



Alameda County Public Health Department
Celebrating Healthy People in Healthy Communities

ALAMEDA COUNTY PFS ASTHMA INITIATIVE



The Burden of Asthma in Alameda County

- Average cost of pediatric hospitalization: **\$16,545**
 - Average cost of ED visit: **\$3,500**
 - Average cost of EMS Response: **\$2,944**
 - **17%** of Oakland's school children diagnosed with Asthma were chronically absent—missing 10% of the school year and reducing Average Daily Attendance (ADA) by **\$894 per student**
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Asthma Impacts Quality of Life

Jenny

8 years old
(Only child in
family of 3
adults)



Impact of Asthma:

7-day overnight hospital stay. Mother was not giving controller medication because she did not understand the concept of preventative medication. Symptomatic twice a week.

Environmental Triggers:

Raw sewer smell, mold in bathroom, leak under kitchen sink, household clutter, smoking by adults in home

Ryan

2 years old (1
of 5 children in
family of 2
adults)



Impact of Asthma:

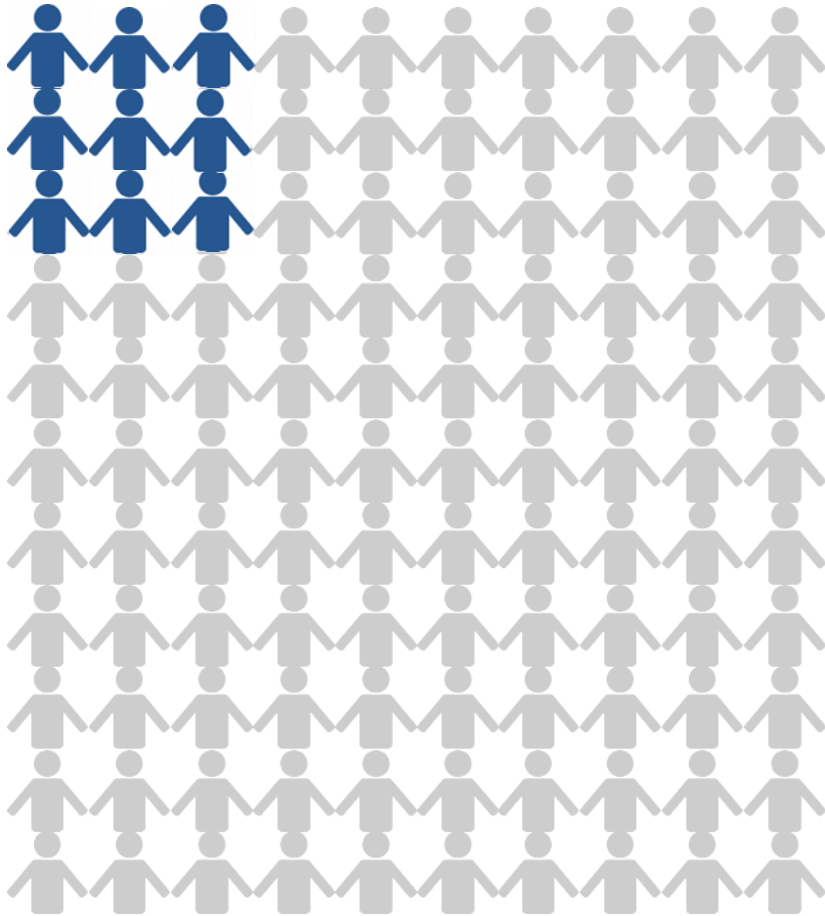
15-day overnight hospital stay, Mother was not priming inhalers, did not know how to use inhaler with spacer and was not administering QVAR.

Environmental Triggers:

Mold on walls, cockroach infestation, inadequate heat, lead in bedroom, deteriorated paint, use of harmful pesticides

*Note: Examples drawn from real Healthy Homes Program anecdotal evidence. Photographs are fictional

The Alameda Asthma PFS can address unmet needs for Asthma Management



Out of 2,952 children with Asthma ED Visits in Alameda (2012), Asthma Start and Healthy Homes currently have the capacity to treat ≈ 9%

Children Referred to Asthma Start

District	Number of Cases
1 (Scott Haggerty)	14
2 (Richard Valle)	86
3 (Wilma Chan)	252
4 (Nate Miley)	296
5 (Keith Carson)	191

Since November 2014 there have been 839 referrals of children who had visited the Emergency Department. These referrals came from Alameda Alliance for Health

839 Referrals x \$3500 per ED Visit = \$2,936,500



Two Existing Interventions

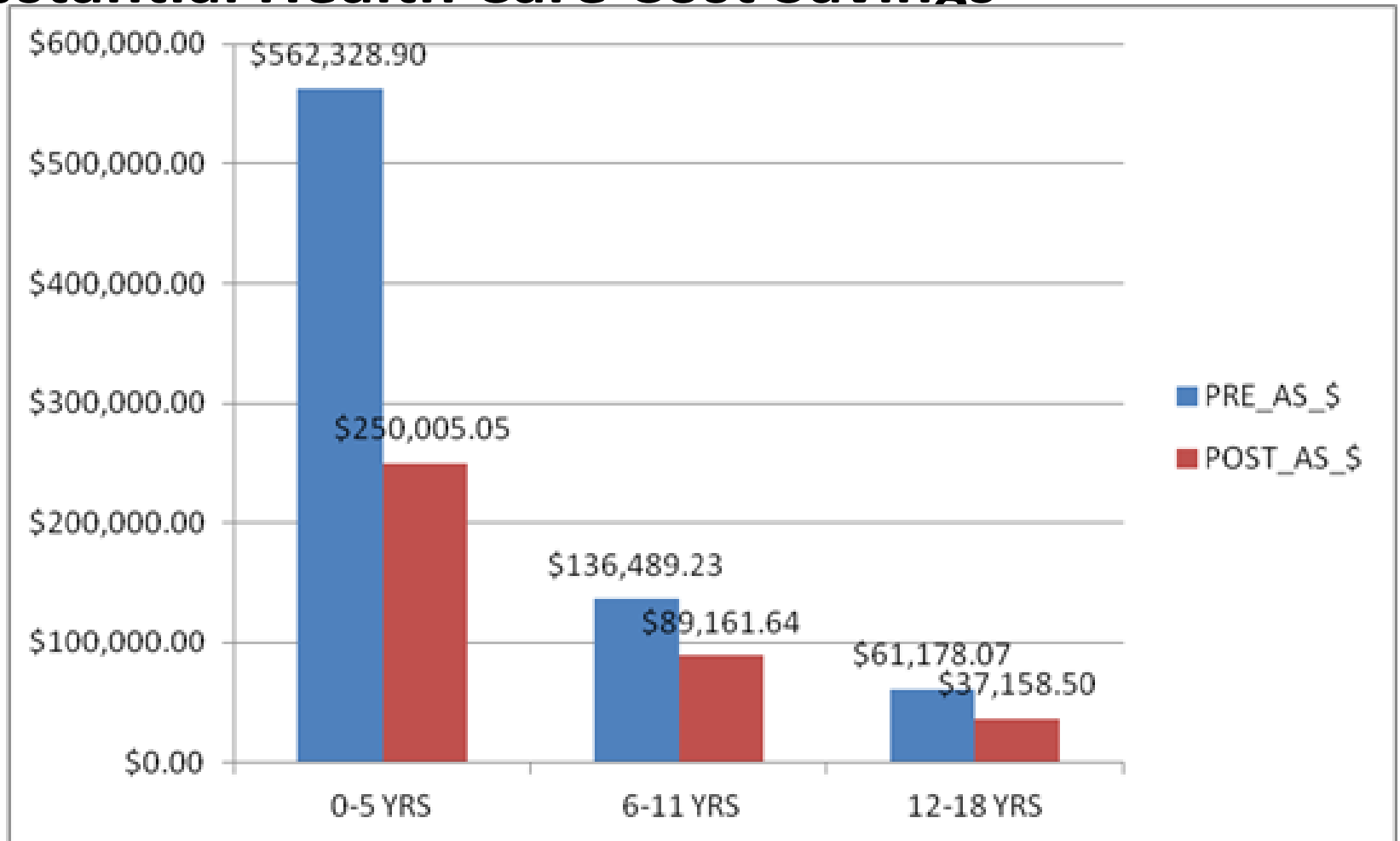
Asthma START

- 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

- Healthy home visual assessment
 - Conduct occupant health and housing education
 - Conduct environmental treatment
 - Removal of known asthma triggers and address safety issues
 - Provide technical assistance to property owner and coordinate with Code Enforcement as necessary
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Preliminary Data Suggests Substantial Health Care Cost Savings

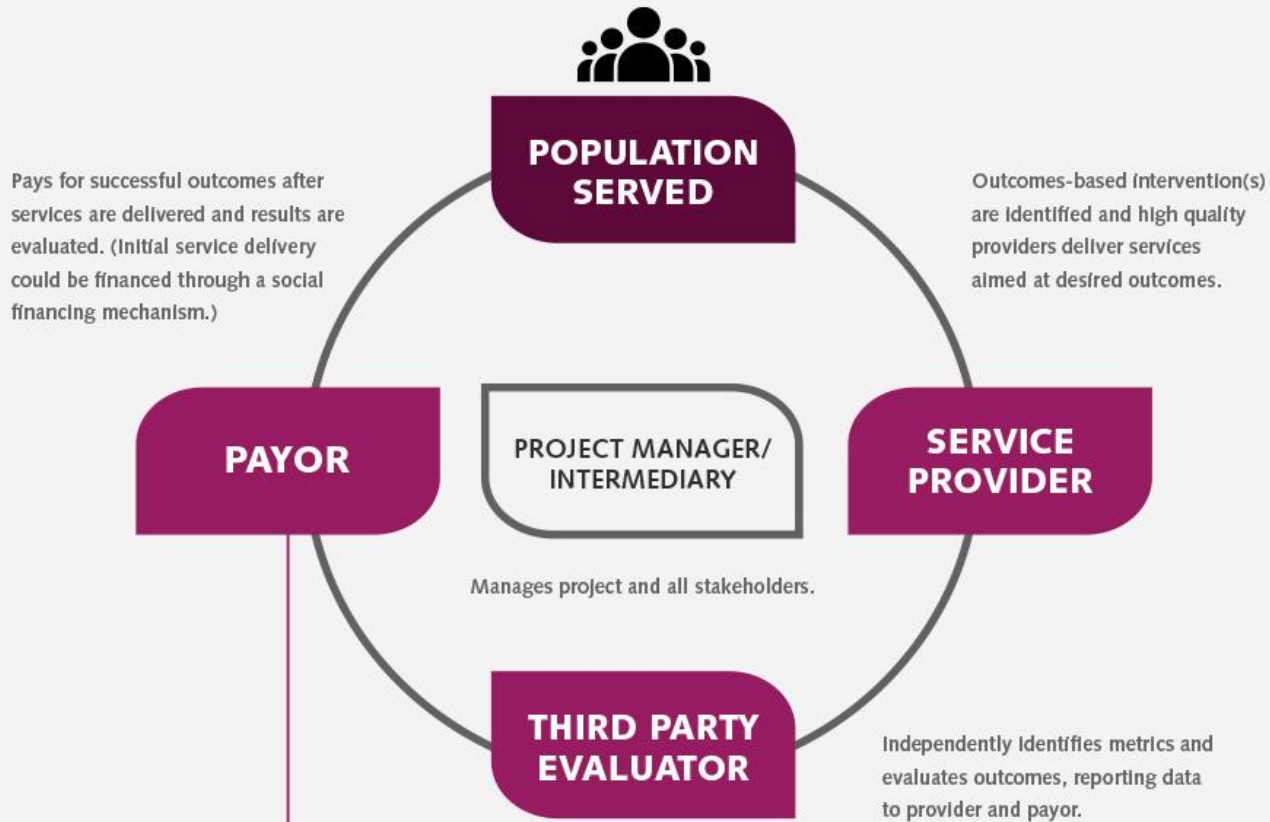


There was as much as a 56% difference in cost of care for pediatric patients (0 – 5 yrs) at Alameda Alliance during the 12 months after receiving Asthma START services.

SOURCE: Actuarial analysis on Alameda Alliance cost of care for children with and without Asthma Start and Healthy Homes

PAY FOR SUCCESS

Target population and desired outcomes are clearly identified.



TYPES OF PAYORS



GOVERNMENT



**PRIVATE INVESTORS/
PHILANTHROPY**

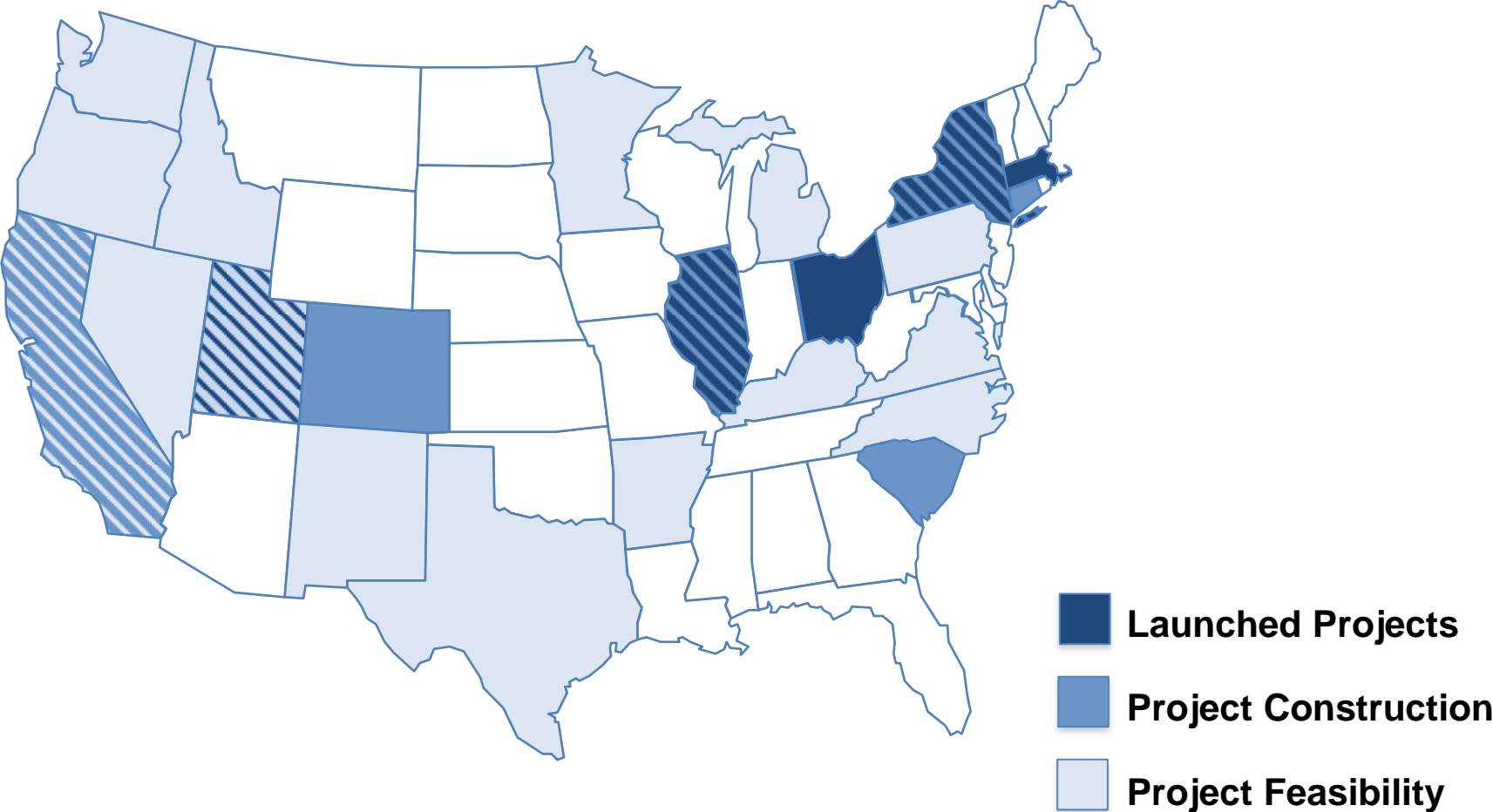


**FINANCIAL INSTITUTIONS/
CDFIs**



PRIVATE ENTITIES

PFS Momentum Across the Country



Roles of Key Agencies and Organizations

Alameda County Health Services Agency, Project Oversight

Alameda County Healthy Homes Department

- Project Management
- Intervention Implementation

Alameda County Public Health Department

- 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

Turner Consulting and Actuarial Services, LLC

- Review patient utilization data

Third Sector Capital Partners

- Ensure project readiness and optimal design for PFS
- Guide preparation for securing private investors in Phase 2, if appropriate

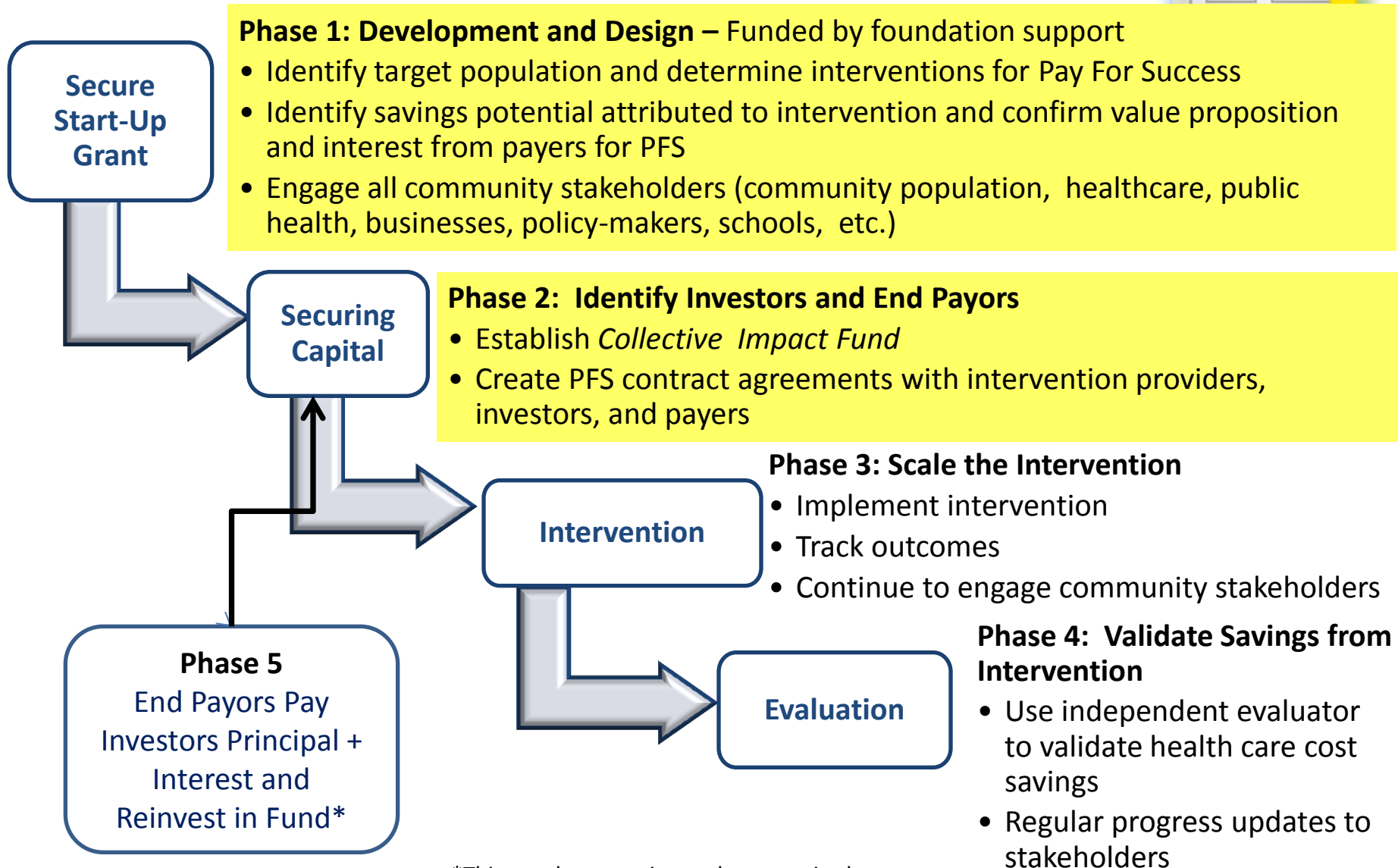
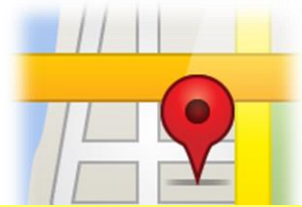
UC Berkeley School of Public Health, Health Research for Action Center

- Review intervention design
- Evaluate results

Impact4Health, LLC

Project Facilitation, Coordination & Technical Support

We Are Here



*This may be an option and not required

Financing a PFS Pilot Program for Alameda County

Program Steps – at no Additional Cost to County

1 Current Stage

- * Complete final feasibility items
- * Formalize Alliance arrangement & finalize data measurement

Result: Program Pilot Launch

Cost to County

\$0 (Grant \$ in hand)

2 Pilot

- * Help 100s of low-income County residents over 1 year

Result: Validate Alliance's savings to fund on-going & scale; Pay for Success covers any gap funds

Cost to County

One time \$1 mil allocated

3 Ongoing

- * Alliance savings covers program costs
- * Cost savings for other County agencies

Result: Other providers join; sustainable scaling

Cost to County

NONE. Covered by Alliance / other providers

Project Activity Completed To Date

Impact4Health Project Management and Oversight

Coordinated Program Alignment

Inform and align Asthma Start and Healthy Homes for a PFS Project Initiative

Initial Grant Development

Secured Grants from California Healthcare Foundation, and US HUD

Coordination of Evaluation Team

Aligned UC Berkeley and Turner Actuarial Consulting on PFS Evaluation Design Requirements

Next Steps Project Work Plan

Coordinate tactical project launch plan and oversight for Community Stakeholder Engagement Advisory Group

Project Activity Completed To Date

Third Sector Capital Partners PFS Feasibility Assessment

Preliminary Economic Model

Initial working economic model capturing PFS costs and savings

Value Proposition

Pitch deck on value of PFS project for stakeholders and investors

Project Summary



Secured grant from Nonprofit Finance Fund for PFS Feasibility Stage II

Next Steps Project Work Plan

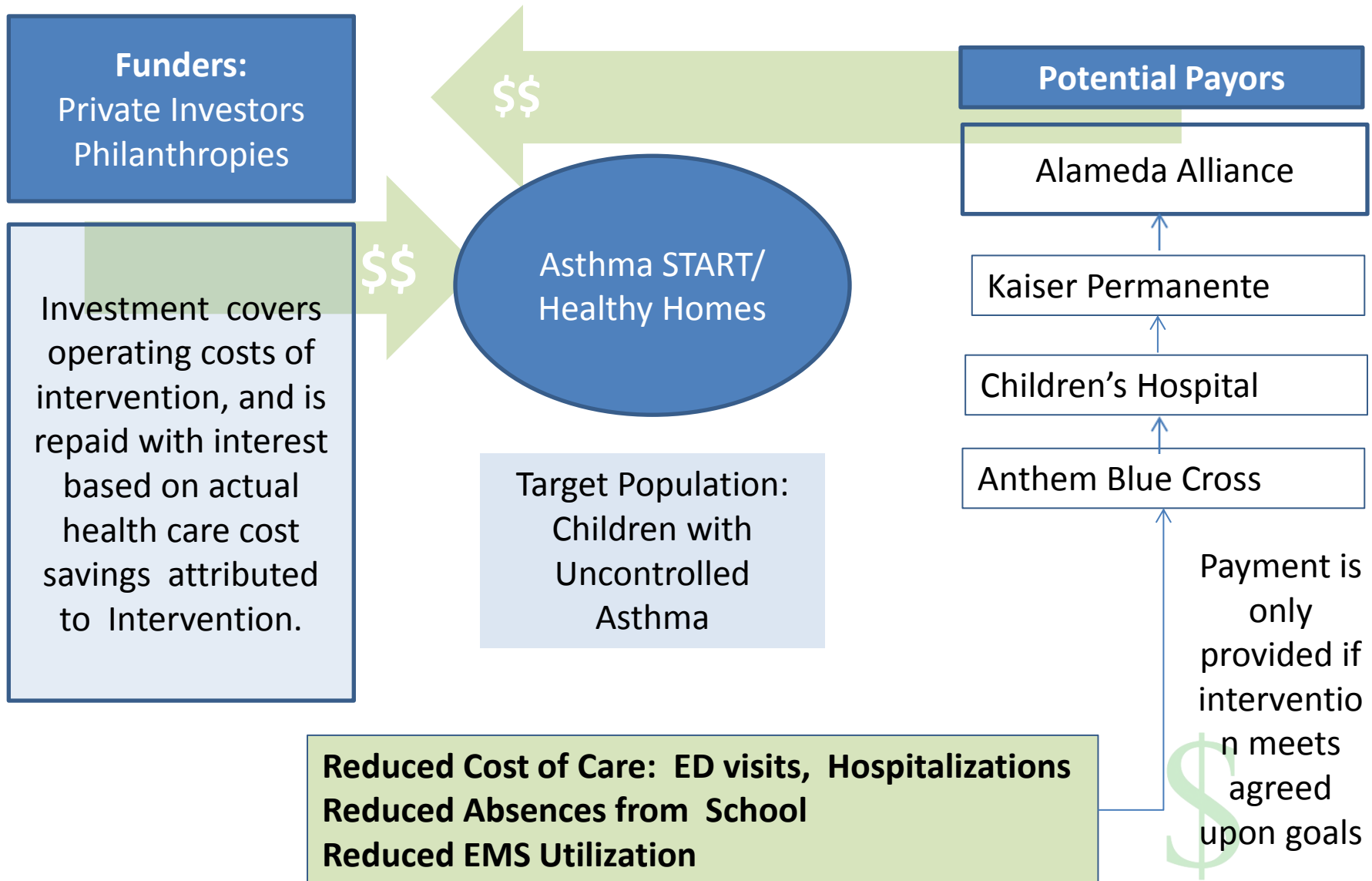
Work plan of key requirements for financing

Nonprofit Finance Fund's CA PFS Initiative Grant: Next Steps in Feasibility

In August 2015, Alameda County received \$300,575 from the Nonprofit Finance Fund through the CA PFS Initiative to support the completion of discrete feasibility deliverables required to potentially advance to transaction structuring and project launch activities.

<p>Goal 1: Complete detailed population and intervention assessment</p>	<p>Goal 2: Create evaluation plan and data collection processes</p>	<p>Goal 3: Complete external stakeholder engagement and PFS project summary for potential end payer</p>	
	<ul style="list-style-type: none"> • Complete intervention and pilot design 	<ul style="list-style-type: none"> • Finalized evaluation plan • Collaboration with evaluator and actuary to complete evaluation plan 	<ul style="list-style-type: none"> • Implementation of intervention and evaluation stakeholder outreach plans • Completion of additional letters/agreements
	<ul style="list-style-type: none"> • Target population overview • Preliminary economic model 	<ul style="list-style-type: none"> • Ensure evaluation plan generates enough information for funder-facing economic model 	<ul style="list-style-type: none"> • Finalized funder economic model • Design of stakeholder outreach plans for funders • Pitch deck for additional end payers

Alameda County PFS Financial Model



Project Overview

Target population: children living primarily in Oakland, San Leandro, or Hayward aged 0 – 17 who have been hospitalized once in last 3 months

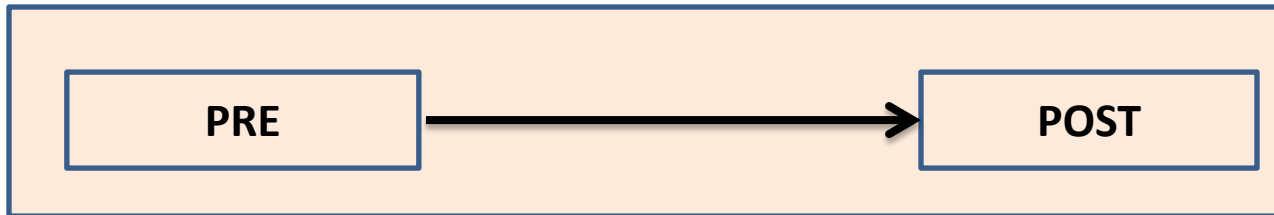
- 200 - 250 households
 - Intervention provided within 30 days (Initial Home Visit)
 - Health and psycho-social assessment
 - Asthma management plan completed
 - Housing assessment
 - Intervention provided within 60 days or less
 - Environmental treatment housing remediation
 - Day Care or School coordination consultation (if applicable)
 - Four in-home visits by Healthy Homes/ Asthma Start staff
 - Confirm medication compliance
 - Confirm asthma trigger management in place
 - Monthly phone calls
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Evaluation Design

Experimental Group



Control Group



1 year & 6 month
before referral

1 year & 2 year
after referral

Data to Analyze

Utilization and Reimbursement Data

- Pharma
- ED Visits
- Hospitalizations
- Clinic Visits
- EMS

Quality of Life

- Survey
- School Attendance

Housing Conditions

Key Assumptions

Participants and Control Group Share Key Characteristics

Level of intervention needed is correctly assigned to participants

Data on patient access to participating hospitals is consistently available

Intervention is delivered consistently and at cost

Key Data for Our Work

For Cohort and Matched Controls 12 months prior and post intervention

Utilization of Services

- Hospitalization (Days)
- ED visits
- Clinic visits
- Prescription costs
- EMS costs

Hospital Charges & Reimbursement

- Allowed amount for related procedures
- Cost to charge ratios

Quality of Life Measures

- Missed days of school
- Self reported health

Quality of Living Conditions

- Indoor air monitoring scores (Speck Air Sensor)
- Mold, mildew removal

Project Target Outcomes

1. Improve quality of life indicators based on Pediatric Asthma Survey
 2. Reduce Asthma emergency department **visits** 70%
 3. Reduce Asthma related hospitalization **days** 50%
 4. Reduce missed **days** of school by 30%
 5. Improve housing conditions through occupant education and technical assistance
 6. **NO** incremental cost to Alameda County; savings demonstrated to Alliance for continued funding
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Alliance's Savings Fund Program

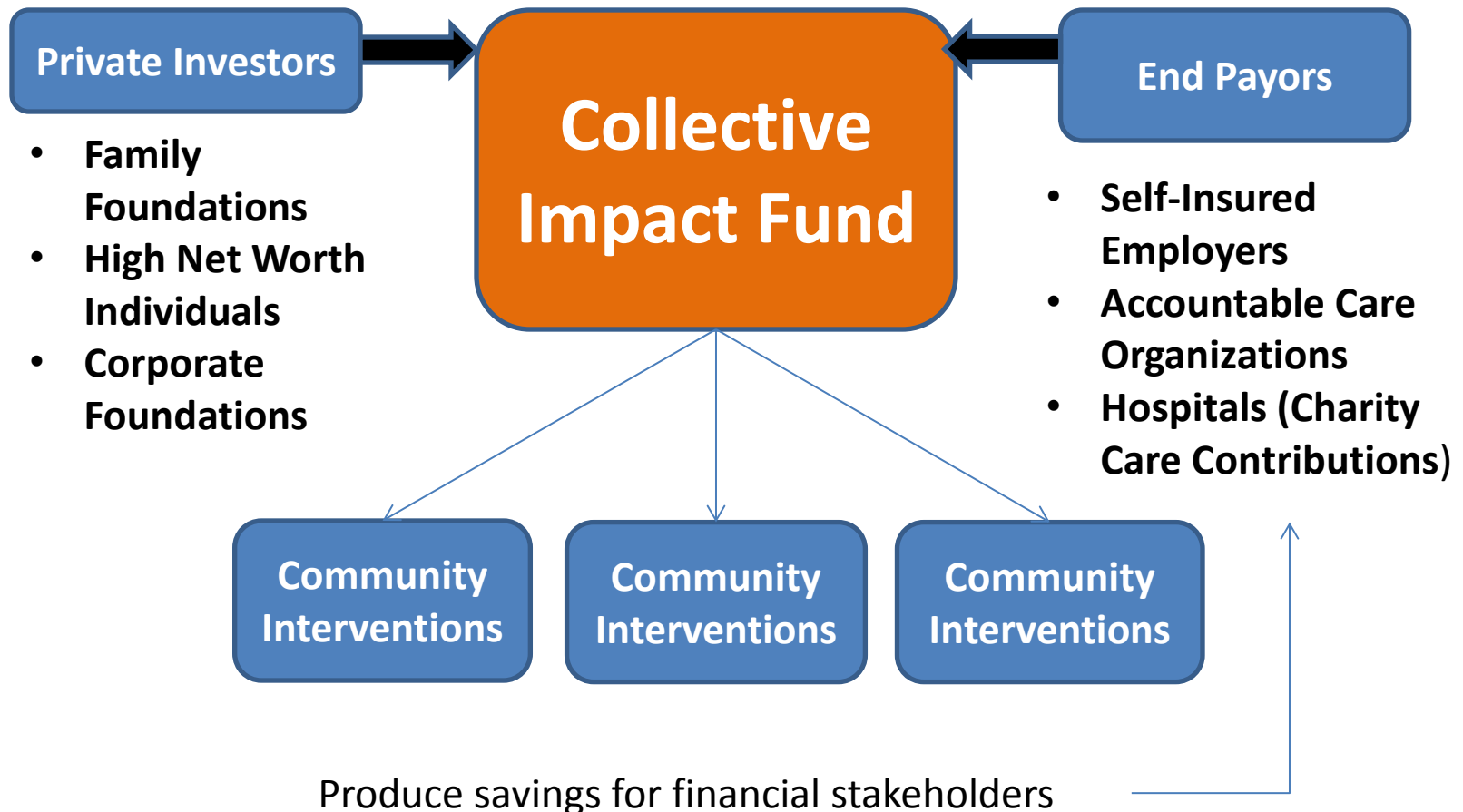
Projections indicate \$ saved by Alliance more than covers program costs – pilot to validate

Pilot to validate costs and savings to Alliance

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

Pilot Project Budget Components	Program costs Per Participant	Average Healthcare Interventions Avoided per Child	Estimated Treatment Costs Avoided	ROI
Intervention and Direct Costs	\$2,562	.46 ED Visits and .23 Hospitalizations	\$8,334	2.3

Alameda County's Funding Strategy



QUESTIONS & COMMENTS
