CIE San Diego & National CIE Movement

Community Information Exchange

2-1-1 SAN DIEGO/IMPERIAL

What is a Community Information Exchange?

"A Community Information Exchange (CIE) ® is a community-led ecosystem comprised of ***multidisciplinary network partners*** *using a* ***shared language****, a* ***resource database****, and* ***integrated technology platforms*** *to deliver enhanced* ***community care planning****. A CIE enables communities to have* ***multi-level impacts*** *by shifting away from a reactive approach towards* ***proactive, holistic, person-centered care****. At its core, CIE centers the community to* ***support anti-racism and health equity****."*

Core Components

Community Stewardship

A CIE must be led by the community through a neutral convener, backbone organization or leadership structure that ensures engagement of community voice, considers the human perspective in all aspects of system design, and promotes shared power and partnership within the network. This governance infrastructure ensures data stewardship, collection and use that meets ethical standards and shares value with community members who institutions have traditionally benefited from.

Multi-Level Impact

The role of a CIE is to support the needs of the individual/family (micro), across organizations and institutions (mezzo) and the larger community (macro). A CIE is responsible for sharing and using data to highlight inequities as well as understand improvement in needs met. CIE data should be used to design community-level interventions as well as inform community-level investment and policy. Locally, a CIE inspires movement with the goal of systems change, rather than solely addressing needs of individual organizations.

Person-Centered to Community Autonomy

Centering individual and family goals, motivations and urgencies is core to a CIE. This person-centered focus prioritizes meeting the needs of the individual and family, rather than the institutions or organizations that serve them. A CIE reimagines the way care is provided and supported through a comprehensive, informed, culturally competent approach that creates space for agency and advocacy. The CIE leverages human-centered design practices and embraces learning and iteration to ensure systems are adaptable to ever evolving community needs, thus supporting community autonomy.

2-1-1 San Diego / Imperial

- National 3-digit dialing code
- Free, 24/7 service, 3-digit dialing code
- Access to community, health, social and disaster services
- Local, manage resource database of services and relationships with CBOs
- Part of United Ways or separate 501c3

Community Information Exchange

- Systems change that fosters true collaboration across networks
- Moving towards person-centered interventions and interactions across healthcare and human services
- Goal is to improve health and wellness for individuals and populations

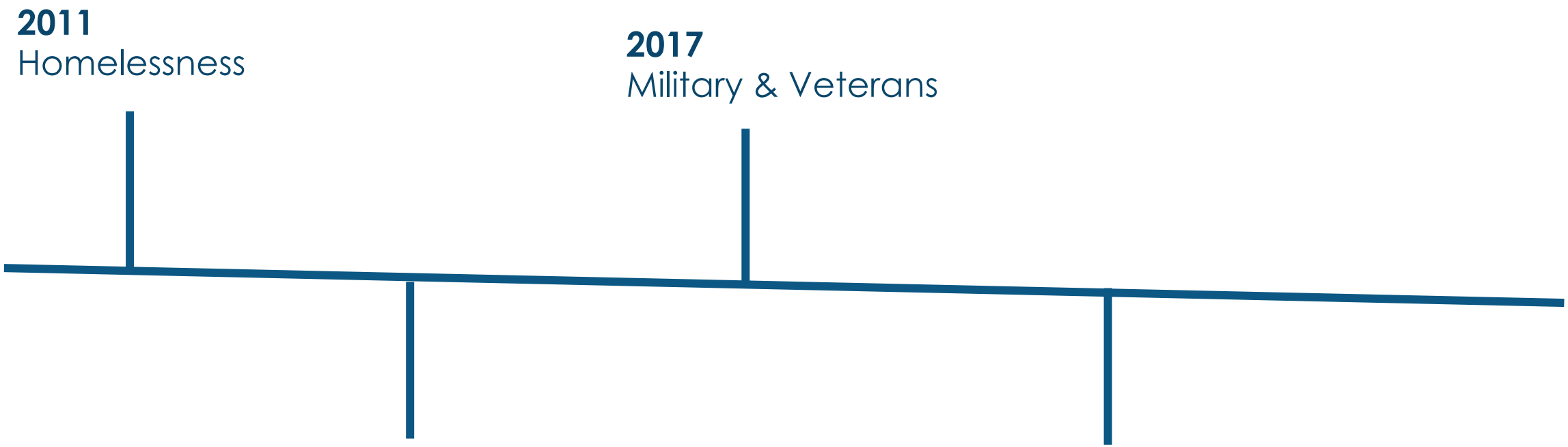
How did CIE start?

Use Case: Better care coordination via data sharing for people experiencing homelessness

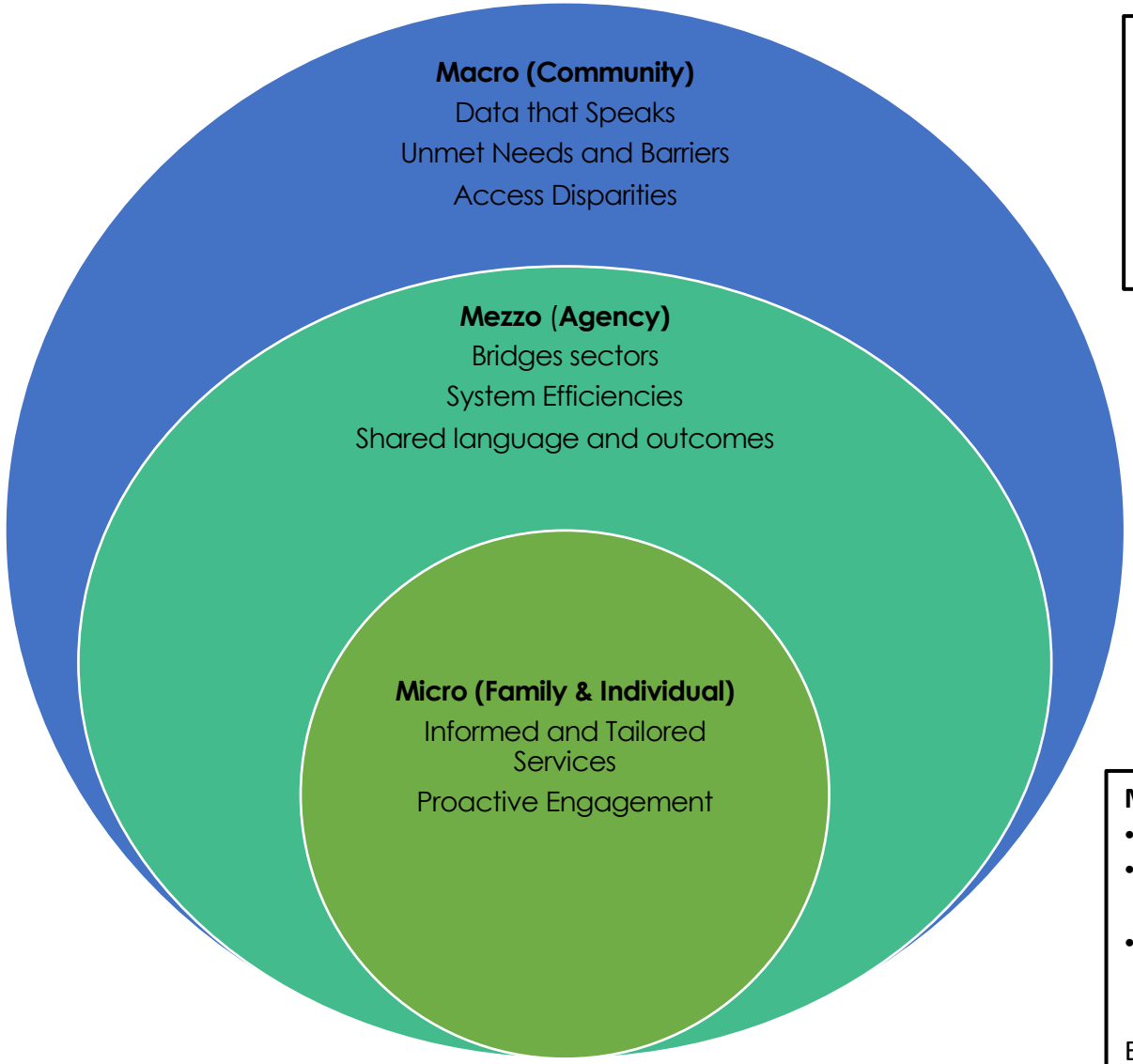
Partners:
Emergency Medical Services
Homeless Shelter
Hospital
Public Safety
Regional Taskforce on Homelessness (HMIS)

- Since January 2011, 13% of San Diegans who most frequently accessed local hospitals & crisis facilities had died
- From 2000-2003 529 San Diegans amassed 3,318 visits and $17.7 million in charges at two local hospitals
- High cost/high need people routinely receive lower quality care due to lack of integrated health & social services

Evolution of CIE



Micro to Macro Value



Macro Impact Examples:

- Collective aggregate community data that is provided by community members
- Wholistic data is collected, understanding connection between health and social

Link to Housing Policy Brief

Mezzo Impact Examples:

- Breaking down of siloed data systems
- Ability to search patients/members to see historical use of social services and closed loop referrals
- Shared screening or prioritization of resources and care team members receive alerts to be proactive or responsive

Link to COVID-19 Response

Micro Impact Examples:

- Families don't have to retell their stories or trauma over and over again
- Agencies can reach out directly, instead of adding additional work on the person to follow-up with the agencies for support
- Care gets coordinated within the individual having to remember who they are working with

Example Cohorts: Homeless Older Adult

Community Information Exchange

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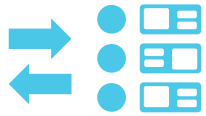
CIE Core Components

Network Partners

Collective approach with standard Participation Agreement, Business Associates Agreement and participant consent with shared partner governance, ongoing engagement, and support.

Shared Language (SDoH)

Setting a Framework of shared measures and outcomes through 14 Social Determinants of Health Assessments and a Risk Rating Scale: Crisis, Critical, Vulnerable, Stable, Safe Thriving



Bidirectional Closed Loop Referrals

Updated resource database of community, health, and social service providers. Ability to accept/return referrals and to provide outcomes and program enrollment.

Technology Platform and Data Integration

Technology software that integrates with other platforms to populate an individual record and shapes the care plan. System features include care team communication feeds, status change alerts, data source auto-history and predictive analytics.

Community Care Planning

Longitudinal record with a unified community care plan that promotes cross-sector collaboration and a holistic approach.

Community Care Planning

Client Record Sample

Client Profile
- Demographic and important information about the client

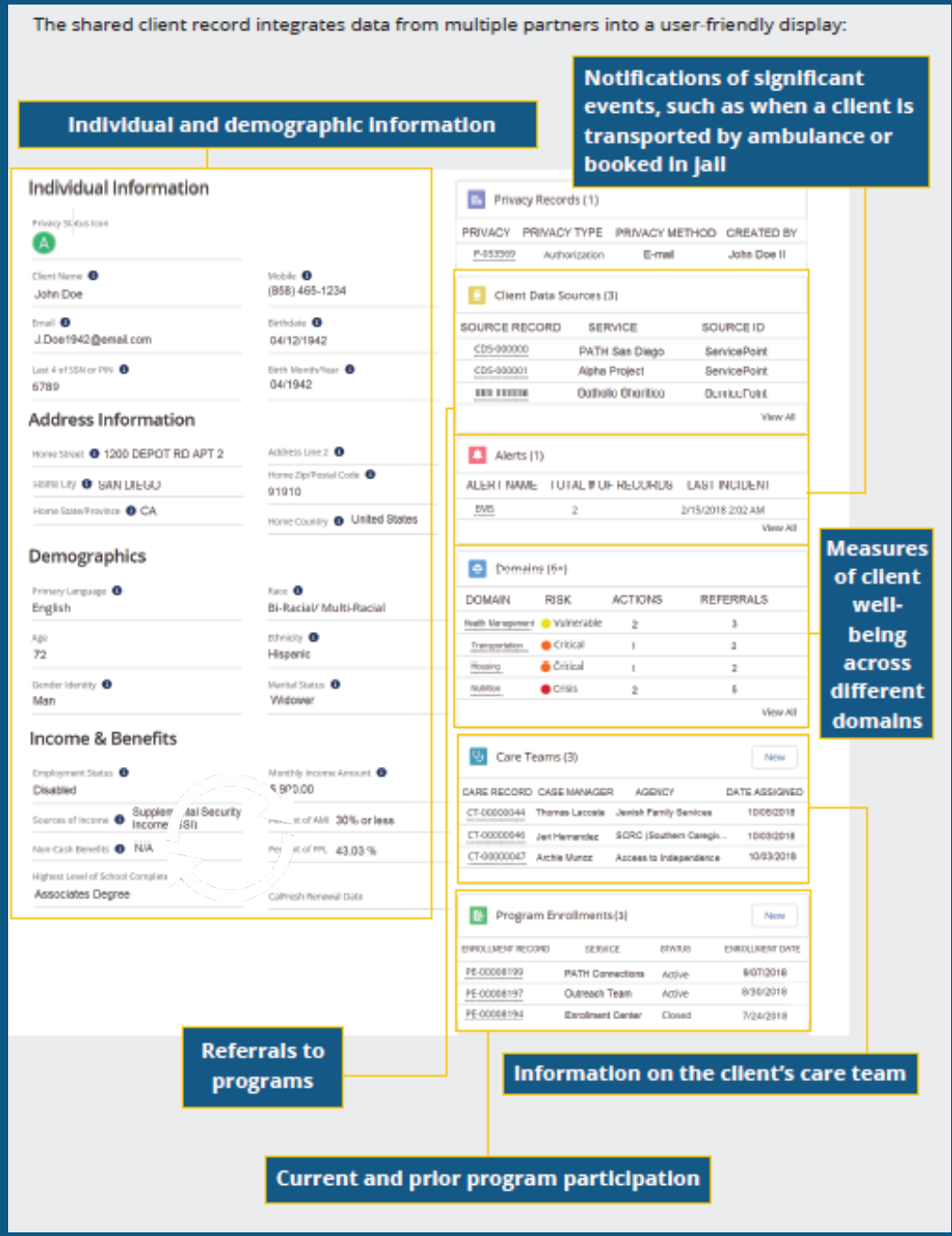
Domains
- Examples like Housing, Food & Nutrition,
- Categorization of Needs (SDOH) & Risk Level
- Shared Assessments and Values across agencies

Care Team
- Case Managers working with client across agencies
- Contact Information

Referrals & Program Enrollment
- Agencies or programs client is referred
- Connection to Services

Alerts
- Notification of emergency services & jail
- Ability to notify Care Team Members of changes

Feed
- Ability to communicate with Care Team members (twitter-like feed)



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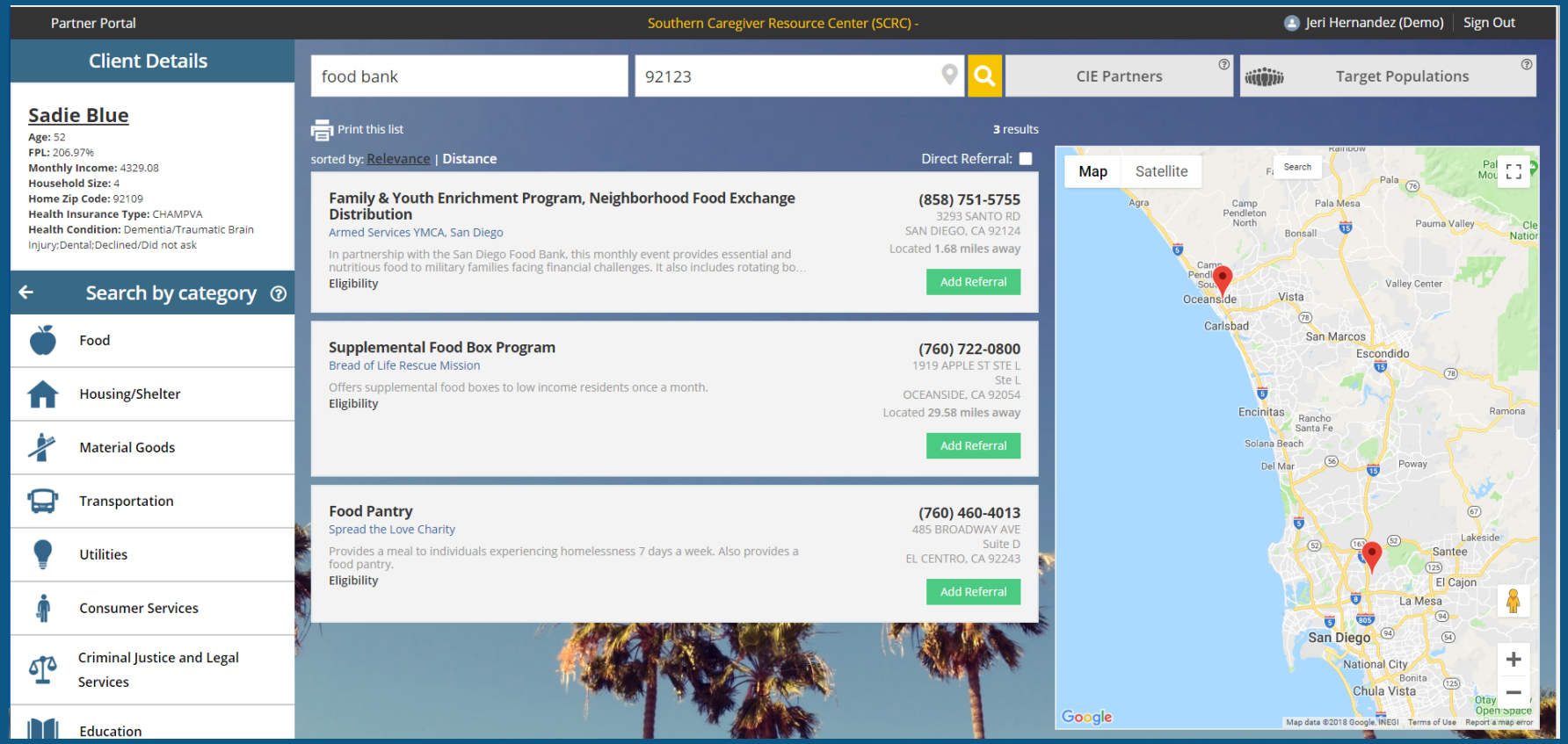
Resource Database and Bi-directional Referrals

Bidirectional Closed Loop Referrals



Agency makes referral to another Agency

Agency Referral Manager receives email and responds to referral

Accepts or Declines Referral

Outcome of Referral (Program Enrollment/Care Team)

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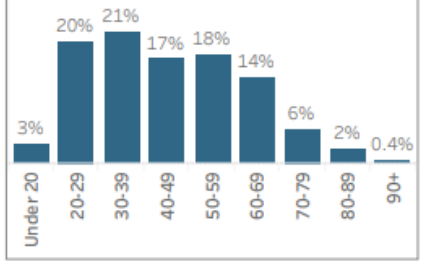
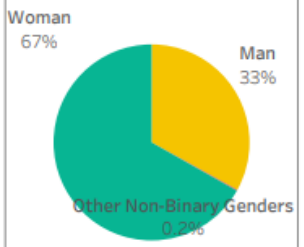
Aggregate Data for Macro Evalution

General Demographics

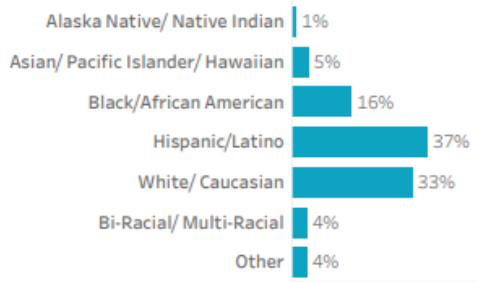
Age Group



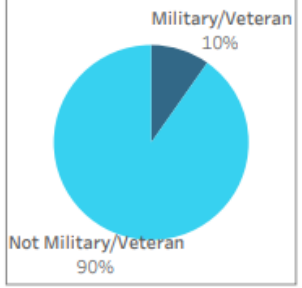
Gender Identity



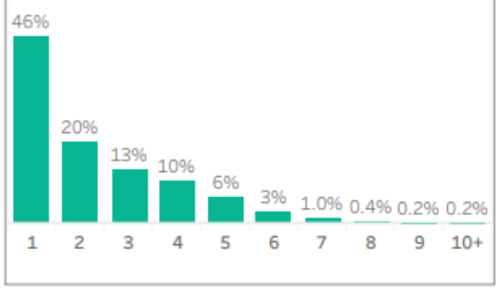
Race/Ethnicity



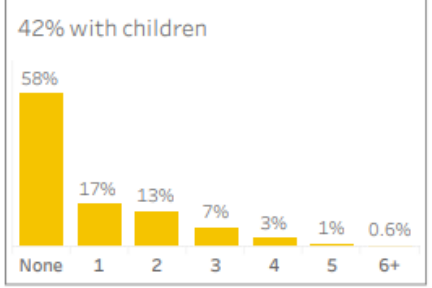
Military/Veteran



Household Size

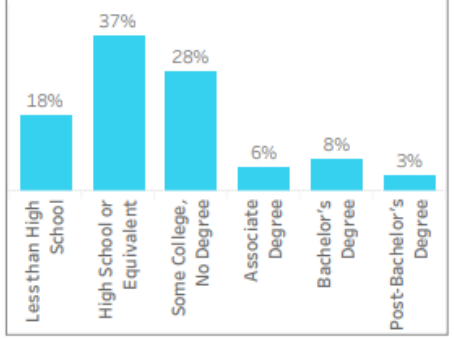


Number of Children

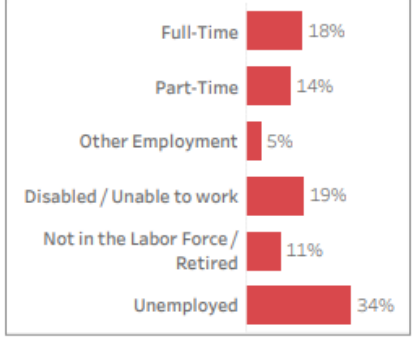


Socioeconomic Indicators

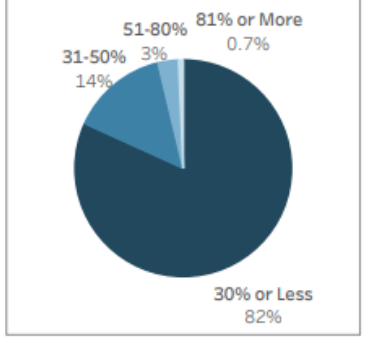
Education



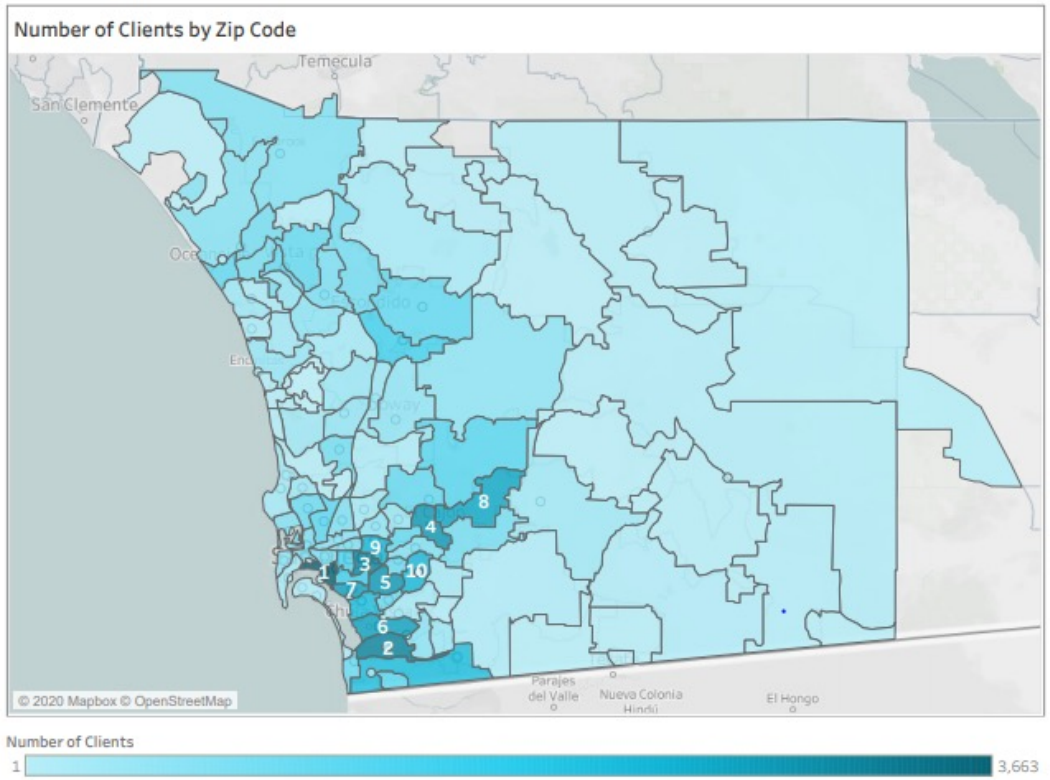
Employment



Area Median Income



Number of Clients by Zip Code



Number of Clients

1 — 3,663

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Measurement and Evaluation

CHCS Center for Health Care Strategies, Inc.

Connecting patients to needed social services can be challenging for health care providers, who are generally focused on clinical care. Additionally, they are often neither aware of the full range of community services nor have the capacity to refer and follow up with patients. Recognizing that social factors significantly impact health outcomes and spending, 2-1-1 San Diego developed the Community Information Exchange (CIE), a cloud-based platform that enables participating providers to better understand a client's interactions with health and community services. The CIE includes a social risk assessment tool, provides alerts, and facilitates connections across multiple agencies and providers. The rich client information collected through the CIE is also used to monitor community trends and address local challenges. 2-1-1 San Diego is actively engaging community partners to participate in the CIE in the hopes of improving care coordination and health outcomes for at-risk patients throughout San Diego.

Program At-A-Glance: Community Information Exchange (CIE) is an interactive data platform developed by San Diego 2-1-1 designed to allow multiple health and social service providers see a patient's interaction across systems, agencies, and community services.

Partners: San Diego 2-1-1 and 34 social service and health care providers, including federally qualified health care centers, and government agencies.

Goals: Improve care coordination for vulnerable patients through an online platform.

Partnership Model: Coordinated service.

Scope of Services: Referral support; secure, cloud-based platform; shared measures for social determinants of health; capacity for organizations to accept and return referrals.

Funding: Grants.

Impact: Among clients enrolled in the CIE, reduced number of emergency medical services trips and increased stable housing rates.

Background

2-1-1 San Diego, launched in 1997 by the United Way, is a free, confidential information and referral helpline

Advancing Community-Based Organization and Health Care Partnerships to Address Social Determinants of Health

Health care and community-based organizations (CBOs) across the country are increasingly working together to better address the root causes of poor health among low-income and vulnerable populations. To assist these efforts, there is a need to identify the financial, operational, and strategic considerations necessary to make these partnerships a win-win for all parties: consumers, the communities being served, health care providers, and CBOs. Through support from Kaiser Permanente Community Health, the Center for Health Care Strategies and Nonprofit Finance Fund collaborated to identify new strategies for advancing effective health care-CBO partnerships, building on work done under the *Partnership for Healthy Outcomes* project funded by the Robert Wood Johnson Foundation. This case study is part of a series highlighting diverse partnerships between CBOs and health care organizations.

Made possible through support from Kaiser Permanente Community Health.

NATIONAL HEALTH CARE for the HOMELESS COUNCIL

Community Information Exchange
Using Data to Coordinate Care for People Experiencing Homelessness: Addressing COVID-19 and Beyond
April 2020

WHAT IS CIE?

Community Information Exchanges (CIEs) are care coordination tools that bring together providers and data from the health and social services sector.[1]

While Health Information Exchanges (HIEs) focus on bringing health care providers from across a community together, this model builds on the idea for HIEs to incorporate cross-system partners.

Partners in a CIE can include hospitals, health centers, other primary care providers, social service providers, housing providers, and schools, among other community resources.[2]

Stages of Data Sharing:

No formal integration or coordination → Referrals but no formal coordination and data sharing → Coordinated team with informal but regular data sharing → Formalized cross-sector data integration (CIE)

HOW IS CIE USED?

CIE a response to growing awareness of the Social Determinants of Health (SDOH). After a health center provider screens for SDOH related needs, the community wide data system can be used to identify and connect individuals to other community resources.[3]

An integrated CIE allows for coordination with other health care providers, like an HIE would, but also connects to social service providers. This allows health center staff to identify where an individual is accessing other services and who could be considered part of the care team.

Data integration tools can be incorporated and linked to fields in the electronic health record (EHR), following HIPAA considerations, to help seamlessly sync health center workflow as part of the SDOH strategy.

In response to SDOH needs, health care providers, case managers and other enabling services staff then have access to information on available community resources, what resources someone has accessed, and can track follow-up on referrals to improve care planning incorporating SDOH.[1]

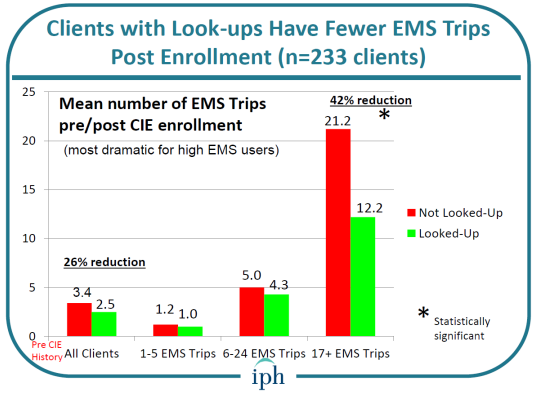


Figure 6. Total Number of EMS Transports in the 12 Months Before and After CIE Enrollment (n=464)

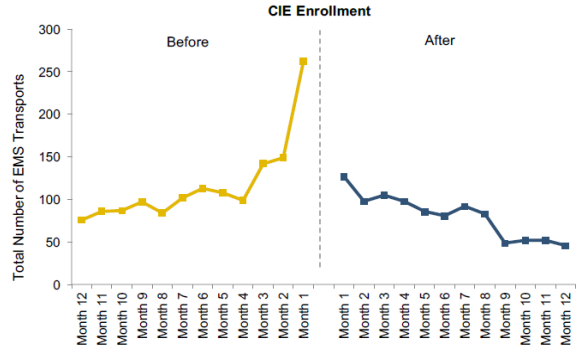
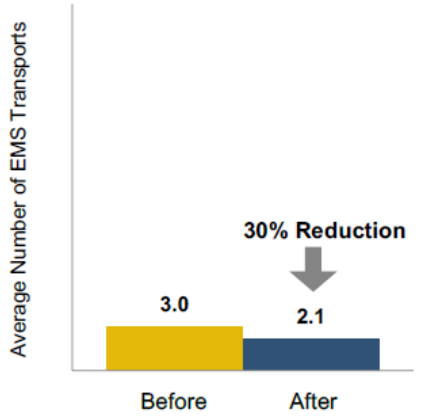


Figure 7. Average Number of EMS Transports Before and After CIE Enrollment (n=464)*



**Statistically significant difference (p<.05)*

Fewer EMS transports
+
Fewer ER visits
=
$1.3M in potential savings

HELP.

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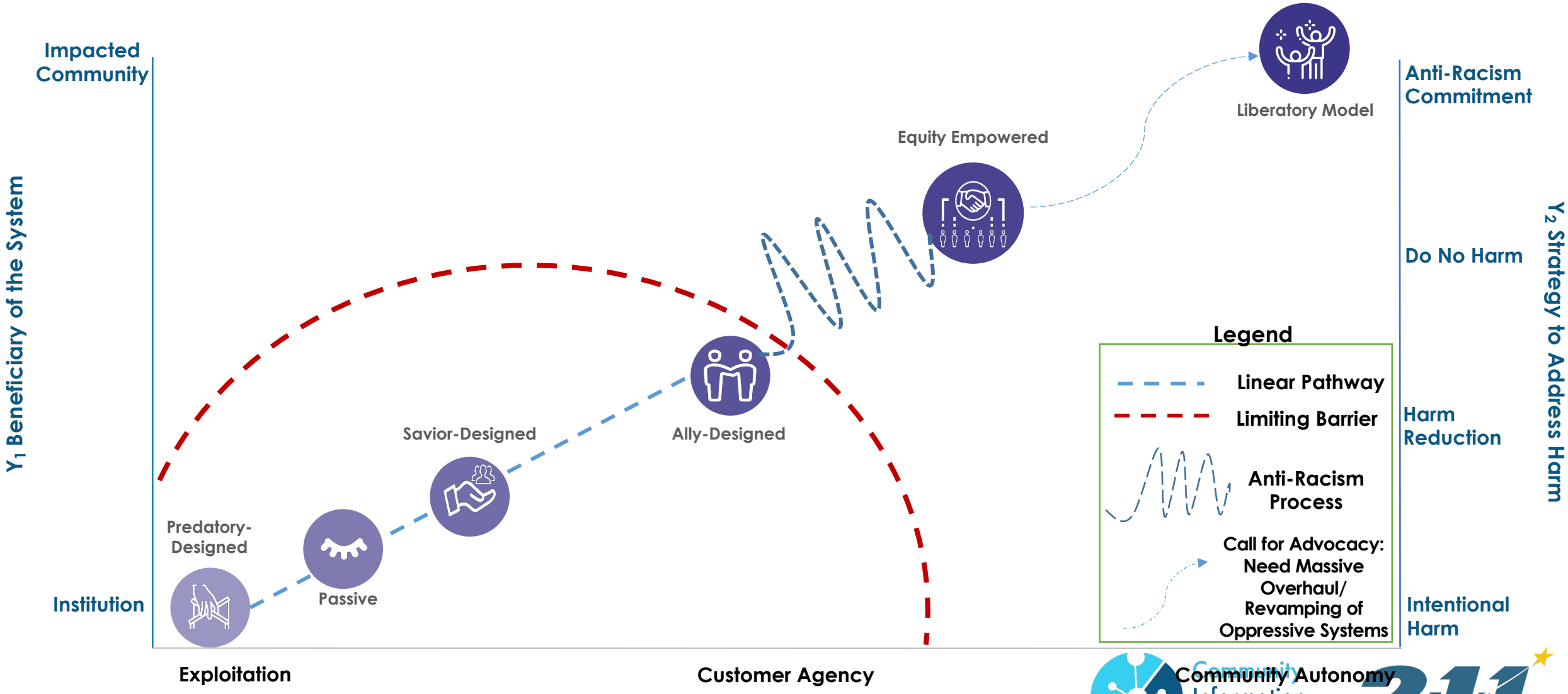
Landscape of Data System Design: Institutional Reflection



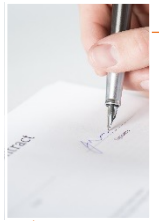
System types partially adapted from the National Institute for Children's Health Quality. https://www.nichq.org/insight/savior-designed-equity-empowered-systems

Data System Drivers

These 11 key components provide detailed descriptions of existing data drivers that will help institutions and organizations understand the differences between each system design and opportunities to move towards an anti-racist model.

DRIVER	DEFINITION
INFORMED CONSENT AND REFUSAL	Process in which someone's information is shared with others, and ability/inability to stop the use or sharing of information
POWER, SYSTEM DESIGN & GOVERNANCE	Core stewardship and decision-making of a CIE, including voices that are represented and influence the system of care
DATA STEWARDSHIP/COLLECTION/USE	Who leds and stewards the collection and use of data, and role with data analysis
ACCOUNTABILITY AND TRANSPARENCY	Responsibility/Role in which information is gathered, used, and shared to make change or influence decisions for individuals, across organizations, and with the larger community.
SECURITY (ROLE-BASED PERMISSIONS AND ACCESS)	The protection and partitions in place that delineates who sees specific types of information and how information is accessed
TECHNOLOGY AND INTEROPERABILITY	The tool(s) used to share information and its ability to integrate and exchange responsibly and ethically with other technology platforms.
SUSTAINABILITY AND MONETIZATION	Process in which technology and services are financed, the initial investment, cost-savings and who is benefiting/profiting, and re-investment.
SHARED LANGUAGE	Collective definition of comprehensive health and social needs through standards and best practices across systems of care, which could include the individual/family, and infrastructure to support the communication.
OUTCOMES/IMPACT and ADVOCACY	Significance of the impact on individual/family, institutions and community and role with advocacy.
CARE COORDINATION	Infrastructure and organization of how institutions and supports participate and the care for Individual/family.
NETWORK ENGAGEMENT	Role in which participating organizations, community members, institutions are engaged on quality improvement, workflows and shared learning.

Savior-Designed Type



CONSENT AND REFUSAL

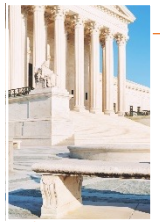
- Data is collected with standard consent through screenings or extraction-based methods; often as a pre-requisite for services; Data is shared for a specific timeframe with ability to revoke consent, but data is always kept.

DATA STEWARDSHIP /COLLECTION / USE

- Assumes the right to use data for justified means and often used to identify or diagnose needs. Often with good intentions but can still perpetuate harm through lack of shared data ownership with impacted community members. Data is used to meet goals set by institutional power.

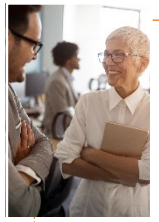
OUTCOMES/ IMPACT and ADVOCACY

- Measures and outcomes are determined by institutional power and benefit their population, often highlighting the deficits of the community or patient population) and can be used to perpetuate or reinforce systemic racism and inequities. Data may harm most impacted population.



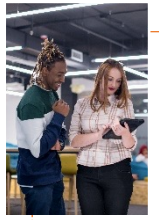
POWER, SYSTEM DESIGN & GOVERNANCE

- Institution driven governance model, with trickle down feedback from community members or community-based organizations. Design structure is based on deficit or risk and institution is "rescuing" those not in power.



ACCOUNTABILITY AND TRANSPARENCY

- Maintains only what is necessary in order to avoid legal and financial risks. Accountability structure is set by the institution solely; often puts onus on community to input data into system; community has no agency to hold institution accountable for misuse.

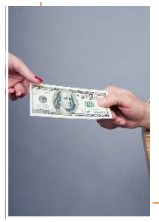


SECURITY (ROLE-BASED PERMISSIONS AND ACCESS)

- Access to data is partitioned based on standards of "need-to-know" access. These standards are set forth by industry or sector-based laws, policies and best practices.

TECHNOLOGY AND INTEROPERABILITY

- Maintain and apply standards set forth by industry or sector-based laws, policies and best practices. Inclusion policies are decided in the community's best interest but may lack impacted community input.

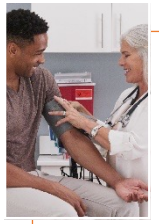


SUSTAINABILITY AND MONETIZATION

- Data is often used as cost-saving mechanism, no payment structure for CBOs or only through a medicalized care or administrative burden. Well-intentioned philanthropic or institutional investment that is dictated by priorities and the timeline of institutional power; investment discontinues if institutional goals are not met: no or limited community reinvestment; community does not participate in how reinvestment occurs.

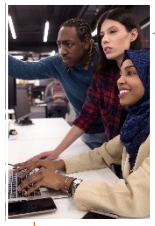
SHARED LANGUAGE

- Medicalization of Data (Screening and binary) With an aim to assist others, communication infrastructure, including language used, developed by and reinforced by institutions. Language makes assumptions about communities, often is not culturally relevant or appropriate, and paternalistic. Establishment of best practices set and verified by institutional power without community input.



CARE COORDINATION & AGENCY

- Assumption that referrals result in care coordination. Does not push or influence to shift status quo care coordination.



NETWORK ENGAGEMENT

- Institution determined engagement and focused on adoption of technology solution vs. community needs. Includes shifts in workflows to accept referrals.

Community Information Exchange

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Community Driven Approach to Care

- **Community Stewardship**
- Led by shared governance structure (Leadership at all levels)
- Informed by community needs

- **Community Ownership**
- Input from the community and orgs representing community
- Opt-in
- Community Access and Input (Advisory Board)

- **Tailored by Community**
- Based on community needs and customized by users
- Ongoing development, led by users

- **Integrated**
- One size does not fit all
- Goal is not to use one system, but integrated from multiple systems and data structures

- **Shared Power Infrastructure**