SOCIAL DETERMINANTS OF HEALTH FOR THE INTERNIST: MAKING SENSE OF IT ALL

SONJA RAAUM MD FACP & ANDREA S. WALLACE RN PHD FAAN

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OBJECTIVES

- Understand importance of SDOH
  - Identify the concept of social needs
- Review pearls/pitfalls from "Hotspotting"
- Apply framework to use SDOH at varying levels of care
- Empower you to ask about and document social needs!

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SDOH DEFINITION

- World Health Organization

"The conditions in which people are born, grow, live, work and age."

"The social determinants of health are mostly responsible for health inequities - the unfair and **avoidable** differences in health status seen within and between countries."

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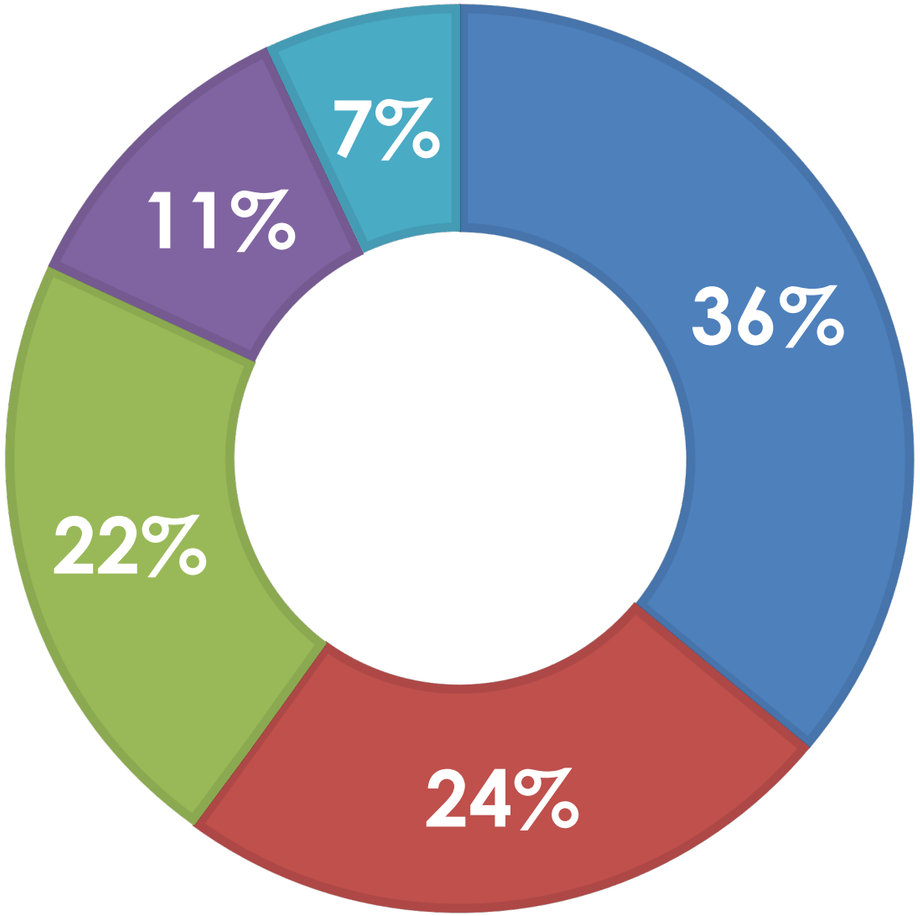
HEALTH OUTCOMES



- Individual Behavior
- Social Circumstances
- Genetics & Biology
- Medical Care
- Environment

SDOH matter because patients don't live in your clinic! (usually)

Determinantsofhealth.org

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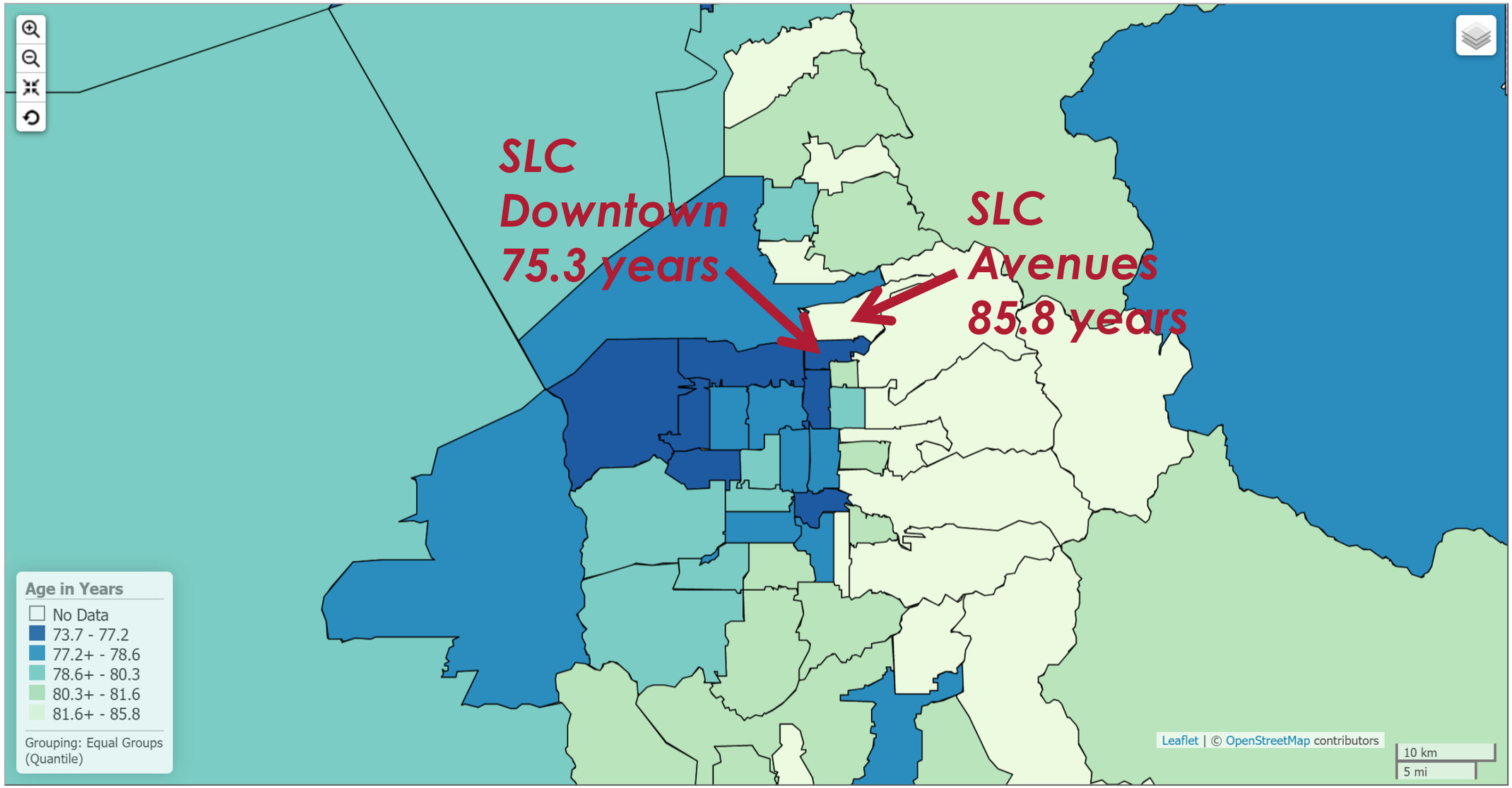
Map

Life Expectancy at Birth by Utah Small Area, 2014-2018, and U.S. 2017



Life expectancy by Utah Small Area was calculated using death counts over a span of 5 years (2014-2018).

https://ibis.health.utah.gov/ibisph-view/indicator/view/LifeExpect.SA.html

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MEDICAL REPORT JANUARY 24, 2011 ISSUE

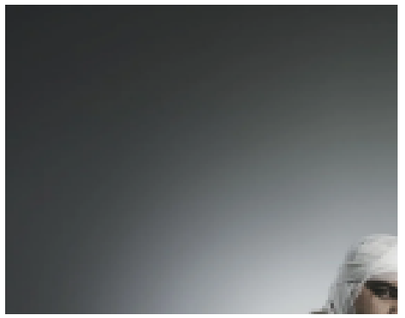
THE HOT SPOTTERS

Can we lower medical costs by giving the neediest patients better care?

By Atul Gawande

January 17, 2011

If Camden, New Jersey, becomes the first American community to lower its medical costs, it will have a murder to thank. At nine-fifty on a February night in 2001, a twenty-



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The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL ARTICLE

Health Care Hotspotting — A Randomized, Controlled Trial

Amy Finkelstein, Ph.D., Annetta Zhou, Ph.D., Sarah Taubman, Sc.D., and Joseph Doyle, Ph.D.

ABSTRACT

BACKGROUND

There is widespread interest in programs aiming to reduce spending and improve health care quality among "superutilizers," patients with very high use of health care services. The "hotspotting" program created by the Camden Coalition of Healthcare Providers (hereafter, the Coalition) has received national attention as a promising

setts Institute of) and the National esearch (A.Z., S.T.) e. Address reprint

NEJM 2020;382(2):152-162

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INTERVENTION

- Enrolled during hospitalization
- Multidisciplinary team
  - RNs, SW, LPNs, Community health workers, coaches
- Performed home visits
- Scheduled and accompanied patients to initial primary care and specialty care
- Coordinated follow-up care, medication management
- BP, blood sugar, coached patients
- Helped patients apply for social services, appropriate behavioral health programs.

NEJM 2020;382(2):152-162

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Table 4. Effects of Intervention in the Treatment Group, 180 Days after Discharge.*

Effect	No. of Patients	Control Group	Treatment Group	Unadjusted Between-Group Difference (95% CI)	Adjusted Between-Group Difference (95% CI)
		mean			
Readmission in total sample					
Any (%)		61.70	62.34	0.64 (–6.17 to 7.46)	0.82 (–5.97 to 7.61)
No. of readmissions		1.54	1.52	–0.02 (–0.29 to 0.26)	0.01 (–0.25 to 0.27)
≥2 readmissions (%)		36.25	36.39	0.14 (–6.61 to 6.89)	0.27 (–6.22 to 6.77)
Days in hospital		9.95	9.36	–0.59 (–2.49 to 1.31)	–0.32 (–2.17 to 1.53)
Hospital charges ($)		114,768	116,422	1,654 (–25,523 to 28,831)	3,722 (–23,438 to 30,882)
Hospital payments received ($)		17,650	18,130	480 (–3,613 to 4,573)	680 (–3,415 to 4,775)
Any readmission according to subgroup (%)					
No. of admissions in previous yr					
2	336	52.12	52.63	0.51 (–10.2 to 11.22)	0.78 (–10.35 to 11.91)
≥3	446	68.75	69.82	1.07 (–7.51 to 9.65)	1.27 (–7.38 to 9.92)
Preferred language					
English	638	63.11	62.61	–0.49 (–8.01 to 7.02)	0.1 (–7.42 to 7.61)
Other	144	56.25	60.94	4.69 (–11.58 to 20.96)	8.49 (–9.08 to 26.06)

NEJM 2020;382(2):152-162

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CASE CLOSED. NEGATIVE RTC.

- NO!

- This leads us to a bigger discussion of how SDOH work
  - Specifically, how does this very large population level concept translate into clinical practice on an individual level?

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INTERVENTION

- Enrollment during hospitalization
- Multidisciplinary team
  - RNs, SW, [illegible]
- [illegible]
- [illegible]edication management
- [illegible]ached patients
- [illegible]patients apply for social services, appropriate behavioral health programs.

- **Majority of work was coordination within the healthcare system, for medical problems**
- **Connected to social programs, but unclear if these met needs**

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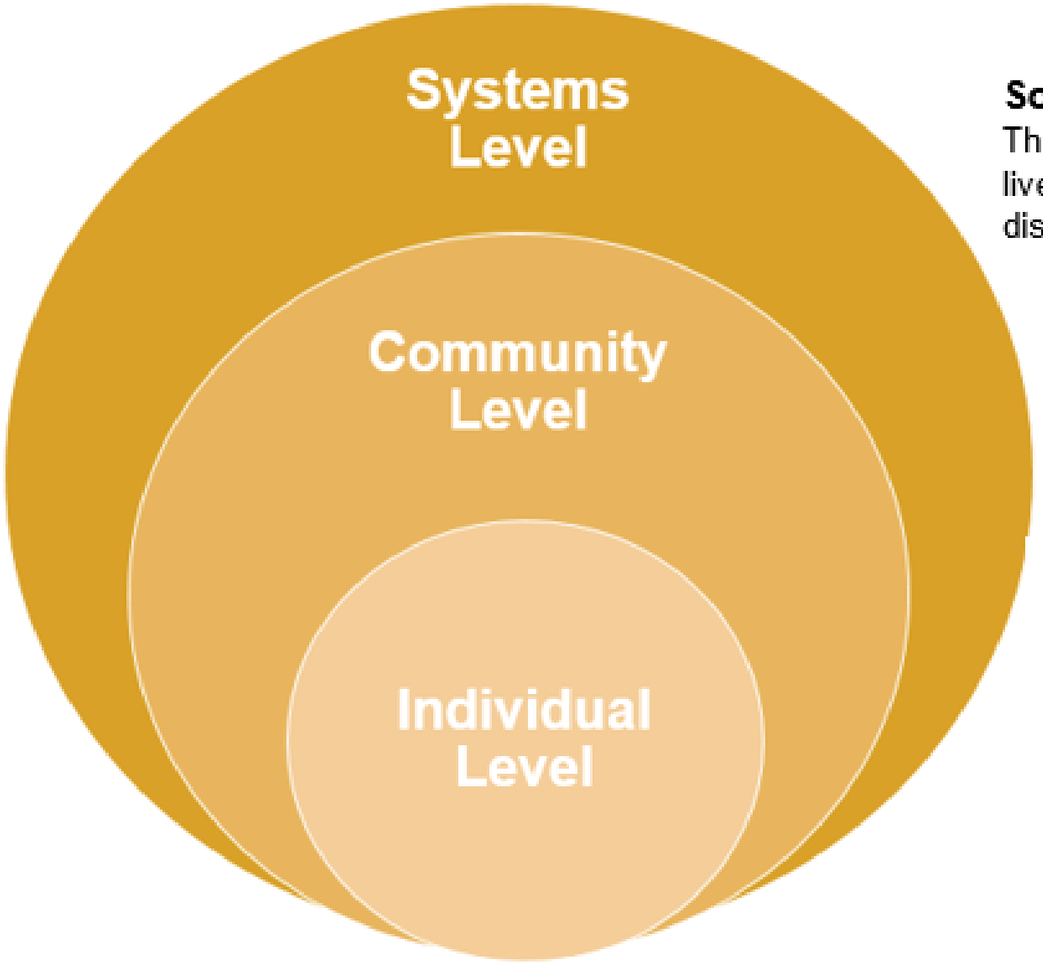

Social Determinants of Health:
The conditions in which people are born, grow, live, work and age, which are shaped by the distribution of money, power, and resources.

Description of the Problem

Social Needs:

- **Informed care** – information provided on a patient's social context to inform care
- **Targeted care** – information provided to address patients social needs directly

How to use

ORPCA.org/initiatives/social-determinants-of-health

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Models for Sense-Making

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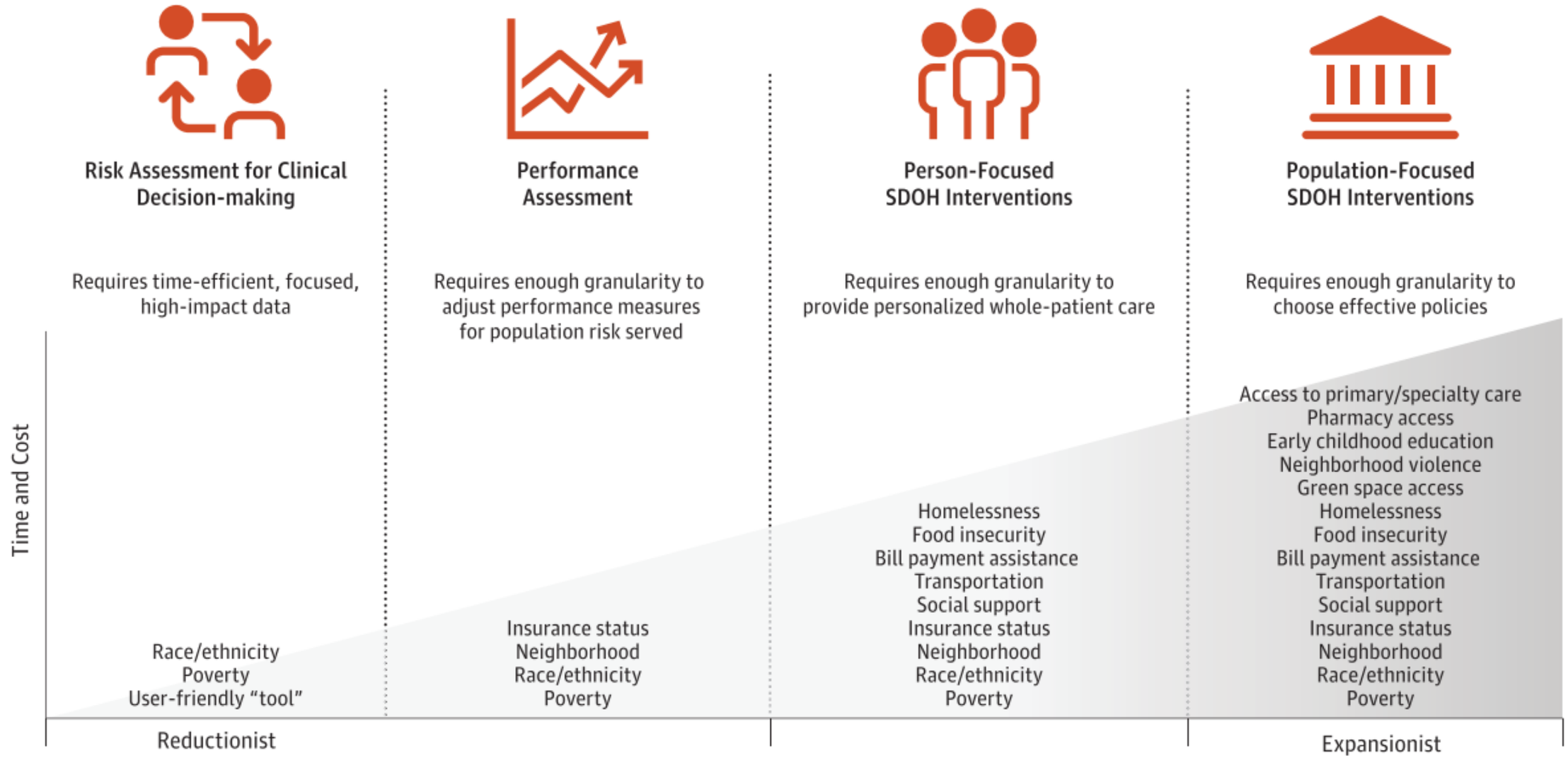
Figure. Proposed Schematic for Social Determinants of Health (SDOH) Data



JAMA Cardiolo. 2019;4(12):1189-90.

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POPULATION FOCUS INTERVENTIONS

- Addressing clean water in Flint, Michigan

Elevated Blood Lead Levels in Children Associated With the Flint Drinking Water Crisis: A Spatial Analysis of Risk and Public Health Response

Mona Hanna-Attisha, MD, MPH, Jenny LaChance, MS, Richard Casey Sadler, PhD, and Allison Champney Schnepp, MD

Objectives. We analyzed differences in pediatric elevated blood lead level incidence before and after Flint, Michigan, introduced a more corrosive water source into an aging water system without adequate corrosion control.

Methods. We reviewed blood lead levels for children younger than 5 years before (2013) and after (2015) water source change in Greater Flint, Michigan. We assessed the

percentage of lead pipes and lead plumbing, with estimates of lead service lines ranging from 10% to 80%.[7] Researchers from Virginia Tech University reported increases in water lead levels (WLLs),[5] but changes in blood lead levels (BLLs) were unknown

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PERSON FOCUSED INTERVENTIONS

- Community health workers, social workers, case managers, comprehensive care plans

- Very common – we are doing this every day!

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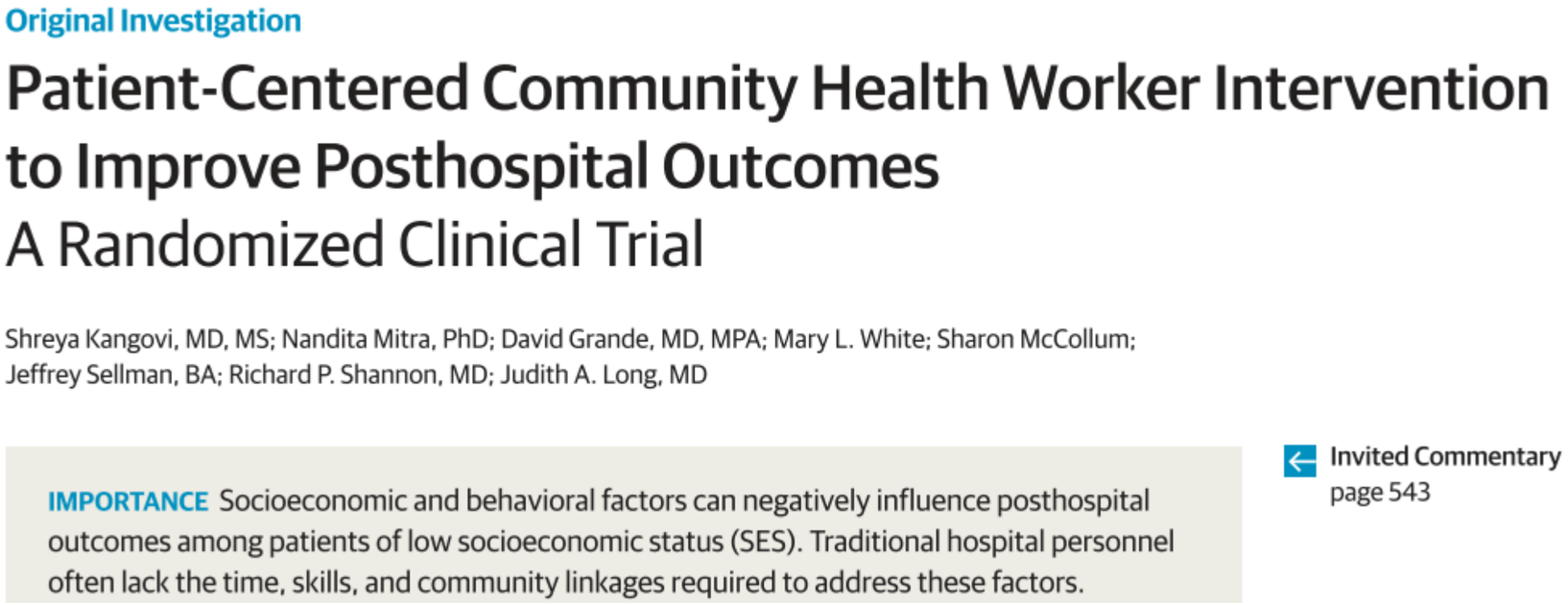
PERSON FOCUSED INTERVENTIONS

- Success depends upon measurement…



Original Investigation

Patient-Centered Community Health Worker Intervention to Improve Posthospital Outcomes

A Randomized Clinical Trial

Shreya Kangovi, MD, MS; Nandita Mitra, PhD; David Grande, MD, MPA; Mary L. White; Sharon McCollum; Jeffrey Sellman, BA; Richard P. Shannon, MD; Judith A. Long, MD

IMPORTANCE Socioeconomic and behavioral factors can negatively influence posthospital outcomes among patients of low socioeconomic status (SES). Traditional hospital personnel often lack the time, skills, and community linkages required to address these factors.

Invited Commentary
page 543

JAMA Internal Medicine 2014;174(4):535-543.

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Table 2. Outcomes in 446 Participants[a]

Outcome	Unadjusted					Adjusted[b]
	No. (%)		Absolute Difference (95% CI)	NNT	P Value	Odds Ratio (95% CI) or β Coefficient (SE)
	Control Group	Intervention Group				
Posthospital primary care	92 (47.9)	115 (60.0)	12.0 (2.0 to 21.7)	8	.02	1.52 (1.03-2.23)
High-quality verbal discharge communication	118 (78.7)	137 (91.3)	12.7 (4.5 to 20.5)	8	.002	2.94 (1.50-5.80)
Perfect medication adherence	115 (59.3)	123 (63.7)	4.5 (−5.2 to 14.0)	NA	.37	1.24 (0.82-1.87)
Any readmission	30 (13.6)	33 (15.0)	1.4 (−5.2 to 7.9)	NA	.68	1.13 (0.66-1.95)
Multiple readmissions	12 (5.5)	5 (2.3)	−3.2 (−6.9 to 0)	31	.08	0.40 (0.14-1.06)
Multiple readmissions among readmitted patients[c]	12 (40.0)	5 (15.2)	−24.8 (−44.5 to −2.8)	4	.03	0.27 (0.08- 0.89)
Change in Patient Activation Score, mean (SD)	1.6 (17.2)	3.4 (17.3)	1.8 (0.8 to 4.0)	NA	.05	3.80 (1.50)
Change in Mental Health Score, mean (SD)	4.5 (12.2)	6.7 (14.0)	2.2 (0.4 to 4.8)	NA	.02	2.84 (1.20)
Change in Physical Health Score, mean (SD)	4.8 (10.4)	5.5 (10.4)	0.7 (−1.3 to 2.8)	NA	.62	0.64 (0.98)
Satisfaction with medical care, mean (SD)	3.4 (1.2)	3.4 (1.2)	0 (−0.2 to 0.3)	NA	.85	0.04 (0.12)

Abbreviations: NA, not available; NNT, number needed to treat.

[a] Denominators of unadjusted outcomes do not include missing data. Adjusted outcomes include imputed missing data.

[b] Outcomes adjusted for baseline number of usual care providers and insurance status. Change in health and activation also adjusted for baseline health and activation scores.

[c] Among those readmitted, n = 63.

JAMA Internal Medicine 2014;174(4):535-543.

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PERFORMANCE ASSESSMENT

- Risk adjustment for patient populations
  - Population level →

Adjusting for social risk factors impacts performance and penalties in the hospital readmissions reduction program

Karen E. Joynt Maddox MD, MPH[1] | Mat Reidhead MA[2] | Jianhui Hu PhD[3] | Amy J. H. Kind MD, PhD[4] | Alan M. Zaslavsky PhD[5] | Elna M. Nagasako MD, PhD, MPH[6] | David R. Nerenz PhD[3]

[1]Cardiovascular Division, Department of Medicine, Washington University School of Medicine, St. Louis, Missouri
[2]Missouri Hospital Association, Hospital Industry Data Institute, Jefferson City, Missouri

Health Services Research 2019;54(2):327-336.

  - Individual level →

THIS ISSUE | NEXT ARTICLE ›
ORIGINAL RESEARCH | 20 JULY 2010

Contextual Errors and Failures in Individualizing Patient Care: A Multicenter Study

Saul J. Weiner, MD; Alan Schwartz, PhD; Frances Weaver, PhD; Julie Goldberg, PhD; Rachel Yudkowsky, MD, MHPE; Gunjan Sharma, PhD; Amy Binns-Calvey; Ben Preyss, BA; Marilyn M. Schapira, MD, MPH; Stephen D. Persell, MD, MPH; Elizabeth Jacobs, MD, MPP; Richard I. Abrams, MD

Article, Author, and Disclosure Information

Annals of Internal Medicine 2010;153(2):69-75.

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ACP POSITION STATEMENT

- *"8. The American College of Physicians* ***recommends adjusting quality payment models and performance measurement assessments*** *to reflect the increased risk associated with caring for disadvantaged populations."*

Annals of Internal Medicine 2018;168(8):577-578.

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RISK ASSESSMENT AND CLINICAL DECISIONS

- Social Needs Screeners

CMS

Box 1 | Accountable Health Communities
Core Health-Related Social Needs Screening Questions

Underlined answer options indicate positive responses for the associated health-related social need. A value greater than 10 when the numerical values for answers to questions 7-10 are summed indicates a positive screen for interpersonal safety.

Housing Instability

1. What is your housing situation today?

- ☐ I do not have housing (I am staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, abandoned building, bus or train station, or in a park)
- ☐ I have housing today, but I am worried about losing housing in the future.
- ☐ I have housing

2. Think about the place you live. Do you have problems with any of the following? (check all that apply)

- ☐ Bug infestation
- ☐ Mold

PRAPARE

THE KRESGE FOUNDATION · KAISER PERMANENTE · blue of california foundation · NATIONAL ASSOCIATION OF Community Health Centers · AAPCHO · OPCA Oregon Primary Care Association · Institute for Alternative Futures

PRAPARE: Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences
Paper Version of PRAPARE for Implementation As of September 2, 2016

Personal Characteristics

1. Are you Hispanic or Latino?

	Yes		No		I choose not to answer this question

2. Which race(s) are you? Check all that apply.

	Asian		Native Hawaiian
	Pacific Islander		Black/African American
	White		American Indian/Alaskan Native

7. What is your housing situation today?

	I have housing
	I do not have housing (staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, or in a park)
	I choose not to answer this question

8. Are you worried about losing your housing?

	Yes		No		I choose not to answer this question

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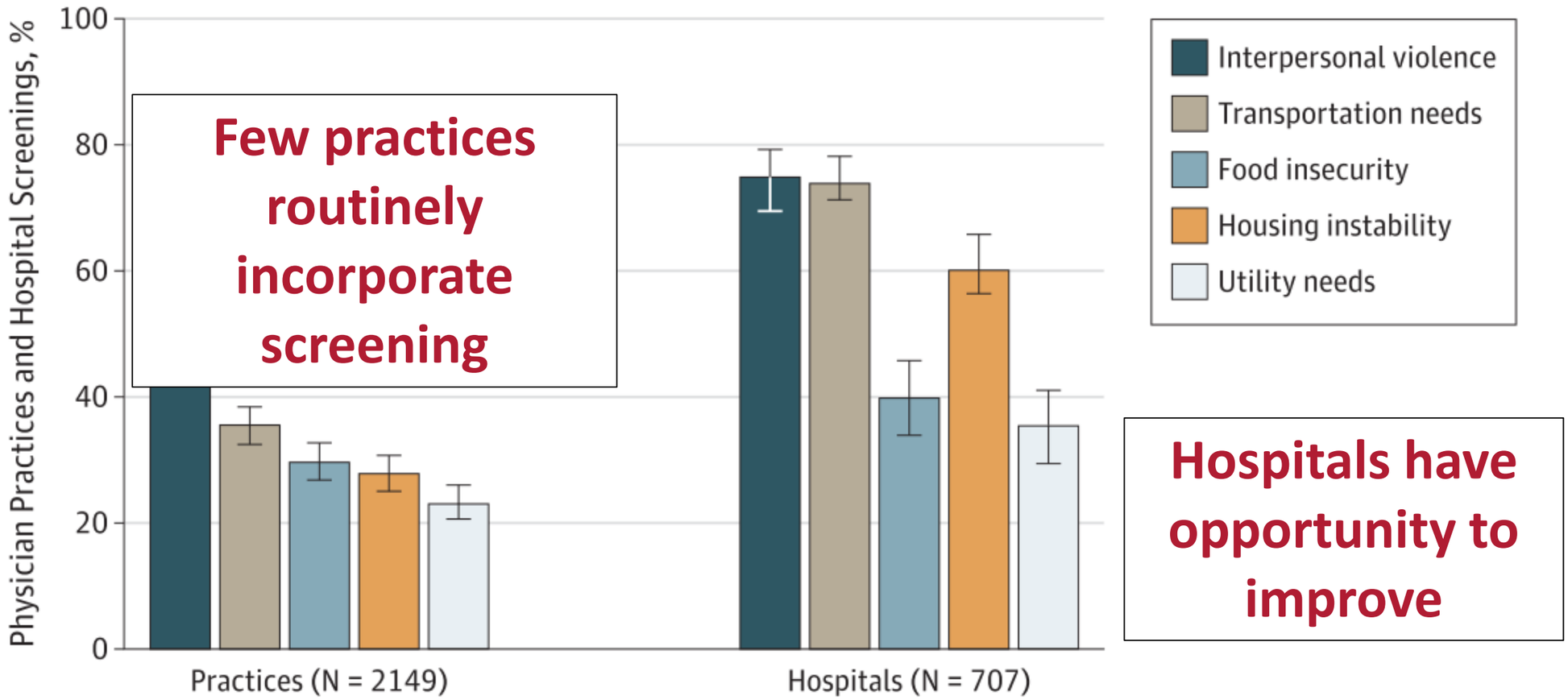
Figure 1. Percentage of Physician Practices and Hospitals That Screen Patients for Each of 5 Social Needs



JAMA Network Open 2019; 2(9):e1911514.

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ACP POSITION STATEMENT

- *"9. The American College of Physicians* ***recommends increased screening and collection of social determinants of health data*** *to aid in health impact assessments and support evidence-driven decision making."*

Annals of Internal Medicine 2018;168(8):577-578.

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When the rubber meets the road

@ASWallaceRNPhD @SonjaRaaum #UtahNursingResearch

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CHALLENGES OF CLINICAL CARE INTEGRATION

- Screening for social determinants during clinical encounter remains controversial
  - Whose responsibility is it to deal with?
  - Does it distract from other medical care?
  - Concern/Implementation barriers
    - 66% of 154 physicians did not feel confident in their capacity to address SDOH[1]
    - Lack of time, lack of resources to address cited as most significant barriers[1]

Med Care. 2019;57(Suppl 6 2):S197-S201.

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WHAT DOES THE PATIENT THINK?

- 50 interviews of patients and caregivers

1. Believe **screening for social risks is important**
2. **Understand connections** between social risks and overall health
3. Emphasized **importance of patient-centered implementation** of social risk screening
4. **Recognize the limitations** of healthcare's capacity to address or resolve social adversity

American Journal of Preventive Medicine 2019;57(6 Supp 1):S38-S46.

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Example

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EXAMPLE: THE UHEALTH ED

Clinical stakeholders communicated:

1. Concerns about assessing social needs without referral resources
2. Beliefs that "others" screen needs and refer patients to resources
3. Beliefs that support staff (e.g., registration vs nurses) can effectively screen, but need to be clinically integrated

Agency for Healthcare Research and Quality R21 HS026505

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EXAMPLE: THE UHEALTH ED

In the last month...

1. Have you not seen a doctor because you did not have a way to get to the clinic or hospital?	◯ Yes ◯ No ◯ Prefer Not To Answer
2. Have you needed to see a doctor but could not because it costs too much?	◯ Yes ◯ No ◯ Prefer Not To Answer
3. Did you not take medications to save money?	◯ Yes ◯ No ◯ Prefer Not To Answer
4. Did you feel there was not enough money for food?	◯ Yes ◯ No ◯ Prefer Not To Answer
5. Did you feel there was not enough money for items like clothing or furniture?	◯ Yes ◯ No ◯ Prefer Not To Answer

REDCap

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EXAMPLE: THE UHEALTH ED

- ED patients screened
- United Way's 2-1-1 service contacts patients within 48 hours
- Data from screening, 2-1-1 encounters, and the Enterprise Data Warehouse are compiled

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Moving Forward

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CURRENT RECOMMENDATIONS

- Universal – consider bias
- Address Literacy and other barriers
- Links to services
- Careful consideration of training and receptivity

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Summary and Final Thoughts

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CURRENT RECOMMENDATIONS

Develop and participate in models that

- Universally screen, or carefully consider bias
- Consider literacy and language barriers
- Establish links to service providers with clear referral process
- Integrate thoughtful staff training and address patient receptivity

Wallace, Luther, Guo et al. (in press)

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Thank You!

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