CALIFORNIA ASTHMA FINANCING

Informational Webinar

Social Impact Bonds and Pay for Success Models

Our Path to Sustainable Financing

Sustainable Financing

Practice

Policy

Science-Care Guidelines

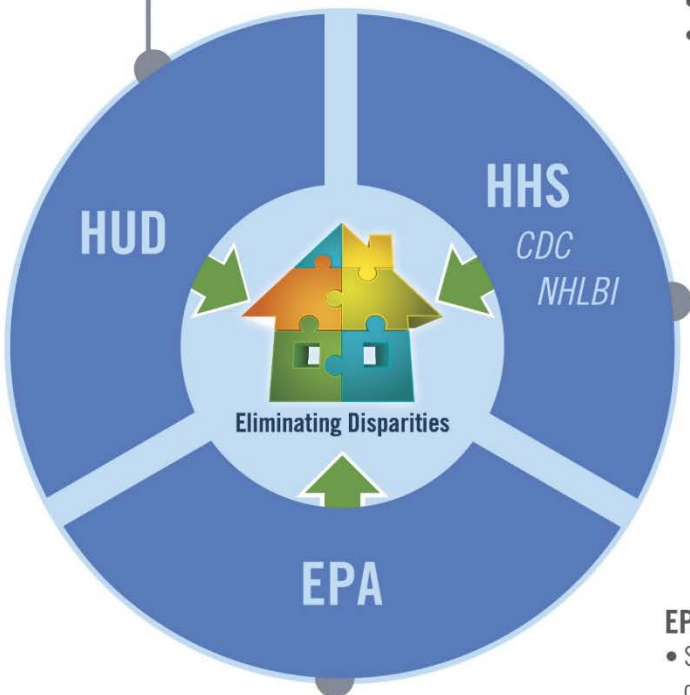
- NAEPP Care Guidelines (NHLBI)
- NAS Report (EPA)
- Community Guide (CDC)
- Asthma Health Outcomes Project (EPA)

- Guidelines Implementation Panel Report (NHLBI)
- Asthma Disparities Action Plan and Healthy Homes Strategy (EPA, HHS, HUD)

- Healthcare providers delivering comprehensive care
- Programs delivering in-home asthma care services & receiving coverage

Science, Policy & Practice in Place

Federal Agencies Working to Expand Access to In-Home Asthma Care Services



HUD

- Sponsor asthma summits focused on the value of housing interventions in homes of children with poorly controlled asthma
- Support grant programs funding healthy homes interventions
- Promote smoke-free multifamily housing
- Sponsor training on integrated pest management for HUD-assisted multifamily housing providers

CDC

- Lead work to develop standard measures
- Administer National Asthma Control Program for states (focus on coverage & reimbursement)
- Target asthma through 6|18 Initiative
- Partner with American Lung Association to track key elements of guidelin es-based asthma care in Medicaid programs

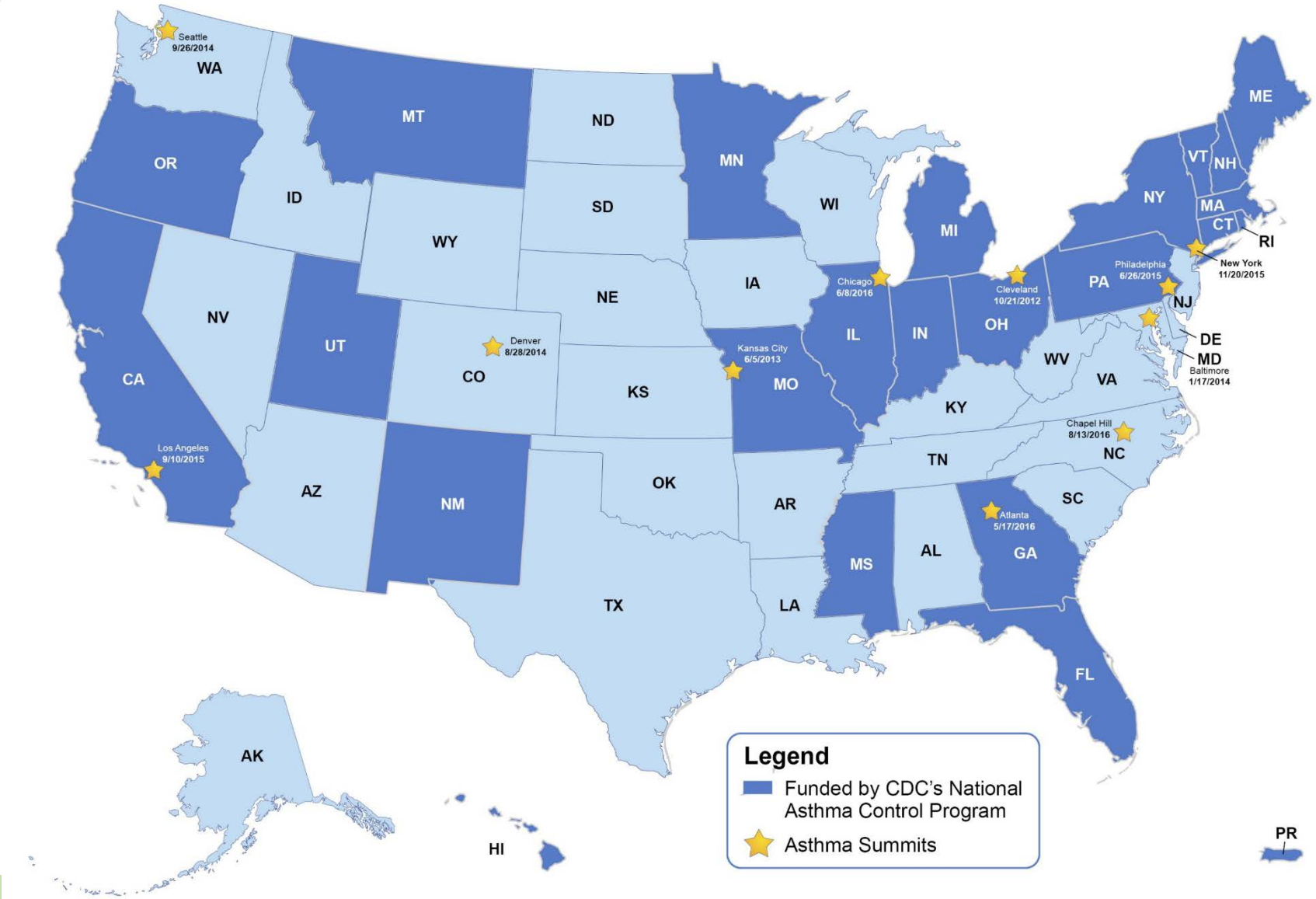
NHLBI

- Award grants to fund and assess community-based, integrated interventions (home, family, medical care, community)

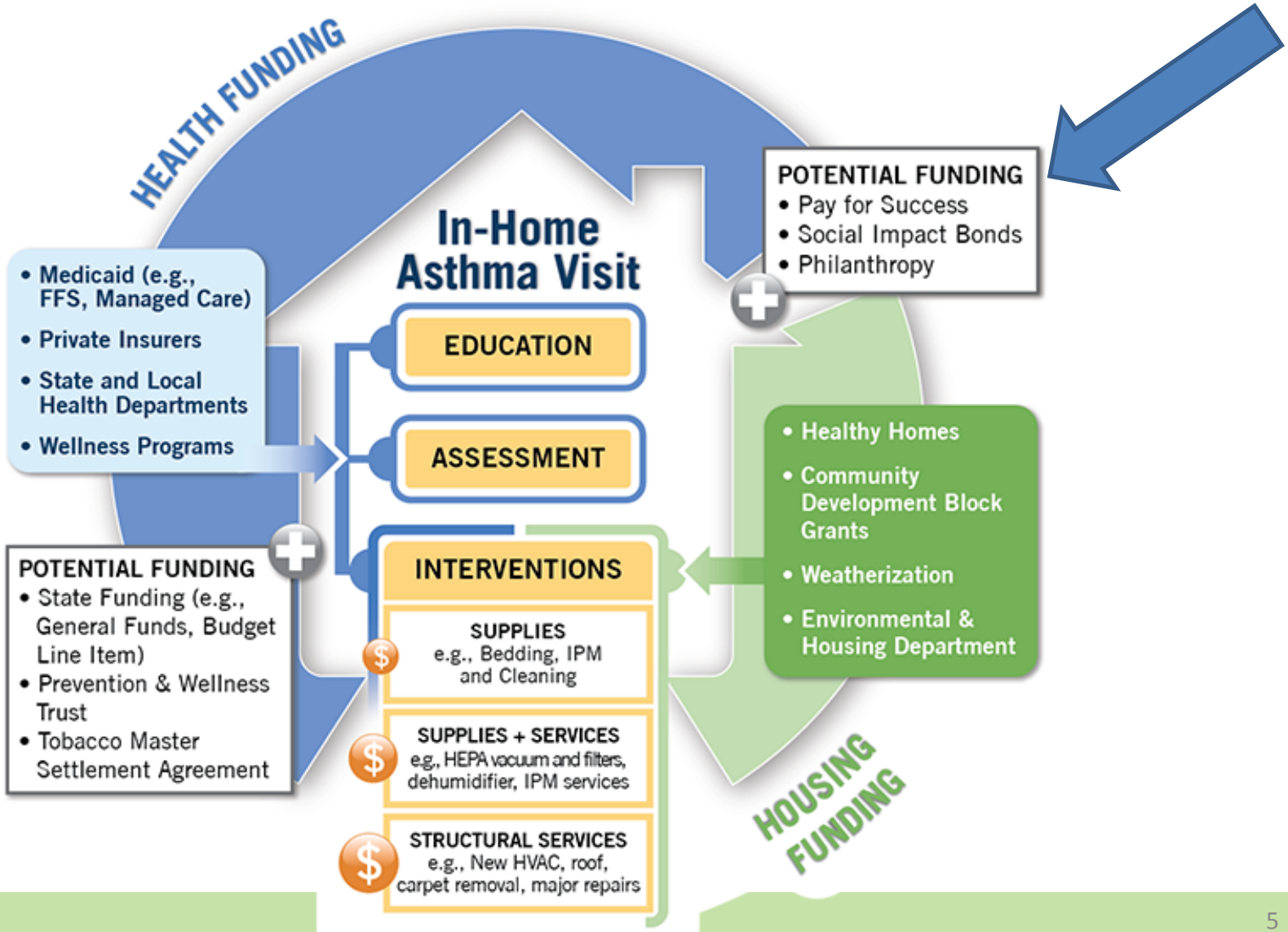
EPA

- Support AsthmaCommunityNetwork.org, a national network of 1000+ community programs
- Recognize best practice approaches through the National Environmental Leadership Awards in Asthma Management for community programs, health care providers and health plans
- Provide technical assistance to support communities and health payers with sustainable financing through cooperative agreements with the National Center for Healthy Housing and America's Health Insurance Plans
- Sponsor asthma summits

Asthma Summits: Promoting Access and Sustainable Financing



Sustainable Financing Options for In-Home Asthma Care



Definitions

SOCIAL IMPACT BONDS

A Social impact bond, also known as a Social Benefit Bond, is a contract with the public sector in which a commitment is made to pay for improved social outcomes that result in public sector savings. The term was originally coined by Geoff Mulgan, Chief Executive of the Young Foundation

PAY FOR SUCCESS

Pay for Success (PFS) is an approach to contracting that ties payment for service delivery to the achievement of measurable outcomes. The movement towards PFS contracting is a means of ensuring that high-quality, effective social services are working for individuals and communities

In a PFS contract, the payor for outcomes – typically, but not exclusively, government – agrees to provide funding if and when the services delivered achieve a pre-agreed-upon result. Typically, an independent evaluator determines whether the agreed-upon outcomes have been met.

BRENDA YAMASHITA

Alameda County Public Health Department

Asthma Start

Alameda County Public Health Department Asthma Start

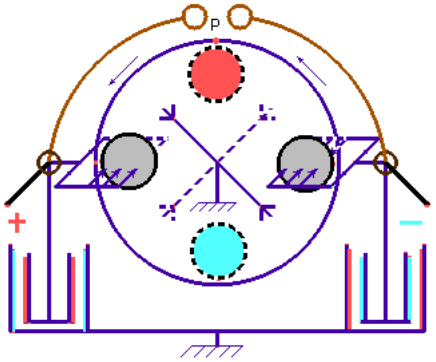
Brenda Rueda-Yamashita

March 28, 2017

Our Start

- Asthma Start Began in 2001
  - Alameda County had the third highest rate of asthma in CA
  - Health Officer committed to a program because of rate
  - First 5 or Every Child Counts was offering funding
  - The program began an in-home case management program using Social Workers
  - Served 0-5 year olds living in Oakland, CA

Original Design



- In home visiting program
- Asthma education
- Address psycho/social issues
- Connect families to services
- Identify triggers in the home
- Work with property owners to make changes
- Insured there is a medical home and insurance
- Collected data

We Grew

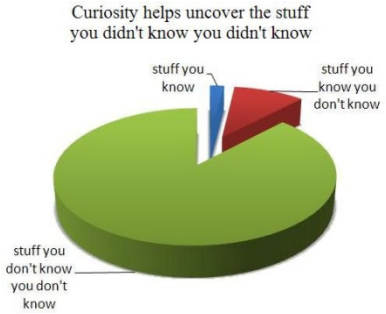
- 2005 began to serve 0-18 year olds
- Expanded to all 14 cities
- Updated our database
- Improved educational materials
- 250 -300 visits per year
- 3 social workers

Pay For Success Design

- 5 social workers
- Expanded partnerships
- Set program eligibility criteria
- Targeted 250 cases
- Updated all educational materials and intake forms
- Added forms (Asthma Control Test, Spare the Air)
- All PFS clients receive the same services
- Speck Meter placed in homes

Our Partners

- Expanded Partnerships
  - Healthy Homes
    - Home inspections and asthma treatments
  - Alameda Alliance for Health
    - Referrals, funding and data (PFS partner)
  - Impact for Health
    - Guidance and coordination
  - UC Berkeley
    - Improve data collection and analysis
  - Actuarial
    - Review and analyze insurance billing and cost information
  - Third Sector Capital
    - Advice on design and attracting investors



Things to Know

- PFS studies cost money
  - Funds for all of the partners
  - Funds to see clients
- Partnerships are vital to complete the picture
  - A PFS partner that agrees to pay for your successes
  - Maintaining your partnerships takes work
- Staff need time to transition
- Not every family wants to participate
- It takes time for the outcomes to be measured

Outcomes

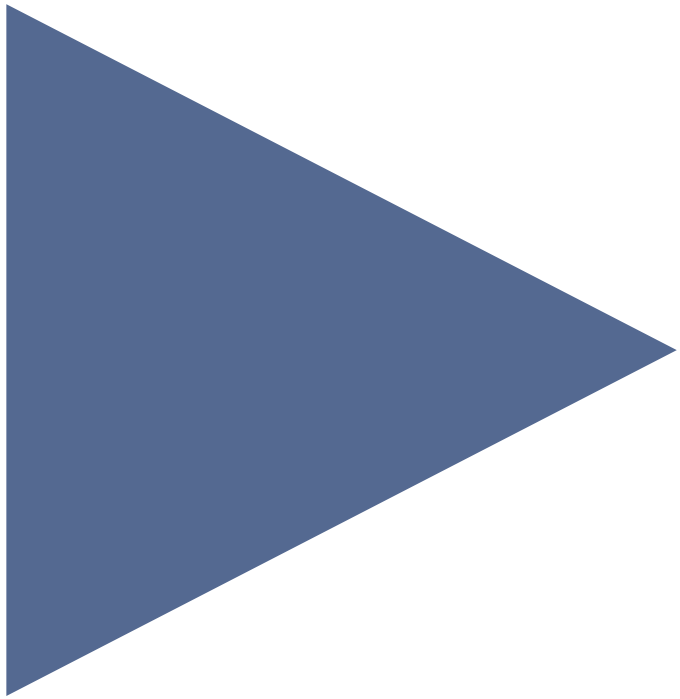
- “Spare the Air Days” is not a concept well know by families where English is not their first language
- Pre and Post tests need to be looked at from a change in knowledge and not the score
- Self report shows a reduction in emergency visit and hospitalizations
- Asthma in Home Treatments are appreciated and gives families a start in maintaining their home
- Success with property owners making changes

KEVIN HAMILTON

Fresno AIM

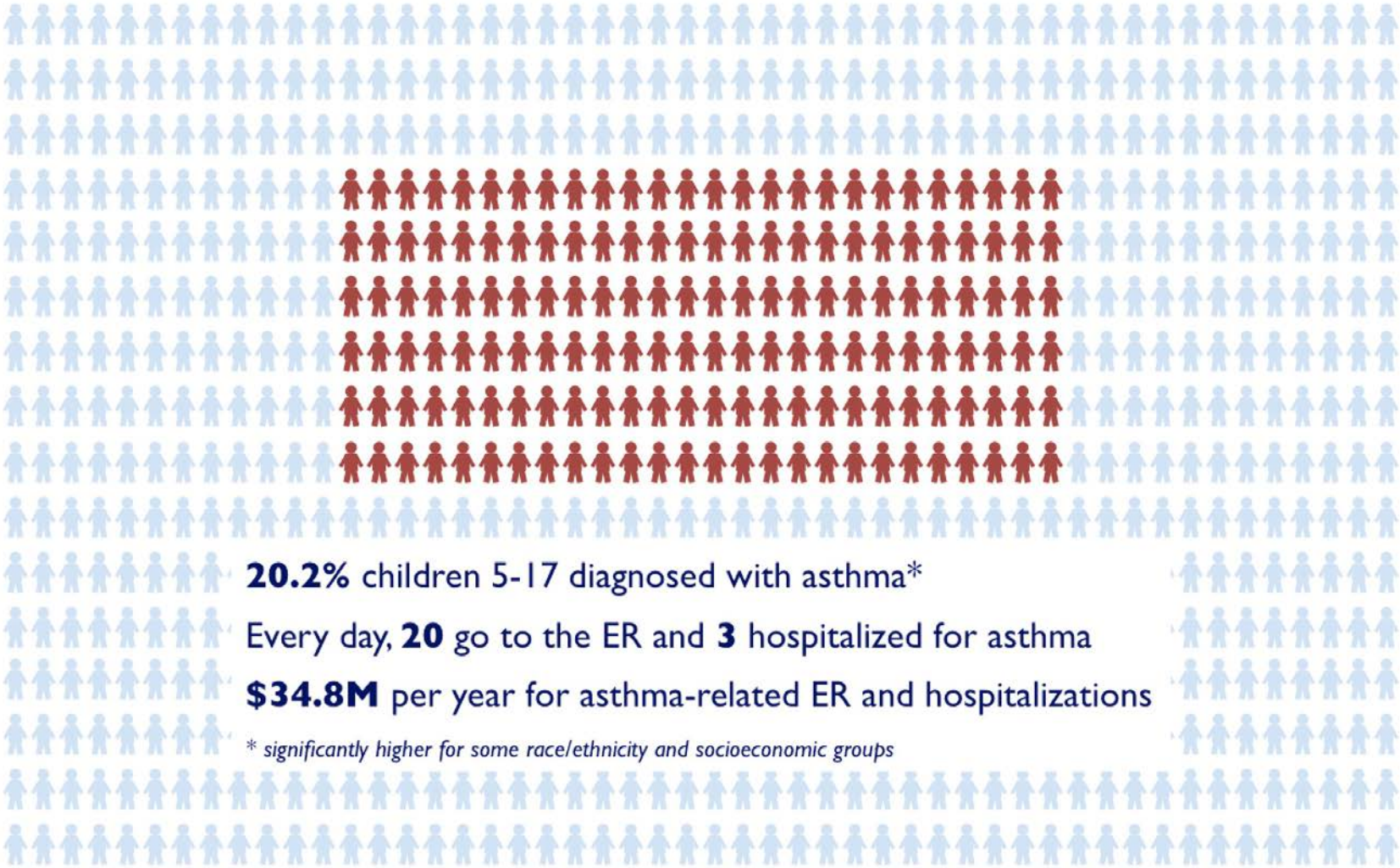
AIM4FRESNO FINAL REPORT

AIM4FRESNO PROJECT OVERVIEW: THE LONG AND WINDING ROAD



ASTHMA: A CRISIS FOR CHILDREN AND COMMUNITIES

Current efforts not sufficient to address asthma emergencies in Fresno County



Office of Statewide Health Planning and Development (OSHPD), 2010.
Hospitalization calculation based on OSHPD 2010 utilization and cost data; emergency services calculation based on OSHPD 2010 utilization data and cost data from Florida Agency for Health Care Administration, February 2009 (2006 data).

STRONG EVIDENCE FOR IN-HOME ASTHMA MANAGEMENT

But is there a business case to support scale-up?

The Guide to Community Preventive Services
THE COMMUNITY GUIDE
What Works to Promote Health
Community Preventive Services Task Force

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

PEDIATRICS

Published online February 20, 2012
Pediatrics Vol. 129 No. 3 March 1, 2012
pp. 465 -472
(doi: 10.1542/peds.2010-3472)

Article

Community Asthma Initiative: Evaluation of a Quality Improvement Program for Comprehensive Asthma Care

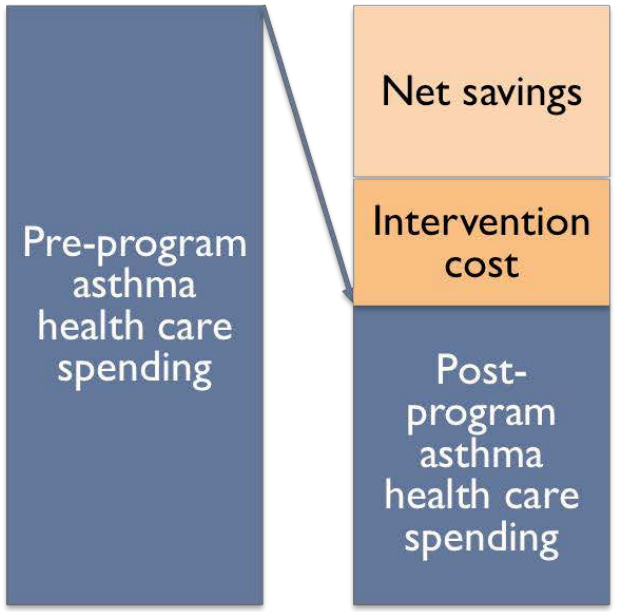
Elizabeth R. Woods, MD, MPH[a], Urmi Bhaumik, MBBS, MS, DSc[b], Susan J. Sommer, MSN, RNC, AE-C[c], Sonja I. Ziniel, PhD[d], Alaina J. Kessler, BS[b], Elaine Chan, BA[b], Ronald B. Wilkinson, MA, MS[e], Maria N. Sosma, BS[c], Amy B. Barack, RN, MA, AE-C[b], Elizabeth M. Klements, MS, FNP-BC, AE-C[f], Lisa M. Queenie, BA[b,g], Deborah U. Dickerson, BA[b], and Shari Nethersole, MD[b,h]

Self-report 12-month data show a **significant decrease** in any (≥1) **asthma ED visits (68%)** and **hospitalizations (84.8%)**.

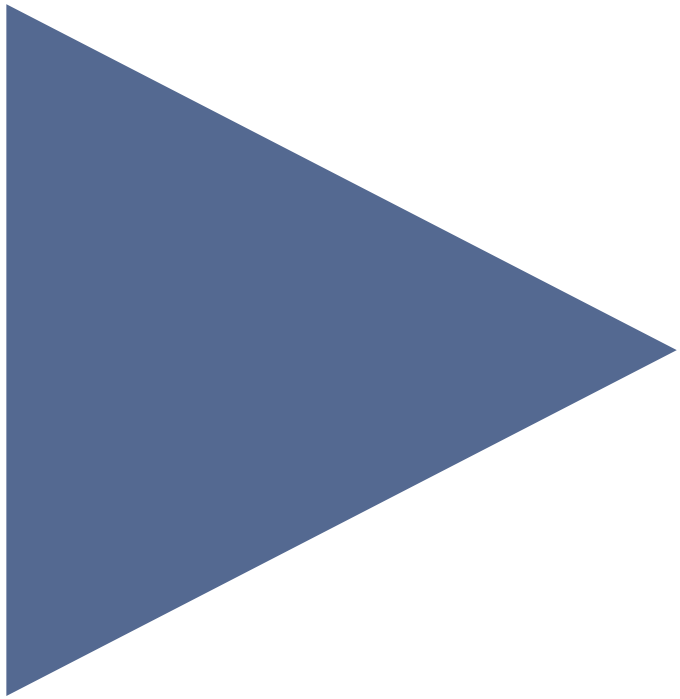
http://pediatrics.aappublications.org/content/129/3/465.abstract

The Atlantic

Getting Private Investors to Fund Public-Health Projects



PROGRAMMATIC RESULTS



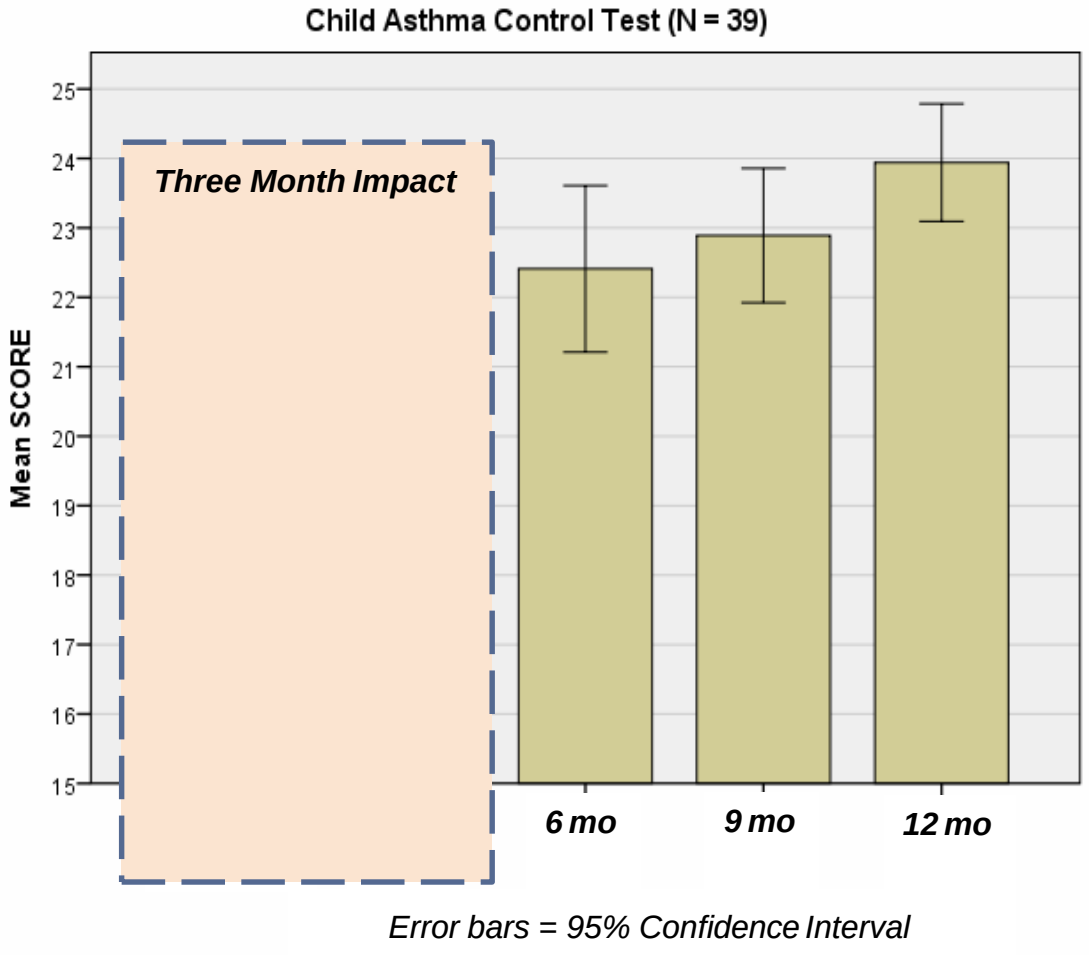
BASELINE CHARACTERISTICS FOR TREATMENT & CONTROL GROUPS

BASELINE	Sex	Mean Age	Total HC Costs* PMPM	Inpatient Costs* PMPM	Drug Costs* PMPM	Asthma Inpatient Admits* / 1,000/year	Asthma ED Visits** / 1,000/year	Mean Risk Score
Total Treatment Group	Males:50 Females: 36	9.23	$1,967.29	$1,699.13	$35.32	145.2	34.4	2.93
Treatment Group Participating	Males: 18 Females:19	9.44	$3,165.38	$2,771.74	$62.22	204.8	108.1	3.73
Treatment Group Non-participating	Males: 32 Females: 17	9.07	$1,080.70	$905.39	$15.41	101.1	0	2.34
Control Group	Males: 52 Females: 35	8.89	$567.39	$456.13	$7.26	116.2	8.6	1.84

*Baseline total health care and inpatient costs per member per month (PMPM) exclude non-asthma inpatient claims; drug costs include all conditions.
**Inpatient admits and emergency department (ED) visits shown here are asthma-only.

TREATMENT GROUP IMPACTS: ASTHMA MANAGEMENT AND CONTROL

Survey data collected by CCAC indicates the program significantly improved the rate at which participants felt asthma conditions were controlled.



Background

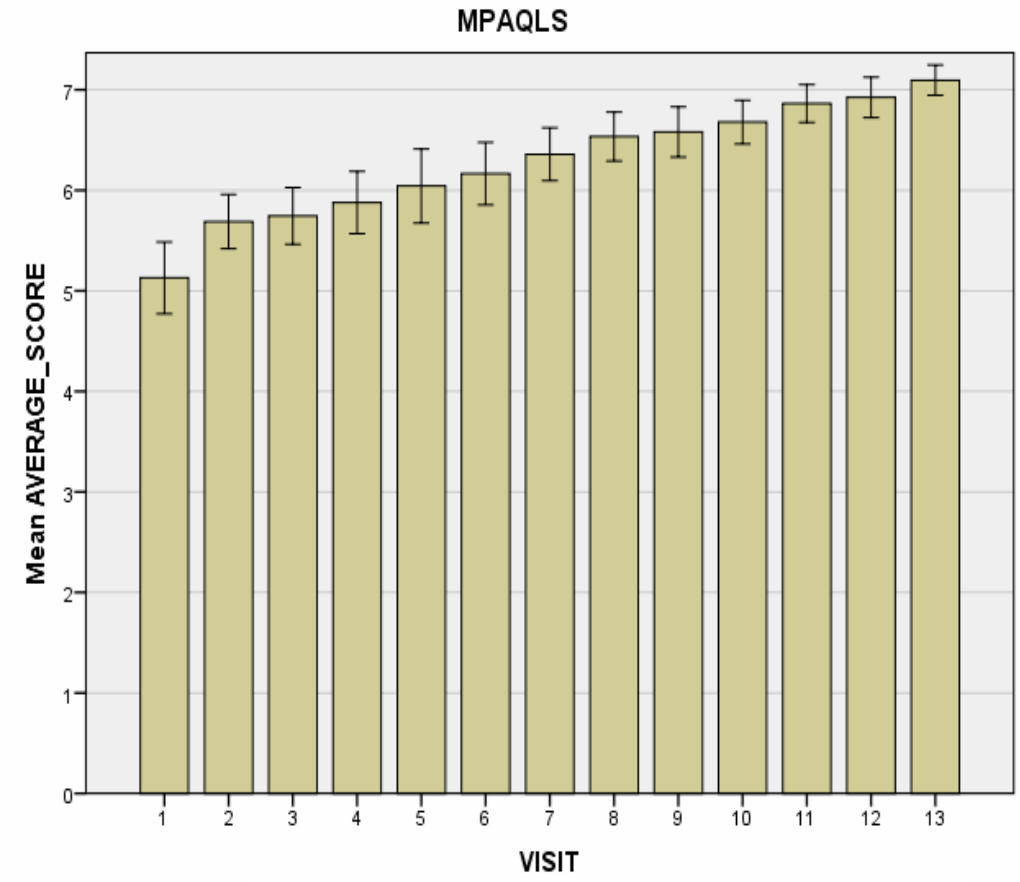
- 5 question self-administered test to determine if asthma is controlled
- Test measures symptoms and daily functioning
- Score below 19 indicates poorly controlled asthma
- Recognized by the National Institute of Health

AIM4Fresno Results

- At baseline, mean ACT scores for participants was ~19, which is the cut-off between poor and well-controlled asthma
- **Mean improvement in ACT score from baseline and 3 month follow-up is statistically significant** *(shaded box in chart)*
- Upward trend in mean ACT score improvement from 3 months to 12 month follow-up

TREATMENT GROUP IMPACTS: QUALITY OF LIFE

CCAC patients reported positive impact on asthma symptoms, activity limitation and emotional function



Error bars = 95% Confidence Interval

Background

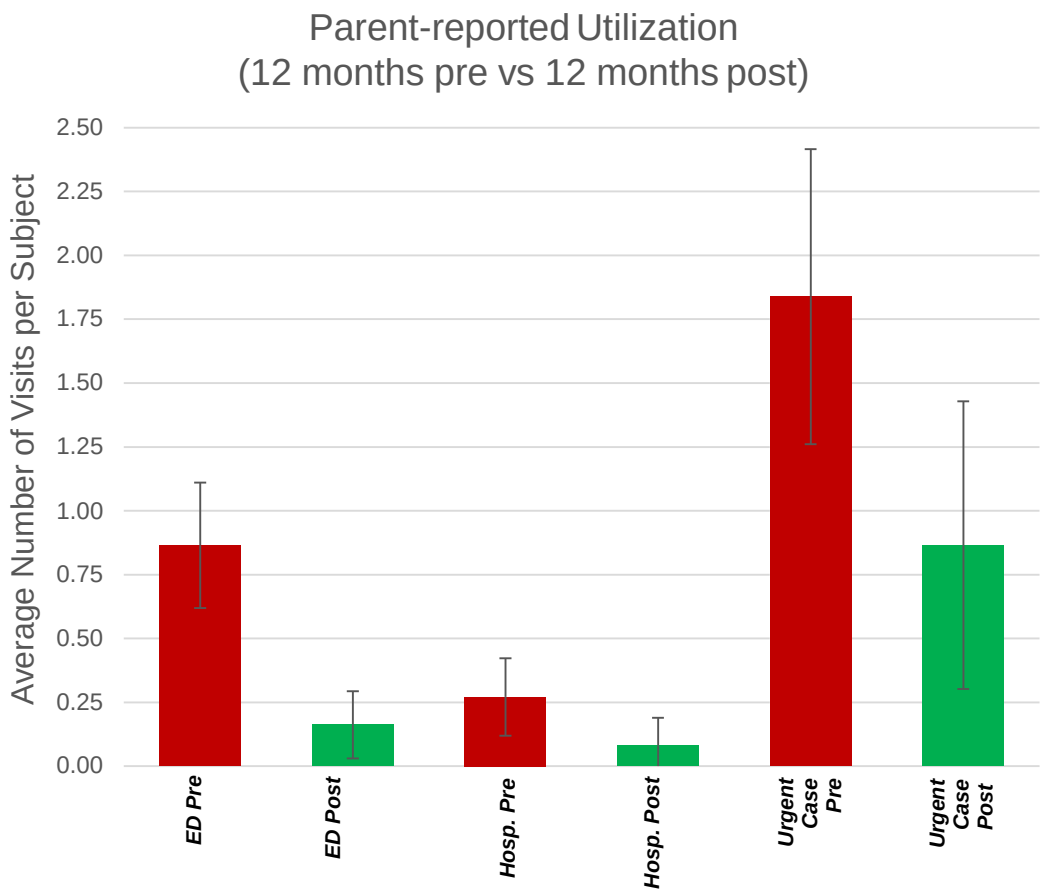
- Mini Pediatric Asthma Quality of Life Survey
- 13 question survey developed to measure the physical, emotional, and social problems for children with asthma
- Validated by National Institute of Health

AIM4Fresno Results

- **Mean improvement in MPAQLS score from baseline to the 3rd visit is statistically significant**
- Upward trend MPAQLS score improvement from baseline visit to last visit

TREATMENT GROUP IMPACTS: REDUCED HEALTH CARE UTILIZATION (SELF-REPORT)

CCAC patients reported lower rates of emergency department, inpatient and urgent care visits in the 12 months after the program relative to 12 months prior to the program



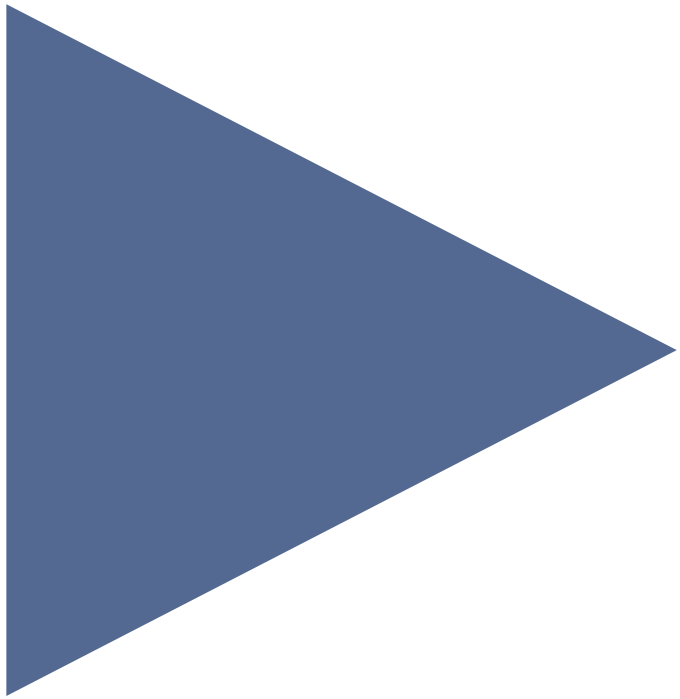
Background

- During the first meeting, CCAC collects self-reported asthma-related health care utilization for the previous 12 months
- CCAC surveys participants every month regarding their asthma-related health care utilization

AIM4Fresno Results (SELF-REPORTED)

- Asthma-related hospitalizations decreased by 70%
- Asthma-related ED usage decreased by 81%
- Asthma-related outpatient visits decreased by 53%

PROGRAMMATIC COST ANALYSIS



THE COST OF DELIVERING IN-HOME ASTHMA MANAGEMENT PROGRAM

	Original Budget	Actual Budget	CCAC Time Study
Personnel Costs	$288,618	$288,618	$19,499
Home Remediation Costs	$113,627	$39,248	$11,655
Total Service Delivery Costs	***$402,245***	***$327,867***	***$31,154***
Number of Cases	200	37	37
Personnel Cost per Case	$1,443	$7,800	$527
Home Remediation Cost per Case	$568	$1,061	$315
Total Service Delivery Cost per Case	***$2,011***	***$8,861***	***$842***

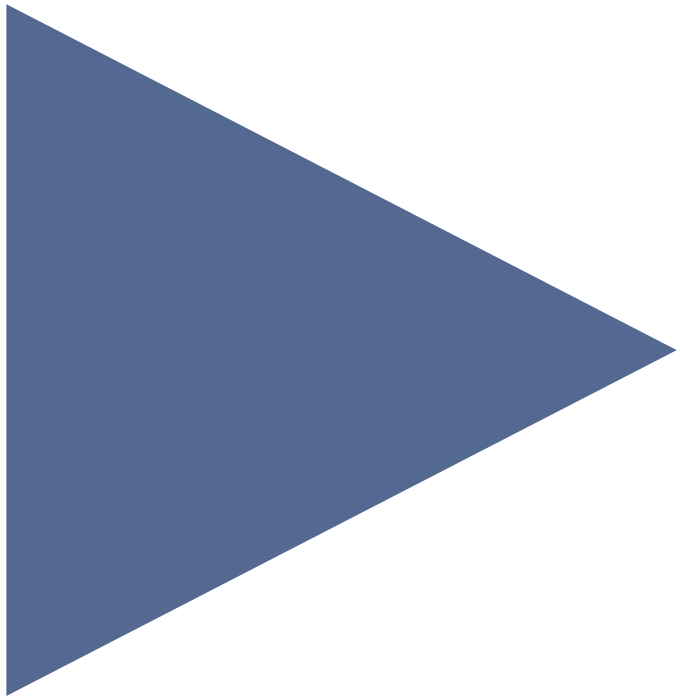
Budget Notes:

- The discrepancy between the Original Budget and the Actual Budget is largely twofold: 1) the fixed costs of maintaining asthma management staff in the midst of lower-than-expected enrollment, and 2) the prolonged delay in obtaining eligibility data impacted staff and service delivery costs.

CCAC Time Study Methodology

- Time study measured the actual staff time and home remediation supplies associated with each of the 37 participants; representing steady-state projection of service delivery costs.
- On average, 12.4 hours of staff time were associated with each case (includes initial visits, follow-up visits and calls, and drive times.

EVALUATION RESULTS AND COST-BENEFIT ANALYSIS



COST-BENEFIT ANALYSIS

ROI of $3.63:1 (based on program costs from CCAC time study)

	Per Person	37 Participants
Health Care Savings (24 months)	$3,056	$113,075
Intervention Costs	$842	$31,175
Net Savings	***$2,214***	***$81,900***

Return on Investment (ROI)

Health Care Savings / Program Cost
$113,056 / $31,175

ROI = $3.63 : $1

Considerations:

- As noted, this includes health care savings only; a more robust benefit estimate may be expanded to include ancillary value generated by the program—such as averted school absenteeism and increased parent productivity.

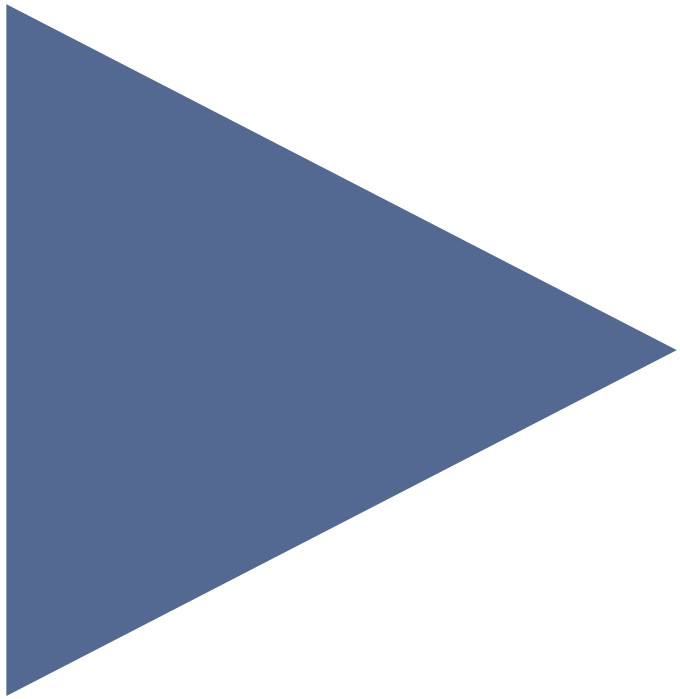
OTHER OUTCOMES

While program shows positive overall savings impact and cost-benefit, there were mixed results on specific utilization and cost measures.

Outcome	Treatment-Participating			Control		
	Pre	Post	Change	Pre	Post	Change
Asthma ED Visits/Thousand/Year	108.1	81.1	(25%)	8.6	14.2	64.6%
Asthma Inpatient Admits/Thousand/Year	204.8	221.9	8%	116.2	87.1	(25%)
Asthma Inpatient Costs PMPM	$2,771.74	$1,081.05	(61%)	$456.13	$192.44	(58%)
Drug Costs PMPM—*all conditions*	$62.22	$124.98	101%	$7.26	$30.5	314%

- Treatment-participating had 25% reduction in asthma ED visits vs. 64.6% increase in Control group.
- Treatment-participating had 8% increase in number of asthma inpatient admits vs. 25% decrease in Control group.
- However, asthma inpatient costs PMPM declined 61% in the Treatment-participating group, which was slightly better than in the Control group.
- Increased total drug costs may indicate greater compliance.
- As noted, results impacted by the small sample size of program participants and the volatility of these utilization areas.

LEARNINGS



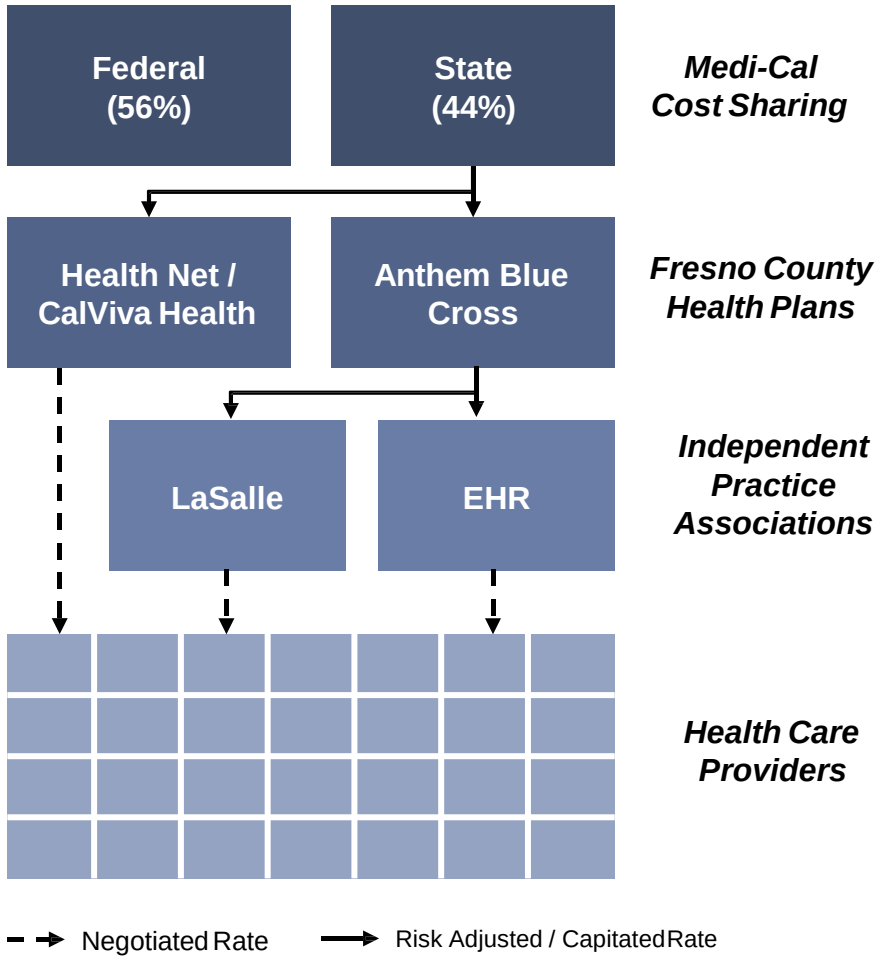
WHAT WE'VE LEARNED: FINANCING SYSTEM

Fragmented health care financing and risk sharing complicate scale-up strategy

Insights and Challenges

Medi-Cal has complex payment flows among multiple financial stakeholders; creates dispersion of risk/value

SIB strategy requires payer with significant risk/value or multi-payer approach



WHAT WE'VE LEARNED: HEALTH PLANS

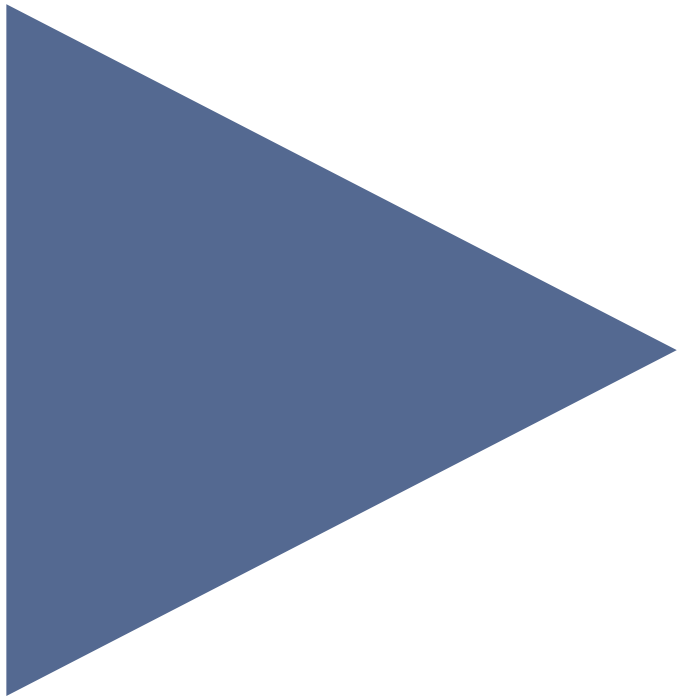
Insights and Challenges	*Lesson Learned*

Sustaining Health Plan engagement proved very challenging for a number of reasons
• *Resource constraint*: Despite offering to compensate both health plans for their time, both health plans indicated they did not have the bandwidth to dedicate FTE resources to the project
• *Low prioritization:* Given the size and magnitude of the project, the health plans could not justify shifting resources and prioritizing the data pulls associated with the project
• *External forces:* The following factors derailed and, ultimately, resulted in the health plans withdrawing support
  • ACA implementation
  • Merger and acquisition
  • Data breach
	1. Generating greater buy-in from health plans
	  • Integrate health plans as core team members
	  • Establish a Memorandum of Understanding clearly outlining each party's commitments
	  • Agree to resource/financial support
	2. Initiate a proof of concept SIB project with a foundation payor
	  • Highlight the impact of the intervention over a short time period
	  • Establish a SIB contract that the health payors could easily adopt

WHAT WE'VE LEARNED: TARGET POPULATION

Insights and Challenges	*Lesson Learned*
Prevalence of uncontrolled asthma lower than anticipated among CHC patients: • Only 20% of 908 CSV Medi-Cal patients with asthma matched our selection criteria	• It will be critical to **access clients via multiple providers and health plans** to help identify sufficient individuals **to scale the project in a cost efficient manner.** • Valley Children's Hospital would be a great partner in Fresno, as they have the highest volume of asthma patients and could be direct referral source into the program
Identifying, reaching, and enrolling hard-to-reach population • Reaching clients from a pre-generated list vs. direct marketing or direct provider referrals compounded the team's ability to reach and enroll members of the treatment group	CCAC implemented two strategies to improve outreach and enrollment 1. **Revamp the program's intake process** to minimize client touch points prior to the first home assessment 2. **Initiated mobile outreach team** to knock on doors of prospective clients

SCALE RECOMMENDATIONS



THREE PATHS TO SCALE IN-HOME ASTHMA MANAGEMENT

These options are not mutually exclusive

1 Direct Investment

- A government or other entity could directly fund in-home asthma management programs given the business case.
- Entities with most benefit to gain from direct investment:
  - Department of Health Care Services (DHCS)
  - Medi-Cal health plans

2 Pay for Success or Performance-Based Contract

- Pay for Success (PFS) of Performance-Based Contracts (PBC) allow back-end payors (e.g., DHCS, health plans) to test the efficacy of in-home asthma management while shifting the financial risk to private investors.
- The PFS sector has evolved significantly since the start of the AIM4Fresno project. There are several active asthma-focused PFS projects being explored.

3 Hybrid (Braided Funding)

- State or the health plans would directly fund in-home asthma education and a PFS/PBC would be established to fund the home remediation cost.
- This option could dovetail nicely with existing efforts to sustainably fund in-home asthma education.

DIRECT INVESTMENT INTO IN-HOME ASTHMA MANAGEMENT

Leverage AIM4Fresno experience in conversations with state and health plans

State Plan Amendment (SPA)

- DHCS is reviewing SPA language that would reimburse non-licensed providers for in-home education and environmental assessment.
- DHCS has requested RAMP to pursue legislation granting DHCS authority to submit SPA to CMS for approval.
- Earliest effective date of new policy: Jan 2018.

CDC 6|18 Initiative

- California Public Health Association – North (CPHA-N) convened stakeholders in July to consider moving forward with in-home asthma management as part of this CDC initiative.
- CA declined to participate in CDC 6|18; no federal or state funding is available.
- CPHA-N sees opportunity to catalyze health plan investment in asthma, tobacco, and diabetes. Funding both asthma education and/or remediation is on the table.

Health Homes Program (HHP)

- CA will soon implement HHP per Section 2703 of the ACA. HHP will serve eligible Medi-Cal beneficiaries with multiple chronic conditions who are frequent utilizers.
- Given the quick realization of cost-savings from asthma home-visiting programs, counties will be incentivized to include them in their HHPs.
- Phased rollout starting in January 2017.

Medi-Cal Health Plans

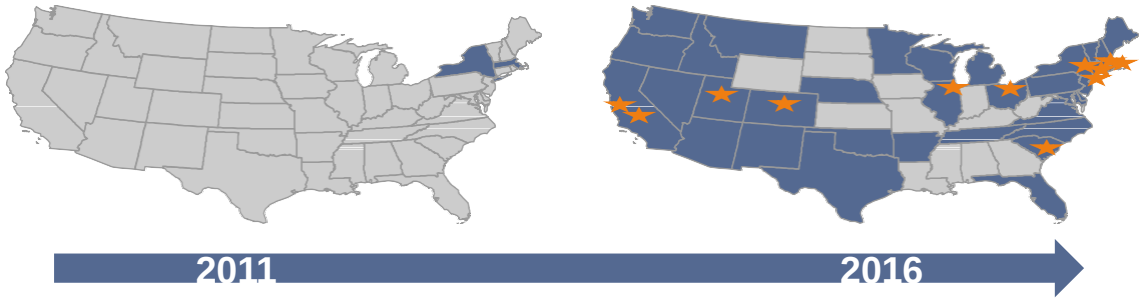
- CCAC is in active discussion with Health Net and Anthem Blue Cross on how in-home asthma management can help the Medi-Cal plans achieve HEDIS quality measures.
- Both of these plans are operating well under the benchmark HEDIS measures; therefore, risk financial penalties.
- This financial penalty may increase health plans appetite for investing in asthma management.

SCALING WITH PAY FOR SUCCESS

The evolution of Pay for Success

More Deals in More Geographies

- In March 2013 when the AIM4Fresno project was launched, only the New York City Rikers Island PFS project was launched
- Today, there are 11 active PFS projects in the market with many more in development
- There is one active PFS project in California (Santa Clara) and a number of projects in development at the County level



Diverse Application of PFS

- The application of PFS varies widely across completed and projects in development, including:
  - issue areas
  - level of evidence-base
  - types of investors
  - evaluation methodology
  - payment terms

SCALING WITH PAY FOR SUCCESS

There is Interest in an asthma-focused PFS Project

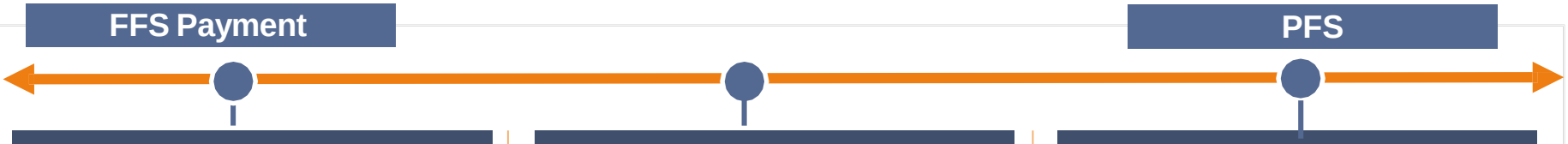
- Green and Healthy Homes Initiative (GHHI) received a federal $1.01M Social Innovation Fund grant to explore PFS feasibility in five sites across the country
- Social Finance is working with GHHI to develop a PFS project in Baltimore, potentially partnering with a health plan as the payer
- Alameda is exploring PFS for an in-home asthma management project

How can this translate into opportunities in California?

	Opportunities	Challenges
Payors	• DHCS is actively reviewing SPA language to fund in-home asthma education. PFS could complement or be a back-up option • PFS offers is a risk-free way for health plans to test if investments in in-home asthma management will yield better HEDIS measures	• Perceived complexity of PFS may be a barriers • Setting aside budget funding for PFS may be difficult in this budget environment • Complicated healthcare financing will likely require Payors to pay for non-fiscal benefits
PFS Investors	• There is investor appetite to invest in health; specifically focused on social determinants of health	• Given small sample size, AIM4Fresno findings unlikely to provide PFS investors with more confidence in the impact of in-home asthma management
Scale	• Significant need in Fresno and greater CA	• Identifying an appropriate payor that allows for sufficient scale to make PFS cost-effective • Establishing referral and outreach over large geography

SCALING WITH PERFORMANCE-BASED CONTRACTING

Opportunity to engage health plans in simplified performance-based contract?



Fee-for-service	Partially performance-based	Fully performance-based
Payor pays for the cost of service	*Payor pays for portion of service upfront; remaining portion dependent on performance*	*Payor only pays to the extent that outcomes are achieved*
Pros: No payment risk **Cons:** Government may pay for less than full cost; price unrelated to value; challenging to scale; year-to-year contracting	**Pros:** Limits risk while ensuring government acknowledges value creation **Cons:** Challenging to scale; provider has performance risk; may require working capital financing	**Pros:** Allows provider demonstrate (and recapture) value; enticing to government **Cons:** Complex; may require working capital financing; risky

Contingent renewal

Future contract size based on performance criteria

Pros: Ensures longer-term relationship tied to performance; improves sustainability**;** potentially a viable option for health plans engagement
Cons: Typically challenging to obligate for government (but not necessarily health plans)

HYBRID:
Braiding direct investment with PFS or PBC

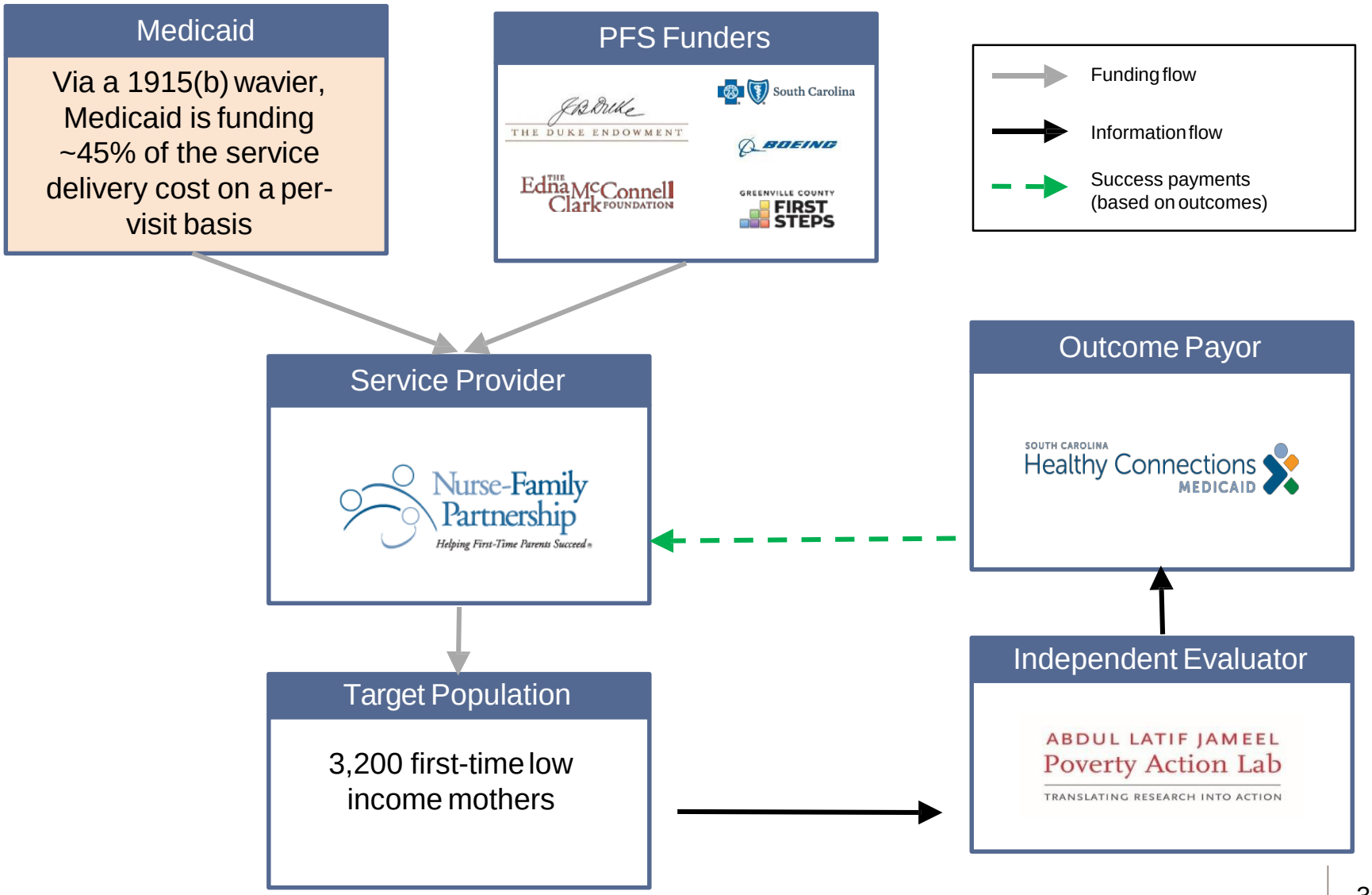
How would a Hybrid Approach Work?

1. State or health plan directly invests in in-home education and home assessment with their budget
2. State or health plan executes a PFS / PBC contract that
   - Leverages private capital to fund upfront cost of home remediation
   - Requires State or health plan to repay private investors if positive outcomes are achieved. State or health plan payments would account for their investment

	Opportunities	Challenges
Payors	• DHCS is actively reviewing SPA language to fund in-home asthma education • Health plans direct investments in in-home education would likely count towards medical expenses for medical loss ratio requirements • PFS/PBC provides an opportunity to fund home remediation while transferring financial risk	• Perceived complexity of PFS may still be a barrier • Setting aside budget funding for PFS may be difficult in this budget environment • Health plans repayments on PFS or PBC may count as administrative expenses for medical loss ratio
PFS Investors	• There is investor appetite to invest in health; specifically focused on social determinants of health	• Given small sample size, AIM4Fresno findings unlikely to provide PFS investors with more confidence in the impact of in-home asthma management
Scale	• Allows for greater scale as investment dollars can be focused on home remediation • Lower nominal cost of capital for government / health plan payments	

SOUTH CAROLINA NURSE-FAMILY PARTNERSHIP PROJECT

An example of the hybrid approach in practice



QUESTIONS & ANSWERS

THANK YOU!!!

Please join us for our next CAF Working Call:

April 26, 2017 @ 11 AM