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## Visual representation of work as a social determinant of health: augmenting Silver et al., Employment status, unemployment duration, and health-related metrics among US adults of prime working age

Sharon R. Silver, MS, MA<sup>1</sup>, Jia Li, MS<sup>1</sup>, Brian Quay, MS<sup>2</sup>

<sup>1</sup>National Institute for Occupational Safety and Health, Division of Field Studies and Engineering, Health Informatics Branch

<sup>2</sup>National Institute for Occupational Safety and Health, Office of the Director, Economic Research and Support Office

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To the Editor,

We write to augment a discussion point from our article<sup>1</sup> recently published in AJIM, “Employment Status, Unemployment Duration, and Health-Related Metrics among U.S. Adults of Prime Working Age: Behavioral Risk Factor Surveillance System, 2018–2019.” In that discussion, we noted that “Decoupling these observed associations [between unemployment and the elevated prevalence of multiple adverse health outcomes] will require addressing 1) social and economic factors contributing to unemployment; 2) job and income insecurity; and 3) healthcare access, which in the U.S. is related to employment both directly (through employer-based coverage) and indirectly (through income).”

We have developed a visual representation of selected pathways through which work functions as a key social determinant of health (SDOH) in the United States. While the article focused on employment status, SDOH such as housing and education often also constrain the type of work a person can obtain. For example, we noted that “residential segregation [affects] access to high-quality primary and secondary education, and thus higher education, which in turn influences employment options, and attendant wages and

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Corresponding Author: Sharon Silver, ssilver@cdc.gov, National Institute for Occupational Safety and Health, Division of Field Studies and Engineering, MS R-17, 1150 Tusculum Ave., Cincinnati, OH 45226, (513) 841-4313.

**Authors' contributions:** Ms. Silver designed the diagram and drafted the manuscript. Ms. Li planned and conducted the statistical analyses for the referenced article, as well as providing substantive input for the diagram and text. Mr. Quay provided the economic context for the diagram and text and provided substantive input for the revision of both. All authors have approved this version of the manuscript for submission to AJIM and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

**Publisher's Disclaimer: Disclaimer:** The findings and conclusions presented in this article are those of the authors and do not necessarily reflect the official position of the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention.

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stability.”<sup>1</sup> In addition, employment status and type of work affect health conditions and outcomes both directly, through working conditions, and indirectly, through compensation (salary/wages, health insurance coverage, etc.). As shown, multiple feedback loops reinforce these relations.

The diagram is high-level and not comprehensive: only selected SDOH are shown; many other inputs constraining education, housing, and employment choices (including other institutionalized modes of discrimination) are not shown; lesser directional indicators are omitted in the interest of legibility; and numerous pertinent characteristics of work are omitted. However, unlike most pictorial representations of SDOH, this diagram highlights the centrality of work as a SDOH and the mutually-reinforcing pathways that complicate the path to health equity.

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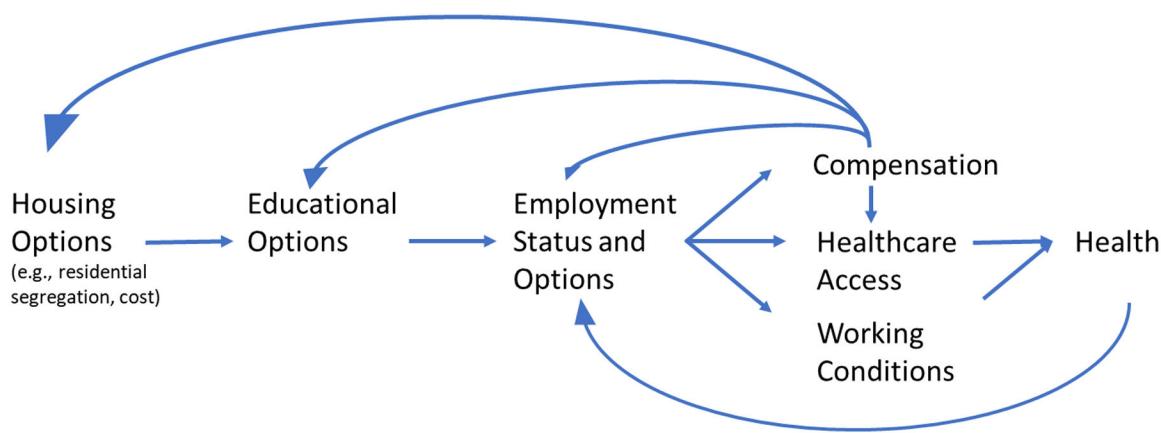
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## Data availability:

Data used for these analyses are available in a public-use dataset from CDC at [https://www.cdc.gov/brfss/annual\\_data/annual\\_2019.html](https://www.cdc.gov/brfss/annual_data/annual_2019.html)

## References

1. Silver SR, Li J, Quay B. Employment status, unemployment duration, and health-related metrics among US adults of prime working age: Behavioral Risk Factor Surveillance System, 2018–2019. *Am J Ind Med.* 2022; 65: 59–71. 10.1002/ajim.23308 [PubMed: 34748231]



#### Work as a Social Determinant of Health (SDOH): Selected Pathways

Diagram developed from: Silver, SR, Li, J, Quay, B. *Employment status, unemployment duration, and health-related metrics among US adults of prime working age: Behavioral Risk Factor Surveillance System, 2018–2019*. Am J Ind Med. 2022; 65: 59– 71.

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