ADVANCING HEALTH EQUITY THROUGH IMPLEMENTATION SCIENCE: BIBLIOGRAPHY AND RESOURCES

CCIS
Consortium for Cancer
Implementation Science

This bibliography is a resource for the research and practice communities in implementation science and cancer control. Manuscripts, reports, and other resources have been identified to highlight broad thematic areas for consideration to advance health equity through implementation science in the field of cancer prevention and control.

This resource serves as a "public good" and will be updated on a semi-annual basis. Please check the following websites for more information:

- Consortium for Cancer Implementation Science (CCIS)
- Cancer Prevention and Control Research Network (CPCRN)

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PUBLISHED RESEARCH ARTICLES

Commentaries

Baumann AA, Cabassa LJ. Reframing implementation science to address inequities in healthcare delivery. *BMC Health Services Research*. 2020;20(1):190.
https://doi.org/10.1186/s12913-020-4975-3

Background: Research has generated valuable knowledge in identifying, understanding, and intervening to address inequities in the delivery of health care, yet these inequities persist. The best available interventions, programs, and policies designed to address inequities in health care are not being adopted in routine practice settings. Implementation science can help address this gap by studying the factors, processes, and strategies at multiple levels of a system of care that influence the uptake, use, and sustainability of these programs for vulnerable populations. The authors propose that an equity lens can help integrate the fields of implementation science and research that focuses on inequities in health care delivery.

Main text: Using the Proctor et al. (12) framework as a case study, the authors reframed five elements of implementation science to study inequities in health care. These elements include (1) focusing on reach from the very beginning, (2) designing and selecting interventions for vulnerable populations and low-resource communities with implementation in mind, (3) implementing what works and developing implementation strategies that can help reduce inequities in care, (4) developing the science of adaptations, and (5) using an equity lens for implementation outcomes.

Conclusions: The goal of this paper is to continue the dialogue on how to critically infuse an equity approach in implementation studies to proactively address health care inequities in historically underserved populations. Our examples provide ways to operationalize how we can blend implementation science and health care inequities research.

Birbeck GL, Bond V, Earnshaw V, El-Nasoor ML. Advancing health equity through cross-cutting approaches to health-related stigma. *BMC Medicine*. 2019;17(1):40.
https://doi.org/10.1186/s12916-019-1282-0

Health-related stigma remains a major barrier to improving health and well-being for vulnerable populations around the world. This collection on stigma research and global health emerged largely as a result of a 2017 meeting on the "The Science of Stigma Reduction," sponsored by the National Institutes of Health. An overwhelming consensus at the meeting was reached. It was determined that for stigma research to advance further, particularly to achieve effective and scalable stigma reduction interventions, the discipline of stigma research must evolve beyond disease-specific investigations and frameworks and move toward more unified theories of stigma that transcend individual conditions. This introduction reflects on the value of taking this cross-cutting approach from both a historical and a current perspective, then briefly summarizes the span of articles. Collectively, the authors apply theory, frameworks, tools, interventions, and evaluations to the breadth of stigma across conditions and vulnerabilities. They present a tactical argument for a more ethical, participatory, applied, and transdisciplinary line of attack on health-related stigma, alongside promoting the dignity and voice of people living with stigmatized conditions.

Bowleg L. Evolving intersectionality within public health: from analysis to action. *American Journal of Public Health*. 2021;111(1):88-90. https://doi.org/10.2105/AJPH.2020.306031

Informed by Collins's conceptualization of intersectionality as a "broad-based knowledge project"—a field of study, an analytical strategy, and critical praxis—the author characterizes intersectionality's inroads into public health and its potential for addressing public health crises as a series of overlapping waves. Wave 1 was and is definitional, focused on intersectionality's history, core tenets, and relevance to public health. Wave 2 reflects the mainstreaming and flattening of intersectionality as it travels through traditional research organizations, such as the National Academy of Sciences and the National Institutes of Health. Wave 3 is analytical, reflecting the theoretical application of intersectionality to current public health crises. In this editorial, the author highlights how this special section spans these waves and previews a fourth wave that is essential to addressing and resolving the current spate of multiple and interlocking public health crises.

Bowleg L. "The master's tools will never dismantle the master's house": ten critical lessons for black and other health equity researchers of color. *Health Education & Behavior*. 2021;48(3):237-249. https://doi.org/10.1177/10901981211007402

Audre Lorde's provocative admonishment, "The master's tools will never dismantle the master's house," is a fitting caution for black and other scholars of color who seek to use traditional social and behavioral sciences research as a tool to achieve social justice and health equity in black communities. Invoking Lorde, the author uses the "master's tools" as a metaphor for conventional theoretical and methodological approaches and "dismantle the master's house" as a metaphor for intersectional structures and systems of oppression that created and sustain health inequity in US black communities. Using a blend of personal narrative and insights from a 23-year career as a black critical health equity researcher, the author shares 10 critical lessons for black and other health equity researchers of color. And because the personal typically reflects the structural, the author recommends system and structural-level mitigation strategies for departments, universities, extramural institutions (e.g., journals), and the government for each critical lesson.

Bowleg L. Towards a critical health equity research stance: why epistemology and methodology matter more than qualitative methods. *Health Education & Behavior* 2017;44(5):677-684. https://doi.org/10.1177/1090198117728760

Qualitative methods are not intrinsically progressive. Methods are simply tools to conduct research. Epistemology—the justification of knowledge—shapes methodology and methods, and thus is a vital starting point for a critical health equity research stance, regardless of whether the methods are qualitative, quantitative, or mixed. In line with this premise, the author addresses four themes in this commentary. First, the author criticizes the ubiquitous and uncritical use of the term "health disparities" in US public health. Next, the author advocates for the increased use of qualitative methodologies—namely, photovoice and critical ethnography—that, pursuant to critical approaches, prioritize dismantling sociostructural inequities as a prerequisite to health equity. Thereafter, the author discusses epistemological stance and its influence on all aspects of the research process. Finally, the author highlights her critical discourse

analysis HIV prevention research based on individual interviews and focus groups with black men as an example of a critical health equity research approach.

Brownson RC, Kumanyika SK, Kreuter MW, Haire-Joshu D. Implementation science should give higher priority to health equity. *Implementation Science*. **2021;16(1):28.** https://doi.org/10.1186/s13012-021-01097-0

Background: There is growing urgency to tackle issues of equity and justice in the United States and worldwide. Health equity, a framing that moves away from a deficit mindset of what society is doing poorly (disparities) to one that is positive about what society can achieve, is becoming more prominent in health research that uses implementation science approaches. Equity begins with justice as health differences often reflect societal injustices. Applying the perspectives and tools of implementation science has potential for immediate impact to improve health equity. The authors propose a vision and set of action steps for making health equity a more prominent and central aim of implementation science, thus committing to conduct implementation science through equity-focused principles to achieve this vision in US research and practice. The authors identify and discuss challenges in current health disparity approaches that do not fully consider social determinants. Implementation research challenges are outlined in three areas: the limitations of the evidence base, underdeveloped measures and methods, and inadequate attention to context.
To address these challenges, the authors offer recommendations that seek to (1) link social determinants with health outcomes, (2) build equity into all policies, (3) use equity-relevant metrics, (4) study what is already happening, (5) integrate equity into implementation models, (6) design and tailor implementation strategies, (7) connect to systems and sectors outside of health,
(8) engage organizations in internal and external equity efforts, (9) build capacity for equity in implementation science, and (10) focus on equity in dissemination efforts.

Conclusions: Every project in implementation science should include an equity focus. For some studies, equity is the main goal of the project and a central feature of all aspects of the project. In other studies, equity is part of a project but not the singular focus. In these studies, we should, at a minimum, ensure that we "leave no one behind" and that existing disparities are not widened. With a stronger commitment to health equity from funders, researchers, practitioners, advocates, evaluators, and policymakers, we can harvest the rewards of the resources being invested in health-related research to eliminate disparities, resulting in health equity.

Carnethon MR, Kershaw KN, Kandula, NR. Disparities research, disparities researchers, and health equity. *JAMA.* **2020;323(3):211.** https://doi.org/10.1001/jama.2019.19329

Disparities in life expectancy by race, ethnicity, sex, and socioeconomic status present a significant challenge in the United States and around the world. In response, the world's largest funder of biomedical research—the National Institutes of Health (NIH)—supports a suite of research and career development programs designed to eliminate health disparities. Despite the clear message from NIH that health disparities are a significant concern, the scientific community has not embraced the message.

Chin MH. Advancing health equity in patient safety: a reckoning, challenge and opportunity. *BMJ Quality & Safety*. 2021;30(5):356-361. https://doi.org/10.1136/bmjqs-2020-012599

In this editorial, the author summarizes the practical lessons for advancing health equity sustainably, with the hope of accelerating equity in patient safety. The author presents a framework for advancing health equity, describes common pitfalls, and applies the framework to patient safety to inform research and policy recommendations. The wider health disparities field has been criticized for spending too many years describing the phenomenon of inequities before emphasizing interventions and solutions. The patient safety field should move faster, incorporating major advances that have occurred regarding how to reduce health disparities. While equity issues in patient safety have been understudied, the principles for successfully advancing health equity align well with the culture and toolkit.

Galaviz KI, Breland JY, Sanders M, et al. Implementation science to address health disparities during the coronavirus pandemic. *Health Equity*. 2020;4(1):463-467. https://doi.org/10.1089/heq.2020.0044

The coronavirus disease 2019 (COVID-19) pandemic is disproportionally affecting racial and ethnic minorities. In the United States, data show that African American, Hispanic, and Native American populations are overrepresented among COVID-19 cases and deaths. As we speed through the discovery and translation of approaches to fight COVID-19, these disparities are likely to increase. Implementation science can help address disparities by guiding the equitable development and deployment of preventive interventions, testing, and, eventually, treatment and vaccines. In this study, the authors discuss three ways in which implementation science can inform these efforts: (1) quantify and understand disparities; (2) design equitable interventions; and (3) test, refine, and retest interventions.

Helfrich CD, Hartmann CW, Parikh TJ, Au DH. Promoting health equity through de-implementation research. *Ethnicity & Disease*. 2019;29(suppl 1):93-96. https://doi.org/10.18865/ed.29.S1.93

Ensuring equitable access to quality health care historically has focused on gaps in care, where patients fail to receive the high-value care that will benefit them, something termed "under-use." However, providing high-quality health care sometimes requires reducing low-value care that delivers no benefit or where the known harms outweigh the expected benefits. These situations represent health care overuse. The process involved in reducing low-value care is known as "de-implementation." In this article, the authors argue that de-implementation is critical for advancing equity for several reasons. First, medical overuse is associated with patient race, ethnicity, and socioeconomic status. In some cases, the result is even double jeopardy, where racial and ethnic minorities are at higher risk of both overuse and underuse. In these cases, the more traditional efforts focused exclusively on underuse ignore half of the problem. Second, overuse of preventive care and screening is often greater for more socioeconomically advantaged patients. Within insured populations, this means more socioeconomically disadvantaged patients subsidize overuse. Finally, racial and ethnic minorities may have different experiences of overuse than whites in the United States.

This may make efforts to de-implement overuse particularly fraught. The authors therefore provide several actions for closing current research gaps, including adding subgroup analyses in studies of medical overuse, specifying and measuring potential mechanisms related to equity (e.g., double jeopardy versus thermostat models of overuse), and testing de-implementation strategies that may mitigate bias.

Holtrop JS, Rabin BA, Glasgow RE. Dissemination and implementation science in primary care research and practice: contributions and opportunities. *Journal of the American Board of Family Medicine*. **2018;31(3):466-478.**
https://doi.org/10.3122/jabfm.2018.03.170259

Dissemination and implementation science (DIS) is a growing research field that seeks to inform how evidence-based interventions can be successfully adopted, implemented, and maintained in health care delivery and community settings. In this article, an overview of DIS and how it has contributed to primary care delivery improvement, future opportunities for its use, and DIS resources for learning are described. Case examples are provided to illustrate how DIS can be used to solve the complex implementation and dissemination problems that emerge in primary care. Finally, recommendations are made to guide the use of DIS to inform and drive improvements in primary care delivery.

Jackson B, Huston P. Commentary – Advancing health equity to improve health: the time is now. *Health Promotion and Chronic Disease Prevention in Canada*. **2016;36(2):17-20.** https://doi.org/10.24095/hpcdp.36.2.01

Health inequities, or avoidable inequalities in health between groups of people, are increasingly recognized and tackled to improve public health. Canada's interest in health inequities goes back more than 40 years, with the landmark 1974 Lalonde Report, and continues with the 2011 Rio Political Declaration on Social Determinants of Health, which affirmed a global political commitment to implementing a social determinants of health approach to reducing health inequities. Research in this area includes documenting and tracking health inequalities, exploring their multidimensional causes, and developing and evaluating ways to address them. Inequalities can be observed in who is vulnerable to infectious and chronic diseases, the impact of health promotion and disease prevention efforts, how disease progresses, and the outcomes of treatment. Many programs, policies, and projects with potential impacts on health equity and determinants of health have been implemented across Canada. Recent theoretical and methodological advances in the areas of implementation science and population health intervention research have strengthened the capacity to develop effective interventions.

With the launch of a new health equity series in 2016, the journals *Canada Communicable Disease Report* and *Health Promotion and Chronic Disease Prevention in Canada* will continue to reflect and foster analysis of social determinants of health and focus on intervention studies that advance health equity.

Mensah GA, Stoney CM, Freemer MM, et al. The National Heart, Lung, and Blood Institute Strategic Vision implementation for health equity research. *Ethnicity & Disease*. **2019;29(suppl 1):57-64.** https://doi.org/10.18865/ed.29.S1.57

The National Heart, Lung, and Blood Institute (NHLBI) provides global leadership for a research, training, and education program to promote the prevention and treatment of heart, lung, and blood diseases and enhance the health of all individuals so that they can live longer and more fulfilling lives. Inherent in this mission is the commitment to advance health equity research as an avenue for enhancing the health of all individuals. Additionally, the four goals and eight research objectives of the NHLBI Strategic Vision directly support the commitment to health equity. In this article, the authors present selected examples of the NHLBI Strategic Vision implementation approaches for advancing health equity research in the mission areas of heart, lung, and blood diseases. Examples of diseases for which the burden of health inequities and Strategic Vision implementation approaches are discussed include hypertension, heart failure, vascular dementia, asthma, and sickle cell disease. Examples are provided of new avenues of NHLBI-solicited research to stimulate and address compelling scientific questions and critical challenges to advance health equity. The authors also highlight the emerging fields of implementation science and predictive analytics as important opportunities to accelerate the translation of discovery science into health impact for all and to advance health equity.

Theory, Models, and Frameworks

Alcaraz KI, Sly J, Ashing K, et al. The ConNECT Framework: a model for advancing behavioral medicine science and practice to foster health equity. *Journal of Behavioral Medicine*. **2017b;40(1):23-38.** https://doi.org/10.1007/s10865-016-9780-4

Health disparities persist despite ongoing efforts. Given the United States' rapidly changing demography and sociocultural diversity, a paradigm shift in behavioral medicine is needed to advance research and interventions focused on health equity. This paper introduces the ConNECT Framework as a model to link the sciences of behavioral medicine and health equity with the goal of achieving equitable health and outcomes in the 21st century. The authors first evaluate the state of health equity efforts in behavioral medicine science and identify key opportunities to advance the field. They then discuss and present actionable recommendations related to ConNECT's five broad and synergistic principles: (1) Integrating Context, (2) Fostering a Norm of Inclusion, (3) Ensuring Equitable Diffusion of Innovations, (4) Harnessing Communication Technology, and (5) Prioritizing Specialized Training. The framework holds significant promise for furthering health equity and ushering in a new and refreshing era of behavioral medicine science and practice.

Allen M, Wilhelm A, Ortega LE, Pergament S, Bates N, Cunningham B. Applying a race(ism)-conscious adaptation of the CFIR framework to understand implementation of a school-based equity-oriented intervention. *Ethnicity & Disease*. **2021;31(suppl):375-388.** https://doi.org/10.18865/ed.31.S1.375

Objectives: To use the Consolidated Framework for Implementation Research (CFIR) adapted to a race-conscious frame to understand ways that structural racism interacts with intervention implementation and uptake within an equity-oriented trial designed to enhance student-school connectedness.

Design: Secondary analysis of qualitative implementation data from Project TRUST [Training for Resiliency in Urban Students and Teachers], a hybrid effectiveness-implementation, community-based participatory intervention.

Setting: Ten schools across one urban school district.

Methods: The authors analyzed qualitative observational field notes, youth and parent researcher reflections, and semi-structured interviews with community-academic researchers and school-based partners within CFIR constructs based on framing questions using a Public Health Critical Race Praxis approach.

Results: Within most CFIR constructs and subconstructs, the authors identified barriers to implementation uptake not previously recognized using standard race-neutral definitions. Themes that crossed constructs included the following: (1) Leaders' willingness to examine black, indigenous, and people of color (BIPOC) student and parent experiences of school discrimination and marginalization had a cascading influence on multiple factors related to implementation uptake. (2) The race/ethnicity of the principals was related to intervention engagement and intervention uptake, particularly at the extremes, but the relationship was complex. (3) External change agents from BIPOC communities facilitated intervention uptake in indirect but significant ways. (4) Highly networked implementation champions had the ability to

enhance commitment to intervention uptake; however, the perceptions of these individuals and the degree to which they were networked was highly racialized.

Conclusions: Equity-oriented interventions should consider structural racism within the CFIR model to better understand intervention uptake.

Eslava-Schmalbach J, Garzón-Orjuela N, Elias V, Reveiz L, Tran N, Langlois EV. Conceptual framework of equity-focused implementation research for health programs (EquIR). *International Journal for Equity in Health*. **2019;18(1):80.** https://doi.org/10.1186/s12939-019-0984-4

Background: Implementation research is increasingly used to identify common implementation problems and key barriers and facilitators influencing efficient access to health interventions.

Objective: To develop and propose an equity-based framework for Implementation Research (EquIR) of health programs, policies, and systems.

Methods: A systematic search of models and conceptual frameworks involving equity in the implementation of health programs, policies, and systems was conducted in Medline (PubMed), Embase, LILACS, Scopus, and gray literature. Key characteristics of models and conceptual frameworks were summarized. The authors identified key aspects of equity in the context of seven Latin American country-focused health programs. They gathered information related to the awareness of inequalities in health policy, systems, and programs; the potential negative impact of increasing inequalities in disadvantaged populations; and the strategies used to reduce them.

Results: A conceptual framework of EquIR was developed. It includes elements of equity-focused implementation research, but it also links the population health status before and after the implementation, including relevant aspects of health equity before, during, and after the implementation. Additionally, health sectors were included, linked with social determinants of health through the "health in all policies" proposal affecting universal health and the potential impact of the public health and public policies.

Conclusions: EquIR is a conceptual framework that is proposed for use by decision-makers and researchers during the implementation of programs, policies, or health interventions, with a focus on equity, which aims to reduce or prevent the increase of existing inequalities during implementation.

Nápoles AM, Stewart AL. Transcreation: an implementation science framework for community-engaged behavioral interventions to reduce health disparities. *BMC Health Services Research*. **2018;18(1):710.** https://doi.org/10.1186/s12913-018-3521-z

Background: Methods for translating evidence-based behavioral interventions into real-world settings seldom account for the special issues in reaching health disparity populations.

Main text: The objective of this article is to describe an innovative "transcreational" framework for designing and delivering interventions in communities to reduce health disparities. The authors define "transcreation" as the process of planning, delivering, and evaluating interventions so that they resonate with the community experiencing

health disparities, while achieving intended health outcomes. The Transcreation Framework for Community-engaged Behavioral Interventions to Reduce Health Disparities comprises seven steps: (1) identify community infrastructure and engage partners; (2) specify a theory; (3) identify multiple inputs for the new program; (4) design an intervention prototype; (5) design study, methods, and measures for a community setting; (6) build community capacity for delivery; and (7) deliver transcreated intervention and evaluate implementation processes. Communities are engaged from the start and interventions are delivered by community-based interventionists and tested in community settings. The framework applies rigorous scientific methods for evaluating program effectiveness and implementation processes. It incorporates training and ongoing technical assistance to ensure treatment fidelity and build community capacity.

Conclusions: This framework expands the types of scientific evidence used and balances fidelity to evidence and fit to the community setting. It can guide researchers and communities in developing and testing behavioral interventions to reduce health disparities that are likely to be sustained because infrastructure development is embedded in the research.

Shelton RC, Chambers DA, Glasgow RE. Perspective article: An extension of RE-AIM to enhance sustainability: addressing dynamic context and promoting health equity over time. *Frontiers in Public Health.* **2020;8:134.** https://doi.org/10.3389/fpubh.2020.00134

RE-AIM is a widely adopted, robust implementation science framework used to inform intervention and implementation design, planning, and evaluation, as well as to address short-term maintenance. In recent years, there has been a growing focus on the longer term sustainability of evidence-based interventions (EBIs), such as programs, policies, and practices. In particular, investigators have conceptualized sustainability as the continued health impact and delivery of EBIs over a longer period of time (e.g., years after initial implementation) and incorporated the complex and evolving nature of context. The authors propose a reconsideration of RE-AIM to integrate recent conceptualizations of sustainability with a focus on addressing dynamic context and promoting health equity. They present an extension of the RE-AIM framework to guide planning, measurement/evaluation, and adaptations focused on enhancing sustainability. The authors recommend consideration of (1) the extension of "maintenance" within RE-AIM to include recent conceptualizations of dynamic, longer term intervention sustainability and "evolvability" across the life cycle of EBIs, including adaptation and potential de-implementation in light of changing and evolving evidence, contexts, and population needs; (2) the iterative application of RE-AIM assessments to guide adaptations and enhance long-term sustainability; (3) explicit consideration of equity and cost as fundamental, driving forces that need to be addressed across RE-AIM dimensions to enhance sustainability; and (4) the use or integration of RE-AIM with other existing frameworks that address key contextual factors and examine multi-level determinants of sustainability. Finally, the authors provide testable hypotheses and detailed research questions to inform future research in these areas.

Snell-Rood C, Jaramillo ET, Hamilton AB, Raskin SE, Nicosia FM, Willging C. Advancing health equity through a theoretically critical implementation science. *Translational Behavioral Medicine*. 2021;11(8):1617-1625. https://doi.org/10.1093/tbm/ibab008

While implementation science is driven by theory, most implementation science theories, models, and frameworks (TMFs) do not address issues of power, inequality, and reflexivity that are pivotal to achieving health equity. Theories used in anthropology address these issues effectively and could complement prevailing implementation science theories and constructs. The authors propose three broad areas of theory that complement and extend existing TMFs in implementation science to advance health equity. First, theories of postcoloniality and reflexivity foreground attention to the role of power in knowledge production and to the ways that researchers and interventionists may perpetuate the inequalities shaping health. Second, theories of structural violence and intersectionality can help us to better understand the unequal burden of health disparities in the population, thereby encouraging researchers to think beyond single interventions to initiate partnerships that can impact overlapping health vulnerabilities and influence the upstream causes of vulnerability. Finally, theories of policy and governance encourage us to examine the sociopolitical forces of the "outer context" crucial for implementation and sustainability. The incorporation of critical theories could enhance implementation science and foster necessary reflexivity among implementation scientists. The authors contend that a theoretically critical implementation science will promote better science and, more importantly, support progress toward health equity.

Woodward EN, Matthieu MM, Uchendu US, Rogal S, Kirchner JE. The health equity implementation framework: proposal and preliminary study of hepatitis C virus treatment. *Implementation Science*. 2019;14(1):26. https://doi.org/10.1186/s13012-019-0861-y

Background: Researchers could benefit from methodological advancements to advance the uptake of new treatments while also reducing health care disparities. A comprehensive determinants framework for health care disparity implementation challenges is essential to accurately understand an implementation problem and select implementation strategies.

Methods: The authors integrated and modified two conceptual frameworks—one from implementation science and one from health care disparities research—to develop the Health Equity Implementation Framework. They applied the Health Equity Implementation Framework to a historical health care disparity challenge—hepatitis C virus (HCV) and its treatment among black patients seeking care in the US Department of Veterans Affairs (VA). A specific implementation assessment at the patient level was needed to understand any barriers to increasing uptake of HCV treatment, independent of cost. The authors conducted a preliminary study to assess how feasible it was for researchers to use the Health Equity Implementation Framework. They applied the framework to design the qualitative interview guide and interpret the results. Using quantitative data to screen potential participants, this preliminary study consisted of semi-structured interviews with a purposively selected sample of black, rural-dwelling, older adult VA patients (N = 12), living with HCV, from VA medical clinics in the Southern part of the United States.

Results: The Health Equity Implementation Framework was feasible for implementation researchers. Barriers and facilitators were identified at all levels, including the patient, provider (recipients), patient-provider interaction (clinical encounter), the characteristics of treatment (innovation), and the health care system (inner and outer context). Some barriers reflected general implementation issues (e.g., poor care coordination after testing positive for HCV). Other barriers were related to health care disparities and likely unique to racial minority patients (e.g., testimonials from black peers about racial discrimination at the VA). The authors identified several facilitators, including patient enthusiasm for obtaining treatment because of its high cure rates, and VA clinics that offset HCV stigma by protecting patient confidentiality.

Conclusion: The Health Equity Implementation Framework showcases one way to modify an implementation framework to better assess health equity determinants as well. Researchers may be able to optimize the scientific yield of research inquiries by identifying and addressing factors that promote or impede implementation of novel treatments in addition to eliminating health care disparities.

Woodward EN, Singh RS, Ndebele-Ngwenya P, Melgar Castillo A, Dickson KS, Kirchner JE. A more practical guide to incorporating health equity domains in implementation determinant frameworks. *Implementation Science Communications.* **2021;2(1):61.** https://doi.org/10.1186/s43058-021-00146-5

Background: Due to striking disparities in the implementation of health care innovations, it is imperative that researchers and practitioners can meaningfully use implementation determinant frameworks to understand why disparities exist in the access, receipt, use, quality, or outcomes of health care. The authors' prior work documented and piloted the first published adaptation of an existing implementation determinant framework with health equity domains to create the Health Equity Implementation Framework. They recommended integrating these three health equity domains in existing implementation determinant frameworks: (1) culturally relevant factors of recipients, (2) clinical encounter or patient-provider interaction, and (3) societal context (including, but not limited to, social determinants of health). This framework was developed for health care and clinical practice settings. Some implementation teams have begun using the Health Equity Implementation Framework in their evaluations and asked for more guidance.

Methods: The authors completed a consensus process with the authorship team to clarify the steps to incorporate a health equity lens in an implementation determinant framework.

Results: The authors describe steps to integrate health equity domains into implementation determinant frameworks for implementation research and practice. For each step, they compiled examples or practical tools to assist implementation researchers and practitioners in applying those steps. For each domain, the authors compiled definitions with supporting literature, showcased an illustrative example, and suggested sample quantitative and qualitative measures.

Conclusion: Incorporating health equity domains within implementation determinant frameworks may optimize the scientific yield and equity of implementation efforts by assessing and ideally addressing implementation and equity barriers simultaneously. The practical guidance and tools provided can assist implementation researchers and practitioners to concretely capture and understand barriers and facilitators to implementation disparities.

Social Determinants of Health

Alcaraz KI, Wiedt TL, Daniels EC, Yabroff KR, Guerra CE, Wender RC. Understanding and addressing social determinants to advance cancer health equity in the United States: a blueprint for practice, research, and policy. *CA: A Cancer Journal for Clinicians.* **2020;70(1):31-46.** https://doi.org/10.3322/caac.21586

Although cancer mortality rates declined in the United States in recent decades, some populations experienced little benefit from advances in cancer prevention, early detection, treatment, and survivorship care. In fact, some cancer disparities between populations of low and high socioeconomic status widened during this period. Many potentially preventable cancer deaths continue to occur, and disadvantaged populations bear a disproportionate burden. Reducing the burden of cancer and eliminating cancer-related disparities will require more focused and coordinated action across multiple sectors and in partnership with communities. This article, part of the American Cancer Society's Cancer Control Blueprint series, introduces a framework for understanding and addressing social determinants to advance cancer health equity and presents actionable recommendations for practice, research, and policy. The article aims to accelerate progress toward eliminating disparities in cancer and achieving health equity.

Crawford A, Serhal E. Digital health equity and COVID-19: the innovation curve cannot reinforce the social gradient of health. *Journal of Medical Internet Research.* **2020;22(6):e19361.** https://doi.org/10.2196/19361

Digital health innovations have been rapidly implemented and scaled to provide solutions to health delivery challenges posed by the coronavirus disease (COVID-19) pandemic. This has provided people with ongoing access to vital health services while minimizing their potential exposure to infection and allowing them to maintain social distancing. However, these solutions may have unintended consequences for health equity. Poverty, lack of access to digital health, poor engagement with digital health for some communities, and barriers to digital health literacy are some factors that can contribute to poor health outcomes. The authors present the Digital Health Equity Framework, which can be used to consider health equity factors. Along with person-centered care, digital health equity should be incorporated into health provider training and should be championed at the individual, institutional, and social levels. Important future directions will be to develop measurement-based approaches to digital health equity and to use these findings to further validate and refine this model.

Emmons KM, Chambers DA. Commentary: Policy implementation science – an unexplored strategy to address social determinants of health. *Ethnicity & Disease.* **2021;31(1):133-138.** https://doi.org/10.18865/ed.31.1.133

This commentary explores the ways in which robust research focused on policy implementation will increase our ability to understand how to—and how not to—address the social determinants of health.

The authors make three key points in this commentary. First, policies that affect our lives and health are developed and implemented every single day, like it or not. These include "small p" policies, such as those at our workplaces that influence whether we have affordable access to healthy food at work, as well as "large P" policies that, for

example, determine at a larger level whether our children's schools are required to provide physical education. However, policies interact with context and are likely to have differential effects across different groups based on demographics, socioeconomic status, geography, and culture. We are unlikely to improve health equity if we do not begin to systematically evaluate the ways in which policies can incorporate evidence-based approaches to reducing inequities and provide the structural supports needed for such interventions to have maximal impact. A policy mandating physical education in schools will do little to address disparities in fitness and weight-related outcomes if all schools cannot provide the resources for physical education teachers and safe activity spaces.

Second, as the authors argue for an increased emphasis on policy implementation science, they acknowledge its nascent status. Although the field of implementation science has become increasingly robust in the past decade, there has been only limited application to policy. However, if we are strategic and systematic in the application of implementation science approaches and methods to health-related policy, there is a great opportunity to discover its impact on social determinants. This will entail fundamental work to develop common measures of policy-relevant implementation processes and outcomes, develop the capacity to track policy proposal outcomes, and maximize the capacity to study natural experiments of policy implementation.

Third, development of an explicit policy implementation science agenda focused on health equity is critical. This will include efforts to bridge scientific evidence and policy adoption and implementation, evaluate policy impact on a range of health equity outcomes, and examine the differential effects of varied policy implementation processes across population groups.

We cannot escape the reality that policy influences health and health equity. Policy implementation science can have an important bearing on understanding how policy impacts can promote health and be equitable.

Freeman T, Fisher M, Baum F, Friel S. Healthy infrastructure: Australian National Broadband Network policy implementation and its importance to health equity. *Information, Communication & Society*. 2019;22(10):1414-1431. https://doi.org/10.1080/1369118X.2018.1434555

Critical social and economic resources, such as employment, education, and health services, increasingly require online access, highlighting the growing need to address equity of access to high-speed broadband telecommunications. Ensuring access to broadband requires the necessary infrastructure that, in Australia, is the National Broadband Network (NBN). In this paper, the authors use policy implementation theory to examine translation of the government's NBN policy into service delivery, specifically in relation to the choice of policy instruments to install the broadband infrastructure, the associated barriers and enablers to their implementation, and the equity considerations that are emerging as the policy is implemented. The authors conducted a rapid review of NBN policy documents and academic and gray literature to map the NBN policy instruments and examine how key contextual, political, and technical aspects of NBN policy implementation are likely to affect equity. Their findings indicate a range of equity concerns in the implementation of NBN policy. The instrument choice of a public-

private "hybrid" organization to implement NBN policy has created a fertile ground for competing political, social, and commercial priorities, thereby affecting how the policy is implemented and thus increasing the risks to equity as it competes with other priorities. As these mixed public-private instruments become more prevalent as policy tools to deliver major infrastructure, determining the best means to safeguard equity is a vital consideration to ensure that the benefits are distributed fairly.

Green K, Zook M. When talking about social determinants, precision matters. Health Affairs Forefront. 2019 October 29. Accessed September 16, 2021, from https://www.healthaffairs.org/do/10.1377/hblog20191025.776011/full/

Public health experts have aptly expressed concern about the health care industry's characterization of interventions as addressing "the social determinants of health" and have pointed out the limitations of over-medicalizing individuals' social needs rather than investing in upstream community interventions. Acknowledging this concern and seeking greater internal consistency, the Health Care Transformation Task Force—a coalition of payers, purchasers, providers, and patients committed to embracing value-based payment models—offers a framework to describe the distinction among social determinants of health, social risk factors, and social needs in a manner that promotes more precise usage of each term by all health care stakeholders. Clear and consistent terminology is an essential first step to determining what role health care providers and payers can and should play in addressing the underlying factors that influence population health.

Oh A, Abazeed A, Chambers DA. Policy implementation science to advance population health: the potential for learning health policy systems. *Frontiers in Public Health*. 2021;9:740. https://doi.org/10.3389/fpubh.2021.681602

Many health policies are designed with the intention of improving health outcomes for all. Yet the implementation of policies is variable across contexts, potentially limiting its impact on population health outcomes. The potential impact of a policy to advance health equity depends both on the design and its implementation, requiring ongoing evaluation and stakeholder engagement. Despite the importance of health policies in shaping public health, health care policy implementation science remains underrepresented in research. The authors argue that enhanced integration of policy questions within implementation science could reduce the time lag from policy to practice and improve population health outcomes to build a body of evidence on effective policy implementation. In this commentary, they argue that approaches to studying policy implementation science should reflect the dynamic and evolving policy context, analogous to the "learning health care system," to better understand and respond to the systematic and multi-level impacts of policy. Several example opportunities for a learning health policy system are posed in building a broader agenda toward research and practice in policy implementation science in public health.

Adaptations

Alvidrez J, Nápoles AM, Bernal G, et al. Building the evidence base to inform planned intervention adaptations by practitioners serving health disparity populations. *American Journal of Public Health.* **2019;109(S1):S94-S101.**
https://doi.org/10.2105/AJPH.2018.304915

Many evidence-based interventions (EBIs) have been developed to prevent or treat major health conditions. However, many EBIs have exhibited limited adoption, reach, and sustainability when implemented in diverse community settings. This limitation is especially pronounced in low-resource settings that serve health disparity populations.

Often, practitioners identify problems with existing EBIs originally developed and tested with populations different from their target population and introduce needed adaptations to make the intervention more suitable. Although some EBIs have been extensively adapted for diverse populations and evaluated, most local adaptations to improve fit for health disparity populations are not well documented or evaluated. As a result, empirical evidence is often lacking regarding the potential effectiveness of specific adaptations that practitioners may be considering.

The authors advocate an expansion in the emphasis of adaptation research from researcher-led interventions to research that informs practitioner-led adaptations. By presenting a research vision and strategies needed to build this area of science, they aim to inform research that facilitates successful adaptation and equitable implementation and delivery of EBIs that reduce health disparities.

Aschbrenner KA, Mueller NM, Banerjee S, Bartels SJ. Applying an equity lens to characterizing the process and reasons for an adaptation to an evidenced-based practice. *Implementation Research and Practice.* **2021;2.**
https://doi.org/10.1177/26334895211017252

Background: Adaptations to evidence-based practices (EBPs) are common but can impact implementation and patient outcomes. In the authors' prior research, providers in routine care made a fidelity-inconsistent adaptation to an EBP that improved health outcomes in people with serious mental illness (SMI). The purpose of this study was to characterize the process and reasons for the adaptation using a framework for reporting adaptations and modifications to EBPs, with a focus on equity.

Methods: This study used qualitative data collected during a national implementation of the InSHAPE EBP addressing obesity in persons with SMI. The authors reviewed transcripts from five behavioral health organizations that made a successful fidelity-inconsistent adaptation to a core component of InSHAPE that was associated with cardiovascular risk reduction. They coded the data using the Framework for Reporting Adaptations and Modifications – Expanded (FRAME) with an emphasis on exploring whether the adaptation addressed inequities in using the EBP related to social determinants of health.

Results: Across the five agencies, the fidelity-inconsistent adaptation was characterized as unplanned and reactive in response to the challenges that InSHAPE teams experienced delivering the intervention in community fitness facilities as intended. In all cases, the goal of the adaptation was to improve intervention access, feasibility, and fit. Socioeconomic disadvantages were noted obstacles to accessing fitness

facilities or gyms among participants with SMI, which led agencies to adapt the program by offering sessions at the mental health center.

Conclusion: Findings from this study show the advantages of applying a health equity lens to evaluate how obstacles such as poverty and discrimination influence EBP adaptations. Recommendations also can assist researchers and community partners in making proactive decisions about allowable adaptations to EBPs.

Barrera M, Berkel C, Castro FG. Directions for the advancement of culturally adapted preventive interventions: local adaptations, engagement, and sustainability. *Prevention Science.* **2017;18(6):640-648.** https://doi.org/10.1007/s11121-016-0705-9

To advance the implementation and dissemination of culturally adapted interventions to diverse populations, greater attention should be devoted to three underdeveloped topics: (1) local adaptations of interventions when they are implemented in community settings, (2) participant engagement, and (3) the sustainability of adapted interventions. Several typologies have been developed for studying local adaptations, and some research indicates that such adaptations might add to intervention effectiveness. There is suggestive evidence of ethnocultural group disparities in intervention engagement and in the success of efforts to boost engagement. Theory and limited data indicate that interventions' flexibility and fit with organizational culture and resources can be achieved through cultural adaptations. Furthermore, those adaptations should be associated with sustainability; however, research has yet to test that hypothesis adequately. Several recommendations are made for advancing culturally adapted interventions through additional research on local adaptations during implementation, the many facets of participant engagement, and sustainability.

Gaias LM, Arnold KT, Liu FF, Pullmann MD, Duong MT, Lyon AR. Adapting Strategies to Promote Implementation Reach and Equity (ASPIRE) in school mental health services. *Psychology in the Schools.* **2021:1-15.** https://doi.org/10.1002/pits.22515

Despite evidence that school mental health services can enhance access to care for students from marginalized racial/ethnic groups, disparities remain in the appropriateness, quality, effectiveness, and outcomes of school mental health services. Implementation strategies hold some promise for addressing the disparities that emerge as a result of inequitable implementation of mental health services. However, without explicitly examining implementation strategies through an equity lens, it is unclear the extent to which they will promote equitable implementation or student outcomes. Thus, the goal of this paper is to describe the Adapting Strategies to Promote Implementation Reach and Equity framework, a generalizable process for adapting implementation strategies to explicitly center the goal of reducing disparities in implementation and service recipient outcomes. The authors outline a three-step process for incorporating an equity lens into implementation strategies and provide examples of how this framework can be applied to implementation strategies in school mental health services. They also discuss examples of projects where implementation strategies were intentionally paired with school mental health programs to enhance racial equity. Implications and recommendations for school mental health services and implementation research and practice are discussed.

Technology

Bakken S, Marden S, Arteaga SS, et al. Behavioral interventions using consumer information technology as tools to advance health equity. *American Journal of Public Health*. **2019;109(S1):S79-S85.** https://doi.org/10.2105/AJPH.2018.304646

The digital divide related to consumer information technologies (CITs) has diminished, thus increasing the potential to use CITs to overcome barriers of access to health interventions, as well as to deliver interventions situated in the context of daily lives. However, the evidence base regarding the use and impact of CIT-enabled interventions in health disparity populations lags behind that for the general population.

Literature and case examples are summarized to demonstrate the use of mHealth, telehealth, and social media as behavioral intervention platforms in health disparity populations; identify challenges to achieving their use; describe strategies for overcoming the challenges; and recommend future directions. The evidence base is emerging. However, challenges in design, implementation, and evaluation must be addressed for the promise to be fulfilled.

Future directions include (1) improved design methods, (2) enhanced research reporting, (3) advancement of multi-level interventions, (4) rigorous evaluation, (5) efforts to address privacy concerns, and (6) inclusive design and implementation decisions.

Holeman I, Kane D. Human-centered design for global health equity. *Information Technology for Development*. **2020;26(3):477-505.** https://doi.org/10.1080/02681102.2019.1667289

As digital technologies play a growing role in health care, human-centered design is gaining traction in global health. Amid concern that this trend offers little more than buzzwords, this paper clarifies how human-centered design matters for global health equity. First, the authors contextualize how the design discipline differs from conventional approaches to research and innovation in global health by emphasizing craft skills and iterative methods that reframe the relationship between design and implementation. Second, while there is no definitive agreement about what the "human" part means, it often implies stakeholder participation, augmenting human skills, and attention to human values. Finally, the authors consider the practical relevance of human-centered design by reflecting on their experiences accompanying health workers through more than 70 digital health initiatives. In light of this material, they describe human-centered design as a flexible yet disciplined approach to innovation that prioritizes people's needs and concrete experiences in the design of complex systems.

Rodriguez JA, Clark CR, Bates DW. Viewpoint: Digital health equity as a necessity in the 21st Century Cures Act era. *JAMA*. **2020;323(23):2381-2382.** https://doi.org/10.1001/jama.2020.7858

The authors highlight inequities in these digital health tools and opportunities to apply an equity framework in the era of expanded patient access to data.

Intersectionality

Etherington N, Rodrigues IB, Giangregorio L, et al. Applying an intersectionality lens to the theoretical domains framework: a tool for thinking about how intersecting social identities and structures of power influence behaviour. *BMC Medical Research Methodology*. 2020;20(1):169. https://doi.org/10.1186/s12874-020-01056-1

Background: A key component of the implementation process is identifying potential barriers and facilitators that need to be addressed. The Theoretical Domains Framework (TDF) is one of the most commonly used frameworks for this purpose. When applying the TDF, it is critical to understand the context in which behaviors occur. Intersectionality, which accounts for the interface between social identity factors (e.g., age, gender) and structures of power (e.g., ageism, sexism), offers a novel approach to understanding how context shapes individual decision-making and behavior.
The authors aimed to develop a tool to be used alongside applications of the TDF to incorporate an intersectionality lens when identifying implementation barriers and enablers.

Methods: An interdisciplinary Framework Committee (n= 17) prioritized the TDF as one of three models, theories, and frameworks to enhance with an intersectional lens through a modified Delphi approach. In collaboration with the wider Framework Committee, a subgroup considered all 14 TDF domains and iteratively developed recommendations for incorporating intersectionality considerations within the TDF and its domains.
An iterative approach aimed at building consensus was used to finalize the recommendations.

Results: Consensus on how to apply an intersectionality lens to the TDF was achieved after 12 rounds of revision. Two overarching considerations for using the intersectionality alongside the TDF were developed by the group, as well as two to four prompts for each TDF domain to guide interview topic guides. Considerations and prompts were designed to assist users in reflecting on how individual identities and structures of power may play a role in barriers and facilitators to behavior change and the subsequent intervention implementation.

Conclusions: Through an expert consensus approach, the authors developed a tool for applying an intersectionality lens alongside the TDF. Considering the role of intersecting social factors when identifying barriers and facilitators to implementing research evidence may result in more targeted and effective interventions that better reflect the realities of those involved.

Trust, Mistrust, Distrust

Anderson A, Griffith DM. Measuring the trustworthiness of health care organizations and systems. *The Milbank Quarterly*. **2022 Mar 15.** https://doi.org/10.1111/1468-0009.12564

Policy Points:

- Current efforts to measure and improve trust in health care focus on changing patients' attitudes rather than measuring and improving the trustworthiness of health care organizations and systems.
- The authors present a conceptual model to understand and explain the constructs of trust and trustworthiness in the context of health care through the application of existing theories of human behavior.
- Developing and publicly reporting measures that can enable patients, particularly from historically marginalized groups, to better assess the trustworthiness of providers is necessary to promote health care equity.

Griffith DM, Bergner EM, Fair AS, Wilkins CH. Using mistrust, distrust, and low trust precisely in medical care and medical research advances health equity. *American Journal of Preventive Medicine*. **2021;60(3):442-445.**
https://doi.org/10.1016/j.amepre.2020.08.019

Trust, mistrust, and distrust influence people's ability to utilize critical resources and make decisions that are best for their health and well-being. Trust is necessary for optimizing health research, eliminating health care disparities, and achieving health equity; however, efforts to build trust to increase health care utilization and research participation may have little effect on attitudes or behaviors that are rooted in distrust or mistrust. Thus, it is critical to be clear whether policies and initiatives are designed to improve trust or decrease mistrust and distrust. This paper refines the way that patients' trust, mistrust, and distrust are conceptualized. In particular, it focuses on clarifying the distinctions among low levels of trust, mistrust, and distrust, which will strengthen the pillars on which more accurate and effective measures, programs, and policies can be created to promote equity in health care utilization and medical research.

Griffith DM, Shelton RC, Kegler M. Advancing the science of qualitative research to promote health equity. *Health Education & Behavior*. **2017;44(5):673-676.**
https://doi.org/10.1177/1090198117728549

Qualitative methods have long been a part of health education research, but how qualitative approaches advance health equity has not been well described. Qualitative research is an increasingly important methodological tool to use in efforts to understand, inform, and advance health equity. Qualitative research provides critical insight into the subjective meaning and context of health that can be essential for understanding where and how to intervene to inform health equity research and practice. The authors describe the larger context for this special theme issue of *Health Education & Behavior*, provide brief overviews of the 15 articles that comprise the issue, and discuss the promise of qualitative research that seeks to contextualize and illuminate answers to research questions in efforts to promote health equity. They highlight the critical role that qualitative research can play in considering and incorporating a diverse array of contextual information that is difficult to capture in quantitative research.

Objective: To understand barriers and facilitators to the adaptation of programs reflecting changing scientific guidelines for breast/cervical cancer screening, including factors influencing the de-implementation of messaging, program components, or screening practices no longer recommended due to new scientific evidence.

Setting: National sample of National Witness Project (NWP) sites from across the United States.

Design and methods: The authors conducted a convergent mixed-methods design in partnership with NWP, a nationally implemented evidence-based lay health advisor (LHA) program for breast/cervical cancer screening among African American (AA) women. Surveys were conducted among 201 project directors (PDs) and LHAs representing 14 NWP sites; in-depth interviews were conducted among 14 PDs to provide context to the findings. Survey data and qualitative interviews were collected concurrently from January 2019 through January 2020.

Results: Trust and mistrust were important themes that arose in quantitative and qualitative data. Common concerns about adapting to new guidelines included (1) perceptions that new guidelines misalign with the personal values and beliefs of AA women; (2) mistrust of guidelines, providers, and medical organizations; (3) confusion about inconsistent guidelines and concern that they are based on studies that do not reflect the experience of AA women (who experience more aggressive tumors at younger ages); and (4) the belief that breast self-exam (BSE) is an empowerment tool for AA women and should be included to promote awareness, given that many women discovered lumps/cancer through BSE.

Conclusion: The findings highlight that trust and mistrust are important but understudied social determinants of health among AA women that should be considered in implementation science as they (1) have critical implications for shaping health inequities, and (2) help explain and contextualize why new screening guidelines may not be fully embraced in the AA community.

Anti-Racism, Racism

Buchanan NT, Perez M, Prinstein MJ, Thurston I. Upending racism in psychological science: strategies to change how our science is conducted, reported, reviewed & disseminated. PsyArXiv Preprints. 2020. https://doi.org/10.31234/osf.io/6nk4x

As efforts to end systemic racism gain momentum across various contexts, it is critical to consider the anti-racist steps needed to improve psychological science. Current scientific practices serve to maintain white supremacy with significant and impactful consequences. Extant research practices reinforce the norms of homogeneity within black, indigenous, and other people of color (BIPOC) populations, segregate theories and methods derived from BIPOC groups, apply disparate standards to the evaluation of research on white versus BIPOC populations, and discourage BIPOC scholars from pursuing research careers. Perhaps consequently, mental and physical health disparities persist. In this article, the authors present examples of how epistemic oppression exists within psychological science, including in how science is conducted, reported, reviewed, and disseminated. Importantly, this paper offers a needed contribution by offering specific concrete recommendations for different stakeholders, including those involved in the production, reporting, and gatekeeping of science, as well as consumers of science. Additionally, this paper critically moves beyond a discussion of problems and potential solutions by offering measurable outcomes that can ensure accountability. This diversity accountability index can be used by journal editors/publishers to measure potential benchmarks of progress, promote dialogue and action, challenge inequity, and upend the influence of white supremacy in psychological science.

Hagopian A, West KM, Ornelas IJ, Hart AN, Hagedorn J, Spigner C. Adopting an anti-racism public health curriculum competency: the University of Washington experience. *Public Health Reports*. **2018;133(4):507-513. https://doi.org/10.1177/0033354918774791**

The authors (along with others at the University of Washington School of Public Health [UWSPH]) set out to develop a curriculum competency which would require that all UWSPH students acknowledge racism and its effects, counter the tendency to minimize racism as a topic, and compel the school to develop resources to support this education. Through this process, the authors developed a collective, although not unanimous, analysis of our role and responsibility in educating public health professionals who have the skills to name racism, address its effects, and work collaboratively with communities of color to dismantle the systems that perpetuate it. Acknowledging this responsibility is not the end; however, it is an important step in a long process. In this commentary, the authors describe their experience in developing and adopting a new schoolwide competency, amid political pushback, and offer lessons learned to encourage other schools and programs of public health to launch their own efforts.

Kegler MC, Wolff T, Christens BD, Butterfoss FD, Francisco VT, Orleans T. Strengthening our collaborative approaches for advancing equity and justice. *Health Education & Behavior*. 2019;46(suppl 1):5S-8S. https://doi.org/10.1177/1090198119871887

The Principles for Collaborating for Equity and Justice are explicit about addressing social and economic injustice, structural racism, and community organizing to facilitate resident power and ownership. They also focus on structural change, an acknowledgment of complexity, and the need to thoughtfully build on decades of practice and scholarship on collaborating for community change. This special theme issue of *Health Education & Behavior* includes 10 articles that highlight these principles and provide insight into the complexities, challenges, and rewards of collaborating in ways that are intentional about advancing health equity through inclusive processes and shared goals to address social determinants of health. The authors provide a brief overview of the articles and identify community organizing and building resident power as possible strategies that should be combined with, complement, or, in some cases, replace our more commonplace multisectoral coalitions if we hope to reduce health inequities through community collaboration.

Obermeyer Z, Powers B, Vogeli C, Mullainathan S. Dissecting racial bias in an algorithm used to manage the health of populations. *Science* (New York, NY). 2019;366(6464):447-453. https://doi.org/10.1126/science.aax2342

Health systems rely on commercial prediction algorithms to identify and help patients with complex health needs. The authors show that a widely used algorithm, typical of this industry-wide approach and affecting millions of patients, exhibits significant racial bias: At a given risk score, black patients are considerably sicker than white patients, as evidenced by signs of uncontrolled illnesses. Remedying this disparity would increase the percentage of black patients receiving additional help from 17.7% to 46.5%. The bias arises because the algorithm predicts health care costs rather than illness; however, unequal access to care means that we spend less money caring for black patients than for white patients. Thus, despite health care costs appearing to be an effective proxy for health by some measures of predictive accuracy, large racial biases arise. The authors suggest that the choice of convenient, seemingly effective proxies for ground truth can be an important source of algorithmic bias in many contexts.

Shelton RC, Adsul P, Oh A. Recommendations for addressing structural racism in implementation science: a call to the field. *Ethnicity & Disease*. 2021;31(suppl):357-364. https://doi.org/10.18865/ed.31.S1.357

Implementation science (IS) has emerged in response to a striking research-to-practice gap, with the goal of accelerating and addressing the development, translation, and widespread uptake of evidence-based interventions (EBIs). Despite the promise of IS, critical gaps and opportunities remain within the field to explicitly facilitate health equity, particularly as they relate to the role of social determinants of health and structural racism. In this commentary, the authors propose recommendations for the field of IS to include structural racism as a more explicit focus of our work. First, the authors make the case for including structural racism as a construct and promote its measurement as a determinant within existing IS frameworks/models, laying the foundation for an empirical evidence base on mechanisms through which such factors influence inequitable adoption, implementation, and the sustainability of EBIs. Second,

the authors suggest considerations for both EBIs and implementation strategies that directly or indirectly address structural racism and impact health equity. Finally, the authors call for the use of methods and approaches within IS that may be more appropriate for addressing structural racism at multiple ecological levels and clinical and community settings in which we conduct IS, including community-based participatory research and stakeholder engagement. The authors see these as opportunities to advance the focus on health equity within IS and conclude with a charge to the field to consider making structural racism and the dismantling of racism an explicit part of the IS research agenda.

Shelton RC, Adsul P, Oh A, Moise N, Griffith D. Application of an anti-racism lens in the field of implementation science: recommendations for reframing implementation research with a focus on justice and racial equity. *Implementation Research & Practice.* **2021 Nov 26.** https://doi.org/10.1177/26334895211049482

Background: Despite the promise of implementation science (IS) to reduce health inequities, critical gaps and opportunities remain in the field to promote health equity. Prioritizing racial equity and anti-racism approaches is critical in these efforts so that IS does not inadvertently exacerbate disparities based on the selection of frameworks, methods, interventions, and strategies that do not reflect consideration of structural racism and its impacts.

Methods: Grounded in extant research on structural racism and anti-racism, the authors discuss the importance of advancing an understanding of how structural racism as a system shapes racial health inequities and inequitable implementation of evidence-based interventions (EBIs) among racially and ethnically diverse communities.
The authors outline recommendations for explicitly applying an anti-racism lens to address structural racism and its manifests through IS. An anti-racism lens provides a framework to guide efforts to confront, address, and eradicate racism and racial privilege by helping people identify racism as a root cause of health inequities and critically examine how it is embedded in policies, structures, and systems that differentially affect racially and ethnically diverse populations.

Results: The authors provide guidance for the application of an anti-racism lens in the field of IS, focusing on select core elements in implementation research, including (1) stakeholder engagement; (2) conceptual frameworks and models; (3) development, selection, and adaptation of EBIs; (4) evaluation approaches; and (5) implementation strategies. They highlight the need for foundational grounding in anti-racism frameworks among implementation scientists to facilitate ongoing self-reflection, accountability, and attention to racial equity, and provide questions to guide such reflection and consideration.

Conclusion: The authors conclude with a reflection on how this is a critical time for IS to prioritize the focus on justice, racial equity, and real-world equitable impact. Moving IS toward making consideration of health equity and an anti-racism lens foundational is central to strengthening the field and enhancing its impact.

Williams DR. Miles to go before we sleep: racial inequities in health. *Journal of Health and Social Behavior*. 2012;53(3):279-295. https://doi.org/10.1177/0022146512455804

Large, pervasive, and persistent racial inequalities exist in the onset, courses, and outcomes of illness. A comprehensive understanding of the patterning of racial disparities indicates that racism in both its institutional and individual forms remains an important determinant. There is an urgent need to build the science base that would identify how to trigger the conditions that would facilitate needed societal change and identify the optimal interventions that would confront and dismantle the societal conditions that create and sustain health inequalities.

Yonas MA, Jones N, Eng E, et al. The art and science of integrating Undoing Racism with CBPR: challenges of pursuing NIH funding to investigate cancer care and racial equity. *Journal of Urban Health*. 2006;83(6):1004-1012. https://doi.org/10.1007/s11524-006-9114-x

In this nation, the unequal burden of disease among people of color has been well documented. One starting point for eliminating health disparities is recognizing the existence of inequities in health care delivery and identifying the complexities of how institutional racism may operate within the health care system. In this paper, the authors explore the integration of community-based participatory research (CBPR) principles with an Undoing Racism® process to conceptualize, design, apply for, and secure National Institutes of Health (NIH) funding to investigate the complexities of racial equity in the system of breast cancer care. Additionally, the authors describe the sequence of activities and "necessary conflicts" managed by the Health Disparities Collaborative to design and submit an application for NIH funding. This process of integrating CBPR principles with anti-racist community organizing presented unique challenges that were negotiated only by creating a strong foundation of trusting relationships that viewed conflict as being necessary. The process of developing a successful NIH grant proposal illustrated a variety of important lessons associated with the concepts of cultural humility and cultural safety. For successfully conducting CBPR, major challenges have included assembling and mobilizing a partnership, the difficulty of establishing a shared vision and purpose for the group, the problem of maintaining trust, and the willingness to address differences in institutional cultures. Expectation, acceptance, and negotiation of conflict were essential in the process of developing, preparing, and submitting the NIH application. Central to negotiating these and other challenges has been the utilization of a CBPR approach.

Methods and Tools for Advancing Equity

Background: The primary health care (PHC) sector is increasingly relevant as a site for population health interventions, particularly in relation to marginalized groups, where the greatest gains in health status can be achieved. The purpose of this paper is to provide an overview of an innovative multi-component, organizational-level intervention designed to enhance the capacity of PHC clinics to provide equity-oriented care, particularly for marginalized populations. The intervention, known as EQUIP, is being implemented in Canada in four diverse PHC clinics serving populations who are impacted by structural inequities. These PHC clinics serve as case studies for the implementation and evaluation of the EQUIP intervention. The authors discuss the evidence and theory that provide the basis for the intervention, describe the intervention components, and discuss the methods used to evaluate the implementation and impact of the intervention in diverse contexts.

Design and methods: Research and theory related to equity-oriented care, and complexity theory are central to the design of the EQUIP intervention. The intervention aims to enhance the capacity for equity-oriented care at the staff level and at the organizational level (i.e., policy and operations) and is novel in its dual focus on the following:

(1) Staff education: Using standardized educational models and integration strategies to enhance staff knowledge, attitudes, and practices related to equity-oriented care in general, and cultural safety and trauma- and violence-informed care in particular.

(2) Organizational integration and tailoring: Using a participatory approach, practice facilitation, and catalyst grants to foster shifts in organizational structures, practices, and policies to enhance the capacity to deliver equity-oriented care, improve processes of care, and shift key client outcomes.

Using a mixed-methods, multiple case study design, the authors are examining the impact of the intervention in enhancing staff knowledge, attitudes, and practices; improving processes of care; shifting organizational policies and structures; and improving selected client outcomes.

Discussion: The multiple case study design provides an ideal opportunity to study the contextual factors shaping the implementation, uptake, and impact of our tailored intervention within diverse PHC settings. The EQUIP intervention illustrates the complexities involved in enhancing the PHC sector's capacity to provide equity-oriented care in real-world clinical contexts.

Browne AJ, Varcoe C, Ford-Gilboe M, et al. Disruption as opportunity: impacts of an organizational health equity intervention in primary care clinics. *International Journal for Equity in Health*. **2018;17(1):154.** https://doi.org/10.1186/s12939-018-0820-2

Background: The health care sector has a significant role to play in fostering equity in the context of widening global social and health inequities. The purpose of this paper is to illustrate the process and impacts of implementing an organizational-level health equity intervention aimed at enhancing the capacity to provide equity-oriented health care.

Methods: The theoretically informed and evidence-based intervention known as "EQUIP" included educational components for staff and the integration of three key dimensions of equity-oriented care—cultural safety, trauma- and violence-informed care, and tailoring to context. The intervention was implemented at four Canadian primary health care clinics committed to serving marginalized populations, including people living in poverty, those facing homelessness, and people living with high levels of trauma, including indigenous peoples, recent immigrants, and refugees. A mixed-methods design was used to examine the impacts of the intervention on the clinics' organizational processes and priorities, and on staff.

Results: Engagement with the EQUIP intervention prompted increased awareness and confidence related to equity-oriented health care among staff. Importantly, the EQUIP intervention surfaced tensions that mirrored those in the wider community, including those related to racism, the impacts of violence and trauma, and substance use issues. Surfacing these tensions was disruptive but led to focused organizational strategies, for example, working to address structural and interpersonal racism, improving waiting room environments, and changing organizational policies and practices to support harm reduction. The impact of the intervention was enhanced by involving staff from all job categories, developing narratives about the socio-historical context of the communities and populations served, and feeding data back to the clinics about key health issues in the patient population (e.g., levels of depression, trauma symptoms, chronic pain). However, in line with critiques of complex interventions, EQUIP may not have been maximally disruptive. Organizational characteristics (e.g., funding and leadership) and the characteristics of intervention delivery (e.g., timeframe and who delivered the intervention components) shaped the process and impact.

Conclusions: This analysis suggests that organizations should anticipate and plan for various types of disruptions while maximizing opportunities for ownership of the intervention by those within the organization. The authors' findings further suggest that equity-oriented interventions be paced for intense delivery over a relatively short timeframe; be evaluated, particularly with data that can be made available on an ongoing basis; and explicitly include a harm reduction lens.

Browne AJ, Varcoe C, Lavoie J, et al. Enhancing health care equity with indigenous populations: evidence-based strategies from an ethnographic study. *BMC Health Services Research*. **2016;16(1):544.** https://doi.org/10.1186/s12913-016-1707-9

Background: Structural violence shapes the health of indigenous peoples globally, and is deeply embedded in history, individual and institutional racism, and inequitable social policies and practices. Many indigenous communities have flourished; however, the impact of colonialism continues to have profound health effects for indigenous

peoples in Canada and internationally. Despite increasing evidence of health status inequities affecting indigenous populations, health services often fail to address health and social inequities as routine aspects of health care delivery. In this paper, the authors discuss an evidence-based framework and specific strategies for promoting health care equity for indigenous populations.

Methods: Using an ethnographic design and mixed methods, this study was conducted at two Urban Aboriginal Health Centres located in two inner cities in Canada, which serve a combined patient population of 5,500. Data collection included in-depth interviews with a total of 114 patients and staff ($n = 73$ patients; $n = 41$ staff), and more than 900 hours of participant observation focused on staff members' interactions and patterns of relating with patients.

Results: Four key dimensions of equity-oriented health services are foundational to supporting the health and well-being of indigenous peoples: (1) inequity-responsive care, (2) culturally safe care, (3) trauma- and violence-informed care, and (4) contextually tailored care. Partnerships with indigenous leaders, agencies, and communities are required to operationalize and tailor these key dimensions to local contexts. The authors discuss 10 strategies that intersect to optimize the effectiveness of health care services for indigenous peoples and provide examples of how they can be implemented in a variety of health care settings.

Conclusions: While the key dimensions of equity-oriented care and 10 strategies may be most optimally operationalized in the context of interdisciplinary teamwork, they also serve as health equity guidelines for organizations and providers working in various settings, including individual primary care practices.

These strategies provide a basis for organizational-level interventions to promote the provision of more equitable, responsive, and respectful primary health care services for indigenous populations. Given the similarities in colonizing processes and indigenous peoples' experiences of such processes in many countries, these strategies have international applicability.

Chinman M, Woodward EN, Curran GM, Hausmann LRM. Harnessing implementation science to increase the impact of health equity research. *Medical Care.* **2017;55(suppl 2):S16-S23.** https://doi.org/10.1097/MLR.0000000000000769

Background: Health disparities are differences in health or health care between groups based on social, economic, and/or environmental disadvantage. Disparity research often follows three steps: detecting (phase 1), understanding (phase 2), and reducing (phase 3) disparities. Although disparities have narrowed over time, many remain.

Objectives: The authors argue that implementation science could enhance disparities research by broadening the scope of phase 2 studies and offering rigorous methods to test disparity-reducing implementation strategies in phase 3 studies.

Methods: The authors briefly review the focus of phase 2 and phase 3 disparities research. They then provide a decision tree and case examples to illustrate how implementation science frameworks and research designs could further enhance disparity research.

Results: Most health disparities research emphasizes patient and provider factors as the predominant mechanisms underlying disparities. Applying implementation science frameworks, such as the Consolidated Framework for Implementation Research, could help disparities research widen its scope in phase 2 studies and, in turn, develop broader disparities-reducing implementation strategies in phase 3 studies. Many phase 3 studies of disparity-reducing implementation strategies are similar to case studies, whose designs are not able to fully test causality. Implementation science research designs offer rigorous methods that could accelerate the pace at which equity is achieved in real-world practice.

Conclusions: Disparities can be considered a "special case" of implementation challenges when evidence-based clinical interventions are delivered to, and received by, vulnerable populations at lower rates. Bringing together health disparities research and implementation science could advance equity more than either could achieve on their own.

McNulty M, Smith JD, Villamar J, et al. Implementation research methodologies for achieving scientific equity and health equity. *Ethnicity & Disease.* **2019;29(suppl 1):83-92.** <ins>https://doi.org/10.18865/ed.29.S1.83</ins>

Implementation science has great potential to improve the health of communities and individuals who are not achieving health equity. However, implementation science can exacerbate health disparities if its use is biased toward entities that already have the highest capacities for delivering evidence-based interventions. In this article, the authors examine several methodological approaches for conducting implementation research to advance equity both in the understanding of what historically disadvantaged populations would need—what we call scientific equity—and how this knowledge can be applied to produce health equity. They focus on rapid ways to gain knowledge on how to engage, design research, act, share, and sustain successes in partnership with communities. The authors begin by describing a principle-driven partnership process between community members and implementation researchers to overcome disparities. They then review three innovative implementation method paradigms to improve scientific and health equity and provide examples of each. The first paradigm involves making efficient use of existing data by applying epidemiologic and simulation modeling to understand what drives disparities and how they can be overcome. The second paradigm involves designing new research studies that include, but do not focus exclusively on, populations experiencing disparities in health domains such as cardiovascular disease and co-occurring mental health conditions. The third paradigm involves implementation research that focuses exclusively on populations who have experienced high levels of disparities. To date, our scientific enterprise has invested disproportionately in research that fails to eliminate health disparities. The implementation research methods discussed here hold promise for overcoming barriers and achieving health equity.

Meissner P, Cottler LB, Eder MM, Michener JL. Engagement science: the core of dissemination, implementation, and translational research science. *Journal of Clinical and Translational Science*. **2020;4(3):216-218.** https://doi.org/10.1017/cts.2020.8

Stakeholder engagement is acknowledged as central to dissemination and implementation (D&I) of research that generates and answers new clinical and health service research questions. There is both benefit and risk in conducting stakeholder engagement. Done wrong, it can damage trust and adversely impact study results, outcomes, and reputations. Done correctly with sensitivity, inclusion, and respect, it can significantly facilitate improvements in research prioritization, communication, design, and recruitment strategies, and ultimately provide results that are useful to improve population and individual health. There is a recognized science of stakeholder engagement, but a general lack of knowledge that matches its strategies and approaches to particular populations of interest based on history and characteristics. This article reviews stakeholder engagement, provides several examples of its application across the range of translational research, and recommends that Clinical Translational Science Awards, with their unique geographical, systems, and historical characteristics, actively participate in deepening our understanding of stakeholder engagement science and methods within D&I research. These recommendations include (1) development of an inventory of successful stakeholder engagement strategies, (2) coordination and intentionally testing a variety of stakeholder engagement strategies, (3) toolkit development, and (4) identification of fundamental motivators and logic models for stakeholder engagement to help align stakeholders and researchers.

Northridge ME, Metcalf SS. Enhancing implementation science by applying best principles of systems science. *Health Research Policy and Systems*. **2016;14(1):74.** https://doi.org/10.1186/s12961-016-0146-8

Background: Implementation science holds promise for better ensuring that research is translated into evidence-based policy and practice; however, interventions often fail or even worsen the problems they are intended to solve due to a lack of understanding of real-world structures and dynamic complexity. While systems science alone cannot possibly solve the major challenges in public health, systems-based approaches may contribute to changing the language and methods for conceptualizing and acting within complex systems. The overarching goal of this paper is to improve the modeling used in dissemination and implementation research by applying best principles of systems science. Among the benefits of systems modeling are iterative practice, participatory potential, and possibility thinking. The authors trust that the best principles proposed here will resonate with implementation scientists; applying them to the modeling process may abet the translation of research into effective policy and practice.

Discussion: Best principles, as distinct from the more customary term "best practices," are used to underscore the need to extract the core issues from the context in which they are embedded in order to better ensure that they are transferable across settings. Toward meaningfully grappling with the complex and challenging problems faced in adopting and integrating evidence-based health interventions and changing practice patterns within specific settings, the authors propose and illustrate four best principles derived from their systems science experience: (1) model the problem, not the system;

(2) pay attention to what is important, not just what is quantifiable; (3) leverage the utility of models as boundary objects; and (4) adopt a portfolio approach to model building. To improve our mental models of the real world, system scientists have created methodologies such as system dynamics, agent-based modeling, geographic information science, and social network simulation. To understand dynamic complexity, we need the ability to simulate. Otherwise, our understanding will be limited. The practice of dynamic systems modeling, as discussed herein, is the art and science of linking system structure to behavior for the purpose of changing structure to improve behavior. A useful computer model creates a knowledge repository and a virtual library for internally consistent exploration of alternative assumptions.

Conclusion: Among the benefits of systems modeling are iterative practice, participatory potential, and possibility thinking. The authors trust that the best principles proposed here will resonate with implementation scientists; applying them to the modeling process may abet the translation of research into effective policy and practice.

Quiñones AR, Mitchell SL, Jackson JD, et al. Achieving health equity in embedded pragmatic trials for people living with dementia and their family caregivers. *Journal of the American Geriatrics Society*. **2020;68(S2).** https://doi.org/10.1111/jgs.16614

Embedded pragmatic clinical trials (ePCTs) advance research on Alzheimer's disease/Alzheimer's disease and related dementias (AD/ADRD) in real-world contexts; however, health equity issues have not yet been fully considered, assessed, or integrated into ePCT designs. Health disparity populations may not be well represented in ePCTs without special efforts to identify and successfully recruit sites of care that serve larger numbers of these populations. The National Institute on Aging Imbedded Pragmatic Alzheimer's disease (AD) and AD-Related Dementias (AD/ADRD) Clinical Trials (IMPACT) Collaboratory's Health Equity Team will contribute to the overall mission of the collaboratory by developing and implementing strategies to address health equity in the conduct of ePCTs and ensure that the collaboratory is a national resource for all Americans with dementia. As a first step toward meeting these goals, this article reviews what is currently known about the inclusion of health disparities populations of people living with dementia and their caregivers in ePCTs, highlights unique challenges related to health equity in the conduct of ePCTs, and suggests priority areas in the design and implementation of ePCTs to increase the awareness and avoidance of pitfalls that may perpetuate and magnify health care disparities.

Saine ME, Re IVL, Barg FK, Szymczak JE. Incorporating stigma into implementation science: linking societal influence to the clinical encounter to understand inequities in healthcare delivery [Preprint]. In Review. 2020. https://doi.org/10.21203/rs.3.rs-47724/v1

Background: Disease-related stigma is an important but under-recognized barrier to the implementation of evidence-based therapies. Existing implementation science frameworks do not adequately specify the mechanisms by which the outer societal context produces disparate implementation outcomes. The authors' aim in this study was to evaluate how stigma influences the implementation of evidence-based hepatitis C virus (HCV) care and, in so doing, make the case for incorporating stigma into the Health Equity Implementation Framework.

Methods: From 2015 through 2019, the authors conducted a concurrent explanatory mixed-methods study among people living with HCV in Philadelphia. They administered the validated 33-item HCV stigma scale. Semi-structured interviews were conducted among a purposive subsample of survey respondents. Summative HCV stigma scale scores and descriptive statistics were calculated. Interviews were transcribed and analyzed for common themes. Survey responses were linked to interview data.

Results: Surveys were completed by 265 participants; 22 interviews were conducted with a subset of these respondents. Hispanic/Latinx ethnicity was associated with significantly higher HCV stigma scale scores (adjusted mean, 81.39 [95% CI, 76.44–86.33] versus 74.28 [95% CI, 70.51–78.05]; $P=0.025$). In interviews, participants described the impact of stigma on their engagement with HCV care. Stigma associated with their diagnosis contributed to feelings of dirtiness and shame. Participants described the critical importance of interactions with medical providers and the health care system as a whole to either facilitating or mitigating the negative impact of enacted stigma on their trust in medicine and willingness to engage with HCV care. Interactions with family and friends, especially surrounding disclosure of one's diagnosis, were an important mediator of the experience of stigma. Hispanic/Latinx participants described greater feelings of isolation and stigma from family and friends as a result of their diagnosis. Finally, participants described the way stigma shaped their and society's perceptions of HCV therapies, including the media's portrayal of pharmaceuticals, the high cost of drugs, and insurer denials of treatment.

Conclusions: Experiences of HCV-related stigma influence engagement with HCV care at multiple levels: patient, provider, family and community, and perceptions of the therapy itself. Incorporating stigma into the Health Equity Implementation Framework can improve the utility of the framework by specifying a mechanism by which the social context influences the uptake of evidence-based innovations.

Wallerstein N, Duran B. Community-based participatory research contributions to intervention research: the intersection of science and practice to improve health equity. *American Journal of Public Health.* **2010;100(S1):S40-S46.**
https://doi.org/10.2105/AJPH.2009.184036

Community-based participatory research (CBPR) has emerged in the past decades as a transformative research paradigm that bridges the gap between science and practice through community engagement and social action to increase health equity.

CBPR expands the potential for the translational sciences to develop, implement, and disseminate effective interventions across diverse communities through strategies to redress power imbalances; facilitate mutual benefit among community and academic partners; and promote reciprocal knowledge translation, incorporating community theories into the research.

The authors identify the barriers and challenges within the intervention and implementation sciences, discuss how CBPR can address these challenges, provide an illustrative research example, and discuss next steps to advance the translational science of CBPR.

Welch V, Jull J, Petkovic J, et al. Protocol for the development of a CONSORT-equity guideline to improve reporting of health equity in randomized trials. *Implementation Science*. **2015;10(1):146.** https://doi.org/10.1186/s13012-015-0332-z

Background: Health equity concerns the absence of avoidable and unfair differences in health. Randomized controlled trials (RCTs) can provide evidence about the impact of an intervention on health equity for specific disadvantaged populations or in general populations; this is important for equity-focused decision-making. Previous work has identified a lack of adequate reporting guidelines for assessing health equity in RCTs. The objective of this study is to develop guidelines to improve the reporting of health equity considerations in RCTs as an extension of the Consolidated Standards of Reporting Trials (CONSORT).

Methods and design: A six-phase study, using integrated knowledge translation governed by a study executive and advisory board, will assemble empirical evidence to inform the CONSORT-equity extension (reporting guideline). To create the guideline, the following steps are proposed: (1) develop a conceptual framework for identifying "equity-relevant trials," (2) assess empirical evidence regarding the reporting of equity-relevant trials, (3) consult with global methods and content experts on how to improve the reporting of health equity in RCTs, (4) collect broad feedback and prioritize the items needed to improve the reporting of health equity in RCTs, (5) establish consensus on the CONSORT-equity extension (guideline for equity-relevant trials), and (6) broadly disseminate and implement the CONSORT-equity extension.

Discussion: This work will be relevant to a broad range of RCTs addressing questions of effectiveness for strategies to improve practice and policy in the areas of social determinants of health, clinical care, health systems, public health, and international development, where health and/or access to health care is a primary outcome. The outcomes include a reporting guideline (CONSORT-equity extension) for equity-relevant RCTs and a knowledge translation strategy to broadly encourage its uptake and use by journal editors, authors, and funding agencies.

Yousefi Nooraie R, Kwan BM, Cohn E, et al. Advancing health equity through CTSA programs: opportunities for interaction between health equity, dissemination and implementation, and translational science. *Journal of Clinical and Translational Science.* **2020;4(3):168-175.** https://doi.org/10.1017/cts.2020.10

Dissemination and implementation (D&I) science is dedicated to studying how to effectively translate and apply research in real-world contexts. There has been increasing interest in health equity within the D&I field to ensure the equitable implementation of evidence-based programs/practices across a range of diverse populations and settings. At the same time, health equity researchers recognize the potential of D&I science to promote the more widespread dissemination, implementation, and sustainment of evidence-based interventions to address health inequities. The National Center for Advancing Translational Sciences' Clinical and Translational Science Awards (CTSA) Program has been a champion for community engagement and translational scholarship in its mission to improve individual and population health. The overall CTSA infrastructure and resources within and among CTSA hubs are well equipped to facilitate a health equity focus to D&I across the phases of translational research. This paper proposes a framework that demonstrates the interaction and opportunities between health equity and D&I science and highlights how CTSAs can support and facilitate wider efforts in translational research with a focus on equitable D&I.

Cancer Health Equity

Carey TS, Bekemeier B, Campos-Outcalt D, Koch-Weser S, Millon-Underwood S, Teutsch S. National Institutes of Health Pathways to Prevention Workshop: Achieving Health Equity in Preventive Services. *Annals of Internal Medicine.* **2020;172(4):272.** https://doi.org/10.7326/M19-3171

Expert groups, including the US Preventive Services Task Force (USPSTF), recommend a range of clinical preventive services for persons at average risk for disease. Use of these services often is substantially lower among racial and ethnic minority groups, rural residents, and persons of lower socioeconomic status. On June 19 and 20, 2019, the National Institutes of Health (NIH) convened the Pathways to Prevention Workshop: Achieving Health Equity in Preventive Services to assess the available evidence on disparities in the use of 10 USPSTF-recommended clinical preventive services for cancer, heart disease, and diabetes. The workshop was co-sponsored by the NIH Office of Disease Prevention; National Institute on Minority Health and Health Disparities; National Cancer Institute; National Heart, Lung, and Blood Institute; and the National Institute of Diabetes and Digestive and Kidney Diseases. A multidisciplinary working group developed the agenda, and an evidence-based practice center prepared the evidence report. During the workshop, invited experts considered the evidence, with discussion among attendees. After weighing evidence from the review, presentations, and public comments, an independent panel prepared a draft report that was posted for public comment. This final report summarizes the panel's findings, identifying current gaps in knowledge. The panel made 26 recommendations for new research and methods development to improve the implementation of proven services to reduce disparities in preventable conditions.

Cykert S, Eng E, Manning MA, et al. A multi-faceted intervention aimed at black-white disparities in the treatment of early stage cancers: the ACCURE pragmatic quality improvement trial. *Journal of the National Medical Association.* **2020;112(5):468-477.** https://doi.org/10.1016/j.jnma.2019.03.001

Background: Reports continue to show that blacks with curable lung or breast cancer complete treatment less often than similar whites, contributing to worse survival. ACCURE is an intervention trial designed to address this problem.

Patients and methods: A pragmatic, quality improvement trial comparing an intervention group to retrospective and concurrent controls. Patients with early-stage breast or lung cancer, ages 18 to 85, were enrolled (N = 302) at two cancer centers between April 2013 and March 2015 for the intervention component. Data from patients seen between January 2007 and December 2012 with these diagnoses were obtained to establish control completion rates. Concurrent data for non-study patients were used to identify secular trends. The intervention included a real-time registry derived from the electronic health records of participants to signal missed appointments or unmet care milestones, a navigator, and clinical feedback. The primary outcome was "Treatment Complete," a composite variable representing the completion of surgery, recommended radiation, and chemotherapy for each patient.

Results: The mean age in the intervention group was 63.1 years; 37.1% of patients were black. Treatment completion in retrospective and concurrent controls showed significant black-white differences (blacks [B] 79.8% versus whites [W] 87.3%, p < 0.001; B 83.1% versus W 90.1%, p < 0.001, respectively). The disparity lessened within the intervention (B 88.4% and W 89.5%, p = 0.77). Multivariate analyses confirmed disparities reduction. The odds ratio (OR) for black-white disparity within the intervention was 0.98 (95% confidence interval [CI] 0.46–2.1); black completion in the intervention compared favorably to whites in retrospective (OR 1.6; 95% CI 0.90–2.9) and concurrent (OR 1.1; 95% CI 0.59–2.0) controls.

Conclusion: A real-time registry, combined with feedback and navigation, improved the completion of treatment for all breast and lung cancer patients and narrowed disparities. Similar multi-faceted interventions could mitigate disparities in the treatment of other cancers and chronic conditions.

Oh A, Vinson CA, Chambers DA. Future directions for implementation science at the National Cancer Institute: Implementation Science Centers in Cancer Control. *Translational Behavioral Medicine*. **2021;11(2):669-675.**
https://doi.org/10.1093/tbm/ibaa018

The National Cancer Institute's (NCI) Cancer Moonshot[SM] initiative seeks to accelerate cancer research in the United States. One of the scientific priorities identified by the Moonshot's Blue Ribbon Panel (BRP) of scientific experts was the implementation of evidence-based approaches. In September 2019, NCI launched the Implementation Science Centers in Cancer Control (ISC[3] or "Centers") initiative to advance this Moonshot priority. The vision of ISC[3] is to promote the development of research centers to build capacity and research in high-priority areas of cancer control implementation science (e.g., scale-up and spread, sustainability, adaptation, precision implementation); build implementation laboratories within community and clinical settings; improve the state of measurement and methods; and improve the adoption, implementation, and sustainment of evidence-based cancer control interventions. This paper highlights the research agenda, vision, and strategic direction for these Centers and encourages transdisciplinary scientists to learn more about opportunities to collaborate with these Centers.

Patel MI, Lopez AM, Blackstock W, et al. Cancer disparities and health equity: a policy statement from the American Society of Clinical Oncology. *Journal of Clinical Oncology*. **2020;38(29):3439-3448.** https://doi.org/10.1200/jco.20.00642

The American Society of Clinical Oncology (ASCO) strives, through research, education, and promotion of the highest quality of patient care, to create a world where cancer is prevented and every survivor is healthy. In this pursuit, cancer health equity remains the guiding institutional principle that applies to all its activities across the cancer care continuum. In 2009, ASCO committed to addressing differences in cancer outcomes in its original policy statement on cancer disparities. Over the past decade, despite novel diagnostics and therapeutics, together with changes in the cancer care delivery system, such as passage of the Affordable Care Act, cancer disparities persist. Our understanding of the populations experiencing disparate outcomes has likewise expanded to include the intersections of race/ethnicity, geography, sexual orientation and gender identity, sociodemographic factors, and others. This updated statement is

intended to guide ASCO's future activities and strategies to achieve its mission of conquering cancer for all populations. ASCO acknowledges that much work remains to be done, by all cancer stakeholders at the systems level, to overcome historical momentum and the existing social structures responsible for disparate cancer outcomes. This updated statement affirms ASCO's commitment to moving beyond descriptions of differences in cancer outcomes toward achievement of cancer health equity, with a focus on improving equitable access to care, improving clinical research, addressing structural barriers, and increasing awareness that results in measurable and timely action toward achieving cancer health equity for all.

Ramanadhan S, Davis MM, Armstrong R, et al. Participatory implementation science to increase the impact of evidence-based cancer prevention and control. *Cancer Causes & Control.* **2018;29(3):363-369.** <ins>https://doi.org/10.1007/s10552-018-1008-1</ins>

It is critical to accelerate the integration of evidence-based programs, practices, and strategies for cancer prevention and control into clinical, community, and public health settings. While it is clear that effective translation of existing knowledge into practice can reduce the cancer burden, it is less clear how best to achieve this. This gap is addressed by the rapidly growing field of implementation science. Given that context influences and is influenced by implementation efforts, engaging stakeholders in the co-production of knowledge and solutions offers an opportunity to increase the likelihood that implementation efforts are useful, scalable, and sustainable in real-world settings. The authors argue that a participatory implementation science approach is critical as it supports iterative, ongoing engagement between stakeholders and researchers to improve the pathway between research and practice, create system change, and address health disparities and health equity. This article highlights the utility of participatory implementation science for cancer prevention and control research and addresses (1) the spectrum of participatory research approaches that may be of use, (2) the benefits of participatory implementation science, and (3) key considerations for researchers embarking on such projects.

Summaries of the April 2019 *Special Convening and Listening Session on Health Equity and Community Outreach and Engagement at National Cancer Institute-Designated Comprehensive Cancer Centers***:**

(1) Doykos PM, Chen MS Jr, Watson K, et al. Recommendations from a dialogue on evolving National Cancer Institute-designated Comprehensive Cancer Center community outreach and engagement requirements: a path forward. *Health Equity.* **2021 Feb 26;5(1):76-83.** <ins>https://doi.org/10.1089/heq.2020.0156</ins>

While cancer mortality is declining in the United States, significant racial, ethnic, economic, and geographic inequities persist. To help address inequities in cancer treatment, care, support, and research, the National Cancer Institute (NCI) instituted the community outreach and engagement (COE) mandate for NCI-designated comprehensive cancer centers (CCCs). The Bristol Myers Squibb Foundation designed a convening and listening session on COE with NCI leaders and staff, gathering representatives from CCCs and the broader cancer community.
This paper captures recommendations from the listening session for NCI and CCCs to further evolve the implementation and impact of the COE mandate on cancer control and outcomes.

(2) Doykos PM, Chen MS Jr, Watson K, et al. Special convening and listening session on health equity and community outreach and engagement at National Cancer Institute-designated Comprehensive Cancer Centers. *Health Equity*. **2021 Feb 26;5(1):84-90. doi:10.1089/heq.2020.0155.** https://doi.org/10.1089/heq.2020.0155

In recent years, the cancer research and care community has been more attuned to health equity, increasingly pursuing coordinated and comprehensive action to achieve equitable health outcomes. In addition to its support of a joint research agenda for health disparities in 2017, the National Cancer Institute (NCI) has demonstrated its commitment to addressing health inequities with its 2012 requirement for cancer centers to define and address the needs of a local "catchment area" and the 2016 mandate for Community Outreach and Engagement (COE). After several years of experience with the COE requirements, there is an opportunity to reflect on the experience to date and identify opportunities to bolster the impact of COE on equitable cancer outcomes for the future. To do so, the Bristol Myers Squibb Foundation (BMSF) hosted a special convening and listening session in April 2019. The session agenda was co-created by BMSF and NCI leaders and staff. It brought together 41 individuals, including representatives from the NCI Cancer Centers Program, the Division of Cancer Control and Population Sciences, and the Center to Reduce Cancer Health Disparities; 22 NCI-designated emerging or affiliated Comprehensive Cancer Centers; and the broader cancer community. This article captures key themes from that meeting, including an overview of current COE efforts, with a deeper look at how four cancer centers are embedding health equity and COE efforts into their institutions and work, and the successes and challenges they have encountered.

(3) Jacobsen PB, Baskin ML, Chen MS Jr, Herbst RS, Lathan CS. How a priority of community outreach and engagement is changing health equity at cancer centers. *Health Equity*. **2021 Apr 21;5(1):227-235.** https://doi.org/10.1089/heq.2021.29005.rtd

Roundtable Discussion.

BOOKS AND BOOK CHAPTERS

Brownson RC, Colditz GA, Proctor EK. *Dissemination and Implementation Research in Health: Translating Science to Practice*. **2nd edition. Oxford Scholarship Online; 2017.**
https://doi.org/10.1093/oso/9780190683214.001.0001

Fifteen to twenty years is how long it takes for the billions of dollars of university-based research to translate into evidence-based policies and programs suitable for public use. Over the past decade, an exciting science has emerged that seeks to narrow the gap between the discovery of new knowledge and its application in public health, mental health, and health care settings. Dissemination and implementation (D&I) research seeks to understand how to best apply scientific advances in the real world by focusing on pushing the evidence-based knowledge base out into routine use. To help propel this crucial field forward, this book aims to address a number of key issues, including how to evaluate the evidence base on effective interventions, which strategies will produce the greatest impact, how to design an appropriate study, and how to track a set of essential outcomes. D&I studies also must take into account the barriers to uptake of evidence-based interventions in the communities where people live their lives and in the social service agencies, hospitals, and clinics where they receive care. The challenges of moving research to practice and policy are universal, and future progress calls for collaborative partnerships and cross-country research. The fundamental tenet of D&I research—taking what we know about improving health and putting it into practice—must be the highest priority.

Cooper LA, Purnell TS, Engelgau M, Weeks K, Marsteller JA. Using implementation science to move from knowledge of disparities to achievement of equity. In: Dankwa-Mullan I, Pérez-Stable E J, Gardner KL, Zhang X, Rosario AM, eds. *The Science of Health Disparities Research.* **1st ed. Wiley Online Library; 2021:289-308.**
https://doi.org/10.1002/9781119374855.ch17

Today's health care system and the people it serves face an urgent need for researchers and health care providers to address widespread inequitable care. Despite state and national policy initiatives seeking to improve population health and reduce health disparities, and despite the presence of a burgeoning evidence base of effective clinical and community-based approaches to reduce disparities, interventions have not been widely translated into real-world practices and communities.
The observed gaps between evidence and practice, and among different racial, ethnic, and rural/urban populations are, in some part, due to a failure to implement known evidence effectively, consistently, and appropriately. Dissemination and translation initiatives to promote health equity are critical to efforts to reduce health care disparities. This chapter provides an overview of implementation science approaches and frameworks and describes their utility for health care equity research, using as an example the Reducing Disparities and Controlling Hypertension in Primary Care Project (ReD CHiP), a pragmatic trial funded by the National Heart, Lung, and Blood Institute. It then offers important lessons and best practices in health care disparities implementation science. A following section discusses challenges and opportunities for using implementation science in health care disparities research, notably in stakeholder engagement; in accounting for contextual differences in implementation settings; and in intervention design and implementation. The chapter

closes with a discussion of future research areas. By incorporating implementation science methods and approaches, researchers and health care providers may improve the effectiveness of dissemination and translation initiatives, spreading and enhancing the sustainment of evidence-based approaches to reduce health care disparities. These efforts may ultimately accelerate the realization of equitable health care for all.

Ford CL, Griffith DM, Bruce MA, Gilbert KL. Racism: science and tools for the public health professional. American Public Health Association Press; 2019.
https://doi.org/10.2105/9780875533049

This important publication builds on the racial health equity work that public health advocates and others have been doing for decades. They have documented the existence of health inequities and have combatted health inequities stemming from racism. This book, which targets racism directly and includes the word squarely in its title, marks an important shift in the field's anti-racism struggle for racial health equity. It is intended for use in a wide range of settings, including health departments; schools; and in the private, public, and nonprofit sectors where public health professionals work. It will also benefit students still in training and serve as a practical reference text for courses and workshops. In this way, this book anticipates acting as a bridge connecting public health professionals, students, and community members, as well as policymakers.

REPORTS AND GRAY LITERATURE

CancerDisparitiesProgressReport.org. Philadelphia: American Association for Cancer Research; 2020. Available from http://www.CancerDisparitiesProgressReport.org/

The 2020 American Association for Cancer Research Cancer Disparities Progress Report is an exciting new initiative with the overarching goal of increasing public understanding of cancer health disparities and the vital importance of cancer health disparities research in saving lives. The report underscores the need for increased annual federal funding for the government entities that fuel progress against cancer health disparities, in particular, the National Institutes of Health, National Cancer Institute, and Centers for Disease Control and Prevention.

Clarke A, Vargas O, Goddu A. Roadmap to reduce disparities. Advancing Health Equity, Robert Wood Johnson Foundation, and the University of Chicago. n.d. Accessed September 16, 2021, from https://www.solvingdisparities.org/implement-change/roadmap-reduce-disparities

The Roadmap to Reduce Disparities is a six-step framework for health care organizations to improve minority health and foster equity. The Roadmap draws upon lessons learned from the results of Finding Answers' partnership with 33 health care organizations, the unique implementation challenges and successes experienced at each site, and the results of 11 systematic reviews of the disparities-reduction literature. It was refined after field-testing with other select health care organizations. It is designed so that various components of an equity-focused quality improvement agenda can be developed and implemented separately or simultaneously and sustainably.

The Roadmap also can be used to guide strategic planning of large-scale equity initiatives and it provides a method for technical assistance providers to incorporate the skills of identifying and eliminating disparities in their curricula.

The Roadmap guides health care professionals, technical assistance providers, and those wishing to promote equity through a standardized process even though the causes of disparities vary across regions and patient populations. Following the Roadmap's recommended processes ensures users that they are benefitting from a comprehensive system which they can tailor to the unique circumstances of their own patient population, payer mix, and surrounding communities.

Institute of Medicine (US), Committee on Psychosocial Services to Cancer Patients/Families in a Community Setting. *Cancer Care for the Whole Patient: Meeting Psychosocial Health Needs* (NE Adler & AE Page, eds.). Washington, DC: National Academies Press (US); 2008. http://www.ncbi.nlm.nih.gov/books/NBK4015/

Cancer care today often provides state-of-the-science biomedical treatment but fails to address the psychological and social (psychosocial) problems associated with the illness. This failure can compromise the effectiveness of health care and thereby adversely affect the health of cancer patients. Psychological and social problems created or exacerbated by cancer—including depression and other emotional problems; lack of the information or skills needed to manage the illness; lack of transportation or other resources; and disruptions in work, school, and family life—cause

additional suffering, weaken adherence to prescribed treatments, and threaten patients' return to health.

A range of services is available to help patients and their families manage the psychosocial aspects of cancer. Indeed, these services collectively have been described as constituting a "wealth of cancer-related community support services."

Today, it is not possible to deliver good-quality cancer care without using existing approaches, tools, and resources to address patients' psychosocial health needs. All patients with cancer and their families should expect and receive cancer care that ensures the provision of appropriate psychosocial health services. This report recommends 10 actions that oncology providers, health policymakers, educators, health insurers, health plans, quality oversight organizations, researchers and research sponsors, and consumer advocates should undertake to ensure that this standard is met.

Institute of Medicine (US), Committee on the Quality of Health Care in America. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academies Press; 2001. https://doi.org/10.17226/10027

Today's health care providers have more research findings and more technology available to them than ever before. Yet recent reports have raised serious doubts about the quality of health care in America.

Crossing the Quality Chasm makes an urgent call for fundamental change to close the quality gap. This book recommends a sweeping redesign of the American health care system and provides overarching principles for a specific direction for policymakers, health care leaders, clinicians, regulators, purchasers, and others. In this comprehensive volume, the committee offers the following:

- A set of performance expectations for the 21st century health care system

- A set of 10 new rules to guide patient-clinician relationships

- A suggested organizing framework to better align the incentives inherent in payment and accountability with improvements in quality

- Key steps to promote evidence-based practice and strengthen clinical information systems

Analyzing health care organizations as complex systems, Crossing the Quality Chasm also documents the causes of the quality gap, identifies current practices that impede quality care, and explores how systems approaches can be used to implement change.

WEBSITES AND RESOURCES

A Practitioner's Guide for Advancing Health Equity: Community Strategies for Preventing Chronic Diseases
https://www.cdc.gov/nccdphp/dch/pdf/healthequityguide.pdf

The purpose of the Health Equity Guide is to assist practitioners with addressing the well-documented disparities in chronic disease health outcomes. This resource offers lessons learned from practitioners on the front lines of local, state, and tribal organizations that are working to promote health and prevent chronic disease health disparities. It provides a collection of health equity considerations for several policy, systems, and environmental improvement strategies focused on tobacco-free living, healthy food and beverages, and active living. Additionally, the Health Equity Guide will assist practitioners with integrating the concept of health equity into local practices, such as building organizational capacity, engaging the community, developing partnerships, identifying health inequities, and conducting evaluations. The Health Equity Guide is designed for the novice interested in the concept of health equity, as well as the skillful practitioner tackling health inequities.

Anti-Racism Resource Library

https://www.aptrweb.org/page/Anti-RacismResourceLibrary

This resource library was developed by the Association of Prevention Teaching and Research (APTR) members to support the APTR Policy: Role of Academia in Combatting Structural Racism in the United States. APTR designed the resource library to assist health professions faculty address and seek to reduce the effects of systemic racism in our society through their professional work as teachers, clinical and public health practitioners, researchers, and members of a university community. The resource library has an organizing structure and provides resources such as websites, files, research articles, and recommended readings. The APTR policy statement calls upon postsecondary educational institutions in the United States—particularly health professions schools and their academic units that teach prevention and public health—to take action to reduce the impact of racism from within their walls and to assume proactive responsibility for teaching students and the general public about racism's causes and effects.

Engage for Equity

http://www.engageforequity.org

Engage for Equity is a partnership of the University of New Mexico Center for Participatory Research; the University of Washington; Community-Campus Partnerships for Health; the National Indian Child Welfare Association; the University of Waikato in Hamilton, New Zealand; the Rand Corporation; and the Think Tank of Community and Academic CBPR [community-based participatory research] Practitioners. Building on our partnership history, sustaining investments, and learning from previous research and lessons learned, together we are committed to using state-of-the-art tools, and finding out what works and what kind of partnering practices and collaborations produce successful outcomes.

Health Equity Resources for State Coalitions
https://www.acs4ccc.org/acs-ccc-resources/health-equity-resources-for-state-coalitions/

Health equity means that everyone has a fair and just opportunity to be as healthy as possible. It is not the same as equality. For the American Cancer Society (ACS) and the ACS Cancer Action Network, health equity means that everyone has a fair and just opportunity to prevent, find, treat, and survive cancer. Below is a selection of ACS resources to help state coalitions address issues of health equity in cancer control.

The Impact of Racism on the Health and Well-Being of the Nation
https://www.apha.org/events-and-meetings/webinars/racism-and-health

Stigma, inequalities, and civil rights injustices remain in our society today. Unfortunately, skin color plays a large part in how people are viewed, valued, and treated. We know that racism, both intentional and unintentional, affects the health and well-being of individuals and communities and stifles the opportunity of many to contribute fully to the future and growth of this nation. Join the leadership of the American Public Health Association in a webinar series about racism's impact on health and disparities.

Implementation Science Initiative

http://www.irvinginstitute.columbia.edu/implementation-science

The Implementation Science Initiative at the Irving Institute for Clinical and Translational Research, Columbia University's Clinical and Translational Science Award program hub, focuses on (1) increasing the awareness of and capacity for implementation science, (2) providing opportunities for education and training, and (3) facilitating research and collaborations in implementation science. They provide the Columbia Implementation Science seminar series with the New York State Psychiatric Institute; working group meeting, training and symposia, consultation services, and pilot funding; and help build research capacity and connections.

Resources on Cancer Disparities and Health Equity (doctor-approved patient information from the American Society of Clinical Oncology)
https://www.cancer.net/research-and-advocacy/health-disparities-and-cancer/resources-cancer-disparities-and-health-equity

These resources provide information about cancer disparities and health equity, as well as national organizations that provide resources and services for specific communities of people with cancer. Contact these organizations directly to learn more about their specific programs and services. Because the offerings change frequently, this list may not include everything that is available.