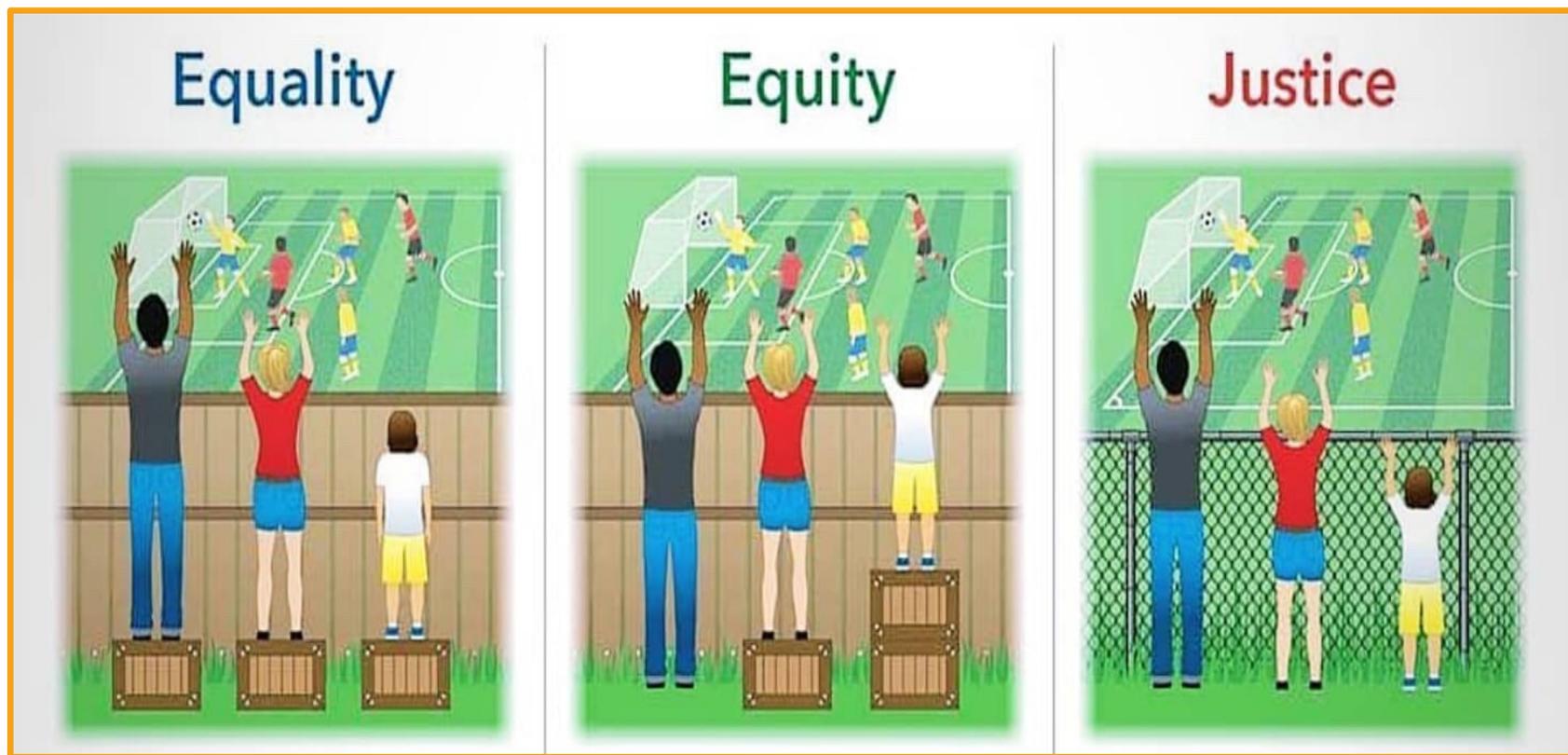


# Eliminate the Barriers for Disparity in Cancer Care in the 21<sup>st</sup> Century

Chanita Hughes Halbert, PhD  
Department of Population and Public Health Sciences  
Norris Comprehensive Cancer Center  
University of Southern California





Promote equity and justice through effective approaches for early detection, prevention, and treatment



# SOCIAL DETERMINANTS FACTORS THAT INFLUENCE YOUR HEALTH

The conditions in which you live, learn, work and age affect your health. Social determinants such as these can influence your lifelong health and well-being.

<b>HOUSING</b> 	<b>INCARCERATION</b> The incarceration rate in the U.S. grew by more than 220% between 1980 and 2014, though crime rates have fallen. 	<b>POVERTY</b> 
<b>HEALTHY FOOD</b> 6.5 million children live in low-income neighborhoods that are more than a mile from a supermarket. 	<b>ENVIRONMENT</b> 	<b>GRADUATION</b> 
<b>LITERACY</b> 	<b>ACCESS TO CARE</b> 	<b>HEALTH COVERAGE</b>  More than 89% of U.S. adults had health coverage in 2014. But 33 million Americans still lacked insurance.

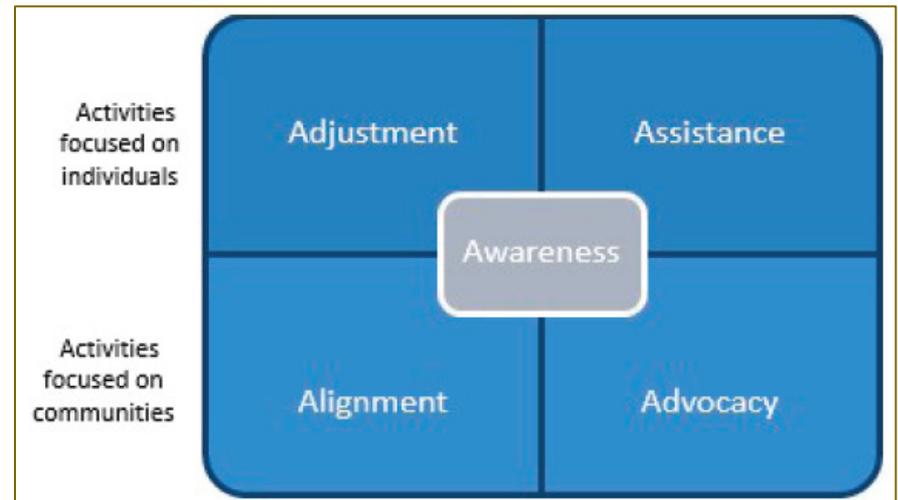
The **NATION'S HEALTH**  
A PUBLICATION OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

[www.thenationshealth.org/sdoh](http://www.thenationshealth.org/sdoh)

*“Create social, physical, and economic environments that promote attaining the full potential for health and well-being for all.” Healthy People 2030*



## National Academies – Integrating Social Care into the Delivery of Health Care



Stress



Social Connections





**TCL**  
THE CANCER LETTER

Inside information on cancer research and drug development

Vol. **46** No. **26**

JUNE 26, 2020

[www.cancerletter.com](http://www.cancerletter.com)

# Enhancing the participation of disparity populations in clinical trials

### **PARTICIPATION BY MINORITY RACIAL, ETHNIC GROUPS IN NCI-FUNDED TRIALS NEARLY DOUBLES IN 20 YEARS**

The proportion of racial and ethnic minority patients in NCI-funded clinical trials has nearly doubled over two decades—from 14% in 1999 to 25% in 2019, according to data from NCI’s National Clinical Trials Network and the NCI Community Oncology Research Program..

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AACTRESSION ON DISPARITIES POINTS TO THE NEW CONSENSUS: BEING WOKE IS NOT ENOUGH

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NCI SEEKS APPLICATIONS TO BUILD RESEARCH CAPACITY FOR COVID-19 SEROLOGY AND IMMUNOLOGY

→ PAGE 17

COLLINS: IT’S UNKNOWN WHETHER COVID-19 ANTIBODY-POSITIVE TEST MEANS PROTECTION AGAINST REINFECTION

→ PAGE 23

LETTER FROM THE EDITOR & PUBLISHER THE CANCER LETTER’S PAY WALL IS RETURNING

→ PAGE 5



# Racial and Ethnic Disparities in Travel for Head and Neck Cancer Treatment and the Impact of Travel Distance on Survival

Evan M. Graboyes, MD <sup>1,2</sup>; Mark A. Ellis, MD <sup>1</sup>; Hong Li, PhD <sup>2,3</sup>; John M. Kaczmar, MD <sup>4</sup>; Anand K. Sharma, MD <sup>5</sup>; Eric J. Lentsch, MD<sup>1</sup>; Terry A. Day, MD<sup>1</sup>; and Chanita Hughes Halbert, PhD<sup>2,6</sup>



Subtheme	Patient	Patient Quotes	Provider	Provider Quotes
Theme 5: Traveling for HNSCC care is a significant burden, particularly for socioeconomically disadvantaged patients.				
	Patient 20	“So the transportation for us...it did hinder a lot and then we tried to call to get free transportation. Once you got the free transportation set up, the date before the appointment they call and said, ‘We can’t do it.’ So that really, really put us in a pickle.”	Provider 10, surgery clinic nurse	“If they didn’t arrive for their appointment, we find out why... And a lot of times it’s because no one could take them. It was too far for them to go. Their car is broken down or they didn’t have the gas money.”
			Provider 9, surgery clinic nurse	“I think after y’all leave the room and we’re coming in to discuss. So, I’m going to set up 800 million appointments for you and they [the patients] are like... ‘I don’t have any family members, and I live 200 miles away.’ How can we help?”
			Provider 1, surgery nurse navigator	“The family members work, they’re coming from far away...[the patients] have to come back and they say, ‘I’ve already missed such and such amount of days of work, I’m going to get fired’...or patients that don’t have anyone, no family members.”
			Provider 4, radiation oncologist	“When they can’t come, they can’t come...if they don’t have help, they won’t be able to come in. And so the delays [starting PORT] predominantly happen to those people who are the most socially and economically vulnerable, the medically disadvantaged.”
			Provider 12, medical oncologist	“The common denominator for many of the barriers is actually the travel distance. To me, the people who live farther away have more transportation issues, either have a caregiver that has to bring them or they don’t have money for gas.”

Traveling is a Significant Barrier to the Delivery of Timely, Guideline-Adherent Adjuvant Therapy



# Transdisciplinary Collaborative Center in Precision Medicine and Minority Men's Health



- Multi-regional consortium
- Translational research on biological, social, psychological, and clinical factors
- Dissemination and implementation
- Data integration

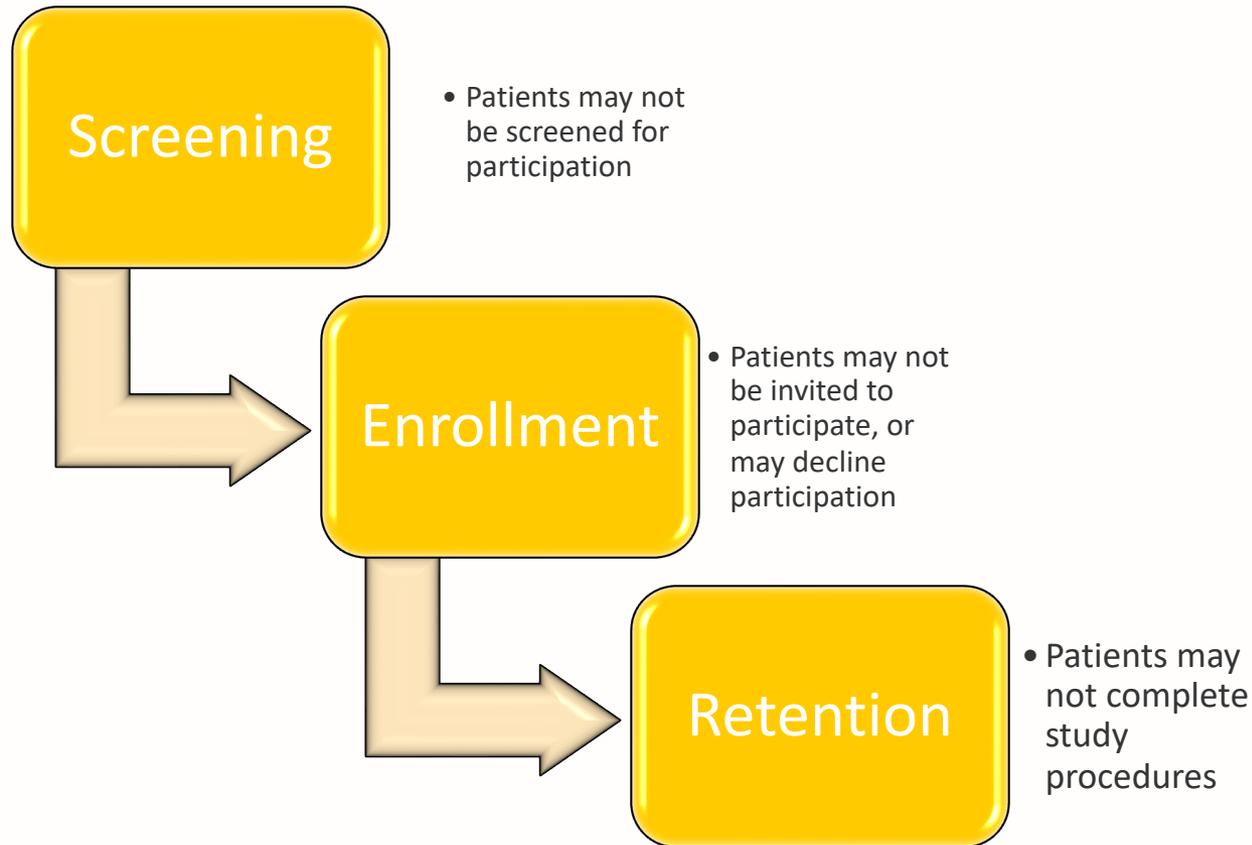
*Chanita Hughes-Halbert, PhD*  
U54MD010706



**Low Country AHEC**  
**National Black Leadership Initiative on Cancer**  
**Hope Institute, LLC**



# Inefficiencies in Clinical Trial Recruitment



## African American Participation in Cancer Genetics Research

<b>Participation Facilitators</b>	<b>% Likely</b>
Study provided free medication or health care	64%
Study addressed a health condition that was personally relevant	65%
Participation lasted a short period of time	60%
<b>Participation Barriers</b>	<b>% Unlikely</b>
Difficulty getting to where the study was being conducted	69%
Not knowing who would be able to obtain their personal information	66%
Lack of study findings being available to participants	60%

Halbert et al. Public Health Genomics, 2014

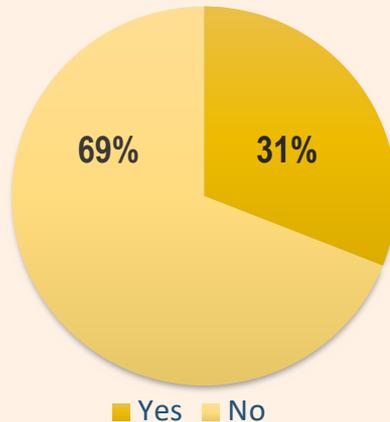


# African American Participation in Genetics Research

## Study Attributes

- Sponsored by government
- Answering Qx
- Data used for current and future studies
- Participants would not receive results

Participation in Precision Medicine Research



Halbert et al. PLOS One, 2016

Attribute	Importance (% Utility Range)
Receiving results about personal health and general research results	60.17%
Answering questionnaire or providing cheek swab (vs. blood test or tissue biopsy)	16.05%
Receiving results about personal health	14.75%
Receiving information about diagnosis, prognosis, treatment	5.47%
Study sponsored by government (vs pharmaceutical company)	3.14%
Data used for current study only (vs. current and future studies)	0.42%



# Transdisciplinary Data Sciences in Minority Health and Cancer Health Disparities

 <p><b>Population Science</b></p> <p>Multilevel determinants of minority health and health disparities</p>	 <p><b>Artificial Intelligence and Machine Learning</b></p> <p>Develop and apply NLP and deep learning tools</p>	 <p><b>Bioethics and Public Policy</b></p> <p>Identify and address ethical, legal, social, and policy issues</p>	 <p><b>Stakeholder Engagement</b></p> <p>Data integration, application, dissemination, communication</p>
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Zhu et al. *BMC Medical Informatics and Decision Making* (2019) 19:43  
<https://doi.org/10.1186/s12911-019-0795-y>

BMC Medical Informatics and Decision Making

RESEARCH ARTICLE Open Access

## Automatically identifying social isolation from clinical narratives for patients with prostate Cancer



Vivienne J Zhu<sup>1\*</sup>, Leslie A Lenert<sup>1</sup>, Brian E Bunnell<sup>1</sup>, Jihad S Obeid<sup>1</sup>, Melanie Jefferson<sup>2</sup> and Charita Hughes Halbert<sup>2</sup>

**Why Do U.S. Cancer Health Disparities Exist?**

Complex and interrelated factors contribute to cancer health disparities in the United States. Adverse differences in many, if not all, of these factors are directly influenced by structural and systemic racism. The factors may include, but are not limited to, differences or inequalities in:

<p><b>ENVIRONMENTAL FACTORS</b></p> <ul style="list-style-type: none"> <li>Air and water quality</li> <li>Transportation</li> <li>Housing</li> <li>Community safety</li> <li>Access to healthy food sources and spaces for physical activity</li> </ul>	<p><b>BEHAVIORAL FACTORS</b></p> <ul style="list-style-type: none"> <li>Tobacco use</li> <li>Diet</li> <li>Excess body weight</li> <li>Physical inactivity</li> <li>Adherence to cancer screening and vaccination recommendations</li> </ul>
<p><b>SOCIAL FACTORS</b></p> <ul style="list-style-type: none"> <li>Education</li> <li>Income</li> <li>Employment</li> <li>Health literacy</li> </ul>	<p><b>CLINICAL FACTORS</b></p> <ul style="list-style-type: none"> <li>Access to health care</li> <li>Quality of health care</li> </ul>
<p><b>PSYCHOLOGICAL FACTORS</b></p> <ul style="list-style-type: none"> <li>Stress</li> <li>Mental health</li> </ul>	<p><b>BIOLOGICAL AND GENETIC FACTORS</b></p>

American Association for Cancer Research (AACR) Cancer Disparities Progress Report 2020

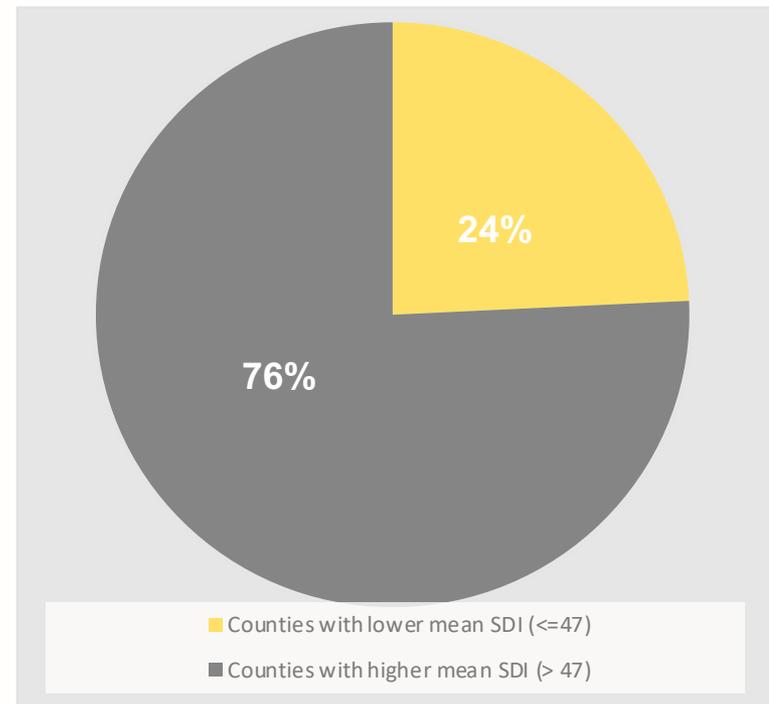
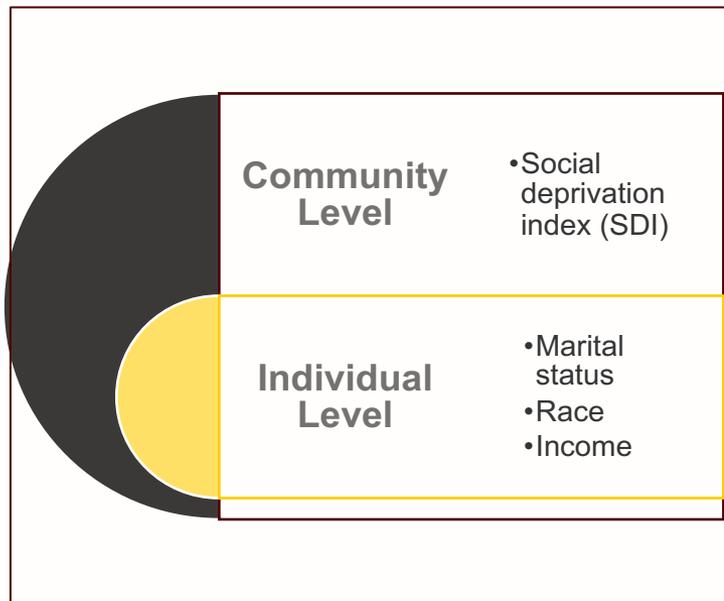
**Project 1:** Sociobiological Responses to Stress in Prostate Cancer Survivors

**Project 2:** Defining an Integrated Allostatic Load Index with Immune and Tumor Microenvironment Factors

**Project 3:** Integrating Genomic and Sociobiological Data to Inform the Development of Prostate Cancer Treatment



# Racial Differences in Social Deprivation among Prostate Cancer Survivors



**Wole Babatunde, MBBS, PHD**  
NCI K00 Postdoctoral Fellow  
Department of Psychiatry &  
Behavioral Sciences  
MUSC

In preparation, 2021

- 49% of patients lived in areas that had high social deprivation
- African American patients more likely than white patients to live in areas that had high social deprivation (OR=4.2, 95% CI=2.4-7.5,  $p=0.01$ )

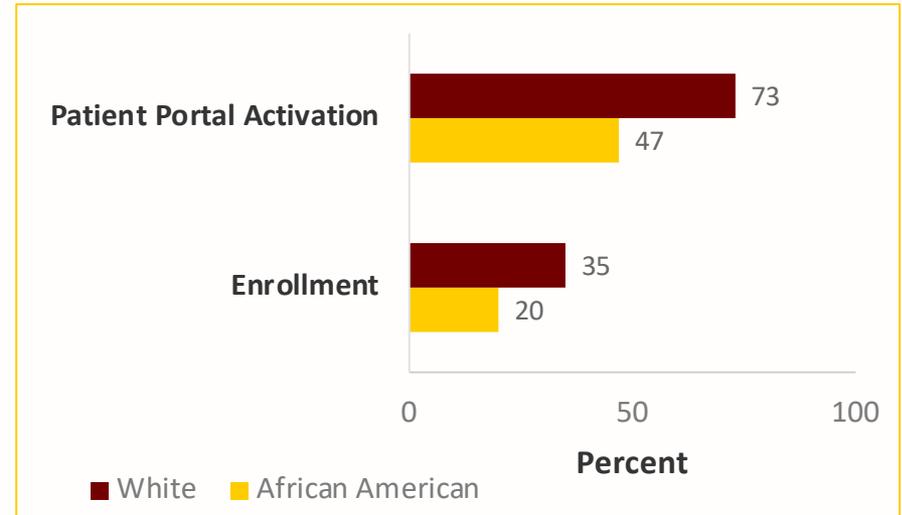


# Social Deprivation and Participation in Precision Medicine Research in African American Prostate Cancer Survivors

## Defining an Integrated Allostatic Load Index with Immune and Tumor Microenvironment Factors

**Participants:** Prostate cancer patients identified from biorepository and tissue analysis core at HCC (n=218)

**Outcomes:** Enrollment in social determinants study and activation of patient portal



## Participation Outcomes

31%  
Enrolled

66%  
Portal  
Activation

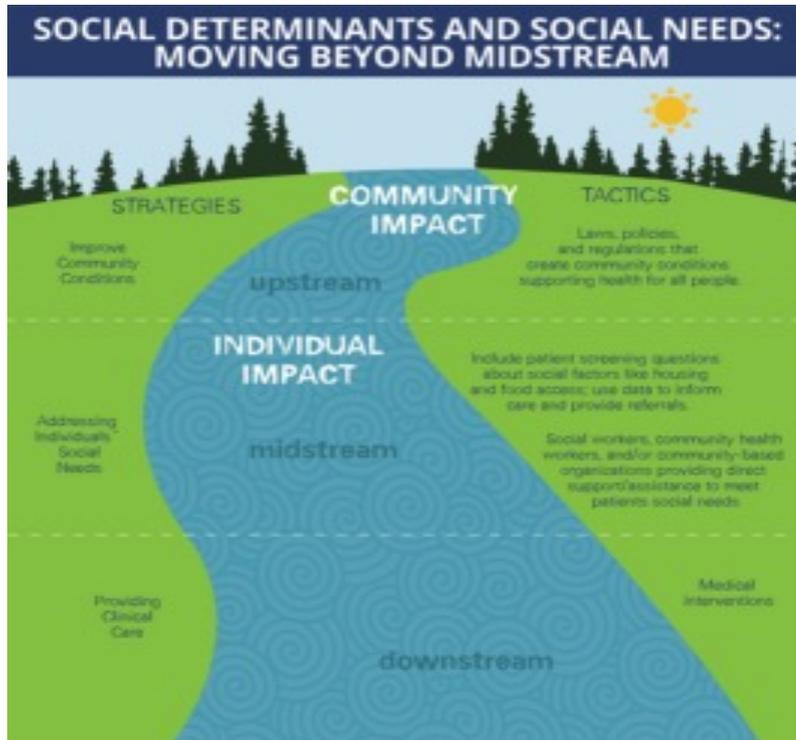
## Social deprivation associated with a significantly reduced likelihood

Variable	Odds Ratio	95% Confidence Interval
Enrollment	0.70	0.50, 0.98*
Patient portal activation	0.58	0.42, 0.82*

\*p between 0.01 and 0.05



# Cancer Health Equity Research and Interventions are Moving Upstream



- Continued efforts are needed to understand the effects of multilevel social determinants on cancer health disparities
- SDOHs should be measured and addressed as part of clinical trial recruitment and cancer care delivery
- Additional research is needed to evaluate the effects of SDOH interventions on clinical trial recruitment, accrual, and cancer outcomes

*Meeting Individual Social Needs Falls Short Of Addressing Social Determinants Of Health," Health Affairs Blog, January 16, 2019.*

DOI: [10.1377/hblog20190115.234942](https://doi.org/10.1377/hblog20190115.234942)

