Population Health: A Supply and Demand Challenge

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Global Healthcare Exchange (GHX)
Karen Conway, MSHCD, CMRP, has no real or apparent conflicts of interest to report.
• What is Population Health?
• The Importance of the Social Determinants of Health
• Organizing Care around the Patient (the Demand)
• A Supply and Demand Challenge
• The Role of Technology
• The Role of Payors
• The Role of Hospitals
• How Supply Chain Can Help
• Some Real Life Examples
Learning Objectives

- Leverage often-overlooked supply chain capabilities to meet population health management objectives

- Integrate population health initiatives into current procurement activities vs. creating new programs and added costs

- Describe how leading healthcare systems are leveraging their supply chains to optimize population health initiatives
The Triple Aim

• Improving the patient experience of care (including quality and satisfaction);

• Improving the health of populations;

• Reducing the per capita cost of health care.

Source: Institute for Health Improvement
What is Population Health?

**Common Definition:** “The health outcomes of a defined group of people, including the distribution of such outcomes within the group.”

**Examples of defined populations:**
- Persons with a *similar condition*, e.g., Type II diabetics, asthmatics
- Residents of a *particular (geographic) community*
- Individuals in a *specific socio-economic class* (economics, race/ethnicity, etc.)

**Achieved by focusing on three interrelated processes:**
1. Identify/analyze the distribution of specific health statuses and outcomes;
2. *Evaluate the clinical, social and economic, behavioral and environmental factors associated with the outcomes*;
3. Implement a broad scope of interventions to modify the correlates of health outcomes.

It’s not how much you spend, but where

When clinical and social care spending are combined, the U.S. is average but spends less on social care.

Less than average relative outcomes suggest the value of addressing social needs.

States that spend more on social care have better outcomes.

IMPACT OF SOCIAL DETERMINANTS OF HEALTH

Social determinants of health have tremendous affect on an individual’s health regardless of age, race, or ethnicity.

Socioeconomic Factors:
- Education
- Job Status
- Family/Social Support
- Income
- Community Safety

Physical Environment

Health Behaviors:
- Tobacco Use
- Diet & Exercise
- Alcohol Use
- Sexual Activity

Health Care:
- Access to Care
- Quality of Care

SDoH Impact:
- 20% of a person’s health and well-being is related to access to care and quality of services
- The physical environment, social determinants and behavioral factors drive 80% of health outcomes

Source: Institute for Clinical Systems Improvement; Going Beyond Clinical Walls: Solving Complex Problems, 2014 Graphic designed by ProMedica.

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Social Determinants of Health (SDOH) are the circumstances in which people are born, grow up, live, work and age and the systems put into place to deal with illness.

-World Health Organization

Source: American Hospital Association
The Scope and the Impact

△ The Scope of the Problem

- Nearly 1.5 million individuals are homeless
- 3.6 million people cannot access medical care due to lack of transportation
- One in 5 families with children are food insecure
- Food insecurity increases hypertension, asthma, diabetes, even obesity
- Hunger increases healthcare costs by $130 billion annually

△ The Impact

- Social, behavioral and environmental factors contribute to more than 70% of some cancers, 80% of heart disease and 90% of stroke.
- 75% of our national health expenditures are to treat chronic disease
- Low socio-economic status is a primary contributor of chronic disease and health disparities.
- Racial health disparities contribute more than $35 billion in higher national healthcare expenditures and $200 billion due to shorter life expectancies.

Location is a major health indicator

Hough, OH
- $18,500 Median Household Income
- Inner City
- 98% minority

Life Expectancy: 64 yrs

Lyndhurst, OH
- $63,000 Median Household Income
- Suburb
- 86% White

Life Expectancy: 88 yrs
Organize Around the Patient

Who is/are the patient(s) and populations?

Where is/are the patient(s) and populations?

What does/do the patient(s) and populations need?

What does/do the patient(s) and populations want?
A Supply and Demand Challenge

Demand: What patients and populations need for optimal health

Supply: The resources available to meet that need or demand

Value = \frac{\text{Quality (outcome, safety, services)}}{\text{Cost (resources consumed)}}
Health Leads

Connecting People with Critical Resources

• Food Assistance
• Housing
• Childcare
• Job Search
• Clothing
• Utilities
• Transportation
• Adult Education
• Job Training

Unmet social needs: > 2x more ER visits; > 2x more missed appts.; 60% greater prevalence diabetes; >50% higher cholesterol and hemoglobin A1C; 2x rate of depression

Source: Health Leads/Commonwealth Fund study
Role of Technology and Data

Electronic Health Records
*ICD-10-Z Codes*

Technology Platforms
*Connecting patients and resources*

CDC Social Vulnerability Index
*Using Census Variables at Tract Level*

Geo-analytics
*Location Powering Predictive Analytics*
Eighty percent of payers believe that addressing the social determinants of health (SDOH) of their beneficiary populations will be a key way to improve their population health programs, according to a new Change Healthcare survey.
Value-based Payment A Key Driver

Type of outcome tracked by hospital type

- Hospitals using two or more value-based care models
- Hospitals using one or no value-based care models

Value-based care models we asked about in the survey included ACOs, capitation, bundled payments, or others.

Source: Deloitte Center for Health Solutions' 2017 Social Determinants of Health Hospital Survey
The Role of Hospitals

There are multiple ways hospitals and health systems can address social determinants of health – both within their own walls and outside in the community.

Internal:
- Screening
- Connecting patients to community resources
- Implementing hospital-wide initiatives

External:
- Engaging with the community
- Partnering with the community
- Investing in the community
Economic Power of Hospitals

• Procurement: $340 billion in goods and services
• Investment Portfolios: $500 billion plus
• Employees: 4 percent of total national employment

It’s about health systems “leveraging all of their assets to ensure the well-being of the community in which they are based.”

• Prevent unnecessary demand (waste)
• Improve quality and cost-effectiveness
• Lower costs and make care more affordable

Kaiser Permanente Vision

“We need to collaborate with local business and community leaders, and even our competitors, to create communities that are among the healthiest in the nation.”

— Bernard Tyson, Chairman and CEO
West Side Story: Power of Collaboration

WEST SIDE UNITED: Building Blocks to Better Health
Food as Medicine

Take Two Aspirin — and a Serving of Kale

Wielding food as medicine, hospitals are focusing on nutrition, sending patients home with prescriptions as well as bags of good food.

PHOTO: ESKENAZI HEALTH
Prescribing May Not be Enough
Need Help? Look in the Basement

Leverage Supply Chain’s Tool Box

• Sourcing
• Contracting
• Inventory Management
• Logistics
• Working with multiple parties
Supporting New Lines of Business

For ProMedica, deciding what to stock in its new grocery store was a challenge.

Stocking a grocery store is a sourcing, inventory, and logistics exercise.

• PHOTO: BRITTANY GREGSON FOR THE WALL STREET JOURNAL
Geisinger Fresh Food Farmacy

Improve health
With proper education, support and food we’re changing lives by helping our patients to better manage their diabetes and celebrate their successes

See patient stories

Food as medicine
With healthy food and continuous diabetes education, we’re providing patients with a special kind of medicine that simply can’t come from a pill bottle

How the program works
Preliminary Results

Early results
- Improved labs
- Happier patients
- 25% less ED visits
- 50% fewer admissions compared to cohorts

Notable Decreases

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Bigger Vision for Supply Chain

I want to pilot this but I don't want to get into food procurement….I’m a physician; I have no training with contracts – we have to get into contracts, pricing, delivery schedules…

Supply chain will probably look different in 5-10 years where food procurement for a percentage of our population will be part of what you are doing… There will be new business and opportunities and obstacles in supply chain… It is definitely going to change for anybody who is in supply chain.

Andrea Fineberg, MD, former head, Geisinger Health Fresh Food Farmacy

Better outcomes; Fewer readmissions

Eskenazi Health

LeeSar
Patient Needs

- Avg. 35 trips to pharmacy a year
- Multiple prescriptions with different refill dates
- High rate of illiteracy

Coordinated Response

- Synchronized refills
- Packaged prescriptions together
- Provided explanatory pictures
- Home delivery
- Driver helps assess patient needs, status, environment
A Few Other Examples
Leveraging Supply Chain

Kaiser Permanente Leverages All System Assets including Supply Chain for Total Health

The Triple Bottom Line

A Final Physician Perspective

“If a patient comes to a doctor with asthma, we can prescribe medication. But if that patient goes back to a home where there’s mould inside the walls and the air is unhealthy, all the medication in the world won’t make that person better.

If a patient has diabetes, we can prescribe medication, and the physician or another health care provider can explain to that person the importance of a healthy diet. But if that patient can’t afford fresh fruits or vegetables, or if there isn’t a proper supermarket in the community where these foods can even be found, that diabetes is going to be much more of a challenge.”

Dr. Anna Reid, 2013 Canadian Medical Association President
Questions

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Thank you for completing the online session evaluation