

EDITORIAL AND COMMENT

How Do We Address the Influence of Social Determinants on Health?

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There is an emerging literature that shows the influence of social determinants on health outcomes; what is needed next is a better understanding of how social determinants influence health.^{1, 2} A recent position paper by the American College of Physicians highlighted this as a pressing issue for physicians and medical professionals, with recommendations to support a research agenda that includes both short- and long-term analysis of how social determinants affect health outcomes.³ In addition, the National Institutes on Minority Health and Health Disparities highlighted the importance of better understanding the role of protective factors and the mechanisms through which place and context impact health in a special issue of the *American Journal of Public Health*.⁴ Currently, the majority of evidence regarding the influence of social determinants focuses on observational associations with little information on the pathway of this influence or how best to intervene.⁴ Interventions that leverage social services, such as those focused on housing, income, or nutrition support, could have positive impact on physical health.^{5, 6} Studies specific to housing support found improved asthma and HIV-related outcomes, lower emergency room visits, and improved self-reported health.^{5, 6}

In this issue of JGIM, Tsai et al. examine the results of an evaluation of the Collaborative Initiative to End Chronic Homelessness.⁷ The study evaluated whether a demonstration program implemented from 2004 to 2009 to provide permanent supportive housing with clinical supports influenced physical health 12 months after participation. Participants included 756 chronically homeless adults, who were recruited from 11 sites across the USA. The program provided permanent housing and increased access to primary care and mental health services. Authors found a reduced number of medical problems and increased number of preventive procedures over time, but no significant relationship existed between changes in housing and physical health outcomes.⁷ While it is disappointing that there was no significant improvement in physical health-related quality of life, this is an important addition to

the literature given few randomized controlled trials or program evaluation efforts exist to understand the housing-health relationship. As noted by the authors, it is possible that provision of housing may be too late to change the course of their health trajectory.⁷ It is also possible that housing alone is insufficient or that longer term follow-up is needed to see the impact of integrating primary care and mental health services with a housing model.

Combining these findings with existing research suggests current housing interventions may improve disease-specific outcomes and utilization-related measures; however, more work is needed to understand how to design programs to improve overall physical health.^{5, 8} Given the relatively limited scope of current interventional work, ongoing efforts should incorporate a variety of study designs and ensure publication of findings.² Program evaluations, such as the one completed by Tsai et al., should be seen as one way to investigate the relationship between efforts focused on linking social needs and health outcomes. The natural experiment currently underway at the Department of Veterans Affairs through the homeless patient aligned care team (H-PACT) model was noted by Tsai et al. as another example of programs that should be investigated.⁷ Well implemented, randomized designs will strengthen the current evidence base substantially. Systematic reviews have found that the majority of intervention studies focused on housing support were quasi-experimental and recommended future work incorporates better comparison groups, larger samples, and more sophisticated methodology to address confounding.^{5, 6, 8} Publication of pilot studies and quality improvement efforts with focused attention on lessons learned and direction for ongoing research may also be helpful, particularly when contrasting different programs or systems. For example, a publication in the *Journal of Ambulatory Care Management* provided information on the experiences of 6 organizations in developing processes to screen for social determinants of health.⁹ Finally, use of effectiveness-implementation hybrid designs can speed translation of research into practice by gathering information on both the effects of an intervention and the implementation strategies used.¹⁰

It is also imperative that studies with non-significant findings are published to inform continued development and refinement of interventions. Unfortunately, studies with non-significant findings often either remain unpublished or

experience significant delays in publication.^{11, 12} The findings of Tsai et al. demonstrate that when focused on improving health, solutions are rarely simple, and often require a multi-faceted approach. Homelessness may be a marker for a host of health behaviors and health factors that are not amenable to change on the basis of addressing housing and access to care. Collection of physical and mental health outcomes as part of primary or secondary aims in interventions focused on improving social factors is important to inform the field.⁸ Measurement of outcomes at 12 months, 18 months, and 24 months after intervention is also necessary given the long-term nature of preventive efforts, and the possibility of behavior drift.² In addition, measurement of multiple aspects of the social and economic factors influencing individuals will help provide detail on the cumulative burden of social determinants. The article by Tsai et al. helps to move the conversation forward regarding how to address social determinants of health by offering an example of one program at multiple sites and measures that did and did not change. Strong evidence supports the idea we should act on social determinants to improve health, but more interventions are needed to know how.

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REFERENCES

1. **Solar O, Irwin A.** A conceptual framework for action on the social determinants of health. *Social Determinants of Health Discussion Paper 2 (Policy and Practice)*. Geneva, Switzerland; World Health Organization. 2010.
2. **Braveman PA, Egerter SA, Woolf SH, Marks JS.** When do we know enough to recommend action on the social determinants of health? *Am J Prev Med*. 2011; 40(1S1): S58-S66.
3. **Daniel H, Bornstein SS, Kane GC.** Addressing social determinants to improve patient care and promote health equity: An American College of Physicians position paper. *Ann Intern Med*. 2018; 168: 577-578.
4. **Palmer RC, Ismond D, Rodriguez EJ, Kaufman JS.** Social determinants of health: future directions for health disparities research. *AJPH*. 2019; 109(S1): S70-S71.
5. **Taylor LA, Tan AX, Coyle CE,** et al. Leveraging the social determinants of health: what works? *PLOS One*. 2016; 11(3): e0160217.
6. **Fitzpatrick-Lewis D, Ganann R,** Krishnaratne, et al. Effectiveness of interventions to improve the health and housing status of homeless people: a rapid systematic review. *BMC Public Health*. 2011; 11: 638.
7. **Tsai J, Gelberg L, Rosenheck RA.** Changes in physical health after supported housing: Results from the Collaborative Initiative to End Chronic Homelessness. *J Gen Intern Med*. DOI: <https://doi.org/10.1007/s11606-019-05070-y>.
8. **Gottlieb LM, Wing H, Adler NE.** A systematic review of interventions on patients' social and economic needs. *Am J Prev Med*. 2017; 53(5): 719-729.
9. **LaForge K, Gold R, Cottrell E,** et al. How 6 organization developed tools and processes for social determinants of health screening in primary care: an overview. *J Ambulatory Care Manage*. 2018; 41(1): 2-14.
10. **Curran GM, Bauer M, Mittman B, Pyne JM, Stetler C.** Effectiveness-implementation hybrid designs: Combining elements of clinical effectiveness and implementation research to enhance public health impact. *Med Care*. 2012; 50: 217-226.
11. **Stern JM, Simes RJ.** Publication bias: evidence of delayed publication in a cohort study of clinical research projects. *BMJ*. 1997; 315(7109):640-645
12. **Thornton A, Lee P.** Publication bias in meta-analysis: its causes and consequences. *J Clin Epidemiol*. 2000; 53(2):207-216.

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