

Annotated Bibliography

An Introduction to Implementation Science for Environmental Health

International Society of Exposure Science Pre-Conference Workshop - August 30th, 2021

Note: Please email Lindsey.Martin@nih.gov for additional resources as this is not a comprehensive list. These are helpful recommendations; recommendations do not equal an endorsement.

Implementation Science: Introductory Sources (these are helpful orientation videos and articles that introduce the field)

- Bauer MS, Kirchner J. Implementation science: What is it and why should I care? *Psychiatry Res.* 2020 Jan;283:112376. doi: 10.1016/j.psychres.2019.04.025. Epub 2019 Apr 23. PMID: 31036287.
- Bauer MS, Damschroder L, Hagedorn H, Smith J, Kilbourne AM. An introduction to implementation science for the non-specialist. *BMC Psychol.* 2015 Sep 16;3(1):32. doi: 10.1186/s40359-015-0089-9. PMID: 26376626; PMCID: PMC4573926.
- Brownson RC, Colditz GA, Proctor EK, eds. *Dissemination and Implementation Research in Health*. 2nd ed. New York, NY: Oxford University Press; 2017.
- [Orientation to the Science of Dissemination and Implementation](#) (this video is an excellent place to start)
- [Training Institute for Dissemination and Implementation Research in Cancer \(TIDIRC\) OpenAccess](#) (content is not entirely specific to cancer)
- Curran GM. Implementation science made too simple: a teaching tool. *Implement Sci Commun.* 2020;1:27. Published 2020 Feb 25. doi:10.1186/s43058-020-00001-z (*Teaching Implementation Science-great framework for using non-scientific language to introduce the field*)
- Gila Neta, Ross C Brownson, David A Chambers, Opportunities for Epidemiologists in Implementation Science: A Primer, *American Journal of Epidemiology*, Volume 187, Issue 5, May 2018, Pages 899–910, <https://doi.org/10.1093/aje/kwx323>

Implementation Strategies (the Powell et al. article used the Delphi Method to identify 73 implementation strategies; there is a nice table listing and describing these strategies)

- Powell BJ, Waltz TJ, Chinman MJ, et al. A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change (ERIC) project. *Implement Sci.* 2015;10:21. Published 2015 Feb 12. doi:10.1186/s13012-015-0209-1
- Waltz, T.J., Powell, B.J., Matthieu, M.M. et al. Use of concept mapping to characterize relationships among implementation strategies and assess their feasibility and importance: results from the Expert Recommendations for Implementing Change (ERIC) study. *Implementation Sci* 10, 109 (2015) <https://doi.org/10.1186/s13012-015-0295-0>

Implementation Outcomes (key article in the field that clearly defines how implementation outcomes differ from effectiveness outcomes)

- Proctor E, Silmere H, Raghavan R, et al. Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. *Adm Policy Ment Health.* 2011;38(2):65-76. doi:10.1007/s10488-010-0319-7

Writing Implementation (vs. Effectiveness) Grants (key article that describes the core elements researchers should consider when writing implementation focused grants)

- Proctor EK, Powell BJ, Baumann AA, Hamilton AM, Santens RL. Writing implementation research grant proposals: ten key ingredients. *Implement Sci.* 2012;7:96. Published 2012 Oct 12. doi:10.1186/1748-5908-7-96

Theory, Frameworks, Models (this article provides a nice overview of process models, determinant frameworks, classic theories, implementation theories and evaluation frameworks-the presentation touched on only three of these)

- Nilsen P. Making sense of implementation theories, models and frameworks. *Implement Sci.* 2015;10:53. Published 2015 Apr 21. doi:10.1186/s13012-015-0242-0
- [RE-AIM](#), [CFIR](#), [EPIS](#) websites are very user-friendly overviews of some widely used frameworks

Demonstrating the Value of Implementation Science:

- [Making a scientific miracle count in the real world](#) (Duke Alumni Magazine, Summer 2021 Issue) by Scott Huler
- Kilbourne, A.M., Glasgow, R.E. & Chambers, D.A. What Can Implementation Science Do for You? Key Success Stories from the Field. *J GEN INTERN MED* 35, 783–787 (2020). <https://doi.org/10.1007/s11606-020-06174-6>

Implementation Science & Environmental Health:

- PODCAST: [Using Implementation Science to Move Environmental Health Discoveries into the Real-world](#)
- [NIEHS Implementation Science website](#)
- Haque SS, Freeman MC. The Applications of Implementation Science in Water, Sanitation, and Hygiene (WASH) Research and Practice. *Environmental Health Perspectives* 129:6. CID: 065002 <https://doi.org/10.1289/EHP7762>

Implementation Science and Health Equity:

- [Opportunities to Advance Health Equity through Implementation Science](#) by April Oh (NCI Implementation Science Team Blog, January 2021)
- [Five Recommendations for How Implementation Science Can Better Advance Equity](#) by Kim DuMont, Allison Metz and Beadsie Woo (Academy Health Blog, April 2019)
- [Bringing Equity to Implementation](#) (Stanford Social Innovation Review)
- Shelton RC, Prajakta A, Oh A. Recommendations for Addressing Structural Racism in Implementation Science: A Call to the Field. *Ethn Dis.* 2021;31(Suppl 1): 357-364; doi:10.18865/ed.31.S1.357
- Brownson, R.C., Kumanyika, S.K., Kreuter, M.W. et al. Implementation science should give higher priority to health equity. *Implementation Sci* 16, 28 (2021). <https://doi.org/10.1186/s13012-021-01097-0>

Other Key Resources:

- Blachman-Demner DR, Wiley TRA, Chambers DA. Fostering integrated approaches to dissemination and implementation and community engaged research. *Transl Behav Med.* 2017;7(3):543-546. doi:10.1007/s13142-017-0527-8 (*see also the other articles in this special issue*)
- 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(3):217-226. doi:10.1097/MLR.0b013e3182408812 (*describes in-depth the three types of Hybrid Effectiveness-Implementation designs and when to use these designs*)
- [NCI Implementation Science Team website](#) is a great resource to learn about webinars, the annual Dissemination & Implementation Science (D&I) conference and additional resources/tools in the field. Be sure to sign-up for the monthly newsletter

NIH-Wide Dissemination & Implementation Science Funding Opportunity Announcements

- [Dissemination and Implementation Research in Health \(R01 Clinical Trial Optional\)](#)
- [Dissemination and Implementation Research in Health \(R21 Clinical Trial Optional\)](#)
- [Dissemination and Implementation Research in Health \(R03 Clinical Trial Not Allowed\)](#)