Maine Quality Counts presents…

QC 2013 Triple Aim Series

Achieving the Triple Aim: Improving Population Health

March 21, 2013 (12N - 1PM)

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President & CEO, Mid Coast Health Services

Don’t forget to call in to hear the audio!
Dial: 866.740.1260, Access Code: 6223374
Dr. Christopher Pezzullo, DO, is a pediatrician who currently works as the Medical Director for the Division of Population Health at the Maine CDC. He continues to also work part-time as a general pediatrician in southern Maine and has been an associate professor in Pediatrics at UNECOM since 1996. Dr. Pezzullo has served as both Medical Director for University Health Care, a multi-specialty group practice of the University of New England, and as chair of the UNECOM department of Pediatrics.

Lois Skillings, RN, MS, is the President and Chief Executive Officer of Mid Coast Health Services in Brunswick, Maine. For 15 years she was the Vice President for Nursing and Patient Care Services for Mid Coast Health Services and was the senior leader responsible for patient safety and quality in the organization. Her clinical background is in Emergency and Medical Surgical nursing, and she has held staff development, nurse manager and supervisor positions prior to her executive roles.
Population Health and the Triple Aim

Dr. Christopher Pezzullo
Medical Director, Maine CDC
Division of Population Health
The **TRIPLE AIM** was first described by Tom Nolan, John Whittington and Donald Berwick in 2008 when Dr. Berwick was the president and CEO of the Institute for Healthcare Improvement (IHI).

IHI developed the **TRIPLE AIM** as a purpose statement for describing fundamentally new health systems that improve health while reducing costs.
Goals:

- *Improve the Health of a Population*
- Decrease or slow the increase in cost of care
- Improve the experience of care
- (*Requires an Integrator*)
Experience of care and cost reduction will be discussed in future webinars.

The entire process will be looked at in depth at Maine Quality Counts conference on April 3; Don Berwick, MD will be keynote lunch speaker.
Population Health refers to the “most important determinants of the health of populations” and can be measured:

- Life expectancy
- Infant mortality
- Death rates
- Disability
- Quality of life
- Self-assessed health
- Happiness and well-being

What is Population Health?
TABLE 1: COMPARING HEALTH INDICATORS

<table>
<thead>
<tr>
<th></th>
<th>Haiti</th>
<th>Dominican Republic</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant mortality rate (per 1000 live births)</td>
<td>54</td>
<td>27</td>
<td>7</td>
</tr>
<tr>
<td>Under-5 mortality rate (per 1000 live births)</td>
<td>72</td>
<td>33</td>
<td>8</td>
</tr>
<tr>
<td>Life expectancy at birth in years</td>
<td>61</td>
<td>73</td>
<td>79</td>
</tr>
<tr>
<td>Lifetime risk of maternal death</td>
<td>1 in 44</td>
<td>1 in 230</td>
<td>1 in 4,800</td>
</tr>
<tr>
<td>Percentage of population using improved water sources*</td>
<td>58%</td>
<td>95%</td>
<td>99%</td>
</tr>
<tr>
<td>Percentage of population using improved sanitation**</td>
<td>19%</td>
<td>79%</td>
<td>100%</td>
</tr>
<tr>
<td>Percentage of births attended by skilled personnel</td>
<td>26%</td>
<td>98%</td>
<td>99%</td>
</tr>
<tr>
<td>Percentage of newborns protected against tetanus</td>
<td>50%</td>
<td>86%</td>
<td>N/A</td>
</tr>
<tr>
<td>Percentage of under-5’s moderately or severely underweight</td>
<td>22%</td>
<td>4%</td>
<td>2%</td>
</tr>
</tbody>
</table>

* Improved water sources include household connections, public standpipes, boreholes, protected dug wells, protected springs, and rainwater collections.
** Improved sanitation facilities include public sewer connections, septic system connections, pour-flush latrines, simple pit latrines, and ventilated pit latrines.
Life expectancy: a summary mortality measure often used to describe the overall health status of a population (= number of years a population of a certain age would be expected to live, given a set of age-specific death rates in a given year)

1 of the most commonly used measures for international health comparison.

In 2007, the United States ranked 27th and 26th out of 33 countries within its peer group of Organization for Economic Co-operation and Development (OECD) countries, for life expectancy at birth for females and males, respectively.
Healthy life expectancy is the average number of healthy years a person can expect to live if age-specific death rates and age-specific morbidity rates remain the same throughout his or her lifetime. Thus, healthy life expectancy is a snapshot of current death and illness patterns and can illustrate the long-range implications of the prevailing age-specific death and illness rates. The measure allows for easy comparisons across populations and over long periods of time.

- Expected years of life in good or better health
- Expected years of life free of limitation of activity
- Expected years of life free of selected chronic diseases
Physically and mentally unhealthy days measure the number of days in the past 30 days that individuals rated their physical or mental health as not good. In 2008,

- Individuals in the United States reported on average 3.6 physically unhealthy days and 3.4 mentally unhealthy days in the past 30 days.

- Physically unhealthy days increased with age. In 2008,
  - Adults ages 18 to 24 reported an average of 2.1 physically unhealthy days
  - Adults age 75 and older reported 6.0 days.

- Mentally unhealthy days decreased with age in the older groups. In 2008,
  - Adults ages 18 to 24 reported an average of 4.0 mentally unhealthy days in the past 30 days
  - Adults age 75 and older reported 2.0 days
Self-assessed health status is a measure of how an individual perceives his or her health—rating it as excellent, very good, good, fair, or poor. Self-assessed health status has been validated as a useful indicator of health for a variety of populations and allows for broad comparisons across different conditions and populations.

- In 2007, 9.5 percent of individuals in the United States reported their health to be fair or poor.

- Self-assessed health status varies by age, with 26.8 percent of individuals age 65 and older reporting fair or poor health.
Would you say that in general your health is excellent, very good, good, fair, or poor?

Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?
Chronic Disease Prevalence

Chronic diseases are the leading cause of death and disability in the United States. They cause 7 out of 10 deaths each year. Heart disease, cancer, and stroke alone cause more than 50 percent of all deaths each year.

In 2008, 107 million Americans (almost 1 out of every 2 adults age 18 or older) had at least 1 of 6 reported chronic illnesses:

- Cardiovascular disease
- Arthritis
- Diabetes
- Asthma
- Cancer
- Chronic obstructive pulmonary disease (COPD)
Complex relationships exist between health and biology, genetics, and individual behavior; and between health and health services, socioeconomic status, the physical environment, discrimination, racism, literacy levels, and legislative policies. These factors, which influence an individual’s or population’s health, are known as determinants of health.

What are the most important factors affecting the health of a population?
The interrelationships among these factors determines individual and population health.

Interventions that target multiple determinants of health are most likely to be effective.

Determinants of health reach beyond the boundaries of traditional health care and public health sectors and include sectors such as education, housing, transportation, agriculture, and environment. They can be important allies in improving population health.
Policies at the local, State, and Federal level can affect individual and population health.
1966 Highway Safety Act and the National Traffic and Motor Vehicle Safety Act authorized the Federal Government to set and regulate standards for motor vehicles and highways. This led to an increase in safety standards for cars, including seat belts, which in turn, reduced rates of injuries and deaths from motor vehicle accidents.
Social determinants of health reflect social factors and the physical conditions in the environment in which people are born, live, learn, play, work and age. Also known as social and physical determinants of health, they impact a wide range of health, functioning and quality of life outcomes.
Examples of social determinants:

- Availability of resources to meet daily needs, such as educational and job opportunities, living wages, or healthful foods
- Social norms and attitudes, such as discrimination
- Exposure to crime, violence, and social disorder, such as the presence of trash
- Social support and social interactions
- Exposure to mass media and emerging technologies, such as the Internet or cell phones
- Socioeconomic conditions, such as concentrated poverty
- Quality schools
- Transportation options
- Public safety
- Residential segregation
Examples of physical determinants:

- Natural environment, such as plants, weather, or climate change
- Built environment, such as buildings or transportation
- Worksites, schools, and recreational settings
- Housing, homes, and neighborhoods
- Exposure to toxic substances and other physical hazards
- Physical barriers, especially for people with disabilities
- Aesthetic elements, such as good lighting, trees, or benches
- Poor health outcomes are often made worse by the interaction between individuals and their social and physical environment.

- For example, millions of people in the United States live in places that have unhealthy levels of ozone or other air pollutants. In counties where ozone pollution is high, there is often a higher prevalence of asthma in both adults and children compared with State and national averages. Poor air quality can worsen asthma symptoms, especially in children.
Lack of access, or limited access, to health services greatly impacts an individual’s health status. For example, when individuals do not have health insurance, they are less likely to participate in preventive care and are more likely to delay medical treatment.

Barriers to accessing health services include:

- Lack of availability
- High cost
- Lack of insurance coverage
- Limited language access
These barriers to accessing health services lead to:

- Un-met health needs
- Delays in receiving appropriate care
- Inability to get preventive services
- Hospitalizations that could have been prevented
Individual behavior also plays a role in health outcomes. For example, if an individual quits smoking, his or her risk of developing heart disease is greatly reduced.

Many public health and health care interventions focus on changing individual behaviors such as substance abuse, diet, and physical activity. Positive changes in individual behavior can reduce the rates of chronic disease in this country.

Examples of individual behavior determinants of health include:

- Diet
- Physical activity
- Alcohol, cigarette, and other drug use
Some **biological and genetic factors** affect specific populations more than others. For example, older adults are biologically prone to being in poorer health than adolescents due to the physical and cognitive effects of aging.

Examples of **biological and genetic social determinants of health** include:

- Age
- Sex
- HIV status
- Inherited conditions, such as sickle-cell anemia, hemophilia, and cystic fibrosis
- Carrying the BRCA1 or BRCA2 gene, which increases risk for breast and ovarian cancer
- Family history of heart disease
A **health disparity** is a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.
To better understand the context of disparities, it is important to understand more about the U.S. population. In 2008, the U.S. population was estimated at 304 million.
▪ In 2008, approximately 33 percent, or more than 100 million persons, identified themselves as belonging to a racial or ethnic minority population.

▪ In 2008, 51 percent, or 154 million, were women.

▪ In 2008, approximately 12 percent, or 36 million people not living in nursing homes or other residential care facilities, had a disability.

▪ In 2008, an estimated 70.5 million persons lived in rural areas (23 percent of the population), while roughly 233.5 million lived in urban areas (77 percent).

▪ In 2002, an estimated 4 percent of the U.S. population aged 18 to 44 years identified themselves as lesbian, gay, bisexual, or transgender.
The “attainment of the highest level of health for all people”. Achieving *health equity* requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities.”
Some examples:

- Improve coordination among specialists and hospitals
- Segment population and deploy resources to high-risk individuals or other groups (i.e., diabetics, high healthcare cost/utilization (top 5% utilizers))
- Work with the community on health promotion
- Strategize to reduce variations in outcomes
- Use care teams to deliver basic services
- Develop shared plans of care (include patient!)

How can we improve population health?
Patients with chronic/serious disease

At-risk patients

Well patients

Care management activities

Panel management activities
Include State/Federal CDC in multi-payer reform efforts to include chronic disease interventions that address underlying determinants of health

Promote a life course perspective—invest to reduce health risks in pregnancy and childhood to yield long term population health

How can Public Health improve Population Health?
- Prevent drug abuse through drug monitoring programs and Medicaid anti-fraud programs
- Promote tobacco cessation
- Increase access to oral health services
- Promote immunization
- Prevent obesity (consider schools, transportation policies, built environment, etc)
- Include screening for and access to mental health

Public Health, continued
- EMR
- PCMH
- Patient Navigators
- Care Coordinators
- CHWs

Change the medical environment to promote population health
Frieden’s Health Impact Pyramid

Increasing Population Impact

Counseling and Education

Clinical Interventions

Long-Lasting Protective Interventions

Changing the Context to Make Individuals’ Default Decisions Healthy

Socioeconomic Factors

Increasing Individual Effort Needed
How to use the pyramid (example: chronic disease)

- **Counseling and education**: diet and activity counseling, public health education around chronic diseases, diabetes self-management programs
- **Clinical intervention**: Treatment of elevated BP and cholesterol, aspirin therapy
- **Protective intervention**: colonoscopy, tobacco cessation, dental sealants
- **Changing the context**: eliminate trans fat and sodium in processed food, water fluoridation, remove lead from paint, taxes on alcohol, tobacco, sugar-sweetened beverages, smoke free workplaces
- **Socioeconomic**: reduce poverty, increase education levels, healthy nutritional options accessible, improved housing
We live in a society that favors medical technology over public health. We'd rather pay for the 'pound of cure' than the 'ounce of prevention.' Unfortunately, giving people a new heart is much more glamorous (and expensive, too) than teaching them to take care of the heart they were born with.”

Michael Barnes, health-care economist
Population Health Outcomes / Functional & Clinical Outcomes

- Activated Community
- Informed Activated Patient
- Productive Interactions & Relationships
- Prepared Proactive Practice Team
- Prepared Proactive Community Partners

Barr V et al. The Expanded Chronic Care Model: An Integration of Concepts and Strategies from Population Health Promotion and the Chronic Care Model. Hospital Quarterly 2003;7(1):73-82
Stronger Evidence/Knowledge Development

- Measure Population Health Status
- Analyze Determinants of Health

Base Decisions On Evidence
- health status
- determinants
- interventions

Increase Upstream Investments

Multiple Strategies
- Public Involvement
- Intersectoral Collaboration

Accountability for Outcomes

GOALS
- Improve health of population
- Decrease health status inequities

Analysis of Health Issues

Priority Setting

Taking Action

Evaluating Results

AUTOMATED & ONGOING

> DATA INTEGRATION
> ANALYSIS
> REPORTING
> COMMUNICATIONS

DEFINE POPULATION

IDENTIFY CARE GAPS

STRATIFY RISKS

MANAGE CARE

MEASURE OUTCOMES

ENGAGE PATIENTS
Achieving the Triple Aim: Improving Population Health

March 21, 2013

Lois Skillings, RN
President and CEO
Mid Coast Health Services
Brunswick, Maine
Achieving the Triple Aim:
Transforming Community Healthcare from a Hospital-Centric Model to an Integrated Health System
It is a whole new world out there. No matter one’s political views, there is growing consensus that the way we finance and deliver healthcare has to change.

Our current healthcare system is not sustainable.
Our System is not Sustainable

Covering the Uninsured

The number of uninsured and underinsured Americans continues to rise……

In 2010, nearly 50 million Americans Under 65 lacked health Insurance.

Reducing the Cost of Healthcare

Healthcare costs are increasing faster than other costs……19% of GDP

Total health expenditures have increased from $1.1 trillion in 1997 to $2.3 trillion in 2007

Improving Quality and Population Outcomes

The U.S. spends more per capita than other countries but that doesn't necessarily translate into better care …..

100,000 Americans die each year from errors & infections acquired in the hospital and Life expectancy infant mortality, obesity rates lag behind other industrialized nations

Source: Kaiser Family Foundation
<table>
<thead>
<tr>
<th>Country</th>
<th>Per Capita Healthcare Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>$2,578</td>
</tr>
<tr>
<td>Britain</td>
<td>$2,760</td>
</tr>
<tr>
<td>Germany</td>
<td>$3,371</td>
</tr>
<tr>
<td>Canada</td>
<td>$3,678</td>
</tr>
<tr>
<td>United States</td>
<td>$6,714</td>
</tr>
<tr>
<td>Maine</td>
<td>$8,521</td>
</tr>
</tbody>
</table>

Maine needs to reduce costs by 22% just to achieve the U.S. average and we would still be more than double other countries.

SOURCES: Centers For Medicare and Medicaid Services, Office of Management and Budget, Kaiser Family Foundation, Alliance for Health Reform, Organization for Economic Co-operation and Development, Senate Finance Committee, Commonwealth Fund.
The Triple Aim to Accountable Care

Reduce the Per Capita Cost of Care

Improve the Health of the Population

Enhance the Patient Experience of Care, including Quality, Access, and Reliability

Source: Institute for Healthcare Improvement, Cambridge, MA
## Current System vs. Accountable Care

<table>
<thead>
<tr>
<th>Definition</th>
<th>Current Healthcare System</th>
<th>Accountable Healthcare System</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Teams of providers”</td>
<td>Fragmented handoffs between primary care, specialists, homecare, skilled care, etc.</td>
<td>Integration of providers that form a team, centered around the patient and engaging the patient</td>
</tr>
<tr>
<td>“Working Together with Payers”</td>
<td>Those who pay for healthcare (employers &amp; government) are not engaged with the providers of healthcare</td>
<td>Employers and providers work together to improve the health of the covered population</td>
</tr>
<tr>
<td>“To be Accountable for Improving the Health”</td>
<td>Health improvement has been “off to the side” but not built in to our healthcare system</td>
<td>Wellness, prevention and health improvement are brought into the mainstream. Providers are rewarded for improving health, not just taking care of the sick.</td>
</tr>
<tr>
<td>“To manage the quality”</td>
<td>In the past, providers care for patients based on their own experience</td>
<td>Engineers reliability into everything we do using evidence, technology and standards</td>
</tr>
<tr>
<td>“To manage the per-capita cost”</td>
<td>Today, providers are responsible for the costs within their own setting</td>
<td>Employers and providers share risk for the entire cost of healthcare. The incentives flip from doing more, to doing what is appropriate.</td>
</tr>
<tr>
<td>“Across all healthcare settings”</td>
<td>Today, healthcare is provided by “silos” of providers, each working within their own set of regulations</td>
<td>Integration of care across all health settings</td>
</tr>
</tbody>
</table>
Community Engagement: Listen / Learn – Focus Groups

An important part of the process has been to listen and learn. Over 1000 people participated in 2011 in helping set a vision for healthcare in our community

• **Internal Focus Groups** – Medical Staff, Nurses and other employees, Medical Executive Committee, MCMG Leadership Council, Department Directors, all MCHS Boards, Corporators, Volunteers / Auxiliary, and Senior Management.

• **External Focus Groups** – Patients & Families, Faith Community, Municipal Leaders, Local Businesses, and Legislators
Focus Group Themes

• Stay Focused on the Patient
• Leverage / Integrate Technology
• Be Ready to be an Accountable Care Organization / Deliver Accountable Care
• Maintain and Exceed Quality Outcomes
• Reduce the Cost
• Easy Access to Services
• Enhance Relationships, Community Outreach
• Increase Health Education, Prevention and Wellness Focus
• Integrated Social / Mental Health Services with Primary Care
• Elderly Services
• Leadership Development / Staff Development / Career Planning to Meet Future Workforce Needs
Over the next decade, Mid Coast Health Services will continue its leadership in **transforming** healthcare for the communities we serve by focusing on the following priorities:

- **Prevention and Wellness**: An organization that not only takes care of patients when they become sick, but also takes responsibility for the health and well being of our community.

- **Excellent Patient Experience**: An organization that is easy to access and navigate and is committed to surpassing expectations. Caring is at the heart of what we do.

- **Integrated and Accountable Care**: An organization that uses a team approach to managing the quality and cost of healthcare across all settings, engaging the patient, employers, and the healthcare team in the process.

- **Continuous Improvement to Achieve Superior Outcomes**: An organization that continuously measures and improves everything we do and engineers safety, technology, evidence, and reliability into our clinical practices to achieve superior outcomes.

- **Meeting Community Needs**: An organization that actively engages with the community to plan for and meet changing needs, and provides a first place to turn for high-quality healthcare, close to home.
Our vision is to become an organization that not only takes care of patients when they become sick, but also takes responsibility for the health and well-being of our community.
Population Health Improvement

Health System

Primary Care
Patient Centered Medical Home

Workplace Wellness

Community/Public Health

Integrated, Coordinated & Aligned
toward a Culture of Health and Wellness
Excellent Patient Experience

Our vision is to become an organization that is easy to access and navigate and is committed to surpassing expectations. Caring is at the heart of what we do.
Integrated and Accountable Care

Our vision is to become an organization that uses a team approach to managing the quality and cost of healthcare across all settings, engaging the patient, employers, and the healthcare team in the process.
Get Better Maine

Learn which Maine Hospitals have the highest level of quality care

COMPARE DOCTORS COMPARE HOSPITALS  FIND HEALTH RESOURCES  ABOUT US

Search by:
- Ratings & location
- Doctor or practice name

Ratings & Location: * indicates a required field

Doctor type: *
- Select type of doctor-

Rated for a specific condition:
Select doctor type first
Choose a doctor type above to see related conditions.

Location: *
- Within 10 miles of
- Enter Town or ZIP code
- Accepting new patients

Go
Patient-Centered Medical Home

• Coordinated care focused on prevention through Primary Care
• Relationship between patient and their physician and the care TEAM
• Integrated care...physical, social, spiritual, emotional
The ROI data will surprise you, and the softer evidence may inspire you.

What’s the Hard Return on Employee Wellness Programs?

by Leonard L. Berry, Ann M. Mirabito, and William B. Baun
Continuous Improvement to Achieve Superior Outcomes

Our vision is to become an organization that continuously measures and improves everything we do and engineers safety, technology, evidence and reliability into our clinical practices to achieve superior outcomes.
Meeting Community Needs

Our vision is to become an organization that actively engages with the community to plan for and meet changing needs, and provides a first place to turn for high-quality healthcare, close to home.
If we are successful, the healthcare system in the future will necessarily need to look different. We can’t have it both ways (transformation and continue acute-care centric models.) Can we engage the community and employers to develop a culture of health and wellness? Can we integrate primary care, acute care, home care and elder care services to be more efficient and effective? Will all “hospitals” have inpatient beds? Can we afford as many hospitals? If we truly impact and improve the health of the population, will we need as many hospitals?
Challenges:

#1. The “in-between generation” of Health IT
Challenge

#2. Data and Analytics
Challenge #3. Foot in two canoes
Thank you!

Questions?

MID COAST HOSPITAL
Our Community. Our Health.
Brunswick, Maine