

# **Multilevel Intervention With Low Income and Minority Older Adults To Improve Influenza Vaccination Acceptance**

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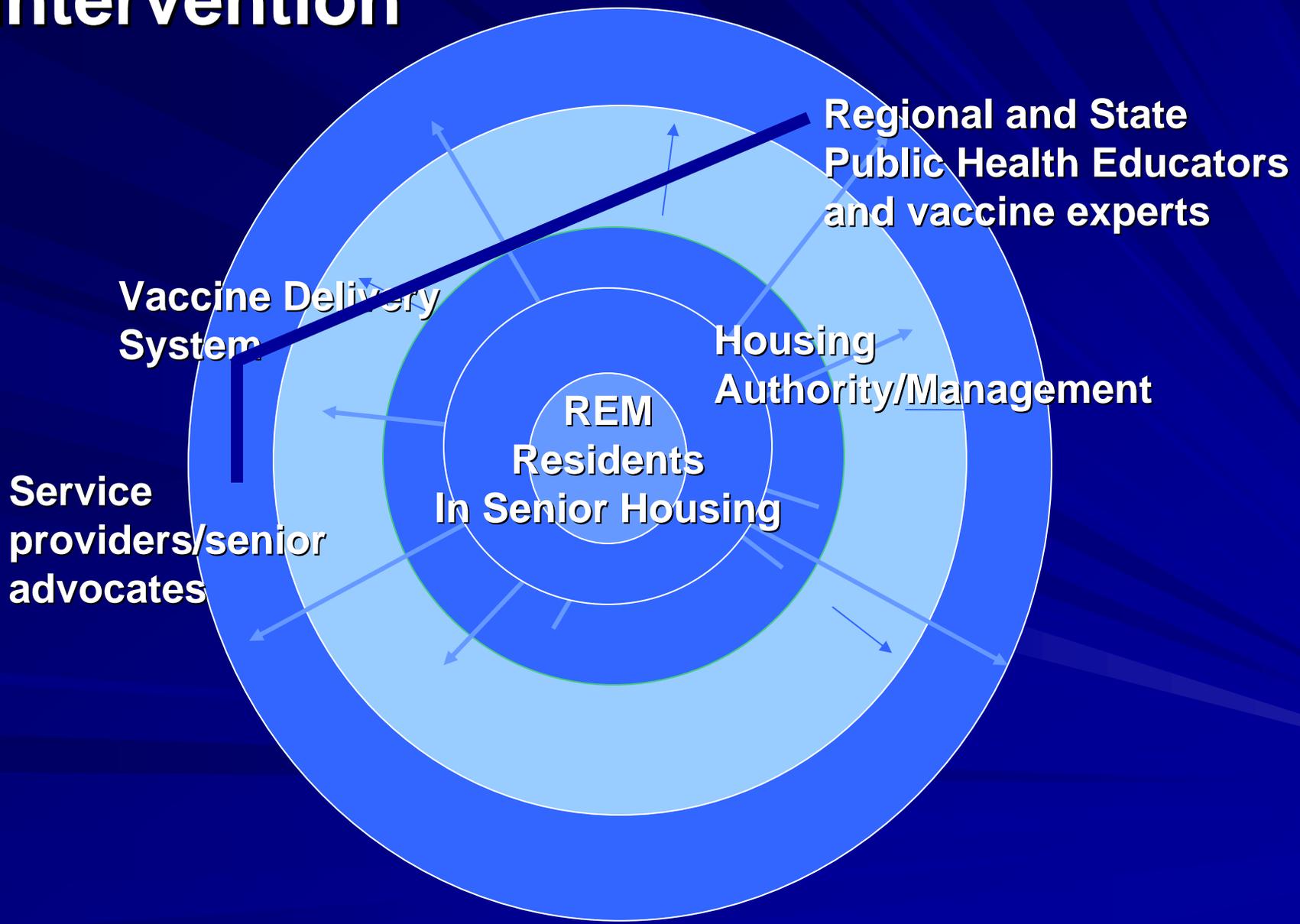
# Goals of Presentation

- Describe multilevel community based project aims, core components, level goals and outcomes
- Present framework for multilevel dissemination/implementation and evaluation
- Outline major considerations in community based MLI dissemination/implementation research

# **Rationale for Vaccination Interventions for Low Income and Minority Older Adults**

- **Influenza is preventable**
- **Vaccination can prevent 70% of influenza infections,**
- **Vaccination can reduce the cost and severity of secondary illnesses and influenza related deaths.**
- **35 – 45% of racial/ethnic minority older adults are vaccinated each year in comparison to 60-70% white older adults.**
- **The SG recommended level is 90% for non-institutionalized adults over 65 years of age.**
- **Public health efforts including campaigns, clinic outreach and community flu clinics have not reached these older adults.**
- **To do so requires a multilevel targeted approach**

# Source of the Problem and Focus of Intervention



# V.I.P. Intervention

## ■ Goals:

- To improve vaccination rates, knowledge and pro-vaccination beliefs and norms
- Build sustainable public health promotion structures at multiple levels

## ■ Approach:

- Build a vertical Influenza Strategic Alliance (ISA)
- Increase building management health awareness
- Build resident flu vaccination advocacy committees to deliver flu campaigns
- Engage these groups with residents for sustainable relationships, vaccination increase and other health initiatives

# Core Components

## ■ Theoretical Processes

- Communications (message consistency, strength, formats, delivery)
- Ecological (multilevel interaction)
- Empowerment (capacity to learn and act independently)
- Constructivist (facilitated process of knowledge and action co-construction)

## ■ Program Structures

- Influenza Strategic Alliance
- Building management
- Building committees
- Individual residents

## ■ Program Elements

- Training curriculum
- FAQs/flip book
- Visuals (film)
- Campaign (and campaign components)
- Committee self-evaluation

# Intervention

- Formation and activation of Influenza Strategic Alliance
- Partnership with building management
- Formation and activation of V.I.P. committee
- Training of V.I.P. Committee
- Development and delivery of two influenza vaccination campaigns
- Implementation of two flu clinics
- Cross-sectional pre and post surveys in intervention and comparison buildings
- Ethnographic process and ML outcome documentation

# Site and Target Population

## Northeastern City

### Older Adult Housing

### Intervention and Comparison Buildings Baseline Sample

(N=73)      (N = 107)

### Population Composition

	Interv.	Comp.
PR	51%	56%
Af/Am	33%	18%
W. Indian	9%	1%
White	7%	15%
Female	35%	44%
Male	65%	56%

## Demographics

	Interv.	Compar.
Education < 8th Grade	38%	48%
Income < \$800/mo)	84%	77%
Time in Htfd. Mean years	25.6	27.5
Time in Bldg. Mean years	4.5	4.6
Language preference (English/Spanish)	73/27%	40/60%

# Intervention Process/Outcomes

## ■ Influenza Strategic Alliance

Process: Formed alliance, supported V.I.P. Committee, provided funding for uninsured vaccinations.

, Outcomes: continued to meet, promoted intervention elsewhere in state.

## ■ Building Management

Process: Supported V.I.P. Committee, provided resources, advocated for flu clinics.

, Outcomes: sustained flu clinics independently; supported other public health efforts

# Intervention Process/Outcomes

## ■ V.I.P. Committee

Process: Expanded membership, became flu experts, developed and adapted campaign materials, implemented flu campaigns, reached 70% or more of target population

Outcome: Expanded membership, repeated campaign with less support, expanded to other public health activities.

- Adapt
- Implement
- Sustain
- Expand infrastructure

# Cognitive/Social and Behavioral Outcomes

## Beliefs, Attitudes, Self-efficacy, Social Influence

Beliefs about Vaccination

Perceived barriers to vaccination

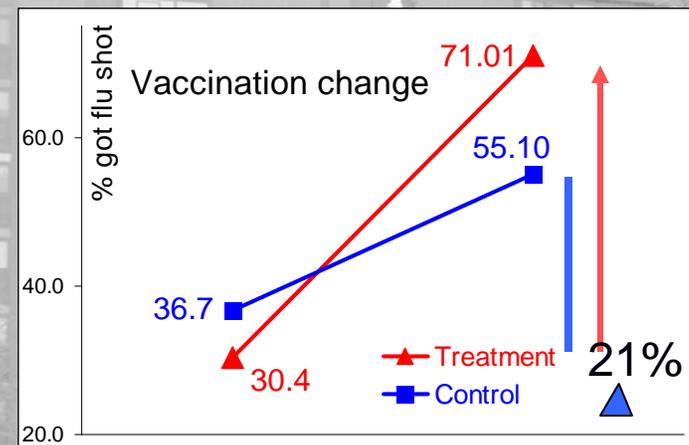
Perceived consequences of influenza

Worry about the flu

Vaccination self efficacy NS

Social influence to Vaccinate

## Vaccination Outcomes



The odds of getting the flu vaccine changed from 1.92 at pre-test to 5.59 at post test in the treatment group.

<i>Dissemination Criteria</i>	<i>Intervention levels</i>			
<i>Implementation/ Evaluation</i>	<b>ISA</b> (community)	<b>BMG</b> (building)	<b>VIP</b> (group)	<b>RESIDENTS</b> (Individual)
<b>Adoption</b>				
<b>Adaptation</b>				
<b>Implementation Fidelity</b>				
<b>Reach</b>				
<b>Efficacy</b>				
<b>Sustainability</b>				
<b>Cost Effectiveness</b>				

**Core Components**

- Theoretical Processes
- Program Structures
- Program Elements  
(content)

## ■ Outcome Evaluation (efficacy, reach)

- Outcomes at each “structural” level (anticipated and emergent)
- Outcome design options involving comparisons:
  - Study versus matched control buildings
  - Study versus control communities (where all buildings in the intervention communities are involved in the intervention)
  - study buildings in a single community over time (where all study buildings are involved; case study design)
  - These designs address the challenge of small Ns in multilevel intervention studies
- Interactions among levels at critical time points

# Cost Effectiveness (Overall minus research/evaluation costs)

- Individual level: per unit cost of hospitalization for flu related problems against per unit cost of vaccination intervention.
- Building level: cost of implementation (VIP, session resources, incentives etc.) against estimated or actual cost of building hospitalizations for flu related problems.
- Start up costs in towns versus continuation costs.
  - Start up costs include full time coordinator, training and incentives costs, and campaign costs
  - Continuation costs include half time coordinator, minimized training and incentives costs and campaign costs,
- Evaluation costs
  - Start up costs include full time coordinator, staffing, training and incentives costs, and campaign costs
  - Continuation costs include half time coordinator, minimized training and incentives costs and campaign costs,

# Points to Remember

- In depth/long term relationships with communities or extensive formative research to identify levels and focal points for intervention
- Multiple level intervention for sustained change
- Small N GRCTs and case study designs are required.
- Multiple level interventions involve the intersection of level and core components (process, structure and content).
- Theory in MLIs cuts across levels.
- MLIs are intentional change efforts inserted into ongoing systems.
- Evaluation tools needed at each level that make it easier to evaluate in large scale dissemination and diffusion.