

# Measuring Social Needs and Outcomes

- Nicole Blumenfeld, 2-1-1 San Diego
- Damon Francis, Health Leads
- Caroline Fichtenberg, Social Interventions Research and Evaluation Network, University of California San Francisco
- Karis Grounds, 2-1-1 San Diego

# Current Approaches to Measuring Social Needs

2018 Community Information Exchange Summit  
**Measuring Social Needs and Outcomes**

April 16, 2018

Caroline Fichtenberg, PhD, Managing Director, Social  
Interventions Research and Evaluation Network, UCSF

# siren

Social Interventions Research  
& Evaluation Network

About Us Tools & Resources Funding Opportunities Newsroom



Evidence Library

## Explore SIREN's Resources

Tools & Resources ›

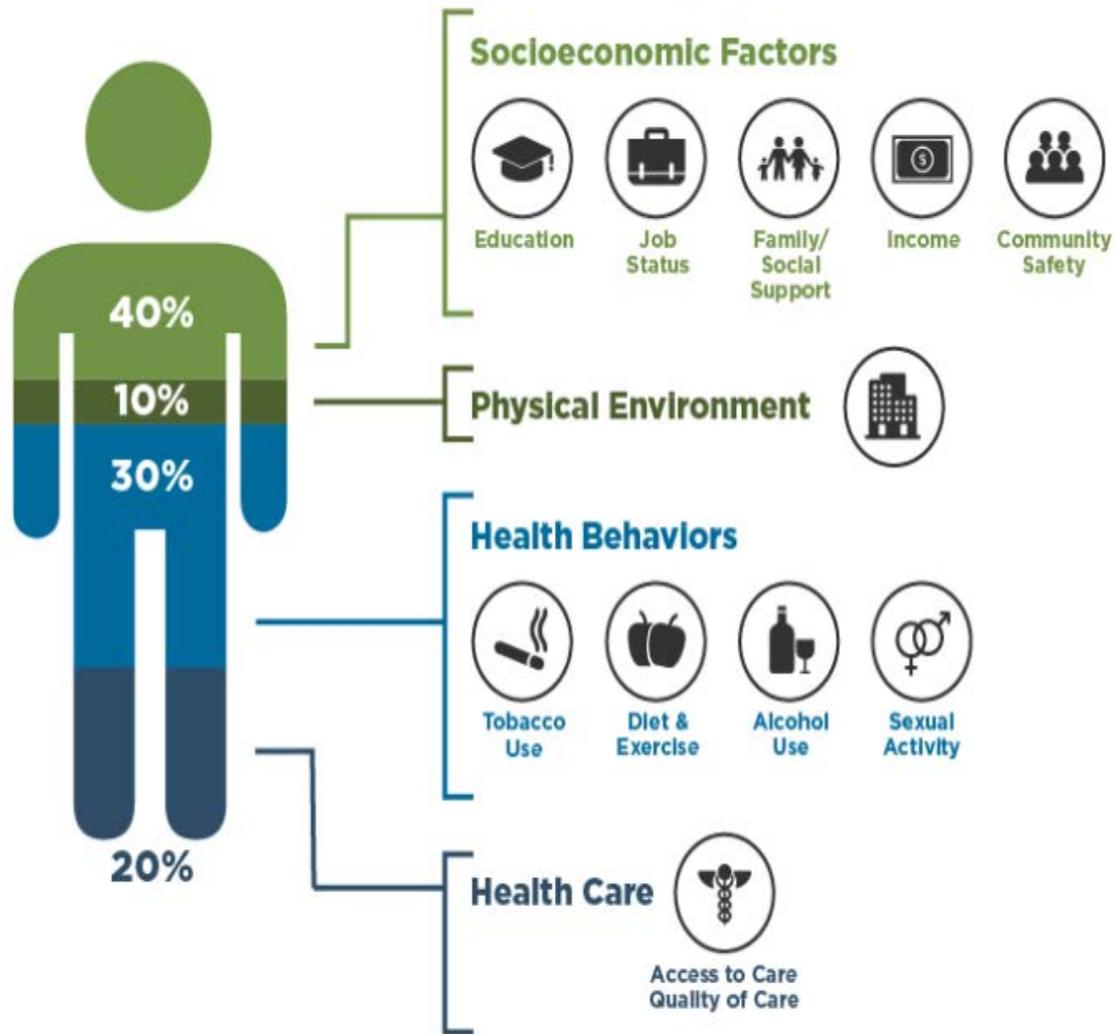
<https://SIRENetwork.ucsf.edu>

siren

@SIREN\_UCSF

UCSF

# What Goes Into Your Health?



# Use Cases for SDH data in clinical settings

Patient Care

Population  
Health  
Management

Risk  
Adjustment

Community  
Health  
Improvement

Research

# How to identify social needs in patients?

# Social needs screening tools

## SOCIAL SCREENING

Do you need...?

- Food
- Housing
- Help with benefits
- Legal services
- Utilities assistance

Do you want help today?

- Yes
- No

- PRAPARE
- Accountable Health Communities
- Health Leads Tool kit
- Upstream Risks Screening Tool
- IOM 2014 Recommended Social and Behavioral Domains and Measures for EHRs
- iHELP
- WE CARE
- SEEK
- WellRx
- And more...

# Social needs screening tools characteristics

Tools differ in terms of:

- Domains
- Length
- Target users/patient populations

	PRAPARE	AHC-Tool	IOM Domains	We Care	SEEK	Health Leads	SWYC	iHELP	WellRx	Health Begins
armed services										
childcare/access										
childcare/afford										
civic engagement										
clothing										
disabilities										
education										
elder abuse										
employment										
ethnicity										
financial strain										
food insecurity										
health care/medicine										
housing insecurity/ instability/homelessness										
immigration										
housing quality										
incarceration										
insurance										
IPV										
literacy										
migrant status										
neighborhood safety										
refugee status										
social support										
stress										
transportation										
utilities										
health behaviors/behavioral health		MH, PA, SU	AA, D, PA, TU	AA, D, SA, TU	AA, D, SA, TH		AA, D, SA, TH		AA, SA	PA



	PRAPARE	AHC-Tool	IOM Domains	We Care	SEEK	Health Leads	SWYC	iHELP	WellRx	Health Begins
armed services										
childcare/access										
childcare/afford										
civic engagement										
clothing										
disabilities										
education										
elder abuse										
employment										
ethnicity										
financial strain										
food insecurity										
health care/medicine										
housing insecurity/ instability/homelessness										
immigration										
housing quality										
incarceration										
insurance										
IPV										
literacy										
migrant status										
neighborhood safety										
refugee status										
social support										
stress										
transportation										
utilities										
health behaviors/behavioral health		MH, PA, SU	AA, D, PA, TU	AA, D, SA, TU	AA, D, SA, TH		AA, D, SA, TH		AA, SA	PA

siren

UCSF

# PRAPARE – Protocol for Responding to and Assessing Patients’ Assets, Risks and Experiences



- Target users: Community Health Centers
- Launched in August 2016
- 21 questions:
  - Race/Ethnicity
  - Migrant and/or Seasonal Farm Work
  - Veteran Status
  - Language
  - Food
  - Housing Status
  - Housing Stability
  - Address/Neighborhood
  - Education
  - Employment
  - Insurance
  - Income
  - Material Security
  - Transportation
  - Social Integration and Support
  - Stress
- Templates for EHR integration (Epic, eCW, GE Centricity, and Next Gen)
- <https://www.nachc.org/research-and-data/prapare/>

# Accountable Health Communities Tool

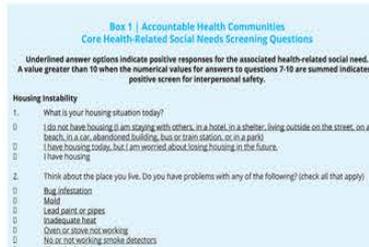


- Target users: 32 Accountable Health Communities Model sites
- Published in May 2017
- 10 questions:
  - Food insecurity (Hunger Vital Sign)
  - Housing instability
  - Transportation needs
  - Utility needs
  - Interpersonal safety
- <https://nam.edu/wp-content/uploads/2017/05/Standardized-Screening-for-Health-Related-Social-Needs-in-Clinical-Settings.pdf>
- Adopted by the American Academy of Family Physicians (Jan 2018)

# Health Leads Toolkit



- Target users: Any
- First published in July 2016, updated in 2018
- 10 questions:
  - Food insecurity
  - Housing instability
  - Medical transportation needs
  - Utility needs
  - Child care
  - Health literacy
  - Social isolation
  - Urgency of needs
  - Desire for assistance
- <https://healthleadsusa.org/tools-item/health-leads-screening-toolkit/>



## Accountable Health Communities Screening Tool

2017 | A. Billieux, K. Verlander, S. Anthony, D. Alley

From the National Academies of Medicine: "With input from a panel of national experts and after review of existing screening instruments, CMS developed a 10-item screening tool to identify patient needs in 5 different domains that can be addressed through community services (housing instability,...



## IOM Recommended Social and Behavioral Domains and Measures for Electronic Health Records

2014 | Committee on Recommended Social & Behavioral Domains & Measures for Electronic Health Records

Determinants of health—like physical activity levels and living conditions—have traditionally been the concern of public health and have not been linked closely to clinical practice. However, if standardized social and behavioral data can be incorporated into patient electronic health records (EHRs...



## PRAPARE: Protocol for Responding to and Assessing Patients' Assets, Risks and Experiences

2016 | NACHC, Association of Asian Pacific CHOs, Oregon Primary Care Association, Institute for Alternative Futures

The Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE) was developed by NACHC and partners to help health centers and other providers collect the data needed to better understand and act on their patients' social determinants of health. The

PRAPARE...



## Health Leads Social Needs Screening Toolkit

2016 | Health Leads

Drawing on Health Leads' experience and recent federal guidelines, this toolkit

# Open questions

- Lack of standardization / Lots of customization
- Atomization of needs
- Needs vs. desire for assistance
- Should screening be structured?
- Who should screen?
- How should patients be screened?
- What is a successful outcome?

# Outcome Measures in Existing Literature

**Process  
Outcomes**

**Social Needs  
Outcomes**

**Provider  
Outcomes**

**Physical and  
Mental  
Health  
Outcomes**

**Utilization /  
Cost  
Outcomes**

Gottlieb LM, Wing H, Adler NE. A systematic review of interventions on patients' social and economic needs. Am J Prev Med. 2017

# Outcome Measures in Existing Literature

**Process  
Outcomes**

**Social Needs  
Outcomes**

**Provider  
Outcomes**

**Physical and  
Mental  
Health  
Outcomes**

**Utilization /  
Cost  
Outcomes**

Gottlieb LM, Wing H, Adler NE. A systematic review of interventions on patients' social and economic needs. Am J Prev Med. 2017



# 2018 Community Information Exchange Summit: Measuring Social Needs and Outcomes

*April 16, 2018*

Damon Francis, MD  
Chief Medical Officer, Health Leads  
Assistant Clinical Professor, UCSF School of Medicine

Confidential - Do Not Distribute





We envision a healthcare system that addresses all patients' basic resource needs as a standard part of quality care.

—————Our Vision—————

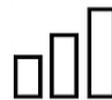
# Health Leads' Solutions

Empowering healthcare organizations to integrate social needs into care delivery with learning, consulting and technology solutions:



## Design

Create your social needs strategy through our interactive workshops or hands-on coaching



## Implement

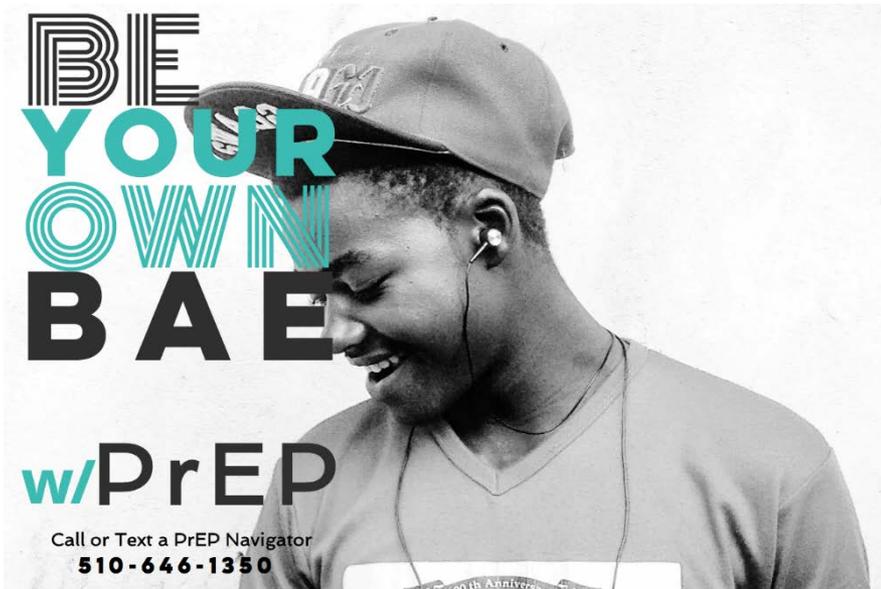
Integrate social needs into care delivery and improve over time with our Implementation Services



## Enable

Manage patients and track success using our Reach social needs technology

## My background: HIV and homeless health care



<https://www.crush510.org/>

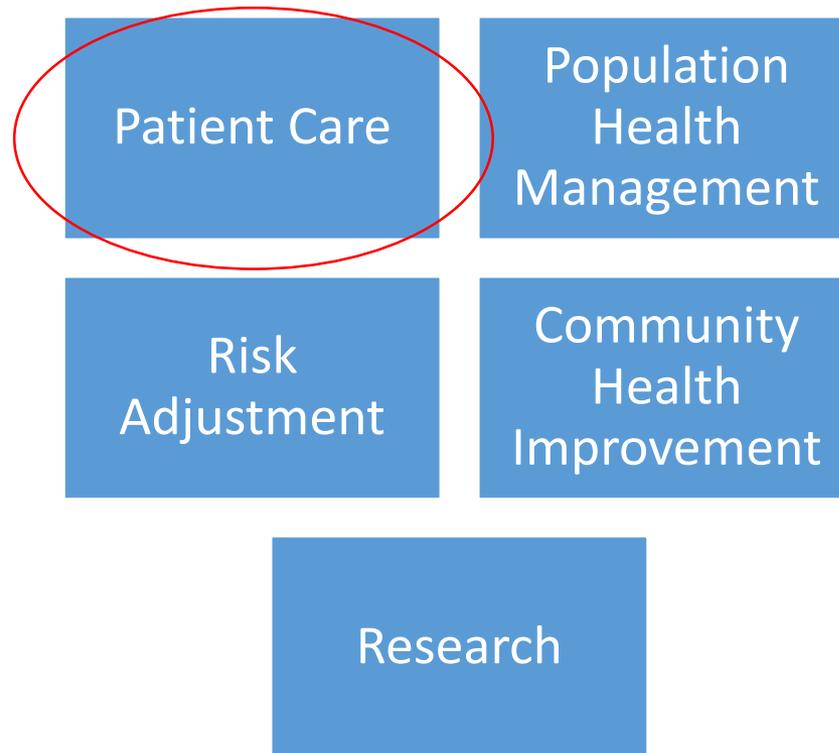


<http://www.sfgate.com/bayarea/article/Judge-rules-that-Albany-can-clear-homeless-camp-4992231.php>

# Use cases

---

Measuring to manage



Does a “Yes” mean someone has a “need”?

“Are you worried that in the next 2 months, you may not have stable housing?”

Source: Social Needs Screening Toolkit, Health Leads, 2018

Assessment:—

## The Essential Link Between Screening and Intervening

Two critical elements--

- What are your goals?
- What are you eligible for?

## Measuring Goals in Assessment – Consider measuring the process of goal setting

Example: CollaboRATE – “A Fast and Frugal Patient-Reported Measure of the Shared Decision-Making Process”

### 3 Questions

- How much effort was made to help you understand your health issues?
- How much effort was made to listen to the things that matter most to you about your health issues?
- How much effort was made to include what matters most to you in choosing what to do next?

Source: Barr, et al, Journal of Medical Internet Research, 2014

# Measuring Eligibility in Assessment – More important than validity?

## Example: 1 Level of Government (Federal), 3 Definitions of Homelessness

**Housing and Urban Development** -- “Persons living in emergency shelters and transitional housing projects must be counted as sheltered homeless persons. Homeless persons who are living in a place not designed or ordinarily used as a regular sleeping accommodation for humans must be counted as unsheltered homeless persons.” [PITC (24 CFR 578.7(c)(2))]

**United States Department of Education** -- Includes “children and youths who are sharing the housing of other persons due to loss of housing, economic hardship, or a similar reason...[McKinney-Vento, Title VII, Subtitle B, Sec. 725(B)(i)]”, and the United States

**Health Resources and Services Administration** – Includes individuals who “are forced to stay with a series of friends and/or extended family members...” [HRSA Bureau of Primary Health Care Program Assistance Letter 99-12]

*Takeaway: Each definition is further specified in an administrative measurement system that defines what help your client or patient can receive, **whether they fit a scientifically valid construct of homeless or not.***

# Measuring Outcomes – Resource connections

## FAILURE

- (a) Patient hit a roadblock and was unable to resolve his or her need
- (b) Patient did not meet eligibility requirements (e.g., income too high)
- (c) No resources exist to meet patient's need

## WAITLIST

Patient placed on a waiting list for two months or longer

## EQUIPPED

Need not yet met, but the patient is actively working on solving the need

**AND**

Feels equipped to proceed without further assistance

## SUCCESSFUL

Patient confirms successful resolution of social need

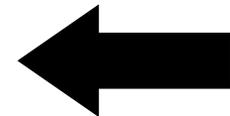
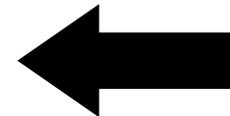
Patient has EBT card with correct \$\$ on it

Patient got food at the food pantry

**UNKNOWN:** Health system did not follow up with patient OR patient did not respond after multiple contact attempts

# Measuring Outcomes – Resource Connections reporting example

Need	Sub-Need	# Closed	% Connected	# Days open
Adult Education	ESL, ESOL	31	16%	61
	GED and Adult Basic Education	21	5%	75
	College	10	10%	65
Child-Related	(Early) HeadStart	36	19%	61
	Childcare and Preschool Program ..	39	32%	42
	Childcare Voucher/Subsidy	18	17%	77
	Out-of-School Time Programs	9	44%	120
	Summer Camp	4	0%	119
Commodities	<b>Baby Supplies</b>	<b>147</b>	<b>1</b> 82%	<b>25</b>
	Clothing	93	62%	51
	School Supplies	20	50%	43
	Household Goods/Furniture	12	33%	61
	Holiday Gifts	14	31%	15
	<b>Job Placement Services (e.g. One ..</b>	<b>101</b>	<b>1</b> 14%	<b>80</b>
Job Training (e.g. Medical Assistan..	30	0%	69	
Employment	Employment 101	30		0

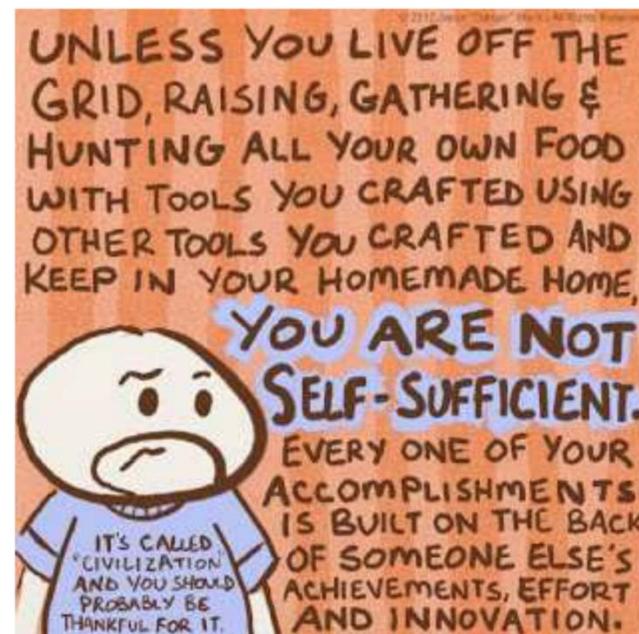


# Measuring Outcomes – Self-Sufficiency Matrix

## Possible status descriptions for food

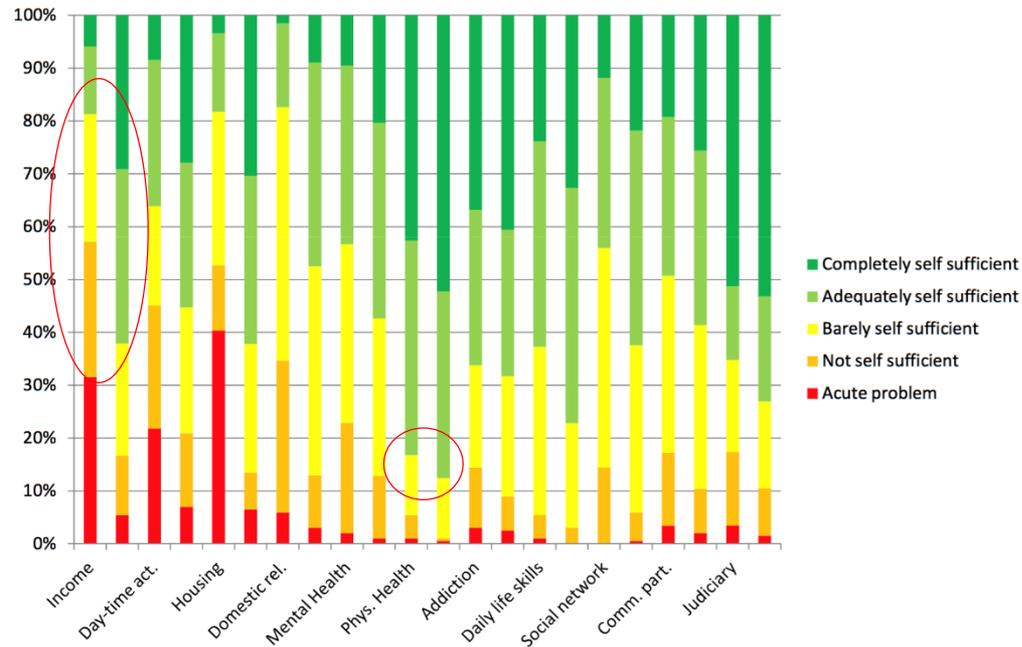
Dimensions	Food
<b>Benchmarks</b>	
<b>Thriving (9-10)</b>	Always has resources and knowledge to purchase and prepare nutritious food of choice. (10)  Usually has resources and knowledge to purchase and prepare nutritious food of choice. (9)
<b>Safe (7-8)</b>	Always has resources and knowledge to purchase and prepare nutritious food. (8)  Usually has resources and knowledge to purchase and prepare nutritious food. (7)
<b>Stable (5-6)</b>	Has sufficient knowledge and personal/community resources to purchase and prepare food. (6)  Has some knowledge and able to buy and prepare some types of food. Occasionally relies on food stamps and food banks. (5)
	<b>Prevention Line</b>
<b>Vulnerable (3-4)</b>	Has little knowledge of and unable to buy and/or prepare some types of food; relies on food stamps and food banks. (4)  Extremely limited knowledge of, and unable to buy and/or prepare food; inadequate resources to obtain food. (3)
<b>In-Crisis (0-2)</b>	Lacks knowledge and/or resources to purchase and/or prepare food. (2)  No food and is not aware of food resources. (0)

Source: Snohomish County Self-Sufficiency Taskforce, 2004.



Source: Delsing M. and Dekker A., Psychometric properties of the Dutch version of the Self Sufficiency Matrix, 2014.

# Measuring Outcomes – Self-Sufficiency Matrix reporting example



Source: Delsing M. and Dekker A., Psychometric properties of the Dutch version of the Self Sufficiency Matrix, 2014.

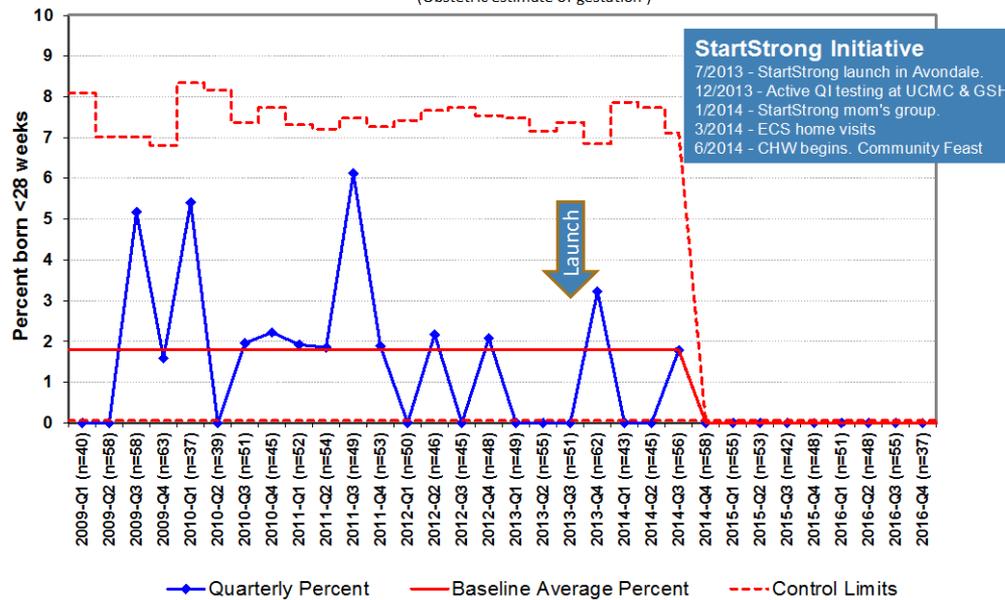
# Outcomes in Practice – *Health outcomes*



## Resident singleton births < 28 weeks gestation

ZIP Code 45229 (Avondale-North Avondale), by quarter, 2009-2016

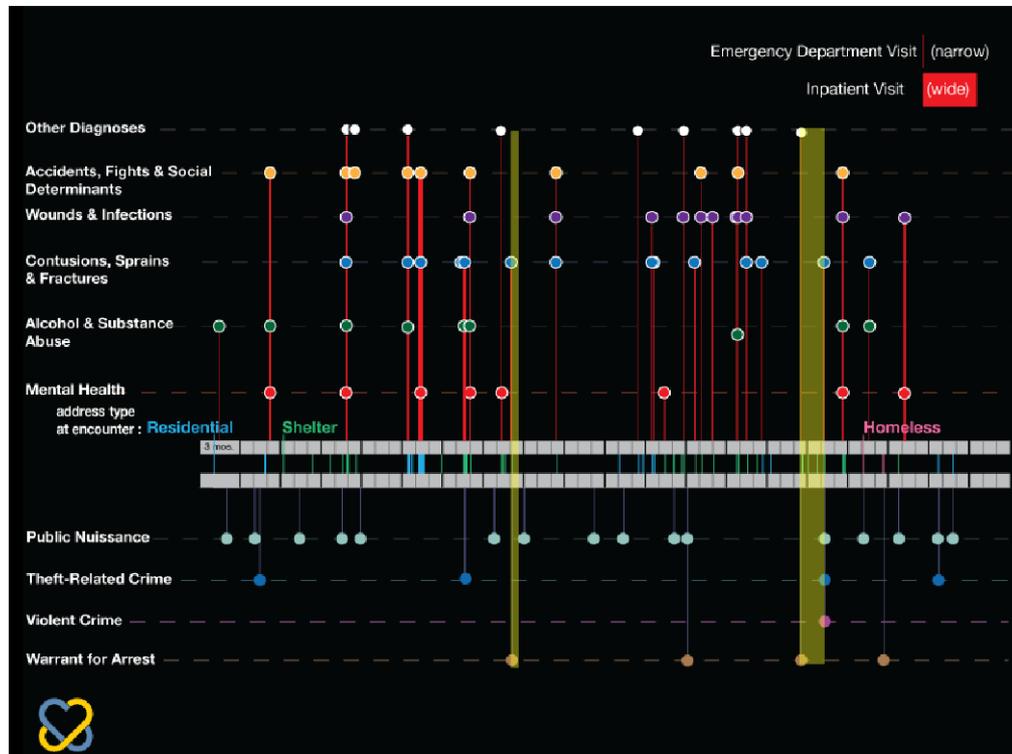
(Obstetric estimate of gestation)



Source: Hamilton County Public Health. Updated by J. Best 1/27/17

Source: Kotagal, IHI National Forum, 2017.

## Outcomes in practice – Utilization of healthcare and other services



Source: Brenner, Addressing the Social Determinants of Health, 2017

---

## What the numbers can miss...

### Resource info is not the only barrier

*Patient:* “Yeah, honestly I do think it was beneficial because I knew I needed help, I didn't know where to begin and the steps, and [the navigator] **helped me in a way get to a point of creating steps** and then having a little bit more of ‘oh hey, I'm going to make this plan for myself.’ ”

*Navigator:* “A 59-year-old man called 2-1-1 for food. As we began discussing some options, I realized the situation was **far more complex than just a matter of finding him some groceries**. The gentleman told me he was living in an unfurnished apartment, and dealing with spinal cord injuries that impaired his movement.”

Source: SOCIAL DETERMINANTS OF HEALTH: OVERCOMING THE GREATEST BARRIERS TO PATIENT CARE, United Way and Health Leads, 2018.

### Relationships and trust matter most

*Patient:* “I felt like it actually gave **us less stress and less worry**. So it kind of helped us a lot to just not worry about having to always look online for food banks and everything. It just gave us a little more of an easy access to what we needed.”

*Navigator:* “One of my patients was undocumented and worried that applying for certain services would jeopardize their status in this country. I was able to help ease their worries a bit, but they **never would have applied if we hadn't talked.**”

---

## Summary

- **Patient-reported measures are critical** to monitoring interventions “day-to-day,” even when “hard” endpoints such as mortality or healthcare utilization are the ultimate goals of the intervention
- **High quality assessment is about conversations that match client goals and eligibility with interventions** – measures support that process, but don’t replace it.
- **Screening and referral data by themselves are inadequate** to meaningfully monitor an intervention or measure success
- **Systematic data collection and reporting remain rare** for SDOH interventions, regardless of the outcome measures, but fortunately experimentation is widespread and accelerating



# The Risk Rating Scale

# Screening vs. Assessment



**Healthcare Provider**

**Priority:** Providing Medical Care

**Secondary:** Screening for Specific Social Risks

**Tools:** Positive or Negative

**Example:**

- Within the past 12 months, we worried whether our food would run out before we got money to buy more.
- Within the past 12 months, the food we bought just didn't last and we didn't have money to get more.



**Social Service Provider**

**Priority:** Address bio-psycho-social of individual and family

**Secondary:** Connection between health and social

**Tools:** Target population focused and tailored

**Example:**

- **What is your current health situation?**
  - Open ended (Physical, Mental/Behavioral, Substance Abuse, Dental)
- **Are you experiencing any barriers to managing your health condition?**
  - Transportation, Prescription Costs, Health Insurance Issues, knowledge health condition, procedure costs, timeline for care, medical equipment
- **What types of services are you hoping access to help you?**
  - Medical home, Sobriety Services, Inpatient, Medical Access, Financial Assistance Programs, Medical Home

# Purpose

**Objective: Creation of universal assessment tool to understand complexity of social influences**

- Clinical screenings exist, but lack comprehensive guide to capture holistic view

**Designed to:**

- 1. Understand client situation, nature and severity of the need**
  - Standardized categories across domains
- 2. Establish baseline risk to objectively measure change over time**
  - Built framework for shared measures
- 3. Provide a roadmap for care planning**
  - Utilize continuum to move clients towards thriving
- 4. Align resources with client need and risk**
  - Resources are tagged through standardized classification system

# Methodology

Identify Existing Models for SDoH	<ul style="list-style-type: none"><li>• Researched existing SDoH tools: World Health Organization (WHO), HealthyPeople2020, Live Well San Diego, Center for Disease Control, Kaiser Family Foundation, Alliance for Information and Referral Taxonomy (AIRS)</li></ul>
Outline Impact on Community Level	<ul style="list-style-type: none"><li>• Identified micro and macro factors that impact San Diego community</li><li>• Individuals' Demographics, Behavior &amp; Choices, Access to, Environment, Policy</li><li>• Laid foundation for 2-1-1 San Diego's 14 domains of health and wellness</li></ul>
Measure Impact (Risk Rating Scale)	<ul style="list-style-type: none"><li>• Developed model to assess client's change over time (adapted from Jewish Family Service's Self-Sufficiency Model)</li><li>• Plots clients within six levels of vulnerability: Crisis, Critical, Vulnerable, Stable, Safe, and Thriving</li></ul>
Identify Shared Measures through Assessments & Domain Standards	<ul style="list-style-type: none"><li>• Developed domain-specific assessments, driven by evidence based tools, existing social service intakes, and practical application</li><li>• Risk is defined by Immediacy, Knowledge &amp; Utilization, Barriers &amp; Support</li><li>• Analytics also include situational factors such as demographics, socioeconomic status, health conditions, and place (geography)</li></ul>
Weighted Assessment Rubric	<ul style="list-style-type: none"><li>• Weighted constructs that aligns specific responses to risk level</li><li>• Values and point allocation driven by literature</li><li>• Objective risk determination via standardized scoring</li><li>• Establishes baseline risk to calculate change over time</li></ul>
Feedback & Integration	<ul style="list-style-type: none"><li>• Review &amp; feedback session with agency subject matter experts across multiple domains</li><li>• Integrated assessments with existing intakes, including shared measures, aligning values and eligibility criteria across agencies</li><li>• External validity through partnership with University of San Diego Caster Center for Non-Profit and Philanthropic Research</li></ul>

# 14 Social Determinants of Health



HOUSING STABILITY



FOOD & NUTRITION



PRIMARY CARE & PREVENTION



HEALTH MANAGEMENT



SOCIAL & COMMUNITY CONNECTION



ACTIVITIES OF DAILY LIVING



LEGAL & CRIMINAL JUSTICE



FINANCIAL WELLNESS & BENEFITS



EMPLOYMENT DEVELOPMENT



TRANSPORTATION



PERSONAL CARE & HOUSEHOLD GOODS



UTILITY & TECHNOLOGY



SAFETY & DISASTER



EDUCATION & HUMAN DEVELOPMENT

Domains/Social Need Domains	HealthyPeople2020 (CDC)	2-1-1 San Diego	Henry J. Kaiser Family Foundation	SIREN	Health Leads	PRAPARE	Self-Sufficiency Matrix
Housing		x		x Quality & Stability	x (Housing Stability)	x(Status & Stability)	X (Housing and Household Management)
Primary Care	X (Health & Healthcare)	x	X (Primary Care and Access)		x(Health Behaviors)	x (Insurance)	X (Access to Services)
Health Condition Management	X (Health & Healthcare)	x			x (Behavioral/Mental Health)	(Stress)	X (Mental, Physical Health, Substance Abuse)
Food & Nutrition	x	x	X (Hunger and Food Insecurity)	x	x (Food Insecurity)		X (Food)
Social & Community Connection	x (Social & Community Context)	x	x	x	x (Social Isolation & Support)	x (Social Integration & Support)	X (Support System)
Activities of Daily Living	x	x			x (Social Isolation)		X (Functional Ability)
Employment	x (Economic Stability)	x	X (Economic Stability)	x (Economic Stability)	x	x	x (Career Resiliency/Training, Employment Stability, English Second Language)
Criminal Justice & Legal	x	x				X (Incarceration History)	X (Legal)
Financial Wellness & Benefits	x	x	X (Economic Stability)	x (Public Benefits)	x (Financial Resource Strain)	x	X (Financial Matters and Income Area Median and FPL)
Transportation	x	x			x	x	X
Personal Hygiene & Household Goods	x	x				x (Material Security)	X (Clothing)
Utility & Technology	x	x			x (Utility Needs)		
Safety & Disaster	x	x		X (Violence/Safety)	x (Exposure to Violence)	x (Safety & DV)	X (Safety)
Human Development & Education	x (Education)	x	x	X (Education & Childcare)	X (Childcare)	x	X (Childcare & Education, Life Skills (human relations and setting goals), Parenting)
Neighborhood & Built Environment	X (Access Healthy Food, Housing Quality, Crime & Violence, Environmental Conditions)		X (Housing, Transportation, Park Safety, Walkability)				

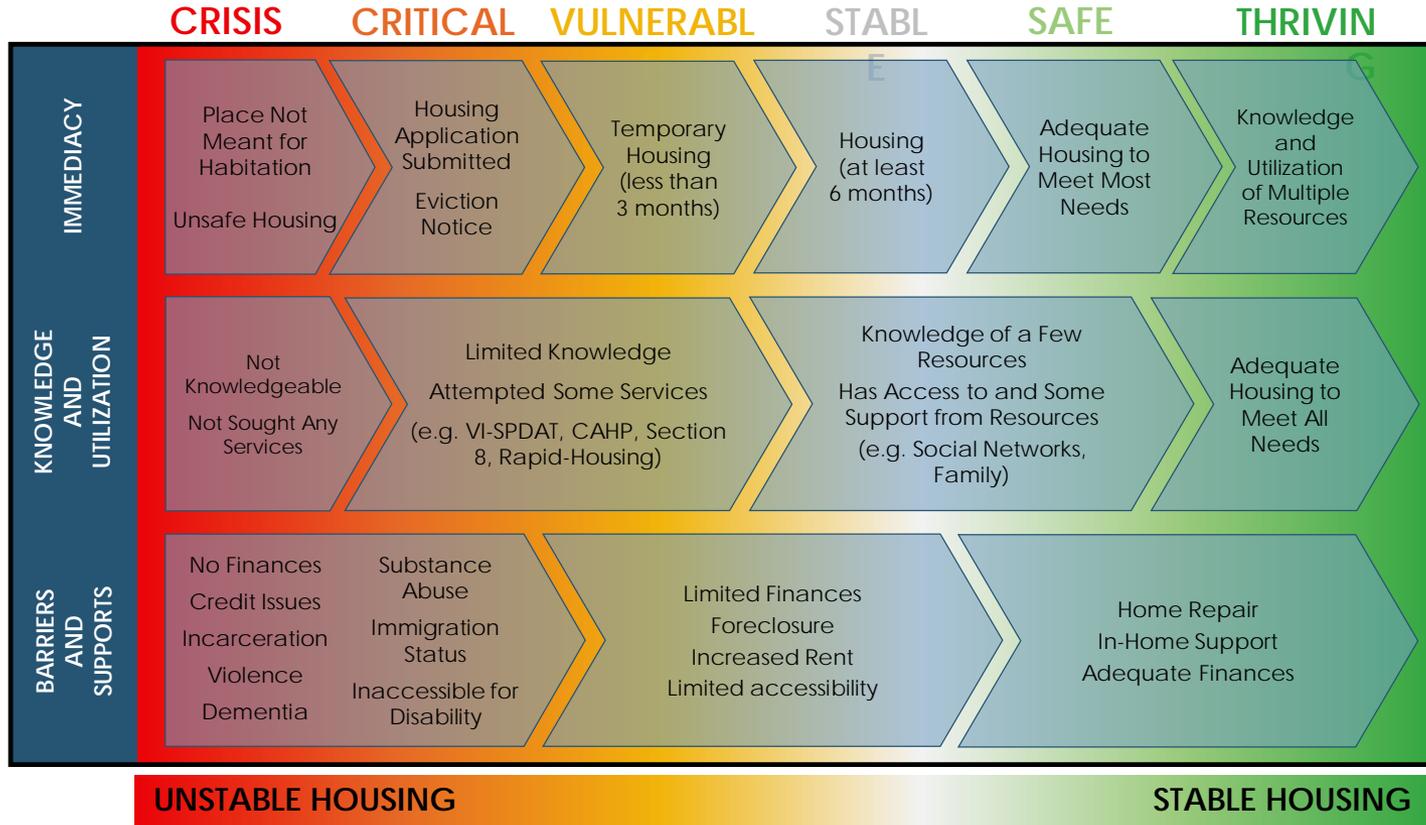
# Framework





# HOUSING STABILITY

Long-term safe and adequate housing that meets all needs with access to multiple resources and ability to access supports for long-term housing sustainability



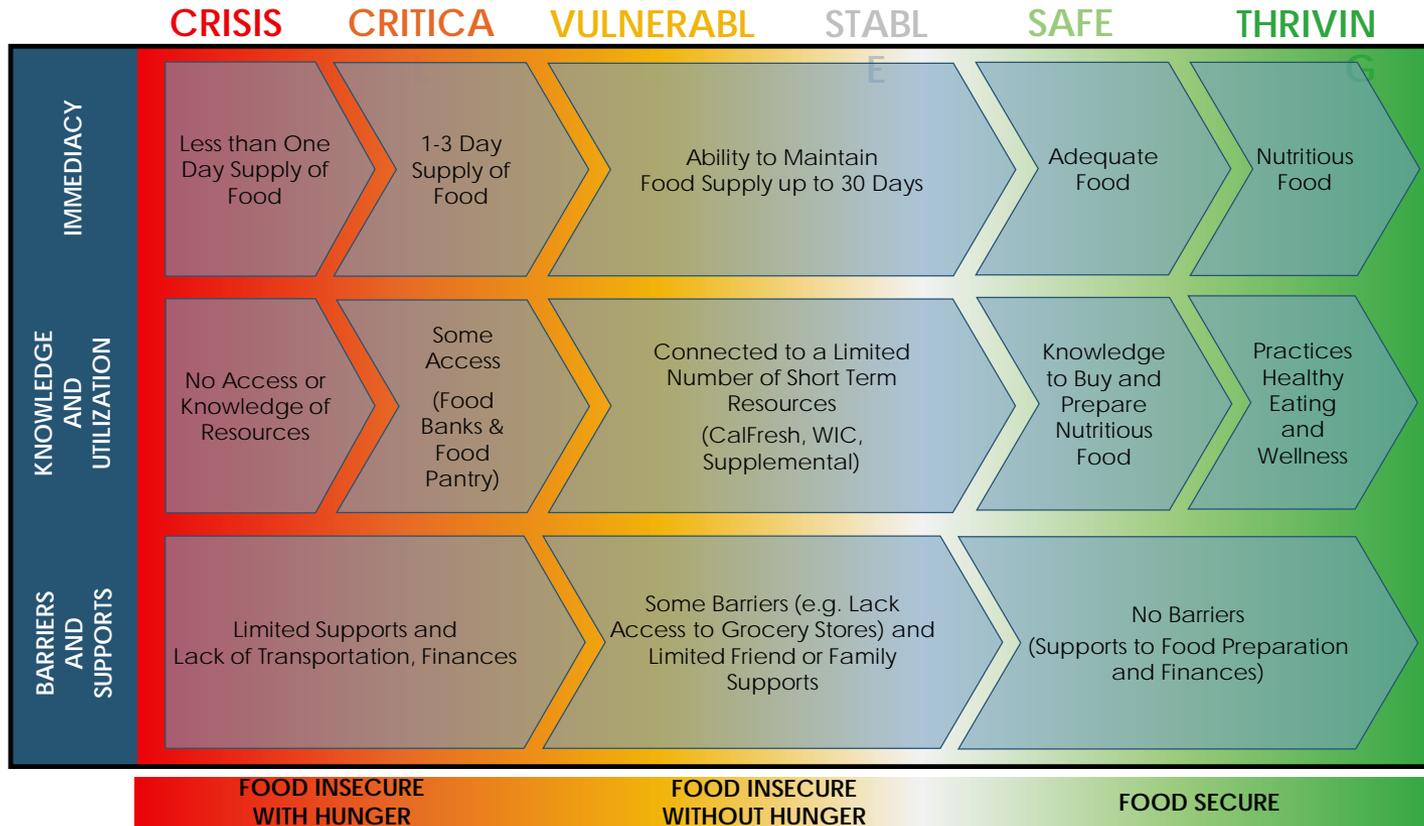
IN COLLABORATION WITH:





# FOOD & NUTRITION

Long-term and sustainable access to nutritious foods and to support services to maintain access



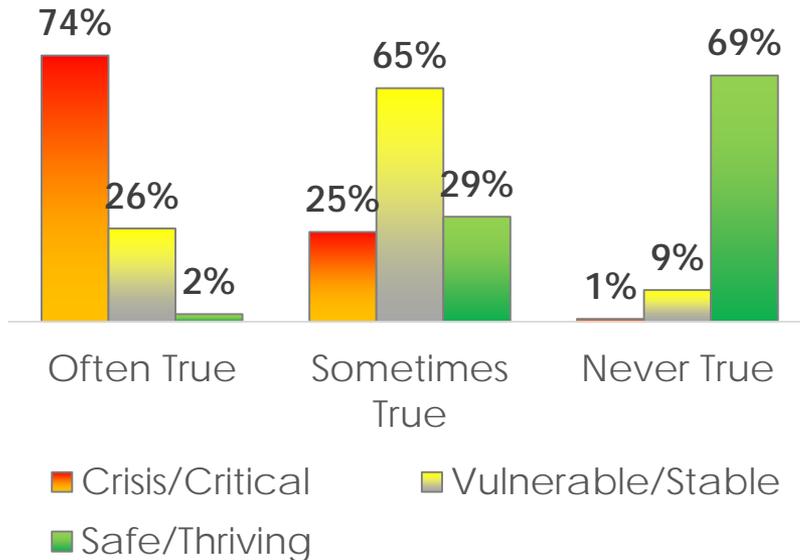
IN COLLABORATION WITH:



# Nutrition Assessment Example

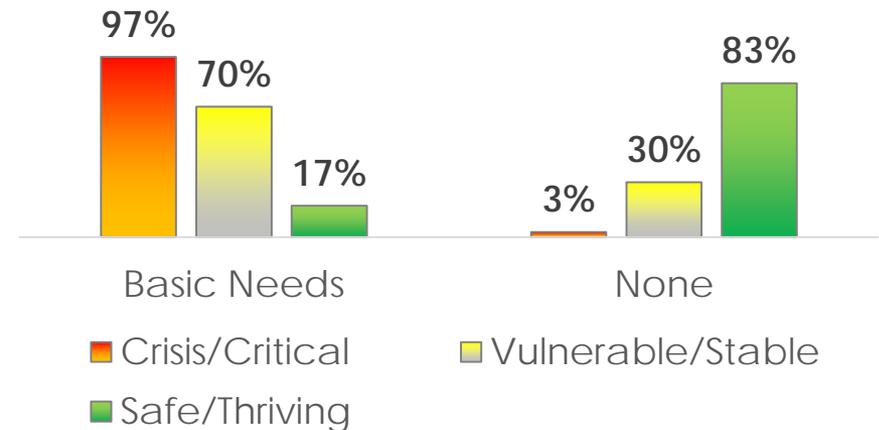
## Concern Over Food Supply

How often are clients worried that food would run out?



## Decisions between Food and Other Needs

Do clients choose to meet other needs before nutritional needs?



# Preliminary Findings in Change Over Time

## What does decreased vulnerability mean for clients?

- Reduced the rate of clients often concerned with food supply from 45% to 33%.
- Increased access to resources by 49%.
  - Connected clients to SNAP applications, food banks and other emergency food options, WIC, and congregate meals.

**6%** of clients initially in a Safe or Thriving risk level decreased vulnerability

**37%** of clients initially in a Vulnerable or Stable risk level decreased vulnerability

**71%** of clients initially in a Crisis or Critical risk level decreased vulnerability



NUTRITION ASSESSMENT

# Lessons Learned

1. Bridging the gap between research based assessment tools and practical applications requires input and validation from multiple sources.
2. Seek partnership opportunities with other organizations to replicate and expand Risk Rating Scales to other settings.
3. Building assessments requires an Agile process, recognizing the need for continuous improvement and enhancements based on learning.
4. Generate more rigorous research grants to develop stronger outcomes and contribute high-quality research to the field.