The data included in the following slides have been compiled by the Epidemiology Program at El Paso County Public Health (EPCPH).

Data are still considered PRELIMINARY and are subject to change. Preparation of a full written report is underway and will be made available in the near future.

If you have questions regarding the data, please contact the EPCPH Epidemiology Program at 719-575-8988.
Health

A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

Medical Model of “Diagnostic” Healthcare

Healthcare provider

Patient

Symptoms

Illness Evaluation

Treatment/Intervention

Improved Health
Public Health Model of Population Health

Public Health Evaluator

Population

Descriptive/Analytic Epidemiology

Health Indicators/Comparisons

Identify health issues/
Partnerships for interventions

Improved Health
What is a Community Health Assessment (CHA)?

- An analytic process intended to describe the health of the community and identify issues that cause
  - Illness or lack of wellness
  - Hospitalizations
  - Injury
  - Loss of quality of life
  - Death
  - Health inequities
Outcomes of CHA

• What does CHA do?
  ▫ Provides objective measures of health behaviors, health outcomes, illness and death
  ▫ “Tells it like it is”
  ▫ Find emerging issues, trends
  ▫ Goes beyond just access to health care

• What doesn’t CHA do?
  ▫ Make judgments
  ▫ Define capacity to change health
  ▫ Prioritize resources
Steps for Communities after CHA

- Ascertain assets & capacity to address population health issues and inequities
- Identify potential solutions
- Focus on certain health issues
- Allocate resources and implement solutions
- Evaluate interventions and outcomes
- Reassess.....
El Paso County CHA

- Standard and validated sources of data
  - U.S. Census
  - Colorado Demography Office
  - Colorado Department of Public Health and Environment birth and death records
  - Well established health surveys for adults, adolescents and children
  - Hospitalization data
Public Health Winnable Battles

- Public health priorities with large-scale, measurable impact on health and the environment, for which there are strategies for change
Colorado Winnable Battles
Colorado Department of Public Health and Environment (CDPHE)

- Clean Air
- Clean Water
- Infectious Disease Prevention
- Injury Prevention
- Mental Health & Substance Abuse
- Obesity
- Oral Health
- Safe Food
- Tobacco Use
- Unintended Pregnancy
# Health Equity

An Explanatory Model for Conceptualizing the Social Determinants of Health

## Health Equity Model

- **NATIONAL INFLUENCES**
  - GOVERNMENT POLICIES
  - U.S. CULTURE & CULTURAL NORMS

### Life Course

<table>
<thead>
<tr>
<th>Pregnancy</th>
<th>Early Childhood</th>
<th>Childhood</th>
<th>Adolescence</th>
<th>Adulthood</th>
<th>Older Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economic Opportunity</strong></td>
<td><strong>Physical Environment</strong></td>
<td><strong>Social Factors</strong></td>
<td><strong>Health Behaviors &amp; Conditions</strong></td>
<td><strong>Mental Health</strong></td>
<td><strong>Access, Utilization &amp; Quality Care</strong></td>
</tr>
</tbody>
</table>
| • Income  
• Employment  
• Education  
• Housing | • Built Environment  
  - Recreation  
  - Food  
  - Transportation  
| • Participation  
• Social support  
• Leadership  
• Political influence  
• Organizational networks  
• Violence  
• Racism | • Nutrition  
• Physical activity  
• Tobacco use  
• Skin cancer  
| • Mental health status  
• Substance abuse  
• Functional status | • Health insurance coverage  
• Received needed care  
| **Quality of Life** | **Morbidity** | **Mortality** | **Life Expectancy** |

Source: Colorado Department of Public Health and Environment
Demographic Characteristics
Demographics, El Paso County 2010

- 622,263 residents
  - Sex
    - 50.2% female
    - 49.8% male
  - Race/Ethnicity
    - 72% non-Hispanic white
    - 15% Hispanic, all races
    - 6% Black
    - 7% non-Hispanic other
- Median age: 34.1 years

Source: U.S. Census Bureau. 2010 Census, Table DP-1.
Population density, by census tract
El Paso County 2000

Source: U.S. Census Bureau. 2000 Census, Table GCT-PH1.
Hispanic population, by census tract
El Paso County 2005-2009

Source: U.S. Census Bureau. 2005-2009 American Community Survey (ACS), Table B03002.
Black, non-Hispanic population, by census tract, El Paso County 2005-2009

Income and education, El Paso County 2010

Annual Household Income

- $75,000+
- $50,000-$74,999
- $25,000-$49,999
- <$25,000

Educational Attainment in adults 25+

- Some college or more
- High school graduate
- Less than high school

Sources: U.S. Census Bureau. 2010 American Community Survey, Table DP03; U.S. Census Bureau. 2010 American Community Survey, Table DP02.
Median household income, by census tract
El Paso County 2005-2009

Source: U.S. Census Bureau. 2005-2009 ACS, Table S1903.
Percent of families below poverty, by census tract, El Paso County 2005-2009

Source: U.S. Census Bureau. 2005-2009 ACS, Table S1702.
Percent of adults 25+ with less than a high school degree, by census tract, El Paso County 2005-2009

Source: U.S. Census Bureau. 2005-2009 ACS, Table S1501.
General Health Status
Self-reported general health status of adults, aged 18+, 2010

Life expectancy and healthy life expectancy, by race/ethnicity, Colorado 2008-10

The difference between life expectancy and healthy life expectancy are the reduction in years related to poorer health.

Source: CDPHE Health Statistics Section.
### Top 10 causes of death
#### El Paso County, 2007-2009

<table>
<thead>
<tr>
<th>Rank</th>
<th>Cause of death</th>
<th>Deaths per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cancer</td>
<td>128.5</td>
</tr>
<tr>
<td>2</td>
<td>Heart disease</td>
<td>113.6</td>
</tr>
<tr>
<td>3</td>
<td>Unintentional injury</td>
<td>38.7</td>
</tr>
<tr>
<td>4</td>
<td>Chronic lower respiratory diseases</td>
<td>38.0</td>
</tr>
<tr>
<td>5</td>
<td>Cerebrovascular disease</td>
<td>33.1</td>
</tr>
<tr>
<td>6</td>
<td>Suicide</td>
<td>18.6</td>
</tr>
<tr>
<td>7</td>
<td>Alzheimer’s disease</td>
<td>15.6</td>
</tr>
<tr>
<td>8</td>
<td>Diabetes mellitus</td>
<td>12.8</td>
</tr>
<tr>
<td>9</td>
<td>Chronic liver disease and cirrhosis</td>
<td>9.7</td>
</tr>
<tr>
<td>10</td>
<td>Influenza and pneumonia</td>
<td>9.4</td>
</tr>
</tbody>
</table>

*Note: the above data reflects crude mortality rates only. Age-adjusted rates are available for comparison to other populations.*

Age-group specific leading causes of death
El Paso County 2007-2009

<table>
<thead>
<tr>
<th>Ages &lt;1</th>
<th>Ages 1-14</th>
<th>Ages 15-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Length of Gestation &amp; Fetal Malnutrition</td>
<td>2. Homicide</td>
<td>2. Suicide</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ages 25-44</th>
<th>Ages 45-64</th>
<th>Ages 65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Suicide</td>
<td>2. Heart Disease</td>
<td>2. Heart Disease</td>
</tr>
<tr>
<td>4. Heart Disease</td>
<td>4. Suicide</td>
<td>4. Cerebrovascular Diseases</td>
</tr>
<tr>
<td>5. Homicide</td>
<td>5. Chronic Liver Disease &amp; Cirrhosis</td>
<td>5. Alzheimer’s Disease</td>
</tr>
</tbody>
</table>

Source: CDPHE Health Statistics Section.
Access to Health Care

- Uninsured individuals are less likely to receive medical care, and more likely to experience poor health and premature death

Source: Healthy People 2020.
Health insurance coverage, by type
El Paso County 2011

Uninsured 12.5%
Other 0.5%
Private 5.0%
CHP+ 0.9%
Medicaid 8.8%
Medicare 8.9%
Employer-sponsored 63.6%

Among those who had coverage for the past year, 12.3% were considered to be underinsured – had plans which did not adequately cover the cost of medically necessary services relative to family income.

## Enrollment for public insurance

### El Paso County 2009

<table>
<thead>
<tr>
<th>Program</th>
<th>Age group</th>
<th>Total # Eligible</th>
<th>Not Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medicaid</strong></td>
<td>≤18 years</td>
<td>32,396</td>
<td>1,887 (5.8%)</td>
</tr>
<tr>
<td></td>
<td>19-64 years</td>
<td>12,659</td>
<td>3,104 (24.5%)</td>
</tr>
<tr>
<td><strong>CHP+</strong></td>
<td>≤18 years</td>
<td>8,462</td>
<td>2,325 (27.5%)</td>
</tr>
</tbody>
</table>

*Child Health Plan Plus (CHP+) is health insurance coverage for low-income children and pregnant women whose family income is too high to qualify for Medicaid.*

Usual source of care by insurance status
El Paso County 2011

Health screening of adults by insurance status
Colorado 2009 & 2010

- Cholesterol screening in past five years, age 18+ (2009)
- Sigmoidoscopy or colonoscopy ever, age 50+ (2010)
- PSA test in past two years, male age 40+ (2010)
- Pap smear in past three years, female age 18+ (2010)
- Clinical breast exam and mammogram in past two years, female age 50+ (2010)

Diet, physical activity, and healthy weight

- Body mass index (BMI) is a widely used measure of unhealthy (over)weight, as defined by:
  - A BMI of 25 or greater for adults
  - A BMI at or above the 85th BMI-for-age percentile for children and adolescents

- The annual medical expenses associated with obesity in the U.S. have nearly doubled over a decade and are now estimated at $147 billion

Prevalence of obesity (BMI ≥30) among adults aged 18+

Proportion of population with unhealthy weight
El Paso County 2009-2010

- 3 out of every 5 adults are at an unhealthy weight
- 1 out of every 5 adults is obese
- Nearly 1 out of 4 children are at unhealthy weight

Sources: CDPHE Health Statistics Section. 2010 Colorado Child Health Survey; 2009 Youth Risk Behavior Survey (YRBS); and 2009-10 BRFSS.
Prevalence of adults aged 18+ who are obese, by race/ethnicity, income and education
El Paso County 2009-2010

Source: CDPHE Health Statistics Section. 2009-2010 BRFSS.
Proportion of adults aged 18+ reporting no leisure-time* physical activity in past 30 days 2009-2010

El Paso County: 17.8%
Colorado: 17.1%

* Unrelated to regular job. May include physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise.

Source: CDPHE Health Statistics Section. 2009-2010 BRFSS.
Prevalence of co-existing conditions in adults aged 18+, by weight status, El Paso County 2009

Source: CDPHE Health Statistics Section. 2009 BRFSS.
Mental Health & Substance Abuse

- Mental health is a leading cause of disability and has substantial co-morbidity with substance abuse and physical health

- Annual total direct and indirect costs of serious mental illness is $317.6 billion

- Overall costs of substance abuse is more than $600 billion each year

Sources: Healthy People 2020; National Institute of Mental Health; National Institute on Drug Abuse.
Percent of adults experiencing mental illness within the past year, by age
Colorado 2008-2009

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18-25 years</td>
</tr>
<tr>
<td>Any mental illness^a</td>
<td>32.8%</td>
</tr>
<tr>
<td>Serious mental illness^b</td>
<td>8.0%</td>
</tr>
<tr>
<td>Had serious thoughts of suicide</td>
<td>6.1%</td>
</tr>
<tr>
<td>Had at least one major depressive episode^c</td>
<td>8.4%</td>
</tr>
</tbody>
</table>

^a Diagnosable mental, behavioral, or emotional disorder
^b Diagnosable mental, behavioral, or emotional disorder resulting in serious functional impairment
^c Period of ≥2 weeks characterized by a depressed mood or loss of interest/pleasure in daily activities and a majority of specified depression symptoms

Sources: National Surveys on Drug Use and Health, Substance Abuse and Mental Health Services Administration (SAMHSA)
Percent of adults aged 18+ with current depression*, 2008

El Paso County: 8.2%

Colorado: 7.0%

*Defined by the presence and severity of specified depression symptoms within past two weeks.

Source: CDPHE Health Statistics Section. 2008 BRFSS.
Suicide rate, by age and sex
El Paso County 2008-2010

Suicide deaths per 100,000 population

Proportion of high school students experiencing mental illness in the 12 months, grades 9-12 Colorado 2009

* Attempt resulted in injury for which medical treatment was sought.

Source: CDPHE Health Statistics Section. Adolescent Health Data: 2009 YRBS.
## Substance abuse among high school students, grades 9-12, Colorado 2009

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Substance</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use in past 30 days</td>
<td>Binge drinking*</td>
<td>25.1</td>
</tr>
<tr>
<td></td>
<td>Marijuana</td>
<td>24.8</td>
</tr>
<tr>
<td></td>
<td>Cocaine</td>
<td>3.6</td>
</tr>
<tr>
<td>Lifetime use</td>
<td>Inhalants</td>
<td>9.2</td>
</tr>
<tr>
<td></td>
<td>Heroin</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>Methamphetamines</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Ecstasy</td>
<td>10.2</td>
</tr>
</tbody>
</table>

* Consuming five or more alcoholic beverages within a couple of hours

Source: CDPHE Health Statistics Section. Adolescent Health Data: 2009 YRBS
Motor Vehicle Safety

- Motor vehicle-related injuries contribute to premature death, disability, poor mental health and high economic consequences

- National costs of motor vehicle-related injuries cost an estimated $99 billion dollars in medical and lost work costs

Source: Healthy People 2020; CDC. Winnable Battles: Motor Vehicle Injuries.
Rate of motor vehicle traffic injuries resulting in hospitalization

Motor vehicle fatalities, by age and sex 2007-2009

Rate of motor vehicle traffic fatalities, ages 15-19 years, Colorado

## Characteristics of motor vehicle traffic fatalities, El Paso County 2009

<table>
<thead>
<tr>
<th>Vehicle and driver-related factors</th>
<th>Percent of total fatalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupant in a passenger vehicle (all seat positions)</td>
<td>66.7%</td>
</tr>
<tr>
<td>Unrestrained driver or passenger</td>
<td>53.6% of passenger vehicle fatalities</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>26.2%</td>
</tr>
<tr>
<td>Unhelmeted driver or rider</td>
<td>63.6% of motorcycle fatalities</td>
</tr>
<tr>
<td>Alcohol-impaired driver (BAC = 0.08+)</td>
<td>35.7%</td>
</tr>
<tr>
<td>Speeding-related crash</td>
<td>45.2%</td>
</tr>
<tr>
<td>Teen fatalities (ages 15-19)</td>
<td>14.3%</td>
</tr>
</tbody>
</table>

Sources: NHTSA. 2009 State Traffic Safety Facts and FARS.
High school students riding in or driving a vehicle operated under the influence of alcohol*, grades 9-12 Colorado

* One or more times in past 30 days

Source: CDPHE Health Statistics. Adolescent Health Data: 2009 YRBS.
Tobacco use is the leading cause of preventable death in the U.S.

Approximately 443,000 American die annually from tobacco-related illnesses.

The estimated direct medical costs and loss of productivity associated with tobacco use is $193 billion each year.

Source: Healthy People 2020.
Prevalence of adults aged 18+ who currently smoke cigarettes

Trends in Colorado adult current smokers & changes in tobacco policy

Prevalence of current smokers aged 18+, by sex, age, income, and education
El Paso County 2009-2010

Source: CDPHE Health Statistics Section. 2009-2010 BRFSS.
Tobacco use by youth, grades 9-12
Colorado 2009

<table>
<thead>
<tr>
<th></th>
<th>Prevalence in 2009</th>
<th>Percent change from 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used tobacco* in the past 30 days</td>
<td>26.5%</td>
<td>+ 1.5%</td>
</tr>
<tr>
<td>Smoked cigarettes in the past 30 days</td>
<td>17.7%</td>
<td>- 5.3%</td>
</tr>
<tr>
<td>Underage current smokers who typically obtained cigarettes by buying in a store or gas station</td>
<td>12.6%</td>
<td>+ 12.5%</td>
</tr>
<tr>
<td>Current smokers who tried to quit within the past 12 months</td>
<td>53.2%</td>
<td>+ 2.7%</td>
</tr>
</tbody>
</table>

* Tobacco includes cigarettes, cigars, cigarillos, little cigars, chewing tobacco, snuf, and dip

Source: CDPHE Health Statistics Section. Adolescent Health Data: 2005 and 2009 YRBS
Proportion of new mothers who smoked, by age
El Paso County 2005-2009

Infectious Disease Prevention

- Completing prevention and treatment measures are vital components of reducing the transmission of infectious disease.

- $43.4$ billion in direct and indirect costs are avoided for each birth cohort vaccinated with the routine immunization schedule.

Source: Healthy People 2020.
Rate of pertussis, by age group
El Paso County, 2008-2010

Source: CDPHE. Disease Control and Environmental Epidemiology Division.
Percent of children aged 19-35 months vaccinated* against pertussis

* Have received 4 or more doses of diphtheria-tetanus-acellular pertussis antigens (DTaP)

Source: National Immunization Survey; Healthy People 2020 Objective IID-7.1
Colorado kindergarteners up-to-date on required immunizations at school entry, by vaccine, 2010-11 school year

Source: CDPHE. 2010-2011 Immunization School Survey.
Adolescents aged 13-17 vaccinated against tetanus, diptheria, and pertussis* since age 10

* Have received one or more doses of tetanus toxoid, reduced diptheria toxoid, and acellular pertussis (Tdap) vaccine

Percent of adolescents aged 13-17 vaccinated against meningitis*

* Have received one or more doses of meningococcal vaccine

Sources: National Immunization Survey; Healthy People 2020 Objective IID-11.3.
Unsafe Sexual Practices

- Unintended pregnancies are associated with negative health and economic consequences for both the mother and children.

- The public costs associated with unintended pregnancies is $11 billion per year in the U.S.

- $16 billion of annual health care costs is attributed to sexually transmitted diseases.

Source: Healthy People 2020.
Sexual behavior among youth, grades 9-12
Colorado 2009

Source: CDPHE Health Statistics Section. Adolescent Health Data: 2009 YRBS.
Teen birth rate for females aged 15-17 years

Source: CDPHE. Maternal and Child Health Data: 2000-2010 State and County Birth and Death Summary Tables.
Proportion of pregnancies that were unintended, by age and race/ethnicity
El Paso County 2005-2009

Approximately 38% of these women were using birth control at the time of their pregnancy

Rates of sexually transmitted infections (STIs)

# Rate of STIs, by sex and age

## El Paso County 2010

<table>
<thead>
<tr>
<th>Sex</th>
<th>Chlamydia per 100,000 population</th>
<th>Gonorrhea per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>597.2</td>
<td>69.8</td>
</tr>
<tr>
<td>Male</td>
<td>251.8</td>
<td>57.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Chlamydia per 100,000 population</th>
<th>Gonorrhea per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>1284.2</td>
<td>123.4</td>
</tr>
<tr>
<td>20-29</td>
<td>1745.8</td>
<td>260.3</td>
</tr>
<tr>
<td>30-39</td>
<td>366.3</td>
<td>73.7</td>
</tr>
<tr>
<td>40-54</td>
<td>48.5</td>
<td>20.9</td>
</tr>
</tbody>
</table>

HIV/AIDS

El Paso County, 2010

- 35 new diagnoses of HIV
- 428 people presumed to be living with HIV
- 308 people presumed to be living with AIDS

I-25 Corridor, 2006-2010

<table>
<thead>
<tr>
<th>County</th>
<th>New HIV infections per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denver</td>
<td>30.3</td>
</tr>
<tr>
<td>Adams</td>
<td>12.7</td>
</tr>
<tr>
<td>Arapahoe</td>
<td>11.2</td>
</tr>
<tr>
<td>El Paso</td>
<td>4.7</td>
</tr>
<tr>
<td>Pueblo</td>
<td>4.2</td>
</tr>
<tr>
<td>Jefferson</td>
<td>3.7</td>
</tr>
<tr>
<td>Larimer</td>
<td>3.2</td>
</tr>
<tr>
<td>Weld</td>
<td>2.7</td>
</tr>
<tr>
<td>Douglas</td>
<td>2.3</td>
</tr>
</tbody>
</table>