Advancing Health and Health Equity: Integrating Medical Care and Public Health

Edward P. Ehlinger, MD, MSPH
Commissioner, Minnesota Department of Health
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Michael Servetus
Died (burned at the stake) October 27, 1553

• Spanish physician - first to describe the function of pulmonary circulation. His description not accepted until William Harvey circa 1650.

• At a time of the Protestant Reformation, he held radical theological views which he published anonymously in the book (1553) in which he also described the circulation of blood through the lungs.

• For his heretical theology, Servetus was burned at the stake by Calvin.
The Triple Aim of Healthcare

- Better care for individuals
- Lower per capita costs
- Better health for populations

The Triple Aim of Healthcare has not moved us to better health or health equity.
Since 1900, life expectancy has increased by 31 years.
Biggest Changes in Early Childhood

In early 1900s, 20% of people born died by age 5.

Today, it takes until age 70 for 20% of a birth cohort to die.
Ten Great Public Health Achievements in the 20th Century

- Immunizations
- Motor-Vehicle Safety
- Workplace Safety
- Control of Infectious Diseases
- Declines in Deaths from Heart Disease and Stroke
- Safer and Healthier Foods
- Healthier Mothers and Babies
- Family Planning
- Fluoridation of Drinking Water
- Tobacco as a Health Hazard
Disparities in life expectancy increased starting around 1980.

Life Expectancy, by race: United States, 1970 - 2010

US began to fall behind OECD countries starting around 1980.

Life Expectancy at Birth US and OECD Countries by Gender 1960-2010

Disparities Affect the Health of Everyone
Disparities in infant mortality rates began to increase in 1970s.


National Center for Health Statistics, Health United States, 2009 (updated)
US began to fall behind OECD countries during the 1970s

Infant Mortality Rates U.S. and OECD Countries 1960-2010

- U.S.
- OECD median

Source: http://stats.oecd.org, accessed 6-10-16

2015 – 38th
US maternal mortality rates are increasing
U.S. Ranked 49th in Maternal Mortality in 2008

Data from UNICEF, WHO, UN Population Fund, and World Bank with standardized methodology.
Improvements in health slowed when we increased our investments in healthcare

Data source: Health expenditure from the OECD; Life expectancy from the World Bank. Licensed under CC-BY-SA by the author Max Roser. The data visualization is available at OurWorldinData.org and there you find more research and visualizations on this topic.
In OECD, for every $1 spent on health care, about $2 is spent on social services.

In the U.S., for every $1 spent on health care, about 55 cents is spent on social services.
What’s behind all of this?

**Predominant U. S. Worldview**

- Decreased investment in the “commons” and the disadvantaged
- Increased competition & polarization

**Boot Straps**
- Individualism
- Virtue of Work

**Small Government**

**Free Market Solutions**
- Education is for job training

**Mistrust of Science**

**Reliance on technology/specialization**

**Structural Discrimination is a thing of the Past**
Health is an individual responsibility

Competition and consumer choice

Healthcare should run like a business

Anyone can choose to be healthy

Medical care will cure me if I get sick

I know what’s best for me and my family

Health is a private matter

• Blaming individuals
• Over investment in biomedical model
The Dominant Health Narrative is:

- People would be healthy if they worked hard; made good choices about diet, physical activity, and substance use; and had good medical care.
- Health is the responsibility of individuals until they get sick, then it becomes the responsibility of the healthcare system.
Triple Aim of Healthcare

• Better care for individuals
• Lower per capita costs
• Better health for populations
The Triple Aim of Healthcare
Has not moved us to better health or health equity

• Individual health model – not a community health model
• What’s good for healthcare may not be what’s best for communities or advancing health equity
• Reinforces the narrative about what creates health
• Makes healthcare the benevolent dictator of health
“Public health is what we, as a society, do collectively to assure the conditions in which (all) people can be healthy.”

The Future of Public Health
Institute of Medicine, 1988
Living Conditions Impact Health

Communities of Opportunity

- Social/economic inclusion
- Thriving small businesses and entrepreneurs
- Grocery stores
- Parks & trails
- Sufficient healthy housing
- Good transportation options and infrastructure
- Financial institutions
- Home ownership
- Better performing schools
- IT connectivity
- Strong local governance

Good Health Status

Contributes to health disparities:
- Obesity
- Diabetes
- Asthma
- Cancer
- Injury

Low-Opportunity Communities

- Social/economic exclusion
- Few small businesses
- Fast food restaurants
- Unsafe/limited parks
- Rental housing/foreclosure
- Poor and limited housing stock
- Few transportation options
- Payday lenders
- Poor performing schools
- Increased pollution and contaminated drinking water
- Limited IT connections
- Weak local governance
Social Determinants of Health

The conditions and circumstances in which people are born, grow, live, work, and age. These circumstances are shaped by the distribution of money, power, social policies, and politics that are beyond the control of the individual.
Changing the Conditions that Affect Health Requires the Capacity to Act
The Public Health Approach to Advancing Health Equity and Optimal Health for All

Triple Aim of Health Equity

- **Implement Health in All Policies:**
  - Implement a Health in All Policies Approach With Health Equity as the Goal
  - Expand Understanding of What Creates Health
  - Strengthen the Capacity of Communities to Create Their Own Healthy Future

- **Strengthen Community Capacity:**
  - Social Cohesion

- **Expand Understanding of Health:**
  - Social Cohesion
Expand the Understanding of What Creates Health

Necessary conditions for health (WHO)
- Peace
- Shelter
- Education
- Food
- Income
- Stable eco-system
- Sustainable resources
- Social justice and equity
- IT connectivity
- Mobility
- Health Care
- Social responsibility

Determinants of Health

- Genes and Biology: 10%
- Physical Environment: 10%
- Clinical Care: 10%
- Health Behaviors: 30%
- Social and Economic Factors: 40%


Attributable Causes of Death

- Tobacco 42%
- Diet/Physical Activity 35%
- Alcohol 9%
- Microbial Agents 7%
- Toxic Agents 5%
- Firearms 2%

Each year in the United States:
- $15.3 Billion is spent marketing tobacco
- $6 Billion is spent marketing alcohol
- $2.9 Billion is spent marketing soda (by just 1 company)

Ehlinger’s beliefs about the contributions to health determinants

Determinants are created & enhanced mostly by policies and systems that impact the physical and social environment.
Expand the understanding about what creates health. Contrasting/Alternative Worldviews

**Dominant U. S. Worldview**
- Mistrust of science
- Reliance on technology/specialization
- Structural discrimination is a thing of the past
- Education is for job training
- Free Market Solutions
- Boot Straps Individualism Virtue of Work
- Small Government

**Alternative Worldview**
- Social responsibility Social Justice
- Education is for enlightenment
- Need for generalists
- Collective Action
- Cooperation
- Interdependence Social Cohesion Virtue of Work
- Necessary government
- Small Government
- Reliance on technology/specialization
- Structural discrimination is a thing of the past
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Expand the understanding about what creates health. Contrasting/Alternative Worldviews

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Health is a collective/community responsibility

Well-being is the goal (not economic success)

Health is a right

Health Equity is the challenge of the present

Balanced investment in care, prevention, and community resilience

Balanced investment in Public Health & Medical Care Esp. Primary Care

Government protects the public good (PSE)

Health in all policies
Deaths Prevented And Change In Health Care Costs Plus Program Spending, Three Intervention Scenarios, At Year 10 And Year 25.

Milstein B et al. Health Aff 2011;30:823-832
Deaths Prevented And Change In Health Care Costs Plus Program Spending, Three Intervention Scenarios, At Year 10 And Year 25.

Milstein B et al. Health Aff 2011;30:823-832
Integrate Clinical Care and Public Health
Annual Deaths, Three Layered Intervention Scenarios, Year 0 To Year 25.

Milstein B et al. Health Aff 2011;30:823-832
Implement a Health in All Policies Approach with Health Equity as the Goal

- Minimum Wage
- Paid Leave
- Criminal justice
- Energy
- Transportation
- Broadband connectivity
- E-Health
- Housing/Homelessness

- Air/Water quality
- Ag Buffer strips
- Food Charter
- Marriage Equity
- Payday Lending
- Freedom to Breathe
- Health Care Reform
- Climate Change
Implement Health in All Policies Approach with Health Equity as the Goal

Strengthen the Capacity of Communities to Create Their Own Healthy Future

Healthy Public Policy & Public Work

- Safer, Healthier Population
  - Becoming no longer vulnerable

Vulnerable Population

- Becoming vulnerable
  - Democratic Self-Governance

- Improving Living Conditions

Traditional Public Health

- Primary Prevention

Afflicted without Complications

- Becoming afflicted

Developing complications

Medical and Public Health Policy

- Primary Care
  - Secondary Prevention

Afflicted with Complications

- Dying from Complications

Specialty Care

- Tertiary Prevention

MANAGEMENT OF RISKS & DISEASES

World of Transforming...
- Deprivation
- Dependency
- Violence
- Disconnection
- Environmental decay
- Stress
- Insecurity
- Etc...

By Strengthening...
- Democracy
- Mutual accountability
- Leaders and institutions
- Plurality
- Freedom
- Foresight and precaution
- The meaning of work
- Etc...

World of Providing...
- Health education
- Screening tests
- Disease management
- Pharmaceuticals
- Clinical services
- Physical and financial access
- Etc...

“...the community in the fullest sense is the smallest unit of health...to speak of the health of an isolated individual is a contradiction in terms.”

Wendell Berry in Health is Membership

• What would it look like if equity was the starting point for decision-making?

• Our work would be different.
Our work would be to Advance Health Equity and Optimal Health for All by:

**Triple Aim of Health Equity**

- **Implement Health in All Policies**
  - Implement a Health in All Policies Approach With Health Equity as the Goal
- **Expand Understanding of Health**
  - Expand Our Understanding of What Creates Health
- **Strengthen Community Capacity**
  - Strengthen the Capacity of Communities to Create Their Own Healthy Future
What would it look like if equity was the starting point for decision-making?

Our work would be different.

But it would also be going back to our roots
I swear by Apollo, the healer, Asclepius, Hygeia, and Panacea, and I take to witness all the gods, all the goddesses, to keep according to my ability and my judgment, the following Oath and agreement...
• "Medicine is a social science, and politics is nothing else but medicine on a large scale."

• “The physicians are the natural attorneys of the poor, and the social problems should largely be solved by them.”
Back to the 1854 - 1865 Cholera Epidemic In London

Changed living conditions

Dr. John Snow

Sir Joseph Bazalgette

Rev. Henry Whitehead

Broad Street Memorial Pump

Abbey Mills Pumping Station (the Cathedral of Sewage) Board of Guardians

Water Map of London 1854
“...the physician’s function is fast becoming social and preventive, rather than individual and curative... (do) not to forget that directly or indirectly, disease has been found to depend largely on unpropitious environment... a bad water supply, defective drainage, impure food, unfavorable occupational surroundings... (these) are matters for ‘social regulation,’ and doctors have the duty to promote social conditions that conduce to physical well-being.”
Public health is the science and art of:
Preventing disease. Prolonging life, and Promoting health and efficiency through organized community effort for...

a. the sanitation of the environment
b. the control of communicable infections
c. the education of the individual in personal hygiene
d. the organization of medical and nursing services for the early diagnosis and preventive treatment of disease, and
e. the development of the social machinery to insure everyone a standard of living adequate for the maintenance of health, so organizing these benefits as to enable every citizen to realize his birthright of health and longevity.
• We had a social conscience.
• We invested in the “public good.”
• We were civil and we cooperated.
“Public health is what we, as a society, do collectively to assure the conditions in which (all) people can be healthy.”
Institute of Medicine (1988), *Future of Public Health*

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Edward P. Ehlinger, MD, MSPH  
Commissioner, MDH  
P.O. Box 64975  
St. Paul, MN 55164-0975  
Ed.ehlinger@state.mn.us