

Measuring Isolation Risk for Seniors in Pennsylvania Counties

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Background & Purpose

- Social isolation tied to individual health outcomes [1,2]
- Older adults at risk for severe COVID outcomes
 - 8 out of 10 COVID-19 deaths occurred in 65+ population [i]
- Pennsylvania has both high concentration (18.7%) and number (2.4 million) of adults age 65 and older [ii]

- i. Centers for Disease Control and Prevention (CDC). People at Increased Risk: Older Adults. Retrieved from: <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html>.
- ii. U.S. Census Bureau. Population Division. Vintage 2019 Annual Estimates of the Resident Population by Age, Sex, Race, and Hispanic Origin. Retrieved from <https://www.census.gov/data/tables/time-series/demo/pepest/2010s-national-detail.html>.

- **America's Health Rankings** ^[3]

- Poverty
- Living Alone
- Single/Widowed
- Disability
- Independent Living Difficulties

- **Other Research** ^[4,5,6]

- Poverty
- Single/Widowed
- Disability
- Transportation
- Social Support
- Personal Health
- Recent Migration
- Childlessness
- Expenses

- **Finances**

- Poverty [ACS]
- Housing Cost Burden [ACS]

- **Living Arrangements**

- Living Alone [ACS]
- Widowed or Divorced [ACS]
- Recently Moved [ACS]

- **Community Access**

- Food Insecurity [USDA]
- No Vehicle [ACS]
- No Computer or Internet [ACS]

- **Individual Barriers**

- One or More Disabilities [ACS]
- Limited English [ACS]
- Poor Mental Health [BRFSS]

[ACS]: **U.S. Census Bureau.** *American Community Survey Five-Year Estimates* (2014-2018).

[BRFSS]: **Centers for Disease Control and Prevention.** *Behavioral Risk Factor Surveillance System* (2017-2019).

[USDA]: **U.S. Department of Agriculture Economic Research Service.** *Food Access Research Atlas* (2015).

Senior Isolation Index

- Counties were ranked on each indicator (e.g., Poverty, Housing Cost Burden)
- The average rank was calculated for each category (e.g., Finances)
- The four category averages were then averaged and normalized to produce an index score from 1 to 100
 - 1 = lowest risk, 100 = highest risk

Findings & Limitations

- Findings

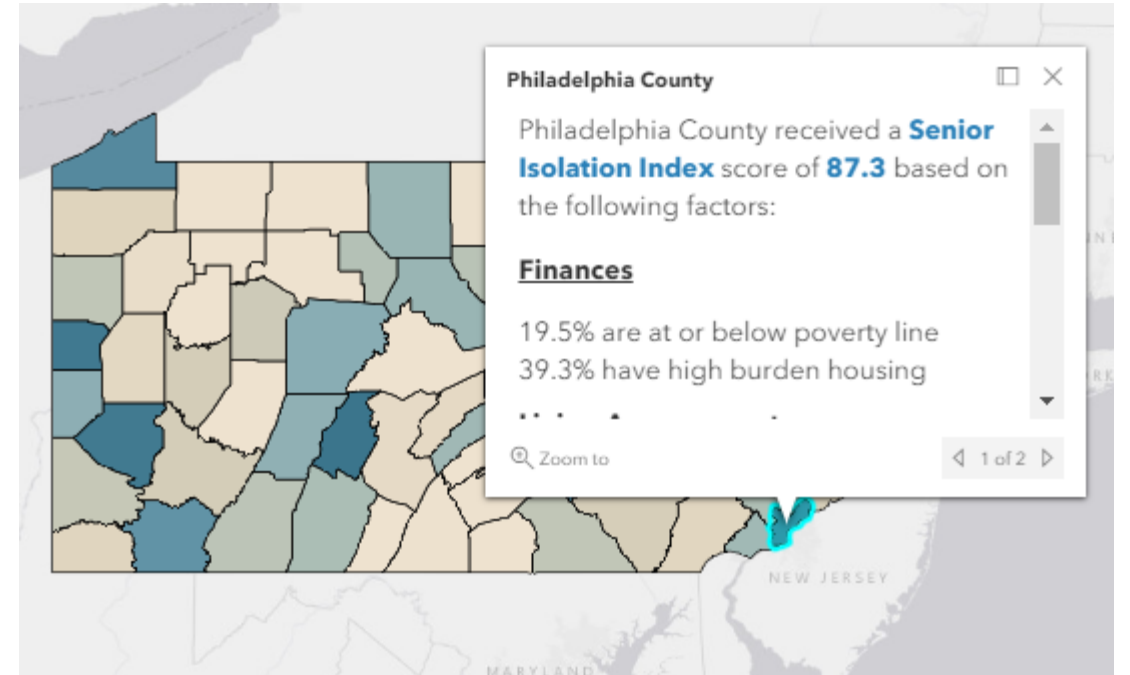
- Index scores ranged from 28.5 in Forest County to 87.3 in Philadelphia County
- Philadelphia ranked **highest** in six indicators, including **Poverty, Vehicle Access, Disability, Limited English, Widowed or Divorced**, and **Poor Mental Health**, and **second-highest** in **Housing Cost Burden** and **Living Alone**

- Limitations

- Personal vehicle ownership does not capture mobility well in urban areas
- Report does not consider differences across racial groups
- Food insecurity data is dated

Report

- Interactive report uses Esri ArcGIS Online & StoryMaps
- Maps created for each indicator and final index
- Access final report at:



<https://storymaps.arcgis.com/stories/d8bf4fdbf5454657ae5d9caf6238f32f>

References

1. Cornwell, E. Y., & Waite, L. J. (2009). Social disconnectedness, perceived isolation, and health among older adults. *Journal of health and social behavior*, 50(1), 31-48.
2. Kobayashi, L. C., & Steptoe, A. (2018). Social isolation, loneliness, and health behaviors at older ages: longitudinal cohort study. *Annals of Behavioral Medicine*, 52(7), 582-593.
3. America's Health Rankings. (2018). Senior report spotlight. United Health Foundation. <https://www.americashealthrankings.org/learn/reports/2018-senior-report/senior-report-spotlight>
4. Townsley, J, Nowlin, M. & Comer, K. (2020). Risk of social isolation in older adults. Central Indiana Senior Fund. <https://storymaps.arcgis.com/stories/9208e0a4477c4e41b5174246700906ec>
5. Goodman, A., Adams, A., & Swift, H. J. (2015). Hidden citizens: How can we identify the most lonely older adults. *London: The Campaign to End Loneliness*. <https://www.campaigntoendloneliness.org/hidden-citizens/>
6. Pekmezaris, R., Kozikowski, A., Moise, G., Clement, P. A., Hirsch, J., Kraut, J., & Levy, L. C. (2013). Aging in suburbia: An assessment of senior needs. *Educational Gerontology*, 39(5), 355-365.

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