

Health Impact Assessment:

A Contemporary Tool for Improving Population Health

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Public Health in the 21st Century

- Epidemic of overweight: diabetes, heart disease
 - Diabetes affects 25.8 million people = 8.3% of U.S. Population¹
 - 26.9% of U.S. residents over 65 years had diabetes in 2010
 - More than 1 in 3 (81 million) U.S. adults currently live with cardiovascular disease²



1) *National Diabetes Fact Sheet, 2011, CDC;*

2) *Heart Disease and Stroke Prevention, Addressing the Nation's Leading Killers: At a Glance 2010, CDC*



Public Health in the 21st Century

- Increased burden and costs of care for aging populations
 - In 2009, over 55 million U.S. residents were age 60 or older = 18% of the population
 - Projected to grow to 92.2 million in 2030 and 112 million by 2050



Public Health in the 21st Century

- Increasing Disparities

- Strongly associated with social environment (education, job opportunities, etc)



- In Los Angeles County, life expectancy for an African American male at birth (69.4 yrs) is nearly 18 years shorter than that of an Asian/Pacific Islander female (86.9yrs)

Public Health in the 21st Century

- Impacts of population density/growth
 - Infectious diseases
 - Mental health problems
 - Environmental exposures
 - E.g. air pollution, toxic exposures
- Macro-environment: climate, conflict



Common Health Improvement Approaches

- Medical care
 - Preventive services
 - Access for underserved
- Shaping health behaviors
 - Individual
 - Group



Modern Public Health

Back to the Future:

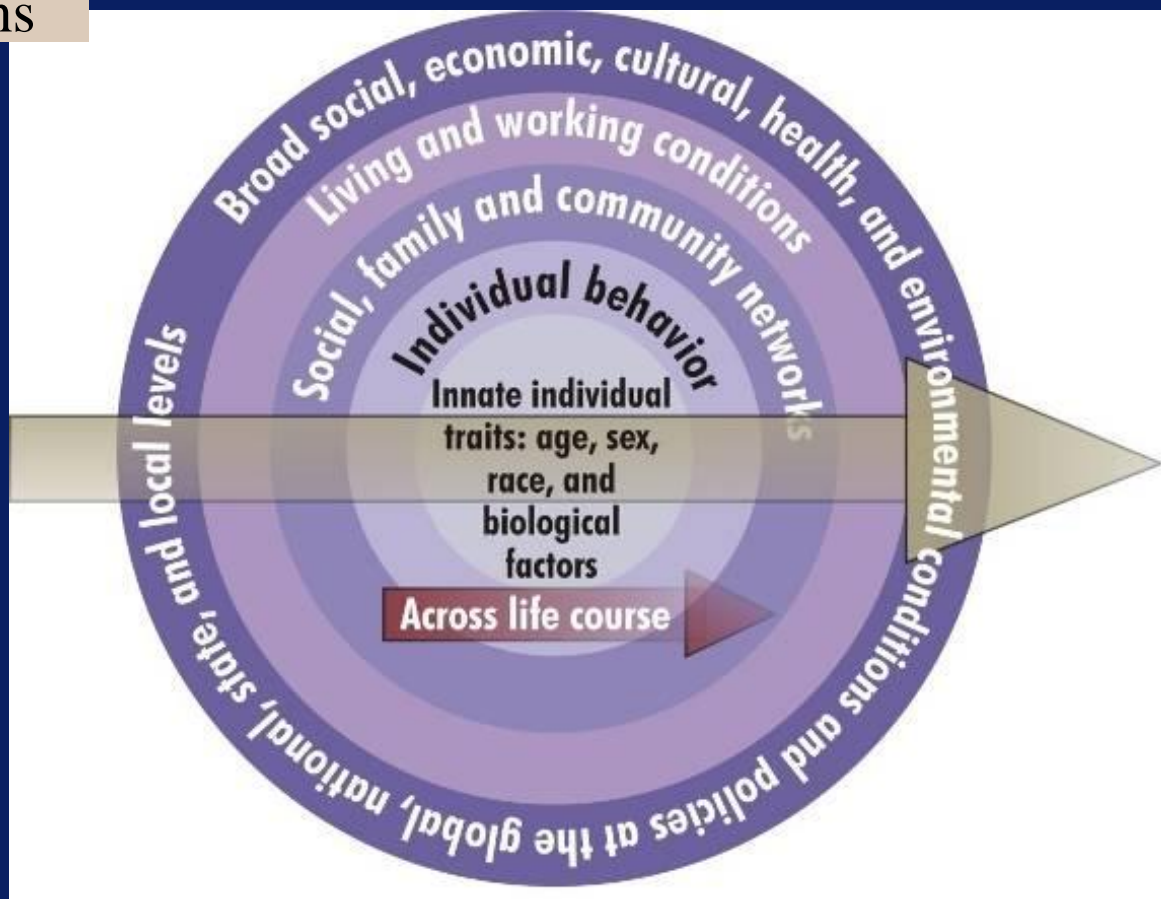
- Adding more ecologic model of health
- Recognition that environments in which we live, work, play and age strongly influence health outcomes



Ecologic Model of Health

Interventions

- Policies
- Programs
- Information



Outcomes

- Behavioral outcomes
- Specific risk factors, diseases & conditions
- Injuries
- Well-being & health-related Quality of Life
- Health equity

Assessment, Monitoring,
Evaluation & Dissemination



Societal Health Determinants

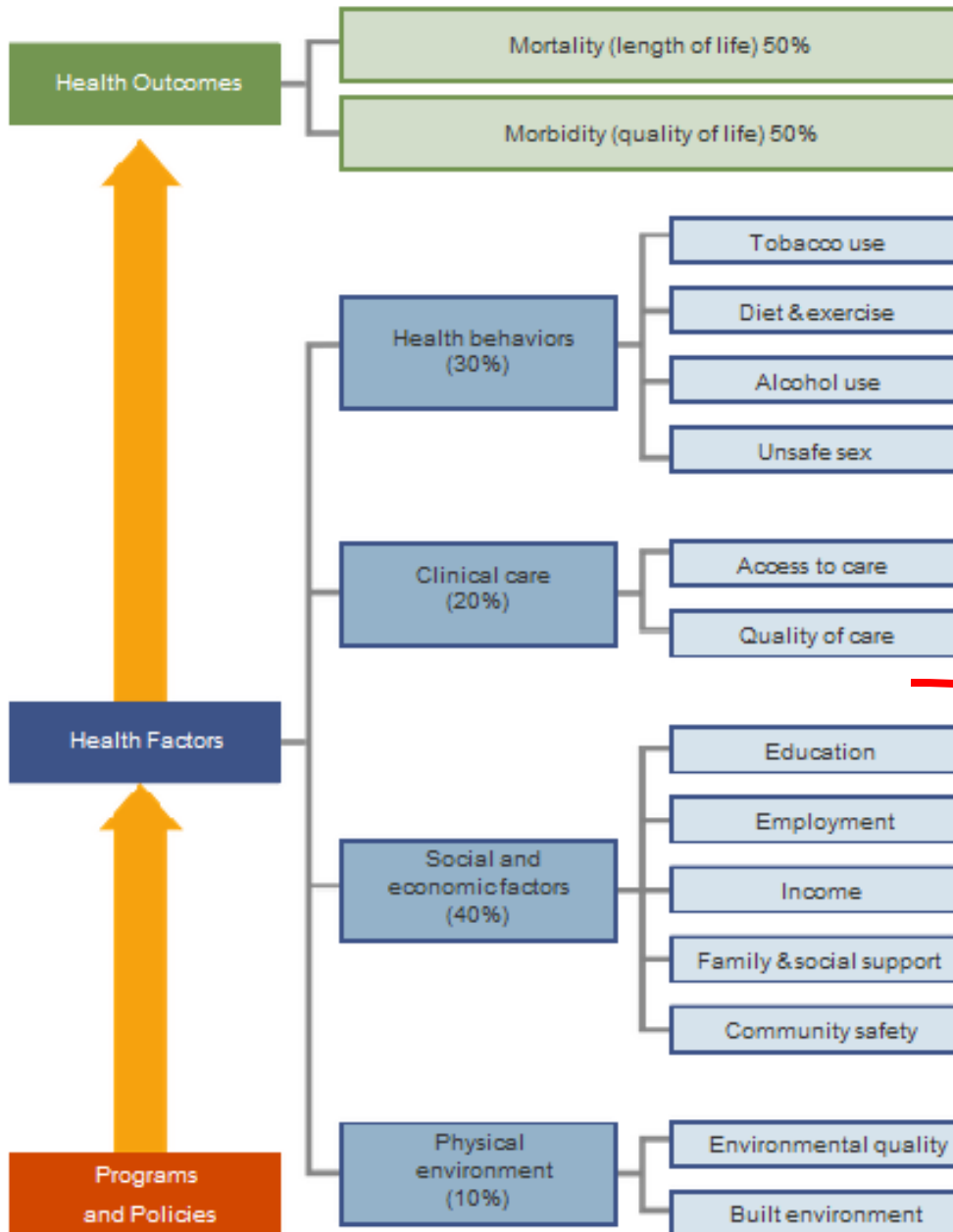
“Conditions in the social, physical, and economic environment in which people are born, live, work, and age. They consist of policies, programs, and institutions and other aspects of the social structure, including the government and private sectors, as well as community factors.”



To What Extent Do Our Environments Influence Health?



County Health Rankings Model



50%
attributed
to social,
economic,
and physical
environments



Social and Economic Factors

- Education

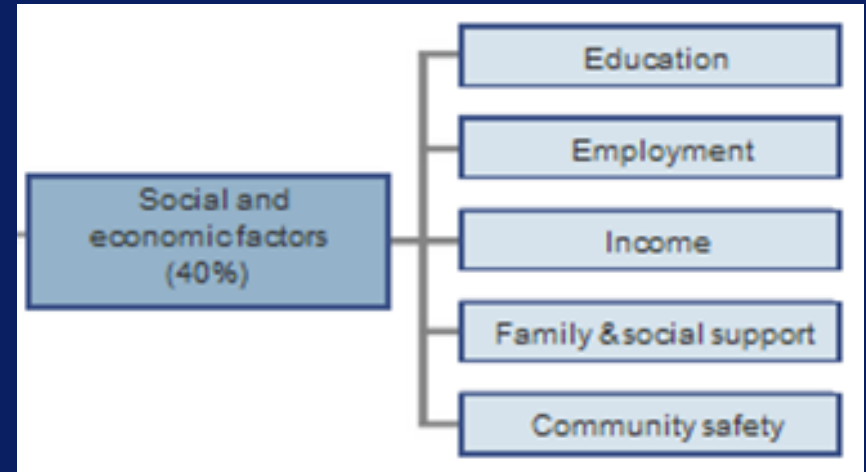
- Mortality is inversely associated with educational attainment
- Age-adjusted death rate for those with >HS diploma is 2.7 times the rate for those with some college or a collegiate degree¹

- Employment

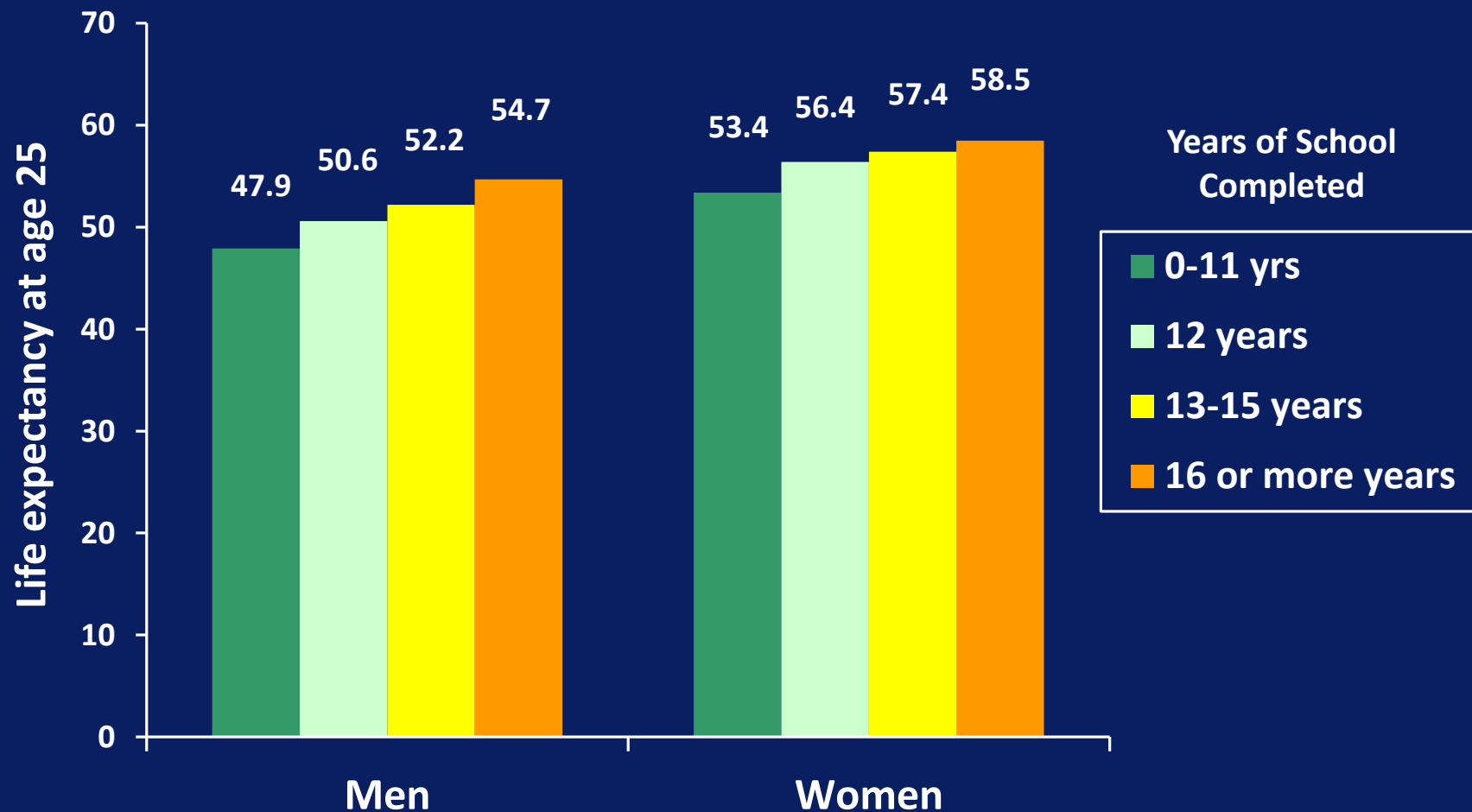
- Workers with less education are more likely to hold lower-paying jobs which may put them at higher risk of injury or fatality, and are less likely to have health-related benefits²

- Poverty

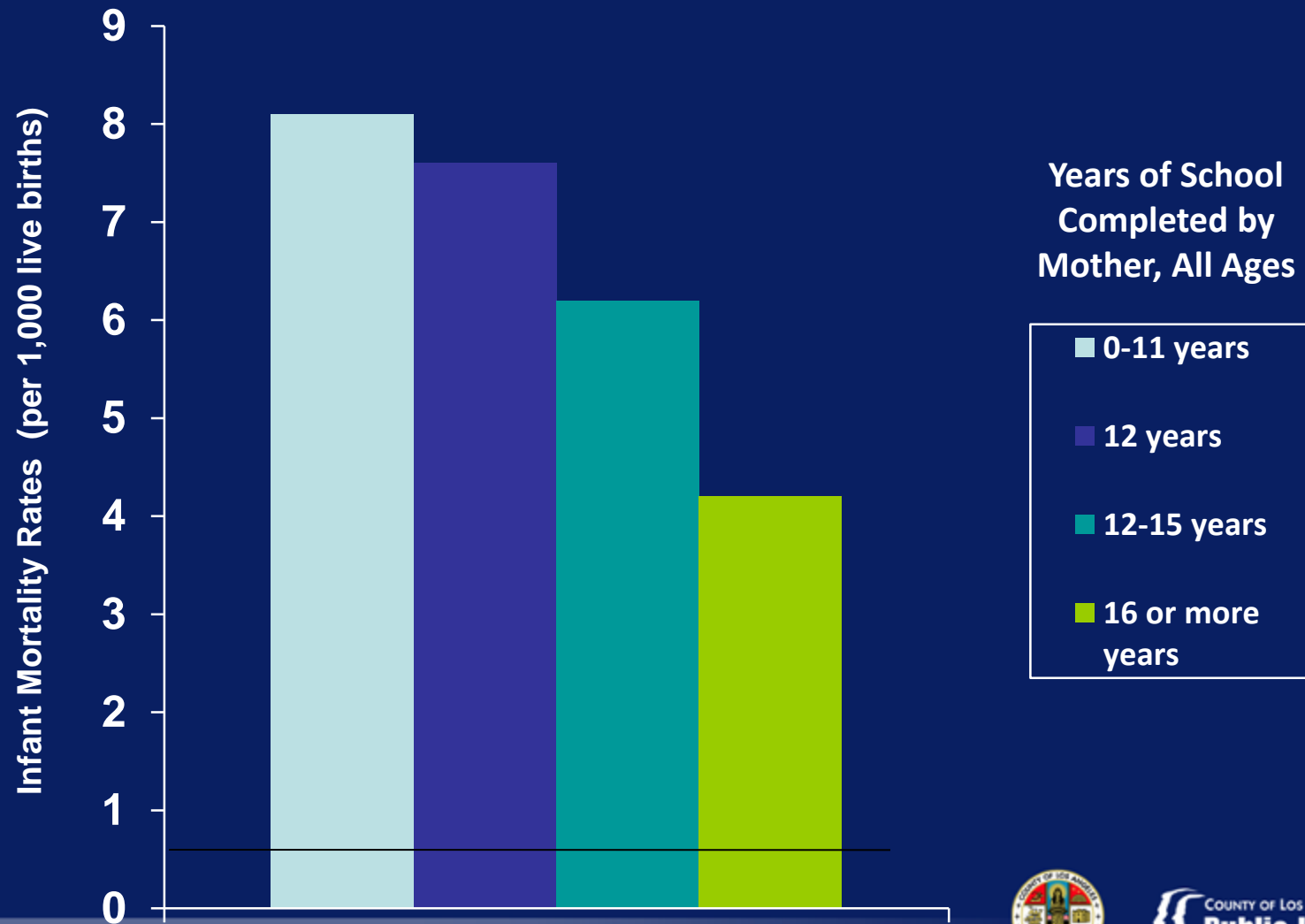
- Over the past 2 decades, persons in higher socioeconomic groups have experienced larger gains in life expectancy than those in more-deprived groups³



Education Matters to Health: More Formal Education = Longer Life Expectancy



And It Matters to the Next Generation: Mother's Education Related to Infant Mortality



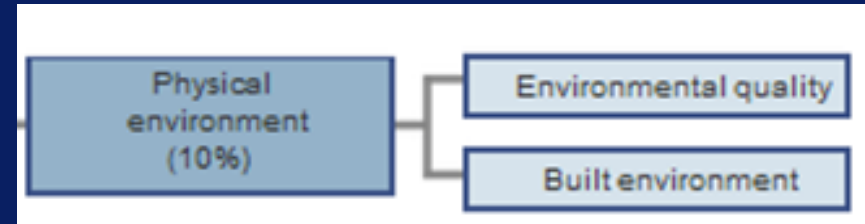
Physical Environment

Natural Environment

- Air quality
- Water
- Climate

Built Environment

- Urban planning/land use
 - Zoning, community design, walkability, places for physical activity, access to mass transit
- Housing
- Transportation



Adverse Health Impacts From Poor Community Design



- ↓ traffic safety
- ↑ air pollution
- ↓ water quality & quantity
- ↑ obesity & chronic disease
- ↓ physical activity
- ↑ crime & violence
- ↓ social capital
- ↓ elder health & mobility
- ↓ mental health
- ↑ health disparities



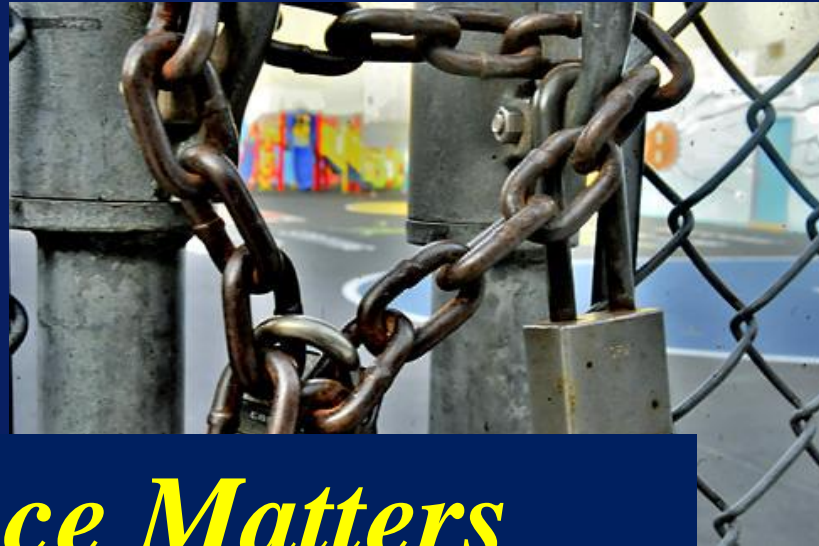
Health and Sprawl

People living in counties marked by sprawling development:

- Walk less in their leisure time
- Are more likely to have high blood pressure
- Have higher body mass indexes
- Are more likely to be overweight (average 6 pound difference)



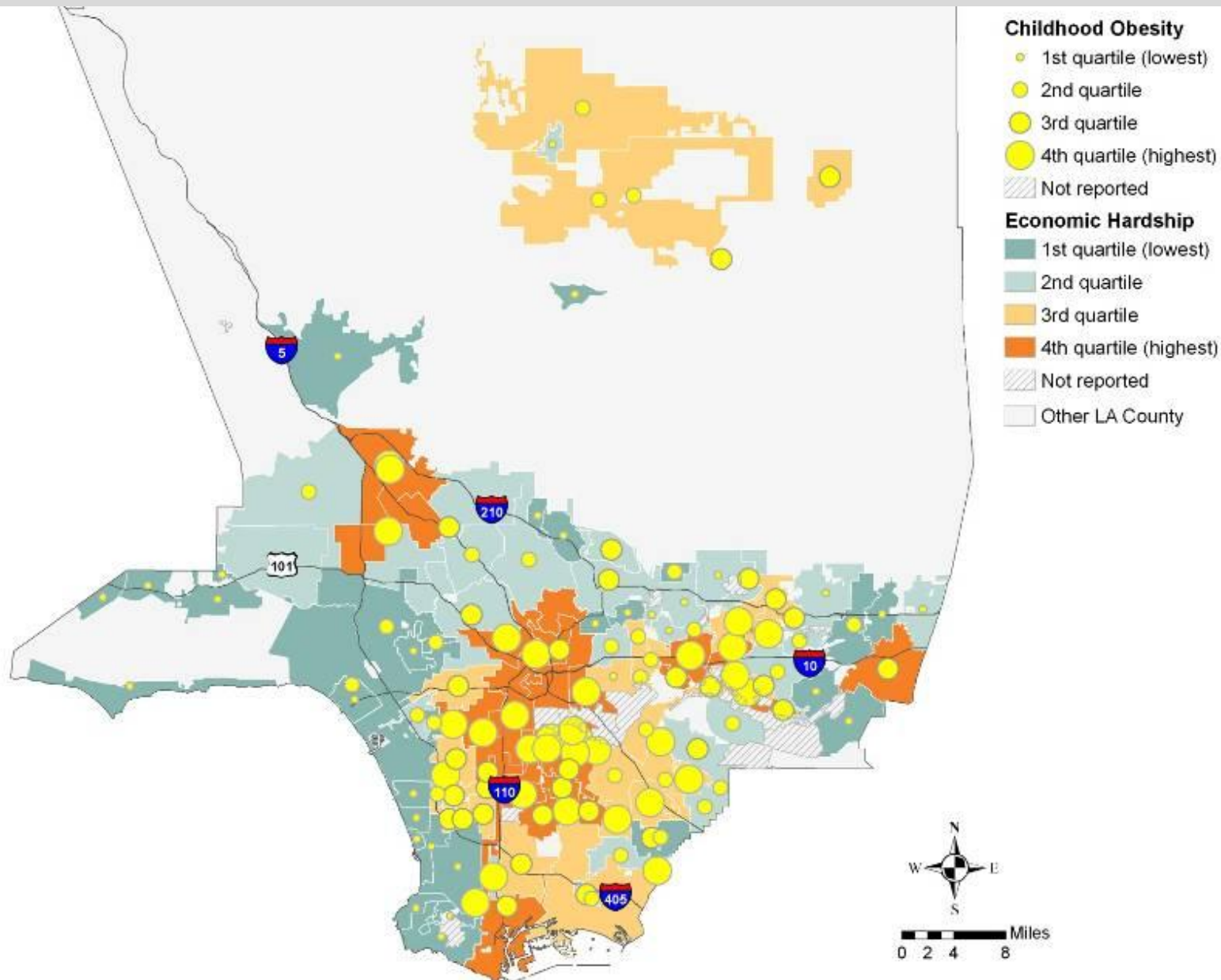
The Community Context



Place Matters



Economic Hardship & Childhood Obesity by City/Community, LAC



Importance of Non-Health Sector Decisions and Policies

- Most major determinants stem from non-health sectors
- Decisions in these sectors greatly influence our collective health
 - Positive
 - Negative
 - Net
 - Distribution among sub-groups



Examples of Sector-based Policy

- Transportation
 - Increase development and utilization of mass transit → less driving, more walking → better air and weight loss
 - Complete streets initiatives
- Agriculture
 - Direct agricultural subsidies toward more nutritious food (corn/corn syrup → fresh fruits and vegetables)
- Tax
 - Use tax policy to reduce percentage in poverty
 - Increase proportion of eligible residents claiming earned income tax credit
 - Support state efforts on alcohol tax
- Environment
 - Support environmental policies that improve air quality (e.g., higher CAFE standards, cleaner energy sources)



IMPROVING HEALTH IN THE UNITED STATES

The Role of Health Impact Assessment

Committee on Health Impact Assessment

Board on Environmental Studies and Toxicology

Division on Earth and Life Studies

National Research Council

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REPORT

IN BRIEF

Improving Health in the United States The Role of Health Impact Assessment

Significant improvements in Americans' health will only occur if health impacts are considered in developing policies, programs, plans, and projects, particularly in sectors that historically have been viewed as unrelated to health, such as transportation, education, agriculture, and energy. Health impact assessment has arisen as an especially promising way to factor health considerations into the decision-making process. It is essentially a structured process that uses scientific data, professional expertise, and stakeholder input to identify and evaluate the health consequences of proposals and suggests actions that could be taken to minimize adverse health effects and optimize beneficial ones. This report discusses the need for health-impacted decision-making, reviews the current practice of health impact assessment, and identifies a framework, terminology, and guidance for improving the assessment of health effects in the United States.

With the United States ranked third in the world in per capita expenditures on health care and 52nd in life expectancy, it is becoming increasingly clear that good health depends on more than just medical care. Despite major advances, almost 40 percent of Americans suffer from chronic diseases, and obesity, which contributes to health conditions, has grown to epidemic proportions in children and adults. A growing body of research indicates that health is determined by the conditions in which people are born, grow, live, work, and age, and programs that historically have not been recognized as related to health are now being found to have important health consequences. For example, public health has been linked to housing policies that determine density and location of housing development, to agricultural policies that influence the availability of healthy food, to urban planning decisions that determine land use and street connectivity, to transportation policies that affect



Credit: iStockphoto/Idje

the availability of public transportation, and to economic-development policies that affect the location of businesses and industry.

This research highlights the importance of systematically assessing the health consequences of policies, programs, plans, and projects to protect and promote public health. Health impact assessment is a tool that can help factor health considerations into the decision-making process. It is applicable to a broad array of decisions, considers adverse and beneficial effects, can incorporate various types of evidence into the analysis, can engage communities and stakeholders in a deliberative process, and can offer practical recommendations to improve health. This report provides a framework, terminology, and guidance for conducting health impact assessments of proposed policies, programs, plans, and projects.

The Elements of Health Impact Assessment

The committee reviewed definitions, practice, published guidance, and peer-reviewed

Health impact assessment is a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population. Health impact assessment provides recommendations on monitoring and managing those effects. Adapted from the International Association for Impact Assessment's definition of health impact assessment.

Health Impact Assessment (HIA)

A systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects.



Two HIA Flavors

1. Project Oriented

Primarily physical environment

2. Policy Oriented

Physical and social environment



Project Oriented: Access to Parks and Green Spaces



Above: From L.A. Dept of Parks and Recreation

**Top: From Calif. Dept of Conservation,
Bottom: French Park, Santa Ana. Courtesy Latino**



Project Oriented: Joint Use Agreements



Photo courtesy of Latino Health Access (<http://www.latinohealthaccess.org>)



Project Oriented: School Siting



**Photos from U.S. EPA Smart Growth
Office website**



Policy Oriented Primarily Physical Environment



Policy Oriented: Living Wage and Paid Leave



Policy Oriented: Road Infrastructure and Land-use



Photo courtesy of the Kern County Dept. of Public Health



Policy Oriented: Mass Transit Funding ...Or Not



Photo by North County Transit District (San Diego, CA)



Photo by Tatianes via Flickr



Benefits of HIA

- **Influences decision makers** using a broad understanding of health and a wide range of evidence
- Highlights potentially **significant health impacts** that are unknown, under-recognized, or unexpected
- **Assesses** how proposals, policies, plans will affect all community members, particularly the most vulnerable
- Facilitates **inter-sectoral collaboration** in decision making
- Supports **sustainable** development—considers short and long term impacts



How HIA Can Affect Policy-making



- **Tip the scales**
Adding evidence in favor or against a certain course of action
- **Put new issues on the table**
Raising awareness of un-/under-recognized health effects
- **Change the terms of debate**
Encouraging open, transparent decision-making and consideration of best available evidence



How HIA Can Affect Policy-making

- **Tweak plans**
Suggesting measures to modify implementation in ways that minimize potential harm and maximize potential benefits
- **Bring new parties to the table**
Giving voice to concerns of affected stakeholders who have difficulty making their concerns known
- **Change institutional missions and responsibilities**
Encouraging formulation of policies that anticipate potential health effects

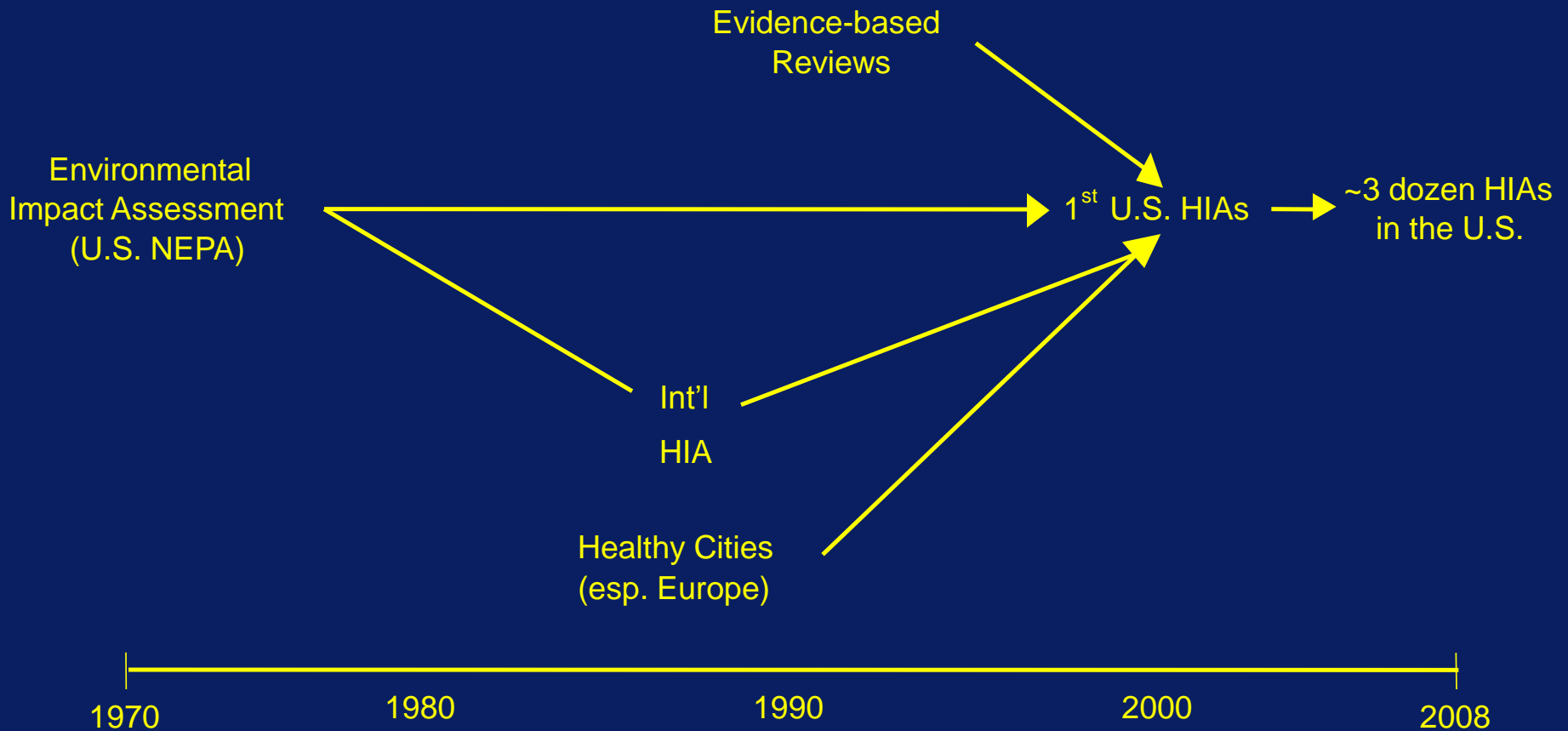


Common HIA Challenges



- Complexity of the relationships between environment and health outcomes.
- Lack of research on these complex causal pathways.
- Insufficient data on interventions to improve health status.
- Lack of reliable and valid indicators of environmental effects.

Timeline of HIA Development in the U.S.



Examples of HIAs in the U.S. 1999-2012

Local Projects

Land-use & Transportation Plans

Mining & Energy

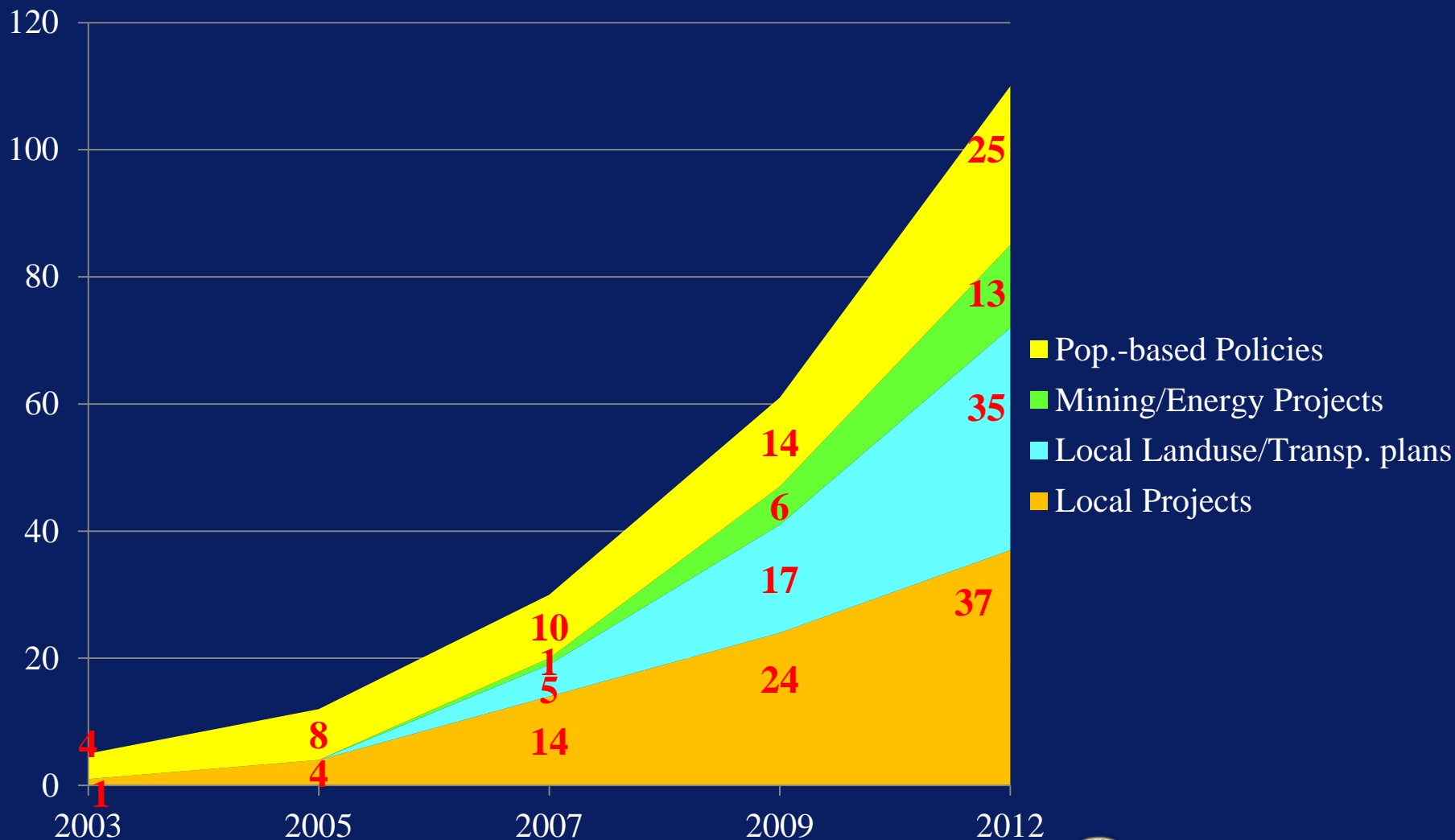
Population-based Policies

- Energy Assistance for low income households (MA)
- Funding for Farm-to-School (OR)
- Living Wage Ordinances (CA)
- Paid Sick Days (CA)
- State funding for mass transit (CA)



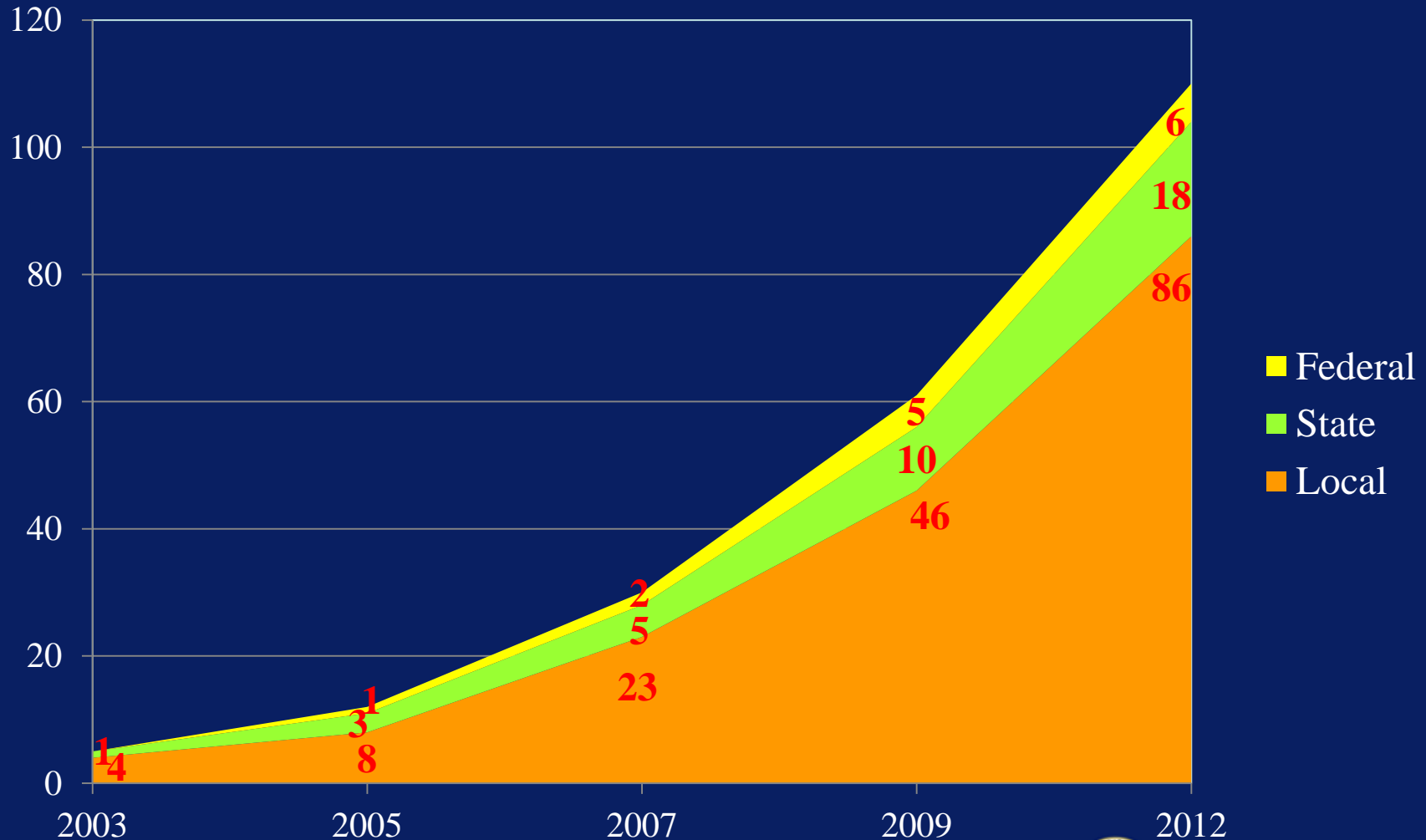
Growth in HIAs in the U.S. 1999-2012

Cumulative number by Year & Type of Project or Policy



Growth in HIAs in the U.S. 1999-2012

Cumulative number by Year & Level of Project or Policy Decision



HIA is a Contemporary Tool for Population Health Improvement



This tool is designed to systematically evaluate, synthesize, and communicate information about potential health impacts for more informed decision-making.



HIA is a Contemporary Tool for Improving Public Health

- **HIA is:**
 - **Focused on public policy decisions and population health outcomes;**
 - **Encouraging of a multidisciplinary process;**
 - **Structured to considers a wide range of evidence;**
 - **Based on a broad model of health.**

HIA IS WELL SUITED TO HELP U.S.

ACHIEVE 2020 NATIONAL HEALTH

OBJECTIVES

