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Fall Prevention: Case Studies in Healthy Homes Success

National Lead and Healthy Homes Conference
Kansas City, MO
August 5, 2025

Agenda

- Introduction
- The Need for Fall Prevention
- Interventions and Programs
- Case Studies
- Action Steps

Mission

GHHI addresses the housing-based causes of lead poisoning, asthma, injury, and energy inefficiency by creating homes that are healthy, safe, and resilient.

The Need for Fall Prevention

Every year, **14M** older adults fall, resulting in **39,000 deaths** (CDC)

Falling accounts for **3M ER visits** annually and is the leading cause of death for adults over 65 (CDC)

54% of fatal falls occur in the home (Home Safety Council)

Independent analysis of GHHI fall prevention intervention shows that every **$1 invested results in $1.80 in benefits** (2019 Housing Upgrades to Benefit Seniors-HUBS report).

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Value to Healthcare of Home Modifications

Health plans can demonstrate leadership in healthcare innovation by preventing falls and empowering members to age in their homes

Reduce healthcare utilization and cost by preventing future falls and unintentional injury

CMS.gov

Work with members to understand Medicaid / Medicare benefits, including Long Term Supports and Services

Leverage existing housing support services available through housing partners

Connect with members who may be harder to engage

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Risk Factors for Falls and Unintentional Injury

- Vestibular disorder (inner ear)/poor balance
- Vitamin D insufficiency
- Medications linked to falls
- Postural hypotension (sudden drops in blood pressure)
- Vision impairment
- Foot or ankle disorder
- **Home hazards**

Source: https://www.cdc.gov/steadi/media/pdfs/STEADI-FactSheet-RiskFactors-508.pdf

Interventions and Programs

Fall Prevention Interventions

Evidence-based fall prevention interventions incorporate home modifications with other person-centered services. For example:

- **HUBS (Maryland):** combination of home assessment and home repair services, case worker home visits, phone calls, and connection to social services. *(cost-benefit ratio of 1.80)*
- **Stepping On (National):** combination of exercise, medication management, home modifications, and education sessions (31% fall reduction).
- **CAPABLE (National):** combination of handyman home modifications with home visits by an Occupational Therapist (OT) for OT assessments and education. *(reduction in hospital costs, increases in mobility metrics)*
- **Other Models:** Many "general" home repair programs and Whole House models incorporate home modifications to meet the accessibility needs of residents. E.g., Detroit Home Repair Fund

Example Fall Prevention Measures

- Shower seat with feet grips and backrest
- Staircase repair
- Graspable handrail repair
- Threshold lowering/repair
- Motion sensor lights
- Safety grab/grip bars
- Tub safety bar installation
- Toilet safety frame/rail
- Handheld shower head installation
- Tip resistant furniture anchors
- Ramp
- Flooring repair

Example modifications: walk-in shower, anti-slip floor, grab bars, offset hinges for bathroom door

Whole-House Interventions Produce Broad Impacts

Input

Comprehensive "Whole-House" Housing Intervention

Healthy Homes
Energy Efficiency
Weatherization
Electrification
Decarbonization

→ **Energy Outputs**
- Reduced kWh consumed
- Reduced energy demand

→ **Non-Energy Outputs**
- Improved air quality
- Increased thermal comfort
- Reduced toxins

→ **Energy Benefits**
- Lower utility bills
- Greenhouse gas reduction

→ **Non-Energy Benefits**
- Environmental quality
- **Occupant health**
- Family economic security

→ **Long Term Impacts**
- Neighborhood quality improvement
- Reduced health disparities
- School attendance
- Economic productivity
- Climate resilience

Goal of Climate Justice: All people — regardless of race, color, national origin, or income — are entitled to equal protection from environmental and health hazards caused by climate change and equal access to the development, implementation, and enforcement of environmental laws, regulations, and policies.

How does home safety and accessibility contribute to housing stability?

Home safety allows adults to stay in their homes by:

- **Improving accessibility** for **enhanced quality of life** as residents age
- **Preventing injury** that would force residents to move
- **Easing financial burden** on residents

Poor housing conditions is one of four dimensions of housing instability (other dimensions are unaffordability, crowding, and forced moves)[1]

References:
[1]Routhier, G. (2019). Beyond worst case needs: Measuring the breadth and severity of housing insecurity among urban renters. Housing Policy Debate, 29(2), 235-249.

How does home safety and accessibility contribute to housing stability?

Recent survey in St. Louis after home repairs for older homeowners found[2]:

- **71%** of homeowners "a lot more likely" to stay in their homes after repairs
- **67%** felt "much more positive" about quality of life, citing improved accessibility
- **78%** reported that their finances had become easier
- **72%** reported that their house had become a more valuable asset

References:
[2]University of Missouri-St. Louis, Community Innovation and Action Center. No Place Like Home: The Need For and Effectiveness of Home Repairs Among Older Homeowners in St. Louis. May 2023.

Case Study: Baltimore, MD
HUBS Program for Older Adults

Housing Upgrades to Benefit Seniors (HUBS) - Baltimore

Producing AIP housing interventions at scale: $10.6 million in public-private funds committed for 2021-2024.

1

Founding Organization

Organizes referral process, develops trainings for partners, and hosts leadership meetings

Civic Works

2

Leadership Team

Performs home remediation and installs fall prevention measures

Rebuilding Together Baltimore

Green & Healthy Homes Initiative®

NHS Baltimore

Civic Works Cities for All Ages

3

HUBS

Provides referrals into HUBS, conducts individualized needs assessment and assists with service referral process

AIM

Meals on Wheels of Central Maryland — More than a meal

GEDCO

Sinai Hospital — a LifeBridge Health center

Strong City Baltimore

Banner Neighborhoods Community Corporation

Keswick — Right Care. Right Time. Right Place.

CHAI — Comprehensive Housing Assistance, Inc. — Strong Communities for Life

The Challenge HUBS is Addressing

Family Background: Low-income senior homeowner raising three adopted daughters; older adult encountering balance issues

Housing Assessment: Roof leaks, poorly weatherized, mold, pests, malfunctioning furnace, numerous safety hazards including trip and fall hazards, poor lighting, lack of handrails

GHHI HUBS and Maryland Energy Administration funded interventions by GHHI:

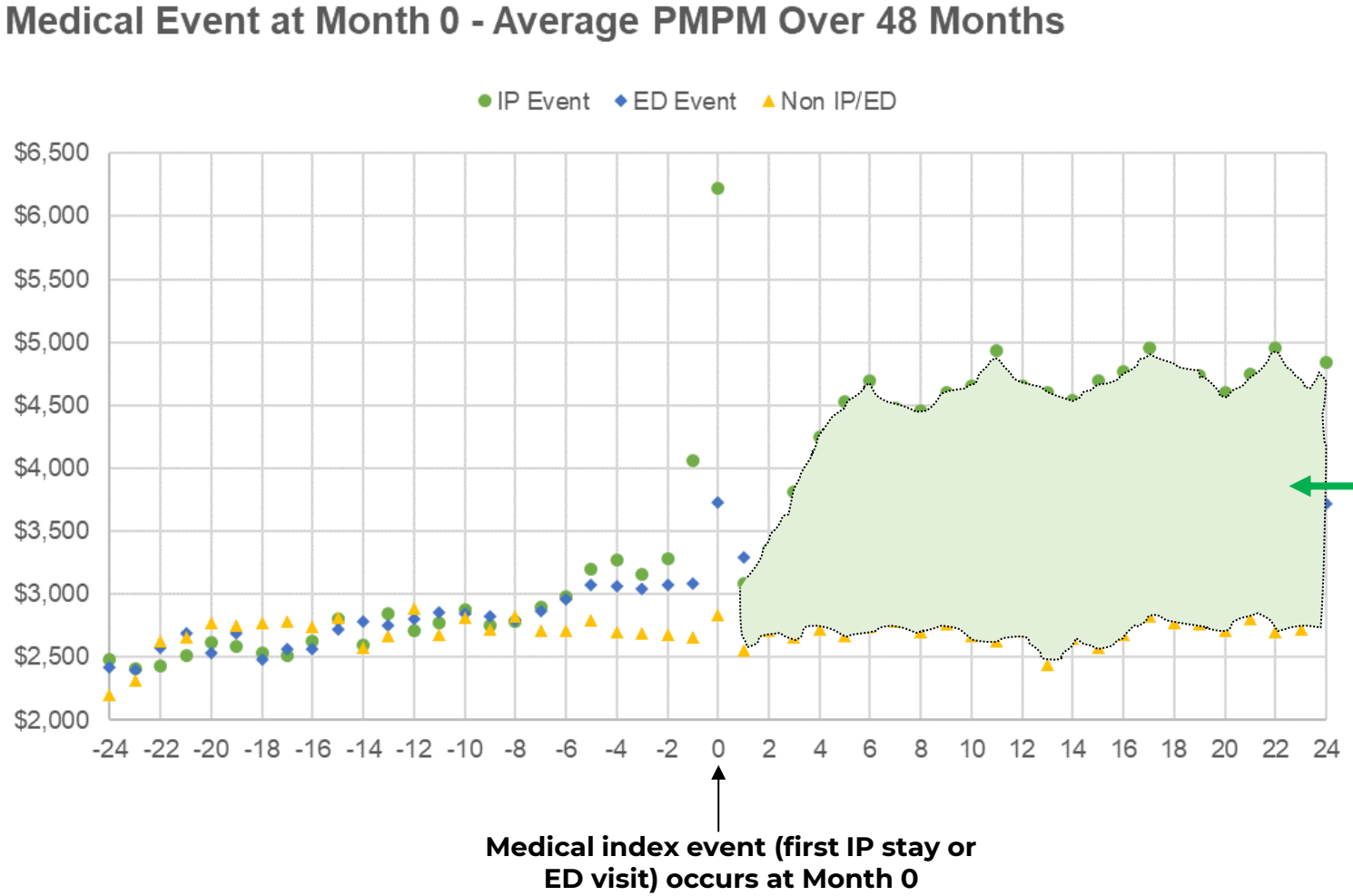
- HVAC replacement; Weatherization intervention including air sealing and insulation; Attic repairs
- Tub grab bars and handheld shower head installed, shower stool and toilet safety frames provided
- Installed stair treads and removed damaged carpets
- Interior and exterior handrails installed, and other handrails repaired
- Dryer and bathroom vented; Mold remediation in basement
- Integrated pest management conducted
- Exterior lights and interior stairwell lights installed; Gutters and downspouts installed

GHHI assisted client through City LIGHT Program process to receive:

- Roof replacement

Case Study: Tennessee
Data Analysis of Fall-related Medicaid Costs

Total cost of care stays high even 2 years after a significant fall



- TN Medicaid claims data from 27,666 members 60+ in Shelby County
- 5 years of claims data totaling $3 billion
- 800 members per year had an IP fall
- 2,400 member per year had an ED fall

Cumulative cost increase after a fall resulting in inpatient admission or emergency department visit:

- **IP: $41,536 (green shaded area)**
- ED: $17,536

This suggests that there is an opportunity for an Aging-in-Place program to help reduce costs by preventing avoidable falls.

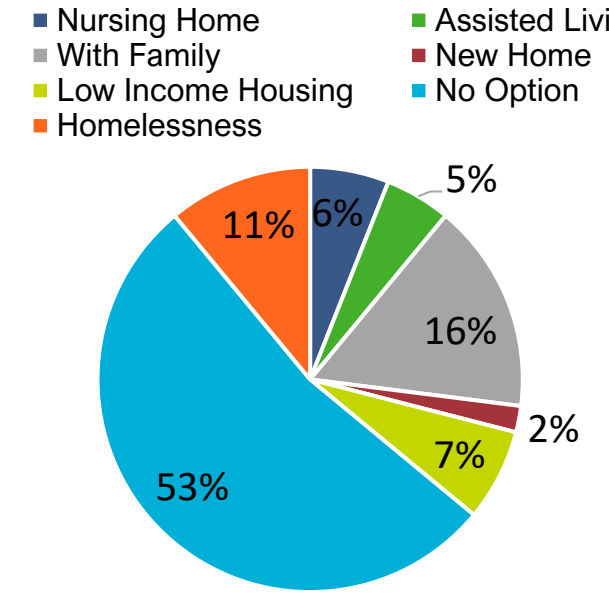
Savings from avoiding nursing homes (Habitat Survey data)

25 Aging-in-Place clients per year report they would have been destined for a nursing home within the year.

This equates to **$2.1 million (semi-private) to $2.3 million (private)** in TN taxpayer savings each year.

Habitat for Humanity® of Greater Memphis

Where would you have gone?



Nursing Home Facility	
Semi-Private Room[5]	**$85,775**
Change Since 2020[2]	**1.07%**
Private Room[5]	**$91,980**
Change Since 2020[2]	**0.60%**

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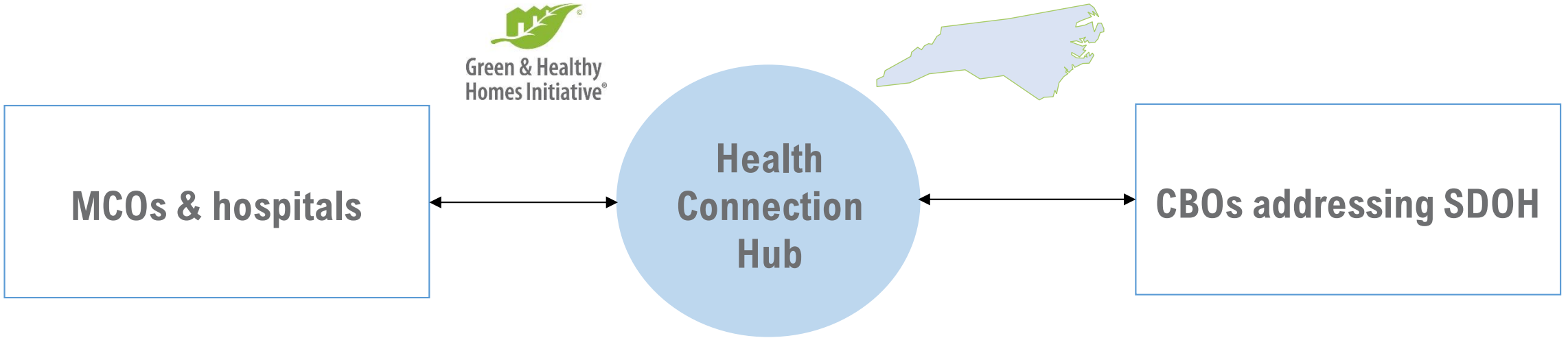
Case Study: North Carolina Fall Prevention Program Funded by Commercial Health Plan

Hubs for Social Determinants of Health Service Delivery (GHHI serves this role in NC working with Commercial Health Plan)

A health connection hub could help efficiently **overcome barriers** to partnership between sectors, **saving time and money** for both partners and **incenting new investment**



Potential roles

- Coordinate data sharing & ensure privacy
- Coordinate referral process
- Draft & hold contracts between partners
- Coordinate payments between partners
- Serve as translator & expert in both sectors

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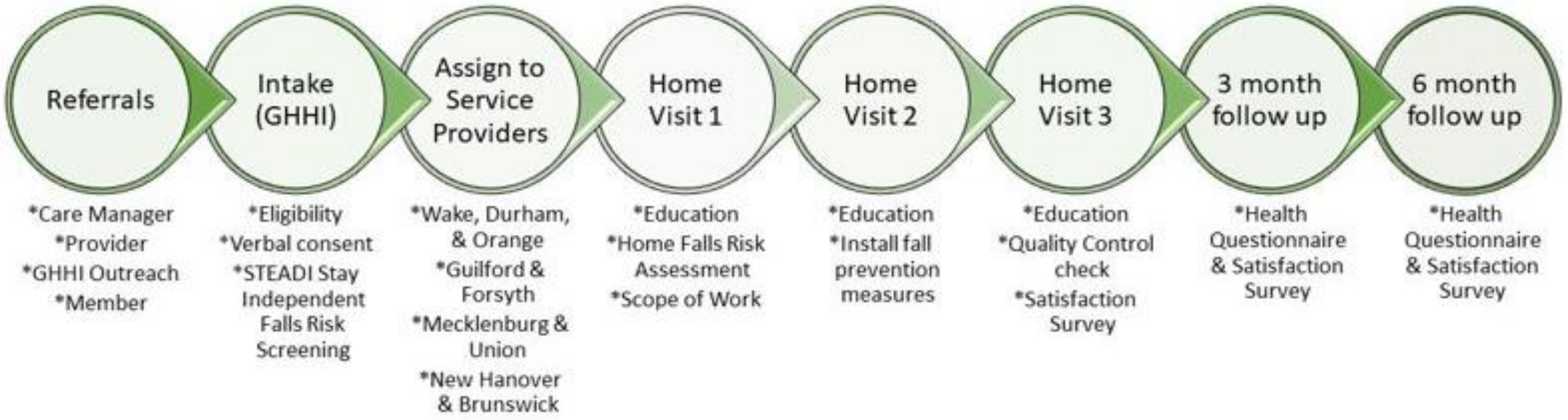
North Carolina Fall Prevention Program Process



Intake - GHHI	Program - Service Provider Partners Enrollment begins with completion of Home Visit 1.

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Key Performance Indicators

- # of referrals
- # of homes assessed/repaired
- % of homes assessed/repaired, % of hazards addressed in homes
- Avg # of home visits, hazards, and repairs
- Avg cost per home and per repair

Implementation Metrics

- Self-reported falls and injuries
- Program-assessed health
  - Falls risk (STEADI)
  - Falls Behavioral Scale (FaB) assesses protective behaviors for falls
- Missed work-days

Health/Quality of Life Metrics (pre and post)

- Reduced ER/UC utilization
- Reduced medical expense
- Reduced admission into skilled nursing facility

Medical Utilization and Expense Metrics (pre and post)

- Program satisfaction
- Likelihood to recommend (NPS)
- Likelihood to renew with Health Plan

Experience Metrics

Other GHHI Home Injury / Fall Prevention / Aging in Place Work

- **Older Adults Staying Independent and Safe (OASIS) in Cincinnati**. Partners include People Working Cooperatively who conduct services including home repairs and Molina health plan that identifies at-risk members. GHHI's role is to design the evaluation of the program including efficacy and cost-effectiveness analysis. Funded by HUD Technical Study.

- **Habitat for Humanity of Greater Memphis.** GHHI is a partner on a newly awarded grant from the Tennessee Department of Health to construct 20 new homes designed to meet the accessibility and other needs of older adults and people with disabilities.

- **Johns Hopkins Center for Injury Research and Policy.** GHHI is partnering with Hopkins to build off an existing model for home assessment and remediation of injury risks for children to design a model specific to older adults.

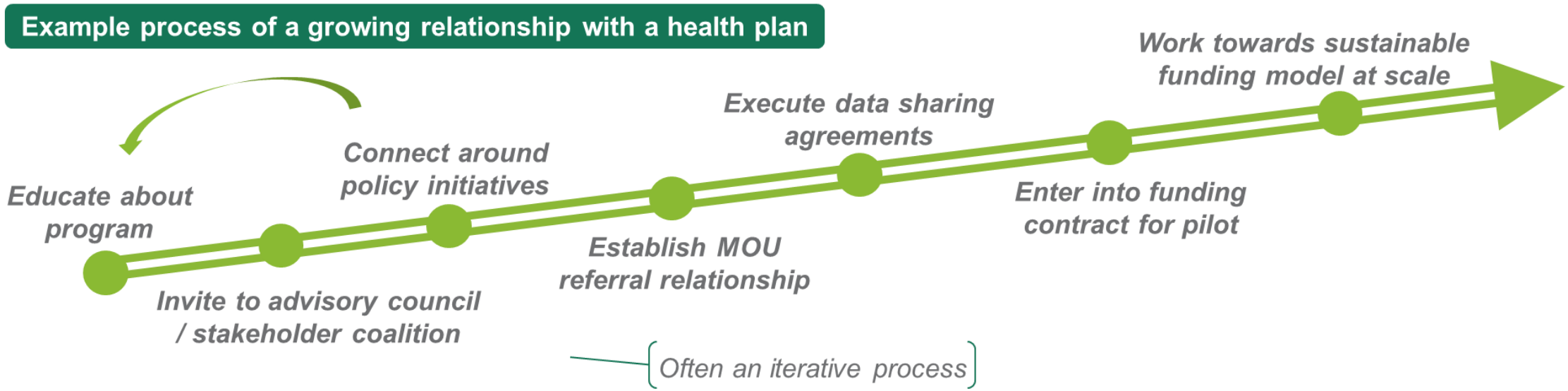
Putting Fall Prevention into Practice

Funding Sources for Fall Prevention Programs

Fall prevention programs can be funded by a diverse set of funding sources, including:

- HUD Older Adult Grants (national, Baltimore, Memphis)
- CDBG Funds (national)
- Medicaid (1115 waivers- California, Massachusetts, New Jersey)
- Philanthropy (HUBS)
- Health insurance plans (North Carolina, 1115 waiver states)
- Research Grants (HUD Technical Studies)

Be Strategic in Building Relationships with Healthcare Partners



- Connect with staff at different levels of health plan; healthcare has frequent turnover
- Look for opportunities to advocate for policies together
- Invite health plans and providers to participate in stakeholder meetings
- Consider what existing or potential partners might have additional resources to help expand the program

QUESTIONS?

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