Aligning population health and systems transformation efforts through a focus on Data, Determinants and Disparities

Medical Interpreters Conference, “Essential Tools and Topics for Interpreters in our Changing Healthcare Environment”

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What is population health?

“The health outcomes of a group of individuals, including the distribution of such outcomes within the group.”

Public Health through the years (CDC)

“Public Health 1.0” - Vaccines, antibiotics and sanitation, and epidemiology (late 19th century through much of the 20th century)

“Public Health 2.0” – Chronic disease, individual behaviors, safety net access to care and emerging epidemics (mid to end of 20th century)

“Public Health 3.0” – Zip code is the greatest predictor of health outcomes (21st century)
What Makes Us Healthy?

- Genes & Biology, 10%
- Health Care, 10%
- Physical Environment, 10%
- Social & Economic Factors, 40%
- Healthy Behaviors, 30%

Social Determinants

- **Individual resources**
  - Education, occupation, income, wealth

- **Opportunity structures**
  - Schools, jobs, justice

- **Neighborhood resources**
  - Housing, food choices, public safety, transportation, parks and recreation, political clout

- **Hazards and toxic exposures**
  - Pesticides, lead, reservoirs of infection

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CDC: Social Determinants of Health and Social Determinants of Equity, the Impacts of Racism on the Health of our Nation
Poor conditions prevent people from practicing healthy behaviors and achieving good health.
Poor social, environmental, economic, and institutional conditions prevent people from practicing healthy behaviors and achieving good health.

Source: Bay Area Health Equity Initiative
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WHAT ARE THE INEQUITIES IN HEALTH OUTCOMES IN THE COMMONWEALTH?
Massachusetts was ranked the #1 healthiest state in the US in the 2017 America’s Health Rankings Annual Report.
Massachusetts Prevalence of Confirmed Blood Lead Levels ≥ 5 μg/dL by Community, among Children aged 9-47 months, 2016

Massachusetts Communities

- < 1.5%
- 1.6 - 2.5%
- 2.6 - 3.5%
- 3.6 - 6%
- > 6%
- No children screened
Trends in Adequacy of Prenatal Care, by Race/Ethnicity, Massachusetts, 2006-2015

- White non-Hispanic
- Black non-Hispanic
- Hispanic
- Asian non-Hispanic
The age-adjusted opioid-related overdose death rate for Hispanics doubled in three years (2014-2016)
Health Disparities and Inequities

What are health disparities?
Disparities are significant differences in health outcomes between populations.

What are health inequities?
Inequities are the unjust distribution of resources and power between populations which manifests in disparities.
Race and Place
Boston Neighborhoods with High Rates of Chronic Disease Hospitalizations

Keep your eye on “the crescent”

*2012 CHIA Hospital Discharge Data, age adjusted
Boston Neighborhoods with Poor Perceived Safety

*Boston Neighborhood Survey (BNS), 2008; Harvard Youth Prevention Center through Cooperative agreement with the CDC*
Boston Neighborhoods with a High Rent Burden

* American Community Survey, 2008-2012, US Census Bureau
Boston Neighborhoods with Low Access to Healthy Food (mRFEI)

* Modified Retail Food Environment Index, CDC
But put them all together and...
High Rates of Chronic Disease
Chronic Disease + Poor Safety
Chronic Disease + Poor Safety + High Rent
Chronic Disease + Poor Safety + High Rent + Poor Food Access
What else is going on in “the crescent”...
Redlining of Boston Neighborhoods

A FOCUS ON HEALTH EQUITY
HEALTH INEQUITY PATHWAYS

Structural & Historical Inequities

- Employment
- Education
- Built Environment
- Violence
- Housing
- Social Environment

Inequitably Poor Health Outcomes
VISION
Optimal health and well-being for all people in Massachusetts, supported by a strong public health infrastructure and healthcare delivery.

MISSION
The mission of the Massachusetts Department of Public Health (DPH) is to prevent illness, injury, and premature death; to ensure access to high quality public health and health care services; and to promote wellness and health equity for all people in the Commonwealth.

DATA
We provide relevant, timely access to data for DPH, researchers, press and the general public in an effective manner in order to target disparities and impact outcomes.

DETERMINANTS
We focus on the social determinants of health - the conditions in which people are born, grow, live, work and age, which contribute to health inequities.

DISPARITIES
We consistently recognize and strive to eliminate health disparities amongst populations in Massachusetts, wherever they may exist.

EVERYDAY EXCELLENCE

PASSION AND INNOVATION

INCLUSIVENESS AND COLLABORATION
About DPH

1799
History of department dates to Paul Revere

8 Bureaus, 6 Offices
DPH covers a range of issues from birth until death

15 sites, 3000 FTEs
DPH is located across the Commonwealth, and partners with local boards of health

$1 billion
Annual budget, comprised of federal, state, and grant funding
Office of Population Health (Estab. 2017)

Mission:
Leverage public and private partnerships to collect, use and disseminate high quality data and documentation and inform and influence policies, programs, practices, prevention strategies and resource allocation that address inequities in the social determinants of health.

Organizational Structure:
Department of Public Health
  > Office of Population Health
    > Office of Health Equity
      > Medical Interpreters Program
Languages Spoken at Home and Ability to Speak English, Ages 5+, MA 2009-2013

Nearly 1.4 million citizens of the Commonwealth speak a language other than English at home:

Over half a million of these residents – just under 1 in 10 in MA -- speak English less than “Very Well”

Detailed Languages Spoken at Home and Ability to Speak English for the Population 5 Years and Over for States: 2009-2013
Inappropriate or inadequate interpreter services are associated with:

• Individuals with LEP experience:
  • Under-utilization of psychiatric care\(^1\)
  • Higher rates of infection, falls and pressure ulcers\(^2\)
  • Longer hospital stays\(^5\), and poor health outcomes including increased readmission due to poor communication\(^6\text{-}^8\)

• Parents with LEP have:
  • Higher risk of problems with accessing and coordinating care for their children in an ED setting\(^3\),
  • Worse health care access and quality for their children with special health care needs\(^4\)
Timely and appropriate language services are associated with:

- Decreases in observed readmission rates for those with LEP\(^1\)
- Improvements in informed consent\(^2\)
- Improvement in glycemic control among diabetic patients\(^3\)
Timeline of Medical Interpreter Services in MA

- MA was the first state (2000) to pass Interpreter Service legislation -- Emergency Room Interpreter Law

- In FY 2001, DPH’s Office of Multicultural Health, currently Office of Health Equity, convened a panel of experts in interpreter services to develop regulations and outreach materials

- 2002 – Federal Executive Order 13166—Improving Access to Services for Persons with LEP
Timeline of Medical Interpreter Services in MA

• In FY04, DPH’s Office of Health Equity assumed new responsibilities related to Determination of Need Process (DON)

• In 2006, the Joint Commission integrated language services into their assessment.

• In FY08, reporting extended to all acute care hospitals.

• In FY13, DPH’s Office of Health Equity upgraded its electronic reporting system for the required MDPH Medical Interpretation Service Report – data to share
Number of Medical Interpreter Services reported to DPH, FY13 to FY16

- FY 2016
- FY 2015
- FY 2014
- FY 2013
Comparison of Top 10 Languages, MA Medical Interpreter Services, FY13 and FY16

- Spanish
- Chinese
- Cape Verde/Portuguese
- Arabic
- Portuguese (all)
- ASL
- Hatian Creole
- Vietnamese
- Russian
- Amharic
- Albanian

Percent of all Services

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<th>FY16</th>
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In Spain they speak Spanish...
Not that long ago…

Family doctors, surgeons, diagnosticians, nose and throat specialists... doctors in every branch of medicine were asked: "What cigarette do you smoke, Doctor?"

Three nationally known independent research organizations did the asking.

The answers came in by the thousands. Actual statements from doctors themselves. Figures were checked and re-checked! The results? Camels... convincingly!
THANK YOU