Telling the Story of Data Driven Impact

July 14, 2017
Transforming a Fractured Service Delivery System
The Burden of Unhealthy and Energy Inefficient Homes

- 30M families live in unhealthy homes
- 14.4M missed days of school each year
- 14.2M missed days of work each year
- $51B+ spent on asthma
- $31B+ spent on slip & fall injuries
- $43B+ spent on lead poisoning
- Over $100B in taxpayer funding is spent each year to address the impact of these hazards

Low income families spend 20% of monthly income on energy costs

VS.

3.5% in other households

Homes with environmental hazards are making their residents sick

Asthma is the top reason students miss school

Collateral burden of sick children is missed days of work for parents and caretakers

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The GHHI Model: No Wrong Door

- **Align**
  - services & funding

- **Braid**
  - relevant resources

- **Coordinate**
  - service delivery

- **Philanthropy**
- **Federal/State/Local**
- **Private Sector**

- **Services & Funding**
  - Single Intake System
  - Comprehensive Assessment
  - Coordinated Services
  - Integrated Interventions
  - Cross-Trained Workers
  - Shared Data

- **Successes**
  - Lead Hazard Reduction
  - Asthma Trigger Control
  - Fall/Injury Prevention
  - Energy Efficiency
  - Weatherization
  - Housing Rehabilitation
GHHI’s National Footprint

Designated GHHI Site
Next Generation Site
Expressed Interest
Pay for Success
The GHHI Model Producing National Results

- **Doctor Visits**
- **ER Visits**
- **Hospital Visits**
- **Missed School**
- **Missed Work**

**Cost to Programs**

**Reductions in:**

- **500,000+ green & healthy units in partnership with HUD**
- **Up to 25% government cost savings**
- **$4K-8K increase in green job wages**
### The GHHI Site Model in Action

<table>
<thead>
<tr>
<th>City</th>
<th>Achievements</th>
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| **GHHI Baltimore** | • 66% reduction in asthma-related hospitalizations  
  • 62% increase in asthma-related perfect school attendance  
  • 88% increase in never missing work due to their child’s asthma |
| **GHHI Philadelphia** | • 70% fewer asthma-related client hospitalizations  
  • 76% fewer asthma-related client ED visits |
| **GHHI Cleveland** | • 58% reduction in asthma-related client hospitalizations  
  • 63% reduction in asthma-related client ED visits |
Family Case Study: The Smith Family

Son with Severe Asthma

Hospitalized 3 times per year

Hospitalizations lasted 1 week each

Lead hazards (windows)

Mouse infestation

Poor weatherization

Dust mites

Improper venting, VOCs

Comprehensive Assessment

Local Partners & Braided Funds

HUD Lead & Health Homes

CDBG

CSBG

MD Energy Administration

Local Foundations

Outcomes

No new hospitalizations

Medical savings: $48K+ in Yr. 1

Energy savings: $721/yr.

Cost: $12,256 – GHHI Savings $2,159
Data Analysis Opportunity #1: Assess Our Operations

- **Retrospective Reporting**
  - What did we do?
  - Who did we do it for?

- **Project Management**
  - Did we achieve our goals?

- **Outcomes Analysis**
  - How did our work benefit the family?

- **Program Analysis**
  - How can we perform more effectively & efficiently?
Data Analysis Opportunity #2: Tell a Family’s Story

Family Demographics

Address | Income Level | EBLLs | Pregnancies | Family Size

House Characteristics

Year Built | Square Footage | Family’s Length of Stay | Lead Violations

Work Completed

Measures Completed | Completion Date | Cost | Amount Billed | Time Elapsed

Family Outcomes

Lowered EBLLs | Lead Compliance | Reduced Medical Utilization | Fewer Missed Days of Work & School
Are We Delivering a Return on Investment?

Avg. cost of an ER visit in Rhode Island: $1,608

Reducing 1,500 ER visits → $2.41M in avoided medical costs

Avg. cost of hospitalization in Rhode Island: $10,278

Reducing 500 hospitalizations → $5.14M in avoided medical costs
“The conditions...that affect...health, functioning, and quality-of-life.” (US Dept. of Health and Human Services)
Are We Impacting Non-Energy Benefits?

“The wider socio-economic outcomes that can arise from energy efficiency improvement.” (International Energy Agency)

Intervention: Energy Efficiency/Weatherization Intervention

Energy Outcomes: Reduced Energy Demand

&

Non-Energy Outcomes:

- Improved Air Quality
- Improved Fire Safety
- Reduced Medical Utilization
- Lower Greenhouse Emissions
- Reduced Utility Bills
- Improved In-Home Comfort
- Improved Economic Reality
- Improved School Attendance
Family Case Study: DeWayne’s Story

DeWayne Davis, age 8, suffered from asthma

His unhealthy, energy-inefficient home was full of asthma triggers.

- Old carpets = allergens
- Water leaks = mold hazards
- Deteriorated windows = air leaks
- Broken hot water heater & furnace
- Chipping paint = lead hazard
- Broken tile = safety hazard
- Defective gutters = water leaks
- Broken ducts = higher heating bills
A Solution Through Braiding

Interventions in DeWayne’s home cost 25% less ($12k vs $16k)

DeWayne hasn’t been hospitalized for an asthma related visit

DeWayne’s school attendance has improved

The family’s monthly heating bills have been decreased

- Remove old carpets
- Remediate mold, install dehumidifier
- Install Energy Star windows
- Install furnace & hot water heater
- Stabilize chipping paint
- Resurface uneven floors
- Replace broken gutters
- Seal ducts, blow insulation

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