Getting to Shore: Using Data for Population Health

Linette T Scott, MD, MPH, FACPM
Chief Medical Information Officer
California Department of Health Care Services

Definitions

- Data
  - A set of values of qualitative or quantitative variables
  - Is measured, collected and reported, and analyzed, whereupon it can be visualized using graphs, images or other analysis tools
- Population Health
  - "The health outcomes of a group of individuals, including the distribution of such outcomes within the group" (Kindig and Stoddart, 2003)
  - Outcomes are the product of multiple determinants of health, including medical care, public health, genetics, behaviors, social factors, and environmental factors

Using Data for Population Health

Requires integration of diverse data which requires:

- Governance and data sharing agreements to data support integration and linkage
- Standard process and definitions to create meaning from diversity
- Expertise in data management, analysis and presentation
- Use cases to drive interventions and results

Initiatives Crossing Boundaries

- Stewards of Change (2005)
  - National Interoperability Collaborative (2017)
- Medicaid Information Technology Architecture 2.0 (2006) built on the National Health Information Infrastructure
- Actionable Intelligence for Social Policy (AISP) focuses on the development, use, and innovation of integrated data systems (IDS) (2008)
- Health Information Technology for Economic and Clinical Health (HITECH) Act (2009)

Resources

- Stewards of Change:
  - http://www.stewardsofchange.com/
- MITA:
  - https://www.medicaid.gov/medicaid/data-and-systems/mita/index.html
  - https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidInfoTechArch/downloads/mitaoverview.pdf
- AISP:
  - https://www.aisp.upenn.edu/
- HITECH:
  - https://www.healthit.gov/

Data Transformation in California

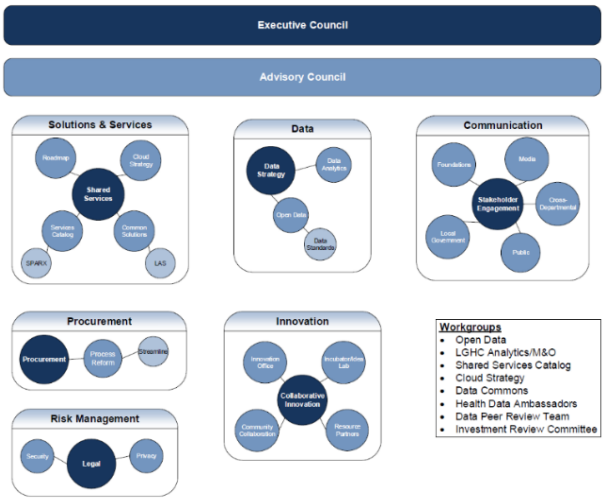
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Governance Journey

- California Health and Human Services (CHHS) Health Information Exchange (HIE) Plan completed 2012
  - Funded by HIE Cooperative Agreement under the HITECH Act
  - Based on three use cases the HIE Plan identified the need for agency-wide governance
- State Systems Interoperability and Integration Project
  - Funded by Administration for Children and Families (ACF)
  - Promoted the understanding of interoperability statewide and developed a proposed integrated Governance Model in 2013
- CHHS Governance Model established in 2014

California Health and Human Services Agency

Governance



California Health and Human Services Agency

Products of Governance

- Open Data Handbook
- Open Data Portal
- Data Playbook
- Data Sharing Framework
- Data De-identification Guidelines
- Data Expo … Four years and going strong

California Health and Human Services Agency

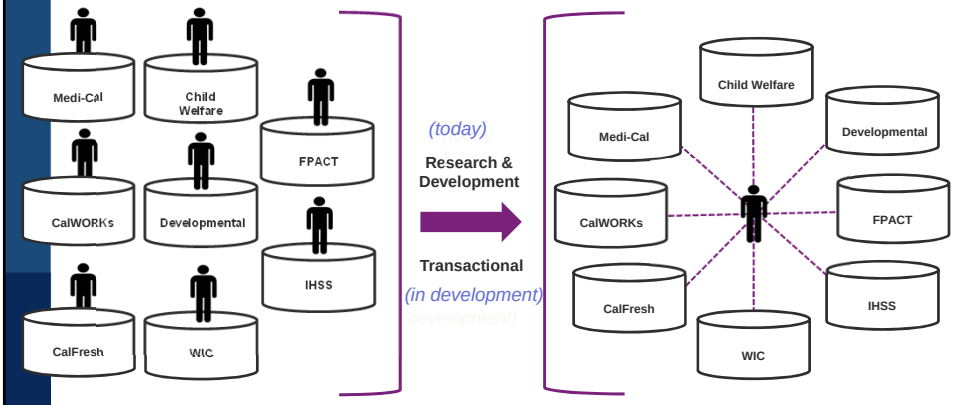
Data Environment

Data collection efforts are inherently “program-centric”, but we want to design and deliver “client centered” services

- Structure - Twelve departments within California’s Health and Human Services Agency oversee the administration of the state’s largest public benefit programs (services coordinated across 58 counties, home to 39 million people)
- Opportunity - Establish a common client identifier across historical records to generate cross-program statistical information

California Health and Human Services Agency

Record Reconciliation Pilot



Becoming a Data-Driven Agency

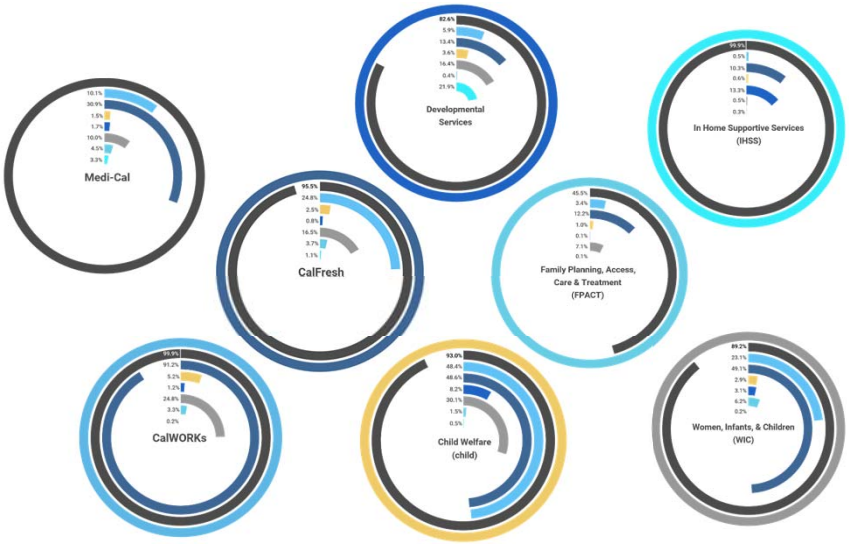
1	2	3	4	5
Formalizing data governance and leadership bodies *(ownership)*	Establishing Agency Open Data Portal *(culture shift)*	Developing Agency-wide data sharing agreement *(mechanism)*	Conducting record reconciliation "proof of concept" *(means)*	Defining "business use cases" for linked records *(value)*

Enrolled at Some Point in 2016

18,176,928 Medi-Cal	365,114 Developmental
1,840,427 CalWORKs	2,000,480 WIC
5,808,535 CalFresh	1,928,708 FPACT
331,986 Child Welfare	603,626 IHSS



Cross-Program Data



Next Steps

- Governance work is continuing and supports operational needs in Agency programs
- Explore opportunities to advance the Record Reconciliation Pilot to support both internal and external analyses and research

References

- State of California Interoperability and Integration Project : https://www.acf.hhs.gov/state-of-california-interoperability-and-integration-project
- CHHS Data Playbook: http://chhsdata.github.io/
- Data Sharing Framework: https://chhsdata.github.io/dataplaybook//resource_library/#datasharing
- Data De-identification Guidelines: https://chhsdata.github.io/dataplaybook//resource_library/#datade-id
- CHHS Open Data Portal: https://data.chhs.ca.gov/