**Health IT Policy Committee - Advanced Health Models and Meaningful Use Workgroup Hearing - June 2nd**

- **PANEL III: How Advanced Health Models are Supporting Integrated Care for Individuals with Complex, Chronic Conditions**
- **Bridging the Continuum of Care Using Information Exchange: The San Diego Journey**
- **Jim Dunford , M.D. (on behalf of Scott Bechtler-Levin, Executive Director, Community Information Exchange, and San Diego's collaborative information exchange infrastructure)**
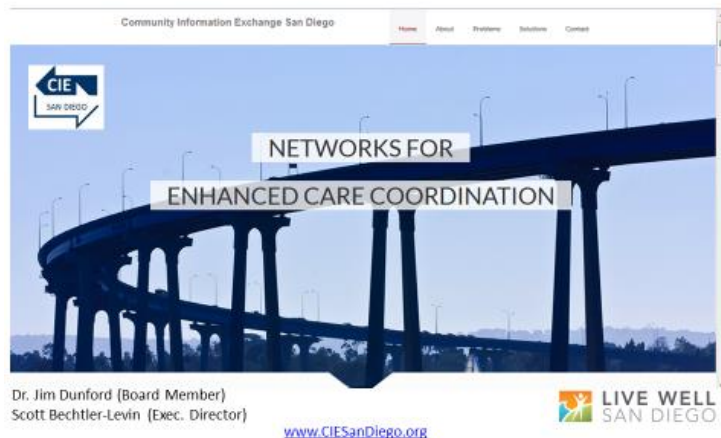
Slide 1: I am here today to talk about what San Diego is doing to address the fact that socio-economic circumstance has a heavy hand in determining health outcomes.   We've been busy building a regional network to address this challenge. The network includes the Community Information Exchange, of which I am a board member, San Diego Health Connect (our regional HIE), 2-1-1 San Diego and the County of San Diego.

Slide 2: The Community Information Exchange, or CIE San Diego, enables information sharing and actionable insights across a wide variety of community-based organizations (CBOs), primarily social service and other care providers, so that San Diegans can live well. Our vision is seamless care coordination that improves people's health and social outcomes.

Our goal is to facilitate the exchange of information to enable whole-person care and a 360 degree view of a person's interactions with our community's care providers.   We anticipate this approach, linked with the other components of San Diego's exchange infrastructure, will transform care models and improve outcomes.

Slide 3: The CIE aggregates and shares social determinants of health to augment the Electronic Health Record (EHR). Rather than having episodic, self-reported updates from patients to healthcare providers, we believe that ongoing feeds from the social service providers caring for clients is more effective and efficient.   With understanding of a patient's background, a healthcare team can spend more time formulating plans that work within the context of the patient's reality.   We also believe that an information infrastructure that assists the vulnerable during good times will be of equal or greater value during large scale emergencies by providing a means to monitor how things are going for people who may suddenly find themselves without transportation, food or other basic necessities.

Step 1: CIE is embedded in case management system

User experience:
- User selects a client WITHIN their native case management or HMIS system
- Presses CIE icon
- Views client record in CIE

Technology works:
- Real-time API integration
- Single sign-on
- Auto-quick search
- Validate view rights by user role

Slide 4: Within their native case management system, the service provider can click on a CIE San Diego icon to view a client's cross-agency record on CIE San Diego's dashboard. For example:
- A social service case manager can access the client history during intake;
- A hospital discharge planner can include a CBO in a care plan to make compliance more likely;
- A community paramedic can contact a homeless shelter's case manager to reduce unnecessary ambulance transports.

In the near future, we expect health plan case managers will use CIE to locate and prioritize patients for assessment, and hospital discharge planners will be able to 'order' grab-bars, home delivered meals, and transport services.

Step 2: Review Dashboard – Shared Access

Slide 5: The CIE San Diego online dashboard and notification engine is driven by a longitudinal data repository of client-specific information populated by web services (APIs) and batch feeds from various participating organizations. Clients consent to share their data with members of that Participant Network. Over time, we expect that similar single sign-on and auto-look-up

capabilities will be implemented in health care providers' EHRs, through our regional HIE, San Diego Health Connect, and through our County's Knowledge Integration Program (KIP).

Our theory of action is that **shared access** built through trust networks and improved communications channels across organizations that serve the same clients will more efficiently connect staff and enhance care coordination, thereby contributing to the Triple Aim.

As for developing standards for data sharing among previously siloed entities , the CIE San Diego began with HUD's (Housing and Urban Development) mandated HIMS (Homeless Management Information Systems) data, both because of its well-documented standards and because it is currently used by 70 organizations across San Diego County. We've attempted to build our social data exchange to comply with NIEM standards, to the extent possible given its limited development. Further, we recognize the importance of both the HL7 standard and AIRS (Alliance of Information and Referral Systems) taxonomy, which is used by the nation's 2-1-1 systems.

Community Information Exchange San Diego
Network Participants as of 5/19/15

Slide 6: I would like to give you a very brief background and a couple of highlights to date. In September 2012, the CIE was awarded an Innovation Initiative ("i2") Grant by the Alliance Healthcare Foundation (AHF). In July 2014 we launched Cohort 1 with 6 organizations agreeing to sharing information. The first use case focuses on homeless individuals who repeatedly call 9-1-1. With additional grant funding from AHF and others, CIE San Diego has expanded beyond the initial pilot goal of 500 clients to now provide dashboards for more than 2,400 clients—2/3 of all of downtown's homeless served by more than 100 staff at 6 organizations.

CIE San Diego is on track to launch Cohort 2 in July 2015 with four additional data sharing organizations. The use case will address the needs of 2,500 frail seniors aging in the community. Future cohorts are now being identified. Over time, we aim to have the vast majority of the 1,300+ social service CBOs in San Diego County share or at least view mutual clients' data.

Building the Exchange Infrastructure for San Diego
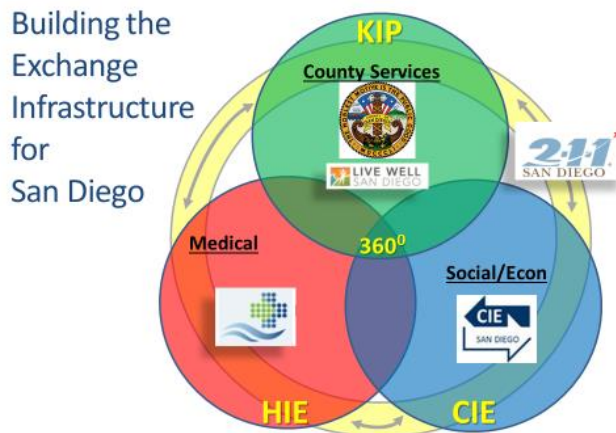
Slide 7: San Diego is proud of the regional collaborations that are creating the infrastructure necessary for data sharing to achieve whole-person care.

We work collaboratively with the **Knowledge Integration Program (KIP) of the County of San Diego.** KIP is designed to move County services from program-centered to person-centered delivery for the almost 1 million unduplicated clients served each year. The initial focus has included development of an integrated service delivery framework and design of a subset of specific use cases and scenarios. The service delivery framework is scalable and replicable and enables the County to 'unlock' the privacy and confidentiality regulations surrounding the data using role-based permissions. Over the next 22 months, the County and IBM, the lead KIP contractor, will integrate nine case management systems and two program indices that cross health, social services, aging services, mental health, alcohol and drug services, child welfare services, probation, and housing services. This will enable the County to identify customers shared by multiple programs, make service referrals across program boundaries, perform multidisciplinary case management, and use the aggregate data for advanced analytics. The County has established a Data Governance Group that spans multiple departments to identify data maturity models, develop data quality standards, and formalize data stewardship roles.

San Diego Health Connect (SDHC), our regional health information exchange (HIE) born from a Beacon Community grant and now an independent nonprofit, is ahead of its adoption schedule. Currently, SDHC has 100% hospital and FQHC agreement to participate.2.7 million of our 3.2 million population are properly identified and over 1.5 million of that population have been consented. The HIE has demonstrated early value by automating once manual processes between the County's Public Health Department and the region's 18 hospitals. Unlike many HIEs, SDHC has also connected the region's 65 SNFs and 4 hospices and is trading information via Direct protocol. SDHC is also completing the integration of the region's EMS providers which will provide real-time prehospital data to EDs, deliver outcomes data essential for agency quality improvement and automate reporting to the County EMS Authority. In April 2015 SDHC processed over 200,000 secure transactions per day.

Finally, **2-1-1 San Diego**, like 9-1-1, is a public utility that connects people to community resources, maximizing efficiency by improving communication and preventing redundancy. Anyone can call 2-1-1, 24 hours a day, 365 days a year to access more than 6,000 community programs and services. This service is provided in over 200 languages and is easily accessible through an online searchable website, which also offers chat capability. 2-1-1 has over 120 highly trained accredited staff who walk clients through eligibility requirements, while listening to their struggles and addressing multiple needs, including food, healthcare, health insurance, and transportation. 2-1-1 programs include: Information & Referral, Military and Veterans (staffed by Veterans), Health Navigation and Enrollment Center (complete over-the-phone applications for various programs using telephonic signatures). 2-1-1 San Diego captures client information in an algorithm-based tool that provides selected client contact information to Health Navigation Specialists for follow-up and ongoing monitoring. With over 500,000 connections each year, 2-1-1 has a robust database detailing client needs, resources available, trends and gaps in services. 2-1-1 works with key stakeholders to ensure access to critical data that shapes and informs policy and resource distribution.

Slide 8: The leaders of each of these infrastructure organizations are actively involved in the governance of CIE San Diego, helping to keep the regional strategies and organizations aligned.

The community is working diligently to solve common problems shared by all care organizations, including:
- **Patient identification**
- **Provider identification**
- **Consent management**
- **Sensitive data authorizations and sharing**
- **Interface and change management**

As you see in this slide, each of the information infrastructure organizations is focused on the challenging tasks of consolidating disparate data sets from different organizations and systems.

Eventually: Even More Complete View

Slide 9: Down the road, we expect to integrate these 4 'hubs' to create an easier user experience, based on roles and organizational privacy/security capabilities.

Success for us is enabling better informed decision-making and coordination to support "whole person" care and to achieve the outcomes of improved health and social conditions, reduced use of emergency and inpatient resources, and lower medical costs. CIE allows providers to personalize treatment plans – for instance, when a homeless person with diabetes and schizophrenia calls 9-1-1 six times within two weeks for poorly-controlled blood glucoses, an array of previously siloed providers now know of the need to intensify and coordinate their efforts to find supportive housing and arrange a case manager. . We are also working to raise awareness of the importance of social context for care, by engaging clients before health conditions become emergencies, and creating value for each individual to invest in his or her outcomes – in keeping with *Live Well San Diego* principles.

Community-wide, each of our hubs face funding challenges. As a region, in order to get our vision moving forward, we have had to be creative and diligent. CIE is fortunate to have received $2,500,000 in start-up funding from Alliance Healthcare Foundation whose innovative thinking has been key to launching this cutting edge initiative We will be looking collaboratively at many types of public-private partnerships that recognize the value of sharing data for individual and population health.

Recommendations

1. Support interoperability standards
   – National Information Exchange Model (NIEM)
   – Housing and Urban Development Homeless Management Information Systems (HUD HMIS)
   – Alliance of Information and Referral Systems (AIRS) taxonomy of providers
2. Mandate that federally funded health care and social service programs must share information on mutual clients using endorsed standards for social service interoperability.

Slide 10: **Our policy recommendations include the following --**
First - endorse the social service interoperability standards established by NIEM, HMIS, and AIRS taxonomy to put the collection and management of social services data on par with health data.

Second - mandate that federally-funded healthcare and social service providers share information on mutual clients using agreed-upon standards**.** The original HIPAA legislation was created to prevent fraud and abuse in federal programs, and mandated sharing of information supports this goal. Such a requirement would also support:

- Client program and service information that is more complete and avoids duplication;
- Treatment using an integrated whole person approach and not according to organizational silos;
- Cohesive administrative overhead to implement privacy and security, and
- Reduced administrative costs.

In San Diego, we are actively planning for Health Homes and the Medi-Cal Section 1115 Waiver Renewal with a particular focus on "high utilizing" and "high cost" beneficiaries who benefit most from effective care coordination. On a grander scale, I want to emphasize that the most important word in our name is COMMUNITY. We are an information-sharing network of CBO's, hospitals, EMS, the County of San Diego, and the City of San Diego, all working together to create an Accountable Community of Health. We've seen this collaborative spirit reap benefits already.

By integrating critical social determinants and supporting CBOs with workflow and capacity-building, we believe we can achieve better health and social outcomes for our community's vulnerable, while enacting informed policies that curb rising health care costs. We can then as a community turn our focus upstream, to address social determinants such as employment, housing, education and the environment that contribute greatly (and inequitably) to health outcomes, and can all be significantly improved.

James Dunford, MD is a Board Member of the Community Information Exchange in San Diego. He is Professor Emeritus (Emergency Medicine) at the University of California, San Diego School of Medicine and the City of San Diego EMS Medical Director. Over a 35 year career, Jim's interests have focused on ways that EMS can be harnessed to strengthen population-based healthcare. Jim led the development of the region's systems of care for sudden cardiac arrest, acute myocardial infarction and stroke. He helped found both the City of San Diego's Serial Inebriate Program and Resource Access Program. He championed the value of EMS data to regional HIE's and co-conceived the Community Information Exchange to share vital social data among providers. Jim is co-investigator in the NIH Resuscitation Outcomes Consortium and principal investigator of a community paramedicine program. He serves on the NQF MAP Dual Eligibles Beneficiaries Work Group as the emergency medicine expert.