Using Social Impact Financing to Improve Asthma Outcomes

Webinar
Monday, September 29, 2014
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  • If you are directing your question to a specific presenter, please write their name before the question (e.g., Lamb, Yu, Iton, Brush, Norton, Hernandez).
• Due to the large number of participants, we will answer as many questions as possible within the time frame allotted for this webinar. If your question was not answered, we encourage you to reach out to the individual presenter via e-mail following the webinar (email addresses will be provided at the end of the presentation).
Today’s Agenda and Speakers

Using Social Impact Financing to Improve Asthma Outcomes
Anne Kelsey Lamb, MPH, Director, Regional Asthma Management & Prevention

Overview of Pay for Success
Alice Yu: Associate, Third Sector Capital

Case Study I: Fresno, CA – Tony Iton, MD, JD, MPH, Senior Vice President, Healthy Communities, The California Endowment / Rick Brush, Founder and CEO, CollectiveHealth

Case Study II: Baltimore, MD- Ruth Ann Norton, President & CEO, Green & Healthy Homes Initiative

Case Study III: Alameda County, CA – Maria Hernandez, PhD, President, Impact4Health; Special Advisor on Social Impact Investing, Health Research for Action, UC Berkeley School of Public Health

Questions & Answers
Using Social Impact Financing to Improve Asthma Outcomes

Introduction

Anne Kelsey Lamb, MPH, Director
Regional Asthma Management & Prevention
Why are we interested?

1. Asthma is a significant public health problem
2. We know a lot about how to manage and prevent asthma
3. We lack sustainable funding sources to make it happen
Asthma is a significant public health problem

- According to the CDC, in 2010, 18.7 million adults and nearly 7 million children had asthma—a 15% rise since 2001
- There are significant disparities by race, ethnicity, and socioeconomic status
- Asthma costs the healthcare system an estimated $56 billion annually
Asthma is not as well managed as it should be

- Nearly 60% of children diagnosed with asthma have experienced an attack within the previous 12 months
- Researchers project that improving asthma management among vulnerable populations could save as much as 25% of the total asthma costs
We know a lot about how to manage asthma

National Clinical Guidelines

• Assessment of disease severity and control
• Comprehensive pharmacologic therapy
• Patient education
• Environmental control measures to avoid or eliminate factors that contribute to asthma onset and severity
National Clinical Guidelines

- Assessment of disease severity and control
- Comprehensive pharmacologic therapy
- Patient education
- Environmental control measures to avoid or eliminate factors that contribute to asthma onset and severity

“An increasingly robust body of evidence shows that these two aspects of effective asthma management not only improve symptoms, but do so at a reasonable cost.” -Asthma Regional Council, Investing in Best Practices for Asthma
Patient education

- **Impacts**: Reduced asthma symptoms, enhanced quality of life, improved medication adherence, fewer activity limitations and, reduced medical costs
- **ROI studies**: One education program targeting high risk children demonstrated a ROI of $11.22 for every $1 spent, while a case management and education program targeting children demonstrated a ROI of $7.69-$11.67 for every $1 spent
Environmental control measures

- **Impacts:** U.S. Centers for Disease Control’s Task Force on Community Preventive Services found “strong evidence of effectiveness of in-home environmental interventions” in improving overall quality of life and productivity in children and adolescents with asthma.

- **ROI analysis:** In its analysis, the Task Force included an economic review and studies showing a return of $5.3 to $14 for each $1 invested.
Sustainable funding for these evidence-based interventions?

- **Grant funding:** An essential component, but we’ve seen many grant-funded programs come and go
- **Policy changes:** There are some exciting opportunities being explored at state and local levels
- **Social impact financing:** A new opportunity?
Speakers

- **Alice Yu**: Associate, Third Sector Capital Partners
- **Tony Iton, MD, JD, MPH**: Senior Vice President, Healthy Communities, The California Endowment; *Presenting with Rick Brush*: Founder and CEO, CollectiveHealth
- **Ruth Ann Norton**: President & CEO, Green & Healthy Homes Initiative
- **Maria Hernandez, PhD**: President, Impact4Health; Special Advisor on Social Impact Investing, Health Research for Action, UC Berkeley School of Public Health
Overview of Pay for Success

September 29, 2014
Definitions

Pay for Success (PFS)

Performance-based contracting within the social sector where government pays only if results are achieved.

Social Impact Finance (SIF)*

Financing that bridges timing gap between government payments for successful outcomes and upfront capital needed to run PFS programs.

*Social Impact Bonds (SIBs) are a type of SIF
When Does PFS Make Sense?

Significant Unmet Needs and Targetable Population

Leadership from Stakeholders

Credible Data

Net Financial and/or Social Benefit

Interventions that Work

Risk Mitigation

Service Providers with Capacity to Scale

Leadership from Stakeholders

Credible Data

Net Financial and/or Social Benefit

Interventions that Work

Risk Mitigation

Service Providers with Capacity to Scale

Third Sector Capital Partners
PFS Momentum Across the Country

Active Project Construction/Feasibility
• Cuyahoga County, OH – Homelessness/Foster Care
• Illinois – Dually Involved Youth
• New York State – Juvenile Justice
• Santa Clara County, CA – Chronic Homelessness
• Santa Clara County, CA – Mental Health
★ Alameda County, CA – Asthma
★ Baltimore, MD – Asthma
  • Connecticut – Child Welfare
  • Denver, CO – Homelessness
★ Fresno County, CA – Asthma
  • Los Angeles County, CA – Feasibility
  • Los Angeles County /First 5 – Feasibility
  • Minnesota – Homelessness
  • Orange County/First 5 – Feasibility
  • San Francisco County, CA – Feasibility
  • Salt Lake County, UT – Feasibility
  • South Carolina – Early Childhood
  • Washington, DC – Teen Pregnancy

Launched Projects
• Massachusetts – Juvenile Justice
• New York – Justice/Workforce Development
• New York City – Juvenile Justice
• Salt Lake City, UT – Early Education

★ Asthma-related projects
### Key Players in a PFS Deal

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
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</table>
| **Government / Payor** | - Initiates contract and identifies lead agency and/or provider(s)  
                        | - End payer for successful outcomes                                      |
| **Lead Agency**     | - Serves as contract holder and service project manager  
                        | - Negotiates PFS contract and identifies service providers/subcontractors  
                        | - Can also provide direct services                                       |
| **Service Provider(s)** | - Delivers services  
                        | - Receives complete cost coverage; may receive performance payments       |
| **Funder(s)**       | - Provide working capital to lead agency/providers  
                        | - May lose capital if project unsuccessful or be re-paid through government success payments |
| **Evaluator**       | - Supports rigorous evaluation design; measures progress towards outcomes based on contract requirements |
Pay for Success Structure

1. **Funders**
   - Repays funders if outcomes met
   - Makes Success Payments if outcomes met

2. **Special Purpose Vehicle**
   - Provide up-front financing
   - Pays for services
   - Delivers Services

3. **Lead Agency / Service Provider(s)**
   - Pay for Success Contract
   - Provides payment for services
   - Designs evaluation methods and measures outcomes

4. **Evaluator**

5. **Government / Payor**
   - Pay for Success Contract
   - Makes Success Payments if outcomes met

6. **Services**
   - Payments
   - Success Payments
Opportunity for Asthma with Pay for Success

1. Establish or Expand Capacity to Scale Interventions
   - Identify a means to establish or expand capacity of preventative asthma programs to serve more clients and enable programs to scale interventions

2. Assess Effectiveness of Interventions
   - Enable programs and stakeholders to assess the effectiveness of asthma interventions through a more rigorous evaluation

3. Explore Performance-based Contracting
   - Test and explore the use of PFS or outcome-driven contracting for future asthma intervention programs

4. Attract Additional Sources of Funding
   - Attract a new source of funding to pay up-front needs of service provision, in particular for programs that have proven to be effective
Asthma Impact Model for Fresno (AIM4Fresno)
Using Social Impact Financing to Improve Asthma Outcomes

Webinar: September 29, 2014 • Childhood Asthma Leadership Coalition
Asthma in Fresno: A Crisis for Children and Community

- **20.2%** children 5-17 diagnosed with asthma*
- Every day, **20** go to the ER and **3** hospitalized for asthma
- **$34.8M** per year for asthma-related ER and hospitalizations

*significantly higher for some race/ethnicity and socioeconomic groups
Asthma Control: Home-Based Multi-Trigger, Multicomponent Environmental Interventions

Economic Review
Cost-benefit studies show return of $5.3 to $14.0 for each $1 invested.

www.thecommunityguide.org/asthma/multicomponent.html

Twelve-month data show a significant decrease in any (≥1) asthma ED visits (68%) and hospitalizations (84.8%).

http://pediatrics.aappublications.org/content/129/3/465/abstract
Asthma Impact Model for Fresno (AIM4Fresno)

*Intended Outcomes for Phase I (demonstration project)*

- **Reduce the rate of asthma emergencies** among 200 high-risk children enrolled in Medi-Cal in Fresno:
  - $\geq 30\%$ lower asthma-related emergency department (ED) visits
  - $\geq 50\%$ lower hospitalizations

- **Measure health care cost savings for payers** using insurance claims data; reduction in asthma-related health care services for program participants compared to randomized control group

- **Develop an impact investment strategy** to finance scale-up of the program in Phase II

Is a *Social Impact Bond* a viable strategy for financing a home-based asthma program for high-risk children covered by Medi-Cal?
Asthma Impact Model for Fresno (AIM4Fresno)

16,000 children (potential)

↑ health, ↓ ER 30%, ↓ IP 50%

$1K-$5K (estimated net savings PPPY)

Grant funding for 200 children

Investors for scale up

RCT using insurance claims data

Validated by third-party actuary

Home-based education & environmental remediation
Philanthropy as a Bridge to Social Impact Investing

- **Validate existing evidence-base** with rigorous evaluation design & insurance claims data
  - Measure actual health care utilization and cost reductions
- **Confirm risk/return proposition** will attract impact investors (philanthropy to commercial investors)
- **Identify payer(s) of outcomes** for scale-up
Appendix

Potential Scale Up of AIM4Fresno

Goal:
• Improve health, social and financial outcomes for high-risk children with asthma
• Reduce ER 30% & inpatient 50%

Potential eligible population:
• 16,000 children (3-19) covered by Medi-Cal with ER or urgent care visit for asthma in past 12 months

Estimated net savings:
• $1,000-$5,000 per child

diagram: pre-intervention and post-intervention savings from 2014 to 2018
GHHI’s Pay for Success Model

Ruth Ann Norton
September 29, 2014
GHHI’s model shifts funding towards preventative care in the home setting

Today...

There are millions of homes across the country that are contributing to the poor health of their residents

GHHI finds these homes and ‘braids’ public and private funding from numerous sources to provide the necessary improvements

This intervention yields proven results, including reduced medical expenses, yet the beneficiaries of these savings are not involved

...the long-term goal

There are millions of homes across the country that are contributing to the poor health of their residents

The medical field recognizes the home as a key part of the continuum of care and payers provide funding for home improvements

This funding is provided to GHHI through a more streamlined process so they can scale their operations and serve more homes

Our assumption is that large public and private payers will not shift funding until the intervention is proven at scale
Organizational history

• 501(c)3 nonprofit organization established in 1986. Headquartered in Baltimore, Maryland
• Direct service programs have helped more than 25,000 Baltimore families, including over 1,600 asthma patients since 2000.
• Launched a national initiative in 2008 to transform the country’s fractured and siloed approach to the delivery of energy and health-based housing interventions.
• Currently there are 17 GHHI cities around the country, and 5 more are onboarding for certification.
• Funding support from federal, state and local agencies, and philanthropy
GHHI: The Team

Environmental Health Educator
- Resident education
- Pre and post client health surveys
- Action plans for the residents
- Healthy Homes Maintenance Kit
- Referrals to partners for other services

Environmental Home Assessment Technician
- Pre and post intervention environmental assessments and audits
- Comprehensive Health and Housing Assessment Tool
- Complete scopes of work for the properties

Housing Intervention Crews
- Executes cross-discipline scopes of work (next slide)

Data Collection

Quality Assurance & Quality Control
## Interventions

<table>
<thead>
<tr>
<th>Health &amp; Safety</th>
<th>Green</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma Trigger Reduction</td>
<td>Energy Audit</td>
</tr>
<tr>
<td>Lead Hazard Reduction</td>
<td>Weatherization</td>
</tr>
<tr>
<td>Health &amp; Safety Assessment</td>
<td>Insulation</td>
</tr>
<tr>
<td>Integrated Pest Management</td>
<td>Reducing Air Infiltration &amp; Leakage</td>
</tr>
<tr>
<td>Trip &amp; Fall Risk Reduction</td>
<td>Energy Efficiency Measures</td>
</tr>
<tr>
<td>Fire &amp; Injury Prevention Measures</td>
<td>Remediating Gas Leaks &amp; CO</td>
</tr>
<tr>
<td>Health &amp; Safety Education</td>
<td>Energy Efficiency Education</td>
</tr>
</tbody>
</table>
Impact on asthma

• 66% reduction in asthma hospitalizations
• 28% reduction of emergency room visits
• 67% reduction in home-based asthma triggers
• 62% increase in no missed school days
• 88% increase in asthma not interfering with work
**GHHI’s Pay for Success Model**

1. All involved parties sign agreements to support the structure:
   - Investor & GHHI
   - Investor & Hospital
   - GHHI and Evaluator
   - Hospital & Evaluator
   - Investor & guarantor

2. Investor provides GHHI with the first tranche of the financing (three draws)

3. GHHI provides services to 1/3 of the total homes in year 1, 1/3 in year 2, and 1/3 in year 3

4. The third party evaluator assesses the program’s effectiveness and determines if savings targets are met

If the targets are met...

5. The hospital / payor repays the Investor’s principal and the interest that has accrued

If the targets are not met...

6. The investor’s guarantee is called, repaying the Investor at a set %; Investor loses the balance
Project development structure

Executive Steering Committee

Core Project Team

Working Groups

Outcome Setting

Data & Evaluation

Finance & Accounting

Service Provision

Secondary Benefits

Stakeholder Outreach

Experts

Experts

Experts

Experts

Experts

Experts
Innovations

• The first pay for success structure that engages a private institution as the payor instead of the government

• **Multiple secondary benefits will be tracked** beyond the savings to the healthcare entity – impact on Medicaid, school and work attendance, energy consumption, and neighborhood stabilization

• The first time **retail investors will be able to participate in a pay for success contract** for as little as $20
Questions?

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410-534-6447

Follow us on Twitter @HealthyHousing
Like us on Facebook @GHHINational
Alameda County Pay For Success Asthma Initiative

**Setting the Stage for Collective Impact**

Healthy Homes in Alameda County

Alameda County Public Health Department
Celebrating Healthy People in Healthy Communities

Third Sector capital partners

Better Health East Bay
Sutter Health
We Plus You
Coordinating for Collective Impact

**Alameda County Healthy Homes Department**
- Project Management
- Intervention Implementation

**Alameda County Department of Public Health**
- Project Management
- Intervention Implementation

**Better Health East Bay—Sutter Health Foundation**
- Invest financial support for community engagement
- Provide in-kind assistance with medical “hot-spotting” for high utilizers

**Third Sector Capital Partners**
- Review our application of PFS strategy and
- Guide preparation for securing private investors in Phase 2, if appropriate

**UC Berkeley School of Public Health/Research for Action Institute**
- Review intervention design
- Evaluate results

**Impact4Health, LLC**
Project Facilitation, Coordination & Technical Support
Our Project Target Outcomes

1. Improve quality of life indicators based on Pediatric Asthma Survey
2. Reduce Asthma emergency department visits by 30%
3. Reduce Asthma related hospitalization days by 50%
4. Reduce missed days of school by 30%
5. Improve housing conditions through occupant education and technical assistance
Bringing Together Successful Interventions:

Asthma START

• Conduct psycho-social assessment of health needs
• Provide health education
• Insure Asthma management plan is in place
• Check-in to affirm behavior changes
• Refer to Healthy Homes for environmental and home remediation

Department of Healthy Homes

• Conduct behavioral health assessment of needs
• Healthy home visual assessment
• Conduct environmental treatment and removal of known asthma triggers
• Address safety issues, provide technical assistance to property owner and refer to
• Use code enforcement, as necessary
Leveraging Unique Opportunity to Identify High Utilizers

For One Hospital Only
(Primary Diagnosis Only)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Number of Encounters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Encounters in ED</td>
<td>109,514</td>
</tr>
<tr>
<td>Total Number of Encounters with Dx as Asthma</td>
<td>1,812</td>
</tr>
<tr>
<td>Total Number of Encounters Peds Asthmatics</td>
<td>180</td>
</tr>
</tbody>
</table>
Building on Existing Success

There was as much as a 56% difference in cost of care for pediatric patients (0 – 5 yrs) at Alameda Alliance during the 12 months after receiving Asthma START services.
The Potential ROI

- 65% of the children in Asthma START visited the ED during the 6 months prior to starting the program (average cost: $3,500)
- 45% of the children in Asthma START had been hospitalized (average cost $16,585)

<table>
<thead>
<tr>
<th>Pilot Project Budget Components</th>
<th>Program costs Per Participant</th>
<th>Healthcare Interventions</th>
<th>Estimated Treatment Costs</th>
<th>ROI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention Alone</td>
<td>$2,500</td>
<td>1 hospitalization and 1 ED visit</td>
<td>$20,085</td>
<td>7.03</td>
</tr>
<tr>
<td>Intervention and Direct Costs</td>
<td>$3,432</td>
<td>1 hospitalization and 1 ED visit</td>
<td>$20,085</td>
<td>4.85</td>
</tr>
</tbody>
</table>
Engaging a Local Community Foundation

Community Foundation as Financial Intermediary

Private Investors
- Family Foundations
- High Net Worth Individuals
- Corporate Foundations

Sustainable Shared Savings Health Impact Fund

End Payors
- Self-Insured Employers
- Accountable Care Organizations
- Hospitals (Charity Care Contributions)

Community Interventions
Community Interventions
Community Interventions

Produce savings for financial stakeholders
For More Information

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Please join the Pay For Success Innovations Community
Questions?

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Childhood Asthma Leadership Coalition
http://www.childhoodasthma.org/