Community Information Exchange: Addressing Social Determinants of Health through Person-Centered Care

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211 History

Information and Referral (I&R) is the art, science and practice of bringing people and services together.

When individuals and families don't know where to turn, I&R is there for them.

1970
A program of United Way

1997
Atlanta launched the first 211
94.2% OVERALL COVERAGE

% of Population Covered* by 2-1-1 in Each State

Data produced by UWW and AIRS. June 2018

*Coverage is calculated by U.S. Census data
SAN DIEGO

- 5th largest U.S. County
- 18 municipalities
- 18 tribal nations
- 42 school districts
- Region is very diverse:
  - Over 100 languages
  - Large military presence
  - Largest refugee resettlement site in CA
  - Busiest international border crossing in the world
What We Know

Social influences greatly impact health
State of the Field

- Proliferation of Technology
- Awareness of the Social Determinants of Health
- Evolving Funding Environment
- Person-Centered Care
- Cross-Sector Collaboration
- Research and Policy Advocacy
**2003**
- **Alliance Healthcare Foundation** funds **Community Information Exchange**, a collaboration of public and private organizations.
- **UC San Diego** Beacon Community Program/HIE
- Father Joe’s Villages Regional Task Force on the Homeless Rural/Metro of San Diego (City Paramedic) San Diego Fire Rescue Department

**2009**
- **2-1-1 San Diego offers telephone signatures** for benefit applications (SNAP/Medicaid)

**2010**
- **UC San Diego** receives 1 of 17 national Beacon awards to build a Health Information Exchange (HIE)
- **2-1-1 San Diego** joins Live Well San Diego

**2014**
- **CIE launches pilot cohort** of homeless services providers sharing basic client demographic data.
- **2-1-1 San Diego expands Health Navigation** through hospital and clinic partnerships.
  - As 2-1-1 San Diego grew, agency leaders recognized traditional Information and Referral models did not provide a holistic view of a person’s interconnected health and well-being needs and put the burden on those in need to access services.
  - 2-1-1 San Diego began shifting services toward a person-centered approach with the launch of Health Navigation

**2017**
- **CIE launches second cohort** of senior service providers
- **2-1-1 San Diego launches SD United network** offering closed loop electronic referrals to target population of military and veterans.
  - Leveraging the work of the San Diego Veterans Coalition and the region’s Peer to Peer hub at Courage to Call, SD United is a care coordination network working to improve access for military and veteran families with enhanced collaboration

**1920**
- United Way of San Diego opens

**1974**
- United Way begins providing free, confidential information and referral services via a hotline

**2000**
- FCC approves 2-1-1 dialing code for nationwide use

**2004**
- 2-1-1 dialing code launches in San Diego

**2018**
- Relaunch of enhanced CIE offering network partners a shared language of assessments and Risk Rating Scale, resource database, and robust technology platform that supports data integration and community care planning with closed loop referrals

**2017**
- **2-1-1 San Diego launches** person-centered care with enhanced CRM with Social Determinants of Health assessments, Risk Rating Scale, and a unique, longitudinal record for each caller
Year 1: Homeless Cohort Analysis

- 26% reduction in EMS Transports Post CIE enrollment
- 44% improvement in remained in housing

Year 2: Senior Cohort Analysis

- Figure 7: Average Number of EMS Transports Before and After CIE Enrollment (n=464)
  - 30% reduction
  - Fewer EMS transports + Fewer ER visits = $1.3M in potential savings
Shared Goal:
Assist in the transition from hospital discharge to home by assessing and connecting to social determinants of health resources through electronic referrals from EHR to 2-1-1 Health Navigators

Measures:
• Percent of individuals readmitted into hospital
• Improvement on shared Risk Rating Scale
• Patient Satisfaction
• Self-Efficacy

Year 1 Outcomes: 2016-2017

Hospital Readmission Rates

<table>
<thead>
<tr>
<th>Percentage</th>
<th>211 Patients</th>
<th>Comparison Group</th>
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<tbody>
<tr>
<td>35.0%</td>
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<td>0.0%</td>
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211 Patients: 211
Comparison Group: 30.0%
Person Centered Model
Community Information Exchange

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. Partners access the system. 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.
14 Domains of Social Determinants of Health

- Housing Stability
- Primary Care and Prevention
- Health Management
- Nutrition & Food Security
- Financial Wellness and Benefits
- Activities of Daily Living
- Social & Community Connection
- Legal & Criminal Justice
- Safety & Disaster
- Utility & Technology
- Transportation
- Education & Human Development
- Personal Care & Household Goods
- Employment Development

Shared Language (SDoH)
CIE Risk Rating Scale

FOOD & NUTRITION
Long-term and sustainable access to nutritious foods and to support services to maintain access
Concern about Food Supply
During the last 30 days, how often are clients concerned about their food supply? How often do they actually run out of food?

45% of clients are often worried their food supply will run out.

39% of clients often actually run out of food during the month.

Decisions over Nutrition
What other basic needs do clients need to meet before they can address their nutrition needs?

- Primary Care: 7%
- Housing: 24%
- Transportation: 26%
- Utility & Technology: 24%
- Education & Human Development: 2%

Shared Language (SDoH)
Resource Database

Hub for social and health sites and providers

- Shared taxonomy language for referrals (AIRS)
- Dedicated resource staff
- Regular updates made to resources
- Standards to listings and requirements
- Inclusion/Exclusion Criteria
- Linked to health conditions
- Tracks resource availability and unmet needs
**Technology Platform**

**MDM**
Master Data Management
- Detects and merges duplicate records
- Ensures the accuracy, completeness, and consistency of multiple domains of enterprise data

**ETL**
Extract Transform Load
1. Reads data from a database
2. Converts the data for the new database
3. Loads into the new database

**CIE**
shared client record

**Technology Platform and Data Integration**

- Food
- Housing (HMIS)
- Jail
- EMS
- File upload

**APIs**

- informatica
- salesforce
- Community Information Exchange

**Alerts**
- Single Sign on
CIE Shared Record

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 like Twitter to other Care Team members

Address Information
- Home Address: 123 Main St, San Diego, CA 92101
- Address 2: 456 Oak Rd, Encinitas, CA 92024
- Address 3: P.O. Box 789, Sunnyvale, CA 94088

Demographics
- Primary Language: English
- Gender: Male
- Married

Household
- Number of Households: 2
- Income: $60,000

Military
- Rank: Staff Sergeant
- Branch: Army

Programs (2)
- HomeShare: Enrolled 12/12/20
- PMC: Enrolled 12/12/20

Domains (4)
- Housing: Crisis: 1; 10
- Income: Stable: 2; 10
- Health: Safe: 1; 1

Alerts (2)
- EMS: 8
- Jail: 2

Care Teams (3)
- CARE TEAM: CASE MANAGER: AGENCY: DATE ASSIGNED
- CT-0000001: Thomas Lee: Department of Social Services: 1/1/2018
- CT-0000002: John Hernandez: Southern Care: 1/1/2018
- CT-0000003: Anthea Munoz: Access to Life: 1/1/2018

Feed
- Ability to communicate like Twitter to other Care Team members
Partnership with County of San Diego Health and Human Services

Bridge between CIE and ConnectWell
- Connect each other systems for following purposes:
  - Resource Database
  - Risk Rating Scale
  - Identify-Proofing
  - Referrals

Partnerships and Engagement with CBOs
2016 Collaborative: San Diego Community Health Needs Assessment

TOP HEALTH NEEDS

- Behavioral Health
  - Alzheimer’s disease, Anxiety, Drug & Alcohol Issues, Mood Disorders
- Cardiovascular Disease
  - Hypertension
- Type 2 Diabetes
  - Uncontrolled diabetes
- Obesity
  - Co-occurrence of other chronic disease

TOP SOCIAL NEEDS

- Food Insecurity & Access to Healthy Food
- Access to Care or Services
- Homeless/Housing Issues
- Physical Activity
- Education/Knowledge
- Cultural Competency
- Transportation
- Insurance Issues
- Stigma
- Poverty
Partnership with Health Information Exchange

Short Term Goals:

• Present CIE data into the HIE
• Single sign-on for platforms (CIE & HIE)
• Research
  • Healthcare utilization and outcomes & social determinants of health

Long Term Goals:

• Present HIE data into the CIE
• Explore bi-directional referrals & Master Patient Index
• Create standards and best practices between HIE & CIE
Driving Interoperability

- Patient identification
- Consent management
- Notifications and alerts
- Data quality
- Data provenance
- PHI and PII
- Public health to primary care
- Proper presentation summary
- Closed loop referral system

Connecting All for Better Health & Wellness
<table>
<thead>
<tr>
<th>Connect/Communicate/Referrals</th>
<th>Person ID System</th>
<th>Legal/Consent</th>
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<tbody>
<tr>
<td>ConnectWellSD</td>
<td>San Diego Health Connect</td>
<td>211 SDI</td>
</tr>
<tr>
<td>Comprehensive Longitudinal Health Record</td>
<td>Community Information Exchange</td>
<td>San Diego Imperial</td>
</tr>
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</table>

- **Public Health**
- **Social**
- **Behavioral**
- **Medical**

**Fully Integrated Information Exchange**
CIE: Toolkit Launch
Download via PDF at www.ciesandiego.org

CIE: Summit
April 24-26, 2019
San Diego, CA
https://ciesandiego.org/ciesummit2019/
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