SDOH: From A Charity Expense, To Repeatable ROI

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ProMedica

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DISCLAIMER: The views and opinions expressed in this presentation are solely those of the author/presenter and do not necessarily represent any policy or position of HIMSS.
Conflict of Interest

Kate Sommerfeld and Brian Miller, MD

Have no real or apparent conflicts of interest to report.
Health and Well-being Organization

National Leader in Managing
SOCIAL DETERMINANTS
OF HEALTH

76,000/YEAR
Inpatient Discharges
13
ACUTE
FACILITIES

Nearly
60,000
Employees

2,600
PHYSICIANS
& PROVIDERS
with Privileges

Home Care
Patients
AVERAGE
3,300/DAY

7,800/YEAR
Births

Hospice Patients
AVERAGE
10,650/DAY

400+
Senior Care
Facilities

Health Insurance Provider
MORE THAN
600,000 LIVES
COVERED

PROMEDICA

who
we are
From early community investment to today’s focus on SDOH, locally and nationally
What do you think of this health system?

- 332 sites
- 27 Counties in OH & MI
- 13 hospitals
- 584,000+ Paramount insurance members
- 950+ employed physicians and providers
- 2,300+ physicians with privileges
- 1,260+ ProMedica Health Network members
- Six ambulatory surgery centers
- 17,000+ employees
- 8,200+ births
- 2,350+ licensed inpatient beds
- 338 continuum service beds
- 1.6 million PCP & Specialist Encounters (PPG)
- 90,000+ inpatient discharges
- 71,000+ surgeries
- 392,000+ ER visits
- 53,200+ Urgent Care Visits
- 220,000+ home care visits
- 425,000+ rehabilitation therapy encounters
- 40+ Boards, Committees/Councils, Foundations
- 460+ Volunteer Board Members
- $14 million raised through Philanthropy
- $180+ million in community benefits
- $4.1 billion total assets
- $3.5 billion revenue
- Strong Investment-Grade Debt Ratings: A1/AA- (Stable)
What do you think of this community?

- Rated 99th out of 100 in Gallup Well-Being Index
- 70% of adults overweight
- 36% of low-income families concerned about having enough food
- Ranked 69th of 88 counties for health outcomes
- Large race disparity for infant mortality / low-birth-weight babies
- Ranked 5th for concentrated, extreme poverty in the country
- 28% of youth reported they felt sad or hopeless every day for 2 weeks or more in a row
- 29% children living in poverty
- Highest number of homeless students in public school system in the state
What do you think of this health system now?

- 332 sites
- 13 hospitals
- Six ambulatory surgery centers
- 2,350+ licensed inpatient beds
- 338 continuum service beds
- 584,000+ Paramount insurance members
- 900+ employed physicians and providers
- 2,300+ physicians with privileges
- 15,000+ employees
- 90,000+ inpatient discharges
- 71,000+ surgeries
- 8,200+ births
- 422,000+ rehabilitations therapy encounters
- $3.1 billion revenue
- Strong financial ratings

- Rated 99th out of 180 in Gallup Well-Being Index
- 70% of adults overweight
- 36% of low-income families concerned about having enough food
- Ranked 69th of 88 counties for health outcomes
- Large race disparity for infant mortality / low-birth-weight babies
- Ranked 5th for concentrated, extreme poverty in the country
- 28% of youth reported they felt sad or hopeless every day for 2 weeks or more in a row
- 29% children living in poverty
- Highest number of homeless students in public school system in the state

How do we make a distinct impact relative to our resources?
What are the Social Determinants of Health?

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

Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Problems (October 2014)
Adapted from The Bridgespan Group
National SDOH Institute Mission Statement

Mission:
The ProMedica National Social Determinants of Health Institute creates healthier people and communities by establishing local, regional, and national opportunities to integrate social determinant factors with clinical care and provide a more holistic approach to health and well-being.

Approach:
The Institute accomplishes its mission by creating strong partnerships with health care providers, payors, nonprofits, corporations, civic leaders, and the people we serve to research, test, shape and invest in innovative solutions that improve health outcomes.
Going beyond: Ebeid Center

- Food market – 1st Floor
- Teaching kitchen – 2nd Floor
- New Call Center – 3rd Floor
- Job training/career skills
- Financial literacy classes
- Parenting classes
- Nutrition counseling
- Diabetes education
- Block by block community empowerment/improvement
The Ebeid Promise

• Catalytic, $50 million, 10 year commitment to neighborhood revitalization
  Transforming Toledo neighborhoods and assisting other regional communities in ProMedica footprint

• National model of how to revitalize communities

• CDFI Investment: Additional $75-125M loan pool for housing development, schools, business support

• Partnership with LISC
Uptown Neighborhood

- High Poverty
- 70% live in rental housing
- Of the renting population, 33% do not have an automobile
- $20,299 Median HH Income
- High patient costs
- Higher discharges
- Higher ED visits
- Higher Non-Admit ED Visits
- Double rate of babies born at low-birth weight
- Higher readmission rates
Ebeid Neighborhood Promise Metrics

**Housing**
- Home Value Trends
- # of Families Assisted
- # of Side Lot Transfers

**Education**
- 3rd Grade Reading
- 3rd Grade Math
- Graduation Rate
- Kindergarten Readiness

**Jobs/Income**
- # Job Created
- Median Income
- % Participants Settling Debt
- Taxes Refunded
- % Participants Building Credit

**Health**
- ER Use
- PMPM
- Readmit Rates
- Infant Mortality
- Access

**Safety**
- Homicides
- Safety
- Resident Leadership
- Robberies
INTEGRATION

Into Clinical Workflows
**ARE WE ASKING THE RIGHT QUESTIONS?**

**We do ...**
- Ask about and encourage exercise
- Ask about and encourage people to lose weight
- Check vital signs
- Check a child’s growth
- Provide physical examinations
- Provide education to patients
- Criticize patients who fail to show up for appointments

**But we don’t ...**
- Ask about safety in neighborhoods
- Ask about diet and ability to secure healthy food
- Screen for mental health
- Look for signs of toxic stress
- Ask about insurance information
- Ask if they can read
- Ask if they have transportation
Hunger in the U.S. / Toledo

- 13% of U.S. households are food insecure
- 19.5% of U.S. households with children are food insecure
- 30.3% of U.S. households – single moms with children
- 31% of seniors cut or skip meals due to lack of resources
- 24% undocumented workers
- 91% people returning from prison
- Almost 75% of SNAP recipients are seniors, disabled or working parents.
- SNAP benefits are often exhausted before the end of the month

Hunger is a major health crisis!
Within the past 12 months we worried whether our food would run out before we got money to buy more.

- Often True
- Sometimes True
- Never True
- Unable to Assess

Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more.

- Often True
- Sometimes True
- Never True
- Unable to Assess
ProMedica clinicians screen patients across 13 Social Determinants of Health domains:

- Food Insecurity
- Training & Employment
- Behavioral Health
- Social Connection
- Financial Strain
- Housing Insecurity
- Transportation
- Utilities
- Intimate Partner Violence
- Childcare
- Education
# Multi-domain Screening in Epic

## Social Factors

For an upcoming appointment with Physician Family, MD on 1/31/2020.

How hard is it for you to pay for the very basics like food, housing, medical care, and heating?

<table>
<thead>
<tr>
<th>Not hard at all</th>
<th>Not very hard</th>
<th>Somewhat hard</th>
<th>Hard</th>
<th>Very hard</th>
<th>Decline</th>
</tr>
</thead>
</table>

What is the highest level of school you have completed or the highest degree you have received?

| 1st grade | 2nd grade | 3rd grade | 4th grade | 5th grade | 6th grade | 7th grade | 8th grade | 9th grade | 10th grade | 11th grade | 12th grade | GED or equivalent | Associate degree: occupational, technical, or vocational | Bachelor's degree (e.g., BA, AB, BS) | Master's degree (e.g., MA, MS, MEng, Med, MSW, MBA) | Professional school degree (e.g., MD, DDS, DVM, JD) | Doctorate | Some college, no degree | Never attended school | Decline |
|------------|-----------|-----------|----------|----------|----------|----------|-----------|----------|-----------|------------|------------|-------------|---------------------------------|-------------------------------|---------------------|-------------------------|----------------------|--------|-----------------|-----------------|---------|

Within the past 12 months we worried whether our food would run out before we got money to buy more.

<table>
<thead>
<tr>
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Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more.

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</tr>
</thead>
</table>

In the past 12 months, has lack of transportation kept you from medical appointments or from getting medications?

<table>
<thead>
<tr>
<th>No</th>
<th>Yes</th>
<th>Decline</th>
</tr>
</thead>
</table>

In the past 12 months, has lack of transportation kept you from meetings, work, or getting things needed for daily living?

<table>
<thead>
<tr>
<th>No</th>
<th>Yes</th>
<th>Decline</th>
</tr>
</thead>
</table>
# The SDOH “Wheel”

## Social Determinants of Health

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intimate Partner Violence</td>
<td>Not At Risk</td>
</tr>
<tr>
<td>Alcohol Use</td>
<td>Heavy Drinker</td>
</tr>
<tr>
<td>Financial Resource Strain</td>
<td>Low Risk</td>
</tr>
<tr>
<td>Stress</td>
<td>No Stress Concern Present</td>
</tr>
<tr>
<td>Hunger Screening</td>
<td>Medium Risk</td>
</tr>
<tr>
<td>Housing Instability</td>
<td>High Risk</td>
</tr>
<tr>
<td>Employment</td>
<td>High Risk</td>
</tr>
<tr>
<td>Social Connections</td>
<td>Severely Isolated</td>
</tr>
<tr>
<td>Tobacco Use</td>
<td>High Risk</td>
</tr>
<tr>
<td>Depression</td>
<td>Not at risk</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>Sufficiently Active</td>
</tr>
<tr>
<td>Transportation Needs</td>
<td>No Transportation Needs</td>
</tr>
<tr>
<td>Childcare</td>
<td>Low Risk</td>
</tr>
<tr>
<td>Postpartum Depression</td>
<td>Not on file</td>
</tr>
</tbody>
</table>

Find community resources
View previous recommendations
SDOH Wheel – Details at a Glance
SDOH Wheel - Interventions
Social Determinants of Health

- Intimate Partner Violence
- Not At Risk
- Alcohol Use
- Not At Risk
- Financial Resource Strain
- Low Risk
- Stress
- Not Stress Concern Present
- Hunger Screening
- No Food Insecurity
- Housing Instability
- Low Risk
- Employment
- Low Risk
- Social Connections
- Moderately Isolated
- Tobacco Use
- Not at risk
- Depression
- Not at Risk
- Physical Activity
- Insufficiently Active
- Transportation Needs
- No Transportation Needs
- Childcare
- Postpartum Depression
- Not on file

Care Gaps

- Noted

Problems

- Unprioritized
- Acne
- Malignant neoplasm of upper-or lower-quadrant of right female breast (CMS-HCC)

Outpatient Medications

- ALPRIAZolam (XANAX) 1 mg tablet
- Cervical radiculopathy
- Gynecological exam normal
- ERRONEOUS ENCOUNTER--DISREGARD
- PAD (peripheral artery disease) (CMS-HCC)
Care Hub Workflow Optimization
Community Resource – Loop Closure

Care Team Message for Wilson, Charles

- Kelly Dickinson
  - Relationship: PCP - General
  - Destination: Epic Medical Center

- Amber Watson
  - Relationship: PCP - Endocrinology
  - Destination: Epic Medical Center

- Andy Lebeau
  - Relationship: Care Manager
  - Destination: Epic Medical Center

Note
I gave Charles several strategies to improve his diet. Please make sure to follow up about his diet at his next visit.

This message will not be saved to the patient’s chart.

Send or Cancel

Care Team
- Kelly Dickinson, MD
  - PCP - General, Family Medicine
  - Started 4 weeks ago
  - Phone: 555-555-5555

- Amber Watson, MD
  - PCP - Endocrinology
  - Endocrinology
  - Started 3 years ago
  - Phone: 555-555-5555

- Andy Lebeau, RN
  - Care Manager
  - Started 1 year ago
  - Phone: 555-555-5555

Message Care Team

Recent Visits
- Office Visit
  - EMC Endocrinology - Jacquelyn Martinez
  - 1 month ago
Social Determinants of HEALTH SCREENING

TOP NEEDS:
• Behavioral Health
• Financial Strain
• Food

- Food Insecurity Screens: 2.6M
- SDOH Screens: 192,030
- Screening all employees through EAP
- Screening 9,000 employees this fall

55% HAD POSITIVE NEEDS IDENTIFIED
• 39% of those screened had needs in four domains or more
• 87% of those screened had a high motivation score
Analytics

Interventions and ROI
Impact Strategies & Interventions

Individual / Neighborhood
- Food Clinic
- Financial Coaching
- Jobs and Training
- Social Isolation
- Pet Therapy
- Summer Youth Employment
- Medical Legal Partnership for Children

Population-Level
- Grocery Store
- Preschool
- College Promise
Research & Learning
Impact Evaluation Framework

Need
Clinical + SDOH

Intervention
- Childhood experiences
- Housing
- Education
- Social support
- Family income
- Employment
- Our communities
- Access to health services

Measurement
- Impact on:
  - Health Outcomes
  - Utilization
  - Cost
Research and Learning: Data Integration and Analytic Strategy

<table>
<thead>
<tr>
<th>Clinical Data</th>
<th>Programmatic &amp; Screening</th>
<th>Claims Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Epic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Provider Roster</td>
<td>• Community Care Hub</td>
<td>• Paramount Advantage</td>
</tr>
<tr>
<td>• Patient Roster</td>
<td>• Food Clinic</td>
<td>• Paramount Elite</td>
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<tr>
<td>• Problem List</td>
<td>• Financial coaching</td>
<td>• Account Care Organization</td>
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<tr>
<td>• Encounters</td>
<td>• Pathways Hub</td>
<td>• ProMedica Employees</td>
</tr>
<tr>
<td>• Diagnoses</td>
<td>• Employer screening results</td>
<td></td>
</tr>
<tr>
<td>• Procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Payments &amp; Charges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Labs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Vitals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Community Contextual Data
- Clinical Data
- Programmatic & Screening
- Claims Data

- Paramount Advantage
- Paramount Elite
- Account Care Organization
- ProMedica Employees
Food Clinic Intervention

Food Prescription Program for patients and members screening positive for food insecurity

Target Population(s): ProMedica Physician Group patients and Paramount Members who screen positive for food insecurity

Program Overview: Physician referral to the ProMedica’s Food Pharmacy, which includes:

- 2-3 days worth of food per visit
- 1 visit/month for up to 6 months per referral
- Nutrition counseling from a dietician
- Healthy recipes
- Connection to other community resources

Program Context

The purpose of the food clinic is to reduce food insecurity, increase access to nutritious food and provide nutrition counseling.

Philosophy that food is medicine

Partner with local food bank for healthy food options

Outcomes:

- Medicare Patients: ↓ ED usage 18%
- Medicare Patients: ↓ Readmissions 5%
- Paramount Advantage Members: ↓ ED usage 11%
- Paramount Advantage Members: ↓ Readmissions 1%
Food Clinic: Impact Analysis

1,037
Participants who utilized the food clinic between 1/16 - 11/17

32% Male
68% Female

32% Male
68% Female

54% African American
84% Medicaid Beneficiaries
43% Between the Age of 40-80

48% had 4+ chronic conditions

Hypertension
Obesity
Depression
Asthma

Impact on Healthcare Utilization & Cost

Medicare
- 18% Reduction in ED Visits compared to -2% in similar patients not using the food clinic

Paramount Advantage
- 11% Reduction in ED Visits compared to -6% in similar patients not using the food clinic

- 5% Reduction in Readmissions compared to +8% increase in similar patients not using the food clinic

PMPY Medical Cost
- 6% compared to 7% increase in similar patients not using the food clinic

- 1% Reduction in Readmissions compared to +4% increase in similar patients not using the food clinic

+16% PMPY Medical Cost compared to 18% increase in similar patients not using the food clinic

2019 Analysis from 2 subsets of the Food Clinic population with CMS Medicare and Paramount Advantage insurance
Financial Opportunity Center

Financial coaching and innovative products services

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Program Context

**Target Population(s):** ProMedica and community members of all incomes and zip codes

Paramount Managed Care contract

**Program Overview:** Integrated services delivery: **Free** integrated employment services, financial coaching, and income supports access. All coaches are coach certified, certified credit counselors and trained in Accenture career success curriculum. Coaches are also VITA trained and certified to provide Free tax services. The FOC is focused on long term engagement; each patient is encouraged to visit the Center at least 2-5 times for assistance. Financial education classes are held monthly at the Ebeid Center.

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Program Activities

**Financial Coaching Process:**

- Baseline assessment; credit report, balance sheet, budget and financial health screening
- Generate a plan to increase income, build assets, build credit, and to address various debts including student debt (if applicable)
- Generate a plan to gain employment career advancement, connect to public benefits, if needed
- Connect with Legal Aid for assistance

**Twin Accounts Program:**

- Matched savings is available for participants who commit to saving at least $25.99 each month; the savings amount is viewed as a loan. Every on-time payment is reported to all 3 credit reporting companies and then matched at the end of 12 months.

The program has seen success since its soft launch in July of 2016; Each coach has a goal to touch 200 lives or more each year and help them achieve long-term financial independence.
**Financial Opportunity Center: Impact Analysis**

- **833**
  - FOC Participants: ProMedica patients & Paramount Members
  - 20% Male
  - 80% Female
  - 50% African American
  - 44% Medicaid Beneficiaries
  - 40% Between the ages of 18-40
  - 42% had 4+ chronic conditions, the most common of which was hypertension
  - 40% had not visited a PCP within the past year
  - Most commonly faced other social risks: Housing Instability, Health Literacy Challenges

**Impact on Financial Security**
- Average Monthly Income Increase: + $610
- Average Credit Score Increase: + 37pts

**Impact on Health Care Utilization and Cost**
- Reduction in Emergency Visits: - 9%
- Reduction in Inpatient Visits: - 38%
- Increase in Primary Care Visits: + 11%
- In Cost Savings:
  - $20K
  - $150K

**Better Connection to Primary and Preventive Care Services**
Proposed Modifications to the HIPAA Privacy Rule To Support, and Remove Barriers to, Coordinated Care and Individual Engagement
Research and Learning: Data Integration and Analytic Strategy

Clinical Data

From Epic

- Provider Roster
- Patient Roster
- Problem List
- Encounters
- Diagnoses
- Procedures
- Payments & Charges
- Labs
- Vitals

Programmatic & Screening

- Community Care Hub
- Food Clinic
- Financial coaching
- Pathways Hub
- Employer screening results

Claims Data

- Paramount Advantage
- Paramount Elite
- Account Care Organization
- ProMedica Employees

Community Contextual Data

Clinical Data

Programmatic & Screening

Claims Data

- Employment
- Demographics
- Crime
- Housing
- Transportation
- Public Health
- Community Resources
- Economics
- Nutrition
- Mental Health

Community-level data

- Demographics
- Economics
- Food
- Housing
- Transportation
- Health Literacy
- Crime & Violence

- Disaggregated at the hex (sub-kilometer) level
Social Risk Analytics: Translating Insights to Impact – at Scale

1. **LOOK BROADLY**
   Full Population Analysis
   1.1M+ individuals

2. **DRILL DEEPLY**
   Identify & Prioritize Cohorts
   Thousands of Cohorts

3. **CHARACTERIZE**
   Social Risk Insights
   Financial Strain

4. **INTERVENE**
   Precision Deployment
   Proactive Connection to FOC Program

5. **IMPACT**
   Track Impact on Cost, Utilization, & Outcomes
Financial Strain

Key Risk Drivers
- Financial Assets
- Financial Liabilities
- Financial Opportunities

Representative Engineered Features
- SD Economic Opportunity Index
- SD Assets & Wealth Index
- SD Career Potential Index

Representative Data Elements
- Monthly income
- Monthly living expenses
- Household members
- Occupation

Representative Screening Question
“How hard is it for you to pay for the very basics like food, housing, medical care, and heating?”

Incorporates 73 Community & Individual Elements

Risk Scale
1 = Little to no risk
2 = Low risk
3 = Moderate risk
4 = High risk
5 = Severe risk

Associated Self-Reported Social Need

CONFIDENTIAL AND PROPRIETARY—DO NOT DISTRIBUTE
Financial Strain

Key Risk Drivers
- Financial Assets
- Financial Liabilities
- Financial Opportunities

Incorporates 73 Community & Individual Elements

Risk Scale
1 = Little to no risk
2 = Low risk
3 = Moderate risk
4 = High risk
5 = Severe risk

Representative Engineered Features
- SD Economic Opportunity Index
- SD Assets & Wealth Index
- SD Career Potential Index

Representative Data Elements
- Monthly income
- Monthly living expenses
- Housing or members
- Occupation

Associated Self-Reported Social Need

Food Insecurity

Key Risk Drivers
- Accessibility of Healthy Food
- Affordability of Food
- Food Literacy

Incorporates 133 Community & Individual Elements

Risk Scale
7 = Little to no risk
8 = Low risk
9 = Moderate risk
10 = High risk
11 = Severe risk

Representative Engineered Features
- SD Health Food Index
- Assistance Eligibility

Representative Data Elements
- Residential location
- Locations of healthy and unhealthy food options
- Minimum food budget

Representative Screening Question
"Within the past 12 months, did you worry that your food would run out before you had money to buy more?"

Associated Self-Reported Social Need

Housing Instability

Key Risk Drivers
- Housing Affordability
- Housing Sufficiency

Incorporates 45 Community & Individual Elements

Risk Scale
1 = Little to no risk
2 = Low risk
3 = Moderate risk
4 = High risk
5 = Severe risk

Representative Engineered Features
- SD Housing Quality Index
- SD Household Crowding Index

Representative Data Elements
- Eviction history
- Household members
- Rent, own

Representative Screening Question
"Are you worried about losing your housing?"

Associated Self-Reported Social Need

Transportation Barriers

Key Risk Drivers
- Access to Transportation
- Proximity to healthcare resources

Incorporates 75 Community & Individual Elements

Risk Scale
1 = Little to no risk
2 = Low risk
3 = Moderate risk
4 = High risk
5 = Severe risk

Representative Engineered Features
- SD Public Transportation Index
- SD Ability to Leave Household Index
- SD Health Resource Index

Representative Data Elements
- Healthcare resource locations
- Urban/rural/suburban classification
- Vehicle ownership
- License

Associated Self-Reported Social Need

Health Literacy Challenges

Key Risk Drivers
- Education
- Demographics
- Culture

Incorporates 36 Community & Individual Elements

Risk Scale
1 = Little to no risk
2 = Low risk
3 = Moderate risk
4 = High risk
5 = Severe risk

Representative Engineered Features
- SD Lifestyle Index
- SD Educational Attainment Index

Representative Data Elements
- Healthcare resource locations
- Urban/rural/suburban classification
- Vehicle ownership
- License

Representative Screening Question
"Has lack of transportation kept you from medical appointments, meetings, work, or from getting things needed for daily living?"

COVID-19 Vulnerability

Key Risk Drivers
- Chronic Disease
- SDOH risk exposure

Incorporates 40 Community & Individual Elements

Risk Scale
1 = Little to no risk
2 = Low risk
3 = Moderate risk
4 = High risk
5 = Severe risk

Representative Engineered Features
- SD Disease Severity Index
- SD Congregation Spaces Index
- SD Emergency Support Index

Representative Data Elements
- Age
- Disease History
- SD Social Risks Score

Representative Screening Question
"Do you speak a language other than English at home?"

Associated Self-Reported Social Need

Diagnostic Test
- Antigen test to detect presence of the virus
**Individual Social Risk Factor Scores**

Available for all adults in the U.S.

- **Financial Strain**: A measure of the individual's financial strength and resiliency
- **Food Insecurity**: A measure of an individual's ability to obtain sufficient affordable, health food
- **Housing Instability**: A measure of the potential that insufficient or unstable housing is impacting the individual’s health and healthcare access
- **Transportation Barriers**: A measure of the potential that the individual's transportation access and travel distance/time is a barrier to seeking appropriate care
- **Health Literacy Challenges**: A measure of the potential that the individual may have difficulty completely understanding how to navigate the healthcare system or understand care plans
- **Violence Exposure**: A measure of the risk that the individual may have exposure to violence in their community or at home
- **COVID-19 Vulnerability**: A measure of the risk of poor health outcome should the individual contract the Novel Coronavirus
Analytic Approach & Prioritization Process

Comprehensive Analytic Approach

- Social Risk
- Disease Burden
- Utilization Patterns
- Enterprise Perf.
- Geography

377,420 distinct opportunities

Strategic Prioritization Considerations

- Total Financial Opportunity
- Per Capita Opportunity
- Addressability - Speed to Impact
- Prevalence - Size of Population Impacted
- Alignment with Existing Strategic Initiatives
- Ability to Impact Key Business Drivers

Prioritized list of 200+ high impact opportunities
Distillation into Highest Impact Opportunities

12 Clusters of Socio-Clinical Opportunity, Spanning 57 Clinical Conditions

- Surgical Complications
- Cardiovascular Diseases
- Epilepsy & Seizures
- Bipolar Disorder
- Pregnancy & Birth
- Cancer
- Opioid Abuse
- Retinal Illness
- Suicidal Ideation
- Respiratory (Pulmonary)
- Sickle Cell
- Stroke, Embolism, Thrombosis

HIMSS 21
Adult Males With Lung Cancer With Two Or More Inpatient Stays

Cohort Characterization
- 1,991 Total Cases
- 544 Admitted Individuals

Business Impact
- $15,991,196
- $2,450 Per Capita Excess Cost

Cost Comparison

<table>
<thead>
<tr>
<th>Risk Index</th>
<th>ELV Risk</th>
<th>Low Risk</th>
<th>Diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM/PY</td>
<td>$196,271</td>
<td>$136,875</td>
<td>$59k (18%)</td>
</tr>
<tr>
<td>PM/PMM</td>
<td>$13,856</td>
<td>$11,406</td>
<td>$2.5k (18%)</td>
</tr>
</tbody>
</table>

Average Spend
- Avg $20k
- Avg $10k
- Avg $5k

Utilization Comparison
- Emergency Dept.: ELV 22.4% vs. Low 14.7%, Diff 7.7%
- Readmission: ELV 1.7% vs. Low 0.5%, Diff 1.2%
- Inpatient: ELV 6.1% vs. Low 5.2%, Diff 0.9%
- Primary Care: ELV 65.4% vs. Low 75.2%, Diff 9.8%

- 36% Likely Inpatient Stay
- 23% Likely Readmission

Social Complexity
- 38% PM/PY
- 45% PM/PMM

Clinical Complexity
- Complex: 53% ELV 22% Low 21%
- Highly Complex: 23% ELV 14% Low 9%

Commonly Occurring Conditions
- Bronchitis: 36%
- Influenza: 10%
- Pneumonia: 19%
- COPD: 8%
## Proactive Patient Care

<table>
<thead>
<tr>
<th>Cohort of Focus</th>
<th>Financial Strain</th>
<th>Multiple Needs</th>
<th>Housing Instability</th>
<th>Food Insecurity</th>
<th>Health Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicare, Congestive Heart Failure</td>
<td></td>
<td>Transportation &amp; Food Insecurity</td>
<td>Medicare, Female, ESRD</td>
<td>Medicaid, Post-surgical Care</td>
<td>Medicaid, Anxiety</td>
</tr>
<tr>
<td>Physician Champions</td>
<td>Imad Hariri, MD</td>
<td>TBD</td>
<td>Allen Flickinger, MD</td>
<td>Joseph Sferra, MD</td>
<td>Dee Bialecki-Haase, MD</td>
</tr>
<tr>
<td>Cohort Patients at Elevated Risk</td>
<td>336 (will slice down to PPG)</td>
<td>~600</td>
<td>70</td>
<td>2.0K</td>
<td>1.5 K</td>
</tr>
<tr>
<td>Total Annual Excess Cost</td>
<td>$378K</td>
<td>TBD</td>
<td>$237K</td>
<td>$1.1M</td>
<td>$873 K</td>
</tr>
<tr>
<td>Planned Intervention</td>
<td>FOC &amp; HF Clinic</td>
<td>Lyft + Food Clinic</td>
<td>Coaching Model (FOC &amp; CHW)</td>
<td>Admission identification &amp; Medically-Tailored Meals</td>
<td>CM Outreach &amp; Education</td>
</tr>
<tr>
<td>Timeline to Impact</td>
<td>6-9 months</td>
<td>6-9 months</td>
<td>6-9 months</td>
<td>prospective</td>
<td>6-9 months</td>
</tr>
</tbody>
</table>
National Growth

Expanding
Scaling
Investing
Innovating
Reaching National Scale

PHS Footprint:
• Fully integrate SDOH into care delivery
• Fund mission-aligned work in communities
• Invest in SDOH innovation and research
• Secure payor contracts to implement SDOH strategies
• Support PHS employees holistically
• Center SDOH in new products and services

Legacy Footprint:
Community investment through philanthropy and partnerships
SDOH screening and proven interventions for patients

Toledo:
Deep neighborhood-based investment and direct services as anchor institution

Nationwide: Scale what works with funding and consulting services; advocate for public policy change; be recognized as a thought leader and innovator.
ProMedica’s National Strategic Role

**Grantmaking & Direct Support**

- **Individual-level** intervention development & scaling
  - Fund, implement & scale SDOH interventions that can be measured at an individual patient level and are replicable in different communities and contexts.
  - 
    - Financial coaching
    - Home assessments and repairs
    - Healthy food deliveries
    - Community Health Workers

**Strategic Investment**

- **Community-level** support and partnerships
  - Increasing existence of community spaces and initiatives, including healthcare entities, that can house, fund, and/or facilitate individual interventions.
  - 
    - Grocery Store launch
    - Workforce development strategies
    - Place-based healthcare investment
    - Embedding SDOH in healthcare settings

**Thought Leadership & Advocacy**

- **Systems-level** and SDOH infrastructure influence
  - Addressing systems-level barriers to addressing SDOH at scale, sustaining promising strategies, and reducing inequity and injustice.
  - 
    - Policy change
    - Innovative financing mechanisms
    - Coalition building

Impact Evaluation Design & Analysis, Research, Develop Strategic Partnerships, Leverage Subject Matter Expertise, Support Business Lines
Consulting and Advisory Supports

Core Products and Services

- Grocery
- Food Clinics
- Employer-based food pantry
- Mobile grocery
- Financial coaching
- Screen and Connect
- Professional development
- Community engagement
- Board support & strategic planning
Safe and Healthy Housing

In partnership with leading national non-profit Green & Healthy Homes Initiative (GHHI), address unhealthy, unsafe housing to address asthma, COPD, lead poisoning, severe injury and assist older adults to age in place.

3-year project
7,000 healthy homes across 7 markets
$150M budget (fundraising goal)
21,000 lives improved, including 7,000+ children and 4,500+ older adults
1,400+ career opportunities created
Impact Story of the Month:

Catherine is a single mother of three children, two are in elementary and the other is a toddler. She is living below the 200% poverty level. Catherine heard about our program through a former student. She has been working in the health field as a caregiver for several years. She knew in order to increase her hourly wage pursuing her STNA was the right way to go. She reached out to our office and connected with the STNA coach and enrolled in the March 8th class. Catherine completed the STNA program and obtained her Nurse Assistant Certificate. She is preparing for her state test and will schedule this soon.

When Catherine joined the Financial Opportunity Center, she had been employed as a caregiver at a senior living facility for over five years. Prior to completing the STNA program she was earning $12.00 an hour. Catherine was hired at ProMedica as a Unit Clerk and her hourly wage increased to $17.00. Catherine attended the “Everything Credit” workshop during the STNA program and learned it is important to keep your credit card balances at 30% or below the available credit. Since she started the program, Catherine has increased her credit score by 26 points. She now has the resource to make sure her credit card balances remain low to continue to increase her credit score.
Q & A