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

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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
  - Obesity
  - Nutrition
  - Alcohol Use
- **Biology**: 20%
- **Health Care**: 10%
- **Environment**: 19%


However….
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

Source: OECD
Distribution of Average Income Growth During Expansions

source: Pavlina R. Tcherneva calculations based on Piketty/Saez data and NBER

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
Allentown

Life Expectancy

Percent of Children in Poverty

Source: 500 Cities Project – City Health Dashboard
Salt Lake City

Life Expectancy

Percent of Children in Poverty

Source: CityHealth Dashboard
Life Expectancy in Ogden

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 10 - 30 yrs.
Inequities Harm Us All

Americans are Sicker Across the Board

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

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 2.0

- Health care equity
- Health Education
- Activity Resources
- Healthy food options
- Tobacco Use
- Obesity
- Diabetes
- Cancer
- Cardiovascular Disease
- COPD
- Pollution
- Asthma

MICRO
Individual
Public Health 3.0

We are all drinking from a poisoned well

Food insecurity poverty crime
Unhealthy housing

Segregation SEXISM INCOME RACISM INEQUALITY Redlining
low education funding disinvestment violence mass incarceration
EXAMPLE: Mapping the Root Causes of Chronic Disease

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

The Isms

MACRO
- communities, states, nations

MESO
- neighborhoods, social networks

MICRO
- Individual

Policies

Low levels of investment & economic opportunity

Health systems inequity

Unjust food systems

Inequitable activity options

Psycho-social stress

Inequitable & low performing education systems

Sources of Stress – food, income, housing, crime

Crumbling infrastructure

Pollution

Social Connectedness

Civic participation and power

Segregation, Disenfranchisement, & Alienation

Crumbling infrastructure

Adverse Childhood Experiences

Obesity

Individual Agency & Biology

Tobacco Use

Diabetes

Cancer

Cardiovascular Disease

COPD

Asthma

EXAMPLE:
Mapping the Root Causes of Chronic Disease

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BARHI Model
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*
Socio-ecological model

Source: Wayne W. LaMorte, MD, PhD, MPH, Boston University School of Public Health
http://sphweb.bumc.bu.edu/otlt/MPH-Modules/QuantCore/PH717_ExposureAssessment/PH717_ExposureAssessment2.html
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
Pittsburgh

Diabetes 18+

High Blood Pressure 18+
Smoking

Physical Inactivity

Erie
High blood pressure

Reading

Obesity
Ogden

Diabetes, Adults 18+  Regular Dental Visits
West Jordan

Smoking

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
<table>
<thead>
<tr>
<th>Domain</th>
<th>Determinant</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Healthcare</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>Community Resiliency</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>Physical Environment</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>Socioeconomics</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>Community Trauma</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 child care
- 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

To implement these strategies:

- Apply a Health Equity Lens to All Work, Materials and Outreach
- Strengthen Policies, Systems, Environments
- Influence Health Care Systems
- Engage Communities
- Enhance Surveillance and Evaluation Systems
- Communicate Positive Norms
- Build Capacity for Injury and Violence Prevention at the Local Level

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
Utah

Obesity

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

Legend
- <10%
- 10-14.9%
- 15-19.9%
- 20-24.9%
- 25-29.9%
- >=30%

Voter turnout
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