Evaluation of Healthy Kids, Healthy Communities

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ACTIVE LIVING RESEARCH CONFERENCE
Healthy Kids, Healthy Communities National Program

Childhood obesity, healthy eating, and active living

Policy, system, and environmental strategies

“High touch, low $”

Leading sites (n= 9)
$400,000, 4 years

Round II sites (n= 40)
$360,000, 4 years

Coaching, national networks

www.healthykidshealthycommunities.org
Healthy Kids, Healthy Communities National Evaluation

Collaborative, participatory evaluation

Comprehensive, dynamic logic model

Mixed-methods, systems science,

Advise on local efforts to evaluate health, behaviors, and related individual-level factors

Focus on policy, practice, and environmental changes

Assess social systems and transformational processes (i.e., partnership and community capacity, social determinants)

www.transtria.com/hkhc.php
HKHC Cross-Site Strategies

**Active Transportation**: Increase active transportation (e.g., walking, biking, using public transit) in the public right-of-way (e.g., sidewalks, streets).

**Parks and Play Spaces**: Increase recreational physical activity in public parks, playgrounds, recreational facilities, or other public places (e.g., play equipment in blocked off streets).

**Child Care Physical Activity Standards**: Increase moderate and vigorous levels of activity in public or private child care settings (e.g., outdoor play, classroom curricula).

**Corner Stores**: Increase purchase and consumption of healthy foods and beverages (or limit foods and beverages with minimal nutritional value) in corner or convenience stores (e.g., refrigeration for fresh produce, accepting SNAP, installing EBT).

**Farmers’ Markets**: Increase purchase and consumption of fruits and vegetables in local farmers’ markets (e.g., new markets or vendors, accepting WIC).

**Child Care Nutrition Standards**: Increase consumption of nutritious meals, snacks, and beverages (or limit foods and beverages with minimal nutritional value) in public or private child care settings (e.g., kitchens, cooking equipment, vending).
HKHC Evaluation Methods

Policy Assessment
Key informant interviews (policies planned/in place)

Cost Assessment
Key informant interviews (costs and revenue)

Group Model Building
Systems science exercises (things that affect/are affected by PSE changes)

Capacity Survey
Online self-report (partnership and community capacity)

HKHC Dashboard Action Reporting
Self-reported planning and implementation activities, intended and unintended changes (website)

Environmental Audits
Observations of environmental conditions

Direct Observation
Observations of behaviors in specified environments

Photos & Videos
Images of people, places, and projects

GIS Mapping
Site initiated use of COGIS for map generation

Mixed-Methods Approach

Other Methods & Tools
Site initiated use of tools and resources (Assessment & Evaluation Toolkit)

Cross-site

Site by site
Green LW. Making research relevant: if it is an evidence-based practice, where’s the practice-based evidence? Family Practice 2008; 1-5.
**HKHC Data Analysis: Intervention Reach**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population Reach</strong></td>
<td>Estimated size of population reached by the intervention</td>
<td>• Very small populations (&lt; 2,500)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Small populations (2,500 – 9,999)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Medium populations (10,000 – 49,999)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Large populations (≥ 50,000)</td>
</tr>
<tr>
<td><strong>High-Risk Population Reach</strong></td>
<td>Estimated size of high-risk population reached by the intervention</td>
<td>• &lt; 25% racial, ethnic, or poverty populations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 25% to &lt; 50% racial, ethnic, or poverty populations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 50% to &lt; 75% racial, ethnic, or poverty populations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ≥ 75% racial, ethnic, or poverty populations</td>
</tr>
</tbody>
</table>
## HKHC Data Analysis: Intervention Scale

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Measures, Ratings, or Algorithms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>Size of intervention setting</td>
<td># of feet (active transportation)</td>
</tr>
<tr>
<td></td>
<td></td>
<td># of sq. feet (parks and play spaces)</td>
</tr>
<tr>
<td></td>
<td></td>
<td># of staff (child care standards)</td>
</tr>
<tr>
<td><strong>Accessibility</strong></td>
<td>Access to intervention setting</td>
<td>• Annual hours of operation / Total hours in a year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(child care standards, parks and play spaces)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 100% access (active transportation)</td>
</tr>
<tr>
<td><strong>Effect</strong></td>
<td>Direct or indirect effects on health outcomes</td>
<td>• Effect on healthy eating or active living</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Effect on intervention (e.g., delivery, sustainability)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Effect on knowledge, skills, attitudes, abilities</td>
</tr>
<tr>
<td><strong>Applicability</strong></td>
<td>High-risk populations</td>
<td>• Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• No</td>
</tr>
<tr>
<td><strong>Scale</strong></td>
<td>Extent of the intervention’s influence</td>
<td>Size X Accessibility X Effect X Applicability</td>
</tr>
</tbody>
</table>
## HKHC Data Analysis: Intervention Implementation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Measures, Ratings, or Algorithms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage</strong></td>
<td>Stage of implementation</td>
<td>• Policy or practice adopted&lt;br&gt;• Funds allocated to change/modification&lt;br&gt;• Implementation of change/modification&lt;br&gt;• Enforcement/maintenance of change/modification</td>
</tr>
<tr>
<td><strong>State</strong></td>
<td>State of completion</td>
<td>• Partially complete&lt;br&gt;• Fully complete</td>
</tr>
<tr>
<td><strong>Quality</strong></td>
<td>Quality of implementation</td>
<td>• Low quality&lt;br&gt;• High quality</td>
</tr>
<tr>
<td><strong>Inclusiveness</strong></td>
<td>Inclusion of residents in decision-making and implementation</td>
<td>• Uni-directional input (little or none from residents)&lt;br&gt;• Some bi-directional input&lt;br&gt;• Full bi-directional input</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
<td>Strength of the intervention’s execution</td>
<td>Stage X State X Quality X Inclusiveness</td>
</tr>
</tbody>
</table>
## HKHC Data Analysis: Intervention Dose

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Algorithms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose (general population)</td>
<td>Intervention potency for the general population</td>
<td>Scale (general population) X Implementation</td>
</tr>
<tr>
<td>Dose (high-risk population)</td>
<td>Intervention potency for high-risk populations</td>
<td>Scale (high-risk population) X Implementation</td>
</tr>
</tbody>
</table>
## HKHC Data Analysis: Intervention Impact

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Algorithms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Impact</td>
<td>Likely population impact of the intervention</td>
<td>Dose (general population) X Population Reach</td>
</tr>
<tr>
<td>High-Risk Population Impact</td>
<td>Likely high-risk population impact of the intervention</td>
<td>Dose (high-risk or general population) X High-Risk Population Reach</td>
</tr>
</tbody>
</table>
HKHC Community Partnerships (n = 49)

Population size
- Median = 227,282
- Range = 731 – 3,971,659

Geographic Scale
- Unincorporated Rural
- Micropolitan areas
- Metropolitan areas
- Counties
- Multiple counties

High-risk populations
- African American
  - Median = 14.7%
  - Range = 0.2% – 60.2%
- Hispanic/Latino
  - Median = 10.6%
  - Range = 1.1% – 99.1%
- Lower Income
  - Median = 18.9%
  - Range = 0.1% – 43.3%
- Non-English Speaking
  - Median = 17.1%
  - Range = 2.3% – 89.6%
HKHC Subpopulations (State, County/City, Organization; n = 537)

**Number of subpopulations**
- Median = 9
- Range = 1 – 48

**Population size**
- Median = 14,907
- Range = 5 – 306,603,772

These data were the basis for the intervention setting populations.

**High-risk populations**

- **African American**
  - Median = 24.5%
  - Range = 0.0% – 97.6%

- **Hispanic/Latino**
  - Median = 18.0%
  - Range = 0.0% – 99.1%

- **Lower Income**
  - Median = 22.4%
  - Range = 0.0% – 97.7%

- **Non-English Speaking**
  - Median = 53.0%
  - Range = 0.0% – 91.3%
HKHC Policy, Practice, and Environmental Changes

- **Active Transportation**: 100% Policy changes, 0% Practice changes, 0% Environmental changes
- **Parks and Play Spaces**: 100% Policy changes, 10% Practice changes, 0% Environmental changes
- **Child Care PA Stds**: 0% Policy changes, 0% Practice changes, 100% Environmental changes

Legend:
- Blue: Policy changes
- Red: Practice changes
- Green: Environmental changes
HKHC Levels of Policy, Practice, and Environmental Changes

<table>
<thead>
<tr>
<th>Level</th>
<th>Active Transportation Examples (n = 687)</th>
<th>Parks &amp; Play Spaces Examples (n = 145)</th>
<th>Child Care PA Standards Examples (n = 967)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1 Community-scale (larger)</td>
<td>12%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Environment (Miles of Bike Lanes)</td>
<td>Practice (Budget Allocation for Park Maintenance)</td>
<td>Policy (Child Care Licensing Regulations)</td>
</tr>
<tr>
<td>Level 2 Intervention setting-scale</td>
<td>18%</td>
<td>40%</td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td>Sidewalks</td>
<td>Zoning Land for Park</td>
<td>Physical Activity Curriculum</td>
</tr>
<tr>
<td></td>
<td>Speed Limits</td>
<td>New Playground</td>
<td>Hours of Operation</td>
</tr>
<tr>
<td></td>
<td>Transit Services</td>
<td>ADA Access</td>
<td></td>
</tr>
<tr>
<td>Level 3 Part of intervention setting</td>
<td>70%</td>
<td>50%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>Bike</td>
<td>Recreation Program</td>
<td>Amenities (Outdoor Water Fountains, Trees)</td>
</tr>
<tr>
<td></td>
<td>Parking/Storage</td>
<td>Financial Assistance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transit Stop</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Population Reach of PPEs within Intervention Settings

Very small populations (<2.500)
Small populations (2,500-9,999)
Medium populations (10,000-49,999)
Large populations (>50,000)
High-Risk Population Reach of PPEs within Intervention Settings

- **Active Transportation**: < 25%
- **Parks and Play Spaces**: 25% to < 50%
- **Child Care PA Stds**: 50% to < 75%
- **> 75%**: 25% to < 50%

- **< 25% racial, ethnic, or poverty populations**: < 25%
- **25% to < 50%**: 25% to < 50%
- **50% to < 75%**: 50% to < 75%
- **> 75%**: > 75%
## HKHC Policy, Practice, and Environmental Changes within Intervention Settings

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Active Transportation Settings Mean (Range)</th>
<th>Parks &amp; Play Spaces Settings Mean (Range)</th>
<th>Child Care PA Standards Settings Mean (Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy, practice, or environmental changes</td>
<td>3.69 (1.00-189.00)</td>
<td>1.84 (1.00-20.00)</td>
<td>2.61 (1.00-9.00)</td>
</tr>
<tr>
<td>Scale – gen. population</td>
<td>13.87 (0.01-100.00)</td>
<td>12.27 (0.00-100.00)</td>
<td>9.39 (0.09-100.00)</td>
</tr>
<tr>
<td>Scale – high-risk pop.</td>
<td>13.87 (0.01-100.00)</td>
<td>12.30 (0.00-100.00)</td>
<td>9.39 (0.09-100.00)</td>
</tr>
<tr>
<td>Implementation</td>
<td>0.42 (0.08-1.00)</td>
<td>0.50 (0.08-1.00)</td>
<td>0.16 (0.04-0.50)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>186</td>
<td>79</td>
<td>370</td>
</tr>
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## HKHC Policy, Practice, and Environmental Changes within Intervention Settings

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<th>Child Care PA Standards Settings Mean (Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose – gen. population</td>
<td>11.29 (0.00-149.49)</td>
<td>5.58 (0.00-50.00)</td>
<td>3.95 (0.03-33.00)</td>
</tr>
<tr>
<td>Dose – high-risk pop.</td>
<td>11.29 (0.00-149.49)</td>
<td>5.61 (0.00-50.00)</td>
<td>3.95 (0.03-33.00)</td>
</tr>
<tr>
<td>Impact – gen. population</td>
<td>9.61 (0.00-149.49)</td>
<td>4.55 (0.00-49.50)</td>
<td>3.71 (0.01-24.75)</td>
</tr>
<tr>
<td>Impact – high-risk pop.</td>
<td>6.87 (0.00-81.54)</td>
<td>2.88 (0.00-25.00)</td>
<td>2.09 (0.01-33.00)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>186</strong></td>
<td><strong>79</strong></td>
<td><strong>370</strong></td>
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</table>
Implications for Policy and Practice

- Increases understanding of ways to “count” policy, practice, and environmental changes in the context of intervention reach, dose, and impact
- Offers measures for reach, dose, and impact of policy, practice, and environmental changes are feasible and can be systematically collected
- Analyzes quantitative and qualitative data to facilitate comparisons across intervention strategies and intervention settings
- Complements other research and evaluation work in the field to measure the effectiveness of healthy eating and active living intervention strategies
Active Living By Design Products

• Growing a Movement: Healthy Kids, Healthy Communities Final Report
  www.activelivingbydesign.org/resources/growing-a-movement
• Lessons for Leaders: Navigating the Process of Healthy Community Change
  www.activelivingbydesign.org/lessons-for-leaders
• Investing in Healthy Community Change: A Resource for Funders
  www.activelivingbydesign.org/resources/investing-in-healthy-community-change

In addition, please visit their recently updated website with a new design and structure that makes it easier to find these new resources and other helpful information.
www.transtria.com/hkhc.php

- Logic model
- Group Model Building Handbook
- Enhanced Evaluation tools, protocols, and training
- Value Framework Manual and Strategy Briefs
- 49 case reports
- 49 causal loop diagram storybooks


- Background, Collaboration, Community Dashboard, and Methods articles
- Four Enhanced Evaluation community briefs
- Four Group Model Building community briefs
- Cross-site Enhanced Evaluation and Partnership and Community Capacity briefs
- Cross-site Group Model Building and Implementation and Impacts articles
Questions?
Thank you!

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