Innovation at the Source: Tackling Social Determinants of Health

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Exploring the Possible

- Imagining a Bigger Role for Supply Chain
- Why Focus on Population Health and the Social Determinants of Health?
- How Hospitals are Addressing the Social Determinants of Health
- Where and How can Supply Chain Play a Role?
- What Factors Need to be in Place?
- Who Should Take the Lead?
Case in Point: 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
How the Program Works

Contracting with local food banks to source and supply nutritional and diet appropriate food.

Helping enrolled patients make healthy food choices and providing recipes and food plans.

Making sure patients have what they need to make healthy meals at home.
Early results
• Improved labs
• Happier patients
• 25% less ED visits
• 50% fewer admissions compared to cohorts

Notable Decreases

<table>
<thead>
<tr>
<th>Measure</th>
<th>Decrease</th>
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</thead>
<tbody>
<tr>
<td>A1C</td>
<td>16.8%</td>
</tr>
<tr>
<td>Glucose</td>
<td>29.4%</td>
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<tr>
<td>Cholesterol</td>
<td>10.4%</td>
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<tr>
<td>LDL</td>
<td>12.1%</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>19.6%</td>
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Role for Supply Chain

On the program:
If this was a drug, the FDA would approve it because we are exceeding what standard [diabetes] medications are required to do…Our food and our program are better than insulin.

On the role of supply chain:
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… it makes no sense to be contracting with retailers –What should the food cost us? What is a good rate? These are things we know nothing about.

A Bigger Vision for Supply Chain

As we cut more and more social services, healthcare will have to pick up more…

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 for your health system and hospitals…

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. We are doing a pilot on transportation. Kaiser is doing one on housing. There will be new business opportunities and obstacles. It’s definitely going to change.

Andrea Fineberg, MD, former head, Geisinger Health Fresh Food Farmacy
Shared Vision?

• Do you share Dr. Fineberg’s vision for an expanded role for supply chain?

• If so, why?

• If so, why not?
Population Health and the Social Determinants of Health
The Triple Aim and Population Health

- 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
Population Health: What and How

• **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.

Beyond Access and Clinical Quality

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.

Examples of the Social Determinants of Health

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

Supply not meeting demand
• One in 5 families with children are food insecure
• More than 40 percent of food in the U.S. is thrown away.
• Food insecurity increase hypertension, asthma, diabetes, even obesity
• Hunger increases healthcare costs by $130 billion annually

Worse Outcomes
• Patients with 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

Higher Costs
• Social, behavioral and environmental factors contribute to more than 70% of some cancers, 80% of heart disease and 90% of stroke.
• Low socio-economic status is a primary contributor of chronic disease
• 75% of our national health expenditures are to treat chronic disease

Who’s Doing What?
Health Leads
Connecting People with Critical Resources

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

Source: Health Leads/Commonwealth Fund study
Prescribing May Not be Enough
Innovating around the Patient

• **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
Better outcomes; Fewer readmissions

Eskenazi Health

LeeSar

Meals on Wheels
Delivering Smiles

Flavor Harvest
Healthy Meals, Healthy Patients
239-343-8920
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.
West Side Story: Power of Collaboration
Investing in Affordable and Healthy Housing

• **Accelerating Investments for Healthy Communities** (Bon Secours Mercy Health; Boston Medical Center, Dignity Health, Kaiser Permanente, Nationwide Childrens, UPMC)- leveraging assets, e.g., financial resources, land, and expertise, to meet local needs

• **University of Chicago**- providing chronically homeless patients with permanent housing (cost per patient dropped 18%)

• **Bon Secours Baltimore** – developing more than 700 affordable housing units for families and individuals on land adjacent to the hospital.

• **Children’s Mercy** – conducting environmental health assessments, repairs and renovations
Discussion: Is there a Case for Supply Chain?
Leverage Supply Chain’s Tool Box

- Sourcing
- Contracting
- Inventory Management
- Logistics
- Working with multiple parties
Where can/should supply chain help?

Can supply chain support efforts to address the Social Determinants of Health, and if so in what areas and how?

![Icons for Social Determinants of Health]

- Housing
- Food
- Education
- Transportation
- Violence
- Social Support
- Employment
- Health Behaviors

Are there other SDOH that should be considered?
Is there a role for traditional medical-surgical suppliers?
What Needs to be in Place for Supply Chain to Help?

• Supply Chain to be seen (to act) as a strategic asset
• More time, more resources
• Better data/more sophisticated analytics
• Different skill sets
• Broader jurisdiction for supply chain, e.g. over food, construction, etc.
• Changes in what payors cover?
• Greater percentage of payment tied to risk and population health
• Technology investments
• Other
Who Should Take the Lead?
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.”*

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

Health-related social needs categories are described on page two of this report.

Source: Deloitte Center for Health Solutions' 2017 Social Determinants of Health Hospital Survey
Value-based Payment A Key Driver

Type of outcome tracked by hospital type

- **Number of patients screened**: 61% using two or more value-based care models, 48% using one or no value-based care models.
- **Number of referrals to community resources**: 56% using two or more value-based care models, 50% using one or no value-based care models.
- **Number of people connected to community resources**: 51% using two or more value-based care models, 38% using one or no value-based care models.
- **Number of individuals enrolled in social needs**: 53% using two or more value-based care models, 33% using one or no value-based care models.
- **Health outcomes**: 52% using two or more value-based care models, 31% using one or no value-based care models.
- **Cost outcomes**: 48% using two or more value-based care models, 25% using one or no value-based care models.
- **Patient experience**: 45% using two or more value-based care models, 21% using one or no value-based care models.
- **No outcomes being tracked**: 5% using two or more value-based care models, 15% using one or no value-based care models.

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 Payors

Government Payors

CMS Accountable Health Communities Model

- 19 states required Medicaid managed-care plans to screen for or provide referrals for social needs in 2017.

Source: Change Healthcare; Kaiser Family Foundation

Commercial Payors

- 80% of payors believe addressing the social determinants of health (SDOH) key to improving population health
- UnitedHealthcare has invested more than $400 million to increase affordable housing access in underserved communities.
- Humana Foundation investing nearly $7 million in 9 organizations addressing the social determinants of health (food security, social connection, and financial stability)
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*
Who should take the lead in addressing the Social Determinants of Health?

- Hospitals
- Payors
- Government
- Technology Companies
- Social Service Agencies
- Other?
Questions and Comments

To continue the conversation,
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Another 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.

Dr. Anna Reid,
2013 President,
Canadian Medical Association
It’s not how much you spend, but where

When clinical and social care spending are combined, the U.S. is average.

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

States that spend more on social care have better outcomes.

Wielding food as medicine, hospitals are focusing on nutrition, sending patients home with prescriptions as well as bags of good food.
KAISER Permanente Total Health
Leveraging Supply Chain

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

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
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

Matching finite resources and what works best to most effectively and efficiently optimize health

• Demand: What patients and populations need for optimal health

• Supply: The resources available to meet that need or demand

VALUE = Outcomes that Matter (quality, service, satisfaction, safety)

All costs to achieve (all resources consumed—fixed and variable)