Building a Set of

Common Measures

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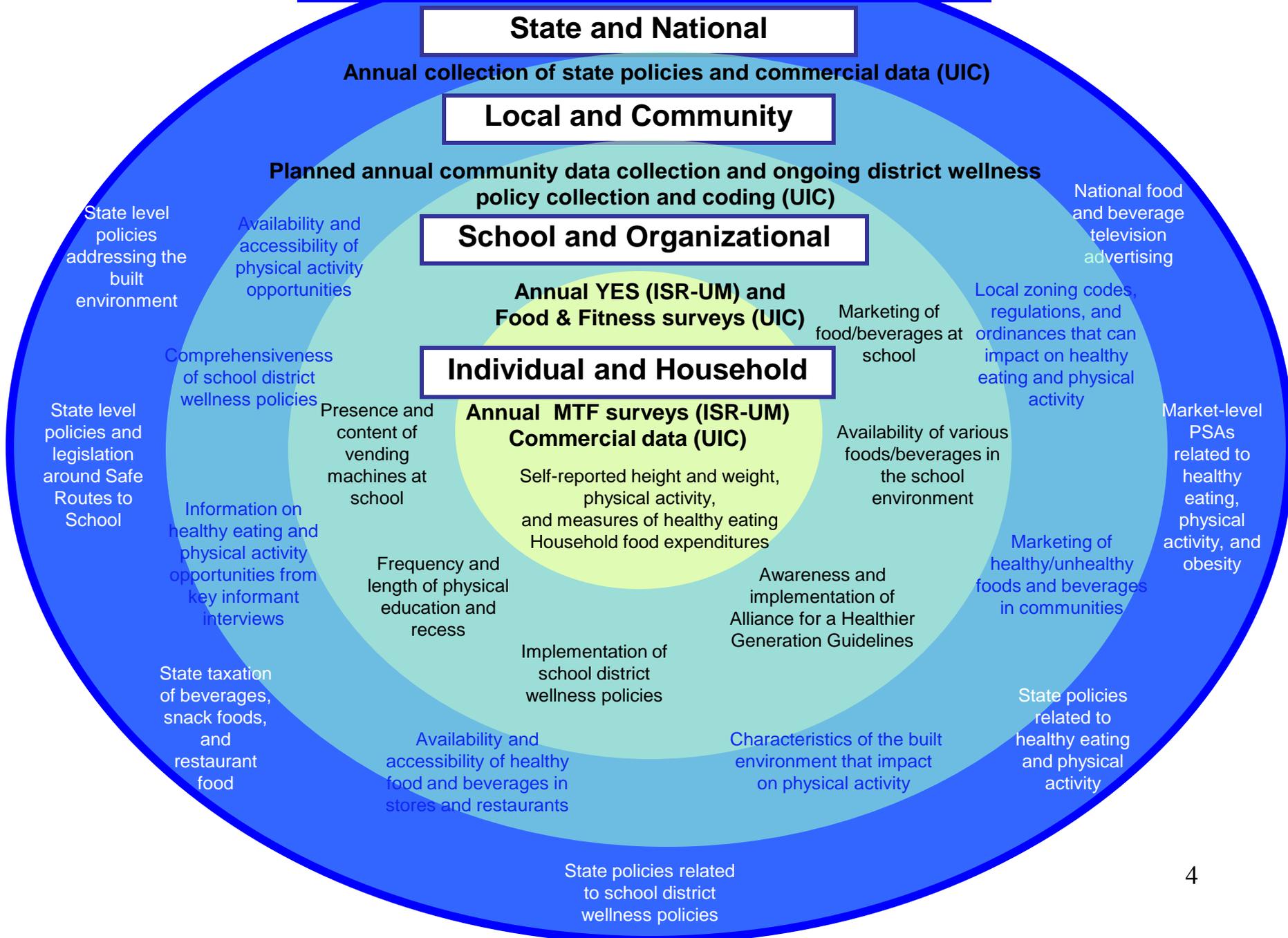
Overview

- Largely draws on measures/sources used in the RWJF-funded Bridging the Gap program

- Initial thoughts on domains

- Examples of potential measures, data sources

- Complication and limitations

Bridging the Gap is …

- A collaborative effort to assess the impacts of *policies*, *programs* & *other environmental factors* on a variety of adolescent health-related behaviors

- An RWJF initiative begun in 1997 with focus on adolescent alcohol, tobacco, and other drug use and related outcomes

- More recently expanded to include youth eating practices, physical activity, and weight outcomes

- Linked to the ongoing, NIDA-funded, *Monitoring the Future* study

Bridging the Gap - Obesity

State and National

Annual collection of state policies and commercial data (UIC)

Local and Community

Planned annual community data collection and ongoing district wellness policy collection and coding (UIC)

School and Organizational

Annual YES (ISR-UM) and Food & Fitness surveys (UIC)

Individual and Household

Annual MTF surveys (ISR-UM) Commercial data (UIC)

Self-reported height and weight, physical activity, and measures of healthy eating Household food expenditures

State level policies addressing the built environment

State level policies and legislation around Safe Routes to School

State taxation of beverages, snack foods, and restaurant food

Availability and accessibility of physical activity opportunities

Comprehensiveness of school district wellness policies

Information on healthy eating and physical activity opportunities from key informant interviews

Presence and content of vending machines at school

Frequency and length of physical education and recess

Implementation of school district wellness policies

Availability and accessibility of healthy food and beverages in stores and restaurants

National food and beverage television advertising

Marketing of food/beverages at school

Local zoning codes, regulations, and ordinances that can impact on healthy eating and physical activity

Availability of various foods/beverages in the school environment

Awareness and implementation of Alliance for a Healthier Generation Guidelines

Characteristics of the built environment that impact on physical activity

Market-level PSAs related to healthy eating, physical activity, and obesity

Marketing of healthy/unhealthy foods and beverages in communities

State policies related to healthy eating and physical activity

State policies related to school district wellness policies

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Bridging the Gap data include …

- *Monitoring the Future Surveys of adolescents*
- *Household food purchases*
- *Surveys of primary and secondary school administrators*
- *School district wellness policies*
- *Community-level observations*
- *Community key informant surveys*
- *Community-level ordinances and regulations*
- *Market and national level television advertising exposure*
- *State-level policies and regulations*
- *Variety of archival data*

Potential Domains for

GIS Application

Potential Domains

- **Healthy Eating**
  - **Access to healthier/less healthy foods**
    - *Availability, pricing*
  - **Marketing**
    - *Advertising, promotion*
  - **Policy**
    - *Statutory, regulatory, voluntary, guidelines*
    - *Implementation and enforcement*

Potential Domains

- **Active Living**
  - **Land use/Community design**
    - *Parks, green space, mixed-use, recreation opportunities*
  - **Transportation**
    - *Public transportation, street connectivity, bike lanes*
  - **Policy**
    - *Zoning laws, statutes, regulations, voluntary policies, community plans*

Potential Domains

- **Schools**
  - **Food environment**
  - **Physical Education & other physical activity**
    - *Recess, intramural/extramural sports*
  - **Policy**
    - *Wellness policies, voluntary guidelines, safe routes to school*

Potential Domains

- **Social Issues**
  - **Crime and violence**
  - **Safety**
  - **Social capital**
  - **Family, community economics**
    - *Income, poverty*
  - **Community demographics**

Potential Domains

- **Outcomes**
  - **Diet**
  - **Activity**
  - **Weight outcomes**
    - *BMI, indicators for obesity*

Potential Measures for GIS Application: Healthy Eating

Potential Measures

Healthy Eating

- **Availability measures**
  - **from business list data**
    - *Dun & Bradstreet Marketplace data*
    - *Info USA business lists*
    - *Other business lists*
  - **collected observationally**

Potential Measures

Healthy Eating

- **Availability measures**
  - **limitations/complications**
    - *Expensive to obtain*
    - *High business turnover*
    - *Misclassification of businesses*
    - *Less than perfect indicator of what's available*

Potential Measures

Healthy Eating

- **Pricing measures**
  - **from archival sources**
    - *ACCRA Quarterly reports*
    - *AC Nielsen and IRI scanner-based data systems (market-level, household)*
  - **collected observationally**
    - *e.g. Karen Glantz' NEMS*

Potential Measures

Healthy Eating

- **Pricing measures**
  - **limitations/complications**
    - *Limited set of products*
    - *Limited representation of stores (store-based scanner systems)*
    - *Limited geographic representation (ACCRA, HomeScan)*
    - *"regular" vs. "special" prices*

Potential Measures

Healthy Eating

- **Food marketing**
  - **Advertising**
    - *television, radio*
    - *print, billboard, outdoor*
    - *point-of-sale*
    - *Internet, cell phone, viral and other emerging forms*

Potential Measures

Healthy Eating

- **Food marketing**
  - **Promotions**
    - *Coupons, cents off specials, quantity discounts, other price reducing*
  - **Others**
    - *Sponsorship, entertainment tie-ins, product placement*

Potential Measures

Healthy Eating

- **Food marketing measures**
  - **from archival sources**
    - *Nielsen Media Research and other measures of average market-level exposure for some types (e.g. TV ads)*
  - **collected observationally**
    - *Prevalence, frequency, content*

Potential Measures

Healthy Eating

- **Marketing measures**
  - **limitations/complications**
    - *Existing systems capture only some measures of marketing*
    - *Expensive*
    - *Limited geographic representation (large market areas, national)*
    - *Changing rapidly*

Potential Measures

Healthy Eating

- **Policy measures**
    - menu labeling statutes
    - limits on food/beverage marketing
    - bans on fast food restaurants
    - tax breaks for full-service supermarkets to locate in food deserts
- **Require original legal research**

Potential Measures

Healthy Eating

- **Policy measures**
  - **limitations/complications**
    - *Comprehensive databases on state legislation underway*
    - *No comprehensive source of local policies*
    - *No sources of information on policy implementation and enforcement*

Potential Measures for

GIS Application:

Active Living

Potential Measures

Active Living

- **Land use/community design**
  - **access to parks/green space**
  - **access to recreation opportunities**
  - **mixed land use**
  - **sprawl**

Potential Measures

Active Living

- **Land use/community design – data sources**
  - business list data (for some recreation opportunities)
  - NavTeq, TeleAtlas (for proximity to parks, some recreation)
- **Could also be collected observationally**
  - aerial photographs

Potential Measures

Active Living

- **Land use/community design measures**
  - **limitations/complications**
    - *Expensive to obtain*
    - *Misclassification*
    - *Incomplete*
    - *Amenities, features likely to be important*

Potential Measures

Active Living

- **Transportation measures**
    - **street connectivity**
    - **street classification**
    - **access to public transportation (physical and economic access)**
    - **availability, quality of bike lanes**

Potential Measures

Active Living

- **Transportation data sources**
  - **Census Tiger files, NavTeq, TeleAtlas**
- **Could also be collected observationally**
  - **aerial photographs**

Potential Measures

Active Living

- **Transportation measures**
  - **limitations/complications**
    - *Misclassification*
    - *Need to be frequently updated*
    - *Amenities, features likely to be important*

Potential Measures

Active Living

- **Policy measures**
  - **zoning laws**
  - **community plans**
  - **regional plans**
  - **smart growth policies**
- **Require original legal research**

Potential Measures

Active Living

- **Policy measures**
  - **limitations/complications**
    - *Comprehensive databases on state legislation underway; limited in this area*
    - *No comprehensive source of local policies*
    - *Complexity of zoning laws*
    - *No sources of information on policy implementation and enforcement*

Potential Measures for

GIS Application:

Schools

Potential Measures

Schools – possible measures

- **school district wellness policies, voluntary policies/guidelines, etc.**
- **school food environment**
- **PE and other activity for students**
- **school facilities**
- **shared use agreements**
- **safe routes to school**

Potential Measures

Schools – data options

- – **school administrator surveys**
- – **school observations**
- – **collection/coding of school district wellness policies**
- – **legal research**
- – **archival sources (QED, NCES)**

Potential Measures

Schools

– **limitations/complications**

- *Expensive to obtain comprehensive data*

- *Limitations of survey data*

- *Archival sources limited on measures of interest*

Potential Measures for

GIS Application:

Community Issues

Potential Measures

Community Issues – possible measures
- **crime**
- **traffic safety**
- **social capital**
- **community demographics**
- **population density**
- **economics**

Potential Measures

Community issues – data sources

- **census data on socioeconomic and demographic factors**
- **crime reports**
- **motor vehicle accident reports**
- **property values**
- **news reports**

Potential Measures

Community issues

    – **limitations/complications**

        • *Standardization of sources*

        • *Frequency of updates*

Potential Measures for GIS Application: Outcomes

Potential Measures

Outcomes – possible measures

- **healthy eating**
  - *Fruit and vegetable consumption*
  - *Fast food consumption*
  - *Caloric intake*
- **active living**
  - *Frequency & intensity*
  - *Caloric expenditure*
- **weight outcomes**
  - *BMI, overweight, obese*

Potential Measures

Outcomes – data sources

– **Behavioral Risk Factor Surveillance System**

- *State, sub-state, county level*

– **Additions to other national surveys**

- *Current Population Survey, National Survey of Drug Use in Households*

– **Expansion of other surveys**

- *NHANES, NHIS*

Potential Measures

Outcomes

– **limitations/complications**

- *Very costly*
- *Self-report data*
- *Cross-sectional data*
- *Representativity of data below large geographic areas*

Next Steps

- **Define key domains**
- **Identify priority concepts**
- **Identify key measures**
  - *practical, cost-effective, readily available or feasible to collect*
- **Define potential sources**