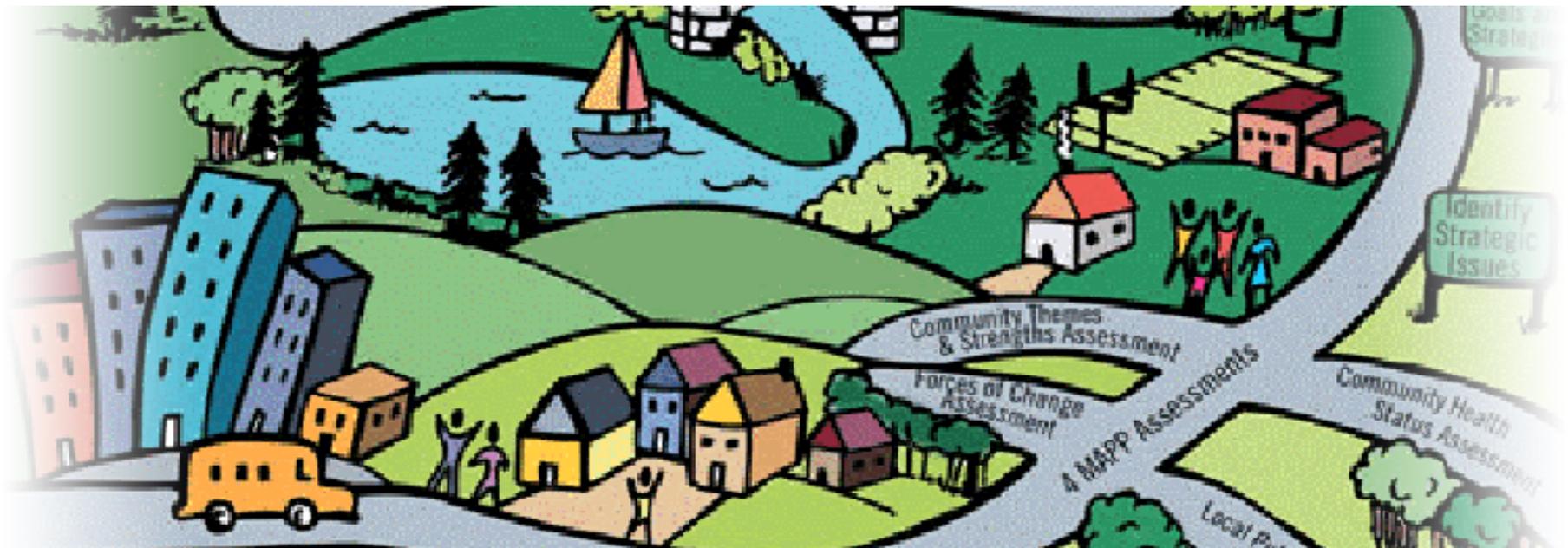


# Maricopa County Community Health Assessment Public Health Strategic Priorities 2012



## Community Action Planning Meeting

# ADHS

*Arizona Department of Health Services*  
**Racial & Ethnic Approaches to  
Community Health (REACH)**

# MCDPH

*Maricopa County Department  
of Public Health*  
**Office of Performance Improvement**



**Collaborating to Improve Community Health**

A Healthier Community

# MAPP - YOUR COMMUNITY ROADMAP TO HEALTH!

Action Cycle

Evaluate Implement Plan

YOU ARE HERE

Formulate Goals and Strategies

Identify Strategic Issues

Community Themes & Strengths Assessment

Forces of Change Assessment

4 MAPP Assessments

Community Health Status Assessment

Local Public Health System Assessment

Our Vision

Organize for Success / Partnership Development

# Our Vision: Empowered communities working together to REACH optimal health and quality of life for all

## Our Values:

**Diversity** – Understanding, respecting, celebrating, and welcoming all people regardless of ethnicity, income, gender, age, heritage, or lifestyle

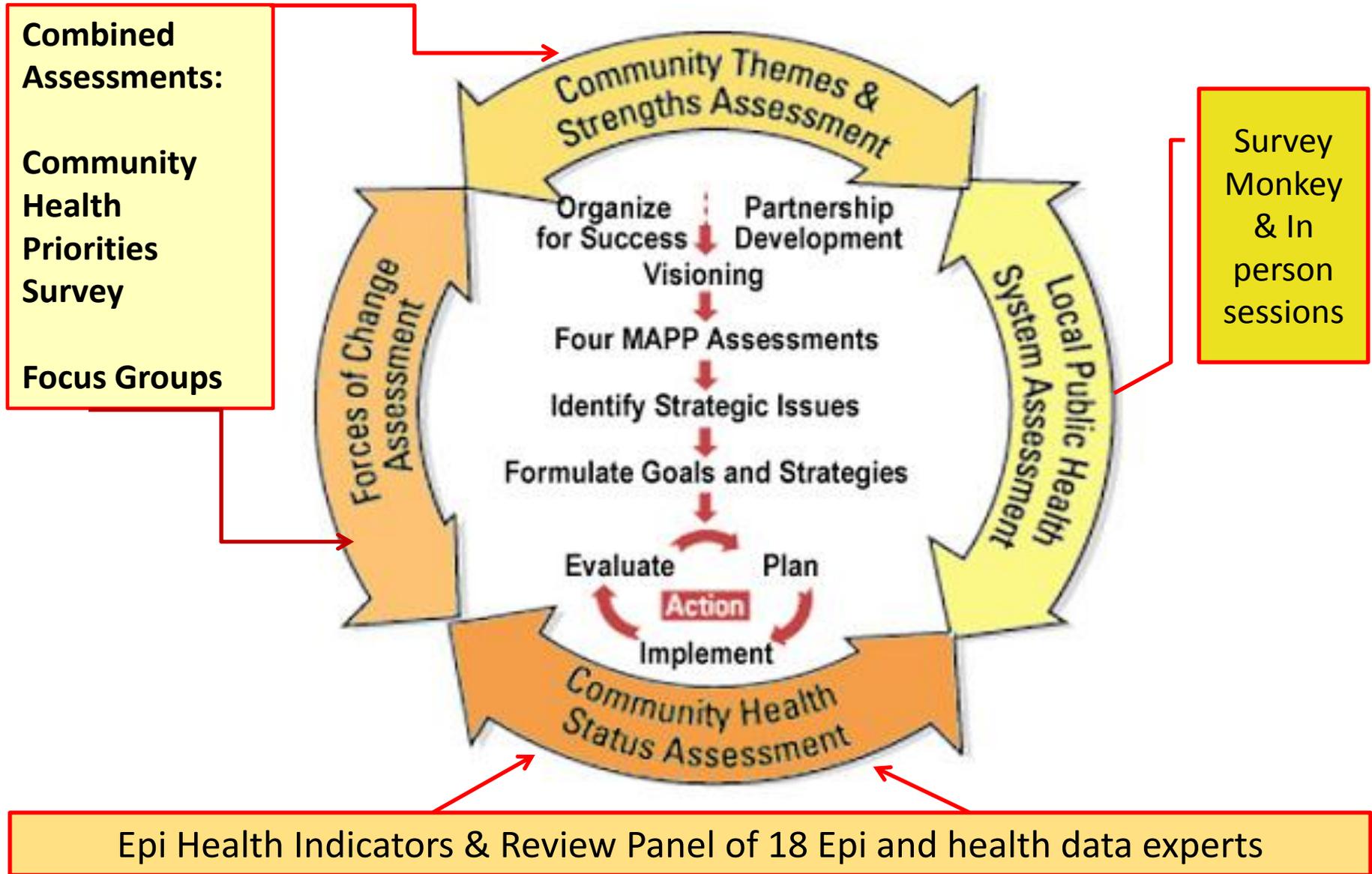
**Health Equity** – Optimizing health conditions for all groups, especially for those who have experienced socioeconomic disadvantages or historical injustices

**Collaboration** – Networked communities working together with mutual respect and cooperation

**Access** – Providing quality, comprehensive healthcare, and community services that are navigable, accessible, and affordable to all community members

**Education** – Providing tools, encouragement, and knowledge to all people so that they can make positive, informed decisions resulting in healthy lifestyles and positive health outcomes

# MAPP Overview Community Health Assessment & Community Action Planning



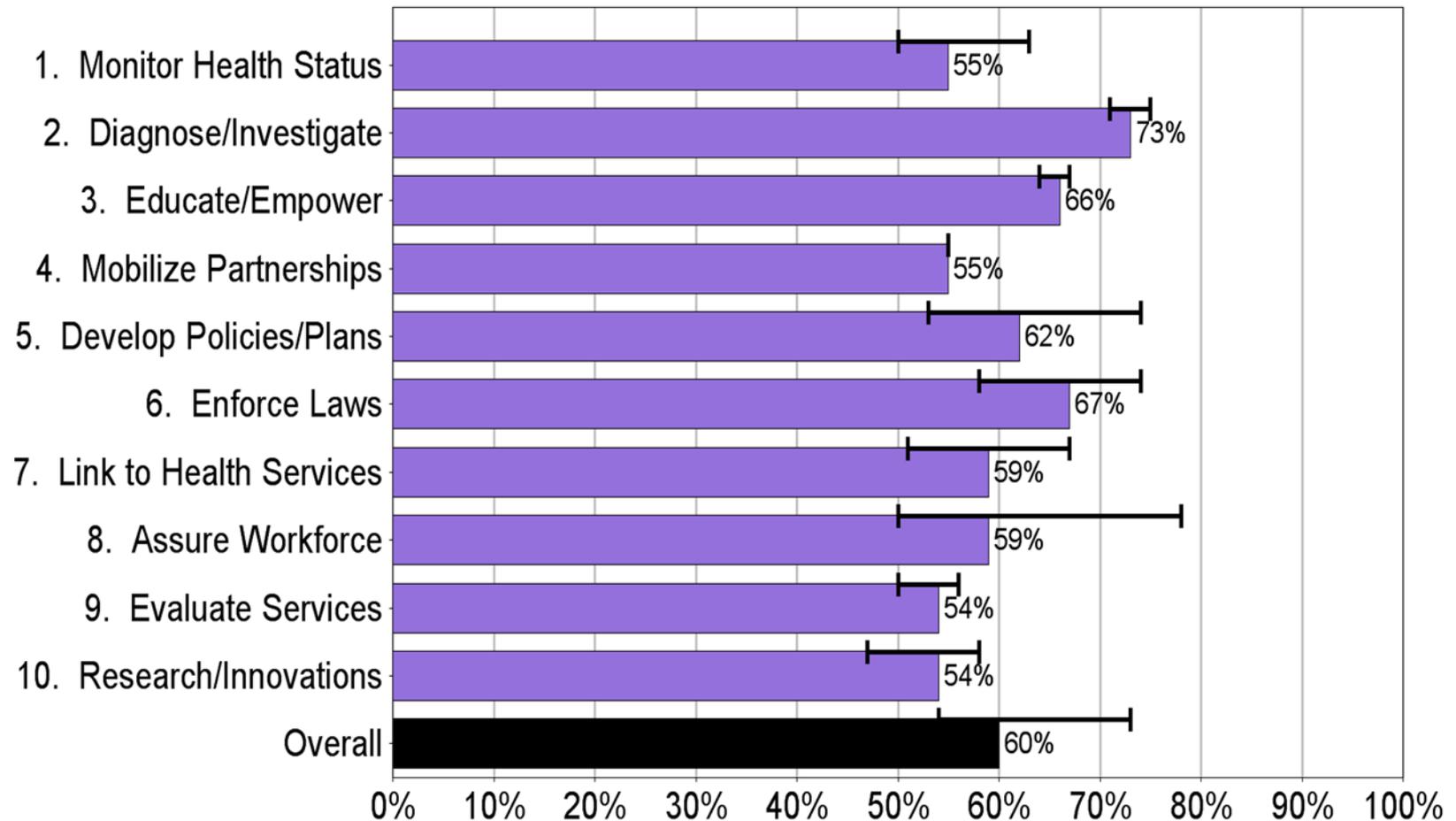
# Local Public Health System Assessment

167 Participants Representing 94 Organizations

- ADHS (11 Bureaus/Departments)
- MCDPH (11 Offices/Programs)
- Other Government Agencies (8)
- Healthcare Organizations (22)
- Non-Profit Agencies, Associations, or Centers (23)
- Disparate Communities Organizations(12)
- Colleges and Universities (7 Departments/Programs)
- K-12 Education (8)
- Foundations (3)



# Local Public Health System Performance Standards Assessment feedback



Source: Centers for Disease Control and Prevention report, Fall 2011.

# Maricopa County Health Status Report Indicators 2012

<p><b><u>Demographics</u></b>          Population Size          Income Distribution          Race and Ethnicity          Sex          Age          Home Ownership          Disability &amp; Mobility</p>	<p><b><u>Access to Health Care</u></b>          No Health Insurance Coverage          No Usual Place of Care          No Prenatal Care          Delayed Care or Prescriptions due to Cost</p>	<p><b><u>Chronic Conditions</u></b>          Coronary Heart Disease mortality and hospital discharge review          Stroke mortality and hospital discharge review          Cancer mortality and hospital discharge review          Diabetes mortality and hospital discharge review          Asthma mortality and hospital discharge review</p>
<p><b><u>Environmental Health</u></b>          Food safety- recalls          Food safety- outbreaks          Air Quality          Neighborhood Support Index          Perceived Neighborhood Safety          Distance between one's Home &amp; Parks or Open Space          Quality of Life Index</p>	<p><b><u>Health Behaviors</u></b>          Tobacco Use          Tobacco Use during Pregnancy          Physical Inactivity          Binge Drinking          Substance Abuse          Unprotected Sex</p>	<p><b><u>Infectious &amp; Sexually Transmitted Diseases</u></b>          HIV/AIDS incidence &amp; prevalence rates per 100,000 population          STDs incidence &amp; prevalence rates per 100,000 population          TB incidence &amp; prevalence rates per 100,000 population          Hepatitis B</p>
<p><b><u>Mortality</u></b>          Cancer          Disease of Heart          Stroke          Diabetes          Unintentional Injury          Chronic Lower Respiratory Disease          Chronic Liver Disease and Cirrhosis          Alzheimer's Disease          Occupational Death          Heat Mortality          Total Mortality from All Causes</p>	<p><b><u>Maternal &amp; Children's Health</u></b>          Infant Mortality per 1,000 Births          Low Birth Weight          Preterm Birth          Gestational Diabetes          Mother-to-child HIV transmission          Teen Pregnancy          Breastfeeding          Oral Health          Lead Poisoned Children          Housing with Increased lead risk          Postpartum Depression</p>	<p><b><u>Mental Health</u></b>          Diagnosis of Anxiety, Bipolar, or Major/Clinical Depression          Intended Suicide          Completed Suicide</p>
<p><b><u>Injury</u></b>          Unintentional Injury incidence &amp; prevalence rates per 100,000 population          Motor Vehicle Crash incidence &amp; mortality          Accidental Poisoning</p>	<p><b><u>Nutrition</u></b>          Fruit &amp; vegetable affordability          Free &amp; Reduced Lunch rates (schools and students)          # of people receiving SNAP          Folic acid awareness/supplementation          Less than 5 fruit/vegetables a day</p>	<p><b><u>Quality of Care</u></b>          Annual Well-Women's Check          Well Child Visit          Immunization Adult          Immunization – Child</p>
<p><b><u>Violence</u></b>          Domestic Violence          Homicide          Child Abuse</p>	<p><b><u>Overall Health Status</u></b>          Self-Reported Poor Physical Health          Self-Reported Poor Mental Health          Obesity</p>	<p><i>These health indicators were analyzed and ranked according to top causes of death, 10-year trends, racial &amp; ethnic disparities, &amp; compared to national/state rates &amp; Healthy People 2010.</i></p>

# Community Themes and Strengths and Forces of Change Assessments

- 429 Surveys were conducted in four ethnic/racial minority communities
  - African American
  - Asian/Pacific Islander
  - Hispanic/Latino
  - American Indian
- 241 Community Partners/Health Professionals were surveyed
- 303 Surveys conducted among MCDPH Staff

# Community Themes and Strengths and Forces of Change Assessments

**22 Focus Groups were conducted engaging**

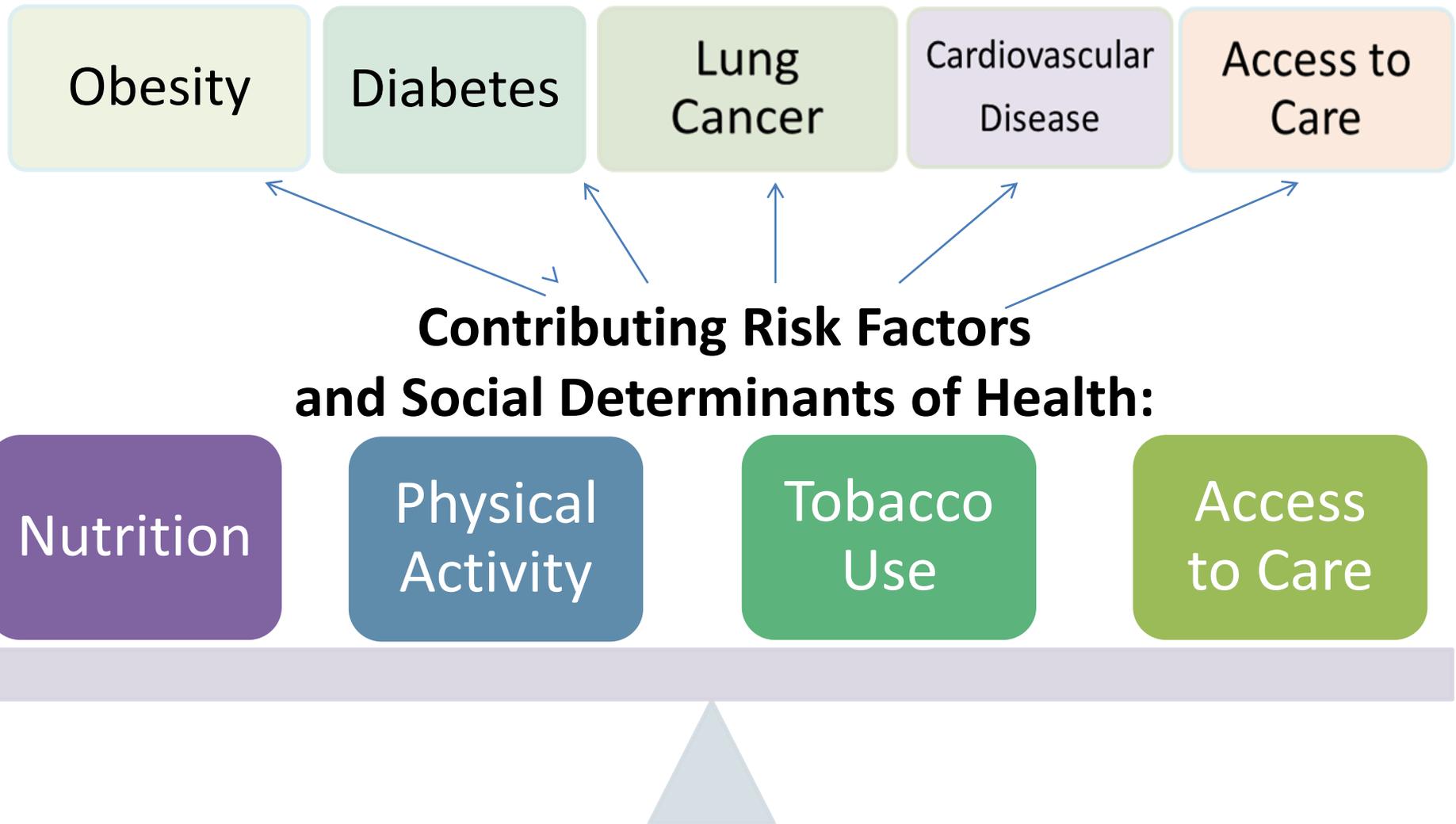
**202 Community Member Participants**

- 4 Focus groups African American population
- 4 Focus groups Asian Americans and Pacific Islanders
- 4 Focus groups American Indians
- 4 Focus groups Hispanic/Latino population
- 2 Focus groups Lesbian, Gay, Bisexual, Transgender population
- 2 Focus groups Senior citizens
- 2 Focus groups low income residents
- Youth Health Project- 329 participants ages 14 to 24 were engaged in surveys, interviews, and consensus workshops

# **Top 5 Community Health Issues identified based on the following criteria:**

- The top three most important issues identified by the community
- Conditions that were responsible for the highest number of years of potential life lost (YPLL); number of inpatient hospital days and emergency room visits
- Prevalence and trends over a 10 year period from 2001 through 2010
- Existence of health disparities by racial/ethnic subgroups

# Top 5 Strategic Public Health Priorities



# Community Health Assessment Data Analysis

## *The following overview contains:*

- Why each area is a strategic priority for Maricopa County, based on
  - Epidemiological data
  - Community priorities (from surveys)
- Risk behavior and protective factor prevalence
- Disparities between race/ethnic groups
- Impact on lives
  - Including personal stories from community members (focus groups)
- *Note: Data shown are mostly for Maricopa County, but if not available, Arizona or the U.S.*

**OBESITY**



# Why Obesity is a Priority

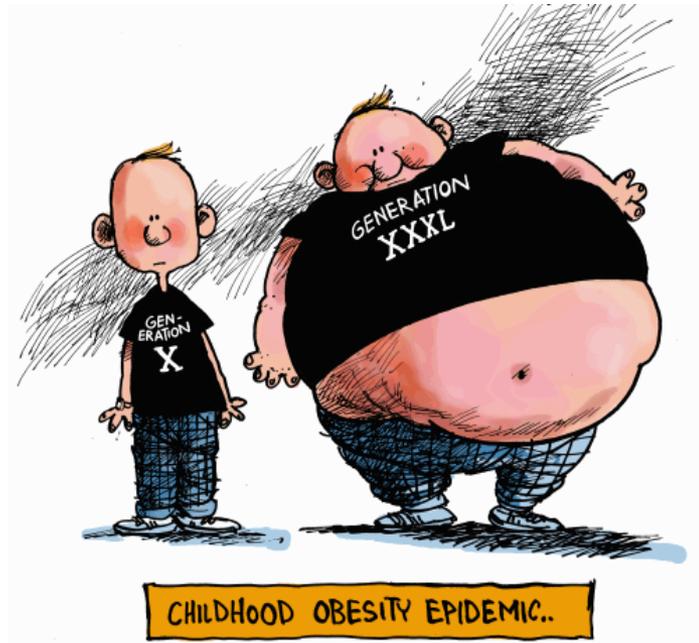
**A risk factor for breast cancer, heart disease, diabetes, and hypertension**

**30,914 potential years of life lost from heart disease and diabetes alone**

**2<sup>nd</sup> most important chosen by health professionals at MCDPH**

**2<sup>nd</sup> most important health problem chosen by community members (African American, American Indian, Asian American, Hispanic)**

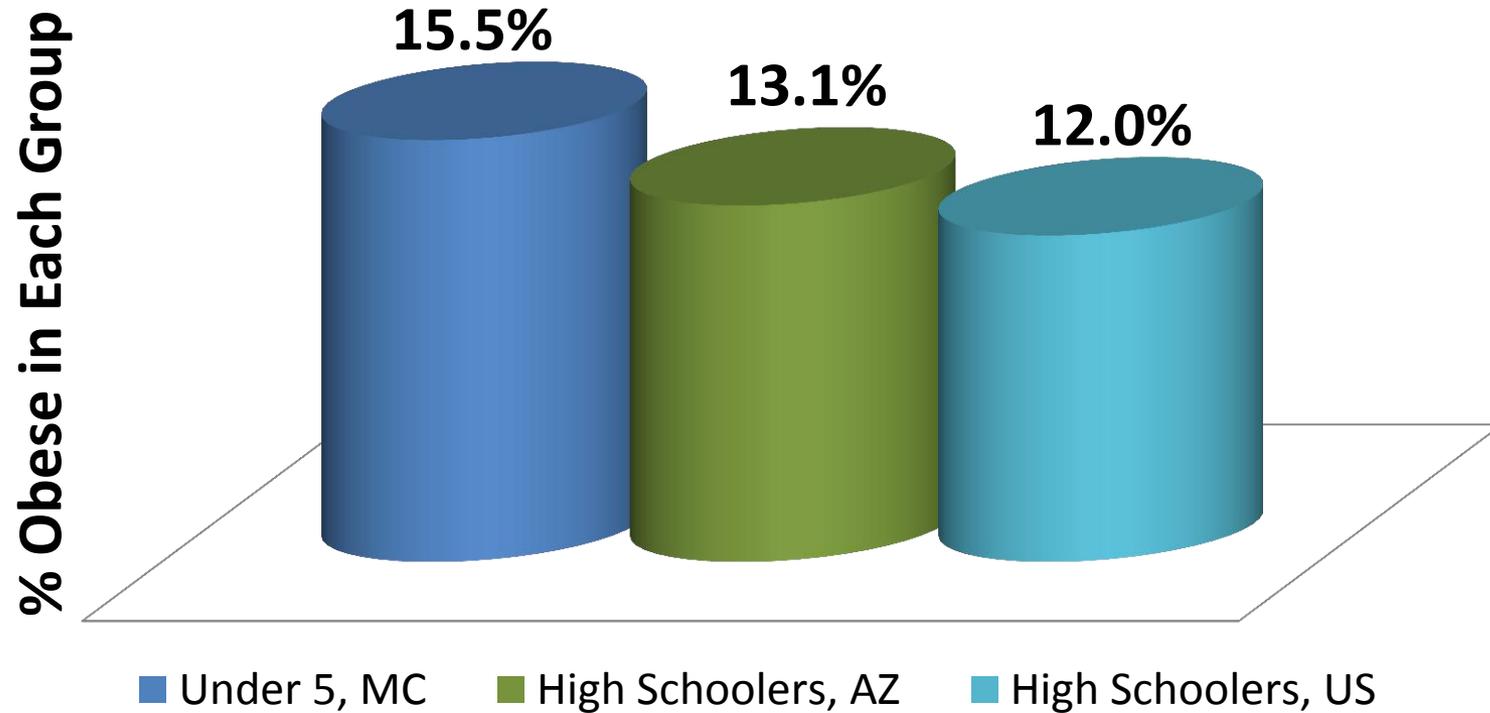
# 1 in 7 MC children are obese



# 1 in 4 MC adults are obese

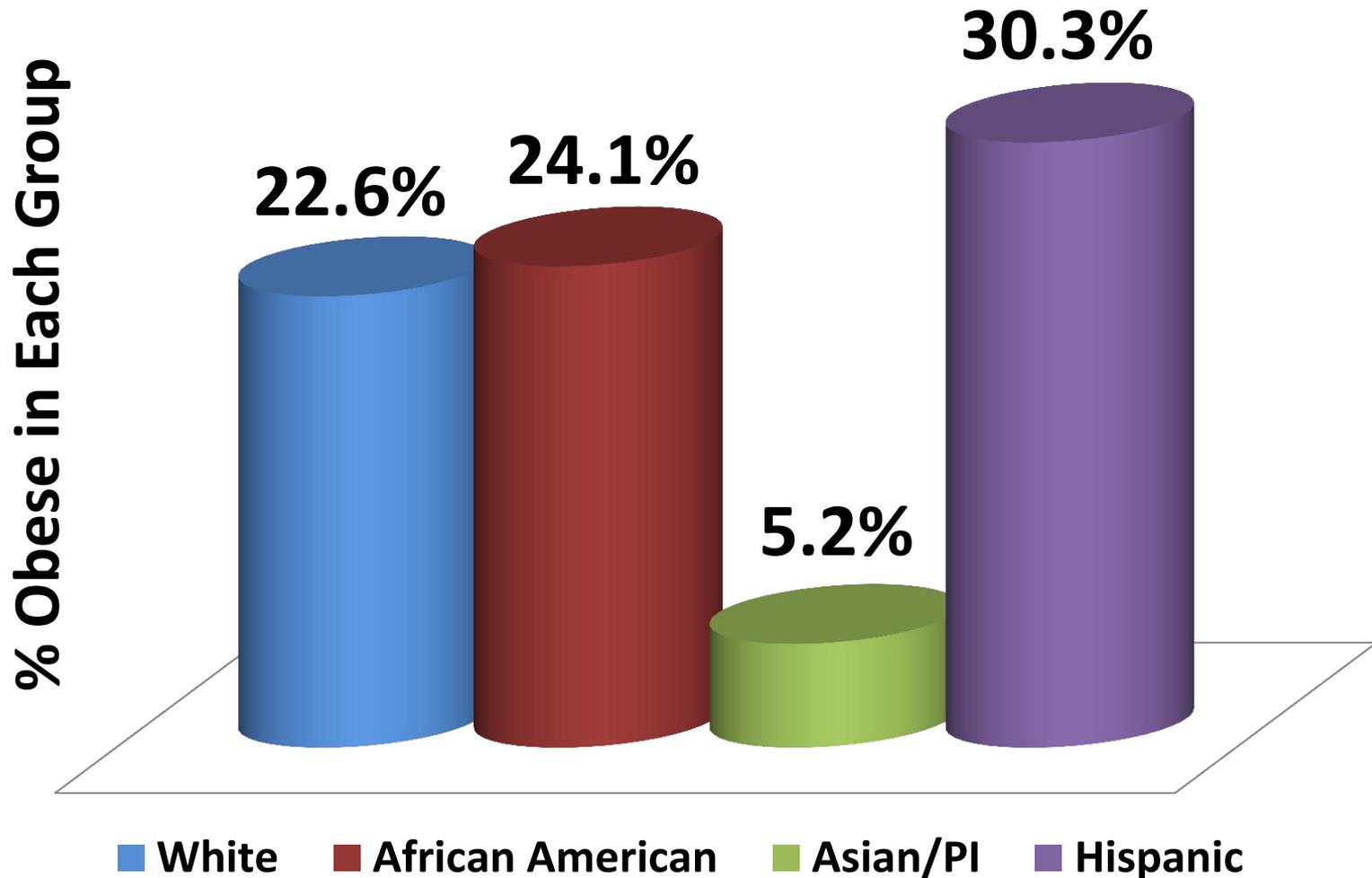
Sources: High school students AZ– Youth Risk Behavior Survey (YRBS) 2009  
Behavioral Risk Factor Surveillance Survey (BRFSS) 2010, Adults, Maricopa County.

# Obesity among Children in Arizona



Source: Under 5 year-olds, Maricopa County - PedNSS, 2009. Highschoolers AZ & US – Youth Risk Behavior Survey (YRBS), 2009.

# Hispanics Higher Percent of Obesity



Source: Combined 2009-2010 BRFSS, Adults, Maricopa County.  
Hispanics significantly higher than Asian/Pacific Islander.

# Community Members' Perspective

**“Being fat is a sign of good health. Skinny means you are sick. This is the way it is, historic. However, we are living in a generation and society that tells us skinny is good.”**

**“...lack of grocery stores. We don't have a grocery store close to us. We don't have health food stores either. Our stores are mom & pop and they sell beer, candy, and tobacco products.”**

# Potential Costs to Maricopa County

- In 2020, if obesity continues to rise, Maricopa County adults will spend \$910MM more on health care;
- In 2020, if obesity declines to 1987 levels, Maricopa County adults will spend \$945M less on health care;
- This is a \$1.85 **Billion** difference in the cost of these alternative futures.

# DIABETES



# Why Diabetes is a Priority

**#7 Leading Cause of Death**

**702 deaths**

**1<sup>st</sup> most important health problem chosen by community members (African American, American Indian, Asian American, Hispanic)**

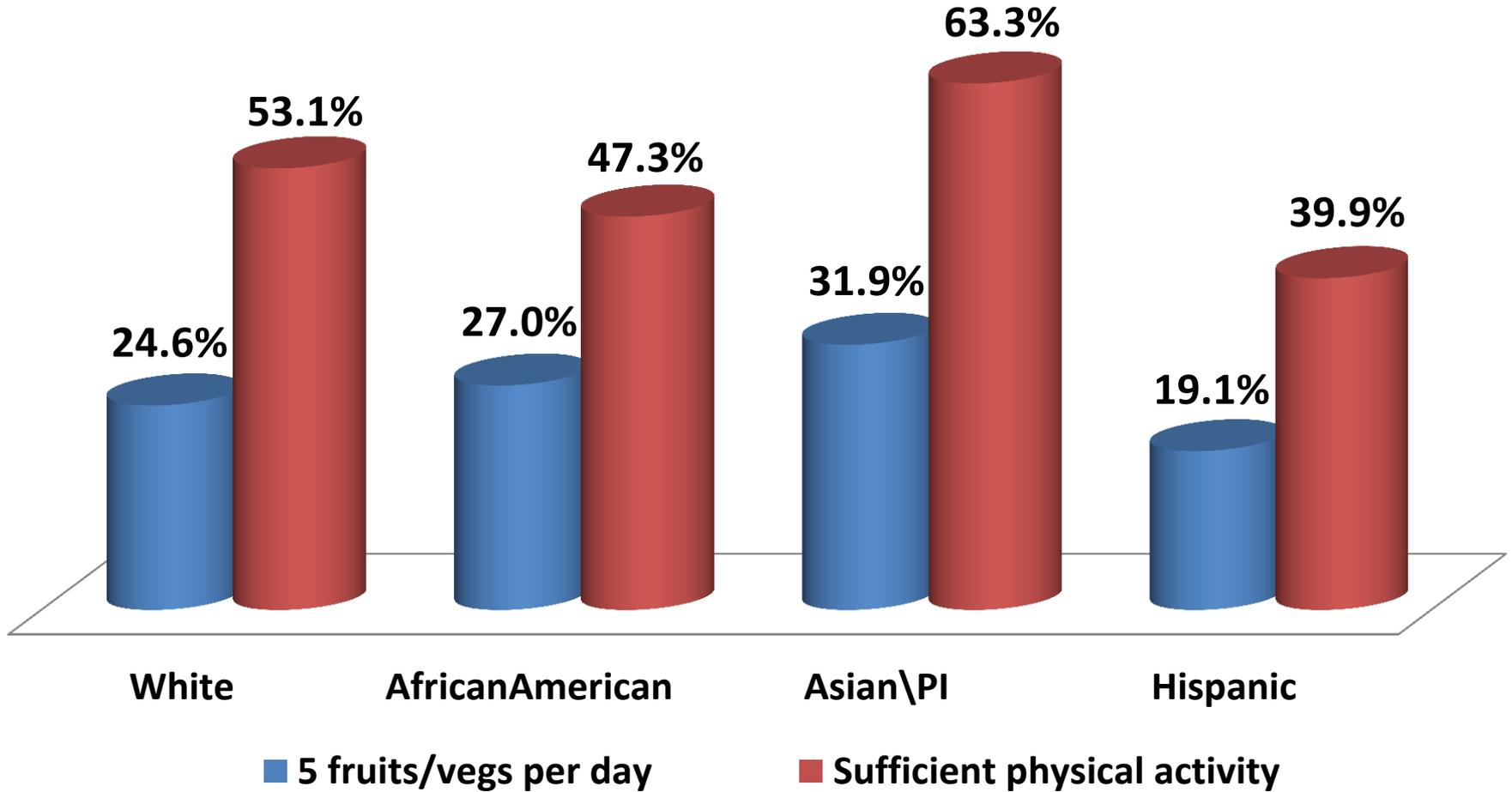
**5,407 ER visits**

**6,378 hospital stays**

**7,083 years of potential life lost**

**8<sup>th</sup> most important chosen by health professionals at MCDPH**

# Risk Behaviors - Adults



Source: Combined 2009-2010 BRFSS, Adults, Maricopa County.

# Only 1 in 4 Adults Eat “5 a Day”

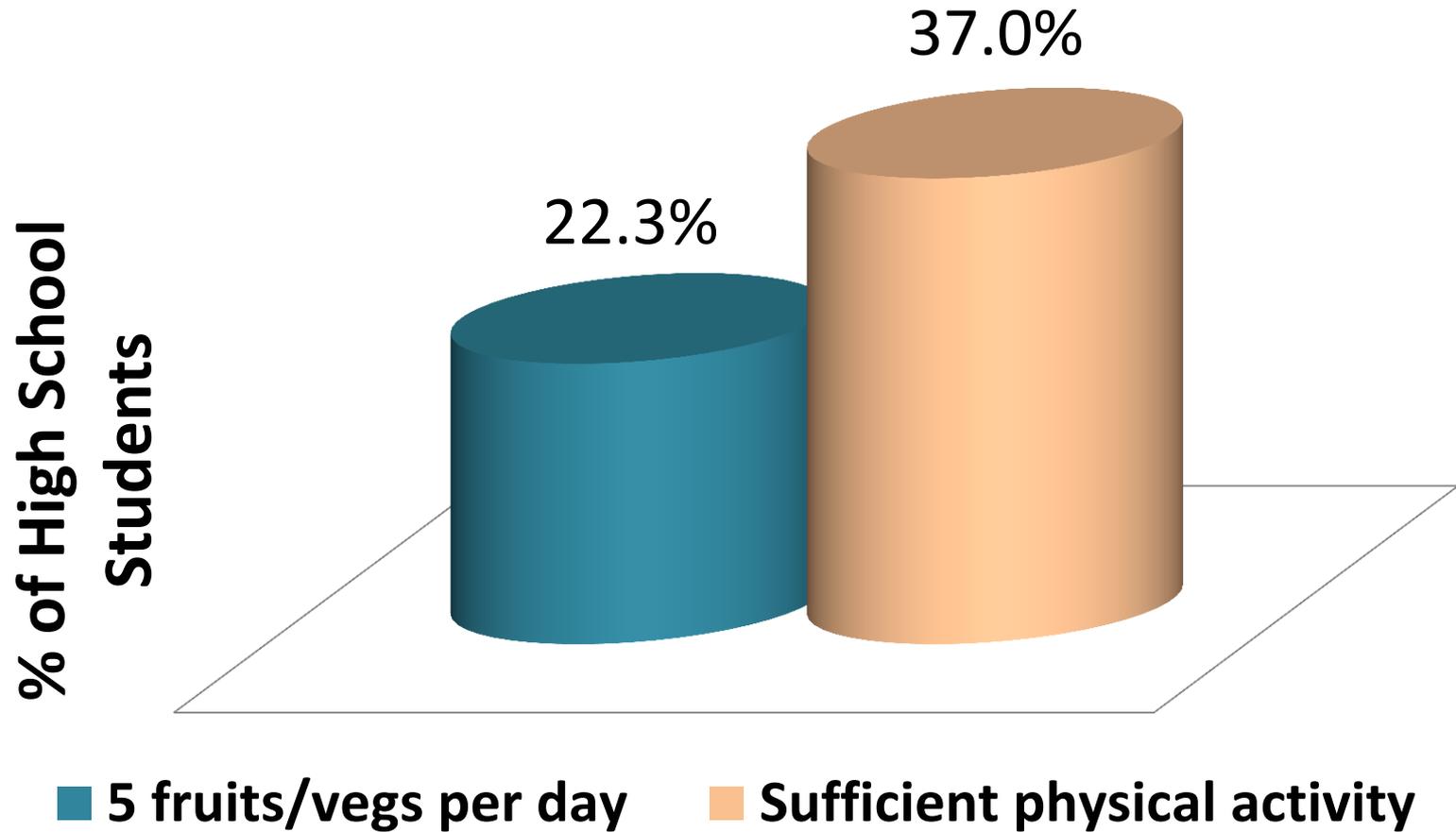


**Only 1 in 4 US  
High School Students Eat  
“5 a Day”**



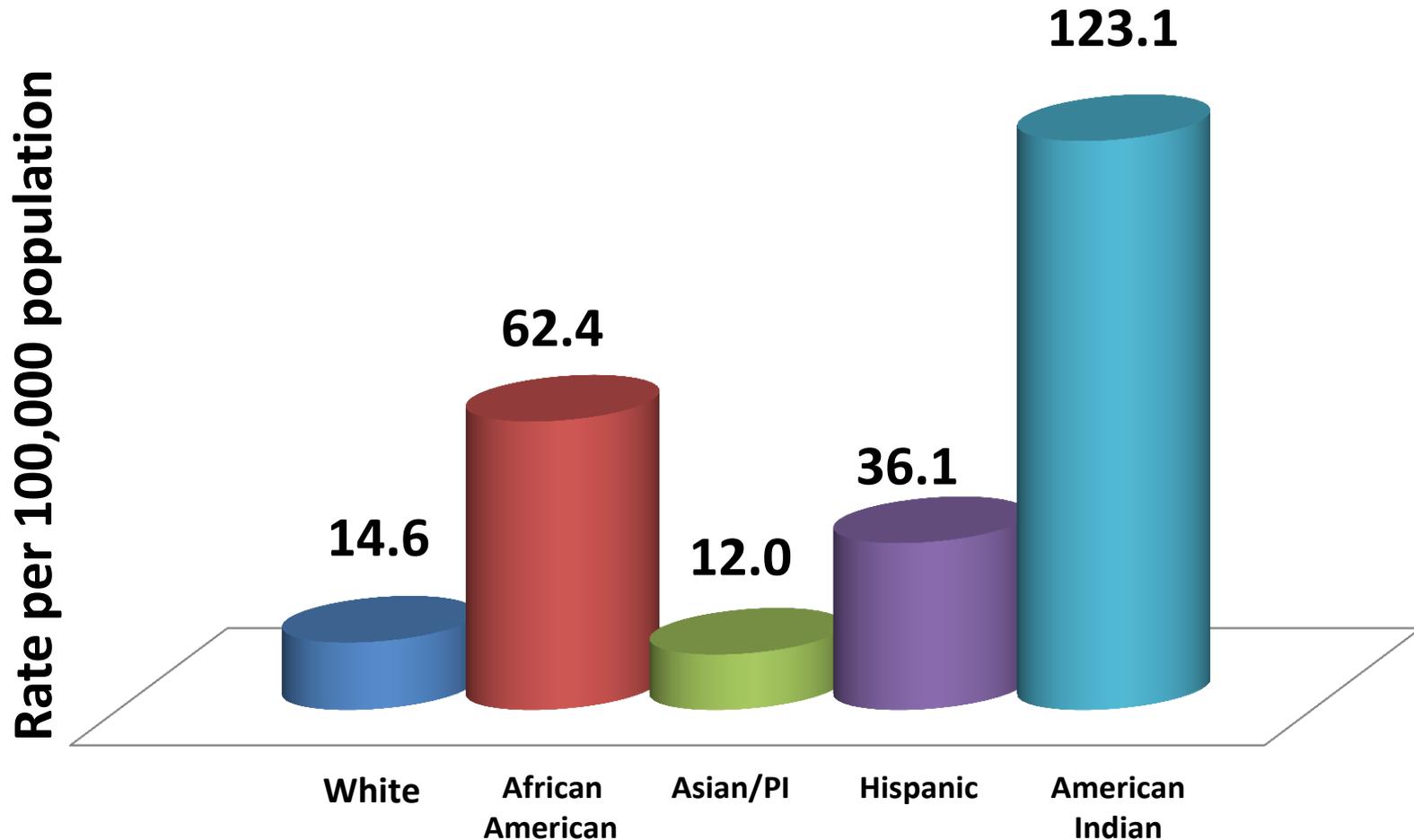
Source: Adults - BRFSS 2010, Maricopa County. High school aged children, YRBS, 2009, US (Local data not available.)

# High School Students at Risk



Source: YRBS, 2009, High school aged children, US (Local data not available.)

# Diabetes Death Rate Higher in African Americans, Hispanics, & American Indians



Source: ADHS, Death Certificates, Maricopa County Residents, 2010, Age adjusted.

# Community Members' Perspective

**“...kids not as active. It’s all about the computer, internet, cell phone. There is an increase of kids with diabetes.”**

**“We have young children with diabetes and who are overweight. PE classes are limited to two to three times per week...My daughter wanted to play T-ball but it was \$250 per season. Options for local sports not affordable. The Boys & Girls Club are expensive and there are additional fees for different activities.”**

# Costs

## Arizona

- In 2006 costs totaled \$3.4 billion including \$2.3 billion in medical bills for diabetes care and \$1.1 billion in indirect costs.

## United States

- \$174 billion: Total costs of diagnosed diabetes in the United States in 2007
- \$116 billion for direct medical costs
- \$58 billion for indirect costs (disability, work loss, premature mortality)
- Average medical expenditures among people with diagnosed diabetes were 2.3 X higher than what expenditures would be in the absence of diabetes.

# CARDIOVASCULAR DISEASE



# Why Cardiovascular Disease is a Priority

**#2 Leading Cause of Death in Maricopa County 2010**

**5,143 deaths**

**21,413 ER visits**

**7<sup>th</sup> most important health problem chosen by community members (African American, American Indian, Asian American, Hispanic)**

**High blood pressure, a major risk factor for CVD, was the 4<sup>th</sup> most important health problem chosen by community members**

**6<sup>th</sup> most important chosen by health professionals at MCDPH**

**30,000+ years of potential life lost**

**58,176 hospital stays**

# Risk Behaviors

- **Obesity**
- **Diabetes**
- **Diet**
- **Physical (In)activity**
- **Tobacco use**
- **Alcohol use**



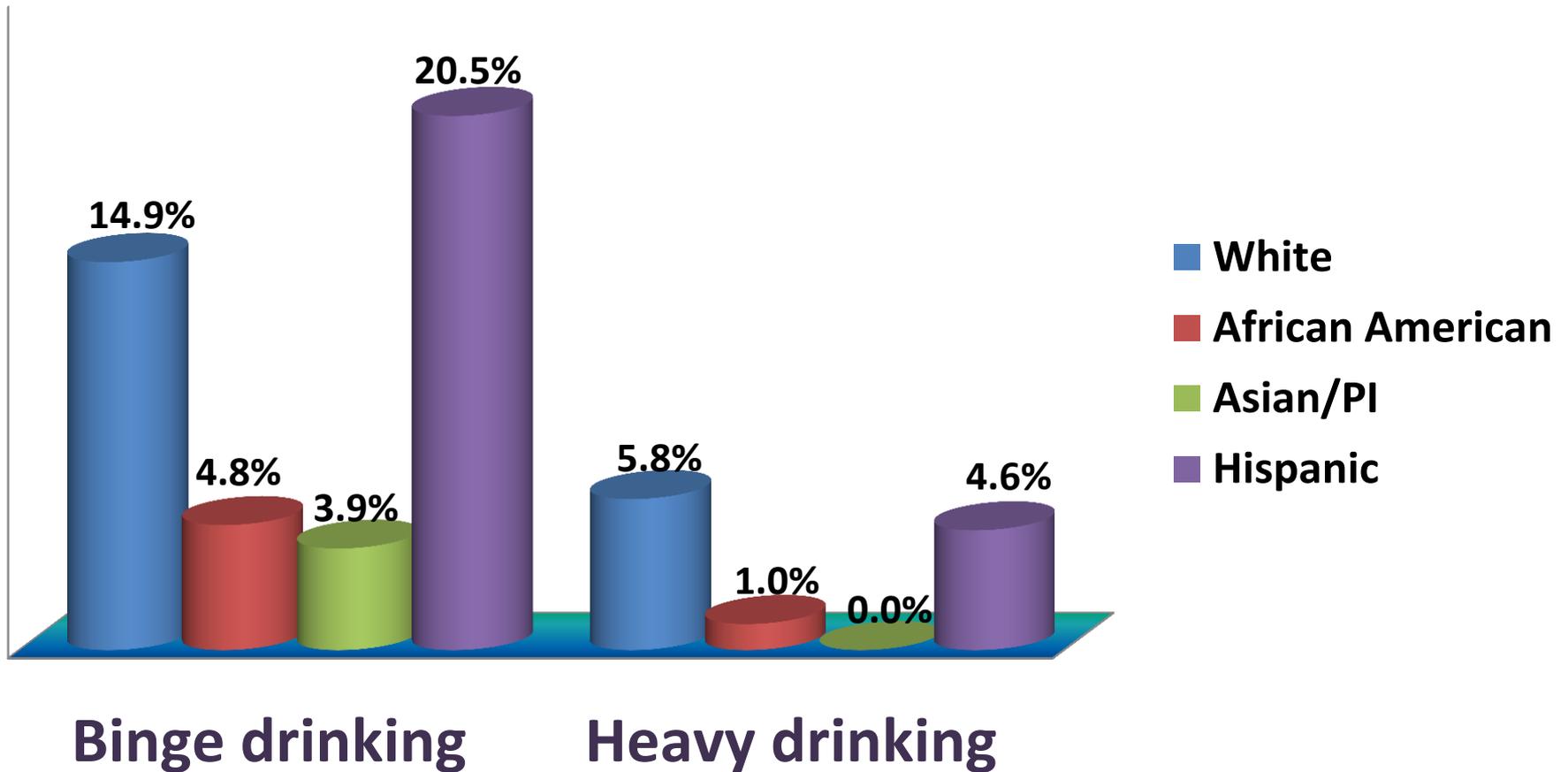
**1 in 4 MC residents have been told by doctor they have high blood pressure**



**1 in 4 MC  
Adults are  
Obese**

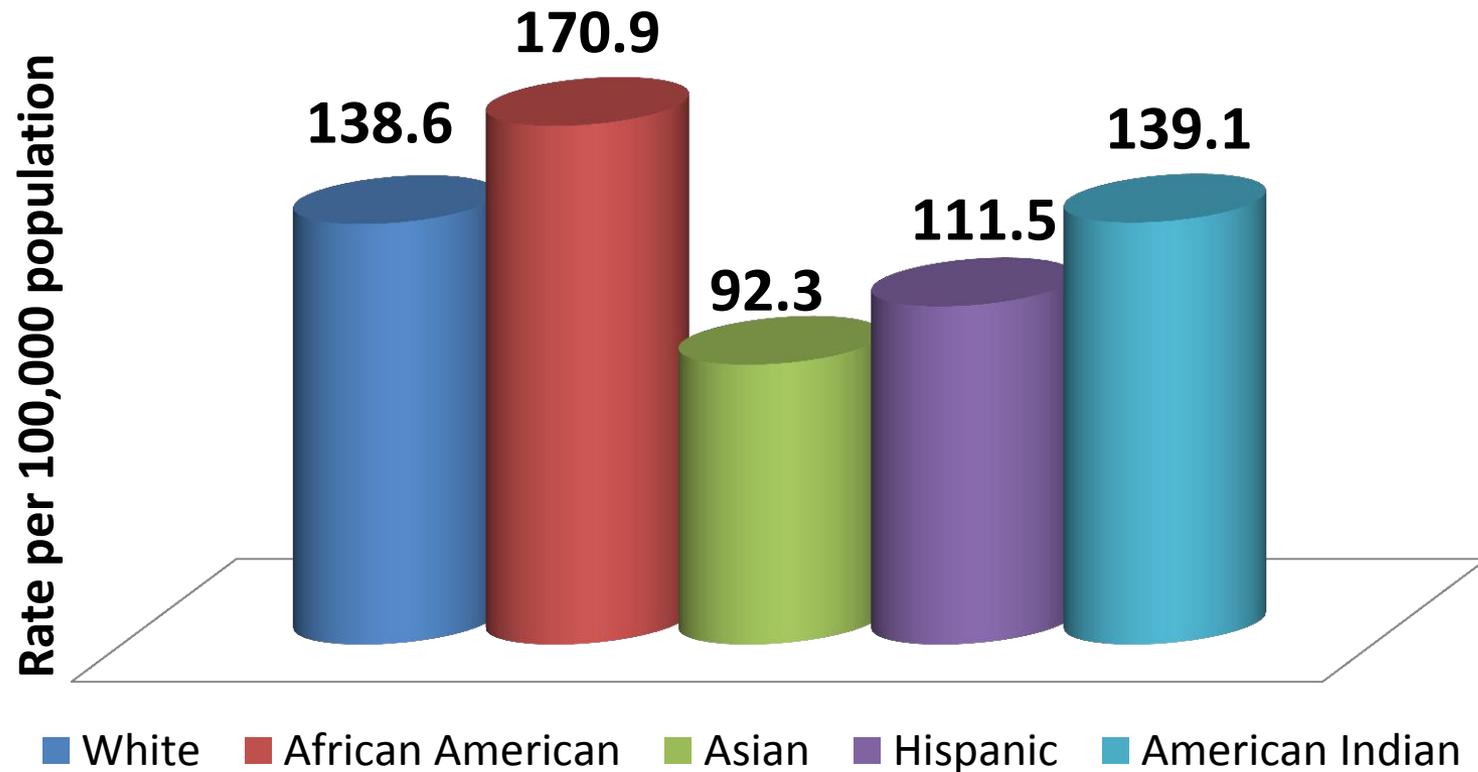
Source: BRFSS 2010, Adults, Maricopa County.

# 1 in 7 MC Adults Binge Drink



Source: Combined 2009-2010 BRFSS , Adults, Maricopa County.

# Heart Disease Death Rates Lower for Asians than Other Groups



Source: ADHS, Death Certificates, Maricopa County Residents, 2010, Age adjusted.

# Community Members' Perspective

**“Nutrition in the school is not very good, especially for the ‘gorditos.’ They serve them hamburgers, hot dogs, and pizza; it’s better to send them with a lunch from home.”**

***(Translation)***

**We are busy working...we don’t pay attention to our health. Plus, we worry too much and we get stress...that will affect to our health...high blood pressure and stroke...”**

# Costs

## Arizona

- Hospital charges from heart disease totaled nearly \$3.8 billion
- Charges associated with stroke were another \$400 million
  - This does not include in-patient physician charges, non-hospital direct costs such as outpatient charges, or indirect costs associated with missed work, early deaths, etc. |

## United States

- All cardiovascular diseases together were projected to cost \$444.2 billion in 2010, including health care services, medications, and lost productivity.

# LUNG CANCER



# Why Cancer is a Priority

**#1 Leading Cause of Death**

**16,318 hospital stays**

**Cancer was the 3<sup>rd</sup> most important health problem chosen by community members (African American, American Indian, Asian American, Hispanic)**

**1,164 ER visits**

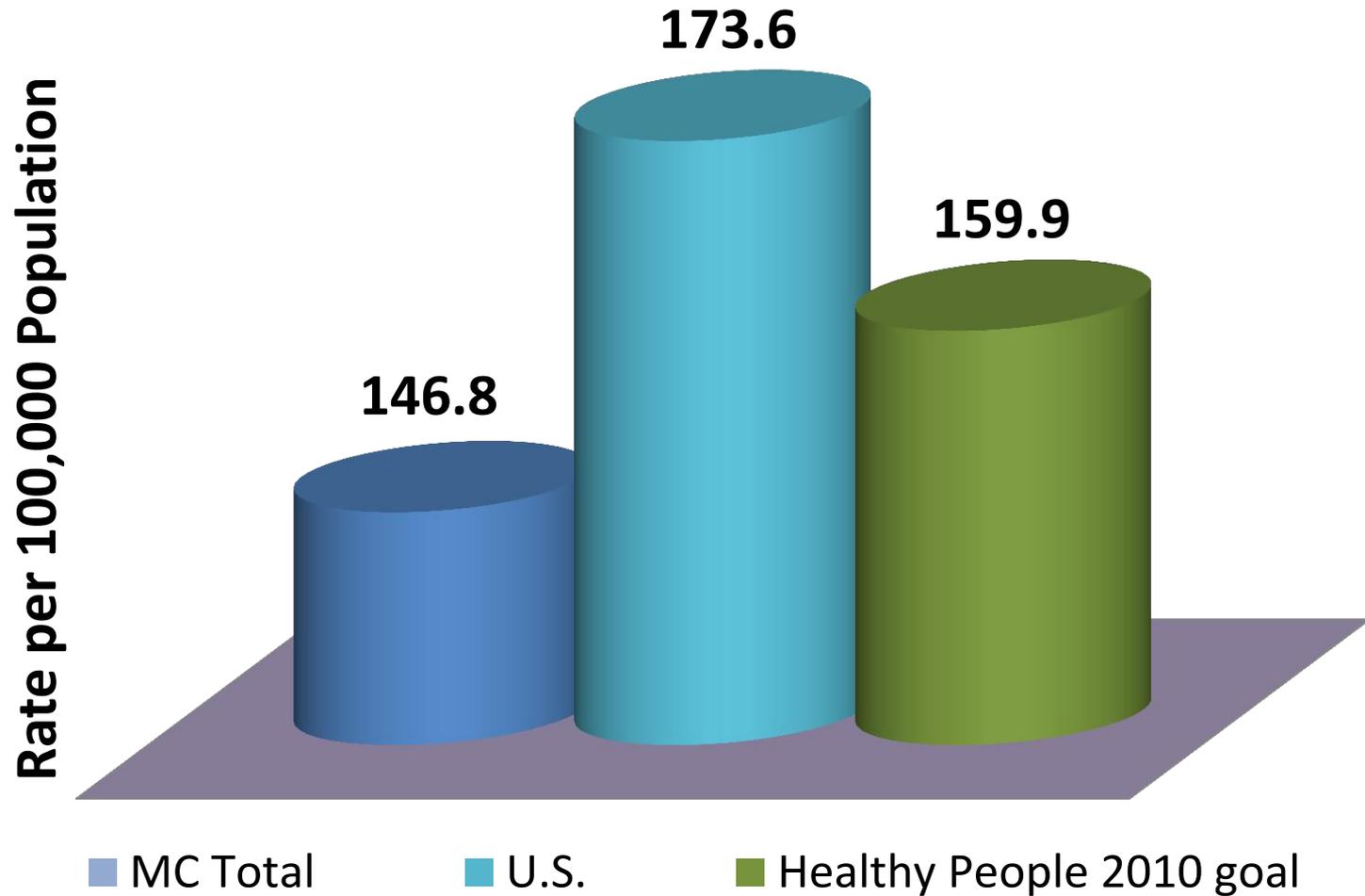
**51,334 years of potential life lost**

**5,508 deaths**

**Tobacco use was the 5<sup>th</sup> most important risky behavior chosen by community members**

**Lung cancer causes more deaths than any other cancer, and is the easiest to prevent**

# All Cancer Deaths, 2010



Source: ADHS, Death Certificates, Maricopa County Residents, 2010 (MC). National Center for Health Statistics, preliminary 2010 (U.S.) accessed May 2012. Healthy People 2010.. Age adjusted

# Which Cancer to Target?

Higher survival rate

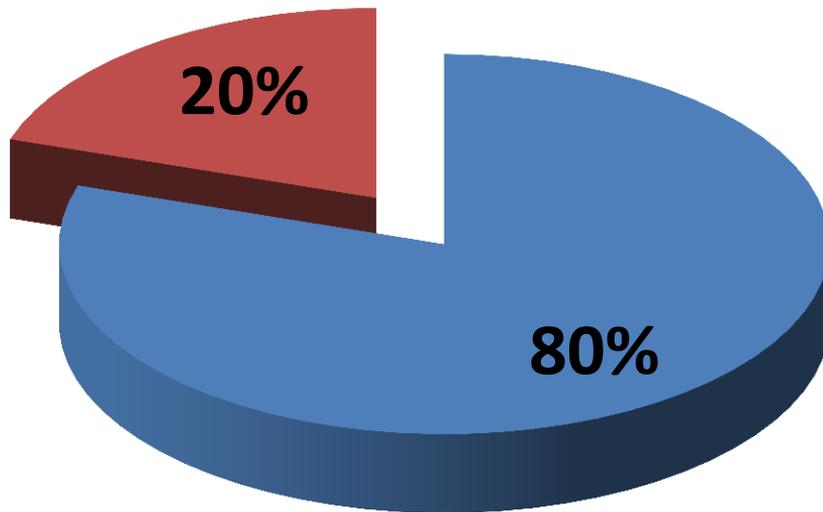
Number of cases diagnosed in 2008	
Breast	2,374
<b>Lung and bronchus</b>	<b>1,936</b>
Prostate	1,934
Colorectal	1,335
Urinary and bladder	698
Cutaneous melanoma	639
Thyroid	607
Other types	5,377
Total (All types of cancer)	14,900

Lower survival rate, easier to prevent

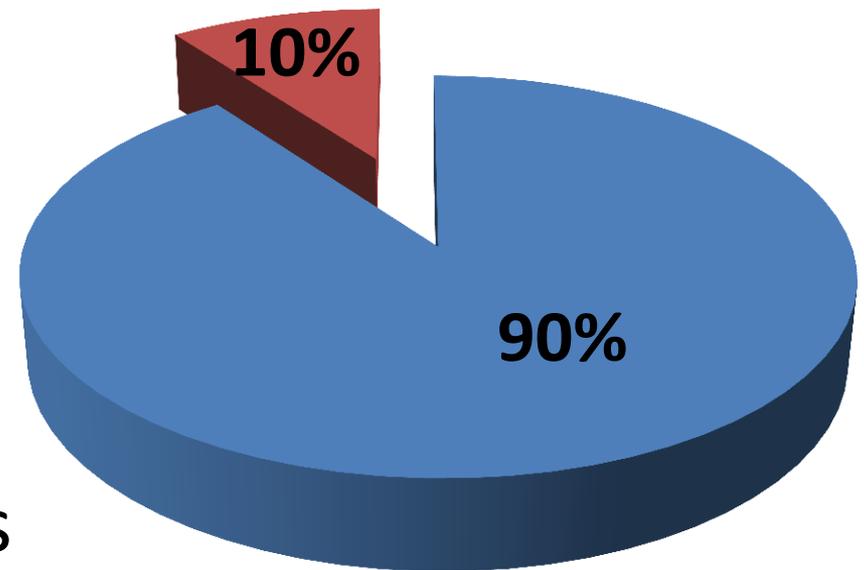
Source: ADHS Cancer Registry, Maricopa County residents diagnosed in 2008 (Most recent data available).

# Lung Cancer Risk Behaviors

## Women



## Men



■ Smoking ■ Other causes

Source: 2004 Surgeon General's Report- The Health Consequences of Smoking

# 1 in 7 Adults Smoke in MC



Note: Smoking is not cool just because cool people on television and in the movies do it.

# Arizona Youth and Smoking, 2009

Of every 20 highschoolers...

10 have ever tried smoking



Source: YRBS, Arizona High School-Aged Children, 2009.

# Arizona Youth and Smoking, 2009

Of every 20 highschoolers...



Source: YRBS, Arizona High School-Aged Children, 2009.

# Arizona Youth and Smoking, 2009

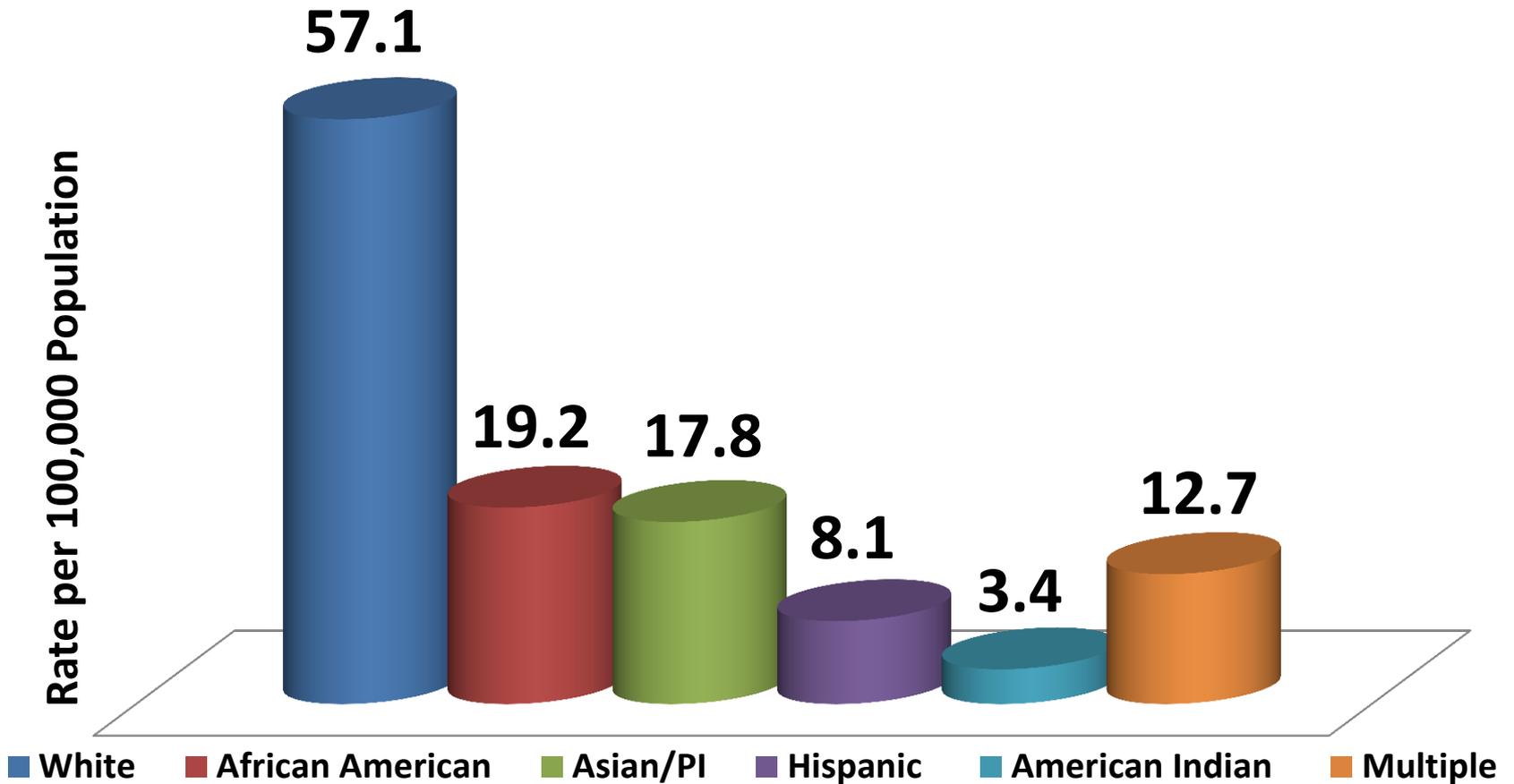
Of every 20 highschoolers...

1  
smoked  
20 of  
past 30  
days



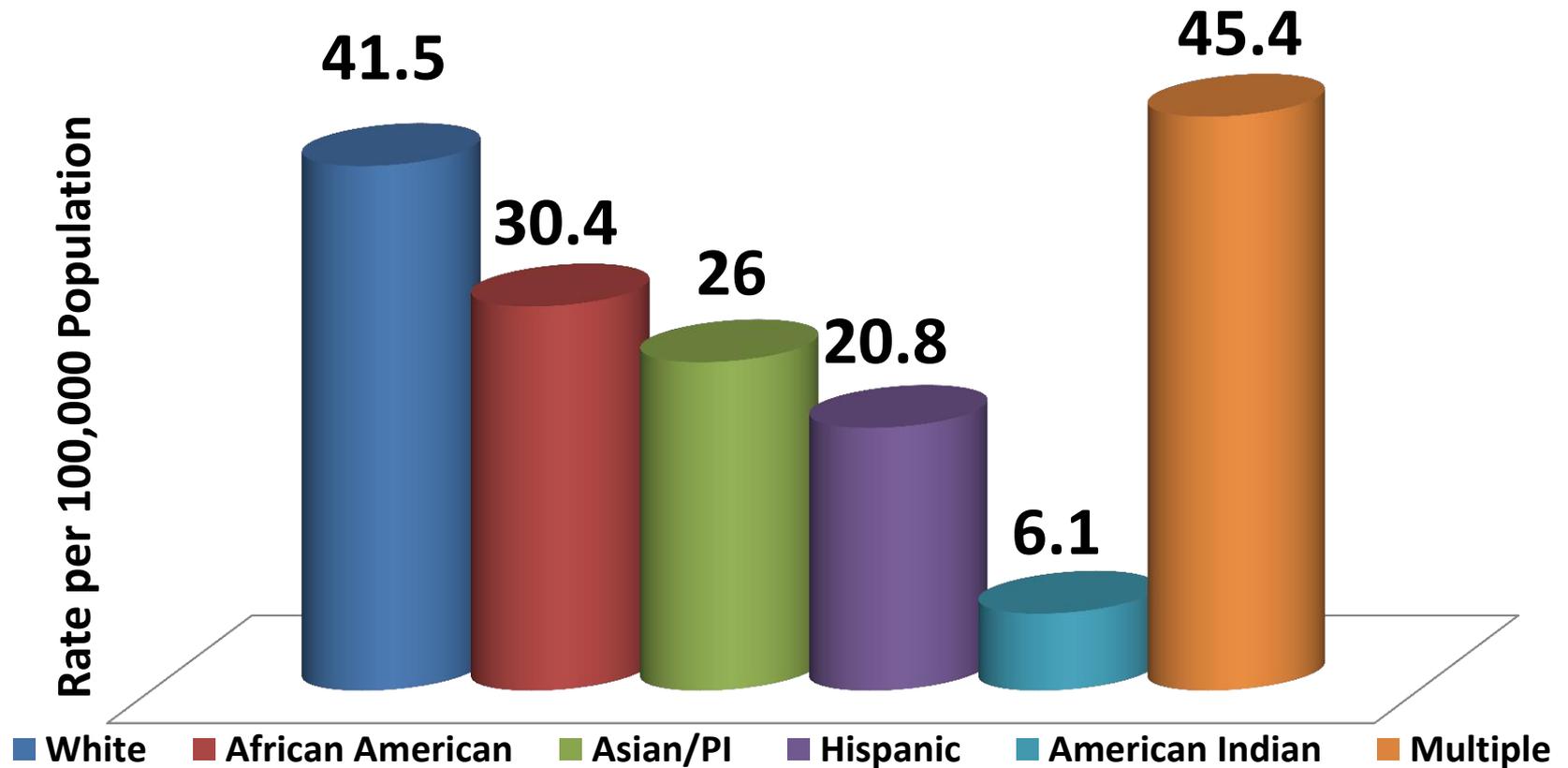
Source: YRBS, Arizona High School-Aged Children, 2009.

# Lung Cancer Death Rate Highest Among Whites



Source: ADHS, Death Certificates, Maricopa County Residents, 2010.

# Lung Cancer Death Rate Highest Among Whites, Multiple Races – Age Adjusted



Source: ADHS, Death Certificates, Maricopa County Residents, 2010.

# Community Members' Perspective

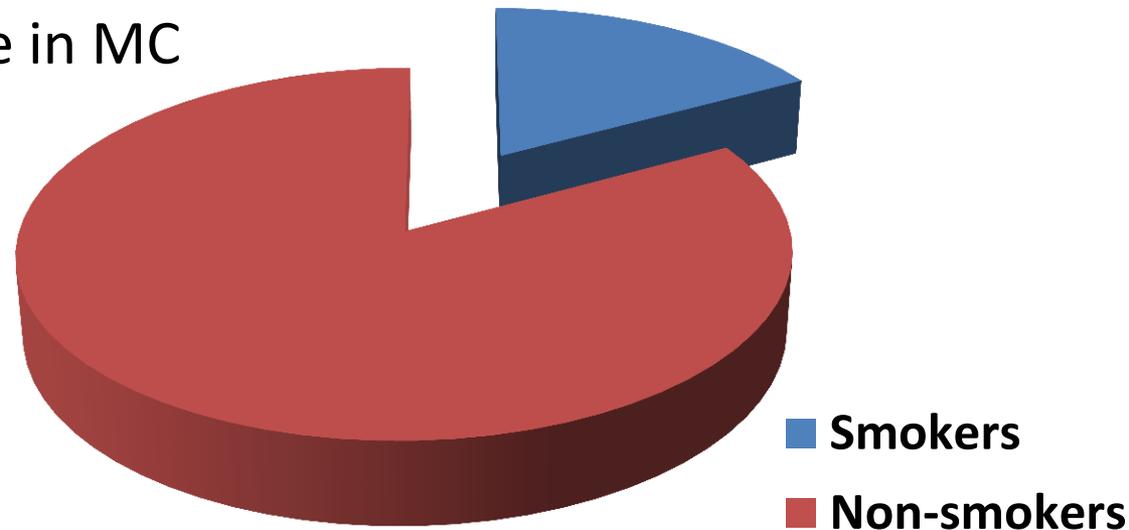
**“...how are we going to help people in our community to express their feeling in front of doctors? I’ve seen many people don’t feel comfortable to discuss with their doctors when they’re having cancer. It will be too late for them when they realize that.”**

**“...Another obnoxious thing is smoking...The US Government treats people who sell cigarettes really well and are afraid of offending them. If they cannot sell it to Americans, they will sell it to Chinese.”**

# Arizona Smoking Prevalence & Costs

## Adults

- 17% of adults smoke in MC



## Cancer Costs

- Approx. \$3.72 billion was spent on cancer in Arizona in 2004
- Total direct medical cost in our state was \$1.36 billion in 2004

Sources: BRFSS, 2010, YRBSS, High School-Aged Children, 2009, ADHS The Arizona Comprehensive Cancer Control Plan.

# Shared Risk Behaviors

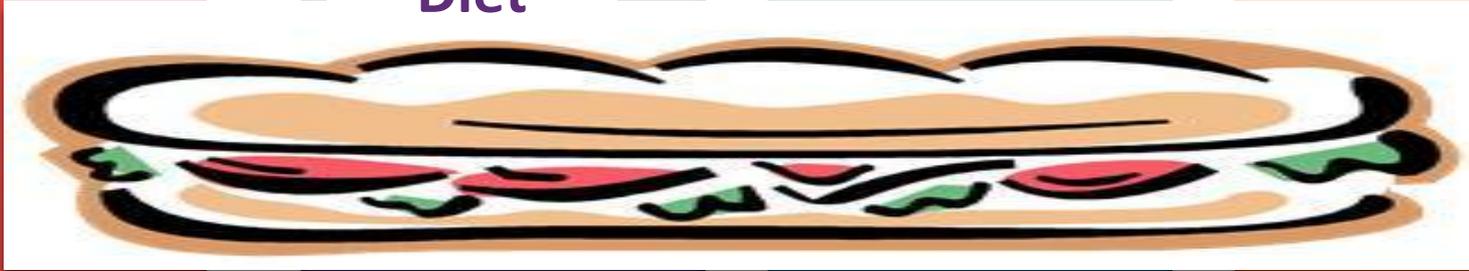
Obesity

Diabetes

Heart Disease

Cancer

Diet



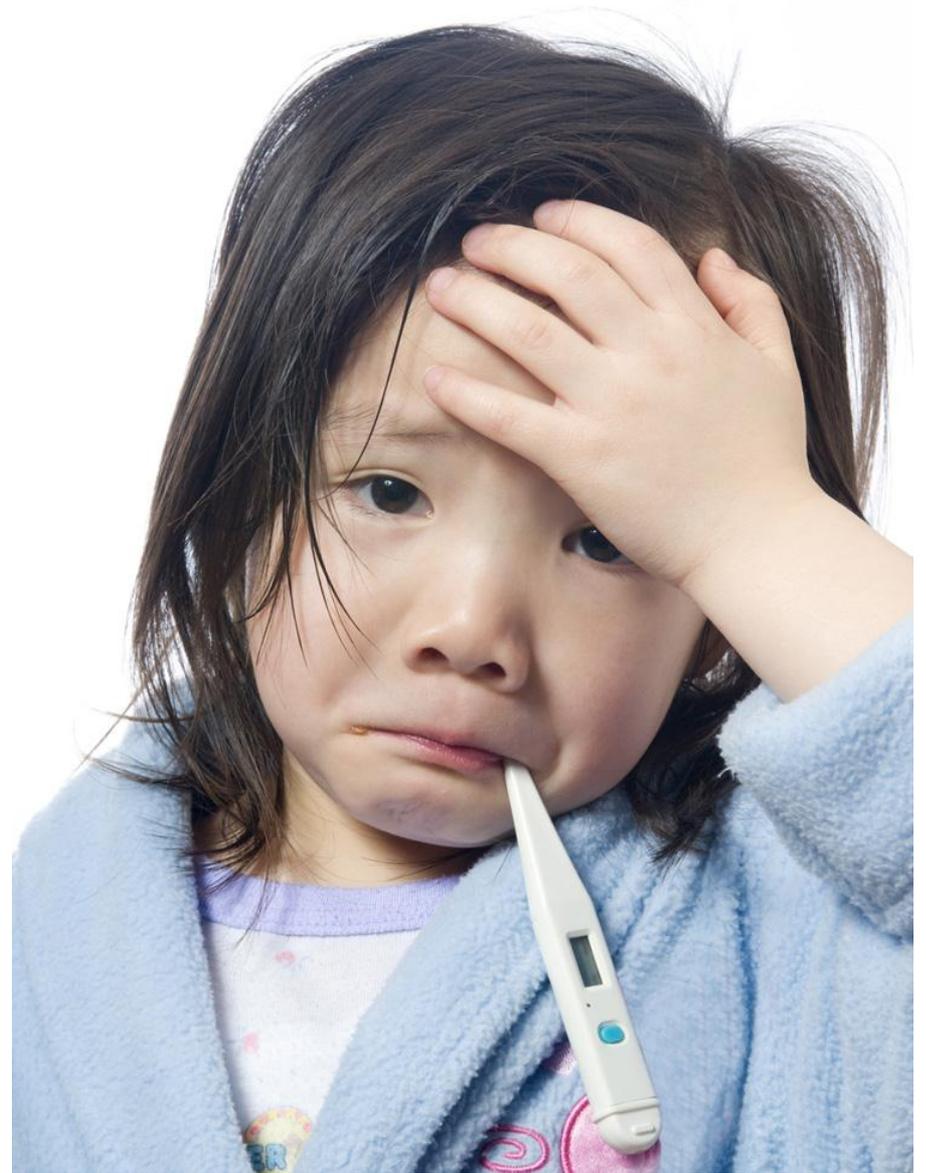
Inactivity



Smoking



# ACCESS TO CARE



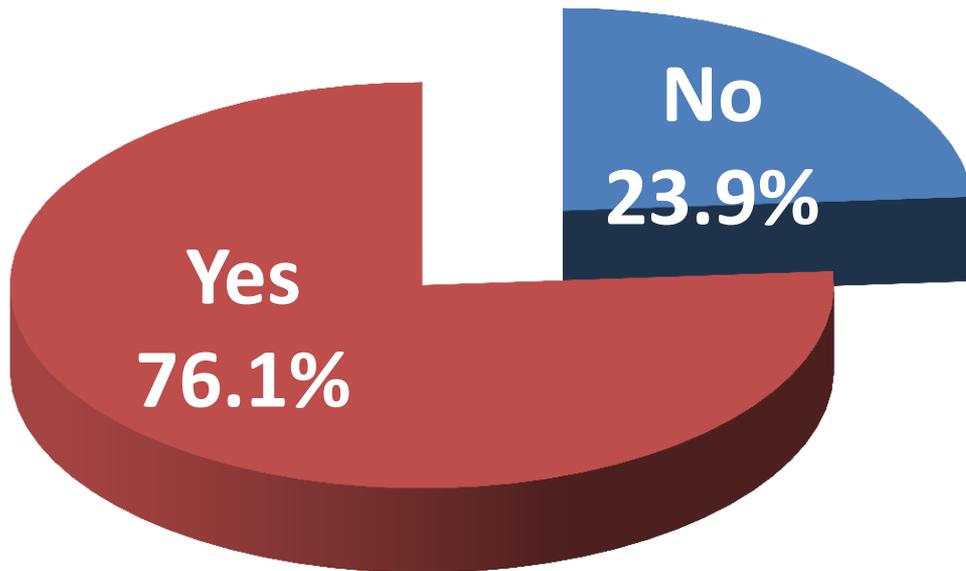
# Why Access to Care is a Priority

**1<sup>st</sup> most important health problem chosen by health professionals at MCDPH**

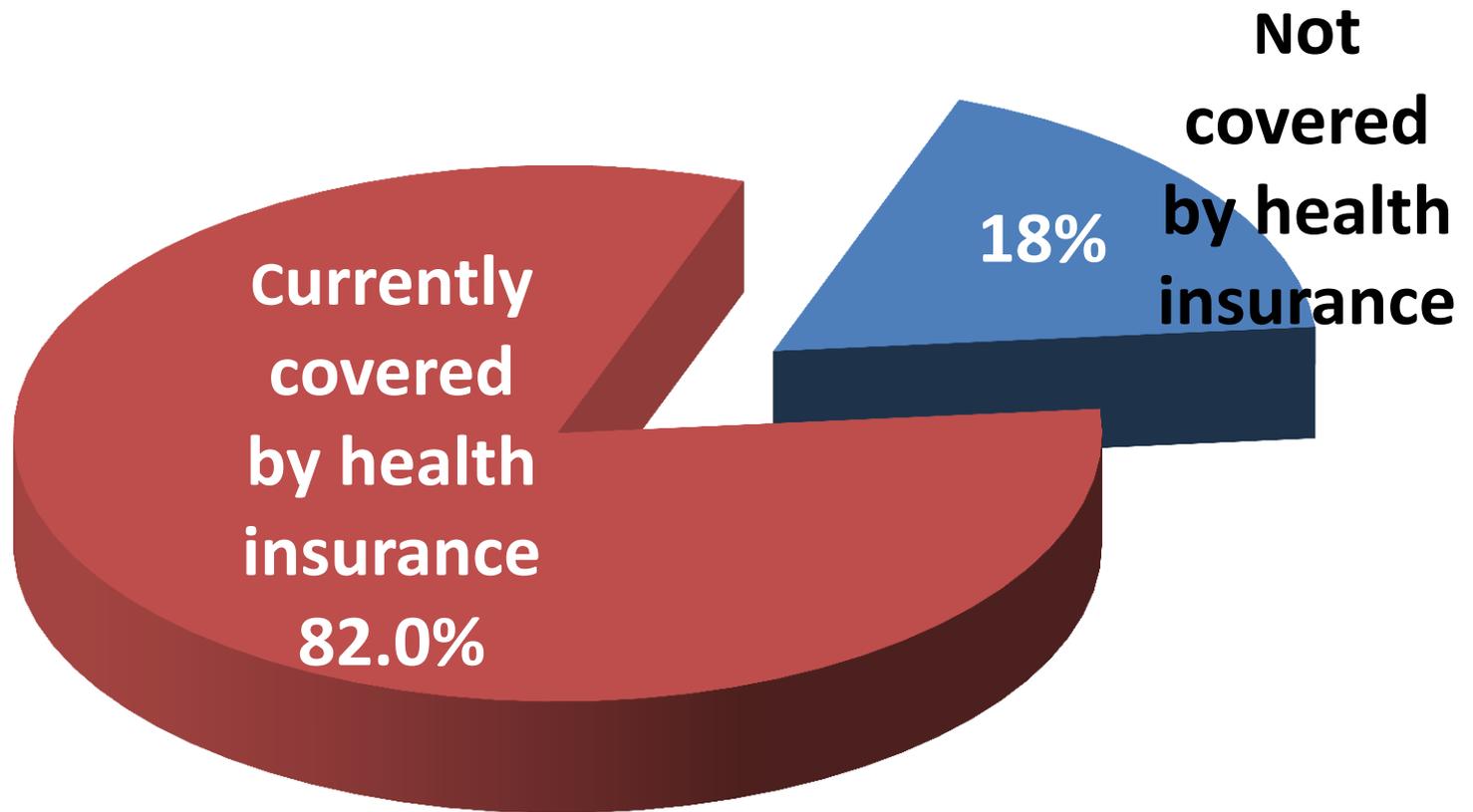
**Has the ability to influence all other components of health**

**6<sup>th</sup> most important factor affecting quality of life chosen by community members (African American, American Indian, Asian American, Hispanic)**

# 1 in 4 MC Residents Haven't Seen Provider in Past Year



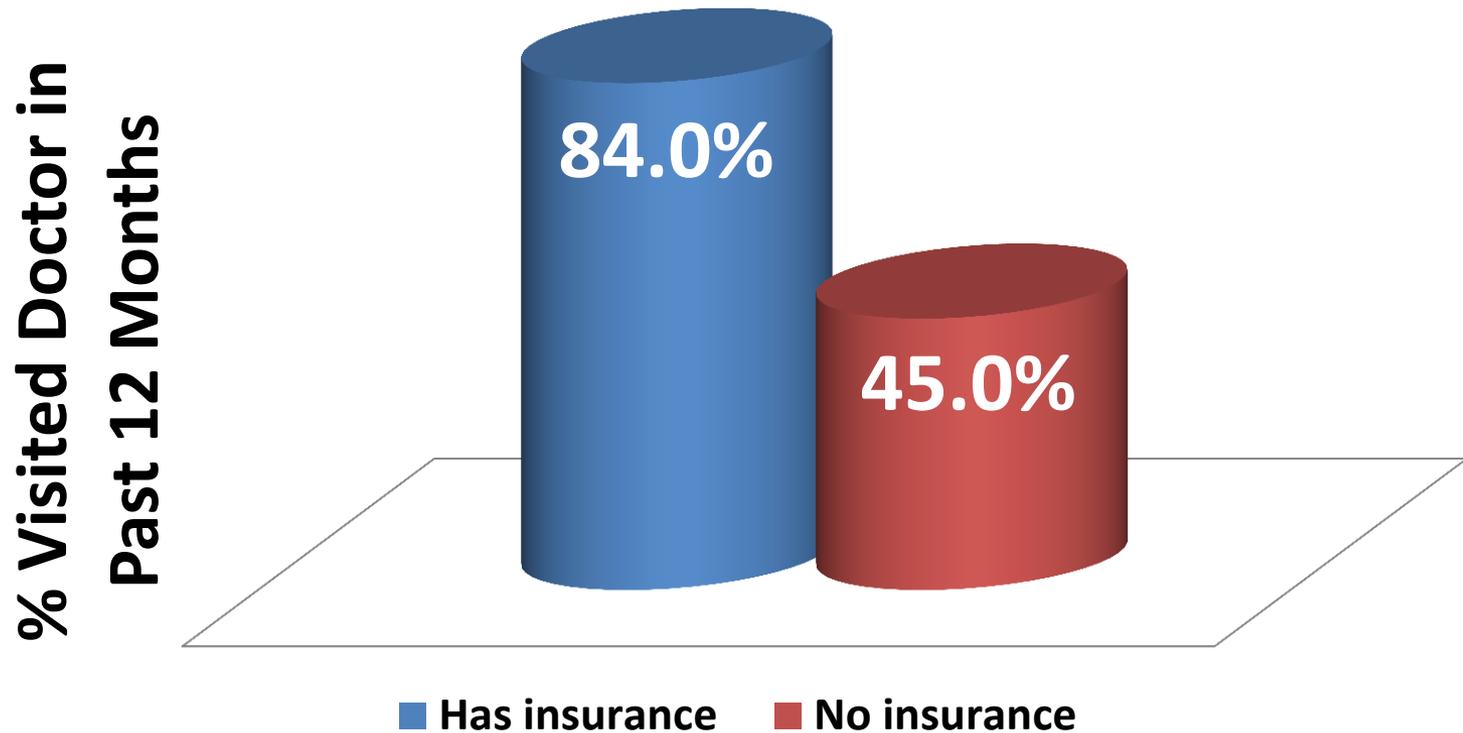
# 1 in 6 Do Not Have Health Insurance in Maricopa County



# 1 in 6 Delayed or Didn't Get Medical Care Because of Cost

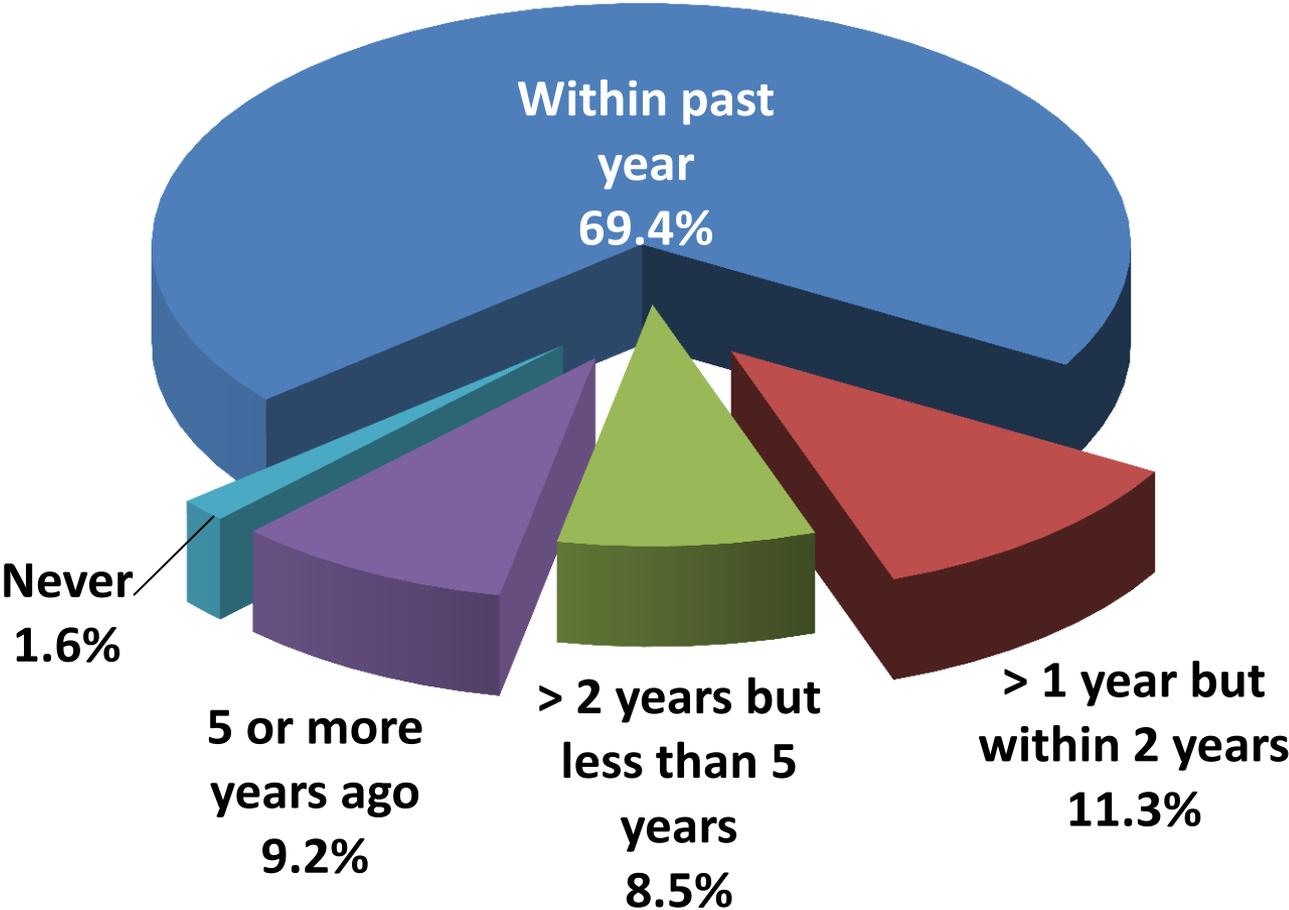


# Residents Without Health Insurance Less Likely to Visit a Doctor

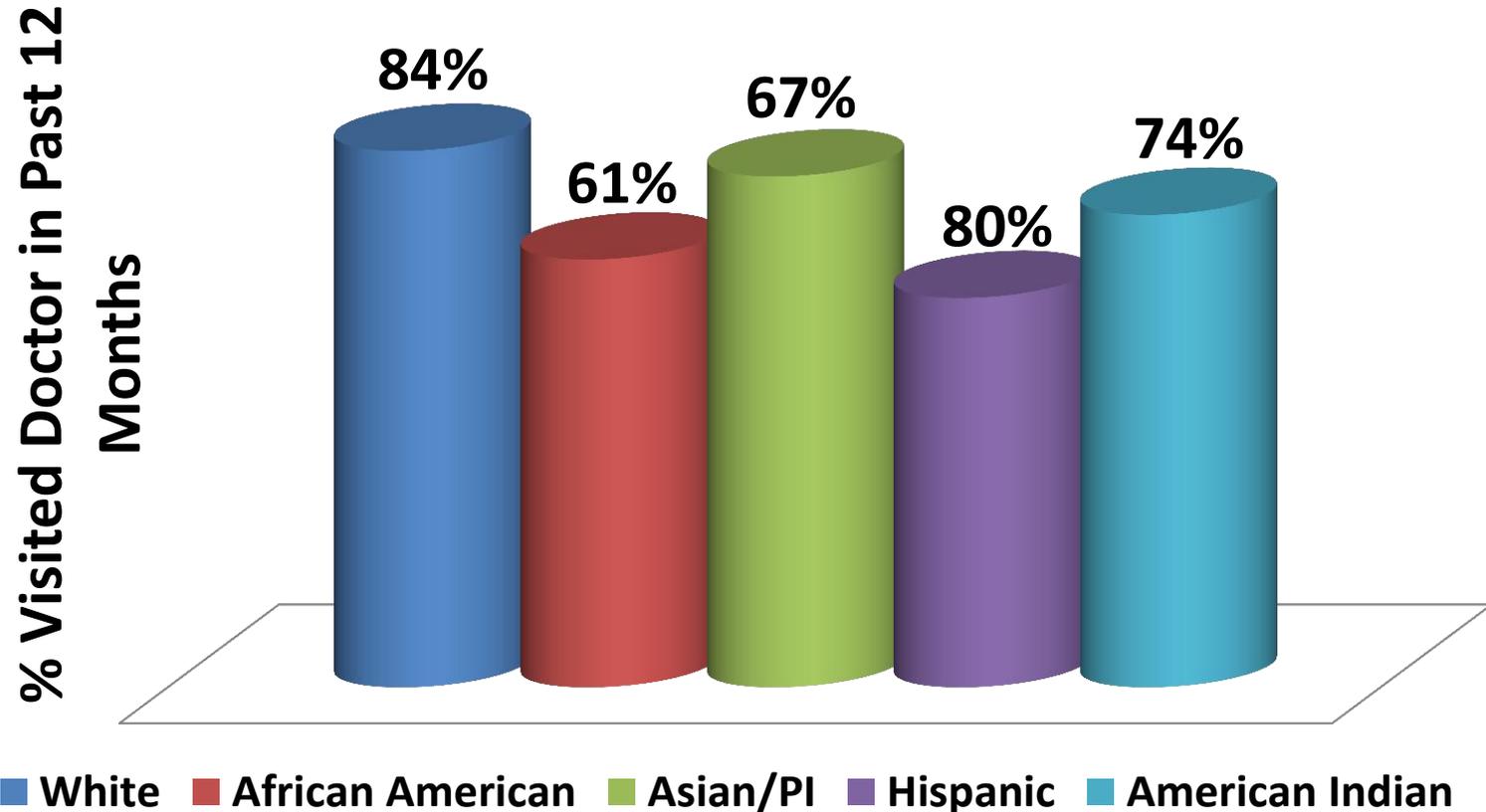


Source: 2010 Arizona Health Survey Report, St. Luke's Health Initiatives-Arizona Adults' Access to Health Care. Statistical significance not measured.

# 2 in 3 Got Dental Care in Past Year



# Whites and Asians Most Likely to Visit a Doctor



Source: 2010 Arizona Health Survey Report, St. Luke's Health Initiatives-Arizona Adults' Access to Health Care. Statistical significance not measured.

# Community Members' Perspective

**"I'm a professional, an entrepreneur, I do not qualify for health care. My neighbors are immigrants. They don't know where to go. For them as well, health care is secondary. Health care is a crisis based on need. No insurance for preventive care. Where do I go? No where. I wait until it's an emergency and go to the emergency room."**

**"My kids are covered through school and for sports related issues only. The school has an insurance program. We, as parents, are uninsured and we are middle income."**

**"In order for me to raise a healthy Arizona child, I need to be healthy myself."**

# Community Members' Perspective

**One participant expressed a need for “a system in place that says, ‘you know what, I know where I can send you that will help you’ and not with a bunch of red tape.”**

**“Need a program that supports those who have worked. I worked for 25 years, I paid into systems, I am unemployed now, I need a program that will provide me health care.”**

**“If you’re in a community where a lot of people don’t have health insurance, it’s a stressful thing.”**

Source: Focus Groups Among Community Members, Spring 2012.

# Acknowledgements:

## ADHS

- Zipatly  
Mendoza
- Anna Alonzo
- Hong Chartrand
- Rayna Edwards
- Rebecca Ascher

## MCDPH

- Eileen Eisen-Cohen
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- Mare Schumacher
- Liva Nohre
- John Kennan
- Amy Prestanski
- Megan Eguchi
- Kara Stanley

We would also like to thank **Dolores Retana, Pima Prevention Partnership, ABT Associates, and Knowledge Capital Alliance** for their consulting work on this project!

# **Additional Information on Data Sources**

# Population

- **From the U.S. Census**
- **Serves as denominator for all rates**
- **Full census taken every 10 years, so years closely following decade mark (e.g. 2000, 2001) more reliable than years furthest from decade mark (e.g. 2008, 2009)**
- **We using the Population Estimates in between census years**
- **Danger: trends can be misleading if census/ denominator is not accurate – this goes for total population as well as subgroups**

# Birth Certificates

- **Birth certificates are completed at the hospital by a birth registrar. The information is normally supplied by a parent and by the medical charts.**
- **The system is connected to the system at Vital Registration (MCDPH). So they entered at a hospital and Vitals staff can see it shortly thereafter.**

# Death Certificates

- Death certificates have “causes of death” filled out by physician
- Underlying cause of death is the one we (and others nationwide) look at most - It is the condition that began the sequence of death. Other causes may have contributed to death.
- The cause of death is written in up to 5 fields: Each cause of death shows a progression of disease, with COD A being the immediate cause of death and the last COD being the underlying cause of death.
- Part II contains diseases that may have caused the individual to die earlier than an individual who did not have the contributing cause of death. An example may be diabetes. An individual with diabetes may die from influenza while that same individual may have lived if they did not have diabetes. On the next page is an example of physician submitted cause of death (NCHS, 2003).

CAUSE OF DEATH (See instructions and examples)		Approximate interval: Onset to death
<p>32. PART I. Enter the <u>chain of events</u>—diseases, injuries, or complications—that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary.</p> <p>IMMEDIATE CAUSE (Final disease or condition resulting in death) →</p> <p>Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST</p>	<p>a. <u>Acute renal failure</u> Due to (or as a consequence of):</p> <p>b. <u>Hyperosmolar nonketotic coma</u> Due to (or as a consequence of):</p> <p>c. <u>Diabetes mellitus, noninsulin dependent</u> Due to (or as a consequence of):</p> <p>d. _____ Due to (or as a consequence of):</p>	<p><u>5 days</u></p> <p><u>8 weeks</u></p> <p><u>15 years</u></p> <p>_____</p>
PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I.		

- **Figure 1. Example of the Cause of Death Section of a Death Certificate**
- In the above example, the cause of death is entered in the fields for COD A, COD B, and COD C. The fields for COD D and Part II are not used. The medical certifier is required to write a cause of death in COD A, but does not need to write anything in the remaining fields if it is not warranted.
- **Multiple causes of death are ALL causes mentioned on the death certificate – you can't add them up and divide them because as you can see, one individual may have 3 or more causes of death.**

# Communicable Disease Data

- **For AZ, 80+ reportable diseases**
- **Data are from reports we get from labs and physicians – they are required to report**
- **Data are counted as “cases” = one person with one disease one time. So, an individual can be more than one case in a year – e.g. if I had Chlamydia in March and West Nile Virus in August – I’d be counted as two cases that year.**
- **Each disease/condition has a different case definition. So, a case may be a person on whom a lab test was done and it showed positive OR a confirmed case may be someone who was in my household experiencing the same symptoms but never had a test, as examples.**

# Hospital Discharge Data

- **Hospital Discharge Data (HDD) is submitted by Arizona hospitals.**
- **Does not include federal run facilities (the VA system, Indian Health Services, etc), long-term acute care hospitals (Kindred, Los Niño's, etc.), or behavior health facilities.**
- **Includes only MC residents going to hospitals here in MC**
- **Unit of analysis for HDD is the hospital discharge, *not a person or patient*. This means that a person who is admitted to the hospital multiple times in one year will be counted each time as a separate "discharge"**
- **The principal diagnosis is the condition established after study to be chiefly responsible for the patient's admission to the hospital. This code is assigned by the hospital.**

# Behavioral Risk Factor Surveillance System (BRFSS)

- **Ongoing survey of Americans (we look only at MC residents when available, AZ when not)**
- **Asked about health, smoking, etc. – so remember everything here is SELF-REPORTED**
- **Why no data about Native Americans, Asians, African Americans? Sample size for Maricopa County too small to break down by these groups**

# Youth Behavior Risk Survey (YRBS)

- Data are from High School Youth Risk Behavior Survey
- Not all questions asked of all respondents
- Data are self-reported
- Sample ~ 2,500 in AZ, 16,000 U.S. (No MC data)
- YRBSS data can be found at:
- <http://www.cdc.gov/healthyyouth/yrbs/index.htm>

# YRBS

- **2009, Arizona, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, 12<sup>th</sup> graders**
- **How they define “Dietary Intake”**
  - Ate fruits and vegetables less than five times per day
  - Did not drink 100% fruit juices
  - Did not eat fruit
  - Did not eat green salad
  - Did not eat potatoes
  - Did not eat carrots
  - Did not eat other vegetables
  - Drank a can, bottle, or glass of soda or pop at least one time per day
  - Drank less than three glasses per day of milk
  - Ate fruit or drank 100% fruit juices less than two times per day
  - Ate vegetables less than three times per day

# YRBS

- During the past 7 days, on how many days were you physically active for a total of **at least 60 minutes per day? (Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time.)**
  - A. 0 days
  - B. 1 day
  - C. 2 days
  - D. 3 days
  - E. 4 days ...etc.
  - Physically active 5+ days for 60 mins or more – can be class whatever, just active
- **Ate Fruits And Vegetables Less Than Five Times Per Day** (100% fruit juices, fruit, green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

# PedNSS

- **What is PedNSS?**

- The Pediatric Nutrition Surveillance System (PedNSS) is a child-based public health surveillance system that describes the nutritional status of low-income U.S. children who attend federally-funded maternal and child health and nutrition programs. PedNSS provides data on the prevalence and trends of nutrition-related indicators.

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## **Data Sources**

- PedNSS uses existing data from the following public health programs for nutrition surveillance:
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC);
- Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Program; and
- Title V Maternal and Child Health Program (MCH).
- A majority of the data are from the WIC program that serves children up to age 5.

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## **Data Collection**

- Data on birthweight, short stature, underweight, overweight, anemia, and breastfeeding are collected for infants, children, and adolescents from birth to 20 years of age who go to public health clinics for routine care, nutrition education, and supplemental foods.

# Years of Potential Life Lost

- Looks at deaths and says, what if the person hadn't died? How many years would he/she have lived?
- For any individual, then, the YPLL is higher if the person died young, lower if the person died old. So homicide of a teenager would have a lot of YPLLs, while death from cancer of a senior would have few YPLLs.
- However, since we're adding up all YPLLs for the whole community, cancer may still have the most YPLLs because many people die of cancer – even if the average for each person is fairly low, there are a lot of people.
- Examples using fictional data:
  - Homicide of teen = 65 yplls \* 50 kids = 3,250 years potential life lost for Maricopa County\*
  - Cancer of elderly = 5 yplls \* 700 seniors = 3,500 years potential life lost for MC
- A good example of calculating YPLL is in Wikipedia.

# Age Adjusting

- Age-adjusting removes the effect of a disproportionately large young or old population on crude death rates by computing an “adjusted” death rate.
- An age adjusted rate allows comparisons between different groups, even if one group has more older members than another.
- A high (unadjusted) death rate for residents of a certain town may be high only because that town has more senior citizens, who are more likely to die than younger residents. Age-adjusted rates allow comparisons between towns, ethnic groups, etc. by adjusting for how many older and younger members there are in the group.
  - For example, take a community where 30% of the White Non-Hispanics are over age 65 . In contrast, only 15% of the Hispanics are over age 65. There is a lower crude death rate for Hispanics compared to White Non-Hispanics. Age adjustment may show that the death rate is actually the same or higher once you account for the age distribution in each community.
- Maricopa County rates are age-adjusted to the 2000 standard population using the direct method described in *Health, United States, 2002* published by the National Center for Health Statistics at [www.cdc.gov/nchs/data/hus/hus02.pdf](http://www.cdc.gov/nchs/data/hus/hus02.pdf), p.414.