Socially Determined:
Moving Chronic Disease Programs to Public Health 3.0

From What and Why to How
Gabriel Kaplan, PhD
Branch Chief, Health Promotion and Chronic Disease Prevention
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

- 1949 - 1953
- 1954 - 1957
- 1958 - 1960
- 1961 - 1969
- 1970 - 1973
- 1975 - 1979
- 1982 - 1990
- 1991 - 2000
- 2001 - 2007
- 2009 - 2012

Bottom 90%  Top 10%
Factors Influencing Health Status

Future Directions for Public Health

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

2.0 • Policy and environmental change – seatbelts, tobacco tax
  • Systems building – Diabetes Prevention Program

3.0 • Social determinants of health – food, housing, transport
  • Partnerships – Education, Human Services, Transportation, Housing, Revenue....
Socio-ecological model - how public health thinks

Five Domains of the Social Determinants of Health
Healthy People 2020
A PUBLIC HEALTH FRAMEWORK FOR REDUCING HEALTH INEQUITIES
BAY AREA REGIONAL HEALTH INEQUITIES INITIATIVE

UPSTREAM

SOCIAL INEQUITIES
- Class
- Race/Ethnicity
- Immigration Status
- Gender
- Sexual Orientation

INSTITUTIONAL INEQUITIES
- Corporations & Businesses
- Government Agencies
- Schools
- Laws & Regulations
- Not-for-Profit Organizations

LIVING CONDITIONS
- Physical Environment
  - Land Use
  - Transportation
  - Housing
  - Residential Segregation
  - Exposure to Toxins
- Economic & Work Environment
  - Employment
  - Income
  - Retail Businesses
  - Occupational Hazards
- Social Environment
  - Experience of Class, Race/Ethnicity, Gender, Immigration
  - Culture, Arts, Media, Violence
- Service Environment
  - Health Care
  - Education
  - Social Services

Strategic Partnerships Advocacy
- Community Capacity Building
  - Community Organizing
  - Civic Engagement

DOWNSTREAM

RISK BEHAVIORS
- Smoking
- Poor Nutrition
- Low Physical Activity
- Violence
- Alcohol & Other Drugs
- Sexual Behavior

DISEASE & INJURY
- Communicable Disease
- Chronic Disease Injury (Intentional & Unintentional)

MORTALITY
- Infant Mortality
- Life Expectancy

Emerging Public Health Practice
Current Public Health Practice

POLSICY
Public Health Need: Military Readiness

- Focus on Reserve and National Guards
- Optimizing readiness, resiliency, and well-being
- 6 themes:
  - Transportation and geographic dispersion
  - Community resources coordination
  - Mental healthcare and substance abuse
  - Jobs and employment
  - Family support
  - Adverse health behaviors

Proposed Solution: Building Healthy Military Communities

US Dept of Defense, Office of Force Resiliency
After the initial quantitative data analyses, the BHMC Pilot team conducted a baseline Rapid Needs Assessment (RNA) via scripted semi-structured interviews of DoD (unit leaders, retention non-commissioned officers, and recruiters) and non-DoD stakeholders (community health organizations, state and local health departments, employment assistance programs, and local healthcare providers). The RNA examined available resources and existing needs and used these qualitative data to identify six themes of the current gaps in optimizing readiness, resiliency, and well-being.

### The 6 Themes

**Transportation and Geographic Dispersion**

**Mental Healthcare and Substance Abuse: Access and Stigma**

**Family Supports:**
- Childcare, Spousal
- Employment, Higher
- Education Opportunities, and Housing

**Communication and Coordination Between DoD and Community Resources**

**Jobs and Employment:**
- Shifting Location,
- Employer Expectations,
- Financial Literacy

**Adverse Health Behaviors:**
- Nutrition,
- Obesity, Chronic
- Conditions, and Tobacco Use
Case 2: Health Equity Zones, Rhode Island

Health Equity Measurement Conceptual Framework

POPULATION HEALTH OUTCOMES

- Ensure access to quality health services for Rhode Islanders, including our vulnerable populations
- Eliminate the disparities of health in Rhode Island and promote health equity
- Address the social and environmental determinants of health in Rhode Island

23 Population Health Goals and Key Metrics

HEALTH EQUITY DOMAINS

- Integrated Healthcare
- Community Resiliency
- Physical Environment
- Socio-Economics
- Community Trauma

KEY DETERMINANTS OF HEALTH

- Healthcare Access
- Social Services
- Behavioral Health
- Civic Engagement
- Social Vulnerability
- Equity in Policy
- Natural Environment
- Transportation
- Environmental Hazard
- Housing Burden
- Food Insecurity
- Education Attainment
- Discrimination
- Incarceration
- Public Safety
# Measuring Determinants of Health

<table>
<thead>
<tr>
<th>Domain</th>
<th>Determinant</th>
<th>Indicator</th>
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<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>
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<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>
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<td></td>
<td>Behavioral Health</td>
<td>RATIO: # of naloxone kits to # of overdose deaths (by city/town) (PORI)</td>
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<tr>
<td>Community Resiliency</td>
<td>Civic Engagement</td>
<td>% reg. voters participating in 2016 election (by city/town?)</td>
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<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>
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<tr>
<td>Physical Environment</td>
<td>Natural Environment</td>
<td>Percentage of overall landmass with tree canopy cover (by city/town)</td>
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<tr>
<td></td>
<td>Transportation</td>
<td>% of households reporting unsatisfactory or no public transportation in their neighborhood</td>
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<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>
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<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>
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<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>
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</tbody>
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The Theory of Change for Addressing Determinants of Health

**IF** Rhode Island collaboratively invests in defined geographic areas to develop sustainable infrastructure, and aligns a diverse set of resources to support community-identified needs...

**THEN** we will positively impact the socioeconomic and environmental conditions driving disparities and improve health outcomes.

- The development of sustainable community infrastructure working to improve the community from within
- The alignment of resources to create sustained investments in the community to address the needs identified by the community
- Will lead to positive impacts on the social and environmental determinants of health and improved population health outcomes
• Launched in 2015

• Nine local collaboratives throughout Rhode Island.

• Geographic areas with measurable health disparities, and socioeconomic and environmental conditions that keep people from being as healthy as possible.
Case 3: Racial Equity Initiative & Community Health Initiatives
Example: Racial Justice Reframing

<table>
<thead>
<tr>
<th>Framing Element</th>
<th>Traditional Approach</th>
<th>Racial Justice Approach</th>
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<tbody>
<tr>
<td>High rate of diabetes</td>
<td>Racial inequities in diabetes rates</td>
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<tr>
<td>Overweight/obesity</td>
<td>Disenfranchisement in communities of color</td>
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<tr>
<td>Increase physical activity</td>
<td>Economic investment in communities of color</td>
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Community Health Initiative in Massachusetts

- Part of the Determination of Need
- 5% investment in a community need is required for all capital projects.
- Community must be engaged in the planning

**DoN Health Priorities**

The DoN Health Priorities are six (6) common social determinants of health:

1) Social Environment
2) Built Environment
3) Housing
4) Violence and Trauma
5) Employment
6) Education

**Current EOHHS/ DPH Focus Issues**

Statewide trends and overall burden of morbidity and mortality point to:

1) Substance use disorders (SUDs)
2) Housing Stability/Homelessness
3) Mental illness and mental health
4) Chronic disease with a focus on Cancer, Heart Disease and Diabetes
Case 4: Michigan - Changing Our Thinking

Consider health risk behaviors as adaptations

Shift from “what’s wrong with you” to “what’s happened to you”
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.
Many forms of violence and injury are connected and share same risk and protective factors.

Focus efforts upstream on common factors.
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 ensure all Coloradans experience

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.
Focus on What Public Health Does Well

- Scientific rigor
- Modeling disease processes
- Collect and analyze data
- Acting as a trusted partner
- Leveraging resources
- Distribute resources
- Educate about policy and environmental changes

Use these strengths to find a way forward...
Public Health 3.0

• Leverage public health expertise
  – Community policing/safety
  – Nurse/family partnership
  – Streetscape designs for active transportation
  – Communities that Care
Public Health 3.0

- Leverage public health expertise
- Resources to grease the skids
  - School grants for healthier vending
  - Funding for community coalitions
  - Referral inventories
  - Streamlining social services application
Public Health 3.0

• Leverage public health expertise
• Resources to grease the skids
• More muscular advocacy
  – Raising tobacco taxes
  – Investments in pre-distribution
  – Studies on guns and health
Public Health 3.0

• Leverage public health expertise
• Resources to grease the skids
• More muscular advocacy
• Potential projects
  – Re-entry for incarcerated individuals
  – Social services prescription systems
  – Health impact assessment policies
  – Community banking and investment
Principles for the Development of Public Health 3.0

- Don’t reinvent the wheel, learn from others
- Don’t stop doing what you’re doing
- Use your training
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