Integration of Community Development and Evidence-Based Program Approaches:

Closing the Research and Health Promotion Practice Gap

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Agenda

- Defining Public Health Impact
  - Reach X Efficacy
- The Public Health Evidence-Based Approach
- The Community Development Approach
- Healthy Youth Places For Promoting Healthy Eating and Physical Activity
  - An example that integrates the evidence-based and community development approaches to obtain public health impact.
Public Health Impact

- Significant U.S. public health challenges reside in the social ecology of communities; not within medical clinics.

- As a result, preventing and managing chronic disease is increasingly central to the mission of Extension.
SITUATION: Leading Causes of Death in U.S., 2000

The Social Ecology of Public Health Impact: Reach X Efficacy
Magic Obesity Prevention Program

- Magic french fry developed by fast food industry
- Eat all you want
- May be costly
- 100% effective at preventing weight gain in adolescents
## The Public Health Impact of Magic Obesity Prevention Program

<table>
<thead>
<tr>
<th>Dissemination Step</th>
<th>Concept</th>
<th>% Population Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% of Clubs</td>
<td>Adoption</td>
<td>50%</td>
</tr>
<tr>
<td>50% of Club Leaders Use Snack</td>
<td>Adoption</td>
<td>25%</td>
</tr>
<tr>
<td>50% of Youth Attend Club</td>
<td>Reach</td>
<td>12%</td>
</tr>
<tr>
<td>50% Leaders Follow Guidelines</td>
<td>Implementation</td>
<td>6%</td>
</tr>
<tr>
<td>50% of those eating their magic french fry have effects</td>
<td>Effectiveness</td>
<td>3%</td>
</tr>
<tr>
<td>50% Continue to benefit after 6 months</td>
<td>Maintenance</td>
<td>1.5%</td>
</tr>
</tbody>
</table>
If Extension’s goal is to influence communities, not individuals, then we need to look at our impact on targeted populations.

Focus on the impact of targeted populations, not just on the effectiveness for individuals.
- Reach = Number Participating/Target Audience (denominator).

To consider multiple dimensions to make program decisions to obtain public health impact.
- RE-AIM
A PLANNING AND EVALUATION MODEL TO “RE-AIM” PLANS AND STRATEGIES

- To increase the relevance of research reports and community trials
- To evaluate issues relevant to program adoption, implementation, and maintenance
- To help close the gap between research studies and practice by
  - Informing design of interventions
  - Providing guides for decision makers
Who is intended to benefit from this intervention? Will they participate?

Will the intervention be effective in practice? Likely adverse consequence?

Is the intervention feasible to implement and can it be consistently delivered?

Can many settings easily adopt this intervention?

What is the potential cost and sustainability of the intervention in practice settings?

www.re-aim.org
Welcome to re-aim.org!

RE-AIM is a systematic way for researchers, practitioners, and policy decision makers to evaluate health behavior interventions. Ultimately, it can be used to estimate the potential impact of interventions on public health.

> For People Conducting Research
If you're a researcher who wonders how to translate theory to practice, discover what we've learned about applying research findings to everyday situations. Share your thoughts with peers. More...

> For People in Community & Health Care Settings
If you deliver health behavior interventions, you'll find valuable resources to have a greater impact on the lives of people you want to help. Share successes and challenges with others. More...

RE-AIM Welcomes
Active for Life Grantees

RE-AIM has entered into a partnership with another RWJF supported project, "Active for Life," the goal of which is to enhance regular physical activity among adults age 50 and older.

We are delighted to make our services available to Active for Life sites...AND we need to hear from you about ways to make this site most helpful to you.

- Welcome Community Leaders
- FAQs
- Resources
Calculating Reach

Target population [y]

Those exposed to recruitment [a]

Those responding to recruitment [b]

Those eligible [c]

Those who participate [d]

>>> Ideas about finding numbers for estimates

As you tackle REACH issues, there are two important questions to ask:

1) What percent of the target population are you reaching? (Use the calculator to get some answers.)

2) Are your participants the people you need to reach? In other words, are the participants representative of your target population?

>>> New calculators to be added soon!

There are ways to calculate representativeness and we will post calculators when they are available. Please check back!

Enter your numbers without commas:

Email Address:

Estimated target population [y]

Estimated number exposed to recruitment [a]

Actual number who respond to recruitment [b]

Actual number who are eligible [c]

Actual number who participate [d]

% of target who respond to recruitment 0%

% of eligible who participate 0%

% of REACH into target population 0%

% excluded from study 0%

% participation among eligible 0%
Resources

Note: This section contains links to tools and resources. We will continue to add items as they become available.

Calculations
Access a standard sequence for calculating and reporting on Reach, and use the calculators for Reach and Adoption. Other items will be added as they become available.

Checklists
Use the RE-AIM framework to identify issues that people should consider when designing interventions and studies.

Figures and Tables
The figures illustrate RE-AIM concepts. The tables provide ways to anticipate and avoid obstacles to designing and delivering health behavior programs. Maximize the positive impact on public health.

Links
Access websites that provide useful data and information. The links are categorized as 1) behavior change programs and implementation guidelines, 2) data sources, 3) reporting guidelines, or 4) general interest.

Literature Review Coding Resources

- Coding Sheet for Publications Reporting on RE-AIM Elements
- Coding Definitions for Literature Review of Reporting on RE-AIM Elements

Measures
Find examples of tools to evaluate health behavior programs and policies based on the RE-AIM elements.

Publications
This list of citations contains links to abstracts of journal articles about health behavior interventions and issues related to the RE-AIM framework.
Key Evidence-Based Terms

- **Community Preventive Service**
  - An intervention (activity) that prevents disease or injury or promotes health in a group of persons.

- **Effectiveness**
  - Improvement in health or behavioral outcome produced by an intervention in a community setting.

- **Evidence-Based Method**
  - A strategy for explicitly linking public health recommendations to the underlying scientific evidence that demonstrates effectiveness.

Evidence-Based Decision Making

- Evidence-Based Public Health Policies and Practices
  - Instituting evidence-based public health policies promotes focusing limited community resources on the best practices for responding to the highest priority problems.
  - Evidence-Based Public Health seeks to improve the quality of practice through providing systematic information on proven intervention strategies.

Interventions: What Works?

- *The Guide to Community Preventive Services*
- Systematic evidence-based review to evaluate the effectiveness of various approaches.
- The gold standard of evidence is defined as effect size shown by a program in a true experimental design (Randomized Controlled Trial).
- Independent, non-Federal Task Force coordinated by the USDHHS & CDC.
Key Community Development Terms

- Community-Based Development
  - Projects that actively include beneficiaries in their design and management.
  - Participation
    - Active involvement of members of a defined community in at least some aspect of project design and implementation.

- Community-Driven Development
  - Projects in which communities have direct control over key project decisions, including management of funds.

(Not Either Or) Closing the Research and Health Promotion Practice Gap

- Community Development
  - Locally Owned
- Evidence-Based Public Health
  - Research Based
Community and Youth Driven Development for Physical Activity and Fruit and Vegetable Consumption

The Healthy Youth Places School Randomized Controlled Trial


SITUATION: Age Decline in Physical Activity

**Methods**
- Participants (185 male, 190 female)
- wore a CSA 7164 accelerometer for 7 consecutive days
- To identify age-related trends, students were grouped as follows: grades 1-3, 4-6, 7-9, and 10-12.
- Bouts of PA and minutes spent in moderate-to-vigorous PA (MVPA) and vigorous PA (VPA) were examined.

**Results**
- Daily MVPA and VPA exhibited a significant inverse relationship with grade level, with the largest differences occurring between grades 1-3 and 4-6.
- Boys were more active than girls, but for overall PA, the magnitudes of the gender differences were modest. Participation in continuous 20-min bouts of PA was low to nonexistent.

**Conclusion**
- Results support the notion that PA declines rapidly during childhood and adolescence and that accelerometers are feasible alternatives to self-report methods in moderately sized population-level surveillance studies.

Objective

To determine if an intervention strategy that implements school environmental change-with adult leader and youth participation-will influence and maintain fruit and vegetable consumption and physical activity.
Places: School Lunch & After School Program
Methods: Research Design

- **Group Randomized Trial**
  - Middle school was the unit of recruitment, random assignment, and analysis.
  - 16 middle school settings were grouped then randomized
    - on size (number of students enrolled 20th day)
    - concentration of poverty (% of students on free and reduced-price lunch)
    - diversity (% of black, hispanic, and other ethnic status)
  - To control for influence of season on diet and activity.
    - Baseline Assessment, 6th Grade 2000, April
    - Post Intervention, 7th Grade 2000-2001, April
    - Post Intervention, 8th Grade 2001-2002, April
    - Follow up, 9th Grade 2002-2003, April
    - New High School Environment Follow-up
Primary Outcome Measures

- Fruit and Vegetable Consumption
  - Food Frequency Questionnaire
    - (Rockett et al., 1997)
      - Servings of fruit and vegetables per day (F&V)

- Physical Activity
  - Previous Day Physical Activity Recall
    - (PDPAR; Weston, Petosa, & Pate, 1996)
      - Moderate and vigorous physical activity (MVPA)
      - Vigorous physical activity (VPA)
Selected Intermediate Outcome Youth Development Measure

- Proxy Efficacy (Confidence)
  - F&V Environmental Change-School
    - “…can get cafeteria workers to offer more fresh fruit options (like strawberries and apples) for your lunch.”
  - PA Environmental Change-School
    - “…can get the after-school program staff to plan physical activities for you and the other members of the after-school program.”
Community Development/Evidence

The Healthy Places Framework (Three-Tiered Intervention)

- **Project Level**
  - Community Hub

- **School Site Level**
  - School Change Team
    - Adult and Youth Leaders
  - Teacher Training
  - Video Training

- **Place Level**
  - Classroom Curriculum
    - 7th grade, 8th grade
  - School Lunch
  - After School Program
Community Hub

- Place-based Community-Driven Diffusion System
- Training Staff and 8 School Site Coordinators
  - 4 time yearly face-to-face meeting
  - Monthly Conference Call
  - Continuous Web Support
- Meeting Structure
  - Social Connection and Support
  - Community Development and Evidence-Based Content
  - Group Goal-Setting and Feedback
Place-Based Planning Process

- Step One - Target a Place (identify an outcome)
- Step Two - State an objective that answers one of the following two questions:
  - A) How will we develop a healthy place
  - B) How will we promote (contact and attract) participants to a health place
- Step Three – Check Reach
- Step Four - Check Quality
  - Strategies to develop the place?
    - Policies, programs, and practices to promote connection, autonomy, skill-building, and healthy norms (physical activity and healthy eating options for positive youth development)
  - Strategies to promote the place?
- Step Five - Identify Resources and Implement
Evidence and Theory-Based Resources

- Mastery Accomplishments
  - Place-based strategic and action planning (Goal setting and feedback)
  - Environmental Change Active Learning Curriculum Modules

- Social Modeling
  - Videos illustrating environmental change by other “like” schools
  - iMovie software, digital camera, & twice yearly video training

- Social Persuasion
  - Performance community group-based training, technical, and social support with site coordinators
  - Change team group-based training, technical support, and social with adult and youth leaders
  - Internet on line collaboration tools for site leaders
Site Level Change Team

- Youth led group facilitated by site coordinator and modeled after community hub.
- Key adult leaders invited to participate.
- Monthly meetings.
Place Level (Target Environments)

- Classroom
  - Curriculum Sessions
    - 7th Grade
    - 8th Grade

- School Lunch
  - Social and Physical Environmental Change (Policies, Programs, Practices)
  - Evidence-Based Practices

- After School
  - Social and Physical Environmental Change (Policies, Programs, Practices)
  - Evidence-Based Practices
Preliminary Results

- **Baseline**
  - **Proc Mixed**
    - Took into account school level intraclass correlation
    - Took into account group level random assignment (match)
    - Provided multilevel estimates and tests
      - No differences between intervention and control groups at baseline on primary outcome measures

- **Intervention Effect**
  - **Proc Mixed**
    - Took into account school level intraclass correlation
    - Took into account group level random assignment (match)
    - Took into account variability between years for an individual
    - Provided 3 level estimates and tests
      - Schools within group variability (Assume schools sampled)
      - Students within school variability
      - Years within student variability
Preliminary Results

- Not Yet Ready for Distribution
Success Stories

- Youth-led focus groups and survey data collections that informed changes in school lunch and after school programs.

- Youth developed promotional and documentary videos and used them for promotion of after school program to students and for policy change presentations to school board.

- School sports integrated into after school program.
  - Site coordinator tracked student involvement after season and recruited students to after school program.

- In several low resource schools, students designed new physical environmental changes (painted fruit and vegetable and physical activity images, posters, etc.)
Conclusion

- An intervention strategy that implements school environmental change-with adult leader and youth participation-influenced and maintained health behavior (physical activity).
- An intervention that facilitates youth to lead the process of environmental change influenced and maintained a positive youth development asset (self-efficacy to change the school physical activity environment).
- Evidence-based strategies can be integrated within a community development approach to have public health impact.
Welcome to Healthy Places...

Healthy Places is here to help build a network of leaders to show child and youth development organizations what is possible in their communities. This virtual community is more than a static website.

Healthy Places Online is an evolving virtual resource center that offers a framework, resources and services to help organizations make dramatic, long-lasting improvements to places in communities where children and youth live, learn, work, and play. Those improvements will enhance individual development, healthy eating, and physical activity.

At Healthy Places, we integrate research and public health and youth development practice to provide what people — as individuals, families, and communities — need to make informed decisions about what is best for their children and youth.

Working with others, you can create environments — human ecosystems — to support healthy decisions and behaviors. Ultimately, you'll see the positive health impacts where you live, learn, work, and play. The result: you'll find yourself in the best place to raise a child and to live a healthy life.

Healthy Places targets the increased problems in the U.S. of poor dietary habits, sedentary lifestyles, and youth at risk for overweight. Implicit in our framework is that these problem behaviors cannot be addressed in isolation. These problems are a symptom of a larger child and adolescent youth development system that needs leadership.
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Questions & Comments??

RE-AIM