U.S. Life Expectancy vs. Health Expenditure

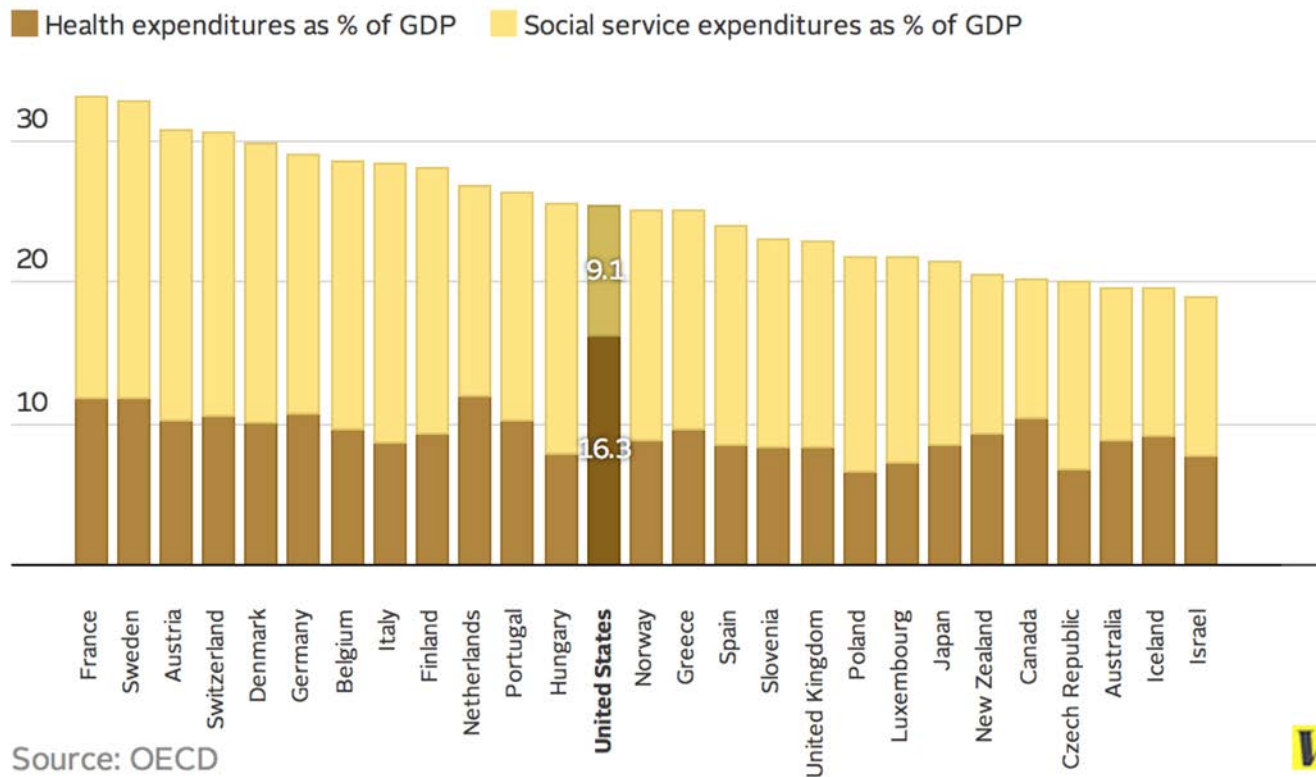From 1970 to 2014, citizens of OECD countries have outlived their American counterparts — for a fraction of the associated costs.
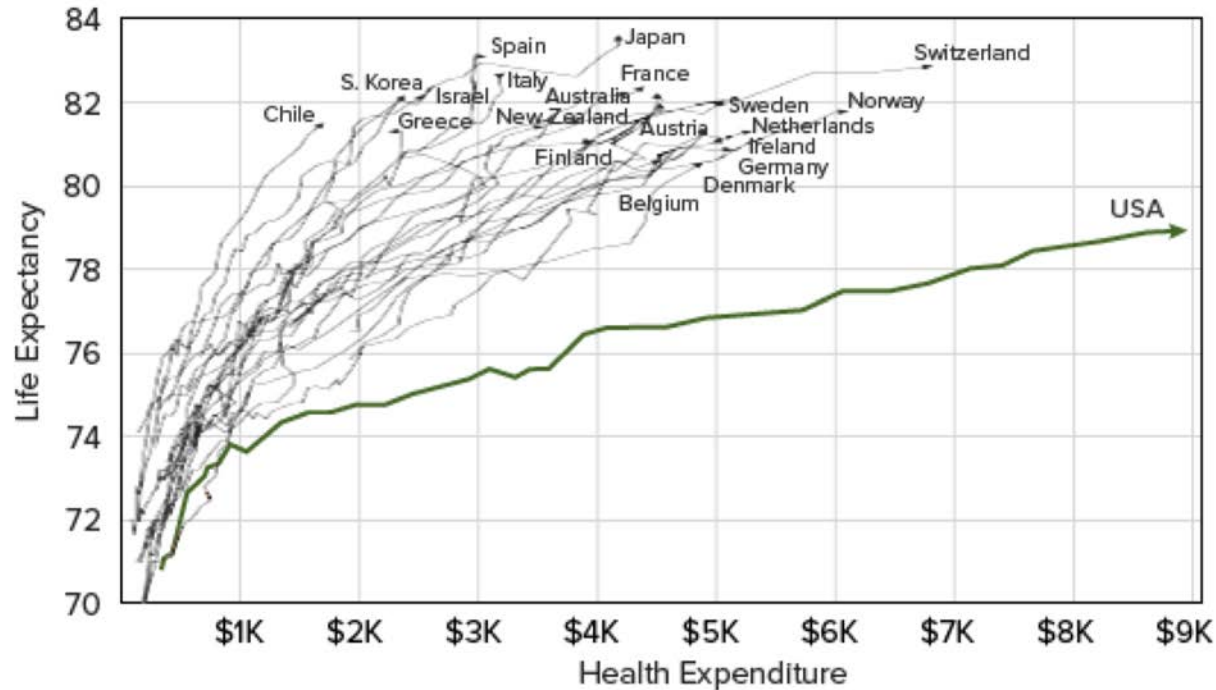
Source: Visual Capitalist

The U.S. is an anomaly in health and social spending patterns

■ Health expenditures as % of GDP ■ Social service expenditures as % of GDP

Countries (left to right): France, Sweden, Austria, Switzerland, Denmark, Germany, Belgium, Italy, Finland, Netherlands, Portugal, Hungary, United States, Norway, Greece, Spain, Slovenia, United Kingdom, Poland, Luxembourg, Japan, New Zealand, Canada, Czech Republic, Australia, Iceland, Israel

United States: 9.1 (social service), 16.3 (health)

Source: OECD

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Distribution of Average Income Growth During Expansions

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

bottom 90% ■ top 10%
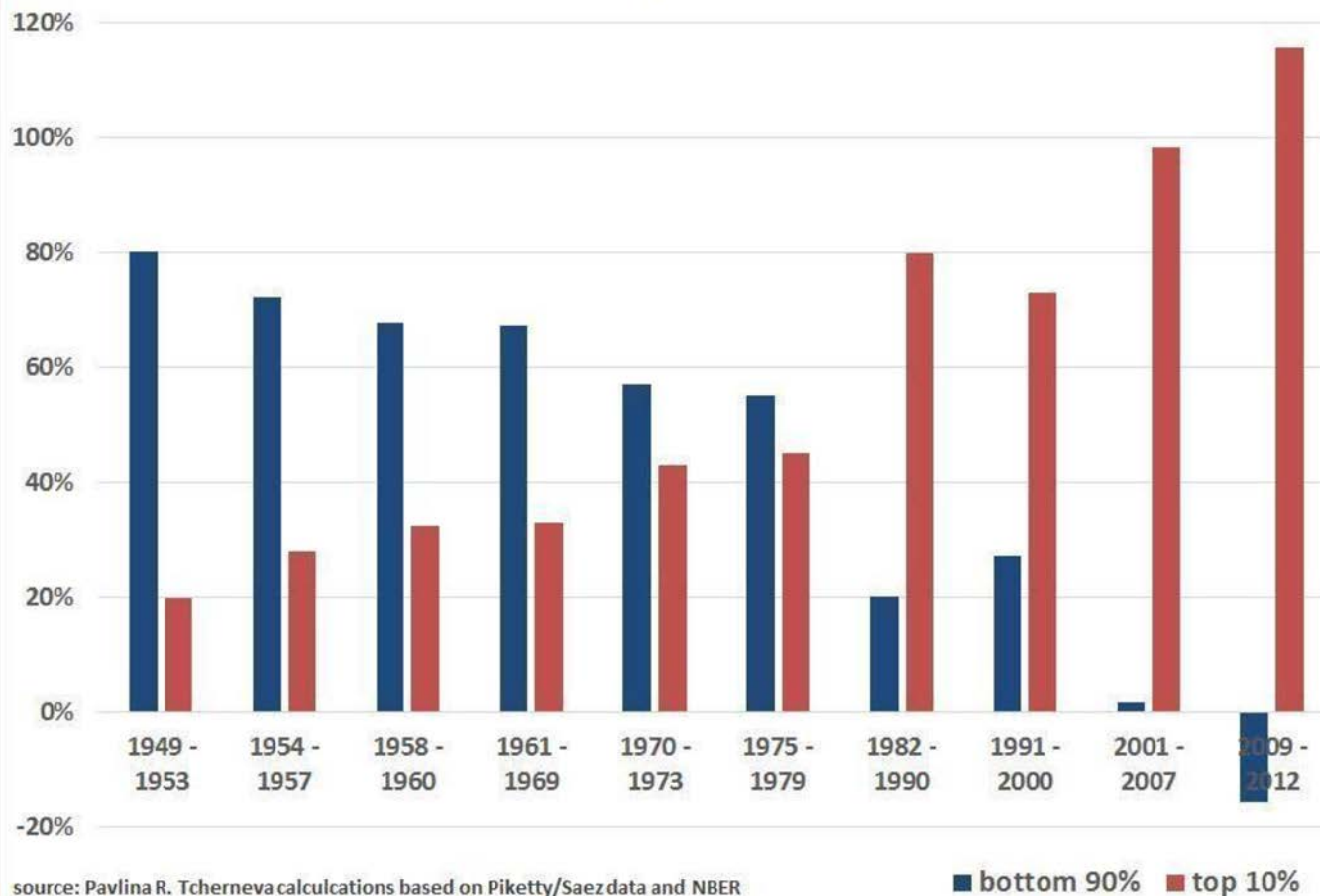
Factors Influencing Health Status

Lifestyle 51% Smoking Obesity Nutrition Alcohol Use

Biology 20%

Health Care 10%

Environment 19%
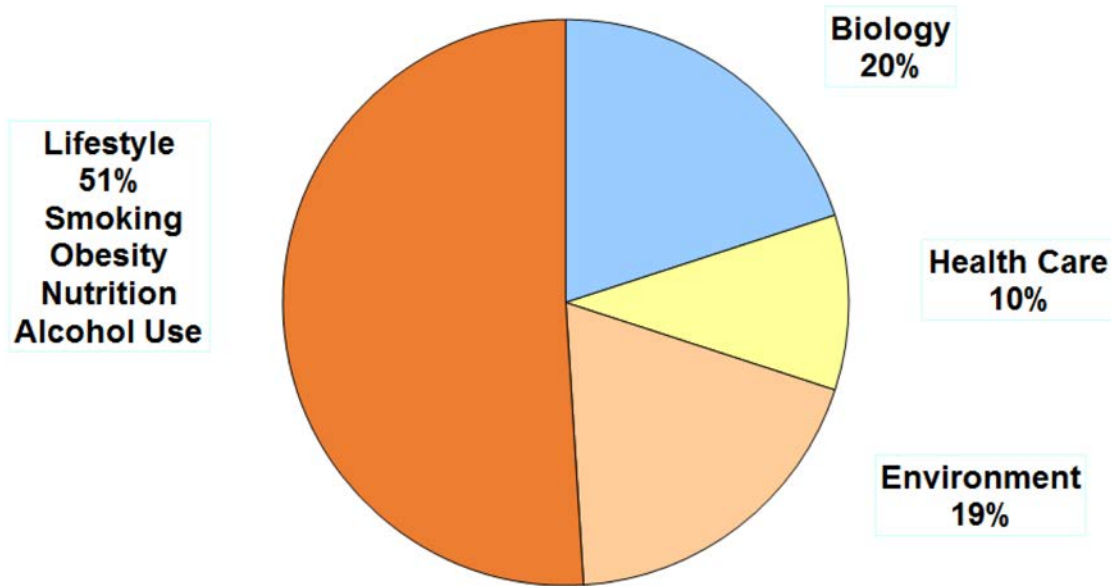
Source: McGinnis, J.M and Foege, W.H. (1993). "Actual Causes of Death in the United States," Journal of the American Medical Association.

Future Directions for Public Health

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
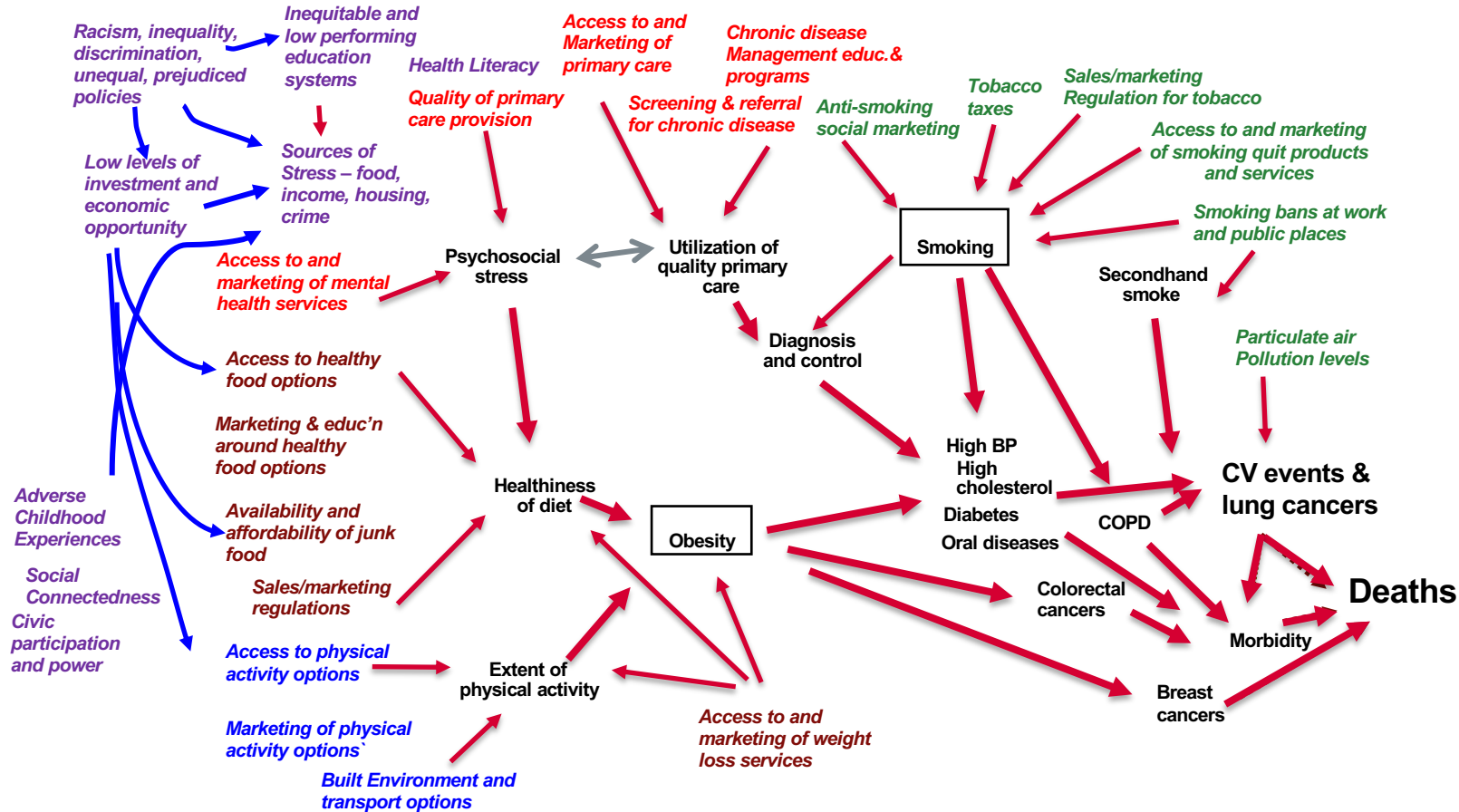
Public Health 3.0
- Social determinants of health – food, housing, transport
- Partnerships – Education, Human Services, Transportation, Housing, Revenue….

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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
  - Adhere to the evidence-base
  - Get the model right - social-ecological, multifactorial
  - Work through partnerships
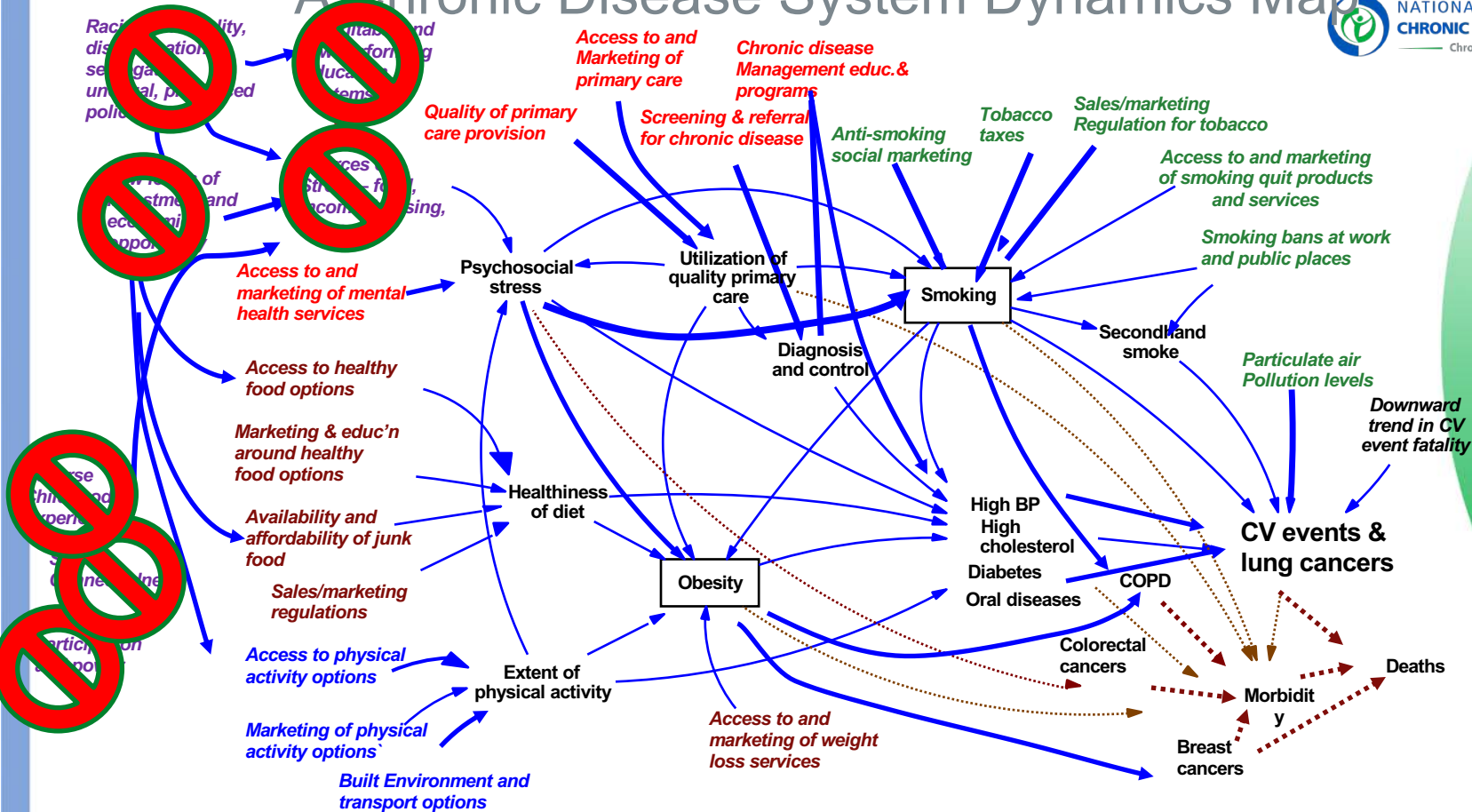 - Lead with humility

A Chronic Disease System Dynamics Map

Racism, inequality, discrimination, unequal, prejudiced policies

Inequitable and low performing education systems

Health Literacy

Access to and Marketing of primary care

Chronic disease Management educ.& programs

Tobacco taxes

Sales/marketing Regulation for tobacco

Quality of primary care provision

Screening & referral for chronic disease

Anti-smoking social marketing

Access to and marketing of smoking quit products and services

Low levels of investment and economic opportunity

Sources of Stress – food, income, housing, crime

Smoking bans at work and public places

Access to and marketing of mental health services

Psychosocial stress

Utilization of quality primary care

Smoking

Secondhand smoke

Particulate air Pollution levels

Access to healthy food options

Diagnosis and control

Marketing & educ'n around healthy food options

High BP High cholesterol

CV events & lung cancers

Adverse Childhood Experiences

Availability and affordability of junk food

Healthiness of diet

Obesity

Diabetes

Oral diseases

COPD

Social Connectedness

Sales/marketing regulations

Colorectal cancers

Deaths

Civic participation and power

Access to physical activity options

Extent of physical activity

Access to and marketing of weight loss services

Morbidity

Marketing of physical activity options`

Built Environment and transport options

Breast cancers

A Chronic Disease System Dynamics Map

Five Domains of the Social Determinants of Health
Healthy People 2020

BARHI Model

A PUBLIC HEALTH FRAMEWORK FOR REDUCING HEALTH INEQUITIES
BAY AREA REGIONAL HEALTH INEQUITIES INTIATIVE
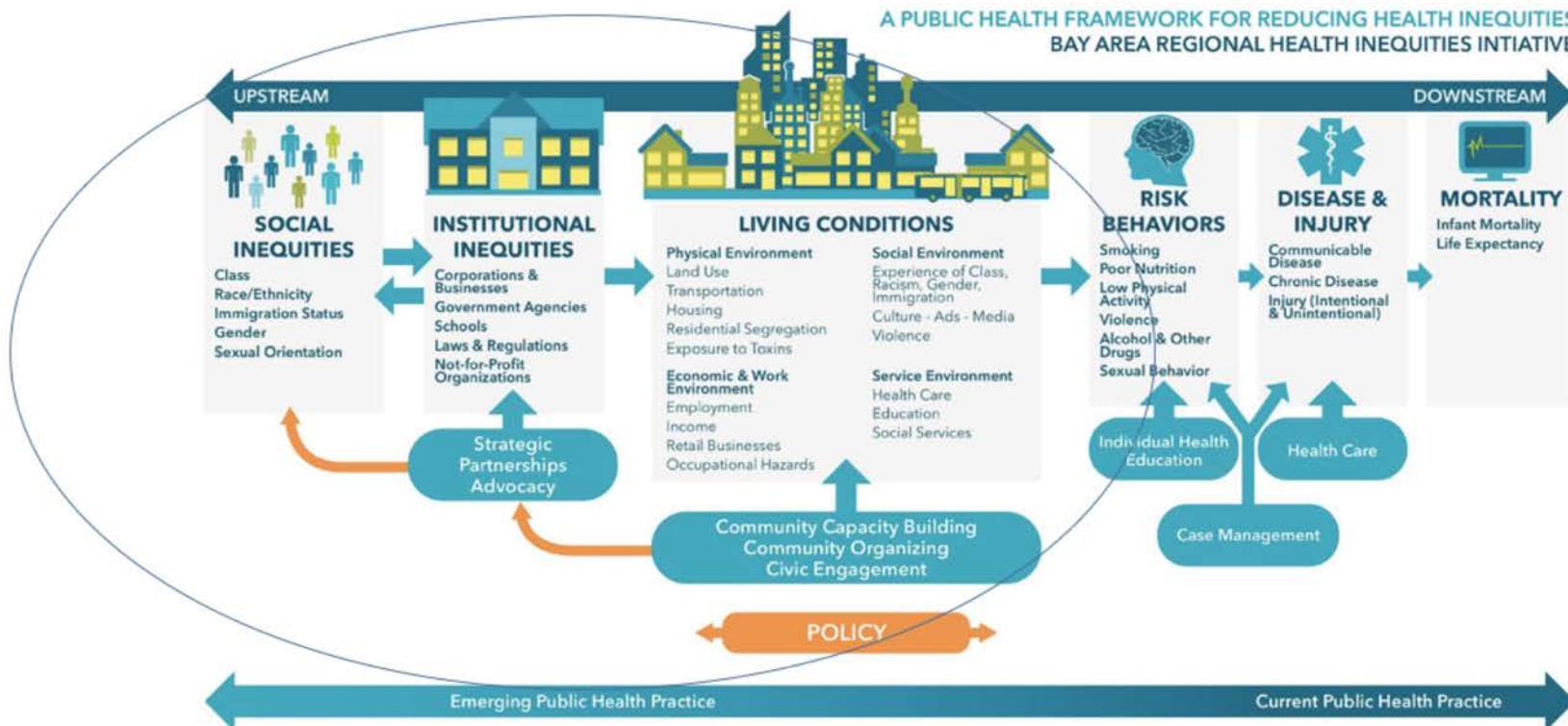
BHMC Pilot: Qualitative Data Analysis

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

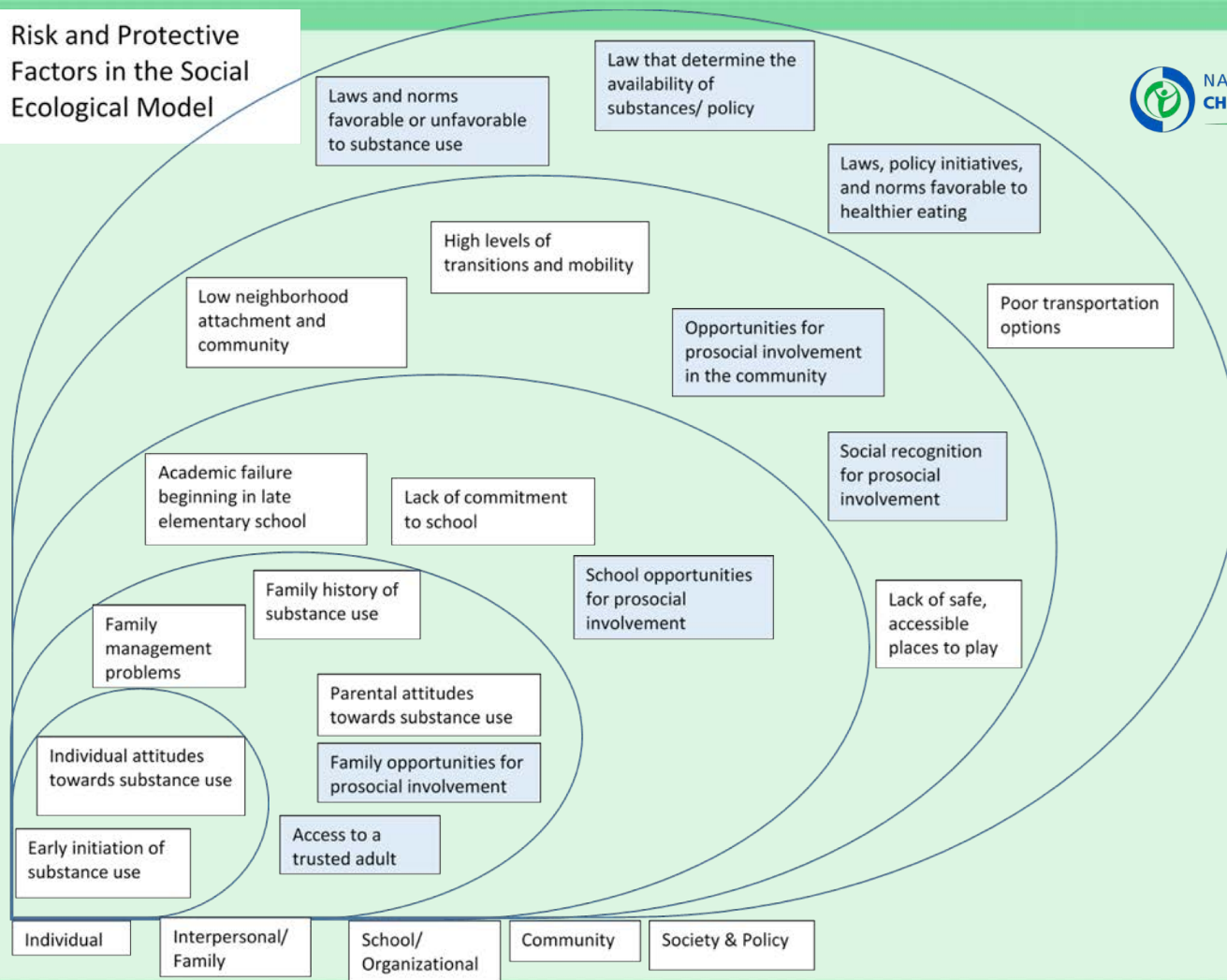# Socio-ecological model - how public health thinks
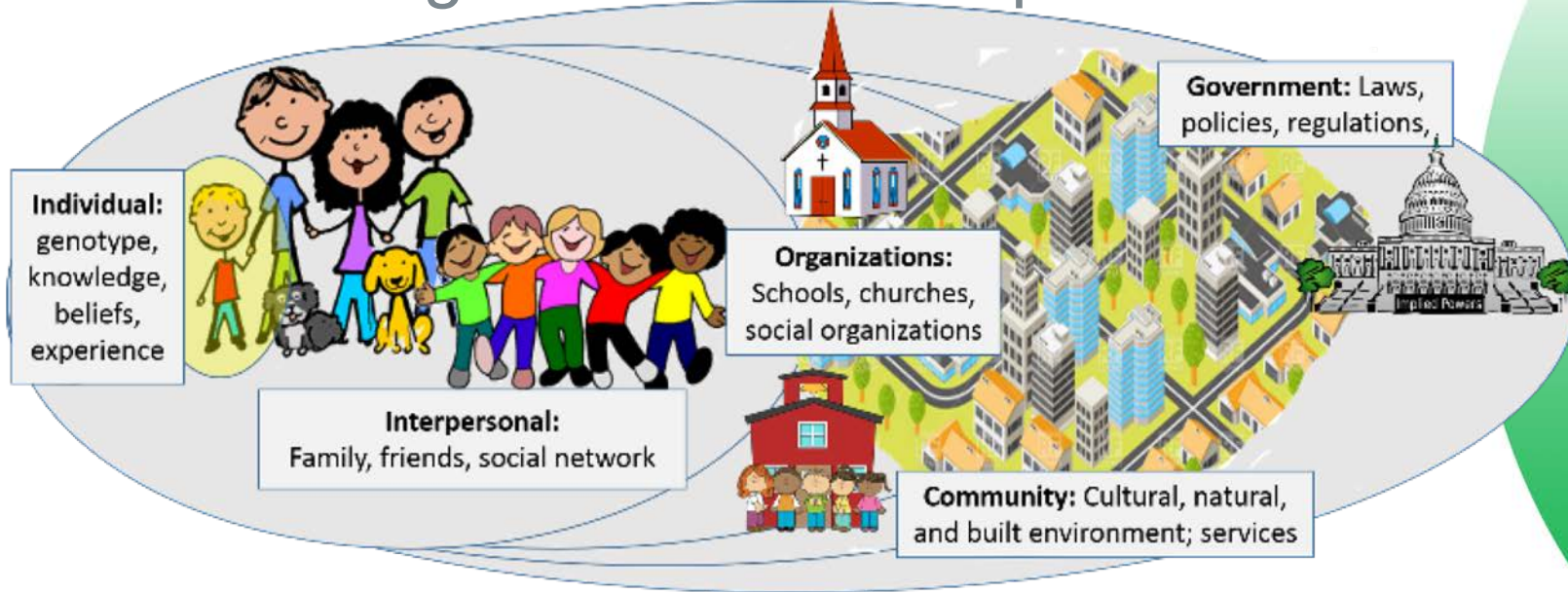
Source: Wayne W. LaMorte, MD, PhD, MPH, Boston University School of Public Health
http://sphweb.bumc.bu.edu/otlt/MPH-Modules/QuantCore/PH717_ExposureAssessment/PH717_ExposureAssessment2.html
Date accessed: 7/25/2018. Date last modified: January 30, 2018.

Risk and Protective Factors in the Social Ecological Model

Laws and norms favorable or unfavorable to substance use

Law that determine the availability of substances/ policy

Laws, policy initiatives, and norms favorable to healthier eating

High levels of transitions and mobility

Low neighborhood attachment and community

Opportunities for prosocial involvement in the community

Poor transportation options

Academic failure beginning in late elementary school

Lack of commitment to school

Social recognition for prosocial involvement

Family history of substance use

School opportunities for prosocial involvement

Lack of safe, accessible places to play

Family management problems

Parental attitudes towards substance use

Individual attitudes towards substance use

Family opportunities for prosocial involvement

Early initiation of substance use

Access to a trusted adult

Individual

Interpersonal/ Family

School/ Organizational

Community

Society & Policy

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What Public Health Does Well

- Modeling disease processes

- Scientific rigor

- Collect and analyze data

- Acting as a trusted partner

- Leveraging resources

Use these strengths to find a way forward...

Disruptive Public Health 3.0 Practices

- Develop new projects, programs or public health practices

- Leverage Public Health expertise

- Using resources to grease or leverage action in other sectors

- Taking a more muscular posture on existing incentives to manufacturing illness

Public Health 3.0 - Potential Projects

- 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

- Build systems of affordable community banking and investment

Public Health 3.0 – Leverage Public Health Expertise

- Public health approach to community policing and safety

- Nurse-family partnership model for parents of school-aged children

- Design changes to street-scapes that encourage physical activity and active transportation

- Communities that Care model for community action

- Rotary Club-styled community health coalitions

- Hot-spotting pockets of need by block or census tract

Public Health 3.0 – 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

Public Health 3.0 – More Muscular Advocacy

✓ Raising tobacco taxes

✓ Looking at the food system critically - ag subsidies, portion sizes, sugar content

✓ Investments in pre-distribution

✓ Mass-transit, housing density, active transportation, design-based zoning

✓ Studies on guns, screen time, communications and health

✓ Mass communication on the social determinants of health

✓ Mass communication/ ROI studies on benefits of Universal Pre-K, Basic income, paid family leave

The Podcast Series

➢ Exploring the social determinants of health and the public health role

➢ Increasing popular understanding of the social determinants

➢ Community action, civic engagement, and mobilization strategies

➢ The Social Genome Project - a role for public health?

➢ ACES and their role in chronic disease

➢ Community development and health impact assessments

➢ Security enhancements - food security, income security and paid family leave