Moving From What and Why to How: Lessons on Addressing the Social Determinants of Health

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Past-President, NACDD
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Overview

- Review of the Root Causes, social determinants of health, and Public Health 3.0
- Using Public Health tools to identify root cause strategies
- Public Health 3.0 – some steps worth following
Factors Commonly Understood to Influence Modern Health Status

- Lifestyle: 51%
- Smoking: 20%
- Obesity: 10%
- Nutrition: 19%
- Alcohol Use


However....
Policy Matters

U.S. Life Expectancy vs. Health Expenditure
From 1970 to 2014, citizens of OECD countries have outlived their American counterparts – for a fraction of the associated costs.

Source: Visual Capitalist
The U.S. is an anomaly in health and social spending patterns

<table>
<thead>
<tr>
<th>Country</th>
<th>Health expenditures as % of GDP</th>
<th>Social service expenditures as % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>9.4</td>
<td>16.8</td>
</tr>
<tr>
<td>Sweden</td>
<td>10.6</td>
<td>21.5</td>
</tr>
<tr>
<td>Austria</td>
<td>10.8</td>
<td>20.9</td>
</tr>
<tr>
<td>Switzerland</td>
<td>11.7</td>
<td>19.4</td>
</tr>
<tr>
<td>Denmark</td>
<td>11.9</td>
<td>18.5</td>
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<tr>
<td>Germany</td>
<td>12.1</td>
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<td>Belgium</td>
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</tr>
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<td>14.9</td>
<td>13.0</td>
</tr>
<tr>
<td>Slovenia</td>
<td>15.2</td>
<td>12.5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>15.5</td>
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</tr>
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<td>16.1</td>
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Source: OECD
American Apartheid:

Segregation Index

South Africa 90
Detroit 85
Milwaukee 82
New York 81
Chicago 80
Newark 80
Cleveland 77
U.S. 66

Source: Massey 2004; Iceland et al. 2002; Glaeser & Vigitor 2001
Credit – Dr Anthony Iton, Colorado Chronic Disease conference 2009.
PLACE MATTERS
Source: Anthony Iton, Alameda County Health Department 2007
Pittsburgh

Life Expectancy

Per Capita Income

Source: Allegheny County Health Department
Salt Lake City

Life Expectancy

Percent of Children in Poverty

Source: CityHealth Dashboard
Life Expectancy Percent of Children in Poverty

Source: CityHealth Dashboard
Orem

Life Expectancy

Percent of Children in Poverty

Source: CityHealth Dashboard
Anchorage

Socioeconomic Status

Obesity Prevalence
These patterns were politically, socially, and economically engineered.

4. DETRIMENTAL INFLUENCES.

5. INHABITANTS:
   a. Type Laborers - Relief
   c. Foreign-born Italian
   e. Infiltration of Negro
   g. Population is increasing

6. BUILDINGS:
   a. Type or types 2 story rows
   c. Average age 20 - 50 yrs.
Americans are Sicker Across the Board

Inequities Harm Us All

### Chronic Disease Prevalence
#### US vs England, **High Income**

<table>
<thead>
<tr>
<th>Disease</th>
<th>England</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>5.7</td>
<td>9.5</td>
</tr>
<tr>
<td>Hypertension</td>
<td>37.0</td>
<td>31.0</td>
</tr>
<tr>
<td>All Heart disease</td>
<td>7.8</td>
<td>12.0</td>
</tr>
<tr>
<td>Myocardial infarction</td>
<td>3.4</td>
<td>4.4</td>
</tr>
<tr>
<td>Lung Disease</td>
<td>3.7</td>
<td>3.1</td>
</tr>
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<td>Cancer</td>
<td>10.0</td>
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</table>

Wealthiest third of the income distribution in each country

The Future of Public Health is NOW

Public Health 1.0
- Infection control through treatment - TB
- Clinical preventive measures – immunizations

Public Health 2.0
- Policy and environmental change – Seatbelts, tobacco tax
- Systems building – Diabetes Prevention Program

Public Health 3.0
- Social determinants of health – food, housing, transport
- Partnerships – Education, Human Services, Transportation, Housing, Revenue....
John Snow: Icon of Public Health 1.0

- Father of modern epidemiology
- London Cholera epidemic of 1854
- Closing down the Lambeth Well
Public Health 3.0

We are all drinking from a poisoned well.

Food Segregation SEXISM
insecurity INCOME RACISM
poverty INEQUALITY Redlining
crime low education funding
Unhealthy disinvestment
ing housing violence mass incarceration
EXAMPLE: Mapping the Root Causes of Chronic Disease

Differentiation
- Race
- Ethnicity
- Gender
- Sexual orientation
- Class
- Income
- Ability

The Isms
- Segregation, Disenfranchisement, & Alienation
- Civic participation and power
- Inequitable & low performing education systems
- Sources of Stress – food, income, housing, crime
- Crumbling infrastructure
- Health systems inequity
- Unjust food systems
- Inequitable activity options
- Psycho-social stress
- Adverse Childhood Experiences

MACRO
- communities, states, nations

MESO
- neighborhoods, social networks

MICRO
- Individual

Policies

Low levels of investment & economic opportunity

Social Connectedness
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Tobacco Use
Diabetes
Cancer
Cardiovascular Disease
COPD
Asthma

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The Lessons for Public Health 3.0 Action

• Some Steps We Can All Follow
Step 1: Build Public Health 3.0 on public health principles

• Don’t stop doing what you’re doing, add to it
• Don’t reinvent the wheel, learn from others
• Use your training
  ○ Adhere to the evidence-base
  ○ Engage others/ Work through partnerships
Step 2: Work across three levels

• Policy & systems change – particular focus on food, income, & housing security
• Community based geographic environmental change
• Interpersonal relationships
Public Health’s Challenge

- **MACRO**
  - Deconstruct the *policies of oppression*

- **MESO**
  - Reconstruct *neighborhoods & communities*

- **MICRO**
  - Co-construct systems that *let everyone achieve health*
Step 3: MACRO - Make the Case

- Speak Truth to Power
- Engage your audience with a call to action
- Commit to communication
Stages of Change Model

Policymakers are an audience that doesn’t know we have a problem.
Mapping Disease by Neighborhood:

Showing policymakers how place matters

Source: Cityhealthdashboard.com
500 Cities Project
Diabetes 18+

High Blood Pressure 18+
Smoking

Physical Inactivity

Erie
High blood pressure

Obesity
Ogden

Diabetes, Adults 18+  Regular Dental Visits
Smoking

West Jordan

Obesity
Anchorage

Lead Exposure Risk

Smoking Prevalence
Life expectancy: Anchorage
Step 4: Build Around Data and Metrics

- Identify a simple and clear set of social, economic and political metrics
- Connect the metrics to your health outcomes
- Create a public facing dashboard to hold yourselves and others accountable for the work and the progress
Five Domains of the Social Determinants of Health
Healthy People 2020

- Economic Stability
- Education
- Health and Health Care
- Neighborhood and Built Environment
- Social and Community Context
### Measuring Determinants of Health

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<th>Domain</th>
<th>Determinant</th>
<th>Indicator</th>
</tr>
</thead>
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<tr>
<td><strong>Integrated Healthcare</strong></td>
<td>Healthcare Access</td>
<td>% adults in 2016 reported not seeking medical care due to cost by race/ethnicity</td>
</tr>
<tr>
<td></td>
<td>Social Services</td>
<td>Ratio of # HH receiving to # HH eligible for SNAP (aka % of eligible HH receiving SNAP/benefits) (by city/town)</td>
</tr>
<tr>
<td></td>
<td>Behavioral Health</td>
<td>RATIO: # of naloxone kits to # of overdose deaths (by city/town) (PORI)</td>
</tr>
<tr>
<td><strong>Community Resiliency</strong></td>
<td>Civic Engagement</td>
<td>% reg. voters participating in 2016 election (by city/town?)</td>
</tr>
<tr>
<td></td>
<td>Social Vulnerability</td>
<td>CDC Social Vulnerability Index</td>
</tr>
<tr>
<td></td>
<td>Equity in Policy</td>
<td>Ratio of # low-moderate income housing units to # low income families (by city/town)</td>
</tr>
<tr>
<td><strong>Physical Environment</strong></td>
<td>Natural Environment</td>
<td>Percentage of overall landmass with tree canopy cover (by city/town)</td>
</tr>
<tr>
<td></td>
<td>Transportation</td>
<td>% of households reporting unsatisfactory or no public transportation in their neighborhood</td>
</tr>
<tr>
<td></td>
<td>Environmental Hazards</td>
<td># and % of children with lead blood levels &gt;5mg/dL</td>
</tr>
<tr>
<td><strong>Socioeconomics</strong></td>
<td>Housing Burden</td>
<td>COMPOSITE: % Cost burdened renters AND owners by City/Town</td>
</tr>
<tr>
<td></td>
<td>Food Insecurity</td>
<td>% of pop. 18+ reporting how often in past 12 months worried or stressed about having enough money to buy nutritious meals</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>% of students graduating with a regular diploma within four years (by city/town)</td>
</tr>
<tr>
<td><strong>Community Trauma</strong></td>
<td>Discrimination</td>
<td>% of women who experience discrimination right before or after a pregnancy by race/ethnicity AND % of adults reporting racial discrimination in HC settings in the part 12 mo. by race/ethnicity</td>
</tr>
<tr>
<td></td>
<td>Incarceration</td>
<td>COMPOSITE: # of non-violent offenders under RI probation and parole PER 1,000 residents age 18</td>
</tr>
<tr>
<td></td>
<td>Public Safety</td>
<td>Violent crime rate and non-violent crime rate (per 100,000 people) (by city/town)</td>
</tr>
</tbody>
</table>
Step 5: Think Outside the Box

• Inequity is more than health disparities
• Get creative - push the boundaries of public health work
Colorado Office of Health Equity

- Established in statute as the Office of Health Disparities - 2005
- Renamed in statute - Office of Health Equity – 2013
  - Re-entry systems with wrap-around services for incarcerated individuals
  - Build work-based learning systems for those changing jobs or entering labor force
  - Build systems of prescription and referral from health care to social services
  - Build accessible support and training systems for 16-25 yr olds on life-skills, positive relationships, and employment training and matching
  - Advocate for policies that require health impact assessments in housing stock, education systems, community plans, local transportation systems, and human service systems
  - School district partnerships to assure health services to needy children, especially in areas of low educational attainment
Another approach –
Provide Resources to Grease the Skids

- Grants to schools to adopt healthier vending options
- Financial assistance and training to improve food prep in childcare
- Funding for operation costs of community health coalitions
- Assisting states in public health transformation and funding initiatives
- Accessing the population health potential of EHRs
- Building resource and referral inventories for social services
- Funding for streamlining applications for social services
Creating connected, thriving & resilient communities free from violence and injury

In order to improve the environments where we live, work, learn and play, we are using these resources

- Research on issues and effective strategies
- State & federal funding
- Existing program resources
- Experienced staff
- State and local partnerships
- Violence and Injury Prevention Network

and ensure all Coloradans experience

- Connectedness: the degree to which people are socially close, interrelated, or share resources with others.
- Social Norms: refers to the rules of behavior and informal understandings considered acceptable in a group.
- Behavioral Health: refers to the promotion of wellbeing in both mental health and substance use.
- Economic Stability and Supports: refers to the level of economic resources and equality of distribution of resources among individuals and communities.

and ultimately reduce

- Suicide
- Older Adult Falls
- Prescription Drug Overdose
- Motor Vehicle Injuries
- and Fatalities
- Bullying
- Sexual Violence
- Teen Dating Violence
- Intimate Partner Violence
- Child Maltreatment
- Traumatic Brain Injury

across the lifespan of all Coloradans.
The Magnitude of the Solution

A focus on **ACEs** and **building resilience**

- Feeling social/emotional *support* and *hope*.
- Having **2 or more people** who help (giving *concrete help* when needed).
- Community reciprocity: watching out for children, intervening when they are in trouble, doing favors for others (*social connectedness*).
- **Social Bridging**: reaching outside your social circle to get help for family and friends.

...can address the many chronic diseases that we are working to improve, and ultimately lead to better health outcomes.
Step 6: MESO – Seek Direction from the Community

• Social Determinants are about PLACES, NETWORKS, EXPERIENCES

• The people from those places with those experiences must lead – be a servant leader

• Political power correlates with premature death and disease more than risky behaviors

• A lack of voice is the first determinant of health
Smoking

Voter Turnout

Pittsburgh
Allentown

Obesity

Voter Turnout
Utah

Obesity

Voter turnout

State Rate 25.0%
(CI: 24.0%-26.0%)

Legend
- <10%
- 10-14.9%
- 15-19.9%
- 20-24.9%
- 25-29.9%
- >=30%
Step 7: Is your own house in order?

- Diversity in hiring
- Building cultural competence
- Leading with humility
- Understand - everyone is responsible; no one is to blame
- Approach communities with multiple options
Step 8: Get creative with financing

• We spend $3.5 trillion on health care
• It’s about HOW we spend the money
• Pool your resources, braid your funding, cut the strings
  – Community Benefit,
  – Certificate of Need,
  – Investments in Prevention,
  – Payment Reform
  – Preventive Services Block Grant
  – Ask partners to contribute what they can afford
Examples

• Rhode Island & Colorado braided funding
• Michigan used Preventive Services Block Grant
• Massachusetts used Certificate of Need
• Community Benefit under the ACA
• North Carolina Medicaid
Step 9: MICRO - Don’t just Medicalize the Problem

• Health Systems have discovered the social determinants of health
• Integrating referrals for social service needs into EHRs
• This is NOT enough
Step 10: Everybody wins

• All of us are swimming in a sea of stress, conflict, adversity, inequity -- making all of us sick.
• By transforming the social and political realm and moving toward greater equity, we will help everyone.
  – Racial justice work is not work done FOR people of color.
  – Systems that fail communities of color, fail all of us.
  – Public health institutions will play a key role in dismantling systems of oppression
• A rising tide lifts all boats
Thank you

• For more information, go to:
  – https://www.chronicdisease.org/page/PresChallenge
  – Podcasts of interviews with
    • Karen DeSalvo, former Acting Assistant Secretary for Health
    • Anthony Iton, Senior Vice President for Healthy Communities, California Endowment
    • Len Nichols, Professor of Economics, George Mason University
    • Monica Bharel, Commissioner, Massachusetts Department of Health & Ben Wood, Healthy Community Design Coordinator
    • Douglas Jutte, Executive Director, Build Healthy Places
    • Isabel Sawhill, Senior Fellow, Economic Studies, Brookings Institution
    • Ana Novais, Deputy Director, Rhode Island Department of Health
    • Jodi Spicer, Adverse Childhood Experiences (ACEs) Consultant, Michigan Department of Health and Human Services
    • Elizabeth Cuervo Tilson, State Health Director and the Chief Medical Officer - North Carolina