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AllianceChicago



AllianceChicago Network

72

Safety-net Organizations

400+

Delivery Sites of Care

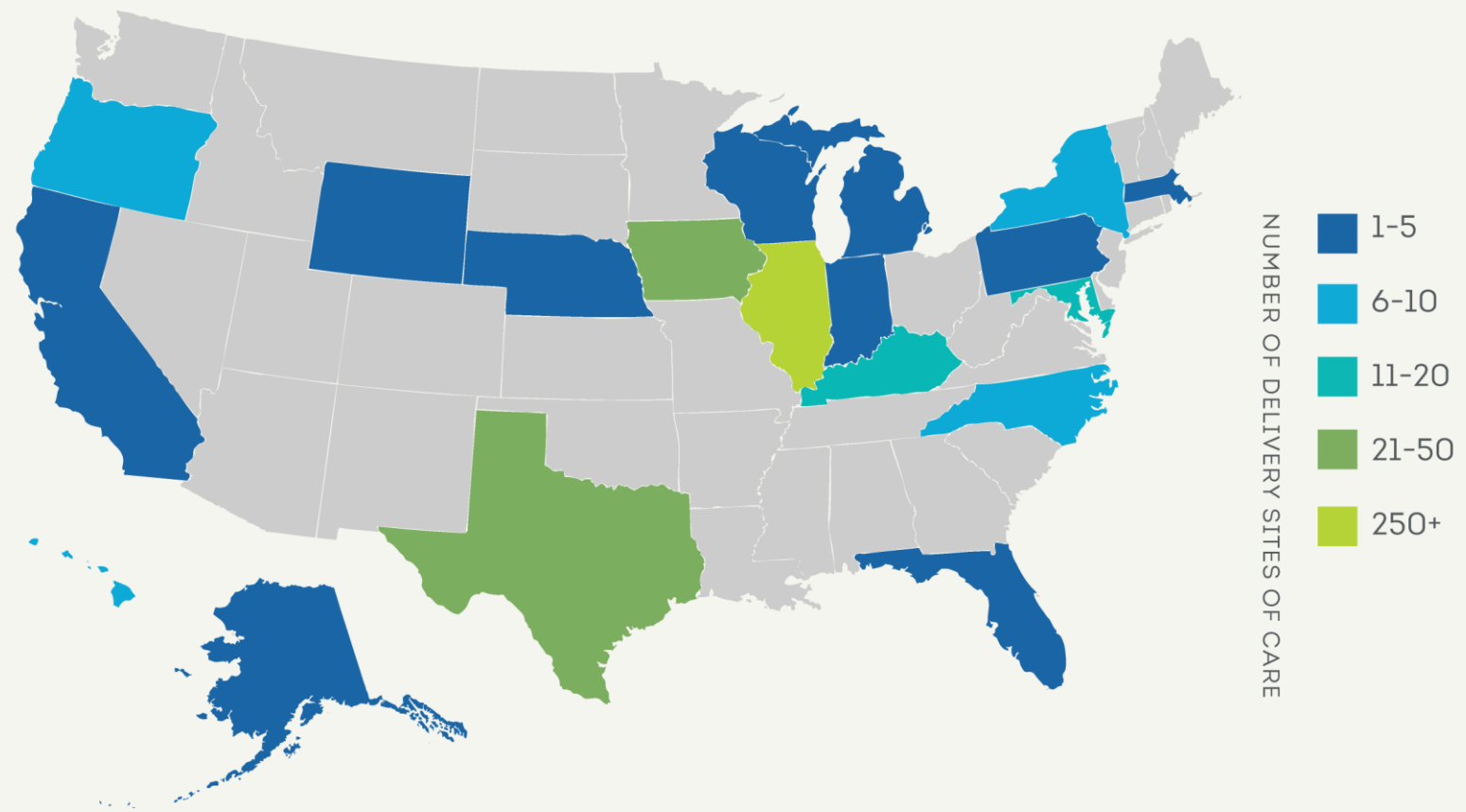
Providing
Services in

19

States

3.6+
Million

Unique Patients



Our Mission

To improve personal, community, and public health through innovative collaboration.



What We Do

Health Care Collaboration

Hosted over **50** virtual events for learning and best practice sharing

Broadcasted our first virtual conference with **46** educational sessions, in partnership with Health Choice Network

Led a large-scale **7**-Health Center Network cohort survey to initiate the ARCH Collaborative to improve use and satisfaction of the EHR

Health Information Technology

Developed **396** Clinical Content updates to athenaPractice

Maintained an average EHR hosted uptime of **100%**

Captured **3,707,443** unique patient lives from **35** health centers

Health Research & Education

Led **43** active research projects

Engaged **32** health centers in research

Published **12** research manuscripts

Disseminated research findings through **12** presentations

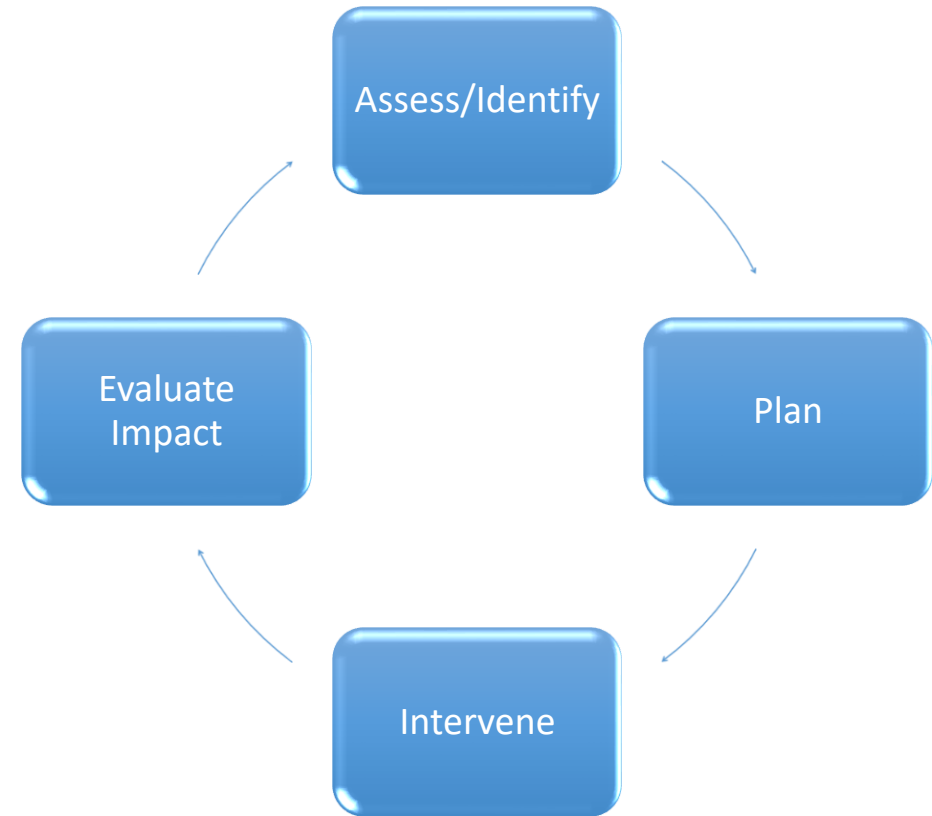
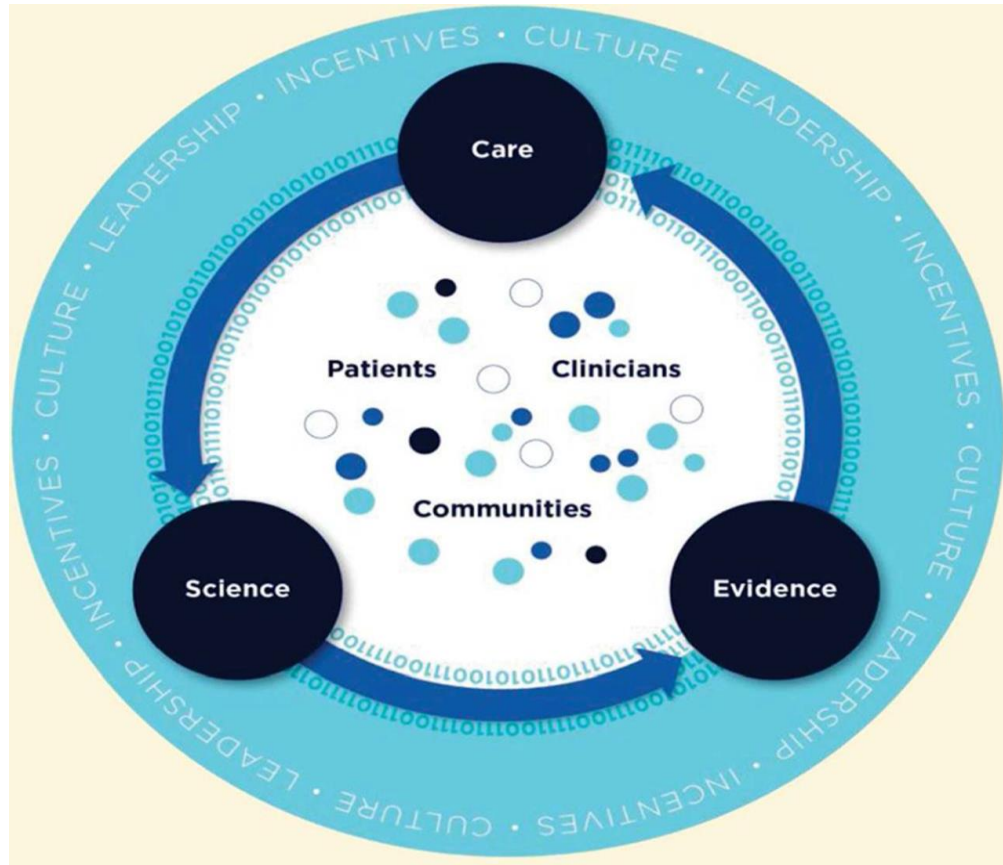
5 Things we know about Health Equity

- Health Equity is influenced by the design of policies & the implementation of program/services
- Medical Care is insufficient for ensuring better health
- New Payment Models are prompting interest in the role of SDOH
- Frameworks for integrating social care into healthcare are emerging
- Health Information Technology adoption and standards are critical to support the integration of social care

5 Things we need to learn

- How do we collect and analyze comprehensive health equity related data to inform the design and delivery of health & social care
- What (new) data and technology solutions are needed – EHRs are necessary but not sufficient
- How to build multisector partnerships for data sharing
- How to prioritize and integrate intersectoral interventions necessary to positively impact Health Equity
- How to intervene without “medicalizing” SDOH

Learning Health System

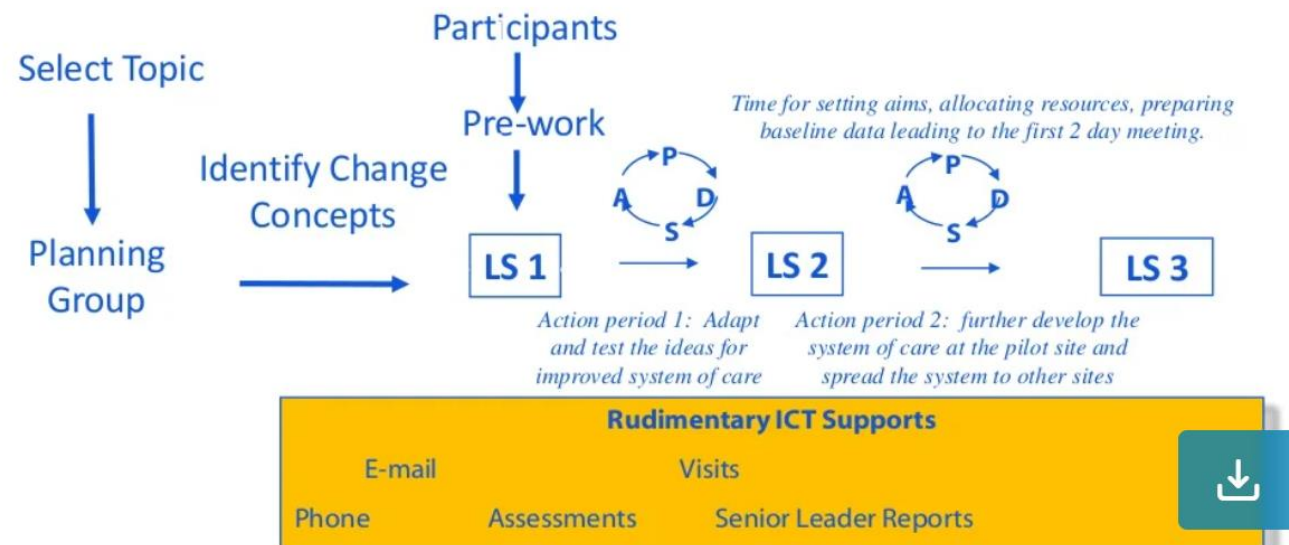


Assess/Identify

- Patient reported information is highly valuable, however difficult to gather (time/effort to collect, data standards, availability)
- Many data collection efforts focus on patients that present for care and frequently overlook those that are “healthy”
- Data standards have been developed (and more are under development) for SDOHs, however there are heterogenous and sometimes conflicting policy & regulatory standards related to the collection and use of SDOH data
- Physical, environment and behavioral factors have a significant impact on outcomes, however current assessment efforts are mostly focused on understanding social factors

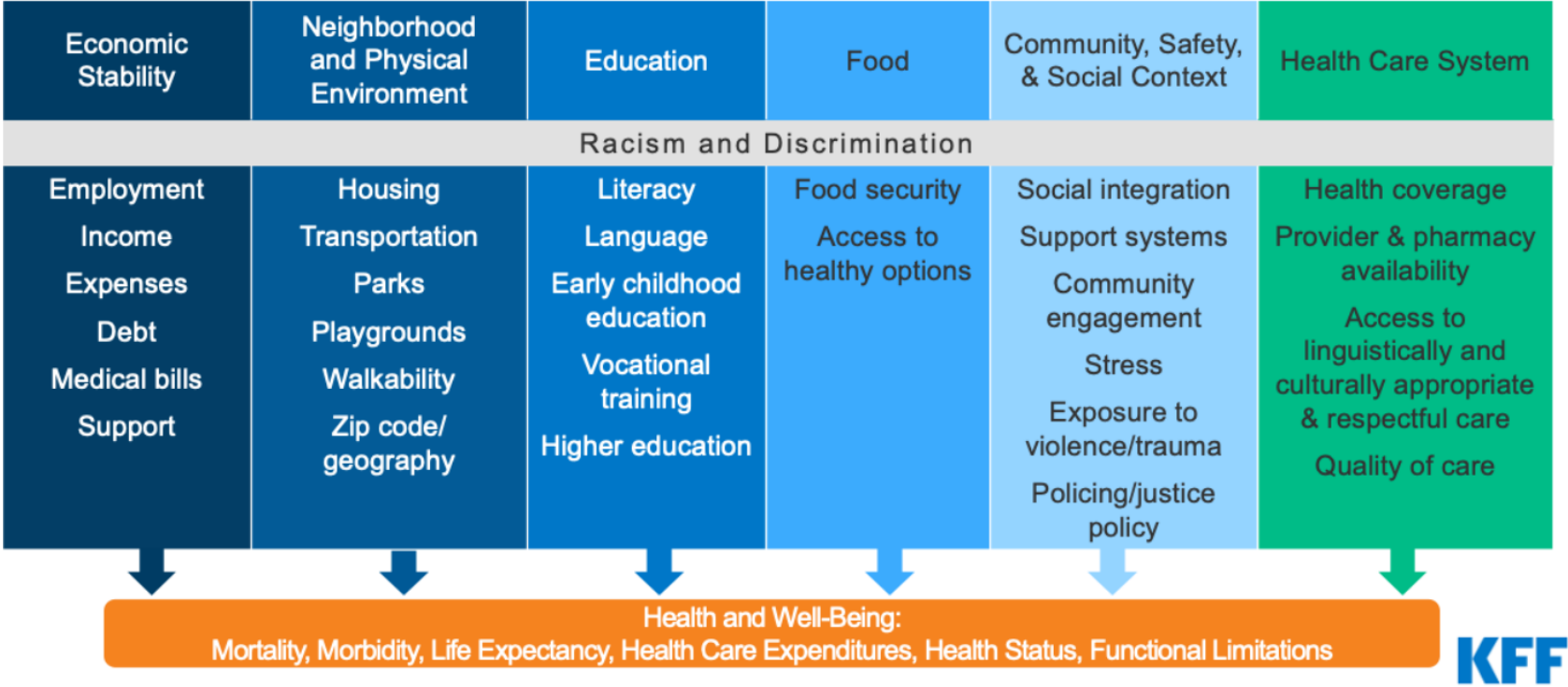
CHCs & Health Disparities Collaborative

HRSA Health Disparities Collaboratives added ICT support to learning process – as key needed infrastructure (1998)



CHCs should develop an approach to assess patients for social care needs and implement “enabling services” to mitigate social and economic risk impacting health outcomes

Health Disparities are Driven by Various Factors



Source: [Disparities in Health and Health Care: 5 Key Questions and Answers](#) | KFF



Health Data Infrastructure







Clinical Decision Support
as a Service

Housed at the City of
Chicago

	YEARS	RECORDS	VARIABLES	OWNER
Blood Lead Level	1995 - Present	2,700,000	First name, last name, date of birth, address, blood lead level, sample type, sample date	CDPH Lead Program
Home Inspection Records Summary	1989 -Present	66,000	Date of initial inspection, lead based paint hazard (yes/no), location of lead-based paint hazards (interior/exterior/both/), date complied, address	CDPH Lead Program
Women, Infants and Children Demographics	1994 - Present	180,000	First name, last name, date of birth, address, sociodemographics	CDPH WIC Program
Building Permits	2006 - Present	400,000	Address, issue date, permit type	Chicago Department of Buildings (Chicago Data Portal)
Building Violations	2006 - Present	1,500,000	Address, violation Date, violation description, violation ordinance, inspection status	Chicago Department of Buildings (Chicago Data Portal)
Building Footprints	2015	800,000	Year of building construction, physical condition, number of units, stories (floors), vacancy status	Chicago Department of Buildings (Github)
Cook County Assessor	2013	800,000	Address, assessed property values, building classifications, building characteristics	2014 Cook County Assessor
Chicago Census Boundaries	2010	800	Shape File	Chicago Data Portal
Chicago Ward Boundaries	2015	50	Shape File	Chicago Data Portal
American Community Survey	2005 - 2014	800	Census tract variables including socio-demographics, education, health insurance, home ownership.	US Census Bureau
Frequently Occurring Surnames from Census	2000	150,000	Census surname ethnicity	US Census Bureau

Clinical Decision Support Tool

The screenshot shows a web-based interface for a 'Lead Screening Risk Assessment'. At the top, there's a header bar with the title 'Lead Screening Risk Assessment' in a purple box, and two input fields: 'DOB: 09/21/2018' and 'Patient Age: 11 Months Old'. Below the header, a section titled 'The Chicago Assessment for Lead Risk' contains a descriptive paragraph and a 'Run Risk Analysis' button. The main area is divided into two columns. The left column has 'Previous Risk Recommendation' and 'Previous Comments' sections. The right column has 'Today's Recommendation' and two 'Comments' sections. The 'Previous Risk Recommendation' shows a 'HIGH RISK' status with a referral to the Chicago Department of Public Health. The 'Today's Recommendation' also shows a 'HIGH RISK' status with a similar referral. The 'Previous Comments' section is empty. The 'Today's Recommendation' section shows a 'HIGH RISK' status with a referral to the Chicago Department of Public Health. The 'Comments' sections are empty. At the bottom left, there's an 'Actions Taken' section with four checkboxes: 'Visual Lead Inspection', 'Patient education handout given to patient/parent', 'No further follow-up indicated', and 'Lead level to be drawn'.

Lead Screening Risk Assessment DOB: 09/21/2018 Patient Age: 11 Months Old

The Chicago Assessment for Lead Risk

The Chicago Assessment for lead risk is to predict risk of lead exposure for children <1 year of age. The decision support is intended to identify infants and pregnant women whose household are at risk for lead

Run Risk Analysis

Previous Risk Recommendation

HIGH RISK: Refer for lead paint visual home inspection to Chicago Department of Public Health at 312-747-LEAD(5323) (06/10/2019)

Today's Recommendation

HIGH RISK: Refer for lead paint visual home inspection to Chicago Department of Public Health at 312-747-LEAD(5323)

Previous Comments

Comments:

Comments:

Actions Taken:

- ☐ Visual Lead Inspection
- ☐ Patient education handout given to patient/parent
- ☐ No further follow-up indicated
- ☐ Lead level to be drawn

- The predictive model is built into an EHR-based Clinical Decision Support (CDS) tool.
- The CDS can alert providers to the risk of lead exposure in a clinical setting.
- The tool provides recommendations regarding the need for visual home inspections and patient education on lead abatement strategies.

SDOH Interoperability

- AllianceChicago to partner with HL7 to pilot the newly developed FHIR IG for SDOHs
- FHIR resources referenced in the SDOH Clinical Care FHIR IG STU1 that are not included in USCDI V2 and the US Core FHIR IG
 - Consent
 - Observation (Questionnaire Response)
 - Task

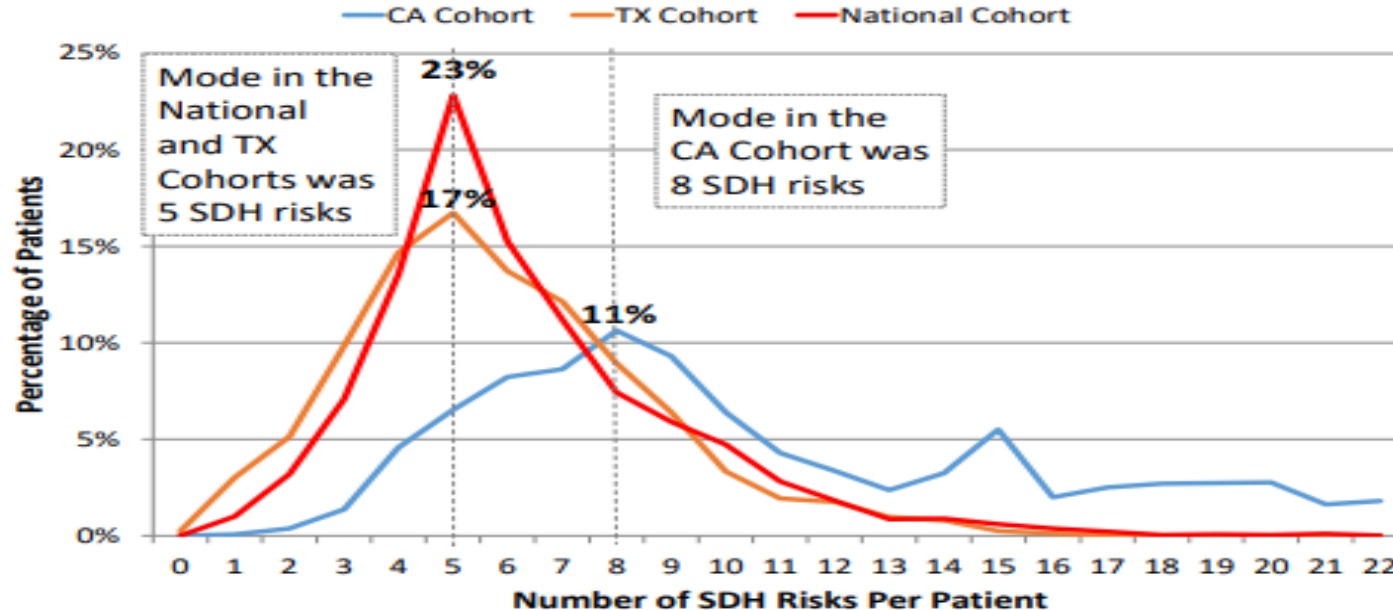
Source: [HL7.FHIR.US.SDOH-CLINICALCARE\Home Page - FHIR v4.0.1](https://hl7.org/fhir/us/sdoh-clinicalcare/home)

Plan

- Prioritizing the information from screenings/assessments are difficult as patients often have multiple concerns
- A Patient-centered, multisector, sharable plan of care is essential
- A longitudinal, dynamic, and event driven plan of care is needed
- Multisector coordination of care planning are necessary including synchronization of other health-related public benefits programs (e.g., WIC, TANAF/SNAP)
- Expansion and harmonization of the IT Infrastructure among social care and community providers is necessary to support multisector data sharing and coordination of interventions

Average # of SDOH Risks Per Patient

Distribution of Patients by Total Number of SDH Risks Across PRAPARE Cohorts



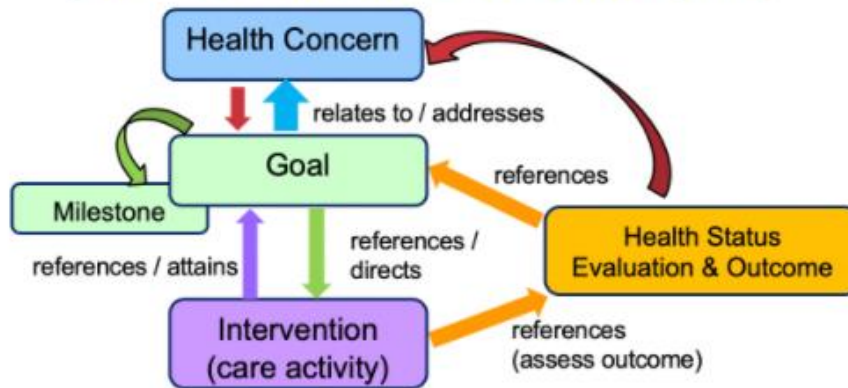
[Source: Collecting SDOH in the Clinical Setting - Findings from the National PRAPARE Pilot 2019.pdf](#)

Nursing Care Plan (NCP)

- The initial concept of the Nursing Care Plan was documented in the early 1930s by
- The proposed care plan included information on all of the family members, their current health status, socioeconomic information, housing conditions, nationality, as well as social and emotional health status
- Today five required components the NCP are 1) assessment, 2) expected outcomes, 3) interventions, 4) rationale for interventions and 5) evaluation of the impact/outcomes of the plan

FHIR Care Plan

The 4 cornerstones of a care plan



Content:

- Health concern(s)
- Health goal(s)
- Activity/intervention
- Progress/outcome and more ...

Dynamic behavior:

- Machine assisted care coordination

Vision Today

Corresponding FHIR standards:

- Care Plan
- Condition
- Goal
- Request-type resources
 - ServiceRequest, MedicationRequest, etc.
- Observation
- Questionnaire & Response

Source: HL7 Patient Care Work Group "Care Plan Standards Overview for ONC" April 19, 2017

Intervene

- Lack information on which social care interventions have the most impact on health equity
- Broaden HIT policy and regulatory efforts to include the growing direct to consumer HIT marketplace
- Ensure direct to consumer HIT mediated program/services are credible and ethical
- Efforts to improve Digital Health Literacy are important to ensure equitable technology-enabled healthcare

Broadband Access

According to the tests collected,

65% (1,362)

of counties are **experiencing the internet at levels below the FCC's definition of broadband** including:

77%

of all **small** counties

51.5%

of **medium** counties

19%

of **large** counties

Source: <https://www.naco.org/resources/featured/understanding-true-state-connectivity-america>

Digital Health Literacy

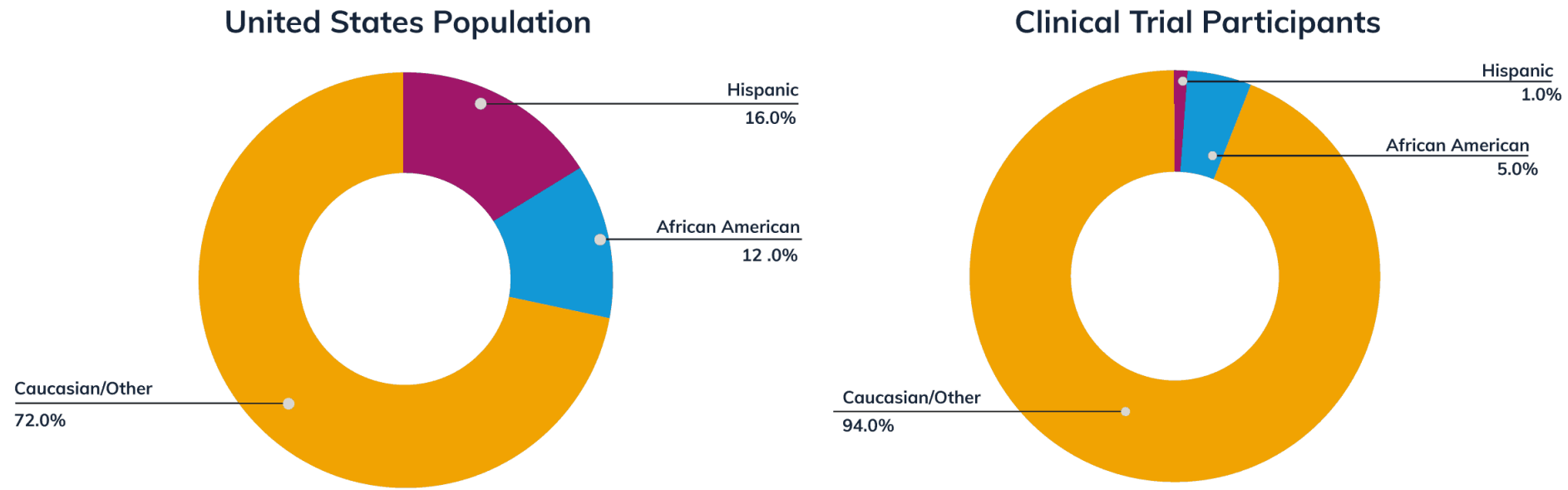
The Infrastructure Investment and Jobs Act will improve access to broadband services, however the effort won't be effective if people can't use online application

- Invest in the development of digital health tools that address the needs of diverse populations (age, races, ethnicity, gender, sexual orientation, primary language, and socioeconomic)
- Track digital health access and usage across sociodemographic populations
- Develop a robust infrastructure to support the use and optimization of digital health tools which account for varied digital literacy levels
- Support multidisciplinary workforce training programs that promote the use of digital health tools with diverse patients and consumers

Evaluation

- Support investments in the further generation of scientific knowledge relative to digital health, health literacy, and multisector interventions
- Promote policy and standards to address bias in machine learning algorithms which can perpetuate health disparities
- Intensify efforts to increase the diversity of individuals involved in community engaged research and evaluation

Underrepresentation in Clinical Trials



Source:

<https://www.sciencedirect.com/science/article/pii/S0146280618301889>

Equitable Learning Health System

- Expand IT policy and standards to increase availability and use of heterogenous, multisectoral data
- Support the development of information technology to encourage the coordination of intersectoral care planning and intervention
- Promote the development of community-based training programs to optimize the use of digital health tools which account for varied digital literacy levels
- Intensify efforts to increase the diversity of individuals involved in community engaged research and evaluation



THANK YOU

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