

# **Principles and Practice of Community Health Assessment**

Michael A. Stoto, PhD  
Georgetown University and  
Harvard School of Public Health  
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Maple Hill Farm, Hallowell ME

# Learning Objectives

- **Understand the goals, objectives and principles of population health assessment and community health improvement**
- **Apply standard models for community health assessment such as IOM CHIP and MAPP**
- **Choose a set of community health indicators**
- **Analyze and critique a community health profile**

# Outline

***Community health assessment principles***

Community health profiles

Exercise

Case study: Community Health Indicators for the Washington Metropolitan Region

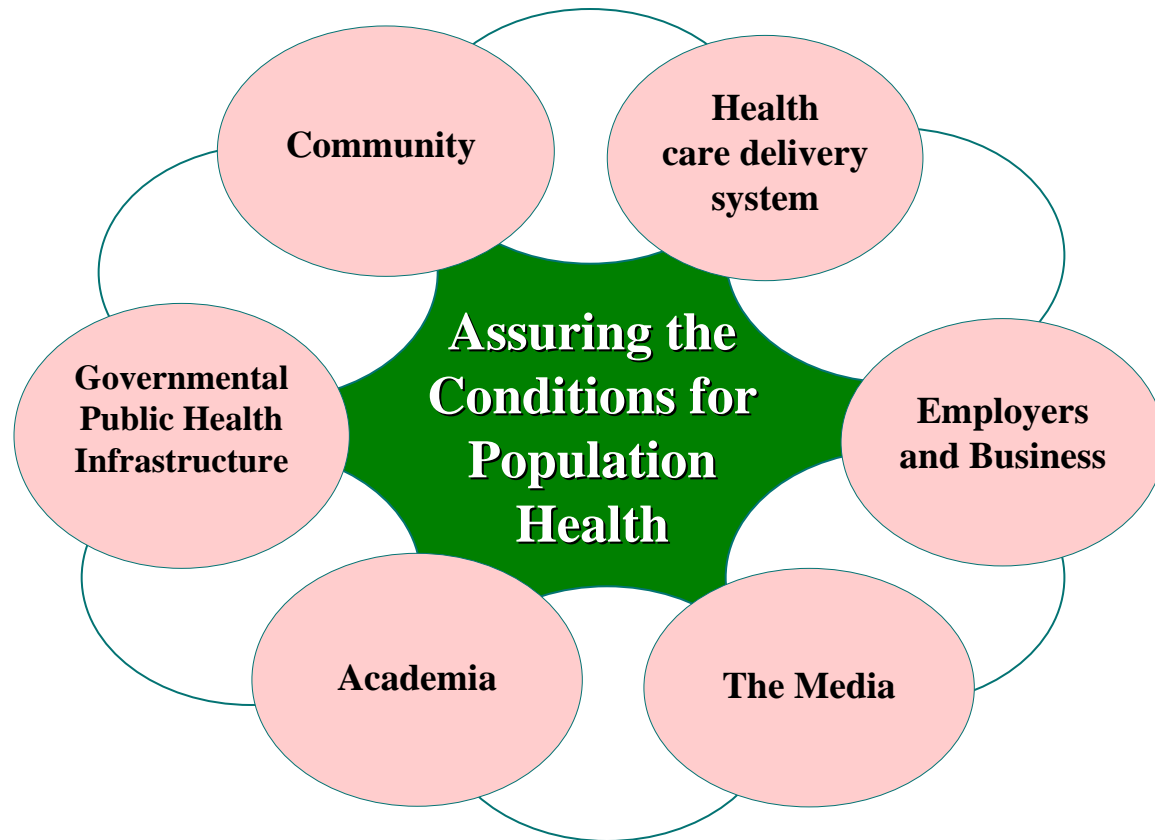
# **“Population Health”**

- **Kindig and Stoddart: The health outcomes of a group of individuals, including the distribution of such outcomes within the group**
- **Characteristics of the population health perspective**
  - **Broader array of the determinants of health than in traditional public health**
  - **Recognition that responsibility for health is diffuse**
- **Management of population health**
  - **Systems perspective, partnerships**
  - **Increasing amounts of public health activities are managed not within but between institutions**

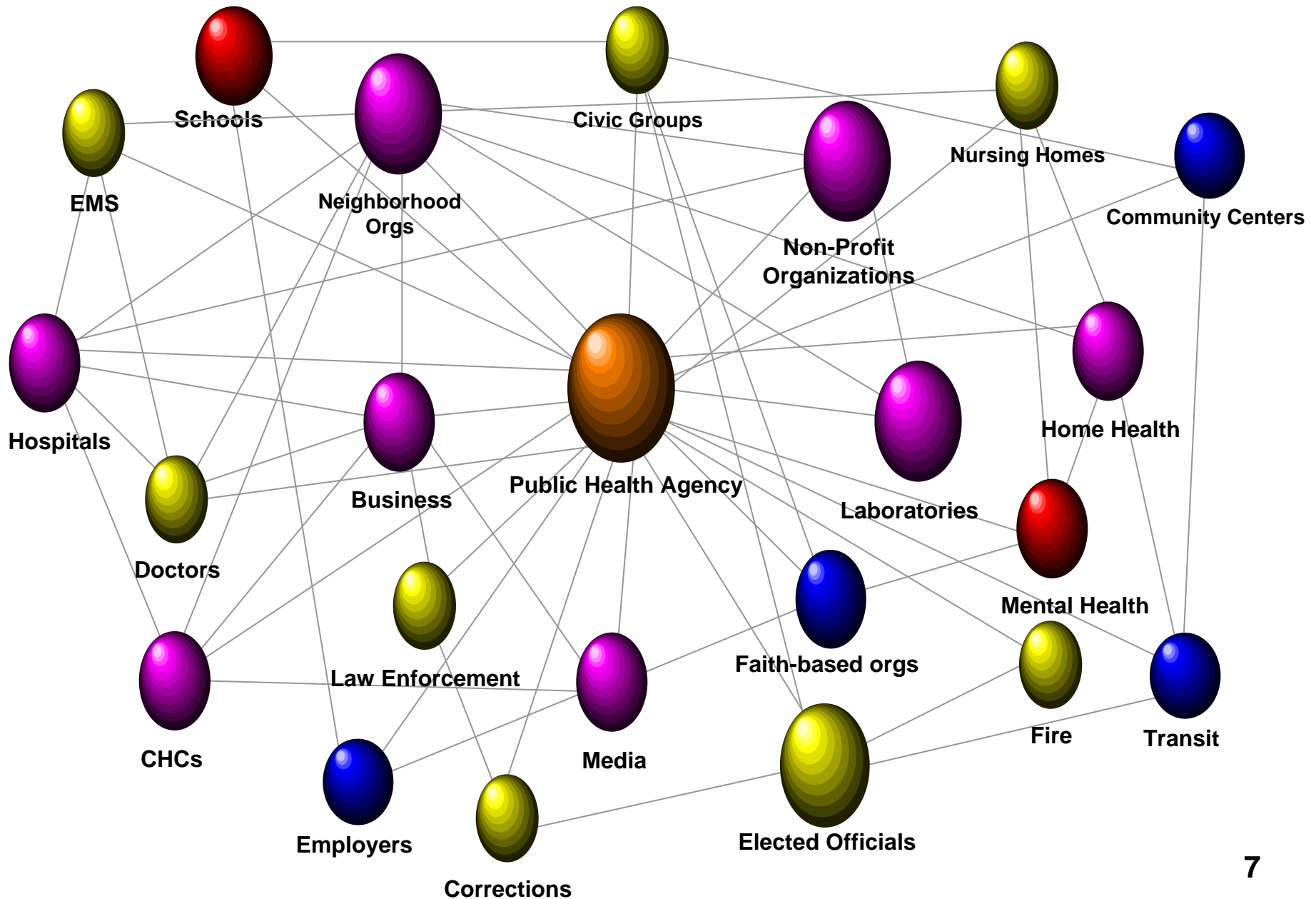
# ***IOM: The Future of the Public's Health in the 21<sup>st</sup> Century***

- **Public health: What society does collectively to assure the conditions for people to be healthy**
- **Multiple determinants of health**
  - **Health of populations and individuals is shaped by a wide range of factors in the social, economic, natural, built, and political environments**
  - **Health care services and biomedical technologies can generally address only the immediate causes of disease**
  - **Healthy policies address education, adequate housing, a living wage, clean air, socio-economic inequalities, etc.**

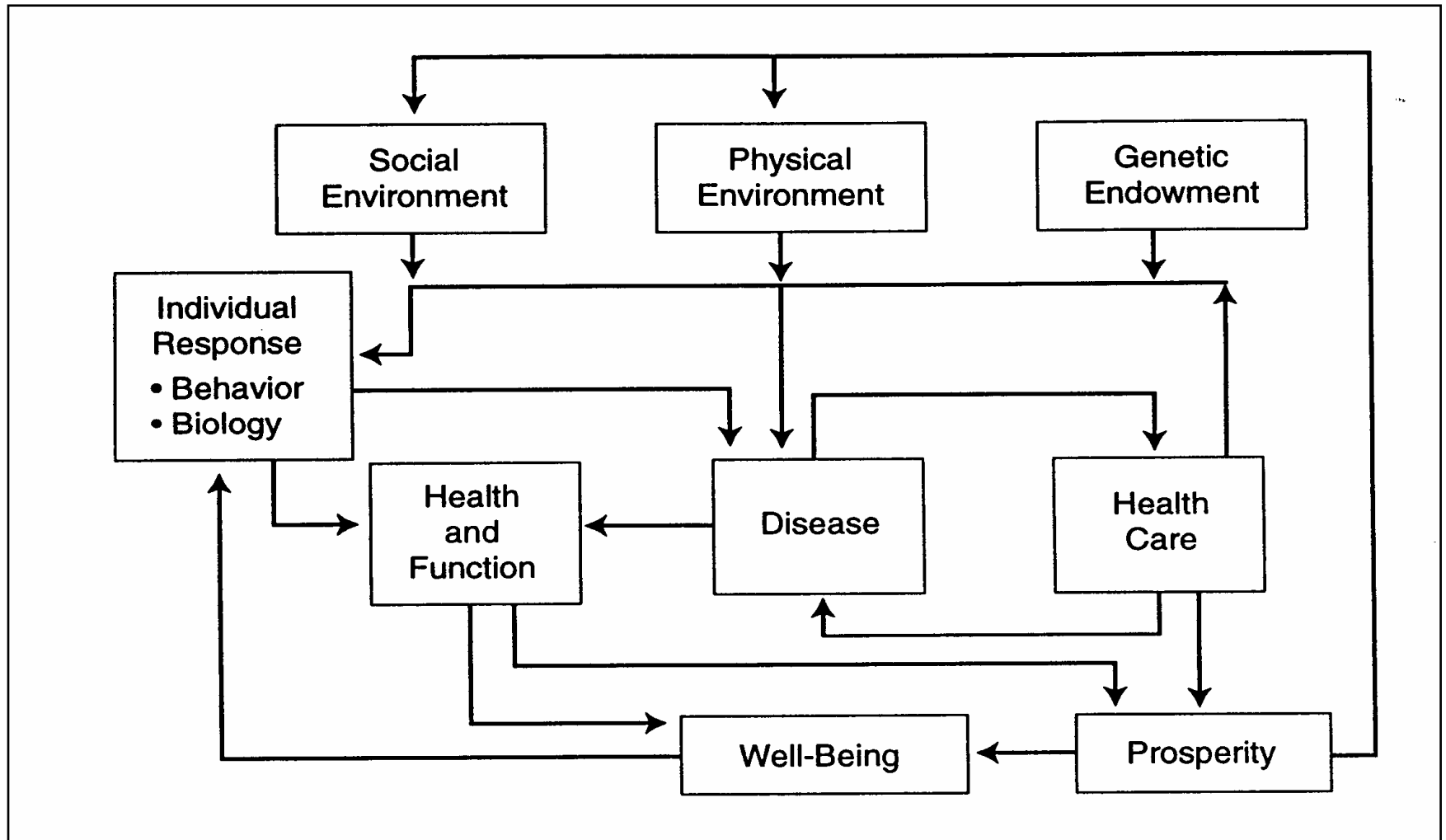
# *The Public Health System*



# The Public Health System



# Evans and Stoddart “Field Model”



# **Core Functions of Public Health**

*The Future of Public Health, IOM, 1988*

## **Assessment**

- **collect, assemble, analyze, and make available information on the health of the community, community health needs**

## **Assurance**

- **assure that services are provided by encouraging, requiring, or providing directly**

## **Policy development**

- **develop comprehensive public health policies using scientific knowledge**

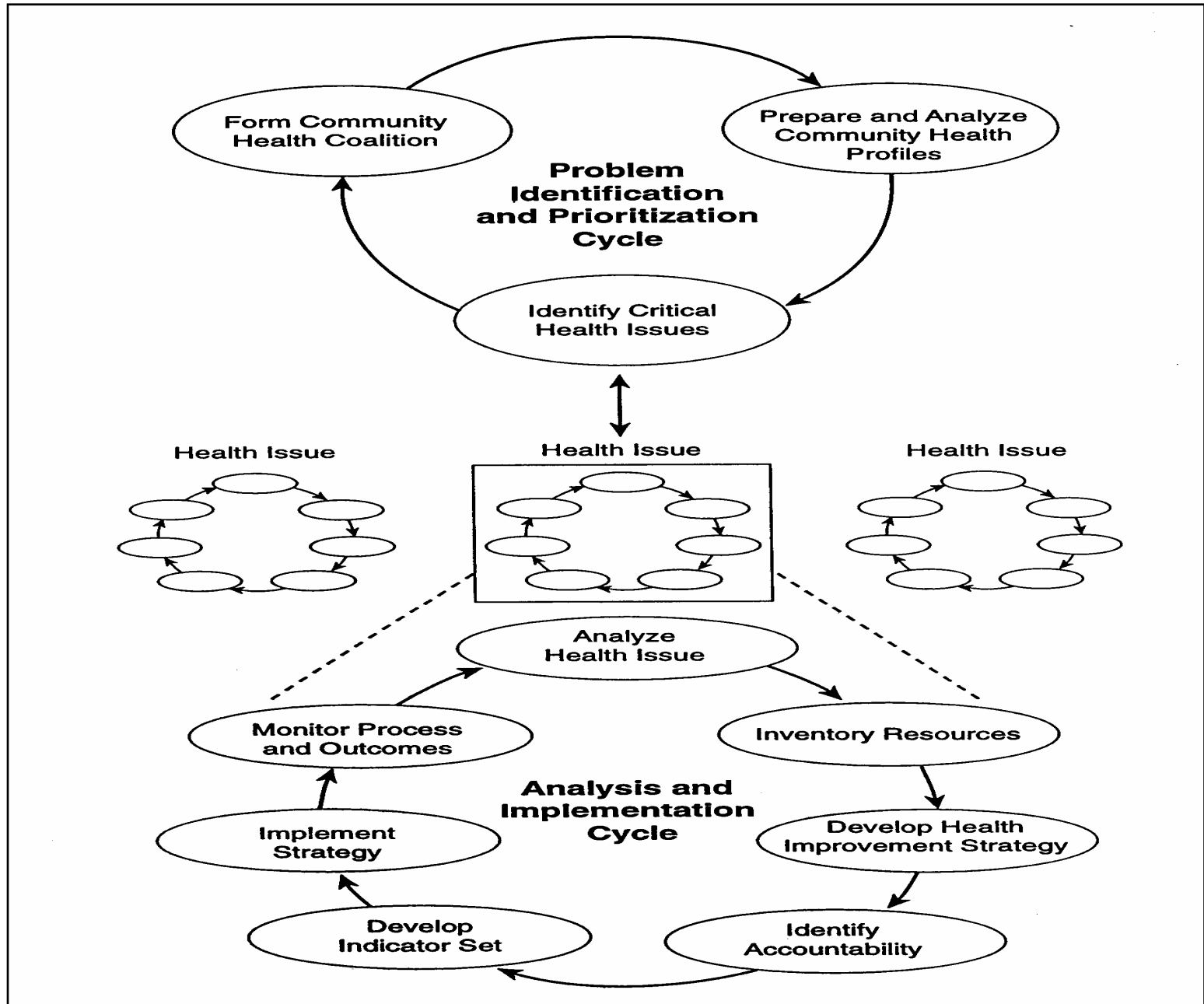
# **Public Health “Assessment”**

- **Includes traditional surveillance activities**
- **Also collecting, assembling, analyzing, and making available information on the determinants of health, health status, and health needs of the community**
- **If the population is the “patient,” PH assessment is the equivalent of clinical diagnosis and monitoring**

# IOM Community Health Improvement Process (CHIP)

*Improving Health in the Community, IOM, 1997*

- The community's health depends on the interaction of many factors, entities, organizations, and interests in the community
- Community health is a ***shared responsibility***
  - Community health assessment
- Specific entities in the community must be ***accountable*** for the actions that they can take to improve community health
  - Entity-specific performance measures



# MAPP: Mobilizing for Action through Planning and Partnerships



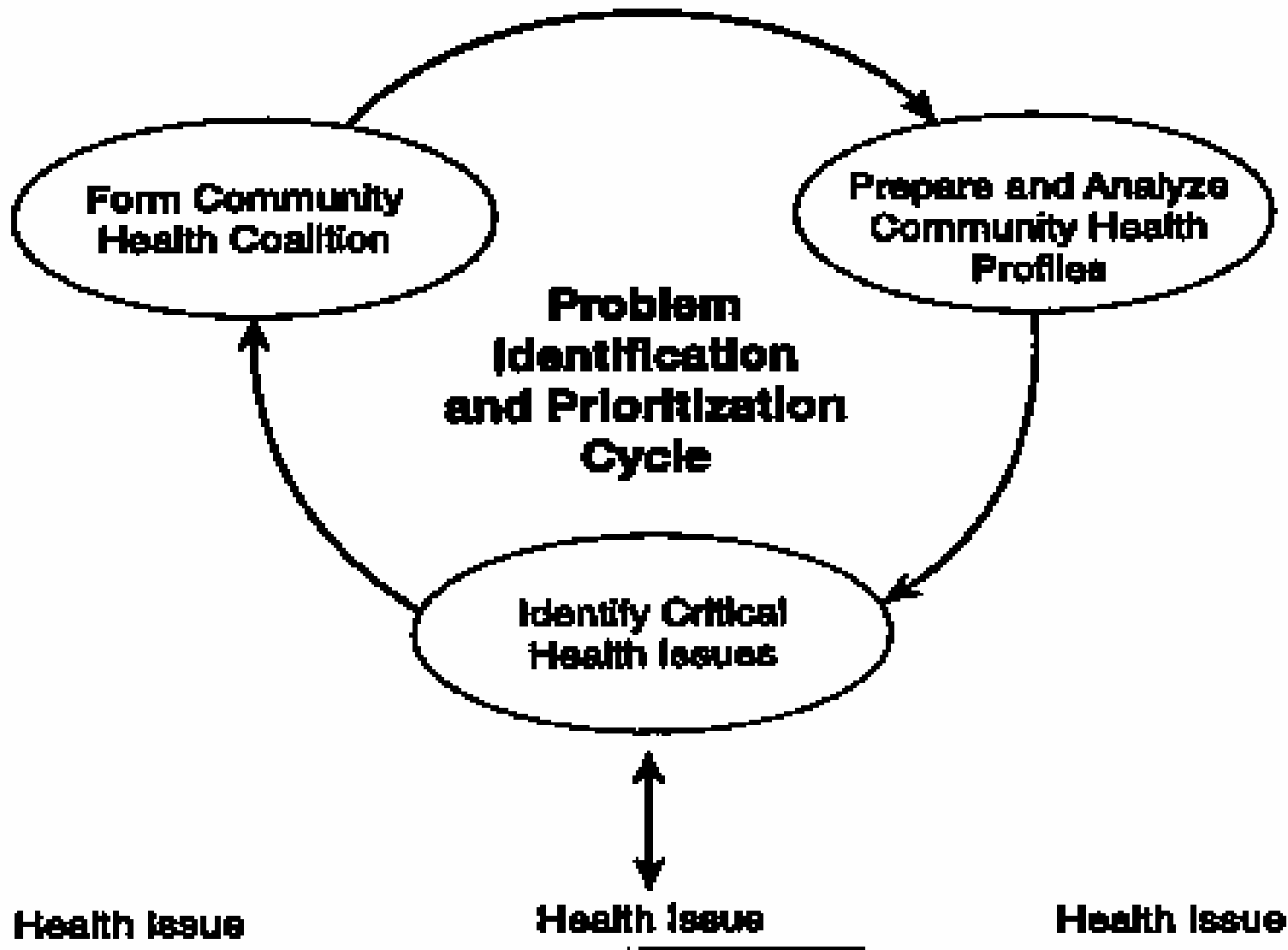
# Outline

Community health assessment principles

***Community health profiles***

Exercise

Case study: Community Health Indicators for the Washington Metropolitan Region





# Framework for Developing Measures

- 1. Clarify the purpose of measurement***
- 2. Identify the concepts to be measured***
3. Identify specific indicators of these concepts
4. Assess validity, reliability, responsiveness to change

# Community Health Profile

Also known as

- Community Health Assessment (CHA)
- Community Health Profile
- Community Health Status Assessment

Set of measures that summarize the health of a community and facilitate comparisons

- over time
- with other communities

Social indicators “theory”

- a *limited yet comprehensive* set
- of *coherent* and *significant* indicators
- that can be *monitored* over time and
- *disaggregated* to relevant social units

# IOM Community Health Profile

## Sociodemographic characteristics

- High school graduation rate
- Median household income

## Health risk factors

- Child immunization coverage
- Adult smoking rate
- Obesity

## Health care resource consumption

- Per capita health care spending

## Health outcomes

- Infant mortality rate by race/ethnicity
- Number of deaths -- preventable causes
- Confirmed child abuse and neglect cases

## Functional status

- Adults in good to excellent health

## Quality of life

- Satisfaction with quality of health care, life in the community

# MAPP Community Health Status Assessment

Who are we and what do we bring to the table?

- Demographic characteristics
- Socioeconomic characteristics
- Health resource availability

What are the strengths and risks in our community that contribute to health?

- Quality of life
- Behavioral risk factors
- Environmental health indicators

What is our health status?

- Social and mental health
- Maternal and child health
- Death, illness and injury
- Infectious disease
- Sentinel events

# Age Group Approach to Health Status Indicators

## Infants (<1)

- Infant mortality rate
- Low birth weight rate
- Prenatal care

## Children (1-14)

- Injury death rate
- Immunization coverage

## Adolescents/Young adults (15-24)

- Injury death rate
- Teenage childbearing
- Substance use (tobacco, alcohol, cocaine)
- STD incidence

## Adults (25-64)

- Premature chronic disease mortality
- Smoking prevalence
- Obesity
- Workplace injuries
- Screening (serum cholesterol, mammography)

## Older adults (65+)

- Activity restrictions
- Immunization
- Dental health

# Critical Issues for Community Health Profiles

30,000 foot view

A broad view of health and its determinants

- Health: state of well-being and the capacity to function in the face of changing circumstances

Capacity to bring together public health, health care, and other stakeholders

- Whole community must be represented

Must respond to community derived issues and priorities

- not just what the “data” show

# Characteristics of “Successful” CHAs

*The New Public Health Agenda*  
(NY State Department of Health, 1998)

- Use of a simple model
- Use of easy-to-use data
- Focus on community assets rather than barriers
- Focus on specific health issues
- Focus on limited geographic areas

# Characteristics of “Useful” CHAs

Myers and Stoto, RAND Health TR-314, 2006

- Content
  - Clearly states goals and purpose
  - Includes most important aspects of the community’s health
  - Allows comparisons with other communities or benchmarks
  - Allows comparisons over time
  - Presents data in meaningful subgroups of population (e.g. to assess health disparities)
  - Focus on positive as well as negative characteristics
  - Sufficiently documents the process and methods used to create the CHA

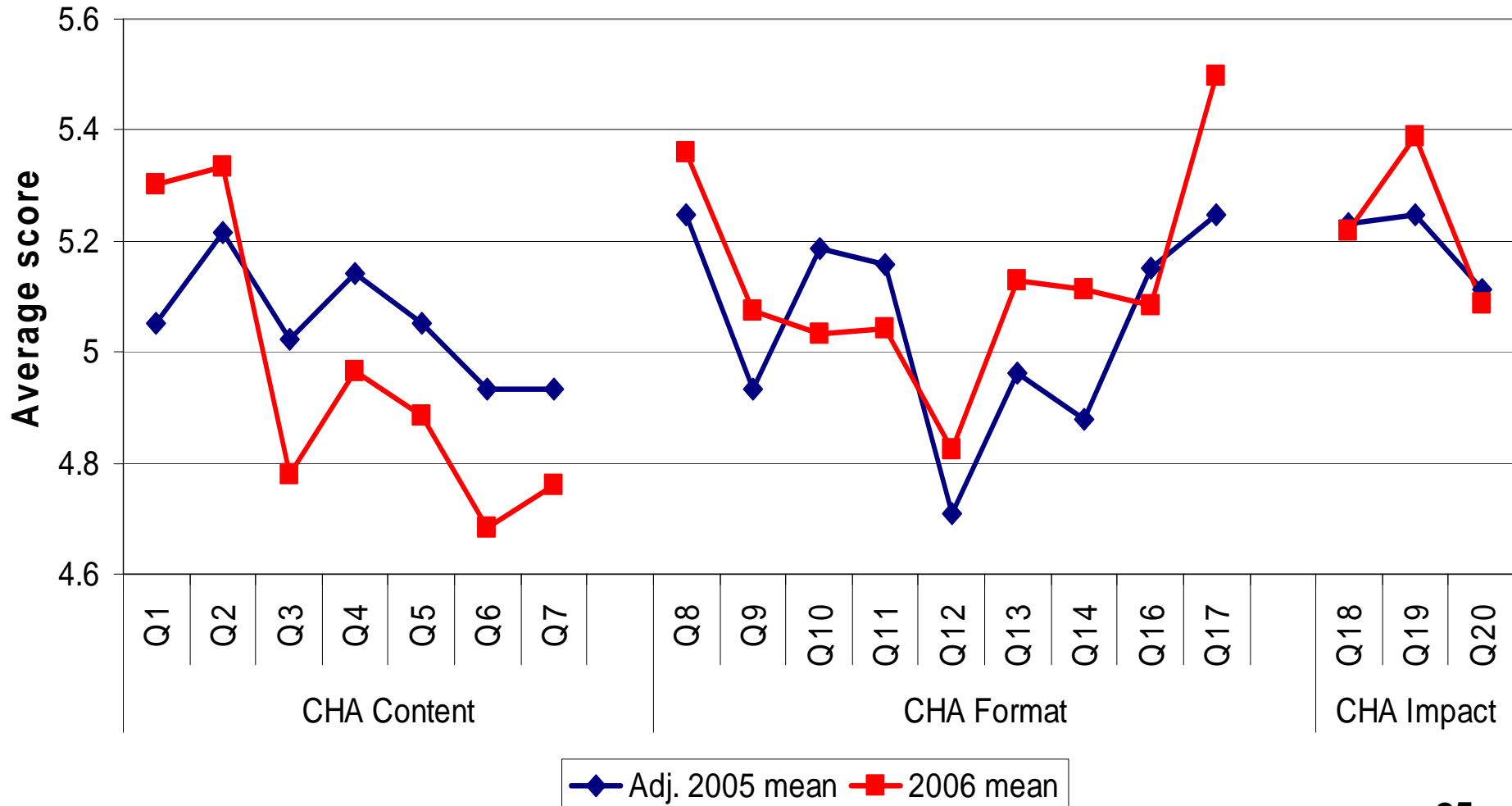
# Characteristics of “Useful” CHAs

Myers and Stoto, RAND Health TR-314, 2006

- Format
  - Consistent format for different topics
  - Includes summary and detailed versions
  - Well organized; easy to find content
  - Easy to understand
  - Clearly indicates the relationships among related indicators
  - Includes narrative and graphic representation of key findings
  - Uses a similar structure or data elements as other community planning tools in use
  - Is available online and includes links
  - Easily reproduced by photocopy
  - Clearly identifies data sources

# Characteristics of “Useful” CHAs

(Stoto et al., *JPHMP*, 2008)



# Outline

Community health assessment principles

Community health profiles

## ***Exercise***

Case study: Community Health Indicators for the Washington Metropolitan Region

# Exercise

**Develop the framework for a community health profile**

- **Identify the community**
- **Clarify purpose and goal**
- **Identify concepts to be included**
  - **Use some logical framework to ensure comprehensiveness**
- **Choose indicators from DHHS District Health Profiles**
  - **Identify additional indicators needed**

# Outline

Community health assessment principles

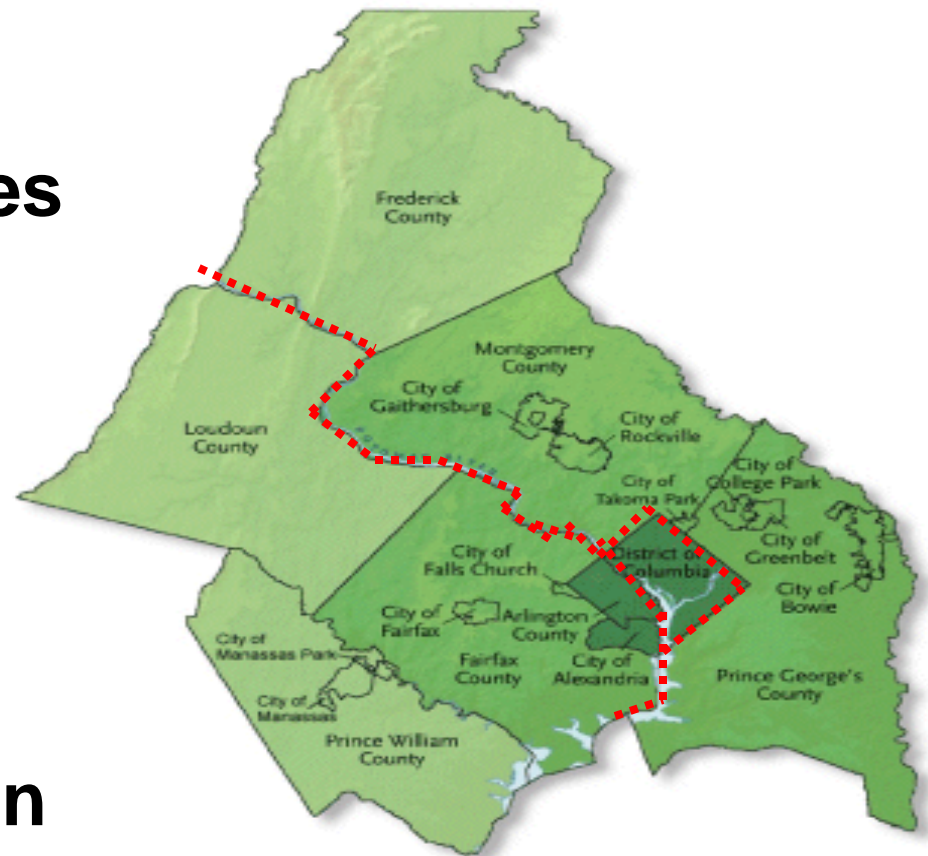
Community health profiles

Exercise

***Case study: Community Health Indicators for the Washington Metropolitan Region***

# The Washington Region

- The region covered by the report includes
  - the District of Columbia
  - 3 counties in Maryland
  - 5 health districts in Virginia



# The Washington Region

- **The Washington region is diverse**
  - **almost half the area's residents are Black, Asian, multiracial, or of Hispanic origin**
  - **14% of the region's adult residents had less than a high-school education (1990)**
  - **growing and multicultural immigrant population throughout the region**
  - **per capita income ranges from \$30,000 in Prince George's County to almost \$47,000 in Arlington (1998)**

# Origins of the Project

- **1995 MWPHA indicators report focusing on six jurisdictions**
  - **need for continuing reports of this kind led to the development of the MWPHAC**
- ***Healthy People 2010* at the national level**
  - **State versions in DC, Maryland and Virginia**
- **Community Health Status Indicators (CHSI) project and generally a growing interest in health data for local areas**

# **The Determinants of Health**

- **Good health for individuals and communities depends not only on health care for the sick, but on opportunities to prevent health problems and improve basic health and well-being**
- **To assess the region’s “health,” the MWPHAC has assembled 29 community health indicators for nine jurisdictions**
  - **health promotion/disease prevention focus**
  - **NOT a “report card” on public health agencies**

# Choosing the Indicators

- **Technical advisory committee with representatives from state and local health departments**
- **Support from GW faculty and students**
- **Considerations**
  - **desire for a mix of health measures**
    - **behavioral risks: smoking**
    - **health outcomes: lung cancer death rate**
  - **availability of effective preventive interventions**
  - **manageable number of indicators**
  - **availability of data (only at the end)**

# Choosing the Indicators

- “Leading health indicators” framework from *Healthy People 2010*
  - At least two measures with local data for each of the ten indicator categories
1. Physical activity
  2. Overweight and obesity
  3. Tobacco use
  4. Substance abuse
  5. Responsible sexual behavior
  6. Mental health
  7. Injury and violence
  8. Environmental quality
  9. Immunization
  10. Access to health care

# HP2010 Leading Health Indicators

## Possible local data

<i>Indicator</i>	<i>Possible local measures</i>
Physical activity	% engaging in physical activity (BRFSS) Coronary heart disease death rate
Overweight and obesity	% overweight or obese (BRFSS) Diabetes death rate
Tobacco use	% who smoke cigarettes (BRFSS) Lung cancer death rate
Substance abuse	Adult binge drinking (BRFSS) Drug-induced death rate
Responsible sexual behavior	AIDS incidence Gonorrhea incidence Birth rate for girls aged 15-17

# HP2010 Leading Health Indicators

## Possible local data

Mental health	Suicide rate
	Mental health "not good" days (BRFSS)
Injury and violence	Motor vehicle crash death rate
	Firearm-related death rate
	Reported rape or attempted rape
Environmental quality	Days ozone standards exceeded
	Cases of foodborne pathogens ( <i>E. Coli</i> 0157:H7, <i>Salmonella</i> )
Immunization	% children 19-35 months who have received recommended vaccines
	% of adults 65+ with flu vaccine
Access to health care	% adults w/ health insurance (BRFSS)
	Infant mortality rate
	Cervical cancer death rate

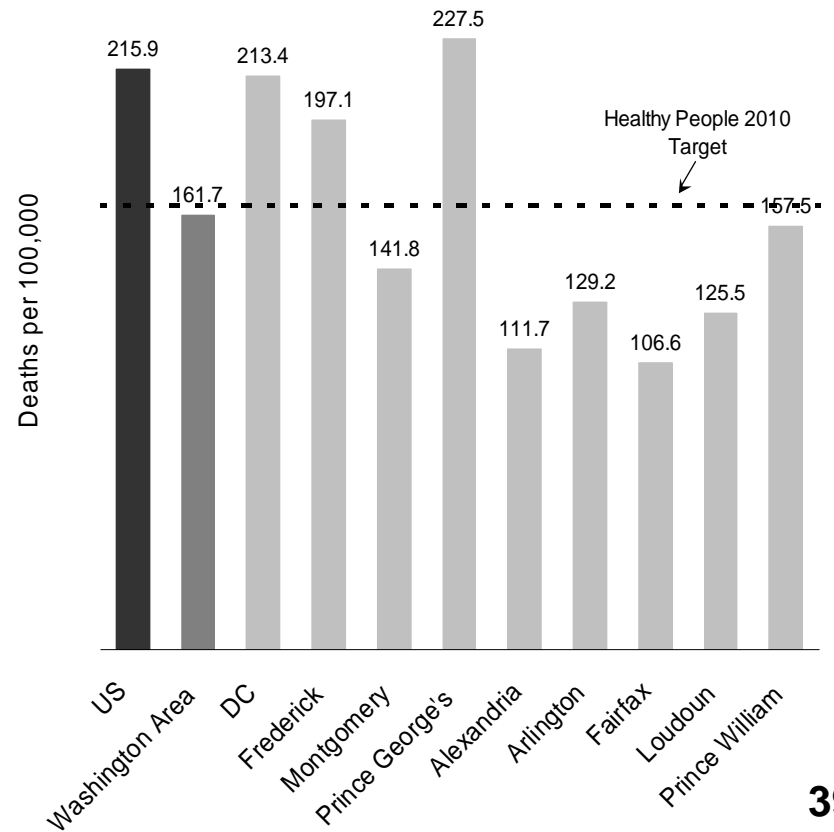
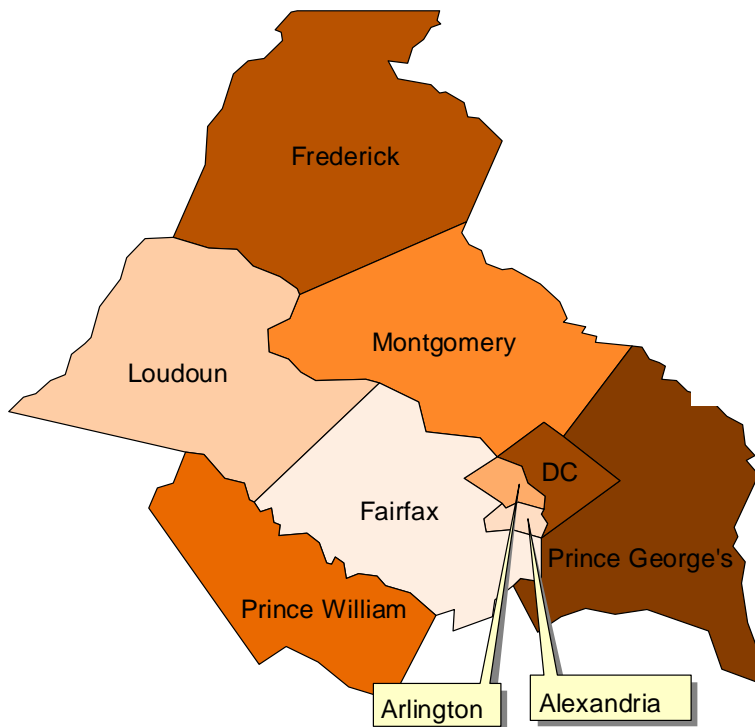
# Washington Results

- Overall, the adult population of the Washington metropolitan area is healthier than the nation as a whole
- On some measures, however, the region appears less healthy than the nation
- The region is diverse; every jurisdiction shows some strengths and weaknesses
- There are several key regional data needs

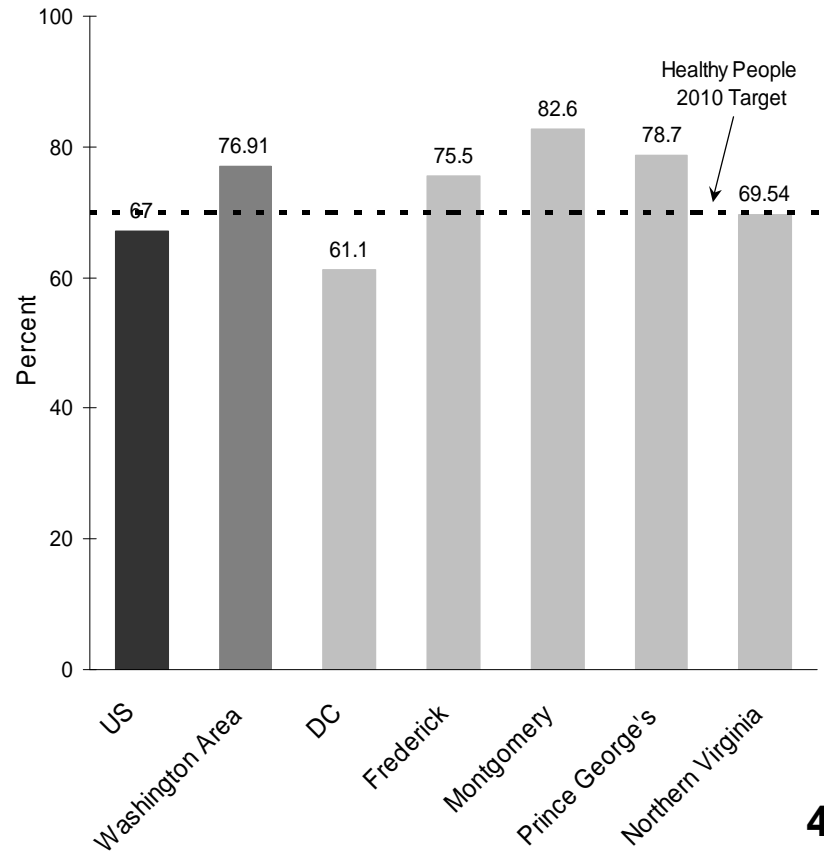
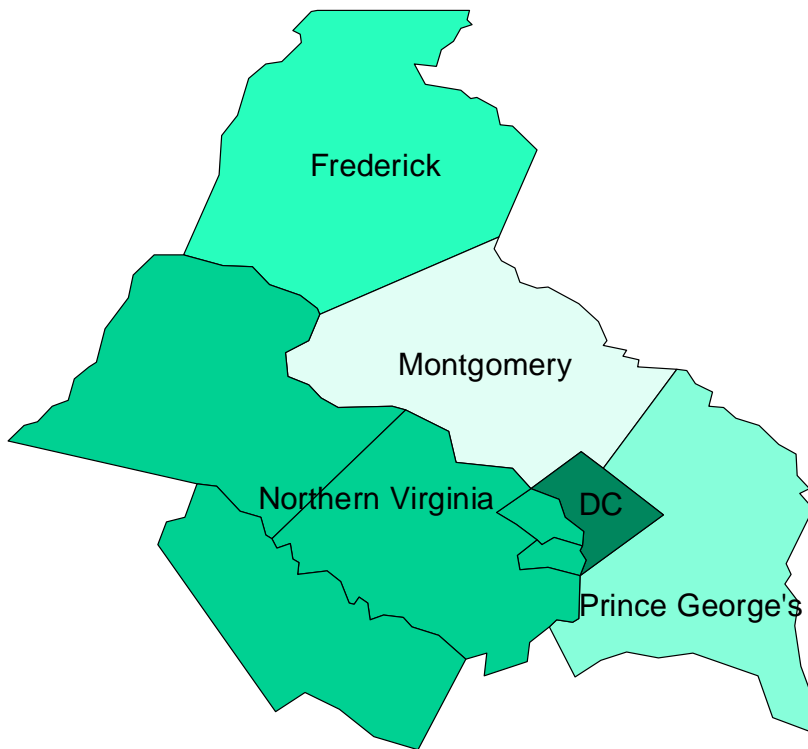
# **The adult population of the Washington area is healthier than the nation as a whole**

- For 19 of 27 indicators, the Washington region is doing as well or better than the national average**
- For coronary heart disease deaths and mammography rates, our region already more than meets national targets for 2010**
- The estimated rate of adult obesity in the region is almost at the national target**

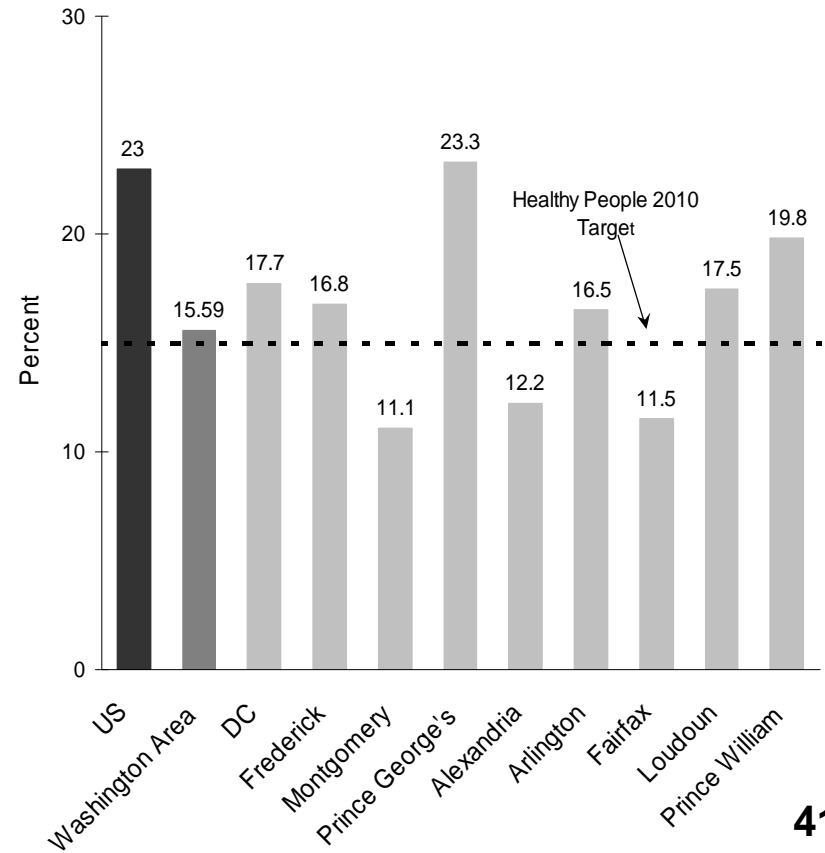
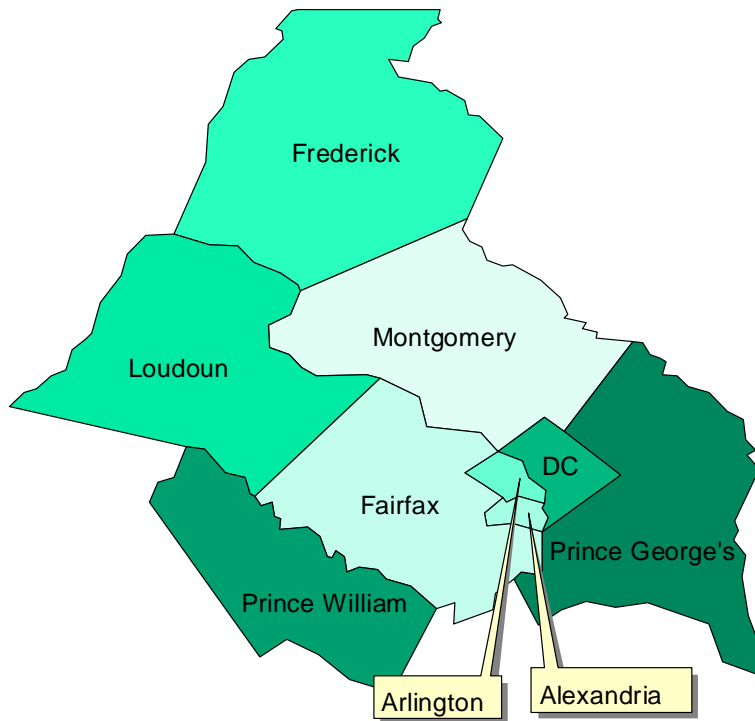
# Coronary Heart Disease: Age-Adjusted Death Rate per 100,000, 1996-1998 Average



# Women, 40 and Older, Having a Mammogram in the Past 2 Years, 1997-1999 Average



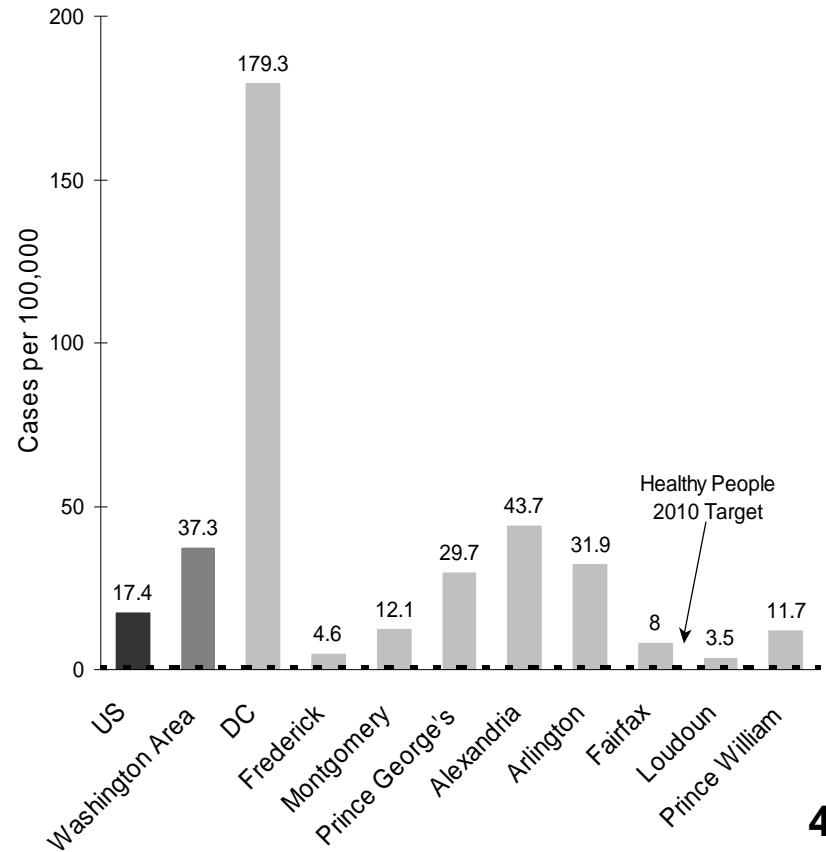
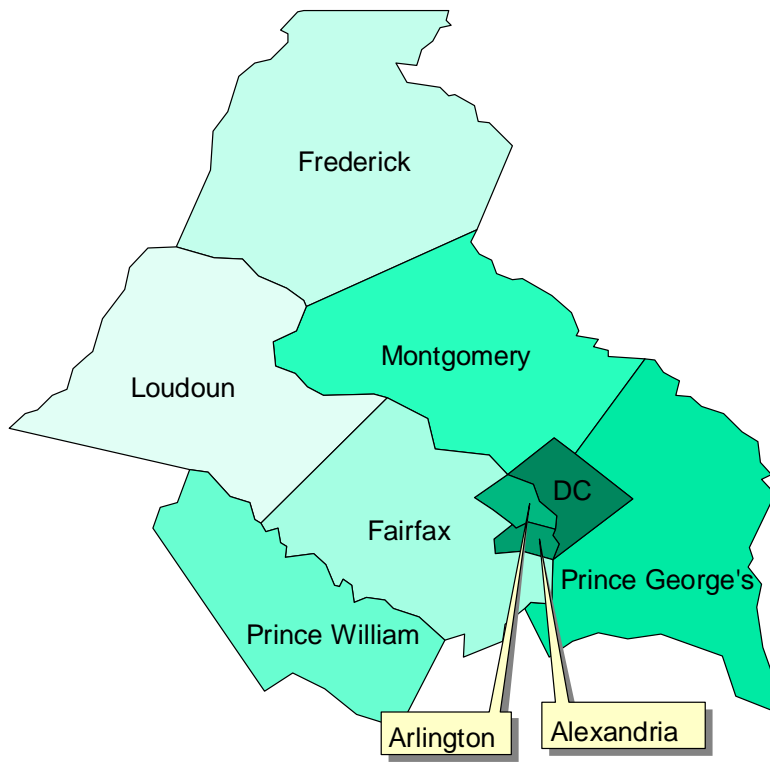
# Percentage of Adults Who Are Obese 1997-1999 Average



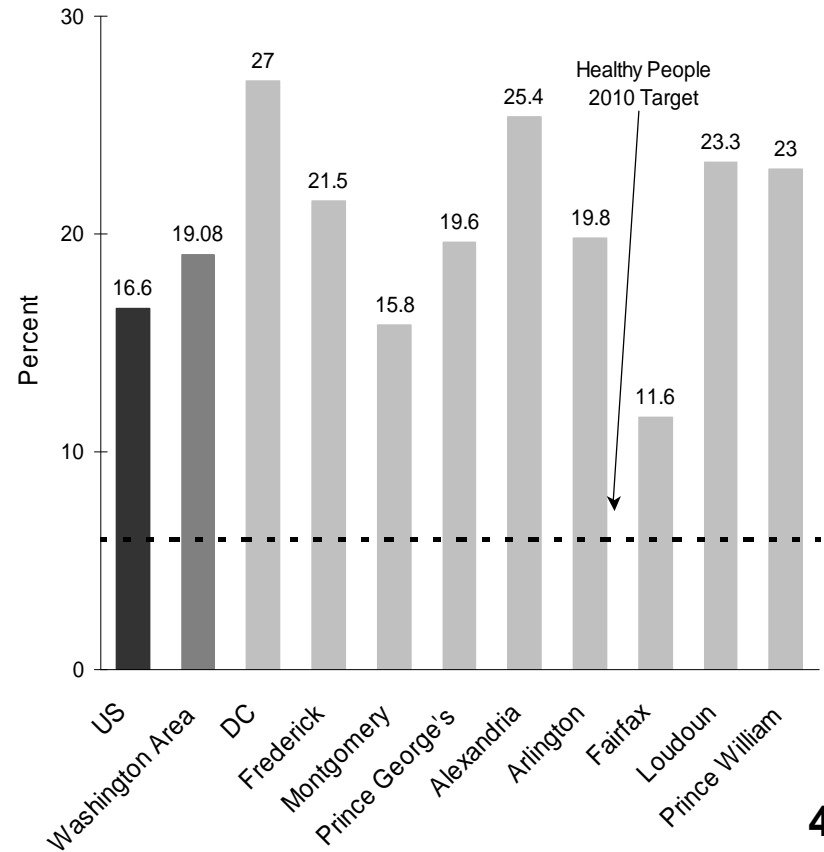
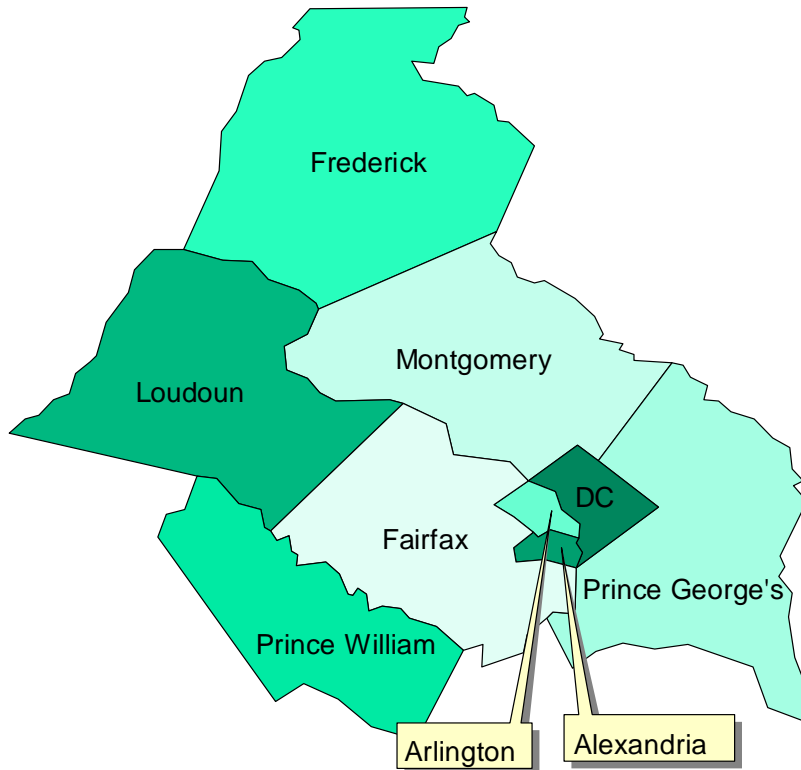
# **On some measures the region is less healthy than the nation**

- **AIDS**
- **Gonorrhea, and other sexually transmitted infections**
- **Tuberculosis**
- **Binge drinking**
- **Firearm-related deaths**
- **Infant mortality**
- **Low birth weight**

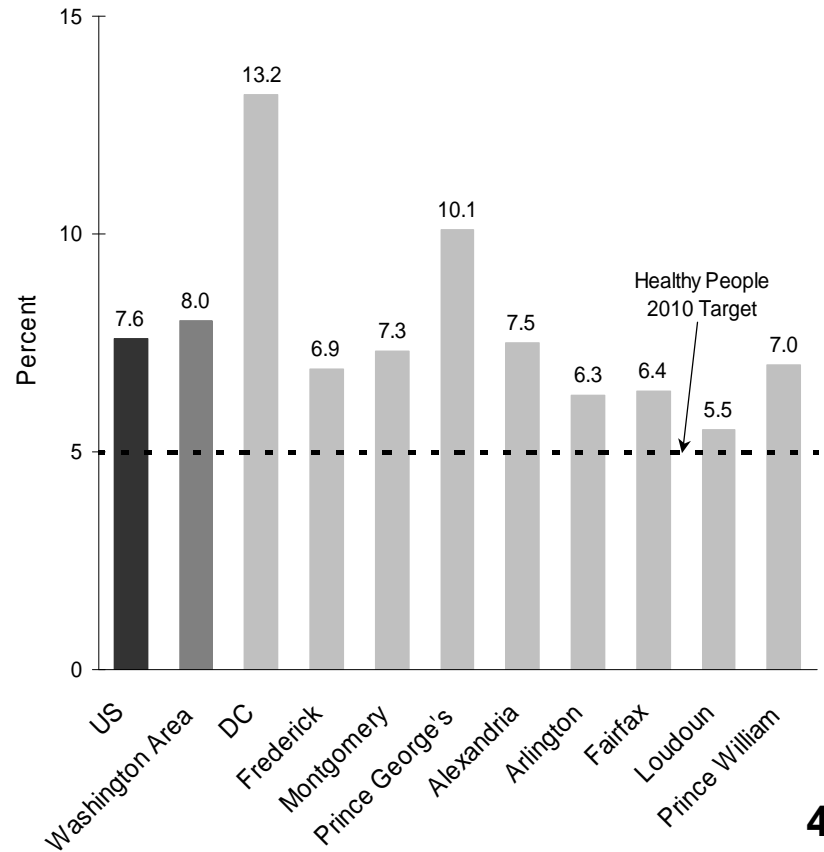
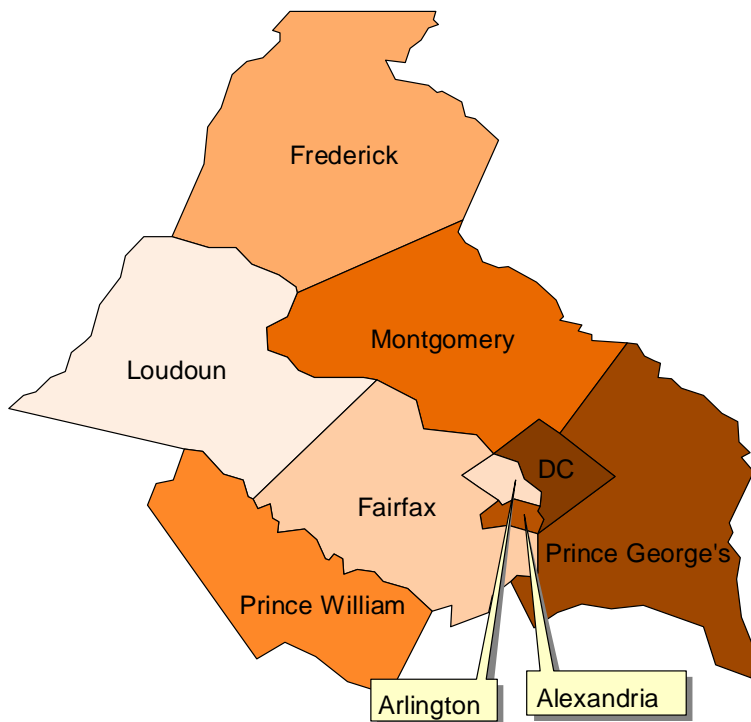
# Annual Incidence of AIDS, New Cases per 100,000 population, 1997-1999 Average



# Adults Having 5+ Drinks on an Occasion in the Past Month, 1997, 1999 Average



# Low Birth Weight: Percentage of Births <2500 Grams, 1997-1999 Average





# The region is diverse

- **Every jurisdiction has strengths and weaknesses**
- **Jurisdictions with higher average socioeconomic status still face challenges in promoting health and preventing disease**
  - **in pockets of poverty**
  - **among growing immigrant communities with varying cultural and linguistic characteristics**



# The region is diverse

- **Rates better than the national average**
  - **Whites: 17 of 19 indicators**
  - **Blacks: 5 of the 19 indicators**
    - **smoking, suicide, motor vehicle deaths, dental care, mammography**
- **For 10 indicators more healthful behaviors among people with**
  - **more education**
  - **higher household incomes**

# Key regional data needs

- **Data comparable across jurisdictions on behavioral risk factors for adolescents**
  - **MD: adolescent survey**
  - **DC: Youth Risk Behavior Survey**
  - **VA: some local adolescent surveys**
- **Data on risk factors for younger children**
  - **overweight**
  - **physical activity**

# Key regional data needs

- **Data on the use of hospital and emergency department services**
  - **visits for asthma, injury, or mental health care**
  - **in forms suitable for regional analysis**
- **More data on differentials by race, ethnicity, socioeconomic status, and education**



# Key regional data needs

- **Data on behavioral risk factors for adults in Virginia jurisdictions**
  - **no longer available because of changes in the size and design of Virginia's BRFSS**
- **Some data are inadequate for their intended purpose**
  - **blood-alcohol level is tested for only a small percentage of drivers in fatal crashes**
  - **Retrospective immunization coverage data for children at age 2**

# Conclusions

- **On the whole, the region is healthy, yet there are health problems that require attention**
- **The indicators may point to opportunities for jurisdictions in the region to**
  - **collaborate on common concerns**
  - **learn from the work of neighbors**
- **Need to invest in better data as an investment in the community's health**
- **We hope that the report will spur further analysis and action to advance health promotion and disease prevention**

# Big Ideas

- The community's health depends on the interaction of many factors, entities, and organizations in the community
- Community health profiles/assessment
  - summarize the health of a community
  - measure our ***shared responsibility***
- Key characteristics
  - a *limited yet comprehensive* set
  - of *coherent* and *significant* indicators
  - that can be *monitored* over time and
  - *disaggregated* to relevant social units

# References

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# Data resources

## Maine

DHHS District Health Profiles

[www.maine.gov/dhhs/boh/maine\\_dhhs\\_district\\_health\\_profiles.htm](http://www.maine.gov/dhhs/boh/maine_dhhs_district_health_profiles.htm)

Maine CDC [www.maine.gov/dhhs/boh/data\\_resources.htm](http://www.maine.gov/dhhs/boh/data_resources.htm)

Maine Quality Forum [www.mainequalityforum.gov/mqsp01f.html](http://www.mainequalityforum.gov/mqsp01f.html)

## Centers for Disease Control and Prevention

National Center for Health Statistics [www.cdc.gov/nchs/](http://www.cdc.gov/nchs/)

CDC Wonder [wonder.cdc.gov/](http://wonder.cdc.gov/)

Behavioral Risk Factor Surveillance System [www.cdc.gov/brfss/](http://www.cdc.gov/brfss/)

## Other federal sources

Agency for Healthcare Research and Policy [www.ahrq.gov/data/](http://www.ahrq.gov/data/)

Health Resources and Services Administration [datawarehouse.hrsa.gov/](http://datawarehouse.hrsa.gov/)

National Cancer Institute [www.cancer.gov/statistics/](http://www.cancer.gov/statistics/)

U.S. Census Bureau, American FactFinder

[factfinder.census.gov/home/saff/main.html?%20Lang=en](http://factfinder.census.gov/home/saff/main.html?%20Lang=en)

## Private foundations

Annie E. Casey Foundation, Kids Count <http://www.aecf.org/>

The Henry J. Kaiser Family Foundation, StateHealthFacts.org

[www.statehealthfacts.org/](http://www.statehealthfacts.org/)