Making Equity Efforts Work at the County Level

The Civitas Networks for Health Webinar – December 8th, 2022

HealthCatalyst

Presentation Presenters

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KPI Ninja by Health Catalyst
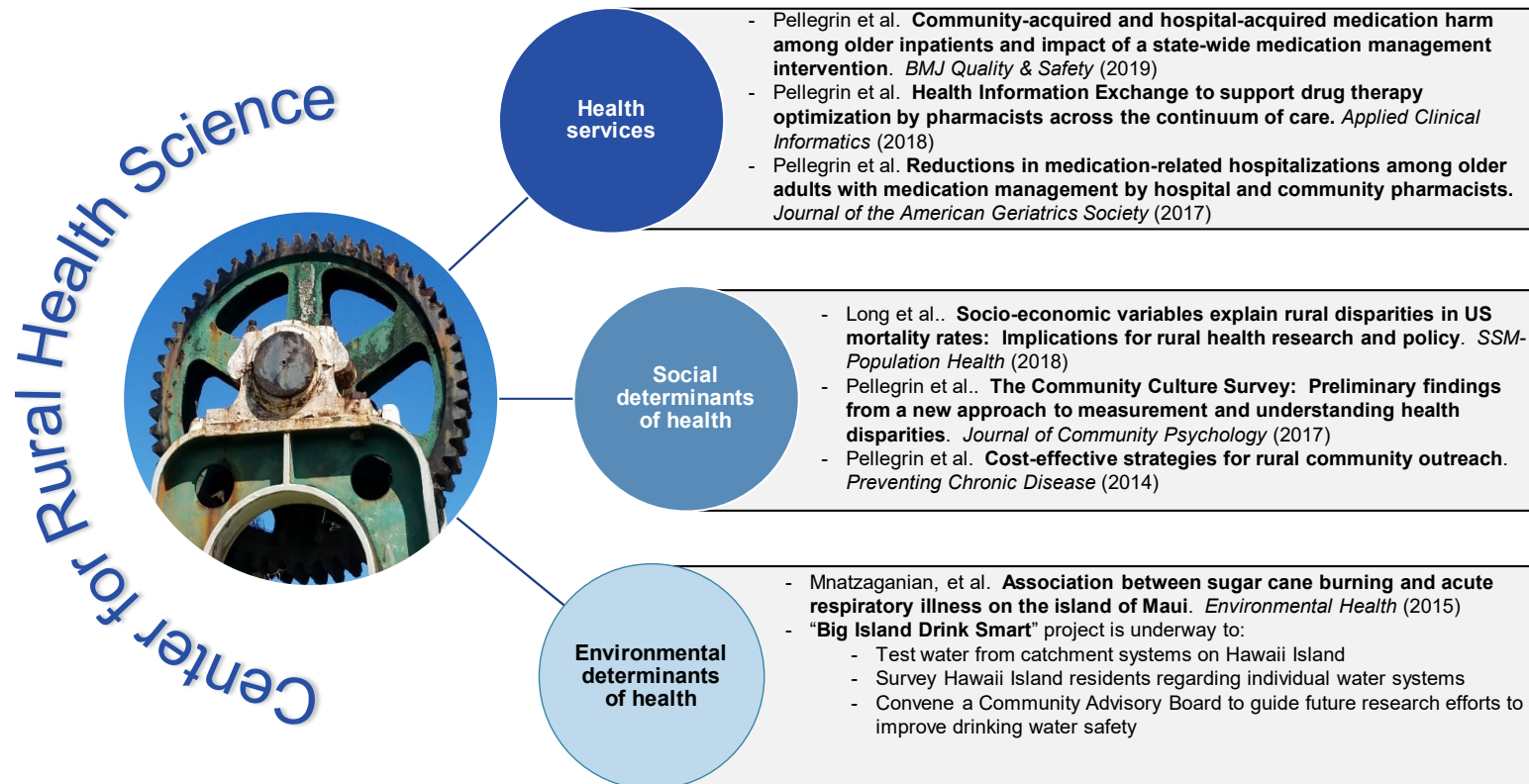
Center for Rural Health Science

Mission - *"to solve rural health problems throughout the Pacific through research, education, community service, and policy change"*

Vision - *"to improve life in rural communities through transformative models of health and healthcare."*

Center for Rural Health Science

Health services

- Pellegrin et al. **Community-acquired and hospital-acquired medication harm among older inpatients and impact of a state-wide medication management intervention.** *BMJ Quality & Safety* (2019)
- Pellegrin et al. **Health Information Exchange to support drug therapy optimization by pharmacists across the continuum of care.** *Applied Clinical Informatics* (2018)
- Pellegrin et al. **Reductions in medication-related hospitalizations among older adults with medication management by hospital and community pharmacists.** *Journal of the American Geriatrics Society* (2017)

Social determinants of health

- Long et al.. **Socio-economic variables explain rural disparities in US mortality rates: Implications for rural health research and policy.** *SSM-Population Health* (2018)
- Pellegrin et al.. **The Community Culture Survey: Preliminary findings from a new approach to measurement and understanding health disparities.** *Journal of Community Psychology* (2017)
- Pellegrin et al. **Cost-effective strategies for rural community outreach.** *Preventing Chronic Disease* (2014)

Environmental determinants of health

- Mnatzaganian, et al. **Association between sugar cane burning and acute respiratory illness on the island of Maui.** *Environmental Health* (2015)
- **"Big Island Drink Smart"** project is underway to:
  - Test water from catchment systems on Hawaii Island
  - Survey Hawaii Island residents regarding individual water systems
  - Convene a Community Advisory Board to guide future research efforts to improve drinking water safety

The Hawaii Health Information Exchange

3,600+
Active Provider Users

2.2M
Unique Lives Indexed

30M+
Messages per Year

Mission:
Hawaiʻi Health Information Exchange is the State's designated entity for health data exchange. We provide the technology, technical expertise, and governance that enables health care providers and stakeholders to share and access complete health data, resulting in an improved quality of life for Hawaii's people and lower health care costs for all.

HealthCatalyst

KPI Ninja by Health Catalyst™

CERTIFIED NCQA
HEDIS® MEASURES
MY 2022
HEALTH PLAN MEASURES AND ALLOWABLE ADJUSTMENT MEASURES
Health Catalyst

CERTIFIED NCQA
ELECTRONIC CLINICAL QUALITY MEASURES (eCQM)
Specifications Published May 2019
KPI Ninja
2020

CERTIFIED NCQA
DATA AGGREGATOR VALIDATION
CERTIFIED DATA PARTNER

r2 RISK-BASED 2-YEAR
HITRUST® CERTIFIED
Ninja Universe residing at Amazon Web Services

aws partner network
Select
Technology Partner

Validated
eHealth Exchange™

> " When organizations like KPI Ninja participate in NCQA's Data Aggregator
>
> Validation program, it shows they meet and demonstrate rigorous standards that
>
> **drive clinical data integrity**. This builds trust and creates more usable, valuable
>
> clinical data for health plans, providers and their partners to improve the quality
>
> of care for the people they serve.

Brad Ryan, MD
CPO of NCQA

Agenda

1. Explore the background and context surrounding the project

2. Provide a high-level summary of the project approach

3. Share lessons learned and the planned journey ahead together

Advancing Health Literacy Awards from HHS/OMH

"The Advancing Health Literacy to Enhance Equitable Community Responses to COVID-19 seeks to demonstrate the **effectiveness of local government** implementation of evidence-based health literacy strategies that are culturally appropriate to enhance COVID-19 testing, contact tracing and/or other mitigation measures (e.g., public health prevention practices and vaccination) in racial and ethnic minority populations and other socially vulnerable populations, including racial and ethnic minority rural communities.

OMH expects the awardee projects to demonstrate the effectiveness of working with local community-based organizations to develop health literacy plans to increase the availability, acceptability, and use of COVID-19 public health information and services by racial and ethnic minority populations. Recipients are also expected to **leverage local data to identify racial and ethnic minority populations at the highest risk for health disparities and low health literacy, as well as populations not currently reached through existing public health campaigns.**"

https://minorityhealth.hhs.gov/omh/Content.aspx?ID=22541&lvl=1&lvlid=5

Social Vulnerability Index (SVI)

SVI "uses 16 U.S. census variables to help local officials identify communities that may need support before, during, or after disasters."

UH Hilo

**Hawai'i County
(Hawai'i Island or "Big Island")**

Level of Vulnerability

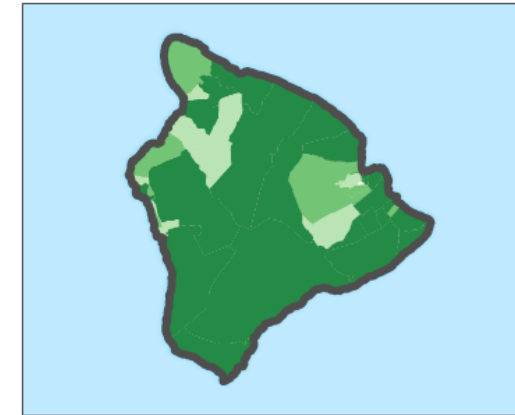| Low	Low-Medium	Medium-High	High

CDC/ATSDR Social Vulnerability Index 2020

Overall Social Vulnerability[1]

Highest (Top 4th) — Vulnerability (SVI 2020)[2] — Lowest (Bottom 4th)

Data Unavailable[3]

0 5 10 20 30 Miles
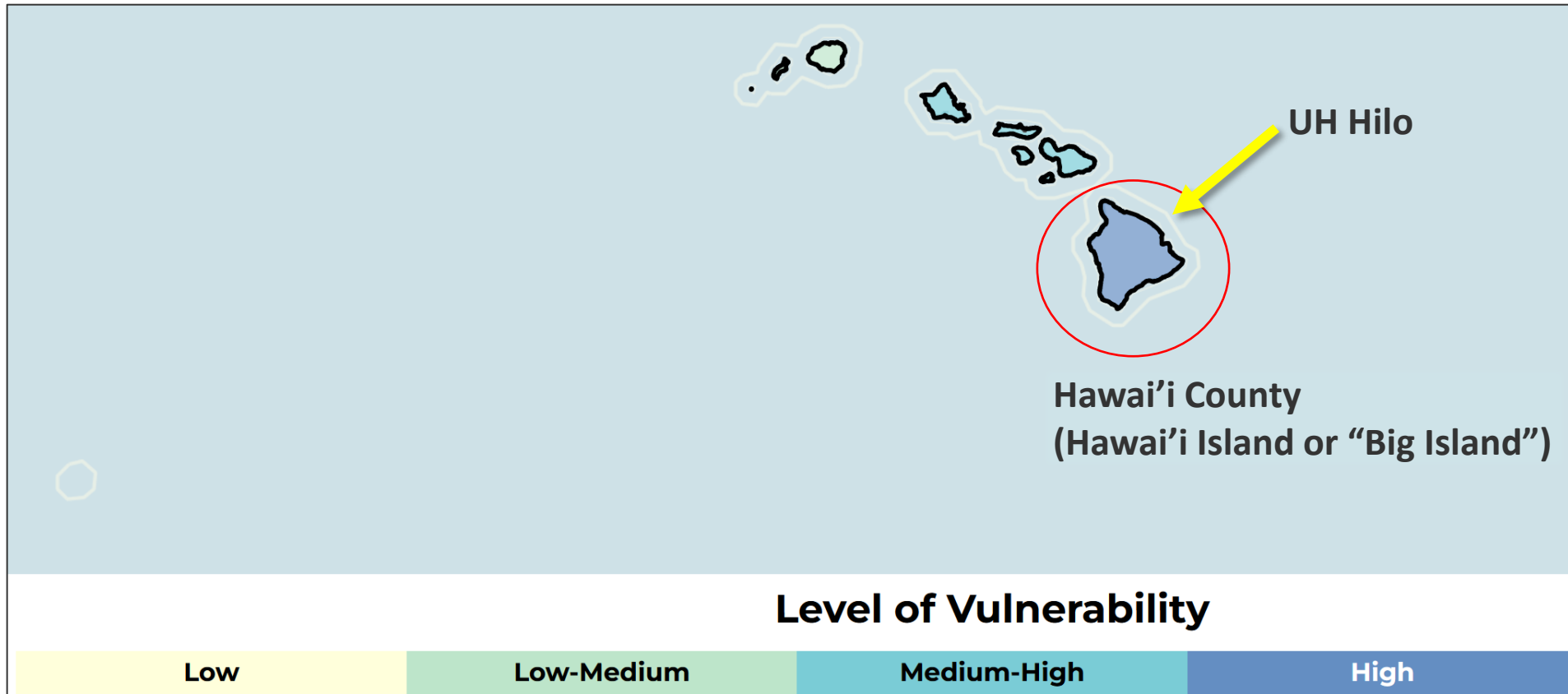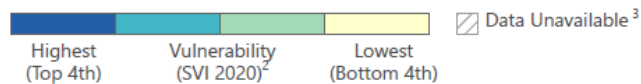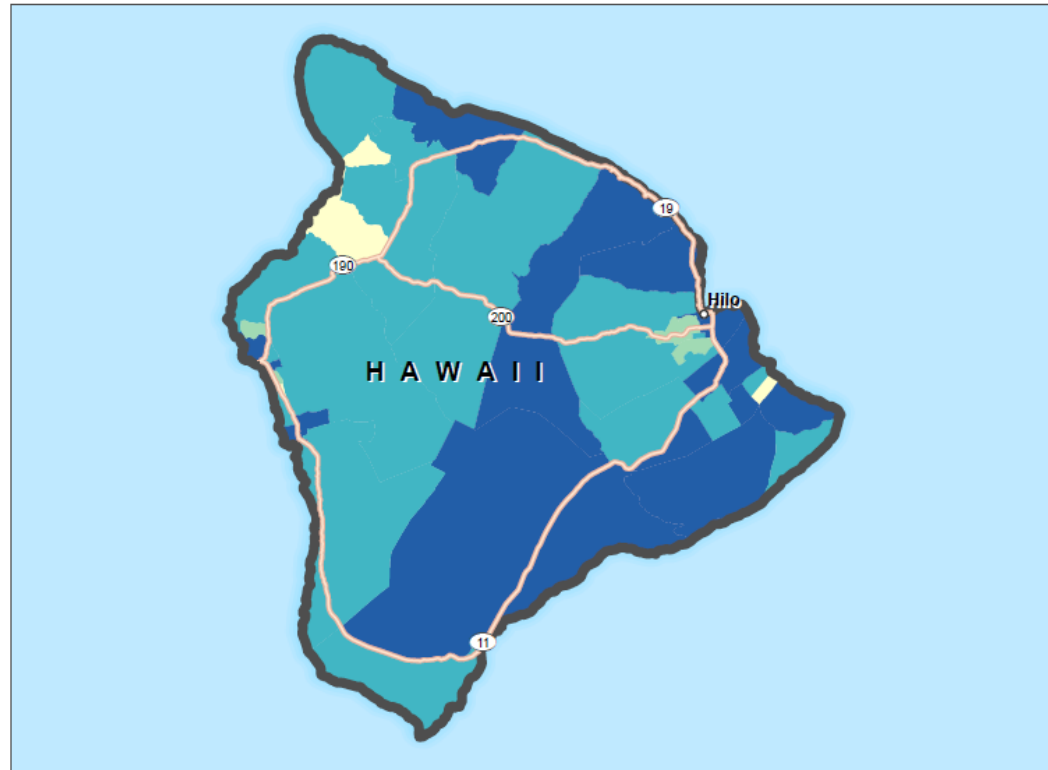
Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills. The **CDC/ATSDR Social Vulnerability Index (CDC/ATSDR SVI 2020)[4] County Map** depicts the social vulnerability of communities, at census tract level, within a specified county. CDC/ATSDR SVI 2020 groups **sixteen census-derived factors** into **four themes** that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language ability, ethnicity, and vehicle access. Overall Social Vulnerability combines all the variables to provide a comprehensive assessment.

CDC/ATSDR SVI Themes

Socioeconomic Status[5]

Highest (Top 4th) — Vulnerability (SVI 2020)[2] — Lowest (Bottom 4th)
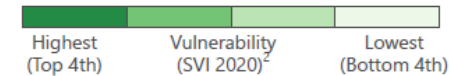
Household Characteristics[6]

Highest (Top 4th) — Vulnerability (SVI 2020)[2] — Lowest (Bottom 4th)
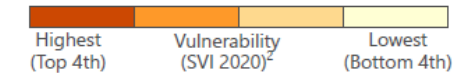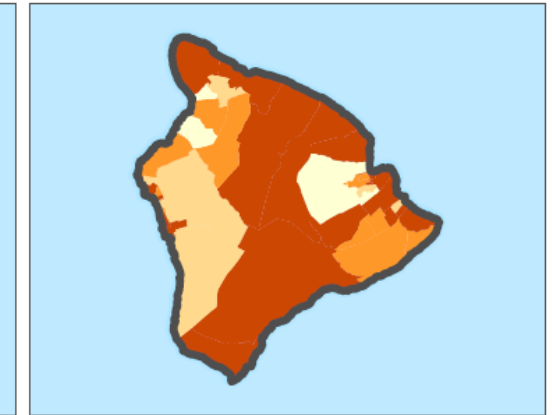
Racial and Ethnic Minority Status[7]

Highest (Top 4th) — Vulnerability (SVI 2020)[2] — Lowest (Bottom 4th)
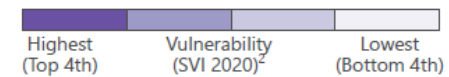
Housing Type/Transportation[8]

Highest (Top 4th) — Vulnerability (SVI 2020)[2] — Lowest (Bottom 4th)
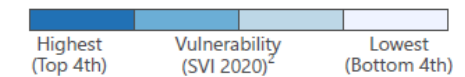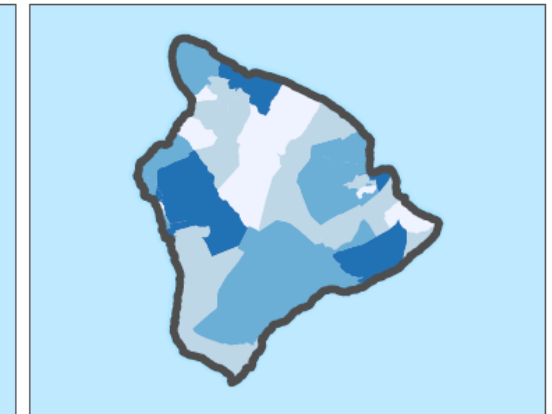
Mauna Loa

Erupting for the first time in 38 years, heading toward "saddle road"

One of two volcanoes currently erupting in Hawaii County

PROCESS

Resources	→	Activities	→	Output Measures
County project team		create quality collaborative		% of HC CHCs participating in collaborative by signed agreement
Community health center convener		design, implement intervention		% of HC CHCs represented at meetings on average
UH Hilo QI/evaluation team		train CHC clinicians (CE-accredited)		# of clinicians by type who complete the training
		implement measurement system		% of CH CHC clinicians by type who comlete the training
				Mean clinician rating of training

Hawaii County Health Literacy to Health Equity Logic Model & Measures
Format adapted from the CDC (https://www.cdc.gov/dhdsp/evaluation_resources/guides/logic_model.htm)

OUTCOMES

Short-term	→	Intermediate	→	Long-term
Clinician knowledge of evidence-based health literacy practices (CE post-test)		Patient survey of clinician communication practices (https://www.ahrq.gov/sites/default/files/publications/files/healthlittoolkit2_3.pdf)		ED utilization rate by social vulnerability census track by county
Clinician knowledge of impact of health literacy on health equity (CE post-test)		# minutes of use of professional translation service per month per HC CHC		hospitalization rate by social vulnerability census track by county
		# COVID lab tests per HC CHC		
		% patients vaccinated per HC CHC by patient demographic		
		mean PEMAT score of patient education materials on COVID across HC CHCs (https://www.ahrq.gov/health-literacy/patient-education/pemat.html)		
		# languages translated for patient education materials on COVID		

IMPACT

Enhanced health equity among vulnerable populations in Hawaii County

The Hawaii Health Information Perspective

Problem:
How do you provide clinicians with access to information on social inequities in a manner that allows them to improve their care planning?

Difficult to map street address to U.S. Census Bureau Census Tracts

Unable to identify common health conditions by Census Tracts

Unable to identify health care resource use by Census Tracts

Challenging to understand SVI subdomains and drivers of risk to health conditions

Data Flow Diagram & Potential Use Cases

Examples of Use Cases for PHI/PII

- Cardiac patient has no car and lives in an area with lack of public transportation
- Elderly patient prone to falls lives in area with low english speaking population

Dashboard

Chronic conditions by census tract and SVI
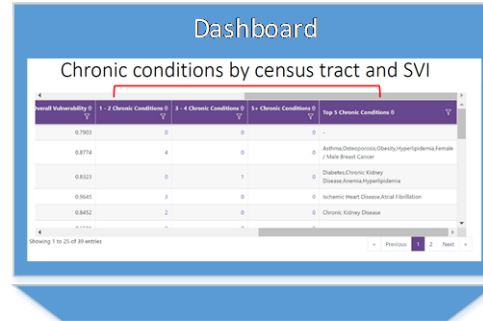
Examples of Use Cases for Aggregated Data

- Emergency vehicle staging in areas with low instances of cars and high # of ER visits
- Hospital outreach program to manage diabetes planned for areas with low education and low income
- Admissions for influenza geo-correlated to determine if patterns of social inequities exist; public health outreach campaign started

Street address to Census Tract Conversion

LexisNexis RISK SOLUTIONS

HHIE Data & Analytics Engine

Powered by KPI Ninja by **HealthCatalyst**

Social Vulnerability Data File(s)

CDC CENTERS FOR DISEASE CONTROL AND PREVENTION

HIE HEALTH INFORMATION EXCHANGE | **Health eNet**

Hawaii County Health Service Partners

Hospital   Clinic   Provider
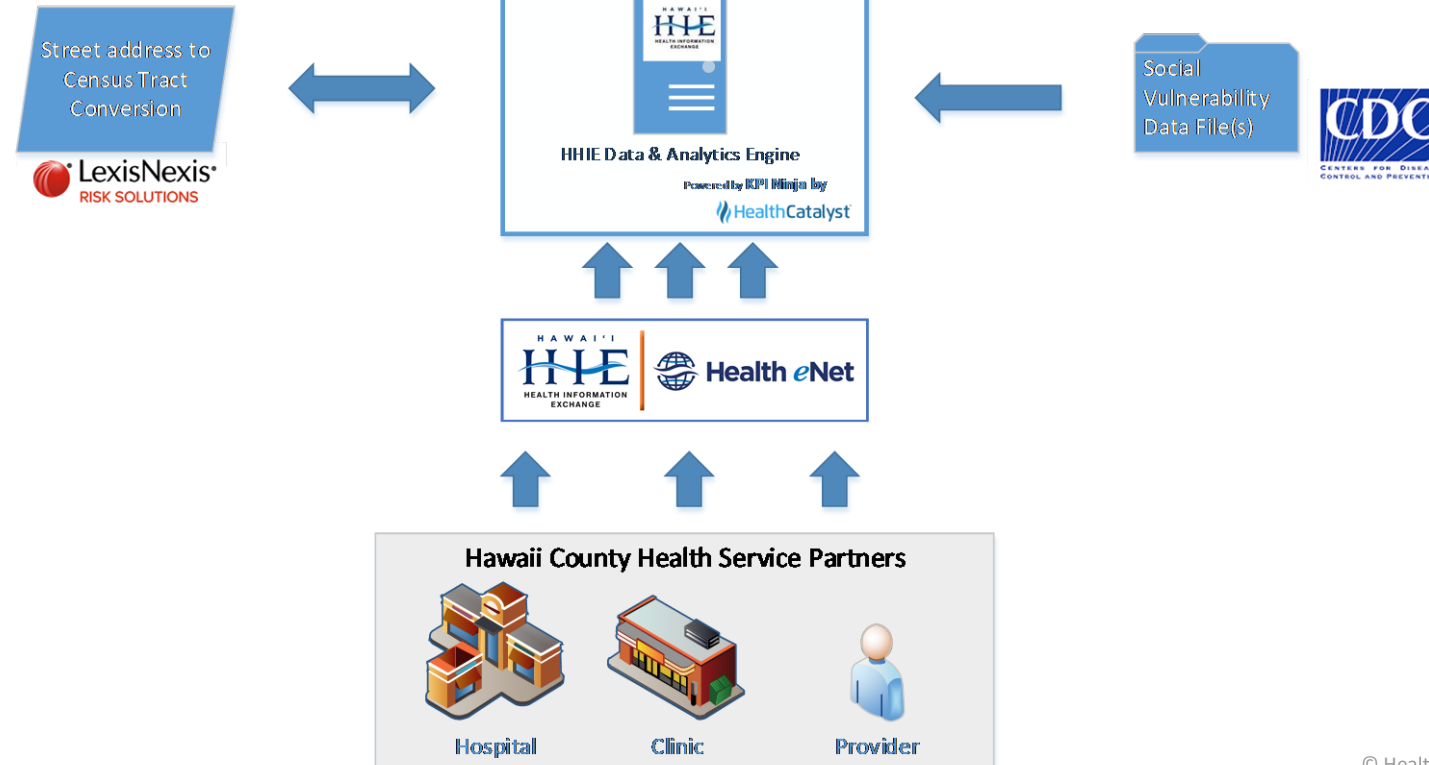
Data Approach

Business Requirements

Inbound Data

Data Processing

Data Display

End User Experience

Data Approach

1. Define the business requirements

- Display Social Vulnerability Index (SVI) data that is associated with the Census Tract

- Correlate available health conditions and utilization data against SVI locations

2. Identify the data sources

- Inbound data feeds

- CDC's Census Tract data

Data Approach – *CDC Social Vulnerability Index Data*

Overall Vulnerability

Socioeconomic

- Below Poverty
- Unemployed
- Per Capita Income
- No High School Diploma

Minority Status & Language

- Minority
- Speaks English "Less than Well"

Household Composition & Disability

- Age 65 or Older
- Aged 17 or Younger
- Civilian with a Disability
- Single-Parent Households

Housing Type & Transportation

- Multi-Unit Structures
- Mobile Homes
- Crowding
- No Vehicle
- Group Quarters

Data Approach – *Data Display*

3. Data flow

- Inbound messages and data parsing

- Data management and processing

4. Data Display

SVI by Census Tract

- Dashboard

- Report

Health Insights by Census Tract

- Demographics

- Utilization

- Chronic Conditions

Data Perspective

- User Access

- Patient/Population/Cohort

Analytics Platform

Analytics Platform

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Analytics Platform

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Analytics Platform

| Tract Code	# of Patients	Socioeconomic	Household Composition and Disability	Minority status and Language	Housing type And Transport	Overall Vulnerability	# of IP Visits	# of ED Visits
20100		0.7355	0.9453	0.4777	0.6495	0.7903		
20300		0.9677	0.6913	0.4777	0.8521	0.8774		
20400		0.8677	0.9132	0.5573	0.6592	0.8323		
20500		0.9871	0.9421	0.6783	0.8296	0.9645		
20600		0.8516	0.9196	0.3662	0.8553	0.8452		
20701		0.7774	0.8457	0.6146	0.2894	0.6581		
20702		0.4161	0.7846	0.6433	0.4437	0.5742		
20801		0.3226	0.717	0.3726	0.164	0.2903		
20802		0.3903	0.8006	0.1242	0.1318	0.2387		
20900		0.5484	0.7621	0.3153	0.0997	0.3258		
21003		0.9452	0.9518	0.3567	0.1222	0.6935		
21011		0.4452	0.9357	0.1783	0.6077	0.6129		
21013		0.8129	0.7331	0.5223	0.2219	0.5968		
21014		0	0	0	0	0		
21015		0	0	0	0	0		
21016		0	0	0	0	0		
21017		0	0	0	0	0		

Showing 1 to 25 of 38 entries

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Analytics Platform
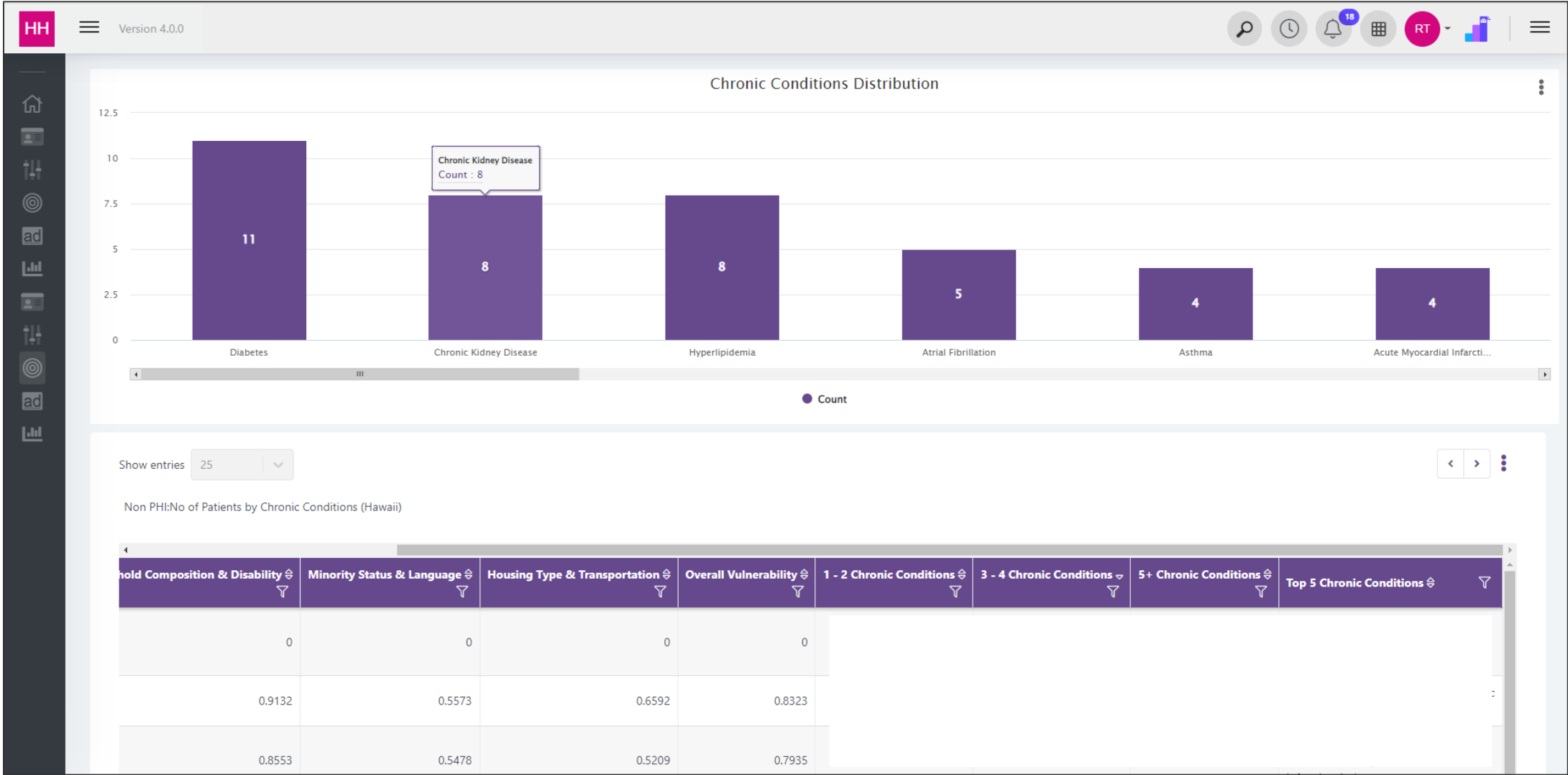
Lessons Learned

SVI information is geography-specific, while clinical care information is patient-specific

Clinicians are not yet motivated to incorporate social determinant information in treatment plans (will need the "why" and "how")

Non-traditional HIE users, such as county departments, see potential for query against social vulnerability information for service enhancement and planning

Confirm existing stakeholder needs

Identify additional stakeholders

Enhance SVI/Health dashboard

Identify additional data sources

Enhance risk model

Next Steps

The Importance and Momentum of Equity Alignment

Health Information Exchanges . . .

- Are **redefining their role** within the industry

- Can deliver **comprehensive services** to meet the diverse and evolving data needs

- To provide **quantifiable value** to participants

Questions?

Thank You!

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