Definitional Landscape

Total population health is a term used to describe the management of health and illness with various definitions in the marketplace. The tri-county area of Charleston is suggested as the group of individuals who constitute the total population for MUSC Health for primary focus. Patients that use a MUSC facility may reside in an area outlying the tri-county region, the difficulty to influence individual health beyond acute and tertiary care increases the complexity of our efforts, but will not exclude any patient, regardless of geographic residence.

Population health refers to the distribution of health outcomes within a population, the health determinants that influence that distribution and the policies and interventions that impact the determinants. Key components of population health include: a focus on an entire population; health systems based approaches; application of behavioral principles; community-level public health factors; and a focus on policy, legislative activities, and patient quality of life.

The health we will manage includes not only the absence of illness but the construct of health from the individual’s perspective. Health includes aspects of physical, behavioral, spiritual and well-being. Health also includes the consideration of quality of life not merely the absence of disease. The measurement of health in the population includes health equity or the amount of health disparity between various sub-populations.

Extracted from the MUSC (MUHA) Total Population Health Project Charter
Definitional Landscape

Total Population Health

Social Determinant Interventions Integrated
Statutory Policy, Cultural Touch points, Community

Population Health Management

Contract Administration
Medicare ACO, Medicaid HMO, PCMH, Uninsured

Population Health Medicine

Patient to Provider
Logic Model for Total Population Health
Targeting Strategy
Socio-Cultural Environment

Lifestyle Risks – Age- Costs
Health Risk Appraisal Responses

Forecasting Utilization Patterns
Psycho-Social Segmentation

- Fully Engaged
- Apathetic or Scared
- Confused
- Hot & Cold

50% of current asthma admissions
Did not have previous diagnosis of asthma

50% of high cost patients
will not be high cost in 12 months

Individuals

Annual Consumption

0

Young & Blissful
In the dark

Fully Engaged
Initial Target Areas
Total Population Health Performance Areas

Primary Prevention

- Breast Cancer Screening
- Maternity, Childbirth
- Colorectal Cancer Screening
- Immunizations

Secondary Prevention

- Diabetes
- Hypertension
- Ischemic Heart Disease
- Heart Failure

Primary Prevention

- Sedentary Behavior
- Obesity
- Tobacco Use
Total Population Health
Community Collaboration

Activity
• Exercise is Medicine
• SPARK
• Eat Smart-Move More
• Parks & Rec
• Bike Path Advocacy
• Push up - Up

Obesity
• We Can!
• Let’s Go 5-2-1-0
• Restaurants
• Grocery Stores
• Fit Family Challenge

All Other
• County Health Dept’s
• SC Dept Public Health
• CDC
• AHA, ADA
• Schools

MUSC Wellness Center
MUSC Weight Management Center

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Implementation Tool Kit
Implementation Tool Kit
Total Population Health Clinic Health Teams

- DHEC Public Health Clinics
- Discharge Planning TCM
- Hospital Case Management
- Community Based Agencies
- Social Support Agencies
- Coastal Connections
- Tobacco Cessation Counselor
- Pharmacist
- Social Worker
- Case Manager
- Health Educator
- Exercise Physiologist
- Medical Assistant
- Front Office Support
- M.D. N.P – P.A.
- Diabetes & CVD Team
- Physician Specialist Practices

Patient
MUSC Intervention Modalities

- Written
  - Practice Guidelines
  - Self-Paced Programs
- Personal
  - On-site Workshops
  - Focus Groups
- Phone-Telemedicine
  - Health Educator Phone Consults
  - Intranet Content
  - Mobile Device Content
  - CME Programs
- Community
  - Electronic Database of Community Resources
## Intervention Map: Physical Activity Example

<table>
<thead>
<tr>
<th>Performance Objectives</th>
<th>Personal Determinants</th>
<th>External Determinants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For the Individual</strong></td>
<td>Attitudes</td>
<td>Knowledge</td>
</tr>
<tr>
<td>Establish a goal to increase activity levels</td>
<td>Expresses Intention to start activity routine</td>
<td>Understand safety and FIT principles for activity</td>
</tr>
<tr>
<td>Moderate activity 30 min/day for 5 days/week</td>
<td>Confidence to maintain activity level</td>
<td>Understands and adheres to FIT principles, confident to maintain over come daily obstacles</td>
</tr>
<tr>
<td>Screen time is decreased (TV, computer, PDA)</td>
<td>Peer Pressure - Social Norm</td>
<td>Lack motor skills for outdoor activity</td>
</tr>
<tr>
<td>Workday activity is increased (stairs, parking lot, breaks)</td>
<td>Not enough time</td>
<td>Self-efficacy to maintain</td>
</tr>
<tr>
<td>Family, friends support team is formed</td>
<td>Fear of asking for support</td>
<td>Support team increases success rate</td>
</tr>
</tbody>
</table>

| **For the clinician** | | | | | | |
| Current activity levels are documented | other more important items | EPIC training on fields | 50% in 6 months 75% in 9 months 90% in 1 year | Scorecard reports | Norm to "do your own thing" |
| personal goals established and documented | patient thing, not my concern | 50% in 6 months 75% in 9 months 90% in 1 year | Team competitions |
| 30 second counseling and referral to a coach completed | Too Busy, time pressure | Self Efficacy for Counseling 3 A's, Ask, Advise, Assist | 50% in 6 months 75% in 9 months 90% in 1 year | Screen reminders |
| Self efficacy and modeling behavior is practiced | already active and busy | Double clinician rate of active | | |
| Adherence to clinical guideline | Awareness of guideline | Understand evidence and actions to implement | 50% in 6 months 75% in 9 months 90% in 1 year | Promotional Campaign for Guidelines |
| Follow up visits are reinforced with consistent message | Willingness to engage | Integrate into ‘everything’ else | 50% in 6 months 75% in 9 months 90% in 1 year | Scorecard reports |
Patient Intervention Modalities

- Written
  - Handouts
  - Patient Guidelines
  - Patient Checklists
  - Internet Content
  - Mobile Device Content
- Personal
  - PCP Counseling
  - In Clinic Teams
  - Home Visits
  - Discharge Teams
- Phone-Telemedicine
  - Disease Mgmt.
  - Lifestyle Coaching
  - Demand Mgmt.
- Community
  - MUSC Health Classes
  - Community Classes
  - Community-Personal, Phone, Written
  - Community-Wide Interventions
Targeting and Timing
Intervention Targeting

\[ 2 + 3 \frac{1}{2} \]

1. Diabetes
2. Cardiovascular Disease

1. Physical Activity
2. Body Fat
3. Tobacco Use

1. Low Risk & Absent
2. High Risk Issues
3. Extreme Utilization
Intervention Targeting

2 + 3 \( \text{and}\ \frac{1}{2} \)

Emphasize the 3 lifestyle issues
1. Physical Activity
2. Body Fat (obesity)
3. Tobacco Use

Universal Process – All Patients
3 Step Approach
1. Ask
2. Advise
3. Assist

Three Intervention Intensities

- **USPSTF Preventive Care- Push Annual Health Review**
  - Low

- **Aggressive Lifestyle Coaching Disease Management**
  - 2-4 visits per year
  - Med

- **Case Management Home Care Tailored Coaching**
  - High
**Intervention Targeting**

- Target ½ of our population
- Stratify into 3 tiers of intensity
- Meet any criteria for nomination

**Tier 1** ~ 10%
- No Shows (ghosts) – never seen
- Age 35-50
- Annual charges < $5,000

**Tier 2** ~ 40%
- 3 Lifestyle Risks
- 3 Chronic Disease Diagnosis
- Any Hospital Admission
- Polypharmacy (>9)
- Socio Economic Risk
- All Pre-natal, Maternity

**Tier 3** ~ 5%
- Admissions >1
- Palliative Care Diagnosis
- Annual Charges >$50,000
- Specialty Meds > $10,000

**2 + 3 and ½**

- **USPSTF Preventive Care- Push**
  - Annual Health Review
- **Aggressive Lifestyle Coaching**
  - Disease Management
  - 2-4 visits per year
- **Case Management**
  - Home Care
  - Tailored Coaching

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Discussion

Founded in 1824 in Charleston, the Medical University of South Carolina is the oldest medical school in the South. Today, MUSC continues the tradition of excellence in education, research, and patient care. MUSC educates and trains more than 3,000 students and residents, and has nearly 13,000 employees, including approximately 1,500 faculty members. As the largest non-federal employer in Charleston, the university and its affiliates have collective annual budgets in excess of $1.7 billion. MUSC operates a 750-bed medical center, which includes a nationally recognized Children’s Hospital, the Ashley River Tower (cardiovascular, digestive disease, and surgical oncology), Hollings Cancer Center (one of fewer than 70 National Cancer Institute designated centers), Level I Trauma Center, and Institute of Psychiatry. For more information on academic information or clinical services, visit www.musc.edu. For more information on hospital patient services, visit www.muschealth.org.
Population Health: A Timely New Label - and how it differs from Public Health

John E. Vena, Ph.D.
Professor and Founding Chair
Department of Public Health Sciences
vena@musc.edu
What is Public Health?

• Public Health is the science and art of protecting and improving the health of communities through organized community efforts aimed at the prevention of disease and promotion of health (infrastructure, education, promotion of healthy lifestyles) and research for disease and injury prevention.

• Public Health links many disciplines and rests upon the scientific disciplinary cores of epidemiology and biostatistics.

• The Mission of Public Health is the fulfillment of society’s interest in assuring conditions in which people can be healthy.
What Is Public Health?
Our Commitment to Safe, Healthy Communities

Definition
Public Health is Prevention.
Public health is the practice of preventing disease and promoting good health within groups of people, from small communities to entire countries.

Public Health is Policy Development and Population Health Surveillance.
Public health professionals rely on policy and research strategies to understand issues such as infant mortality and chronic disease in particular populations.
Why It’s Important

Public Health Saves Money and Improves Quality of Life. A healthy public gets sick less frequently and spends less money on health care; this means better economic productivity and an improved quality of life for everyone.

Improving Public Health Helps Children Thrive. Healthy children become healthy adults. Healthy kids attend school more often and perform better overall.1 Public health professionals strive to ensure that all kids grow up in a healthy environment with adequate resources, including health care.

Public Health Prevention Reduces Human Suffering. Public health prevention not only educates people about the effects of lifestyle choices on their health, it also reduces the impact of disasters by preparing people for the effects of catastrophes such as hurricanes, tornadoes and terrorist attacks.
Who Does It?

Public Health as a Profession.

Rather than being a single discipline, public health includes professionals from many fields with the common purpose of protecting the health of a population.

• Emergency Responders • Restaurant Inspectors • Health Educators • Public Policymakers • Scientists and Researchers • Public Health Physicians • Public Health Nurses • Occupational Health and Safety Professionals • Social Workers • Sanitarians • Epidemiologists • Nutritionists • Community Planners • Dental Health Practitioners
Examples of It
Public Health in Policy and Practice.

• **Vaccination programs** for school-age children and adults to prevent the spread of disease • **Regulation of prescription drugs** for safety and effectiveness • Safety standards and practices to protect **worker health and safety** • Ensuring **access to clean water and air** • **Educational campaigns** to reduce obesity among children • **Measurement** of the effect of air quality on emergency recovery worker • **School nutrition programs** to ensure kids have access to nutritious food.
So what is healthy?

• The World Health Organization definition is: “a state of complete well-being, physical, social, and mental, and not merely the absence of disease or infirmity.”

• We need well educated public health professionals to effectively shape the programs and policies that will improve population health.
Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

The correct bibliographic citation for the definition is: Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

The Definition has not been amended since 1948.
The future of public health is dependent on:

• a commitment to broadening our understanding of biology and behavior; medicine, methods, and management; environment and economics; policy and programs; and a host of other things;

• the renewal of a vision of health and well being for the whole community and a corresponding commitment to the values that shape that vision.

Public health scientists work as part of public health teams in academia, federal agencies such as the Centers for Disease Control, state and local health departments and community and international organizations.
Distinctions Between Public Health and Clinical Health Professions

Public Health          Clinical Health
Population ←----------> Individual

Health ←---------------> Disease
Prevention and ←--------> Diagnosis and Health Promotion       Treatment
Global Health-1
Towards a common definition of global health

Jeffrey P Koplan, T Christopher Bond, Michael H Merson, K Srinath Reddy, Mario Henry Rodriguez, Nelson K Sewankambo, Judith N Wasserheit, for the Consortium of Universities for Global Health Executive Board*
Lancet 2009; 373: 1993–95

“A steady evolution of philosophy, attitude, and practice has led to the increased use of the term global health. Thus, on the basis of this analysis, we offer the following definition: global health is an area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide.

Global health emphasizes transnational health issues, determinants, and solutions; involves many disciplines within and beyond the health sciences and promotes interdisciplinary collaboration; and is a synthesis of population based prevention with individual-level clinical care.”
Global health is public health

...global health and public health represent a single field with a long tradition of bringing scientifically validated approaches, technologies, and systems to bear on the world’s most pressing health needs. Improving the lives of vulnerable populations depends on continuing advances in this field.

Definition of One Health
One Health is the collaborative effort of multiple health science professions, together with their related disciplines and institutions – working locally, nationally, and globally – to attain optimal health for people, domestic animals, wildlife, plants, and our environment.


Scope of One Health
• Convergence of human, animal, and plant health and the health of the environment
• Human-animal bond
• Professional education and training
• Research, both basic and translational
• Ensuring a safe food and water supply that is high quality, available and affordable
• Agricultural production and land use
• Natural resources and conservation
• Disease surveillance, prevention and response, both infectious and chronic diseases
• Commonality of diseases among people and animals, such as cancer, obesity, and diabetes
• Clinical medicine demand for interrelationship between the health professions
• Environmental agent detection and response
• Disaster preparedness and response
• Public policy and regulation
• Global trade and commerce
• Communications and outreach
Public Health is Global Health is One Health
To flourish—indeed to survive—AHCs must reconfigure and transform rapidly and broadly in size, speed, value, and innovation.

“Academic health centers must learn to care for the health of populations, beyond that of individual patients. Population health refers to using a global budget to manage the health of a specific population. The Patient Protection and Affordable Care Act, increasing enrollment in Medicare Advantage, and new forms of risk sharing in commercial payer contracts all drive this new emphasis on population health management.”
A clarion call for PREVENTION

New Opportunities in the Changing Landscape of Prevention

The focus of medical research has historically been on curative medicine, yielding better drugs, medical devices, and clinical procedures. Prevention science—the systematic application of scientific methods to the causes and prevention of diseases in populations—has yet to receive the necessary investment and support required to reduce the growing burden of largely preventable noncommunicable diseases (NCDs).¹

National Institutes of Health estimates that 20% of its $30 billion annual budget is allocated to prevention; however, less than 10% is spent on human behavioral interventions that target the major modifiable risk factors.² More investment in prevention science could lead to greater health gains at lower cost.

Low levels of investment in prevention research and development represent a missed opportunity to further scientific knowledge and improve population health.

Investing in prevention should be a strategic national priority to help improve the lagging population health of the United States compared with peer countries.