Data Modernization Initiative (DMI)

Board of Health
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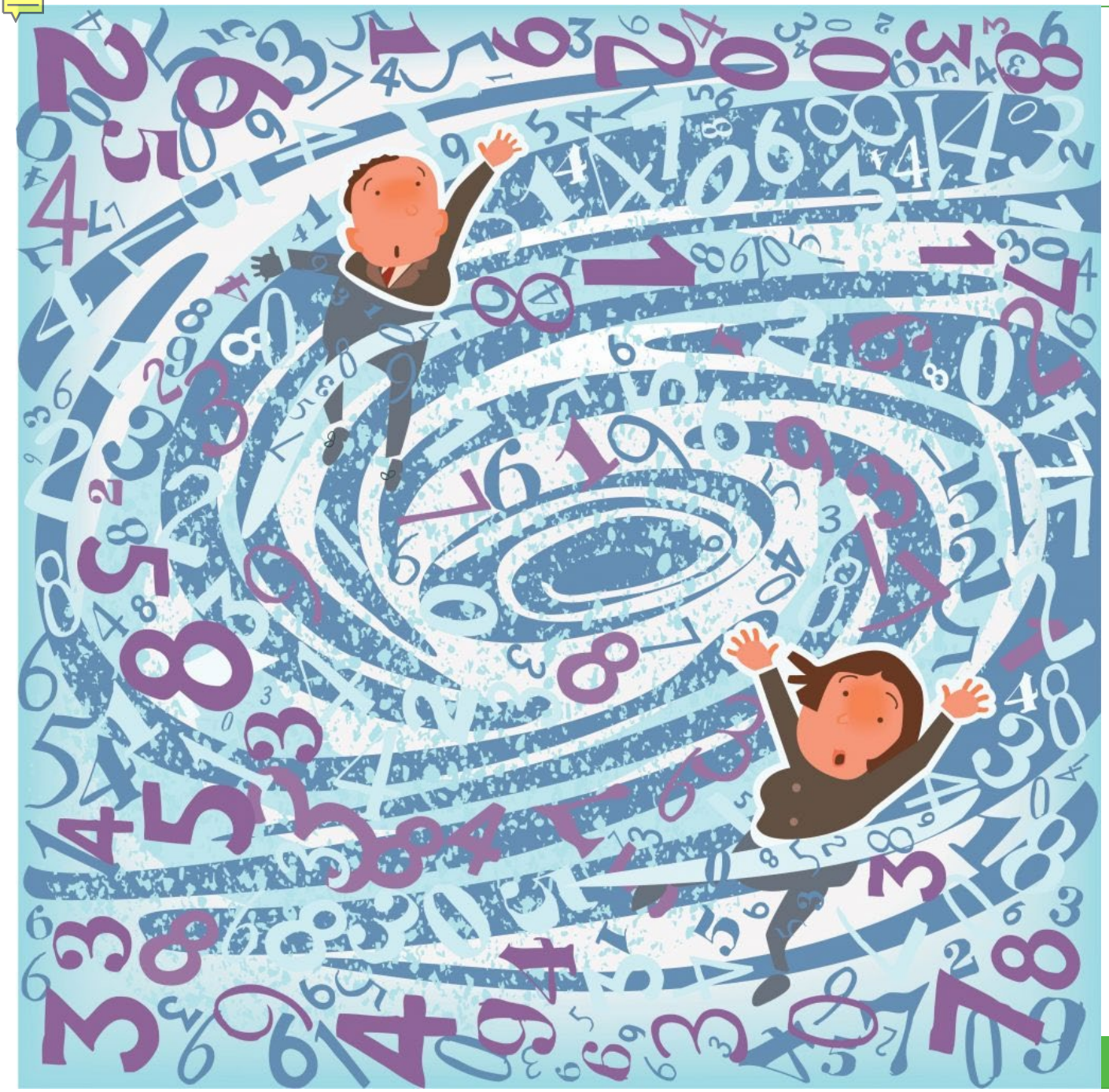
Logan Hyder, MPH
Epidemiologist



"We are **drowning in information**, while **starving for wisdom**. The world henceforth will be run by **synthesizers**, people able to put together the right information at the right time, think critically about it, and make important choices wisely."

- E.O. Wilson, *Conscience: the Unity of Knowledge*, 1998

Drowning in COVID

"The nation's public health data systems are **antiquated** and in **dire need of security upgrades** – paper records, phone calls, spreadsheets and faxes requiring manual data entry are still in widespread use and have significant consequences including **delayed detection** and **response**, **lost time**, **missed opportunities**, and **lost lives**."

— Janet Hamilton, Executive Director
Council of State and Territorial Epidemiologists (CSTE)

Becoming Synthesizers

Technological **advances** are **pressuring** the public health sector to **change its operational model**:

- from that of an ‘information **consumer**’ to an ‘information **broker**’
- to enhance **efficiency** & improve **performance**
- prove its **capability** & **credibility** as a population health **expert** & **partner**

- LaVenture et al, 2014

CDC Data Modernization Initiative

Goal: To get better, faster, actionable insights for decision-making at all levels of public health by putting the right people, processes, technology, and policies in the right places

Vision: To create one public health community that can engage robustly with healthcare, communicate meaningfully with the public, improve health equity, and have the means to protect and promote health

Priorities:

Problems DMI is Trying to Solve

Siloed information

Disconnected and/or proprietary disease systems driven by disease-specific budget lines keep us from seeing the complete picture

Older technologies

Most systems at health departments are not flexible, do not use cloud, and are not scalable

Outdated skills

The public health workforce needs training to use today's technologies more effectively

Patchwork of policies

The variable landscape of data collection and reporting across the nation complicates rapid response to emerging threats

Heavy burdens for providers

Providers in healthcare and at health departments are burdened with sending data to many places in many ways

Public health not in healthcare data ecosystem

Public health got left behind as federal incentives and regulations helped healthcare systems to be able to easily share data automatically in the Electronic Health Record.

"We're **reimagining** what technology and innovative solutions can do — and **what we can do** with the data."

– Jennifer Layden, MD, PhD, Acting Director for the Office of Public Health Data, Surveillance, and Technology (CDC)

DMI in the Wild

- Electronic laboratory reporting (ELR)
- Electronic case reporting (eCR)
- Updated electronic health record (EHR) systems
- Wastewater surveillance
- Syndromic surveillance
- Timed saved by drafting communication scripts & SAS code with chatGPT
- Performance management tracking systems
- Partnerships with IS/informatics to connect silos (interoperable systems)

Why Do We Care?

- Public Health **Accreditation** Board (PHAB)
- **Strategic Plan** priorities
- Culture of continuous **improvement, innovation, & leading** other LHDs
- **Public demand** for more current information (COVID dashboards)
- Challenges getting information out of systems for **data-informed decision making**
- Informatics & data literacy skills now included in updated **professional competencies** for all tiers of public health workforce

Data Modernization Pre-Plan

Davis County Health Department

This plan outlines a course of action to prepare the jurisdiction to engage in Data Modernization Initiative (DMI) efforts at the state and national level by documenting its workflows, needs, and strengths. CDC's goal for DMI is to get better, faster, actionable insights for decision-making at all levels of public health by focusing on data, people, and policy.

Prepare

- Identify & connect to DMI **communities of practice** & opportunities
- Form core advisory **team** & DMI **lead**
- Create basic overview of DMI so all engaged staff start from same **foundation of knowledge**
  - Establish **common language** for key concepts & terms
- Understand Utah DMI **landscape** & identify **partners** via external stakeholder interviews
- Outline one-page **value case** for communication with partners & funders
- Identify & implement **internal modifications** (i.e. **Immunizations** program) to pilot process & demonstrate benefits

Assess

- Select **assessment** instrument & methods
- **Advisory team conducts** assessment
- Document DCHD **ecosystem** of hardware, software, databases, datasets, workflows, & policies:
  - Division interviews
  - Gather asset lists
  - IS interviews
  - Partners that send/ receive data from us
  - Review county/ department policies
- **Engage** partners & staff with preliminary results (**retreat**):
  - Review ecosystem maps
  - Assessment takeaways
- Identify & implement **easy internal modifications** from assessment gaps as pilot project(s) to inform planning phase

Plan & Prioritize

- Create DCHD **vision**:
  - Where do we want to be in 1, 3, 5, & 10 years?
  - Envisioned outputs & outcomes
- Develop a **roadmap** of strategies to build capacity in areas of data, people, & policy to achieve vision:
  - Prioritize areas identified in assessment
  - Workforce development, hire technical skill sets
  - Funding sources
  - Technology assets & processes to update, pursue, or sunset
  - Communication plan
  - Additional assessments
  - Include evaluation metrics
- Seek **feedback** on plans from staff, partners, & subject matter experts

Implement

- **Execute** prioritized steps from roadmap
- Apply DMI checklist **criteria** to projects proposed for each roadmap step
- **Division-specific tailoring** of vision & activities

Monitor & Update

- **Track** roadmap progress
- **Evaluate** impact of implemented changes to demonstrate ROI
- Monitor external landscape of DMI efforts
- **Adjust** plans as needed based on internal & external factors

DCHD DMI Outputs:
Ecosystem Map | Assessment Report | Roadmap | Division-Specific Modifications

"We are drowning in information, but starved for knowledge" *– John Naisbitt*

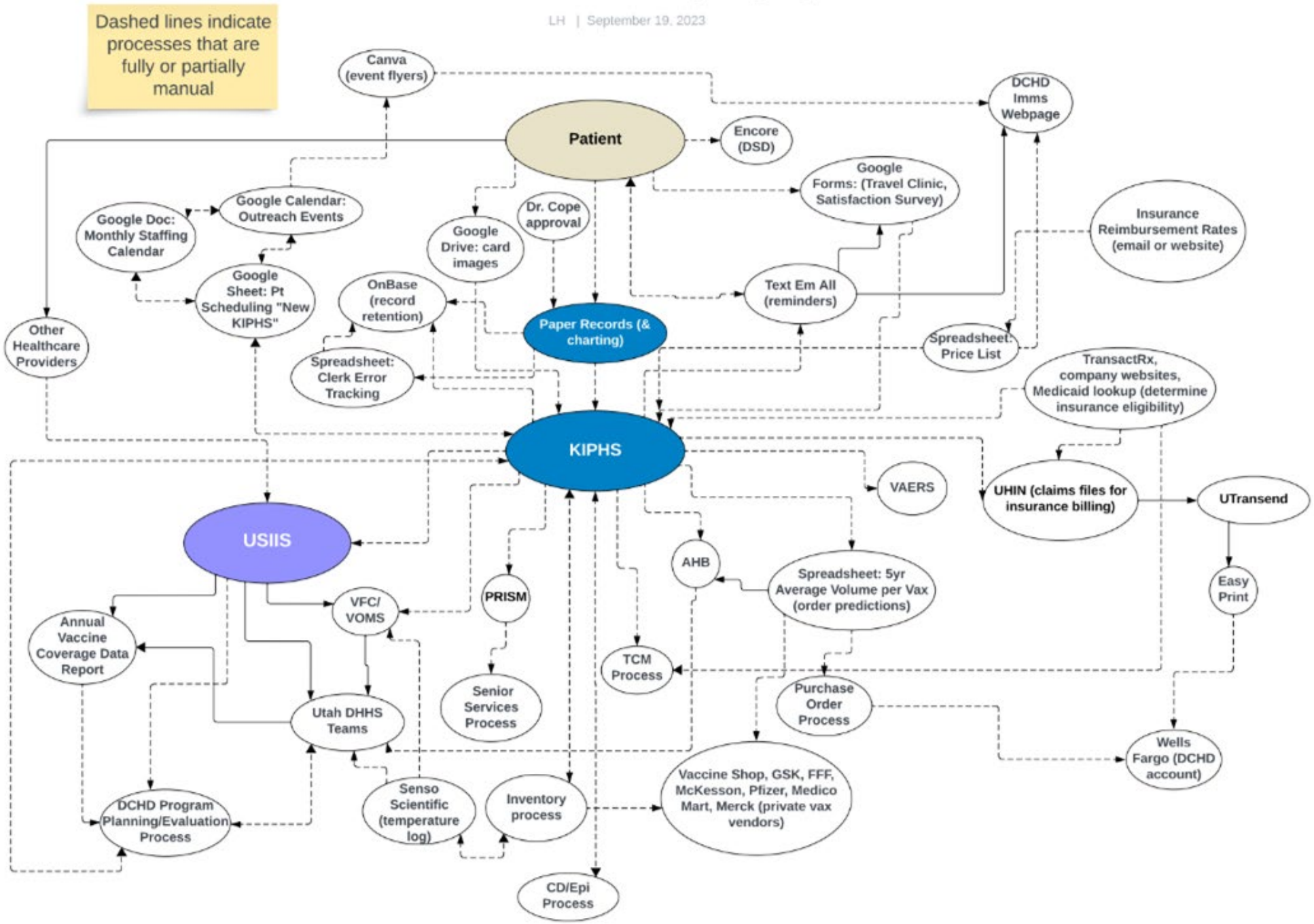
Resources:
PHII Toolkits | CDC Portal | Terminology | Circles Learning Community | CDC DMI Roadmap

lhyder@co.davis.ut.us

Updated: Sep 26, 2023

DCHD Immunizations Ecosystem [draft]

LH | September 19, 2023



Assessment Highlights

Strengths

Vision/strategy

- Leadership buy-in/support
- Effective relationship with IS
- Collaboration with community partners to meet population health goals/objectives

Workforce

- Informatics knowledge and skills (program managers)

Systems

- Software lifecycle support process

Challenges

Vision/strategy

- Documented informatics vision & strategy
- Strategy for data exchange with external partners
- Standard procedure for data sharing agreements

Workforce

- Organizational focal point with authority/responsibility
- Informatics job classification
- Training
- Informatic professionals

Modernizing the public health system is like building a house

Foundation: 10 Essential Services

Plumbing/electrical: upgrading & connecting data systems

Features: specific DMI projects increasing functionality & performance

Our structure is solidly built: better ready to promote & protect the health and well-being of the Davis County community