POPULATION HEALTH: MOVING FROM JUST TREATING ILLNESS TO BUILDING CULTURES OF HEALTH

Department of Behavioral Health and Intellectual Disability Services
Philadelphia PA

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Co-Founder HealthNEXT
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June 15 2016
My Journey
Provider, Payer, Purchaser, Vendor, Consultant – Patient

• Nearly 30 years of medical management experience with
  • Truven Health Analytics / Thomson Reuters Healthcare (CMO)
  • Walgreens (Strategic Advisor to the President)
  • CHD Meridian / i-trax (President & CMO)
  • GE (Global Medical Leader)
  • Aetna, US Healthcare (Corporate Medical Director)

• Served as front line primary care physician for over a decade
  • Comcast Hills Pediatrics (private practice)
  • Episcopal Hospital Pediatric Clinic Director (Comcast Medical School affiliate)

• Published articles, book chapters and three books
  • Most recent book is entitled Population Health: Creating Cultures of Wellness

• Adjunct Faculty positions
  • Jefferson School of Population Health, Harvard School of Public Health
  • American College of Occupational & Environmental Medicine

• Distinguished Fellow & Faculty Member of American College of Physician Executives

• Co-founder of HealthNEXT
  • Emerging Leader in building organizational cultures of health
MY BACKGROUND:
A PATIENT, A PROVIDER, A PAYER, A PURCHASER, A VENDOR, A CONSULTANT
Agenda Today
4 WHATs, A Why & A Can

• What Is Population Health?
• What Is Population Health Management?
• What is the role of the Department of Behavioral Health and Intellectual Disability Services?
• Why Manage the Health of Populations?
• What does it mean to build cultures of health?
• Can we apply all of this to the city of Philadelphia?
• STANDING OVATION
What is Population Health?

Health Interventions

Determinants of Health

Health Status Improvement
POPULATION HEALTH
Examples of Interventions

CREATE TAXES TO IMPROVE POPULATION HEALTH
CREATE LAWS TO IMPROVE POPULATION HEALTH
POPULATION HEALTH
Examples of Interventions

CREATE MEDICAL BREAKTHROUGHS TO IMPROVE POPULATION HEALTH
POPULATION HEALTH
Examples of Interventions

Workplace Safety
Workplace safety begins and ends with you. It’s your responsibility to stay current on the latest news and items to prevent workplace injuries.

CREATE SAFER WORKPLACES TO IMPROVE POPULATION HEALTH
POPULATION HEALTH

Examples of Interventions

CREATE SAFER HOSPITALS TO IMPROVE POPULATION HEALTH
Health & Well-being influencers

- **Intrapersonal** – knowledge, attitude, beliefs, risks, access
- **Social** – peers, family, friends
- **Employment** – co-workers, policies, workplace
- **Community** – environment, rules, regulations

Stay well where you live, work and play
The Hidden Social Influence

Is Obesity Contagious?


Faith – A Social Determinant of Health
Hope, Belonging, Compassion, Community

Regular Attendance at a place of worship correlates with up to 7 years of additional quality life years
• **Physical environment** – safe water and clean air, healthy workplaces, safe houses, communities and roads all contribute to good health.

• **Education** – low education levels are linked with poor health, more stress and lower self-confidence.

• **Employment and working conditions** – people in employment are healthier, particularly those who have more control over their working conditions.

• **Income and social status** - higher income and social status are linked to better health. The greater the gap between the richest and poorest people, the greater the differences in health.
• **Social support networks** – greater support from families, friends and communities is linked to better health.

• **Culture** - customs and traditions, and the beliefs of the family and community all affect health.

• **Genetics** - inheritance plays a part in determining lifespan, healthiness and the likelihood of developing certain illnesses.

• **Personal behavior and coping skills** – balanced eating, keeping active, smoking, drinking, and how we deal with life’s stresses and challenges all affect health.

• **Health services** - access and use of services that prevent and treat disease influences health

• **Gender** - Men and women suffer from different types of diseases at different ages.
Lifestyle: *Strongest Determinant of Mortality*

Health Behaviors:
The Main Mortality Risk Factors in U.S.

- **Lifestyle**: 51%
- **Heredity**: 20%
- **Environment**: 19%
- **Health Services**: 10%

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4 Behaviors cause nearly 40% of all deaths in the U.S. (year 2000)

Optimal Lifestyle Metric (OLM)

- Being physically active
- Not smoking
- Eating 5 fruits and vegetables each day
- Drinking alcohol in moderation
Every Year That You Do Not Take Care of Yourself Increases Your Chance of Chronic Disease

The “OLM Universe”

- <0.5% meet zero OLM component
- 5% meets one OLM component
- 27.5% meets two OLM components
- 54% meets three OLM components
- 13% meets four OLM components
- 83.6% does not meet the diet OLM component (5 F&V daily)

Adherence to OLM and New Disease
Difference in 2-year incidence of new disease between people who adhere to OLM 0 or 1 and OLM 3 or 4 (%)

WHAT IS POPULATION HEALTH MANAGEMENT?

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Population Health Management

Manages Across the Continuum

How Does Behavioral Health Fit In?

Well

At Risk

Acute Illness

Chronic Illness

Catastrophic Illness

Moving the Population Toward Wellness
POPULATION HEALTH - WELLNESS

Not Just the Absence of Illness
Significant Behavioral Health Focus

**WHO Definition of Health**

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity

**Components of Wellness**

Social
Physical
Emotional
Career
Intellectual
Environmental
Spiritual

Source: [http://www.undstudenthealth.com](http://www.undstudenthealth.com)

Swenson, John A., M.D.
POPULATION HEALTH
THE HEALTHY
“BLUE ZONES”

Right Outlook:
Without Anger & Anxiety

Move Naturally:
Build into Lifestyle

Consume Wisely:
No Smoking
Fruits, Vegetables, Nuts

Belong:
Strong Spousal Realotions
Community Activities
Religion/Spiritual
WELLNESS

GREATER RETURN TO KEEP THE WELL WELL ~ 2.1: WELLNESS SCORE & MEDICAL COSTS OVER 3 YEARS

WELLNESS SCORE & MEDICAL COSTS OVER 3 YEARS

YEAR 1

YEAR 2

YEAR 3

N=27,799
Wellness Score 81.1
Mean Cost $5,150

Zero Trends; Dee Edington 2009
The Centers for Disease Control and Prevention (CDC) estimates...

- 80% of heart disease and stroke
- 80% of type 2 diabetes
- 40% of cancer

...could be prevented if only Americans were to do three things:

- Stop smoking
- Start eating healthy
- Get in shape
- Drink in moderation
The GE trademarked prevention program

Its purpose is to help the global employee community stay well. The key numbers remind us to avoid tobacco products, eat a healthy diet, exercise regularly and maintain a normal weight.
POPULATION HEALTH

ACUTE ILLNESSES IMPACTS VITALITY

Effects of illness on physical functioning

- Usual (normal aging)
- Acute illness (surgery)
- Rehabilitation
- Frailty

Strength vs. Age (yr)
Rise in spending for treated diseases (37%) 
- Innovation/advancing technology (pharmacologic, devices, treatments) 
  - Newborn delivery costs – five-fold increase from 1987-2002 
  - NICU, incubators, ventilators, C-section 
  - New/better medicines for treating disease 
  - New treatment thresholds 
    - Blood pressure 
    - High blood glucose 
    - Hyperlipidemia 

Rise in the prevalence of disease (63%) 
- About ¼ of all healthcare spending in the U.S. is focused on patients who have one or more chronic health conditions 
- Chronically ill patients only receive 56% of clinically recommended preventive health services 
- 27% of the rise in healthcare costs is associated with increases in obesity rates
DISEASE MANAGEMENT
MANAGE CHRONIC CONDITIONS

Identification
Predictive modeling
Severity indexing

Engagement
Trusted Clinician
Telephonic
Web
Mobile

Intervention
Education
Referral Management
Care Management

Impact
Quality of Care
Cost of Care
Satisfaction

Number of People With Chronic Conditions (millions)

Year

118
125
133
141
149
157
164
171
BIG DATA WILL PLAY AN IMPORTANT ROLE
KEY HEALTH INFORMATICS TOOLS FOR
IDENTIFICATION, COMPARISON & PREDICTION

Severity Indexing
- Prioritize & categorize registry based on illness burden
  - Severe – Care Management
  - Moderate – Coordinated Care
  - Mild – Patient Education
- Achieving fairness when comparing

Predictive Modeling
- Identify patients before the catastrophic event
- Predict future trends
- Prove that things did not happen
Medical and prescription costs in last year of life (proxy) by range

- $10 to $9,999: 0.4%
- $10,000 to $49,999: 11.4%
- $50,000 to $99,999: 15.8%
- $100,000 to $499,999: 54.4%
- $500,000 to $1,000,000: 12.6%
- $1,000,000 to $4,000,000: 5.4%

20,389 patient cohort from 79 Million patient Truven Health Analytics database
Total cost for these patients was over $2 billion
HIGH SCORES FOR HOSPICE CARE
WIDE VARIATION OF USE

![Chart](chart.png)

**Family Concerns About Quality of Care at End of Life for Adult Relatives Who Died of a Chronic Illness in 2000**

<table>
<thead>
<tr>
<th>Last place of care:</th>
<th>Home with hospice care</th>
<th>Home with home care</th>
<th>Nursing home</th>
<th>Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate help for patient's emotional distress</td>
<td>35</td>
<td>56</td>
<td>32</td>
<td>6</td>
</tr>
<tr>
<td>Inadequate help for patient's pain</td>
<td>18</td>
<td>43</td>
<td>32</td>
<td>19</td>
</tr>
<tr>
<td>Patient not always treated with respect</td>
<td>16</td>
<td>16</td>
<td>32</td>
<td>20</td>
</tr>
<tr>
<td>Inadequate family information</td>
<td>29</td>
<td>32</td>
<td>44</td>
<td>50</td>
</tr>
</tbody>
</table>

Note: Results shown represent a subset of nine aspects of care measured in the study.
*Information about what to expect while patient was dying.

**Map of Average Number of Hospice Days per Chronically Ill Patient during the Last Six Months of Life by FFR (deaths occurring in 2007)**

- 22.9 to 39.2 (61)
- 19.6 to < 22.9 (60)
- 16.6 to < 19.6 (62)
- 13.3 to < 16.6 (62)
- 6.0 to < 13.3 (61)
- Not populated
What is the role of the Department of Behavioral Health and Intellectual Disability Services?

Department of Behavioral Health and Intellectual Disability Services
Philadelphia PA

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Co-Founder HealthNEX
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June 15 2016
RECOVERY, RESILIENCE & SELF-DETERMINATION

Welcome to Philadelphia’s Department of Behavioral Health and Intellectual Disability Services (DBHIDS) Website. The City of Philadelphia has integrated its behavioral health care and intellectual disability services into one comprehensive system.
DBHIDS

DEDICATED TO PROMOTING HEALTHY BEHAVIORS & COMMUNITIES

Public Education & Training
DBHIDS is dedicated to promoting healthy behaviors and healthy communities through education and awareness building strategies. DBHIDS has developed a variety of comprehensive and easily accessible online resources and trainings to strengthen awareness of behavioral health tools, services and support available for individuals and families.

- **Healthy Minds Philly**
  A virtual resource designed to provide awareness and education on behavioral health issues and to educate neighborhoods, 21 hours a day, 7 days a week. Healthy Minds Philly is home to:
  - **Behavioral Health Screeners** Quick, free and anonymous online screen to learn whether you or someone you care about might be experiencing symptoms of behavioral health disorders.
  - **Mental Health First Aid (MHFA)** Public education program that teaches the skills needed to identify, understand, and respond to signs of behavioral health challenges or crises. First Aid is given until appropriate support is received.
  - **Behavioral Health Training and Education Network**

To support the DBHIDS and other human services systems by planning, coordinating, and providing quality learning experiences for behavioral health professionals in the entire system, including individuals and their family members. DBHIDS staff members and staff of other provider organizations.

Prevention & Early Intervention
DBHIDS understands the earlier we intervene with behavioral health issues, the faster we are able to provide the individual a community. This requires paying attention to social determinants of health which include the availability of support, access to healthcare, education and economic opportunities, and the social and physical environment. We do this by partnering with city agencies including the mental health, justice, housing, school, and child welfare systems, as well as the behavioral health treatment system and the general public.

- **Community Response Teams**
  Community Response Teams provide community support and crisis response services to communities affected by disasters, violence, or other events which require emotional support and psychosocial assistance as part of coordinated response efforts.

- **Crisis Intervention Team Training**
  The Crisis Intervention Team (CIT) is a collaboration between DBHIDS staff, the Philadelphia Police Department, and other stakeholders designed to reduce conflict during encounters between police and community members with mental health challenges. CIT training emphasizes the principles of violence prevention de-escalation and community collaboration.

- **Infant Toddler Early Intervention Program**
  The Philadelphia infant Toddler Early Intervention Program is an enrollment program for infants and toddlers (ages 0 to 3 years old) of state and federal resources. This program is designed to help families who are in need of early intervention services for infants and toddlers (ages 0 to 3 years old) who are at risk. It is essential for infants and toddlers to receive high-quality early intervention services so they can develop the necessary skills for healthy growth and development.

Community Engagement
Public education around behavioral health issues is necessary to promote overall health and well-being. Through partnerships with community-based agencies and connecting with public libraries, DBHIDS works to promote the health of Philadelphians by supporting initiatives that strengthen individuals, families, and communities.

- **Mural Arts BookLight Program**
  A community-based public art program that promotes health and wellness in Philadelphia. The program engages participants in the creation of public art murals, which raise awareness about the importance of mental health and wellness.

- **Engaging Males of Color (EMOC) Initiative**
  A newly established and targeted initiative designed to address the impact of health, economic, and educational disparities experienced by males of color. The goal is to promote better understanding and awareness of behavioral health challenges, reduce the associated stigma, and improve the quality of life for males of color throughout the Philadelphia region.

- **Community Coalition Initiative**
  Community Coalition Initiative was designed to better link behavioral health services to targeted communities. Throughout this effort, the number of individuals receiving services has increased.

- **Faith Based Unit**
  In 2005, DBHIDS created a Faith-Based Initiative to build partnerships with faith communities, churches, mosques, and synagogues in various faith communities. This initiative is designed to provide a deeper relationship between individuals with behavioral health treatment services.

Cross System Collaboration
Cross-system collaboration is an essential component to achieving overall wellness. Behavioral health settings are not the natural habitat of many community members. DBHIDS supports innovative cross-system collaboration to strengthen the capacity of this workforce to identify the health and wellness needs of people.

- **Tobacco Recovery and Wellness (TRW) Initiative**
  TRW is a partnership between the Philadelphia Department of Public Health Tobacco Policy and Control Programs, University of Pennsylvania’s Center for Tobacco Policy and Treatment, and the Department of Behavioral Health and Intellectual Disabilities (DBHIDS) that engages behavioral health providers to incorporate evidence-based tobacco dependence treatment into their clinical and community practice.

- **Housing Outreach Unit**
  DBHIDS supports five agencies led by Project Home to engage people living on the streets of Philadelphia. The other agencies are Horizons House, SELF Inc., the Mental Health Association of Southeastern PA and Hall-McCure Community Mental Health Center. The majority of the persons they engage are believed to suffer from behavioral health challenges, particularly occurring mental health and addictions challenges.

Innovative Treatment Services
DBHIDS recognizes that effective and innovative practices are essential components of a resilience- and recovery-oriented behavioral health system. DBHIDS is committed to ensuring the efficient, sustainable “state-of-the-art” treatment of as many as possible.

- **Philadelphia Alliance for Child Trauma Services**
  A network of child serving systems and organizations that provides the most effective practices for traumatized youth and their families.

- **Evidence-Based Practice and Innovation Center (EPIC)**
  DBHIDS’ Evidence-based Practice and Innovation Center, or EPIC, seeks to advance system-wide efforts to help support the implementation, sustainability, and accessibility of behavioral health evidence-based practices in Philadelphia.
Moving the Population Toward Wellness

First Aid For Mental Health

Tobacco Recovery Wellness Initiative (TRWI)

Prevention of Bullying, Violence, Substance Abuse, Social Skills Building

Emergency Preparedness and Response

Crisis Response Centers

Community Response Teams

Drug Free Coalitions

RECOVERY RESILIENCE SELF-DETERMINATION