Priorities for Improved Survival: ICPD Beyond 2014

Promoting Healthy Lifestyles: What Works?

United Nations Expert Group Meeting
UN Population Division
October 21, 2013

Rachel A. Nugent, Ph.D.
University of Washington
"the process of enabling people to increase control over, and to improve, their health. It moves beyond a focus on individual behavior towards a wide range of social and environmental interventions."

WHO
Types of Health Promotion

1. Information, education, communication
2. Regulatory actions
3. Environmental/engineering/structural
4. Incentive-based policies

In the ...

...community, school, workplace, population
Domains and Sources of NCD Health Risk

- Tobacco: smoking, chewing
- Alcohol: binge drinking, low quality liquor
- Diet: salt, transfats, satfats, sugar, low F&V, low coarse grains and nuts, low diet diversity
- Physical Activity: less than 30 minutes per day of moderate activity at least 5 days per week
What’s Effective for Tobacco?

- Taxes
- Subsidies for cessation
- Bans
- Marketing restrictions
### Interventions Effectiveness

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large, regular increases in excise taxes, adjusted for inflation and affordability</td>
<td>10% higher price reduces consumption ~4% (2% quit, 2% reduce amount smoked)</td>
</tr>
<tr>
<td>Complete bans on tobacco advertising and promotion</td>
<td>Reduces consumption by ~15% in LMICs</td>
</tr>
<tr>
<td>Complete ban on smoking in public places</td>
<td>Reduces consumption by 3-14%</td>
</tr>
<tr>
<td>Cessation support for smokers, brief medical advice, pharmacotherapy</td>
<td>At 6 months, brief medical advice doubles quit rates (from 2% unaided to 4%); drugs triple quit rates (to about 8-10%)</td>
</tr>
<tr>
<td>Anti-smuggling technologies</td>
<td>10% higher spending on anti-smuggling efforts reduces smuggling by 5% and consumption by 2%</td>
</tr>
</tbody>
</table>

Summary from Prabhat Jha, CGHR, 2013
SHARE OF THE WORLD POPULATION COVERED BY SELECTED TOBACCO CONTROL POLICIES, 2010

Note: The tobacco control policies depicted here correspond to the highest level of achievement at the national level; for the definitions of these highest categories refer to Technical Note 1.
Plain packaging (Australia) and pictorial warning labels (Canada)
People’s Republic of China
Distribution of marginal taxes and health benefits by SES group

**Low SES group:**
Pays **6.4%** of increased taxes but receives **32.1%** of health benefits: hence, health/tax ratio: **5.02**

% of income: Net gain for lowest 2 quintiles, net loss for highest 3 quintiles

Source: ADB 2013, Verguet 2013
What’s Effective for Alcohol?

1. Restrictions on use
2. Restrictions on driving and drinking
3. Restrictions on advertising and sponsorships
4. Taxation

Data from Ramanan Laxminarayan, July 2013
What’s Effective for Diet?

1. Sustained, community-based information coupled with labeling and regulation
2. Marketing regulations for children
3. School campaigns
<table>
<thead>
<tr>
<th>Media and Education</th>
<th>Sustained, multi-mode campaigns focused on specific foods/drinks, either alone (IIa B) or as part of larger multi-component strategies. (I B) ‡§</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labeling and Information</td>
<td>Mandated nutrition facts, front-of-pack labels/icons, or menu labeling to influence <em>industry</em> behavior and product formulations. (IIa B) †</td>
</tr>
</tbody>
</table>
| Schools | Multicomponent diet and activity program including classes, teacher training, supportive policies, environmental changes, family components. (I A)†  
School garden programs (IIa A)†; fresh fruit & vegetable programs. (IIa A)† |
| Workplaces | Comprehensive worksite wellness programs for diet, activity, tobacco. (IIa A)†  
Increased availability of healthier options and/or strong nutrition standards, combined with on-site prompts, labels, or icons. (IIa B)† |
| Economic Incentives | Subsidy strategies to lower prices of more healthful foods/drinks. (I A) †  
Tax strategies to increase prices of less healthful foods/drinks. (IIa B) †  
Long-term agricultural and related policy changes on infrastructure to facilitate production, transportation, marketing of healthier foods. (IIa B) † |
| Bans and Mandates | Restrictions on marketing of less healthy foods/drinks to youth on TV (I B)†, near schools and public places (IIa B)†, and on packages (IIa B)†.  
Direct bans (e.g., sodium, trans fat) or mandates (e.g., vegetable oils). (I B)†§ |

Mozaffarian et al, AHA Scientific Statement, Circulation 2012
**What NOT to do**  
*(unless, perhaps, it’s free)*

<table>
<thead>
<tr>
<th>Media and Education</th>
<th>• Shorter-term, community media/education efforts that target multiple CVD behaviors and risk factors simultaneously. (IIb B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labeling Information</td>
<td>• Detailed nutrition facts panels, front of pack labels, or menu labelling as a means to influence consumer behavior. (III B)</td>
</tr>
</tbody>
</table>
| Schools             | • School-based education alone, without other components. (IIb A)  
                     | • Restricted accessibility (times, locations) to vending machines. (IIb B)  
                     | • Promotion of water use alone. (IIb B) |
| Workplaces          | • Worksite cafeteria or vending machine labels or prompts alone. (IIb B) |
What’s Effective for PA?

1. Community-based and multi-component
2. School-based
3. Structural and environmental
Community-wide Campaigns

- Involve many community sectors
- Include highly visible, broad-based, multicomponent strategies
- May also address other chronic disease risk factors, particularly diet and smoking

Examples:
- Wheeling Walks
- Agita Sao Paulo
- Stanford Heart Disease Prevention Program

Credit: Tom Schmidt, CDC, 2013
# Overview of Effective, Promising, and Emerging Strategies to Promote Physical Activity in Communities

<table>
<thead>
<tr>
<th>Approaches</th>
<th>Strategy</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campaigns and Informational</td>
<td>Point-of-decision Prompts</td>
<td>EFFECTIVE</td>
</tr>
<tr>
<td></td>
<td>Community-wide Campaigns</td>
<td>EFFECTIVE/PROMISING</td>
</tr>
<tr>
<td></td>
<td>Mass media Campaigns</td>
<td>PROMISING</td>
</tr>
<tr>
<td></td>
<td>Short Informational Messages</td>
<td>EMERGING</td>
</tr>
<tr>
<td>Behavioral and Social</td>
<td>School-based Strategies</td>
<td>EFFECTIVE</td>
</tr>
<tr>
<td></td>
<td>Social Support in Communities</td>
<td>EFFECTIVE</td>
</tr>
<tr>
<td></td>
<td>Provider-based Counseling</td>
<td>PROMISING</td>
</tr>
<tr>
<td></td>
<td>Community PA Classes</td>
<td>PROMISING</td>
</tr>
<tr>
<td>Policy and Environmental</td>
<td>Community-scale Urban Design</td>
<td>EFFECTIVE</td>
</tr>
<tr>
<td></td>
<td>Street-scale Urban Design/Land use</td>
<td>EFFECTIVE</td>
</tr>
<tr>
<td></td>
<td>Transportation Policies and Practice</td>
<td>EMERGING</td>
</tr>
<tr>
<td></td>
<td>Community-wide Planning and Policies</td>
<td>EMERGING</td>
</tr>
</tbody>
</table>

Source: Tom Schmidt, CDC, July 2013
What do we know about Cost-Effectiveness for PA?

- Very few CEA of PA interventions have been completed, fewer still using the most widely accepted methods (Cost / QALY)
- Cost / QALY of PA interventions are consistently in “CE” range
- Most studies have focused on high risk or older populations or work sites
- Indirect cost benefits of PA are generally greater than direct medical benefits, but are even less well studied
The Frontiers

• Built environment
• E-technology
• “Crowding-in” multiple sectors
• Private sector involvement and investment
Implications

• Economic incentives are well supported, perhaps especially effective in developing countries, but they are under-utilized. However, need some enabling conditions (ex Vitality).

• Culture matters. Community-based campaigns work well in community-oriented societies without major barriers (crime, low accessibility).

• Importance of targeting: youth programs different from geriatric programs, etc.

• At the population level, even modest shifts in risk behaviors and risk factors substantially alter health outcomes and disease risk.
Conclusions

• Health promotion for NCD control is generally low-cost (regulation, taxation, IEC), except for structural change.

• However, often ineffective unless multi-component and sustained. Dx the problem: lack of information or behavioral choice?

• Need to better evaluate benefits and costs of large-scale change.

• Need a coherent social agenda to change norms, supported by enabling physical environment, and alignment of policies across sectors.
Priorities for Improved Survival: ICPD Beyond 2014

THANK YOU

RNugent2@uw.edu
www.dcp-3.org
### Examples of Strategies with Less Evidence

<table>
<thead>
<tr>
<th>Environment</th>
<th>Economic Incentives</th>
<th>Bans and Mandates</th>
</tr>
</thead>
</table>
| • Greater availability of supermarkets near homes. (IIa B)†‡  
  • Greater availability of grocery stores near homes. (IIb B)  
  • Reduced availability of convenience stores near homes. (IIb B)  
  • Reduced availability of fast food restaurants near homes (IIb B) or schools (IIb B).  
  • Greater availability of local farmers’ markets (IIb B) or community gardens. (IIb C) | • Changes in agricultural subsidies alone to either encourage crops or reduce crops as a means to alter consumption. (IIb C)  
  • Sustained individual financial disincentives for adiposity or poor diets (e.g., higher insurance premiums) or other individual financial incentives to lose weight or improve diet. (IIb C)  
  • Nonsustained individual financial disincentives or incentives related to obesity or diet. (IIb A) | • Mandates to support production of healthier foods. (IIa C). |
Community-scale Urban Design

- Urban design and land-use regulations, policies, and practices
- Walking and biking trails
- Exercise facilities

Examples: Bike and Pedestrian Corridors in Portland, Oregon, USA; Ciclovias in Bogotá, CO
Street-scale Urban Design Strategies

- Pedestrian/bike friendly environments
- Improved access
- Aesthetics
- Safety

Examples:

- Sidewalks
- Continuity of pavement
- Lighting and traffic calming effects
School-based physical education programs in Latin America

- US Community Guide review process conducted on school programs in Brazil, Chile and the US/Mexico border. (GUIA)
- Consistent positive increases in PA levels for all outcomes (PE and transport to school) in 3 randomized trials
- Except for one cohort non-randomized studies showed positive intervention effects

Source: Ribeiro et al 2010, Glb Hth Prom
Community-level, professionally supervised and publicly available programs such as ACP are effective in increasing levels of leisure-time PA.

Offering opportunities for transportation physical activity should be considered as a strategy to increase PA among the poor.

Source: Simoes et al, AJPH, 2009