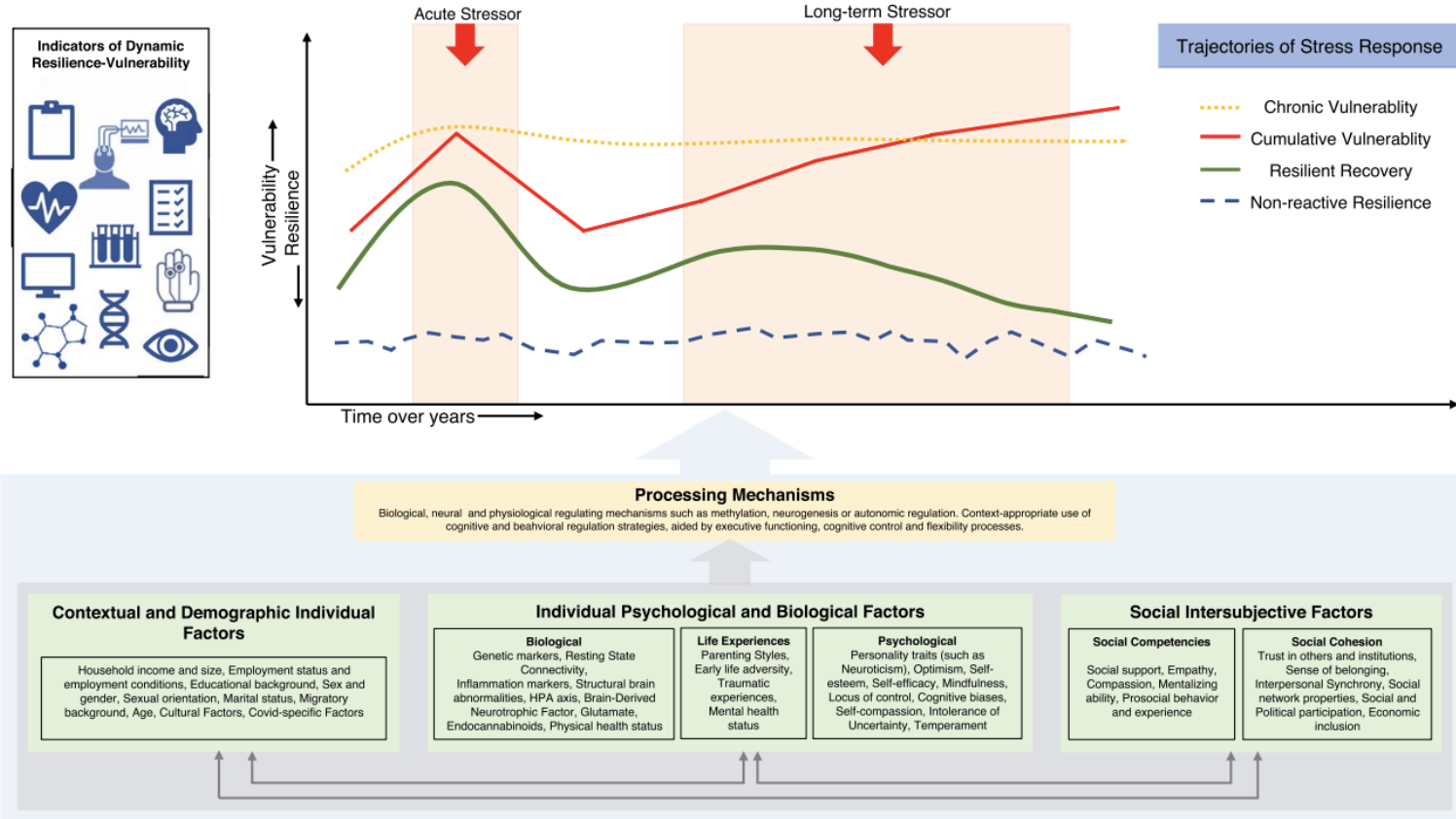
Koelle, K., Martin, M.A., Antia, R., Lopman, B. and Dean, N.E., 2022. The changing epidemiology of SARS-CoV-2. *Science*, *375*(6585), pp.1116-1121.

Godara, M., Silveira, S., Matthäus, H., & Singer, T. (2022). The Wither or Thrive Model of Resilience: an Integrative Framework of Dynamic Vulnerability and Resilience in the Face of Repeated Stressors During the COVID-19 Pandemic. *Adversity and Resilience Science*, 1-22.

Trajectories of loneliness over 18 months of the pandemic

Four identified groups:

1) Persistently Lonely (16%)

2) Adapted to restrictions (22%)

3) Occasional loneliness (29%)

4) Never Lonely (33%)

Kotwal, A.A., Batio, S., Wolf, M.S., Covinsky, K.E., Yoshino Benavente, J., Perissinotto, C.M. and O'Conor, R.M., 2022. Persistent loneliness due to COVID-19 over 18 months of the pandemic: a prospective cohort study. *Journal of the American Geriatrics Society*.
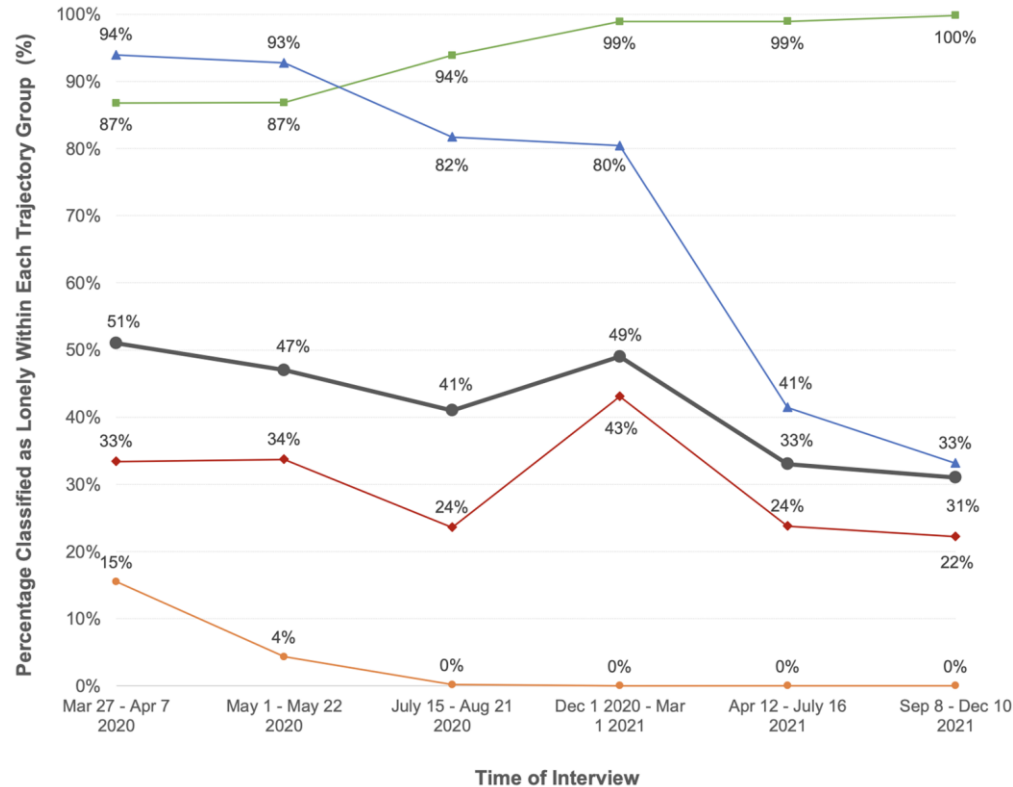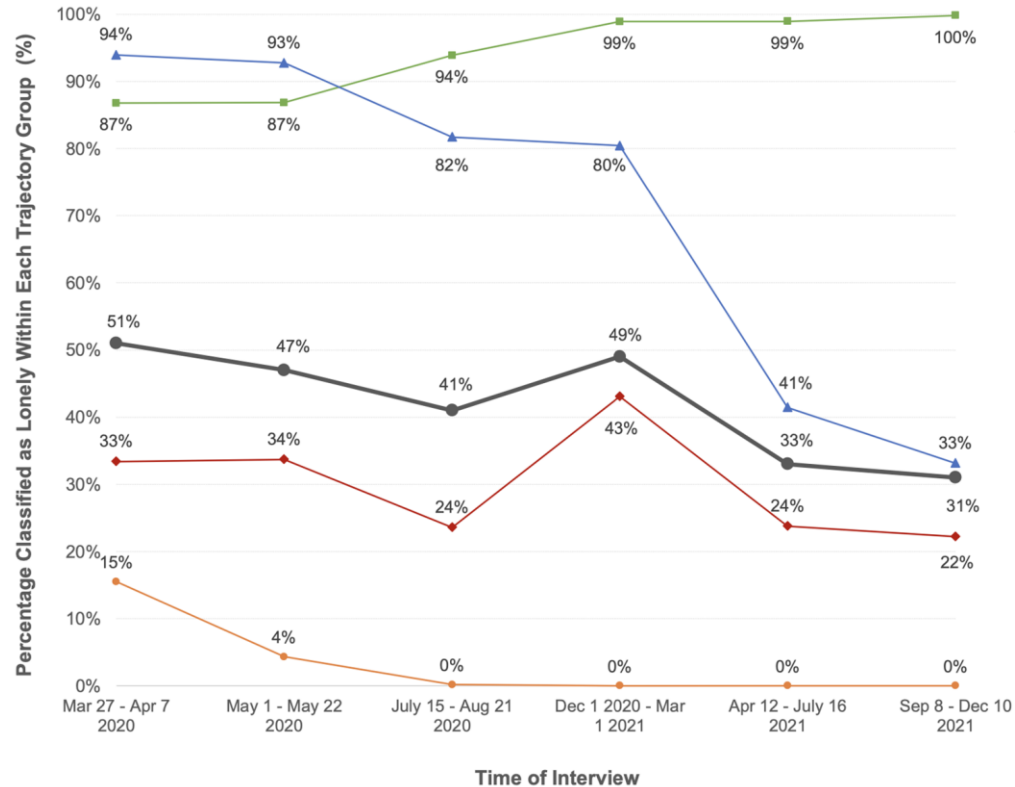
Trajectories of loneliness over 18 months of the pandemic

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1) Persistently Lonely (16%)

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4) Never Lonely (33%)

At risk of persistent loneliness:
- Poverty
- Living Alone
- Social isolation (technology)
- Anxiety or Depression

Percentage Classified as Lonely Within Each Trajectory Group (%)

Time of Interview	Mar 27 - Apr 7 2020	May 1 - May 22 2020	July 15 - Aug 21 2020	Dec 1 2020 - Mar 1 2021	Apr 12 - July 16 2021	Sep 8 - Dec 10 2021
Green	87%	87%	94%	99%	99%	100%
Blue	94%	93%	82%	80%	41%	33%
Black	51%	47%	41%	49%	33%	31%
Red	33%	34%	24%	43%	24%	22%
Orange	15%	4%	0%	0%	0%	0%

Kotwal, A.A., Batio, S., Wolf, M.S., Covinsky, K.E., Yoshino Benavente, J., Perissinotto, C.M. and O'Conor, R.M., 2022. Persistent loneliness due to COVID-19 over 18 months of the pandemic: a prospective cohort study. *Journal of the American Geriatrics Society*.

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Key Considerations

1. We need multi-dimensional measures and mixed-methods

2. We should consider varied living situations and different communities nationally and globally

3. Consider the pandemic as both an acute and long-term stressor
   - Recurrent Stressors: Lock-downs, Public health measures
   - Variable impact of stressor: e.g. 2021 winter surge vs Omicron
   - Before, during, and "after" the pandemic
   - Ideally multiple time points during the pandemic

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Data and Analytic Approaches

Data:
- Omnibus national health surveys
  - Health and Retirement Study; National Health and Aging Trends Study
  - Baltimore Longitudinal Study of Aging; National Social life Health and Aging Project; SHARE;
    - Limitation: "During pandemic" time points – opportunity for sub-studies
- Hospital and administrative data
- Wearable devices, location sensors (Life Space Mobility)

Methods:
- Interrupted time series, latent class trajectory analysis, instrumental variable
- Qualitative and Mixed-methods

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In Summary

1. The pandemic is a complex stressor.

2. We should consider multi-dimensional measurements of psychosocial stress and taking into account context and time

3. There is available data which can capture trajectories which, combined with modern epidemiologic approaches and mixed-methods, can provide robust evidence

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Thank You!

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