Public Health Tools: Diarrhea and Death – now Livability?

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Rail~volution
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What is Health?

• Health is the state of complete physical, mental and social well-being and not merely the absence of disease or infirmity - World Health Organization
Healthy Community Design Initiative: Mission

To understand and improve the relationship between community design and health
Community Design and Health

Core Components of Community Design
- Transportation Systems
- Land Use
- Housing
- Parks/Rec

Environmental and Behavioral Impacts
- Air Quality
- Water Quality/Quantity
- Access to Greenspace
- Destination and Transportation Options
- Physical Activity
- Nutrition/Food Access

Related Leading Causes of Death - Adults
- Heart Disease
- Cancer
- Cerebrovascular Disease (Stroke)
- Unintentional Injuries
- Diabetes

Related Leading Causes of Death - Children
- Unintentional Injuries
- Cancer
Public Health Importance

- Annual costs of transportation-related health outcomes (APHA 2010)
  - Obesity and overweight: $142B
  - Air pollution from traffic: $50-80B
  - Traffic crashes: $180B
The 10 Essential Public Health Services
Monitoring Health: Surveillance

- Ongoing, systematic collection, analysis, and interpretation of data
  - Collect mortality, morbidity information
  - Identify risk factors and define affected population

- Community design surveillance
  - Transit, pedestrian, and bicycle injuries
  - Trips and mode share

- Importance
  - Communication of issues
  - Tracking changes
Surveillance – Community Design Integration

- Environmental Public Health Tracking Network
- National surveys
- Benchmarking
  - www.peoplepoweredmovement.org/site/index.php/site/memberservices/C529
Investigation: Epidemiology

- Study of the distribution and causes of health outcomes in specified populations

- Observational studies
  - Cross-sectional
  - Case-control
  - Cohort

- Randomized control trials

Increasing strength of design
Examples


- MacDonald, et al. The Effect of Light Rail Transit on Body Mass Index and Physical Activity. 2010
Linking Community Design to Health

- **Goal to identify causal relationships**
- **Challenges**
  - Creating a defined exposure and outcome
  - Minimize or control bias and confounding
- **CDC Efforts**
  - **Research**
  - Systematic reviews summarize evidence
    - www.thecommunityguide.org
  - Measurement guidance
    - www.cdc.gov/mmwr/preview/mmwrhtml/rr5807a1.htm
Policy Development

- **Health Impact Assessment (HIA)**
  - Collection of procedures and tools by which projects, policies, and programs can be evaluated based on their potential effects on the health of a population, and the distribution of those effects within the population. Gothenburg consensus statement, 1999

- **Steps**
  - Screening
  - Scoping
  - Risk Assessment
  - Recommendations
  - Reporting
  - Evaluation
HIA as a Pre-op Physical for Communities

"Whoa! Watch where that thing lands—we'll probably need it."

http://www.phoenix5.org/humor/CartoonOperation.html
Completed HIAs in the United States 1999–2009 (N = 53)
HIA

- **Efforts**
  - Tracking HIAs
  - Toolkit and education development
  - Capacity building grants, training state and local personnel
  - Opportunities to conduct HIA within other grants

- **Challenges**
  - Need evidence-based decisions, not decision-based evidence
  - Standardization of practice could help
  - Effective communication of uncertainty
  - Engaging decision-makers
Other Policy Development

- **Transportation Policy Recommendations**
  - http://www.cdc.gov/transportation/
  - Expand public transit
  - Ensure safe connections to transit
  - Promote transit-oriented development

- **Model legislation**
  - APA model zoning codes

- **Importance**
  - Can set the direction for multiple projects
Assurance: Evaluation

- **Importance**
  - Helps communicate internally and externally successes
  - Quality improvement

- **Projects**
  - Safe Routes to School
  - Non-motorized Transportation Pilot Program

- **Challenges**
  - Timing
  - Measures
  - Additional activity
Health Impact Pyramid

Socio-Economic Factors

Changing the Context to make Individuals’ Default Decisions Healthy

Long-lasting Protective Interventions

Clinical Interventions

Education

Increasing Population Impact

Increasing Individual Effort Needed

Frieden, AJPH, 2010
What can you do?

- **General**
  - Build relationships
  - Learn how decisions are made
  - Adapt what has worked elsewhere

- **Specific**
  - Use or create surveillance to track progress
  - Investigate areas with problems
  - Consider policy interventions or HIAs
  - Identify opportunities for evaluation
Will 23 lanes be enough?

Proposal would put I-75 among country’s biggest

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It’s wider than an aircraft carrier.
Far wider than the carving on Stone Mountain. Wider than the White House stretched end to end, twice.
It’s the planned I-75, all 23 lanes, coming soon to Cobb County. As currently conceived it’s 388 feet across, wider than a football field is long.

23 LANES: The state Department of Transportation is planning to expand I-75 (below) and I-575 in Cobb and Cherokee counties. The 23-lane stretch would be between Delk and Windy Hill roads on I-75.

Traffic heads north on I-75, just north of I-285, on Thursday. A proposal for the interstate is enough to make a road builder weep with joy, and make others wonder whether it’s overkill.
Thank you