Public Health 3.0:
A Vision for the Future

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Kansas Governor’s Public Health Meeting
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@kbdesalvo
The Challenge

Life expectancy vs. health expenditure over time (1970-2014)

Health spending measures the consumption of health care goods and services, including personal health care (preventive care, rehabilitative care, long-term care, ancillary services, and medical goods) and collective services (prevention and public health services as well as health administration), but excluding spending on investments. Shown is total health expenditure (financed by public and private sources).

Data source: Health expenditure from the OECD; Life expectancy from the World Bank. Licensed under CC-BY-SA by the author Max Roser. The interactive data visualization is available at OurWorldinData.org. There you find the raw data and more visualizations on this topic.
The Challenge

Woolf, VCU; Chetty et al. JAMA 2016;315(16):1750-1766

www.healthypeople.gov/ph3

#PH3
Dying of Social Causes

Caption: Life expectancy at birth by county, 2014. Life expectancy into 80s (blue), 70s (green, yellow, orange), 60s (red).
Health is made where we are born, live, work and age.
Many Pressures

- Epidemiology shifts
- Affordable Care Act
- Delivery System Reform
- Data and Technology
- Great Recession

Source: Public Health Economics, 2015
Evolution of PH

Public Health 1.0
- Tremendous growth of knowledge and tools for both medicine and public health
- Uneven access to care and public health

Public Health 2.0
- Systematic development of PH (public health) governmental agency capacity across the U.S.
- Focus limited to traditional PH agency programs

Public Health 3.0
- Engage multiple sectors & community partners to generate collective impact
- Improve social determinants of health

DeSalvo et al, AJPH, 2016

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Public Health 1.0

(late 19\textsuperscript{th}/most of 20\textsuperscript{th} Century)

Comprehensive public health protection—from primary prevention through treatment—becomes possible for the first time in history.

Development of an astonishing array of health-protecting tools and capacity with increasingly sophisticated techniques for ensuring sanitation and food safety.
By late in the 20\textsuperscript{th} century, there was \textit{tremendously uneven} public health capacity at the local levels.

Health Departments strained to address new infectious disease challenges as well as the growing challenge of chronic disease prevention and preparedness.

\textit{Governmental} public health ‘came of age’ – culminating in today’s Health Department accreditation movement.
Evolution of PH

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Late 1800s

1988 IOM Future of Public Health Report

Recession

Affordable Care Act

2012 IOM For the Public’s Health Reports

DeSalvo et al, AJPH, 2016
PUBLIC HEALTH

What we do together as a society to ensure the conditions in which everyone can be healthy.
Overall, the richest American men live 15 years longer than the poorest men, while the richest American women live 10 years longer than the poorest women.

Chetty et al. JAMA 2016;315(16):1750-1766
Learn From Field

PUBLIC HEALTH 3.0
LISTENING TOUR

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www.healthypeople.gov/ph3   #PH3

13
Public Health 3.0

**KEY COMPONENTS**

1. **Leadership & Workforce**
2. **Essential Infrastructure**
3. **Strategic Partnerships**
4. **Data, Analytics & Metrics**
5. **Flexible & Sustainable Funding**

www.healthypeople.gov/ph3  |  #PH3
Report that reflects what we heard and saw across the country, including input from thought leaders.

We proposed 5 overarching recommendations and 51 actions that define what is most needed to support health departments and the broader public health system as it transforms to PH3.0.
Recommendations

1) Public health leaders should embrace the role of **chief health strategist** for their communities.

2) Public health departments should engage with community stakeholders – from both the public and private sectors – to form vibrant, structured, **cross-sector partnerships**.

3) **PHAB accreditation** for public health departments should be strengthened to ensure that every person in the United States is served by nationally accredited health departments.

4) Timely, reliable, granular, and **actionable data** should be accessible to communities, and clear metrics should be developed to document success in public health practice.

5) **Funding** for public health must be enhanced and substantially modified.

*DeSalvo, et al, Prev Chronic Disease, 2017*
Public Health 3.0

KEY COMPONENTS

LEADERSHIP & WORKFORCE

ESSENTIAL INFRASTRUCTURE

STRATEGIC PARTNERSHIPS

DATA, ANALYTICS & METRICS

FLEXIBLE & SUSTAINABLE FUNDING

www.healthypeople.gov/ph3 | #PH3
I. Leadership & Workforce

• Strong role models in the field
• Most of the workforce feels unprepared
• Chief health strategist not always from public health
• New competencies and training models underway
  – Modification of curriculum for new workforce
  – deBeaumont (BEAM)
  – Illinois Public Health Institute
• Need to cross train with other professions/sectors

DeSalvo, AJPH, 2017; Erwin et al, AJPH 2017
2. Partnership

Health generators

- Health care 20%
- Genetics 20%
- Social, environmental, behavioral factors 60%

Adapted from James Rubin, TAV Health; CMS.gov; www.healthypeople2020.gov; Leavitt and DeSalvo, Modern Healthcare, 2017
2. Partnership

Six High-Burden Health Conditions

SIX WAYS TO SPEND SMARTER FOR HEALTHIER PEOPLE

- Reduce tobacco use
- Control blood pressure
- Prevent healthcare-associated infections (HAI)
- Control asthma
- Prevent unintended pregnancy
- Control and prevent diabetes

High-burden
Costly
Preventable
Scalable
Purchasers & Payers
Community empowerment
2. Partnership

- School-Based Programs to Increase Physical Activity
- School-Based Violence Prevention
- Safe Routes to School
- Motorcycle Injury Prevention
- Tobacco Control Interventions
- Access to Clean Syringes
- Pricing Strategies for Alcohol Products
- Multi-Component Worksite Obesity Prevention

Changing the Context
Making the healthy choice the easy choice

Social Determinants of Health

HI-5
HEALTH IMPACT IN 5 YEARS

- Early Childhood Education
- Clean Diesel Bus Fleets
- Public Transportation System
- Home Improvement Loans and Grants
- Earned Income Tax Credits
- Water Fluoridation
Systems Change Recognition

**Paid Sick Leave**
Paid sick leave laws reduce the spread of contagious illnesses, increase employment and income stability, and save cities money in health care costs.

**High-quality, Universal Pre-Kindergarten**
Children who attend high-quality pre-k are more likely to succeed in school, go on to stable jobs and earn more as adults—all of which are linked to better health and stronger communities.

**Affordable Housing/Inclusionary Zoning**
As cities grow, it's important that residents of all income levels have access to affordable housing that sets them up for good health.

www.cityhealth.org  www.healthypeople.gov/ph3  #PH3
3. Infrastructure

- Accreditation progressing - 68% of US population
- PHAB thinking through how to better recognize 21st century (PH3.0) efforts
- Develop appropriate recognition and reward system
- Shared services and reductions in overlapping jurisdictions
- Form of accountability and pathway to transformation
- Evidence building that is linked to better outcomes
4. Data, Analytics & Metrics

• Requires comfort with atypical data sources
  – Current data still “stale” and traditional
  – Some places experimenting with non-traditional sources
  – Working to include a broad view of health including the social determinants

• Comfort with new or non-traditional methods
  – Small area estimation
  – Synthetic populations and controls
  – Twitter

4. NYC Macroscope

• Partnership between governmental and academic PH
• Leverage data from primary care EHR on nearly 700,000 New Yorkers
• Correlate prevalence with NYC HANES and validated with chart review
• Strong correlation with key indicators
About Us

**Academic Health Department**

The Lawrence-Douglas County Health Department and the University of Kansas Work Group on Community Health and Development created a partnership called the Academic Health Department, the first in Kansas and one of only a few in the country.

**Advisory Council**

The Advisory Council was formed in July 2011 to provide input and feedback about the Lawrence-Douglas County Health Department’s programs, services and communication efforts.
The current model of financing isn’t working.
The return for every $1 invested in health improvement programs is $5.60
5. Funding

• Funding foundational capabilities
  – “The gap”?

• Sustainability and flexibility should be met with accountability

• Services Funding needs innovation
5. Funding

Health and Social Care Spending
Percent of GDP

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MY PH 3.0 EXPERIENCE
"System" Redesign

Move Upstream

[Website: www.504healthnet.org; DeSalvo, Johns Hopkins Advanced Studies in Medicine, 2006; DeSalvo, Ann Int Med, 2016]
Move Further Upstream

200,000 Households flooded. Surrounding social infrastructure of churches…schools…friends…family...libraries.

Create a Culture of Health via PH3

www.healthypeople.gov/ph3 | #PH3
Closing thoughts

- Epidemiology has shifted - death from social causes
- Require systematically & strategically addressing SDOH
- Public health the natural leader
- Requires significant transformation, funding & partners
- Tremendous opportunity for medicine and public health to realign
- PH3.0 can be our blueprint for the future
- We should not cede this responsibility but embrace it

PUBLIC HEALTH

What we do together as a society to ensure the conditions in which everyone can be healthy.

Thank you!