Monitoring and Evaluation for Community Health in King County, WA

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Public Health, Seattle & King County
CSTE Pre-conference workshop, June 2018
What I’ll cover in our last session

- Set the context for understanding some about King County, WA
- Overview of PHSKC’s approaches to M & E and other potential options
- Discuss data sources we routinely use for assessment, monitoring, and evaluation
- Lessons from the field of evaluation of larger projects
- An example of how to calculate impact of interventions
- Monitoring and evaluation of LE changes (emerging information)
A winding road
No “right” or “wrong” questions; many different approaches

All about the data

Changes in knowledge, attitudes, beliefs, practices can take years to result in outcomes; hold the course and set expectations

Fail forward faster

Plan for evaluation and monitoring in budget

In order to be Chief Health Strategist, requires knowing where you are, where you want to go and a plan of how to get there

Relevant data partners

Programs and services make sense for community

Cross-sector rather than data siloes: how can data tell the story

Don’t forget about the impact of qualitative data

Collective impact with the community
King County: Speed Dating Statistics

- 2.2 million people
- 450,000 additional weekday commuters
- 39 incorporated cities. Seattle largest at 710,000
- More land than 14 states
- Median home price (Q1 2018): $640,200*
- Median rent, (Q1, 2018): $2,495*
- Average household income(2016): $78,800
- 9.3% of persons in poverty
- Increasing diversity

* Zillow
The health of King County

King County ranks among the top counties in the U.S. on measures of health and wealth.

However... despite high rankings on measures of socioeconomic status and health, county residents continue to experience differences in social and health outcomes by race, income and place.

King County

Fair or poor health (adults), King County (average: 2011-2015)

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>King County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>24%*</td>
</tr>
<tr>
<td>AIAN</td>
<td>23%*</td>
</tr>
<tr>
<td>Black</td>
<td>22%*</td>
</tr>
<tr>
<td>NHPI</td>
<td>15%</td>
</tr>
<tr>
<td>Multiple</td>
<td>13%</td>
</tr>
<tr>
<td>White</td>
<td>11%</td>
</tr>
<tr>
<td>Asian</td>
<td>9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Household income</th>
<th>King County</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$15k</td>
<td>31%*</td>
</tr>
<tr>
<td>$15-$25k</td>
<td>21%*</td>
</tr>
<tr>
<td>$25-$35k</td>
<td>16%*</td>
</tr>
<tr>
<td>$35-$50k</td>
<td>14%</td>
</tr>
<tr>
<td>$50-$75k</td>
<td>9%*</td>
</tr>
<tr>
<td>$75k+</td>
<td>5%*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>King County regions</th>
<th>King County</th>
</tr>
</thead>
<tbody>
<tr>
<td>South</td>
<td>16%*</td>
</tr>
<tr>
<td>Seattle</td>
<td>11%</td>
</tr>
<tr>
<td>East</td>
<td>9%*</td>
</tr>
<tr>
<td>North</td>
<td>9%</td>
</tr>
</tbody>
</table>

^ = Data suppressed if too few cases to protect confidentiality and/or report reliable rates
* = Significantly different from King County average
! = Interpret with caution; sample size is small, so estimate is imprecise

AIAN = American Indian/Alaska Native
NHPI = Native Hawaiian/Pacific Islander
King County demographics: Rapidly changing and growing

- 2000: 1.7 million
  - White NH: 73
  - Black/African American NH: 5
  - AIAN NH: 1
  - Asian NH: 11
  - NHPI NH: 1
  - Multiple Race: 3
  - Hispanic Latino: 5

- 2010: 1.9 million
  - White NH: 65
  - Black/African American NH: 6
  - AIAN NH: 1
  - Asian NH: 14
  - NHPI NH: 4
  - Multiple Race: 9

- 2016: 2.2 million
  - White NH: 61
  - Black/African American NH: 7
  - AIAN NH: 1
  - Asian NH: 17
  - NHPI NH: 5
  - Multiple Race: 10
King County demographics: Rapidly changing and growing

**King County’s foreign-born populations** (over 460,000, ACS 2016)

1 in 5 residents of King County were born outside the United States (ACS 2016)

170 different languages and dialects are spoken in King County (ACS 2016)

50% of growth since 2000 in King County is from Africa, Asia, Eastern Europe, and Latin America (ACS 2014)

Produced by Gene Balk. Source: U.S. Census Bureau  Audrey Carlsen/The Seattle Times
King County serves all residents by promoting fairness and opportunity and eliminating inequities.

King County Strategic Plan - Fair And Just Guiding Principle

Determinants of Equity

- Affordable, safe, quality housing
- Access to parks and natural resources
- Equity in county practices
- Access to affordable, healthy, local food
- Equitable law and justice system
- Community and public safety
- Access to health and human services
- Healthy built and natural environments
- Family wage jobs and job training
- Early childhood development
- Economic development
- Strong, vibrant neighborhoods
- Access to safe and efficient transportation
THE “UNHEALTHY STREAM” CREATES INEQUITIES

POLICIES, PRACTICES & SYSTEMS—Policies, structures and systems—including those in government—have sustained and even contributed to inequities.

CONDITIONS—Past policies, systems and practices have resulted in adverse social, physical and economic conditions.

OUTCOMES—Organizations and their programs historically have tended to react to problems and treat poor individual and family-level outcomes.

THE “HEALTHY STREAM” CREATES EQUITY

PRO-EQUITY POLICIES, PRACTICES & SYSTEMS—For greatest and most effective impact, King County is focusing “upstream” to address root causes and be pro-equity.

CONDITIONS—Pro-equity systems and policies result in improved community conditions, also known as “determinants of equity.”

OUTCOMES—Individuals and families thrive regardless of race and place.
The King County Experience:
How we started with sub-county LE and what happened next
Where to get the data for understanding what is upstream? How to define what indicators to track?

PH didn’t have access to all the different types of data listed in the determinants of equity (and are still working on building out our portfolio).
County-level LE compared to the 10 longest lived countries
LE by county varied by 21 years in 2014

Institute for Health Metrics and Evaluation, JAMA, 2017
Social Determinants of Health

Health Outcomes
- Length of Life 50%
- Quality of Life 50%

Health Factors
- Health Behaviors (30%)
- Clinical Care (20%)
- Social and Economic Factors (40%)
- Physical Environment (10%)

Policies and Programs
- Tobacco Use
- Diet & Exercise
- Alcohol & Drug Use
- Sexual Activity
- Access to Care
- Quality of Care
- Education
- Employment
- Income
- Family & Social Support
- Community Safety
- Air & Water Quality
- Housing & Transit

County Health Rankingsmodel © 2014 UVMHI
## ZIP code health conditions in King County, 2008-2012

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obesity</td>
<td>9% - 34%</td>
</tr>
<tr>
<td>Uninsured</td>
<td>2% - 32%</td>
</tr>
<tr>
<td>Smoking</td>
<td>2% - 22%</td>
</tr>
</tbody>
</table>
Life expectancy at birth by health reporting areas, King County, 2008-2012

Note: HRA labels on the map match the chart on the right, listed in alphabetical order.
Source: WA State DOH, Center for Health Statistics, Death Certificates. Prepared by Public Health - Seattle & King County, APDE on 11/6/14.
Life Expectancy in King County by Census Tract

- Difference of 25 years, accounting for unreliable tracts! (Low of 70; High of 95)
- King County average: 81.6
- The next question became: what is driving this extreme disparity?
What happened from these meetings?

- Don’t underestimate the power of visuals
## Communities of Opportunity: Health, Social and Economic Measures

<table>
<thead>
<tr>
<th>Measures</th>
<th>Lowest decile</th>
<th>Highest decile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy</td>
<td>74 years</td>
<td>87 years</td>
</tr>
</tbody>
</table>

### Health, broadly defined

<table>
<thead>
<tr>
<th>Measures</th>
<th>Lowest decile</th>
<th>Highest decile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse childhood experiences</td>
<td>20%</td>
<td>9%</td>
</tr>
<tr>
<td>Frequent mental distress</td>
<td>14%</td>
<td>4%</td>
</tr>
<tr>
<td>Smoking</td>
<td>20%</td>
<td>5%</td>
</tr>
<tr>
<td>Obesity</td>
<td>33%</td>
<td>14%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>13%</td>
<td>5%</td>
</tr>
<tr>
<td>Preventable hospitalizations</td>
<td>1.0%</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

### Housing

<table>
<thead>
<tr>
<th>Measures</th>
<th>Lowest decile</th>
<th>Highest decile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor housing condition</td>
<td>8%</td>
<td>0%</td>
</tr>
</tbody>
</table>

### Economic opportunity

<table>
<thead>
<tr>
<th>Measures</th>
<th>Lowest decile</th>
<th>Highest decile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-income, below 200% poverty</td>
<td>54%</td>
<td>6%</td>
</tr>
<tr>
<td>Unemployment</td>
<td>13%</td>
<td>3%</td>
</tr>
</tbody>
</table>
An increasing charge to monitor LE and other indicators

- Routine indicators: more interactive and robust; quicker turn around
- Thinking about the system edges
- How does data from other sectors impact health?
- How do we bring the concept of health into more sectors and understand their drivers?
- What is the community experience?
- Where are the data gaps?
- Opportunities for policy, systems, environment change?
- ASSETS
How are we monitoring and evaluating?

Monitoring  Evaluation
Connecting data to users: Monitoring health status and conditions

Community health indicators
A gateway to King County data

- Interact and explore data in new ways
- Opportunity for PHSKC to more actively engage with partners and stakeholders
- Use visualizations to answer questions (or ask new ones!)
- Visually accessible and searchable

Topic areas on CHI website

160+ indicators covering...

- Access to healthcare & preventive services
- Alcohol, tobacco, marijuana & other drugs
- Chronic illnesses
- Demographics
- Economic & food security
- Environment
- Family & community
- Infectious disease
- Life expectancy, leading causes of death & quality of life
- Mental & behavioral health
- Physical activity, nutrition & weight
- Pregnancy, birth & sexual health
- Violence & injury prevention
Determinants of equity & intersections outside of clinic walls

In King County...

- Poverty impacts at least 1 of every 5 residents and 1 in every 4 children under 18.
- Racial and regional differences in poverty mirror disparities observed in most chronic disease indicators.

- Escalating housing prices disproportionately burden older adults, communities of color, and people living in poverty.
- Student homelessness has doubled since 2008.

- Lower income households are less likely to have a usual primary care provider.
- Despite advances in health insurance coverage with the ACA, King County communities of color remain disproportionately uninsured.
While median household income has steadily increased since 2000, there is a widening gap between the county’s highest and lowest income households.

- Southwest King County income decreasing
- Downtown and South Seattle income increasing
- Neighborhoods around Lake Union income increasing
- Overall, Seattle becoming wealthier, south region becoming poorer
Data sources used in KC for community health monitoring and evaluation

- Behavioral Risk Factor Surveillance System
- Pregnancy and Risk Assessment Monitoring System
- Vital statistics data (births, deaths, hospitalizations)
- Population data (including small area)
- Strong and supportive state DOH who makes these tasks easier *(THANK YOU!!)*
- Locally driven surveys (Best Starts for Kids), often funded out of initiatives
- Census and American Community Survey Data
- Data from public schools (school districts or the Office of Superintendent of Public Education)
- Environmental data (Toxic Release Inventory)
- Medicaid claims data
- Qualitative data gathered via focus groups and community conversations
- Qualitative data
- Cross-sector data: working on education, housing, jail, behavioral health, EMS, homeless data
Data aspects of monitoring and evaluation

- Requires strong data quality.
- Quality assurance is important
- Robust measures – and if measuring geographically, geographic matches
- Ability to automate when possible. One-off analyses are impossible to maintain in a large quantity
  - QA is important! From data acquisition, data prep, data analysis, data visualization and interpretation.
- Guidelines and templates to follow – makes standard reporting easy
  - Need opportunities to vary from the standard, though
Disaggregating data for **sub-populations**: [www.kingcounty.gov/chi](http://www.kingcounty.gov/chi)

**Online indicators report:**

- A description of the indicator
- Overall estimate for King County
- Multiple-year averaged estimates for subpopulations as well as trends (e.g. race/ethnicity, region and smaller sub-county geography, sexual orientation status, poverty or income, disability status)
- CHNA on-line report offers narrative interpretation that highlights important findings (by race, place, income, gender, or sexual orientation)
  - CommunitiesCount.org also has more narrative
- Some have cross-tabs (e.g. race by gender)
Community health indicators:

APDE engages users to explore 160+ indicators & provides data trainings.

Click tabs to see different analysis.

Maps provide data for cities & neighborhoods.

Rankings for cities & neighborhoods.

Technical users can turn visual display of confidence intervals on and off.

Users can hover over data points to see more information.

Source: Vital statistics data, WA State Department of Health; Data from Health Statistics.
What’s gotten better & where can we improve?

**Across King County, successes include:**

- Increase in health insurance coverage
- Decrease in cigarette smoking for adults & youth
- Decline in daily sugary beverage intake for youth

**Across King County, opportunities for improvement include:**

- Homelessness
- Mental health
- Lack of physical activity & obesity
- Food insecurity
- Drug related deaths
Infants born to Black or American Indian/Alaska Native mothers were more than twice as likely as those born to Asian or white mothers to die before their first birthday.
Inequities & **sexual orientation**: youth depression

Since 2004, youth rates of depressive feelings have **increased** in King County overall. Double the rate of depressive feelings in youth who identify as LGB compared to heterosexual youth.

### Depression prevalence (8th, 10th, 12th grade), King County (average: 2014 & 2016)

<table>
<thead>
<tr>
<th>Sexual orientation</th>
<th>Heterosexual</th>
<th>LGB</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25%*</td>
<td>57%*</td>
<td>38%*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>AIAN</th>
<th>Asian</th>
<th>Black</th>
<th>Hispanic</th>
<th>Multiple</th>
<th>NHPI</th>
<th>White</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>35%*</td>
<td>27%*</td>
<td>29%</td>
<td>36%*</td>
<td>34%*</td>
<td>35%*</td>
<td>26%*</td>
<td>32%*</td>
</tr>
</tbody>
</table>

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AIAN = American Indian/Alaska Native
NHPI = Native Hawaiian/Pacific Islander
LGB = Lesbian, gay, or bisexual
Inequities & **place**: diabetes prevalence

Diabetes prevalence has been rising for King County overall since 2000, *inequities by neighborhood poverty and region are apparent*. 

### Diabetes prevalence (adults), King County (average: 2011-2015)

**Race/Ethnicity**

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Diabetes Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>King County</td>
<td>7%</td>
</tr>
<tr>
<td>AIAN</td>
<td>14%</td>
</tr>
<tr>
<td>Asian</td>
<td>6%</td>
</tr>
<tr>
<td>Black</td>
<td>11%*</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8%</td>
</tr>
<tr>
<td>Multiple</td>
<td>8%</td>
</tr>
<tr>
<td>NHPI</td>
<td>10%*</td>
</tr>
<tr>
<td>White</td>
<td>7%</td>
</tr>
</tbody>
</table>

**Household Income**

<table>
<thead>
<tr>
<th>Household Income</th>
<th>Diabetes Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; $15k</td>
<td>11%*</td>
</tr>
<tr>
<td>$15k-$29k</td>
<td>9%</td>
</tr>
<tr>
<td>$25k-$34k</td>
<td>10%*</td>
</tr>
<tr>
<td>$35k-$50k</td>
<td>8%</td>
</tr>
<tr>
<td>$50k-$75k</td>
<td>7%</td>
</tr>
<tr>
<td>&gt; $75k</td>
<td>5%*</td>
</tr>
</tbody>
</table>

**King County regions**

<table>
<thead>
<tr>
<th>Region</th>
<th>Diabetes Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East</td>
<td>6%*</td>
</tr>
<tr>
<td>North</td>
<td>7%</td>
</tr>
<tr>
<td>Seattle</td>
<td>5%*</td>
</tr>
<tr>
<td>South</td>
<td>10%*</td>
</tr>
</tbody>
</table>

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AIAN = American Indian/Alaska Native  
NHPI = Native Hawaiian/Pacific Islander
• Narrative to help understand the data
• Data dives into community
• Training on how to use the site
Evaluation of Policy Change: ACA and ACH
Other monitoring and evaluation work: examples and lessons learned
## Evaluation framework to monitor ACA impacts KC: beyond traditional public health datasets

<table>
<thead>
<tr>
<th>Topic area</th>
<th>Indicator areas</th>
<th>Illustrative indicators</th>
<th>Data sources</th>
<th>Data availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to care</td>
<td>• Coverage</td>
<td>• Uninsurance</td>
<td>ACS, BRFSS</td>
<td>Good/Fair</td>
</tr>
<tr>
<td></td>
<td>• Unmet need</td>
<td>• Not seeking care d/t cost</td>
<td>HBE, CHARS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Affordability</td>
<td>• Enrollment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilization of care</td>
<td>• Percent using any care</td>
<td>• Visits per capita</td>
<td>BRFSS, CHARS</td>
<td>Good</td>
</tr>
<tr>
<td></td>
<td>• Evidence-based health care</td>
<td>• Routine checkup past year</td>
<td>DCHS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>practices</td>
<td>• Avoidable hospitalizations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Health outcomes</td>
<td>• Clinical Process Measures (e.g. Heart Failure Care)</td>
<td>ProviderOne</td>
<td>In process</td>
</tr>
<tr>
<td>Quality of care</td>
<td>• Satisfaction with health</td>
<td>• Satisfaction with health care received</td>
<td>BRFSS, CAHPS</td>
<td>Some</td>
</tr>
<tr>
<td></td>
<td>care received</td>
<td>• Per capita supply of HCPs</td>
<td>OIC, Mystery shopper</td>
<td>Poor</td>
</tr>
<tr>
<td></td>
<td>• Plan network adequacy</td>
<td>• Accepting new patients</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Health provider capacity</td>
<td>• Estimated price of inpatient care</td>
<td>CHARS</td>
<td>Poor</td>
</tr>
<tr>
<td>Health system capacity</td>
<td>• Total costs of health care</td>
<td>• Late/no prenatal care</td>
<td></td>
<td>Good</td>
</tr>
<tr>
<td></td>
<td>per capita</td>
<td>• Child immunization rate</td>
<td>Vital stats, BRFSS</td>
<td></td>
</tr>
<tr>
<td>Costs</td>
<td>• Preventive services</td>
<td>• Fair/poor health status</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Immunizations</td>
<td>• Estimated price of inpatient care</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Health status</td>
<td>• Late/no prenatal care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population health</td>
<td>• Preventive services</td>
<td>• Child immunization rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Immunizations</td>
<td>• Fair/poor health status</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Health status</td>
<td>• Estimated price of inpatient care</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ACS, American Community Survey; BRFSS, Behavioral Risk Factor Surveillance Survey; AMA, American Medical Association; OIC, Office of the Insurance Commissioner; HBE, Health Benefit Exchange; HCP, Health care provider; DCHS, Department of Community and Human Services; JHS, Jail Health Services; HRSA, Health Resources & Services Administration; NPPES, National Plan and Provider Enumeration System; CHARS, Comprehensive Hospital Abstract Reporting System; MCO, Managed Care Organization.
Uninsured individuals

Unmet medical need due to cost

Teen birth rate (age 15-19)

Total Medicaid enrollees

Hospital charity care

Uninsured FQHC clients

**Monitoring ACA-related gains and vulnerabilities of King County safety net providers and clients**

**ACA implementation**

- LARCs become more affordable
- King County overall population
- Income < 200% of Federal Poverty Level

Data Sources: American Community Survey; Behavioral Risk Factor Surveillance System; Birth records; Community Hospital & Financial Data; Community Health Services, PHSKC; Health Care Authority. LARC, Long-acting reversible contraceptive.
With increased insurance rates, cost barriers to seeking health care decrease.

Data source: Behavioral Risk Factor Surveillance System

Percent of King County adults who reported being unable to see a doctor last year because of cost.
Uncompensated hospital care falls in King County after the ACA

Data source: WA State Department of Health, Year End Financial Reports, Washington State Hospital Association
Continued plans for evaluation

- Healthcare utilization comparisons between the newly insured vs continually insured
- Return on investment for cost of care
- Health outcomes after continuous insurance: improve?
  - Looking across costly or chronic conditions: are they better managed?
- What is happening with QHP costs?
- Opportunity to see who moves on and off Medicaid rolls to private insurance using a statewide APCD
Evaluating **specific populations** in ACA: King County **health safety net providers and clients**

<table>
<thead>
<tr>
<th>Providers</th>
<th>Clients*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals</td>
<td>5. Medicaid caseload</td>
</tr>
<tr>
<td>FQHCs</td>
<td>6. Insurance coverage</td>
</tr>
<tr>
<td>Dental providers</td>
<td>7. Unmet medical needs due to cost</td>
</tr>
<tr>
<td></td>
<td>8. Avoidable EMS calls</td>
</tr>
<tr>
<td></td>
<td>9. QHP monthly premium cost</td>
</tr>
<tr>
<td></td>
<td>10. QHP deductible level</td>
</tr>
<tr>
<td></td>
<td>11. Unintended pregnancies</td>
</tr>
<tr>
<td></td>
<td>12. Teen birth rate (age 15-19)</td>
</tr>
<tr>
<td></td>
<td>13. Early and adequate prenatal care</td>
</tr>
<tr>
<td></td>
<td>14. Basic Food Plan recipients</td>
</tr>
<tr>
<td></td>
<td>15. Food insecurity</td>
</tr>
<tr>
<td></td>
<td>16. Income inequality</td>
</tr>
</tbody>
</table>

**Access to care**

- 1. Uncompensated care
- 2. Uninsured clients
- 3. Health provider capacity
- 4. Dental provider capacity

**Reproductive health**

- 11. Unintended pregnancies
- 12. Teen birth rate (age 15-19)
- 13. Early and adequate prenatal care

**Food security**

- 14. Basic Food Plan recipients
- 15. Food insecurity

**Social context**

- 16. Income inequality

---

*All client-level indicators will be presented by available demographics where possible, including immigration status. = availability of data to be determined. FQHC = Federally Qualified Health Center, EMS = Emergency Medical Services, QHP = Qualified Health Program.*
Falling uninsured rates among King County FQHC medical and dental clients

Data Source: Community Health Services Division, PHSKC. Data shown are for King County residents only, all ages included.
Who uses the health safety net in King County? A comparison of medical clients with the overall King County population in 2015.

Data Source: Health safety net – Community Health Services Division, PHSKC; overall King County population – US Census Bureau, American Community Survey, 2015. Note that data include all FQHC medical clients in 2015, with exception of Public Health Centers for which homeless clients only are included.
Using Data and Cross-Sector Data Vision to Create Accountable Communities of Health

Cross sector data

- Affordable housing
- Insurance companies/MCOs
- Jails
- Clinical records
- DCHS
- Surveys
- Vital stats
- Education

Facilitate cross sector data sharing

ACH

Data management

Data analysis

Data dissemination

Data visualization
### High level theory of change for the Medicaid transformation

<table>
<thead>
<tr>
<th>Problems</th>
<th>Strategies</th>
<th>Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals with chronic conditions struggle to reach full potential with fragmented health &amp; social services</td>
<td>Improve integration and coordination of physical health, behavioral health, and social services</td>
<td>Improve use of primary care and behavioral health services</td>
</tr>
<tr>
<td>Variable care quality leads to suboptimal management of chronic conditions</td>
<td>Develop incentive payment programs to optimize and sustain chronic condition management</td>
<td>Improve linkages between health and social services</td>
</tr>
<tr>
<td>Too many opioid prescriptions and deaths related to prescription opioids</td>
<td>Improve opioid prescribing practices of providers</td>
<td>Reduce use of ED and hospital</td>
</tr>
<tr>
<td>Screening and treatment for Opioid Use Disorder (OUD) too low</td>
<td>Increase OUD screening in primary care and expand access to OUD treatment</td>
<td>Reduce jail involvement</td>
</tr>
<tr>
<td>Too many opioid overdose deaths</td>
<td>Expand access to take-home overdose prevention kits</td>
<td>Reduce homelessness</td>
</tr>
<tr>
<td>Jails over-represent individuals with chronic conditions and homelessness</td>
<td>Improve access to health and social services for individuals leaving jail</td>
<td>Reduce OUD and opioid overdoses</td>
</tr>
<tr>
<td>Hospital use for mental illness is too high</td>
<td>Improve access to mental health and substance use disorder treatment for these individuals after hospitalization</td>
<td>Improve overall health and wellbeing across the age spectrum</td>
</tr>
<tr>
<td>Hospital use among older adults and others requiring long-term services with chronic conditions is too high</td>
<td>Improve care coordination for these individuals after hospitalization</td>
<td></td>
</tr>
</tbody>
</table>
Identifying **hot** and **cold** spots in the Medicaid population

### Hot spots

1. **Broad**: Members with heavy utilization of ED, hospital, and/or jail
2. **Behavioral health**: Members with heavy utilization of ED and/or hospital for behavioral health concerns
3. **Chronic disease**: Members with poorly managed chronic disease (P4P measures)

For each of these cohorts, estimate the following:

a) # not using primary/preventive care
b) # not using behavioral health services
c) # who are homeless
d) # eligible for but not enrolled in Health Home

**By demographics:**

i. Adult (18+) vs. child (<18)
ii. Gender
iii. Race
iv. Language/limited English proficiency status
v. Sub-county region
vi. Medicaid coverage group

### Cold spots

4. **Primary care**: Members with no primary/preventive care use in past year
5. **Behavioral health**: Members with unmet mental health service need
6. **Chronic disease**: Members with potentially undiagnosed chronic illness?

For each of these cohorts, estimate the following:

e) # using primary/preventive care (except #4)
f) # using behavioral health services (except #5)
g) # who are homeless

**By demographics:**

i. Adult (18+) vs. child (<18)
ii. Gender
iii. Race
iv. Language/limited English proficiency status
v. Sub-county region
vi. Medicaid coverage group

Which Medicaid members have greatest opportunity for improvement?

### Behavioral health concerns tied to healthcare and social outcomes

<table>
<thead>
<tr>
<th>Elevated risk for...</th>
<th>3+ ED visits per year</th>
<th>Unemployment</th>
<th>Homelessness</th>
<th>Arrest</th>
<th>30-day readmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any mental health need</td>
<td>2.2x</td>
<td>1.5x</td>
<td>1.5x</td>
<td>1.4x</td>
<td>1.2x</td>
</tr>
<tr>
<td>Serious Mental Illness</td>
<td>2.7x</td>
<td>1.7x</td>
<td>1.9x</td>
<td>1.8x</td>
<td>1.3x</td>
</tr>
<tr>
<td>SUD treatment need</td>
<td>4.5x</td>
<td>1.8x</td>
<td>4.3x</td>
<td>5.4x</td>
<td>1.4x</td>
</tr>
<tr>
<td>Co-occurring MI/SUD</td>
<td>5.6x</td>
<td>2.1x</td>
<td>4.2x</td>
<td>4.9x</td>
<td>1.5x</td>
</tr>
</tbody>
</table>

### Persistent racial/ethnic disparities also exist

<table>
<thead>
<tr>
<th>Homelessness</th>
<th>3+ ED visits per year</th>
<th>Arrest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Medicaid members</td>
<td>1.7x</td>
<td>1.6x</td>
</tr>
<tr>
<td>AIAN Medicaid members</td>
<td>2.6x</td>
<td>2.6x</td>
</tr>
</tbody>
</table>

- No follow-up after ED visit for alcohol or drug dependence within 7 or 30 days
- No breast cancer screening
- No blood sugar testing for diabetes

### Notes:
1) Data source: Measure Decomposition Data, 7/7/2017, DSHS, Research & Data Analysis Division
2) Data represent adults (18-64, except breast cancer screening – 50-64) with full-benefit Medicaid coverage, excluding members with third party coverage but including members with Medicaid dual eligibility.
Path of least resistance for performance-based initiatives not necessarily transformative change

<table>
<thead>
<tr>
<th>Maximal overlap approach</th>
<th>Equity &amp; social justice approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find the common denominator across all projects – Medicaid members with chronic disease &amp; behavioral health concerns who may benefit from opioid dependence prevention/treatment and transitional care services</td>
<td>Identify Medicaid member subgroups with largest burden of relative health and social disparities – AI/AN, Black, mental illness &amp; SUD treatment needs</td>
</tr>
<tr>
<td>Optimize efficiency, but may only be able to move interconnected P4P measures (e.g. may miss child P4P measures)</td>
<td>Grounded in justice, accountability to underserved populations, but may not be able to move region-level needle</td>
</tr>
<tr>
<td>Find providers who have established health or social service relationships with the largest number of Medicaid members not meeting performance measures</td>
<td>Identify the small subset of Medicaid members with the most complex health and social needs and thus the highest utilization and cost of health care services (e.g. 5% responsible for 50% of total cost of care)</td>
</tr>
<tr>
<td>May be well designed for shifting region-level needle, but not necessarily linked to transformative change</td>
<td>May blend elements of both performance and ESJ, given focus on members with maximal suffering and high, costly utilization of health services</td>
</tr>
</tbody>
</table>

May be worthwhile to consider a blended approach that includes both needle-moving, condition-specific clinical and social strategies (e.g. diabetes management) AND ESJ-grounded, system-level transformative change (e.g. centralized referral hub for clinical and social services to support improved care coordination)
Designing for rigor

Logic models, reach and impact, oh my!
Good Evaluations Start with Good Data

- Plan early for scientific rigor
  - Develop evaluation plan
  - Identify data gaps
  - Literature search
- Detailed data plan (collection and/or analysis)
  - Determine data needed (administrative, survey, secondary, observational)
  - Data quality
  - Continue to monitor data and shift if necessary
- Analysis plan needs to match the evaluation questions
- Don’t forget to write up the results for dissemination!
Common Logic Model Components

<table>
<thead>
<tr>
<th>Resources/Inputs</th>
<th>Activities</th>
<th>Outputs</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources needed to achieve program’s objectives</td>
<td>What the program does with resources to meet objectives</td>
<td>Direct products of program activities</td>
<td>Changes that result from the program’s activities and outputs</td>
</tr>
</tbody>
</table>

**Assumptions:** The underlying assumptions that influence the program’s design, implementation or goals

**External Factors/Context:** Description of environment in which program takes place
FIGURE 8-1 Generic logic model or theory of change for community obesity prevention. Not all interventions will include programs, policies, and environmental changes or systems changes. Not all interventions will focus on both diet and physical activity. Dashed lines indicate potential for interventions to increase community engagement over time.
Components of policy, systems and environment change: measuring reach

Policy change
- Written laws, regulations, programs, procedures or budget commitments, as adopted by a formal governing body
  - Smoke-free multi-unit housing, parks, and other settings
  - Swimming pool scholarship program

Infrastructure change
- Sustainable changes in practices & protocols within institutions
  - Routinely training cafeteria staff on whole food cooking
  - Increase f/v purchasing by 20% per year

System change
- New, ongoing interactions across sectors
  - Farm to schools/childcare/senior centers
  - City planning and public health departments

Environment and social change
- Physical, economic and social surroundings
  - Hydration stations
  - Placement of items in school cafeterias
  - Promoting foods using superhero themes

Behavior change
- Fewer current smokers, exposures to 2nd hand smoke
- Improved levels of obesity, overweight
- Increased physical activity
- Healthy eating: 5 a day, no food insecurity

Reach includes the population who received PSE
Reach: the extent to which a program attracts its intended audience

- People
- Organizations
- Communities
- Largely based on the intervention’s scope.

Reach Formula

\[
\text{Actual number of people or entities served} \ \frac{\text{Potential number of people or entities served}}{=} \ \text{Percentage Reached}
\]
Impact

• Impact is the effect that interventions have on people, organizations, or systems to influence health.

• Key considerations:
  • Measurable: Impact is concrete, meaningful to stakeholders, and speaks to the value of your program.
  • Realistic level of change: How an intervention helps achieve public health goals.
  • Consider using short-term change for chronic disease risk factors

• Refer to Vickie’s slide deck for examples of how to apply the evidence base to calculate impact on reach
# Sample Data Collection Plan: Process Evaluation

## Data Collection Matrix

<table>
<thead>
<tr>
<th>Evaluation Questions</th>
<th>As evidenced by...</th>
<th>Data Source</th>
<th>Accessed where and by whom...</th>
<th>At what time point...</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance Monitoring and Process Evaluation: Implementation/Outputs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What do we want to know...</td>
<td>Indicator</td>
<td>Data Collection (Person Responsible)</td>
<td>Time Frame</td>
<td></td>
</tr>
<tr>
<td>Evaluation Questions should be developed based on literature review and identified gaps in evidence base to extent possible</td>
<td>What type of data we'll need</td>
<td>Where we'll get the data</td>
<td>How we will get the data (initals)</td>
<td>When we will collect the data</td>
</tr>
<tr>
<td><strong>Implementation Science: Identify strategies to promote the integration of evidence into policy and program decisions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 1) How much of what kind of support (training, TA) was used? What things were perceived to be helpful? | Topics Counts or time Staff description of helpful topics | a) Training agendas
   b) Attendee logs
   c) TA tracking sheet
   d) Staff interviews | a) Collected from DJ/MP/DO
   b) Collected from DO and MP
   c) Conducted with key district and school key staff by EQ | a) Post training
   b) Quarterly
   c) Spring 2014 |
| 2) What facilitators and barriers arose during implementation? (What needed to be purchased? How was support - admin, teachers, students - present and useful?) | TA topics noted Staff descriptions of facilitators and barriers | a) TA tracking sheets
   b) Staff interviews | a) Collected from DO and MP
   b) Conducted with key district and school staff by EQ | a) Quarterly
   b) Spring 2014 |
| **Implementation Science: Comparisons of multiple evidence-based interventions** |                           |                                                                            |                                                                   |                           |
| 3) What did schools choose to focus on and why? | Selected objectives and action items Topics receiving most attention | a) Schools' plans
   b) TA tracking sheet
   c) Staff interviews | a) Plans reviewed (EQ)
   b) Collected from MP and DO
   c) Interviews conducted with key district and school key staff (EQ) | a) Fall 2013
   b) Quarterly
   c) Spring 2014 |
| **Implementation Science: Appropriate adaptation of interventions according to population and setting** |                           |                                                                            |                                                                   |                           |
| 4) Were there differences between middle and high schools? | [analysis question, see Q2 and Q3] |                                                                            |                                                                   |                           |
| 5) Were there differences based on school resources (e.g., cafeteria layout, food service skills)? | [analysis question, see Q2 and Q3] |                                                                            |                                                                   |                           |
| **Other**                                                                 |                           |                                                                            |                                                                   |                           |
| 6) What media messages were used, at what dose and to whom? | Staff description | a) Staff interviews | a) Interviews conducted with key district and school key staff (EQ) | a) Spring 2014 |
## Sample Evaluation Plan

### Logic Model

**PPO 2 (Healthy Eating):** By September 29, 2014, increase the number of intervention area residents who are exposed to healthy eating opportunities from unknown to 325,399.

**AMO 2.4:** By September 29, 2014, increase the number of students exposed to improved school nutrition environments by using behavioral economic strategies to increase student consumption of high nutrition quality foods from 0 to 9,000.

**Reach:** Defined by the number of students in schools using (any?) BE principles OR the number of students who buy lunch in schools using (any?) BE principles (OUTPUT)

**Context or conditions:** (situation in which the effort will take place; factors that may affect outcomes)
- Some key details will be determined upon selection of funded district and schools (e.g., # of schools, current cafeteria practices, data collection logistics).
- BE action steps and objectives will be selected by schools in the spring; these will then affect the outcomes of focus.

**Overarching Evaluation Question:** To what extent can the evidence-based BE principles and strategies be effectively translated into effective school practices?

### Evaluation Plan Summary: Behavioral Economics

**CPPW Evaluation Lead:**

**Date:** May 2, 2013

### Resources

<table>
<thead>
<tr>
<th>Resources</th>
<th>Implementation Activities</th>
<th>Outputs</th>
<th>Short Term Outcomes</th>
<th>Intermediate Outcomes</th>
<th>Long Term Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTG funding</td>
<td>District/schools participate in training on BE principles, objectives and action items</td>
<td>#/amount of training conducted</td>
<td>Increased understanding of BE principles, objectives and action items among Nutrition Directors and school cafeteria staff</td>
<td>Increased application of BE principles and action items in school cafeterias</td>
<td>Increased student selection of fruit</td>
</tr>
<tr>
<td>1 funded school district</td>
<td>(minimal training on marketing)</td>
<td>#/type of staff trained</td>
<td></td>
<td></td>
<td>Increased student selection of vegetables</td>
</tr>
<tr>
<td>Up to 6 participating middle and high schools</td>
<td>District/schools engage with TA providers on BE principles, objectives and action items; media education initiative development and implementation</td>
<td>Amount of TA provided</td>
<td></td>
<td></td>
<td>Increased student selection of white milk</td>
</tr>
<tr>
<td>Evidence-based Smarter Lunchroom Movement (SLM) training and TA materials</td>
<td></td>
<td>#/type of BE TA topics</td>
<td></td>
<td></td>
<td>Increased student selection of targeted entrée</td>
</tr>
<tr>
<td>Sample marketing materials?</td>
<td></td>
<td>#/type of media TA topics</td>
<td></td>
<td></td>
<td>Increased student selection of reimbursable meals</td>
</tr>
<tr>
<td>Leading expert (trainer and TA provider) from the Cornell Center for Behavioral Economics for Child Nutrition Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHSCC lead/TA provider (expertise in BE, school nutrition, public health)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPHN TA provider (expertise in BE, school nutrition, public health)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**...we are able to do these activities...**

**...producing these results...**

**...and these increases in knowledge, skills, capacity...**

**...and these changes in practices, policies, systems and environments...**

**...resulting in behavior change or population-level outcomes...**
Challenges and cross-sector considerations
**Tools:** Health & housing dashboard

**Health & housing data dashboard**

- Public Housing Authority (PHA) residents are **more likely** to receive care for chronic conditions than the non-PHA Medicaid population.

- PHA children are **more likely** to receive a well-child check than non-PHA Medicaid children.

**How to use this page**

Click on any of the icons on the map or list to view general patterns of health for residents in that community or type of building.

A comparison bar is available that shows the rate for the rest of the PHA population (who are enrolled in Medicaid).

Use the menus below to filter which groups are included in the rate. You can also select just the health conditions you want to see.

**Users can click through tabs to see different dashboards.**

**Users can click to filter by housing type.**

**Users can select different years (2012 through 2016) and different health indicators to see how rates change.**

**Users can hover over data points to see more information.**

**www.kingcounty.gov/health-housing**
Challenges and Opportunities

- Increasing complexity of data
- More data available than ever before
- Public Health Accreditation
- Aging and chronic disease have long term trajectories
- Increasingly savvy consumers want more granular data, faster
- Getting social determinants of health data
- Cost of primary data collection
- “Collective impact” for community transformation
- Integration of epidemiology, quality improvement, decision and data science
- Transformation opportunities to leverage data integration and linkage
- Creating the “workforce of tomorrow” by increasing skills and facility with data

You like data! You really like data!
Healthy Community Action Plan

**Health and housing partnership**
Bring health and financial literacy programming to residents.

**Support regional clean air agency**
Conducting near-road air toxics study to quantify relationship between air quality and health.

**Neighborhood and City Parks & Rec**
Activate neighborhood parks.

**Influence City government**
Shifting City of Seattle toward providing more culturally appropriate responses to public safety, sanitation, and homelessness.
Other local health monitoring or evaluation
Economic Evaluation Methods

- Cost-benefit analysis accounts for outputs

Cost effectiveness:

- Cost utility:
Using Health Equity as a Focus

It is our mission to transform public health practice for the purpose of eliminating health inequities using a broad spectrum of approaches that create healthy communities.

The Bay Area Regional Health Inequities Initiative (BARHII) is a coalition of the San Francisco Bay Area's eleven public health departments committed to advancing health equity. The regional collaboration includes public health directors, health officers, senior managers and staff from Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma counties, and the City of Berkeley.
Networks

• All-In for Community Health [https://allin.healthdoers.org/](https://allin.healthdoers.org/)
• American Evaluation Association [https://www.eval.org/](https://www.eval.org/)
• A compilation of information [https://phpartners.org/health_stats.html](https://phpartners.org/health_stats.html)
• Program specific: [https://www.cdc.gov/tobacco/stateandcommunity/tobacco_control_programs/surveillance_evaluation/surveillance_manual/index.htm](https://www.cdc.gov/tobacco/stateandcommunity/tobacco_control_programs/surveillance_evaluation/surveillance_manual/index.htm)
• Guiding Principles for Evaluators: [http://www.eval.org/p/cm/ld/fid=51](http://www.eval.org/p/cm/ld/fid=51)
• Consider looking outside US (Public Health England, for example)
Collective Impact: Engaging Community for Results

Results based-thinking/accountability
• How much did we do?
• How well did we do it?
• Is any one better off?
CI Readiness: Where are you now?

1-3 Information sharing, networking, learning

4-7 Organizations working together toward shared goals i.e. advocacy, coalitions, joint fund raising, etc.

8-9 Assessing readiness, identifying funding/resources for CI; designing a structure for backbone support (strategic direction, dialogue between partners, data collection and analysis, handling communications, coordinating community outreach, mobilizing Funders)

10 Launching Collective Impact initiative
Collective Impact Theory of Change
2 Kinds of accountability
   • Population- or Community-Level Quality of Life (Results & Indicators)
   • Performance- or Program-Level (Performance Measures)

3 Kinds of performance measures
   • How much did we do?
   • How well did we do it?
   • Is anyone better off?

7 Questions: from ends to means “in less than an hour”
   (aka: Turning the Curve Thinking)
The 7 Population Accountability Questions

1. What are the quality of life conditions we want for the children, adults, and families who live in our community?
2. What would these conditions look like if we could see them?
3. How can we measure those conditions?
4. How are we doing on the most important of these measures?
5. Who are the partners that have a role to play in doing better?
6. What works, including no-cost and low-cost ideas?
7. What do we propose to do?
Developing Indicator and Measurement Systems

1. Shared Measurement Systems
   - Provides menu of common indicators and common platform to report on different outcomes and indicators.

2. Comparative Performance Systems
   - Involves asking participants to report on the same indicators, using the same measure to compare performance.

3. Adaptive Learning Systems
   - Supports ongoing collaboration and learning among organizations to align efforts and goals, and to measure common outcomes and indicators.

COO residents

Health, housing, and economic equity

Population
- Who is this about?

Results
- Where do we want to end?

Experience
- How are we doing right now?

Story behind the numbers
- What’s the story behind the baseline?

Partners
- Who has a role to play in turning the curve?
- Who is impacted?
- Could there be unintended consequences?

What works
- What do we propose to do to turn the curve?
- What are our criteria for action?

Strategy and action plan
- How well did we do?
- How much did we do?
- Is any one better off?

Examples from COO

Partners in Rainier Valley, White Center, SeaTac/Tukwila, government, states, NGO

Food Innovation Network; develop new affordable mixed-use housing; workforce development

Measure indicators; regular report outs; dashboard; community check-in
Selecting Program Level Measures

**Communication Power**
Does the indicator communicate to a broad range of audiences?

**Proxy Power**
Does the indicator say something of central importance about the result?
Does the indicator bring along the data HERD?

**Data Power**
Quality data available on a timely basis.
Criteria and types of indicators

Part 1: Primary Indicators
- 3 to 5 “Headline” Indicators
- What this result “means” to the community
- Meets the Public Square Test

Part 2: Secondary Indicators
- Everything else that’s any good (Nothing is wasted.)
- Used later in the Story behind the Curve

Part 3: Data Development Agenda
- New data
- Data in need of repair (quality, timeliness etc.)

Communication Power
Does the indicator communicate to a broad range of audiences?

Proxy Power
Does the indicator say something of central importance about the result?

Data Power
Quality data available on a timely basis.
Evaluating Collective Impact Requires a Mindset Shift for Many Funders and Practitioners

**Typical Focus of Program Evaluation**

- Assessing the impact of a specific intervention
- Evaluating effects and impact according to a predetermined set of outcomes
- Using logic models that imply cause and effect, and linear relationships
- Providing findings at the end of the evaluation

**Evaluating CI as a Complex Intervention**

- Assessing multiple parts of the system, including its components and connections
- Evaluating intended and unintended outcomes as they emerge over time
- Evaluating non-linear and non-directional relationships between the intervention and its outcomes
- Embedding feedback and learning through the evaluation
Continued monitoring and analysis of life expectancy

NOTE: these data are still under development and not considered final; please do not disseminate but consider as part of a discussion.
Summary
Overarching Lessons Learned

• Start small and grow evaluation function over time
• BEFORE getting to design and measurement, clarify:
  • What the intent of the program is and how it intends to achieve impacts and
  • The priority questions for this evaluation or monitoring effort
• Leverage resources from the profession of evaluation and colleagues in the field
• Always use a logic model or other plan to help you know where you start, where you want to go, how you are going to measure it, and how you are going to get there
• Include in budget; supplement funding with grants
• Remember that it is an on-going process. Revisit your plans in terms of M&E -- have different questions emerged? Are you getting useful information? Do you need to change your program or your plan?
• Community is vitally important
In summary – same as context setting

• No “right” or “wrong” questions; many different approaches
• All about the data
• Changes in knowledge, attitudes, beliefs, practices can take years to result in outcomes; hold the course and set expectations
• Fail forward faster
• Plan for evaluation and monitoring in budget
• In order to be Chief Health Strategist, requires knowing where you are, where you want to go and a plan of how to get there
• Relevant data partners
• Programs and services make sense for community
• Cross-sector rather than data siloes: how can data tell the story
• Don’t forget about the impact of qualitative data
• Collective impact with the community
Examples of transformation values and tools in action

- Improved health & social outcomes
- Reorienting systems toward prevention
- Better value

**Cross-cutting outreach, communications & evaluation supports**
Metro Foundational Public Health Services

Across all programs:
- Assessment (surveillance and epidemiology)
- Emergency preparedness and response (all hazards)
- Communications
- Policy development and support
- Community partnership development
- Business competencies
Wrap up and reminder for evaluation via the CSTE app

We do really value your feedback and use it to add to the next year’s workshop!

Questions?

If you want to join the SCALE project:
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Follow up items: participants will receive an electronic version of the EHI calculation, a primer in creating a CT map in MS Excel, and a link to the SEPHO tool for LE