Chronic Health Conditions and Access to Care in Pueblo County

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Pueblo City-County Health Department

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Acknowledgements

This report was produced by

The Pueblo City-County Health Department and Public Health Partners

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This report was developed through a collaborative process among Pueblo County partners:

- Integrated Community Health Partners
- Parkview Medical Center
- St. Mary Corwin Medical Center
- Pueblo Community Health Center
- Pueblo Triple AIM Corporation
- Spanish Peaks Behavioral Health Centers

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Executive Summary

The report meets the needs of the Pueblo City-County Health Department (PCCHD) in three ways: (1) fulfills requirements of the Chronic Disease Capacity grant; (2) assists in fulfilling requirements for public health accreditation; and (3) provides critical information to inform decisions and guide resource allocation.

Purpose

To identify leading chronic diseases and access to care issues in Pueblo County so that current and future community public health efforts may be more successful.

Methods

This report uses secondary data from several sources, primarily the Colorado Department of Public Health and Environment (CDPHE) Health Indicators and the Colorado Health Institute's (CHI) Colorado Health Access Survey (CHAS) to determine strengths and weaknesses in the provision of care and prevention education in Pueblo County.

Leading Causes of Death, Life Expectancy (LE), and impact

Information on the county's leading causes of death has been limited to the top five for the purposes of this report. Although the average LE in Pueblo County is 77 years, healthy LE is 65.6 years; a number that is lower than most other counties in the state. A lack of a healthy life contributes to less economic productivity, poorer health status, and higher health care costs.

#1 and 2 Heart Disease and Cerebrovascular Diseases

- 35% of Pueblo County deaths are linked to heart disease, 11% linked to cerebrovascular diseases.
- Main contributors include unhealthy lifestyle choices: inadequate exercise, smoking and poor eating habits leading to obesity and/or high cholesterol.
- Hospital readmission rates for heart disease and stroke are similar or lower than national averages.
- Access issues may be related to lack of preventive care.

#3 Chronic Lower Respiratory Diseases

- 16% of all deaths are attributed to chronic lower respiratory diseases.
- Asthma rates are high: 11% of adults and 24% of children have been diagnosed with asthma.
- Additional contributors are high smoking rates, exposure to second hand smoke, poor indoor air quality and household hygiene.
- Total cost of care for asthma is higher in Pueblo County than Colorado.
- Asthma and tobacco education programs are offered, however, they may not be accessible to the most vulnerable.
- There is a lack of educational programs for indoor air quality and healthy housing.

#4 Diabetes

- Diabetes related deaths account for 7% of all Pueblo County deaths.
- At 12%, Pueblo County has a statistically significant higher percent of adults diagnosed with diabetes than Colorado.
- Obesity is a major contributor: 27% of adults and 22% of children are obese.
- Provider availability is similar to state rates although pediatric provider rates for Pueblo County are low.
- Prevention and education programs are available and emphasize self-management, but classes are hospital-centric.

#5 Suicide

- 3% of all deaths are attributed to suicide.
- Contributing factors are poor health, low social support, low socio-economic status, ethnicity, educational attainment, and substance abuse.
- Statistically significant higher rates of suicide hospitalizations and mental health hospitalizations in Pueblo County compared to Colorado.
- Appear to be adequate mental health providers, but preventive utilization is unknown. Unclear what access to the providers looks like (e.g. wait times, insurance issues, associated stigma, etc.)

Coverage/Cost

- Health insurance coverage rates for Pueblo County do not appear to be significantly different from Colorado.
- 26.5% reported being on public insurance, 10.9% were uninsured and 13.1% were underinsured.
- Cost appears to be a barrier to accessing care. Pueblo County is not necessarily paying more out of pocket, so the issue may be related to income disparities and cost of care.

Services/Utilization

- Pueblo County ranked lowest of selected counties and the state for primary use of a doctor's office and for having visited a health care provider in the previous year. It ranked highest overall for use of community health centers as well as hospital emergency rooms (ER).
- Pueblo County over-utilizes the ER for non-emergencies; a high percentage claimed they went due to the inability to get an appointment soon enough and because the ER is more convenient.
- Male hospital admission rates for Pueblo County were over two times the state rate. For males 18-34 years, the utilization was nearly four and a half times the state.
- Good readmission indicators in the areas of urology, nephrology, obstetrics/delivery for all patients.
- Poor readmission indicators for all payers in the areas of neurology and orthopedic surgery.

Timeliness

- Nearly 25% of Pueblo County respondents stated they could not get an appointment as soon as it was needed. Oftentimes, this results in visits to the ER for non-emergencies which impacts ER wait times.

- Wait times to make an appointment with area doctors' offices along with actual wait times to meet with the doctor are difficult to find.
- Emergency Department (ED) wait times at local hospitals are comparable to national averages.

Workforce

- Compared to Mesa County, Pueblo County is par for the number of safety net locations.
- Since 2007 Pueblo County has seen an increase in community mental health centers, going from three to five.
- Overall, Pueblo County is comparable to state rates for medical providers and ranks fourth best for ratio of patients to full time primary care physicians (PCP) at 1,664:1.

Key Questions

1. How does an unhealthy life expectancy impact access to care? Prevention/treatment?
2. Why are hospitalizations for stroke and heart disease high? Is it an access concern? Or is the concern related to prevention/education?
3. What are the overarching concerns for high asthma incidence and prevalence? Is it an access problem? Education/prevention problem? Is the issue related to unhealthy habits? Or the age of Pueblo County housing?
4. Why are so many individuals in Pueblo County dying from diabetes? Is this an access problem? Education/prevention problem? Is this a behavioral issue? Is this an environmental problem?
5. Why are suicide and mental health hospitalizations so high in Pueblo County? Is it an access concern? Insurance based problem? Is it cultural or normative?
6. How has implementation of the Affordable Care Act (ACA) likely affected coverage and cost data?
7. Pueblo County reports a large percentage of residents on public insurance—are there problems utilizing this? Is education an issue?
8. What could account for the large difference in the median monthly amount people are willing to pay for coverage? Is this an income issue or perceived value of having coverage?
9. Why is it so convenient to choose the ER in Pueblo County? Why the drastic increase since 2011? How can we encourage regular use of PCPs?
10. Why are patients unable to get timely appointments with a doctor? Is it related to insurance status? Volume? Could it be possible that people have too high of expectations for wait times with PCPs?

Outcomes from the Triple AIM meeting on February 19, 2015

- Results from this meeting show that Pueblo County health care and service providers would like to pursue a path of investigating ways to increase resources to community/population with highest need and cultural/environmental shifts and changes related to health behaviors and value of health.
- Participants noted that there are a number of assets and barriers to improving chronic health conditions and access to care in Pueblo County, including.
    - Assets
        - Improved access to care
        - Health education

        - Insurance enrollment
        - Hospital programs and policies
    - Barriers
        - Lack of social support and resources
        - Lack of a generalized mindset regarding the importance of health
        - ER overutilization
- Results from the February 19, 2015 meeting have set the stage, with efforts to research potential evidence based programs that impact 1) increasing resources to a community/population with highest need; and 2) shifting cultural and environmental behaviors toward valuing health and further investigation through key informant interviews and surveys to better understand how individuals value health and think about preventive care in Pueblo County.

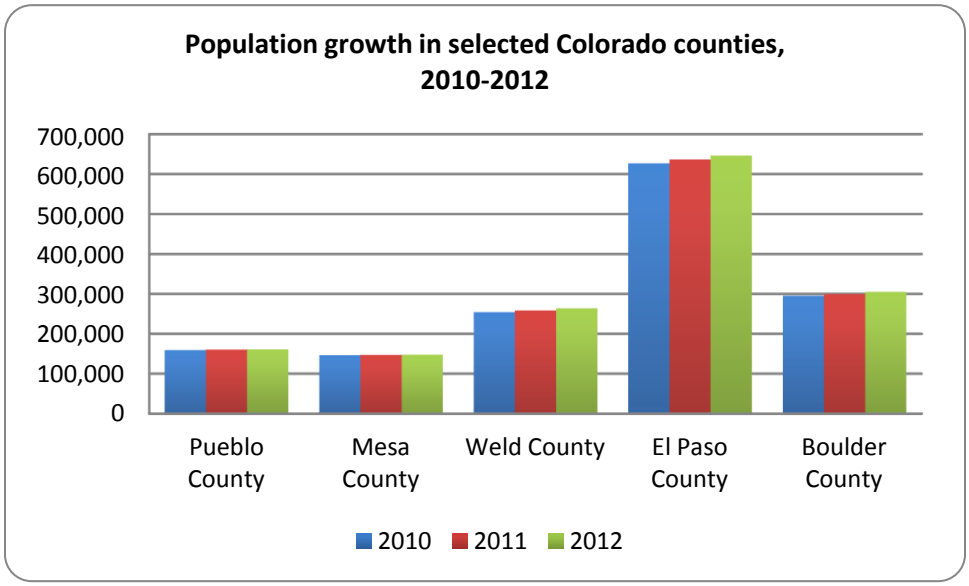
Methods

1. PCCHD chose approximately 100 indicators based on requirements of the Chronic Disease Capacity grant and to fulfill Public Health Accreditation requirements.
2. Pueblo County data was compared to four additional Colorado counties as well as the state of Colorado. The county comparison is useful to establish best practices, as well as gauge progress in the health indicators areas. Comparisons with counties of similar demographics, size or geographic proximity can best align local efforts. In other ways, the county comparison can be utilized as a health ranking tool across the state. In this report, Pueblo County indicators are compared to the indicators from Mesa, Weld, El Paso and Boulder counties.
3. From November-December 2014, two PCCHD employees collected chronic disease data using the CDPHE data repository/health indicators for Pueblo County as well as the selected comparison counties and Colorado. In some areas, indicators were further broken out by gender, race, age, education, and income.
4. The CHI provided data to PCCHD on 49 different access to care indicators from 2011-2013 for Pueblo, Mesa, Weld, El Paso and Boulder Counties, and Colorado. CHI conducted the CHAS with 400 individuals in Pueblo County for both 2011 and 2013 spanning questions related to insurance, ER visits and use, and cost of care.
5. Two PCCHD research assistants reviewed secondary data for significance comparing Pueblo County to other counties and Colorado. Significance was determined if confidence intervals (CI) did not overlap. Where CI was not available, indicators were considered significant in relation to other important social determinants in Pueblo County or if special mention was made by local partners, such as re-admission rates and mental health.
6. The report is structured in two sections: 1) leading causes of death in Pueblo County, specifically those causes of death linked to chronic health conditions and mental health; and 2) access to health care in Pueblo County. For the five leading causes of death, each section was further divided into the areas of burden/prevalence, utilization, cost, and access to resources. Questions are included on each of the leading causes of death related to access, education/prevention, and behavior. The section on access to health care in Pueblo County is divided into the areas of coverage/cost, services/utility, timeliness, and healthcare workforce. Questions are included on utilization, service availability and education concerns.
7. Supplementary data on utilization and access were collected from CDPHE Health Indicators, CHI, Bureau of Health Professions/HRSA, Medicaid, Medicare, U.S. Census Bureau/American Community Survey, Centers for Disease Control and Prevention (CDC), Department of Regulatory Agencies, Center for Improving Value in Health Care and the U.S. Department of Health and Human Services (HHS).
8. On February 19th, 2015, a meeting was held with 18 Triple AIM participants in Pueblo County. The intentions of the meeting were to determine areas where community can come together to make changes, explore ways how the timely use of health care services in Pueblo County to achieve healthy outcomes can be improved, and determine root causes regarding access (or lack of access) to care in Pueblo County.

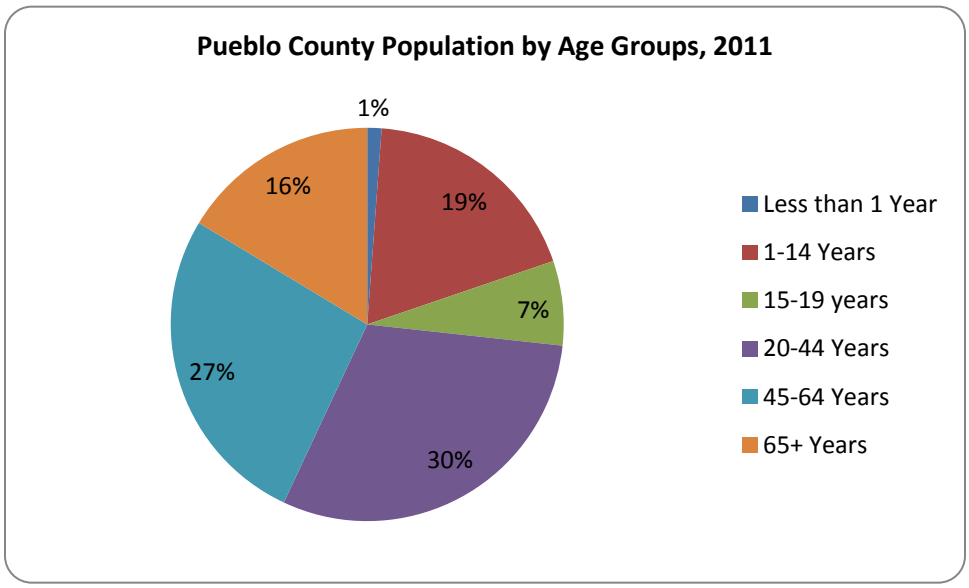
9. Written responses were collected from participants during the February 19th meeting on the following questions:
    - What sections stood out to you?
    - What work is occurring in Pueblo County?
    - What work is not occurring in Pueblo County?
    - What is the one thing regarding chronic health conditions and access to care that if done, would make a significant difference for the whole community?
10. All responses were collected, inputted into excel, and then analyzed using constant comparison analysis (creating themes) and classical content analysis (counting the themes). Themes and frequencies were written into a narrative and tables and included in the appendix of this report.

Demographics

Population



Source: Colorado Health Indicators/Colorado State Demography Office



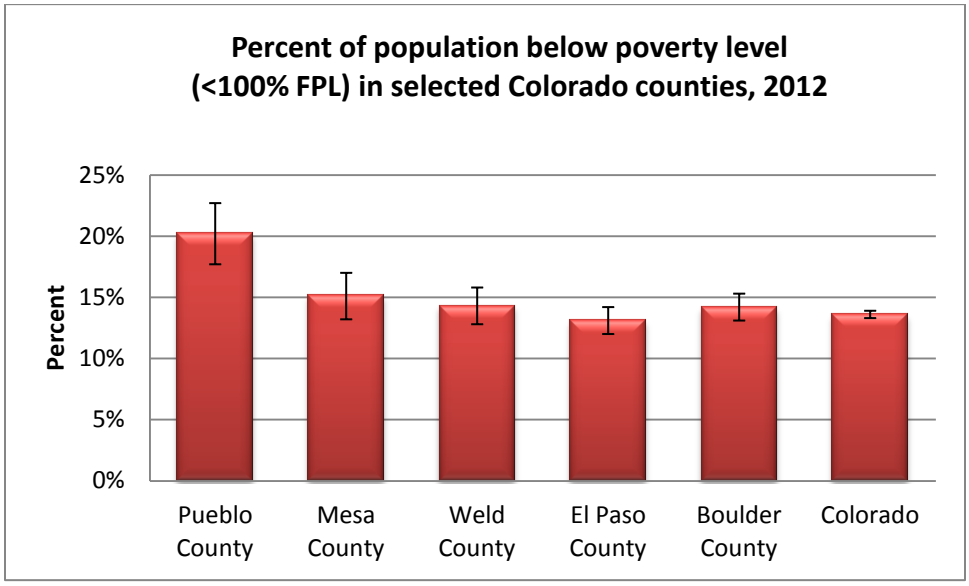
Source: Colorado Health Indicators/Colorado State Demography Office

Summary

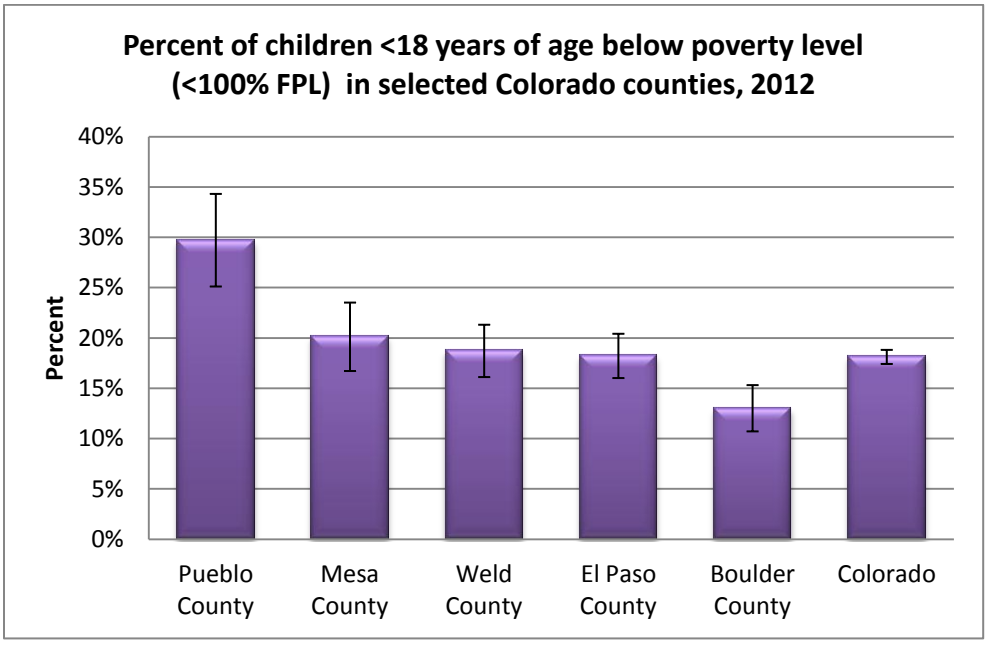
- The majority of the population in Pueblo County is between 20-65 years of age.
- Pueblo County has a much higher percentage of individuals identifying as Hispanic than other counties and Colorado.

- Pueblo County has a higher LGBT (lesbian, gay, bisexual, transgender) community than comparison counties and state average.
- Minority populations tend to have worse inequities related to access to care and chronic health conditions.

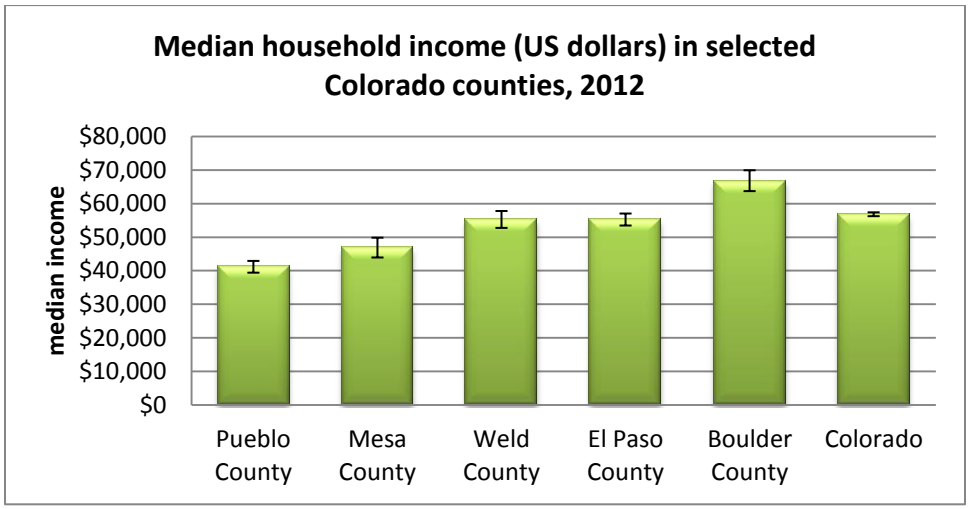
Income



Source: Colorado Health Indicators/Small Area Income and Poverty Estimates

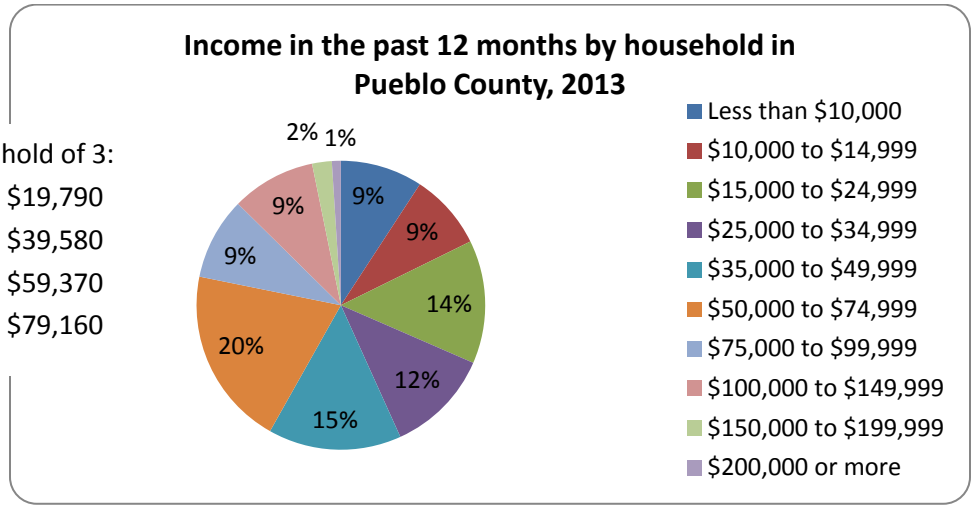


Source: Colorado Health Indicators/Small Area Income and Poverty Estimates

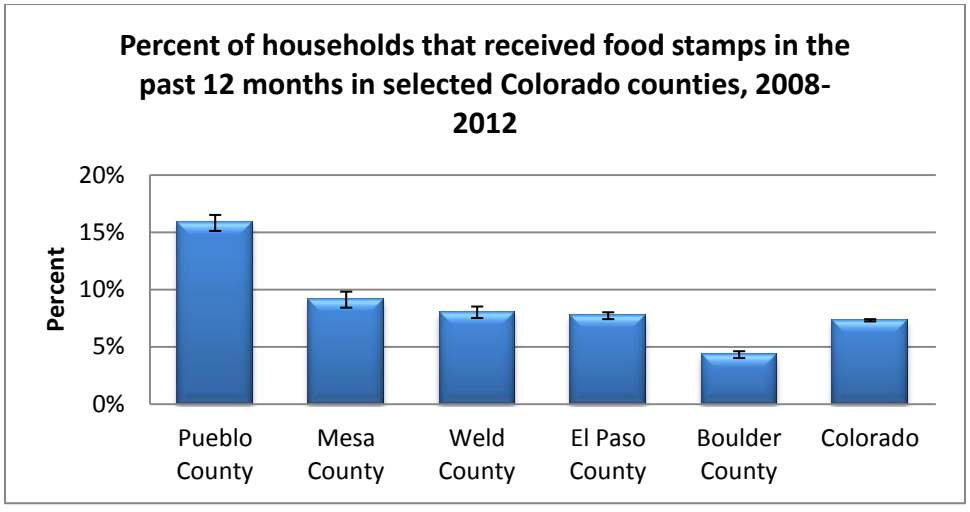


Source: Colorado Health Indicators/Small Area Income and Poverty Estimates

- For a household of 3:
- 100% FPL is $19,790
- 200% FPL is $39,580
- 300% FPL is $59,370
- 400% FPL is $79,160



Source: U.S. Census Bureau/American Community Survey

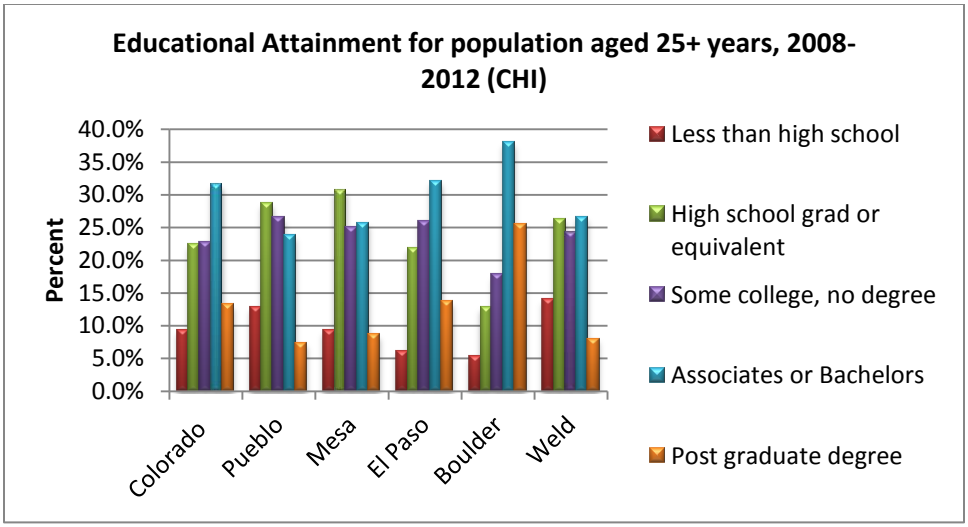


Source: Colorado Health Indicators/Small Area Income and Poverty Estimates

Summary

- Pueblo County has statistically significant percentages of poverty among the general population and children.
- Income in Pueblo County is also lower than comparison counties and Colorado.
  - Poverty is linked to higher inequities in access to care and worse chronic health conditions.
  - Minority populations are more likely to be low income.
- 43% of Pueblo County lives at 200% Federal Poverty Level (FPL) and 78% of Pueblo County lives at 400% FPL .
- Food stamp use is higher in Pueblo County than comparison counties and Colorado. Among those using food stamps in Pueblo County, use is highest among those living below the poverty line and with those who have children 18 years or younger living with them.

Educational Attainment



Source: Colorado Health Indicators/U.S. Census Bureau/American Community Survey

Summary

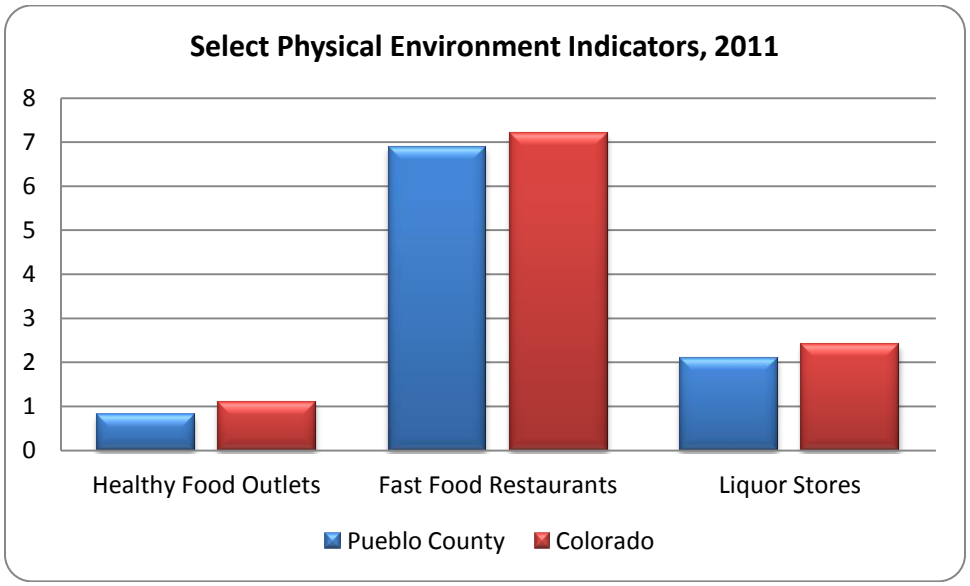
- Pueblo County has a high number of individuals with less than a high school diploma.
- Hispanics had the lowest graduation rates from high school in Pueblo County.
- Poor health outcomes are related to individuals with less than an associate's degree.

Questions

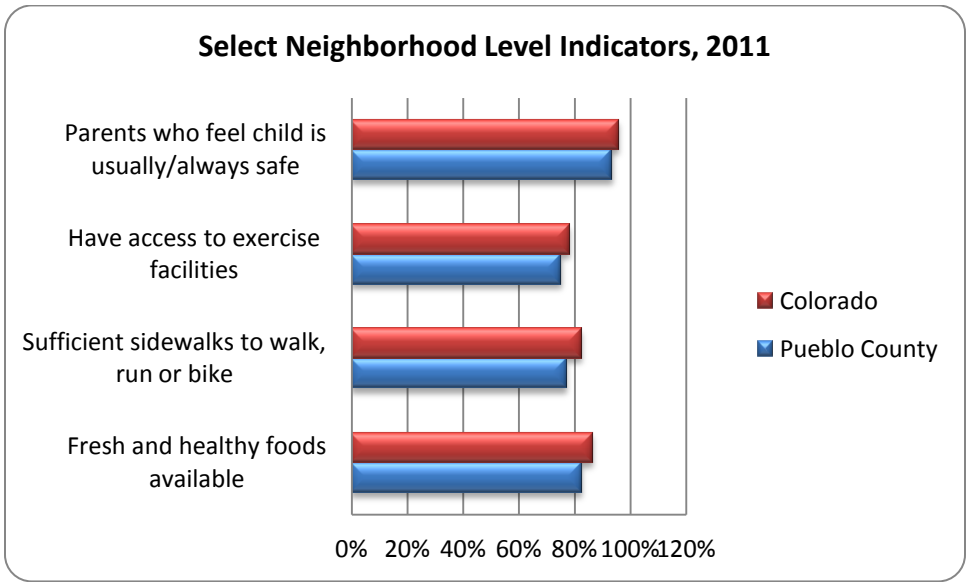
- Does having a larger Hispanic, lower income, and lower education population have consequences on access to care, including cost and quality of care?
- Do higher percentages of low income and less educated impact prevention and treatment of chronic health conditions in Pueblo County?
  - What do these inequities look like?

- Are there cultural and normative behaviors related to lower income and less educated that impact access to care and prevention/treatment of chronic health conditions?

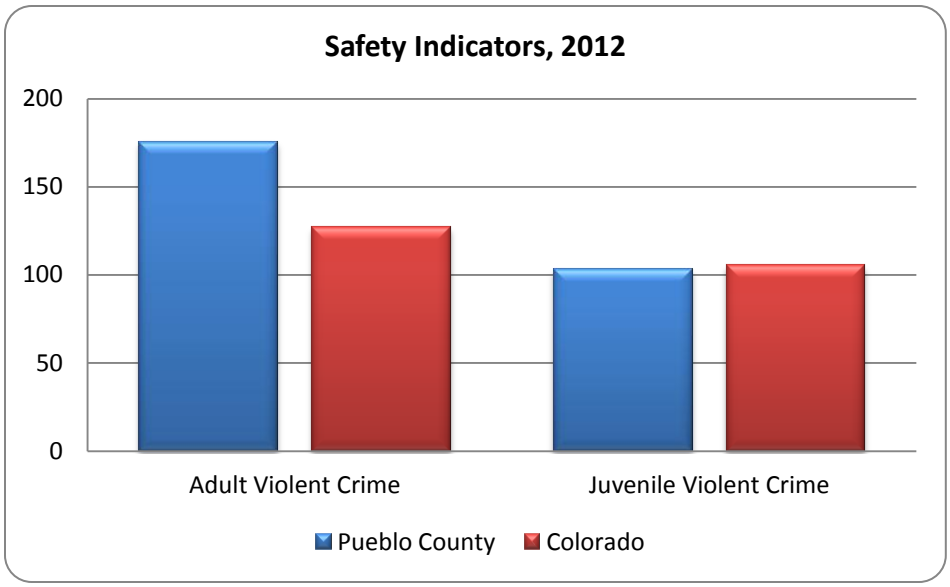
Physical Environment



Source: Colorado Health Indicators/US Census Bureau County Business Patterns



Source: Colorado Health Indicators/Colorado Behavioral Risk Factor Surveillance System

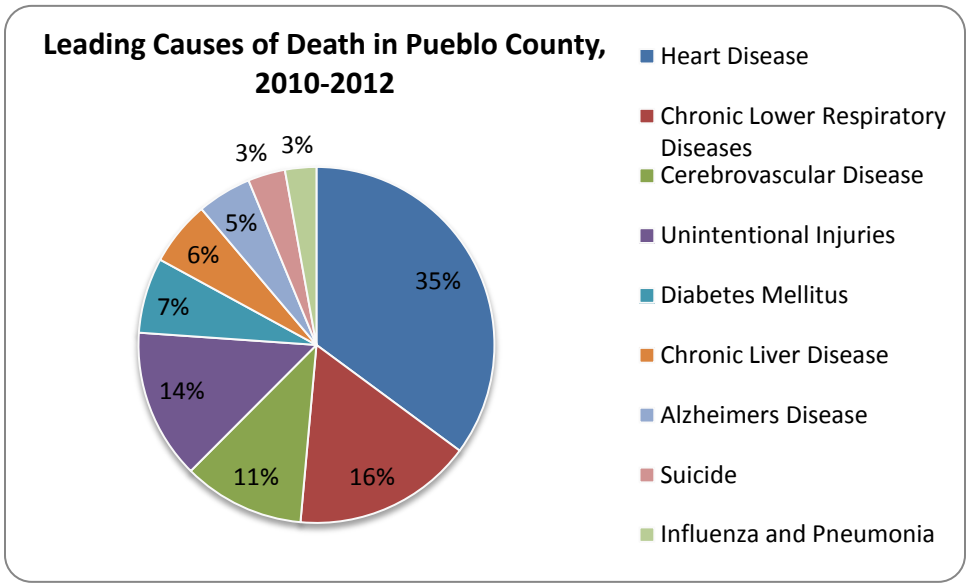


Source: Colorado Health Indicators/Colorado Bureau of Investigation

Summary

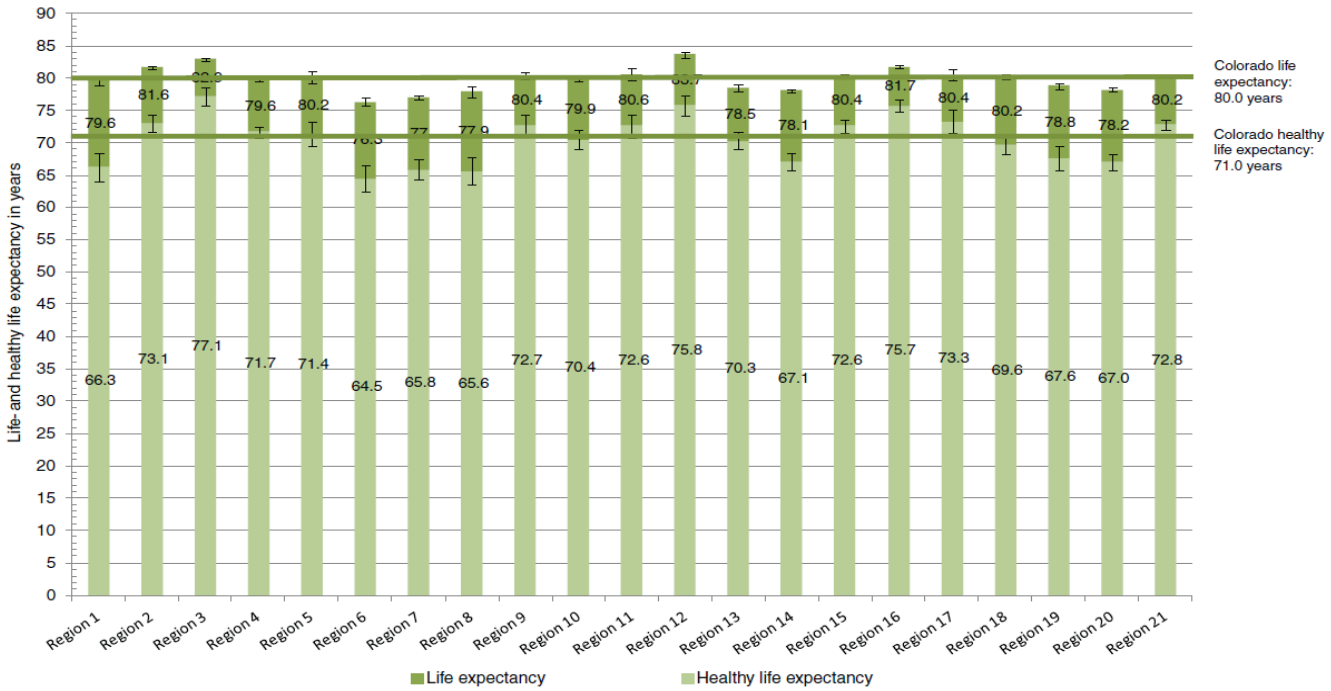
- Data on factors related to food availability, recreation opportunities and safety show minor discrepancies between Pueblo County and Colorado.
- Although similar to state rates, Pueblo County has over eight times the rate of fast food restaurants as healthy food outlets.
- Even though the adult violent crime rate for Pueblo County is higher than state levels, over 90% of parents feel their children are safe in their community. This fact, coupled with the relatively high self-reported access to recreation, seems to remove access as a primary barrier to residents getting recommended amounts of exercise.

Leading Causes of Death in Pueblo County



Source: Colorado Health Indicators/Colorado Health Statistics and Vital Records

Figure 5. Life expectancy and healthy life expectancy by region of residence: Colorado residents, 2008-2010.



Error bars represent the 95% confidence interval of the life expectancy estimate.
SOURCE: Health Statistics Section, Colorado Department of Public Health and Environment.

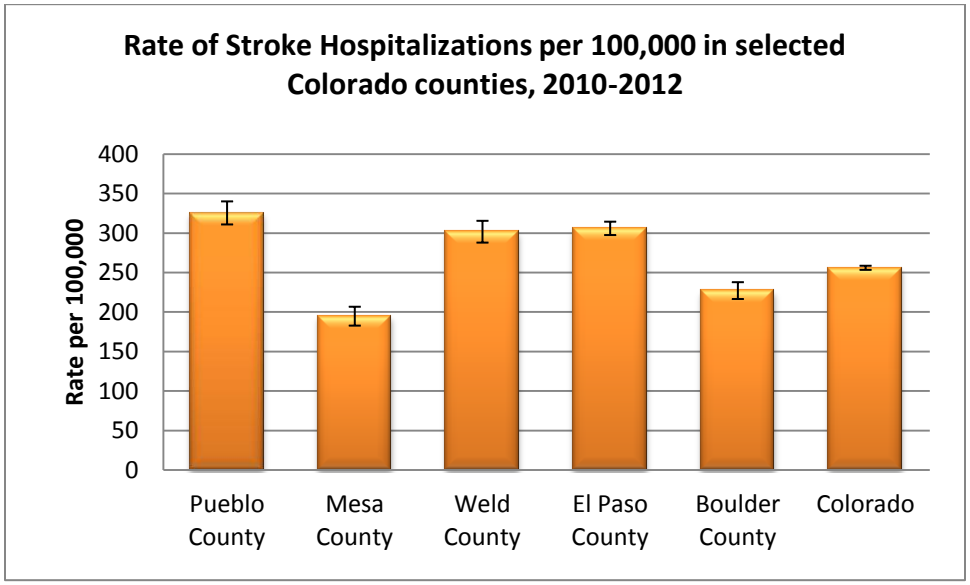
Summary

- Life expectancy is defined as “a statistical measure of how long a person may live, based on the year of their birth, their current age and other demographic factors including gender” (Wikipedia, 2015).
- Healthy life expectancy is described as “the average number of years that a person can expect to live in "full health" by taking into account years lived in less than full health due to disease and/or injury” (Wikipedia, 2015).
- Pueblo County (Region 7) has higher age adjusted rates of death as compared to other counties and Colorado for heart disease, chronic lower respiratory disease, and diabetes mellitus.
- Average life expectancy in Pueblo County is 77 years; healthy life expectancy is 65.6 years signifying individuals in Pueblo County have a lower healthy life expectancy than counterparts in most other Colorado counties.
- A lack of a healthy life contributes to less economic productivity, poorer health status, poorer quality of health, and higher health care costs.

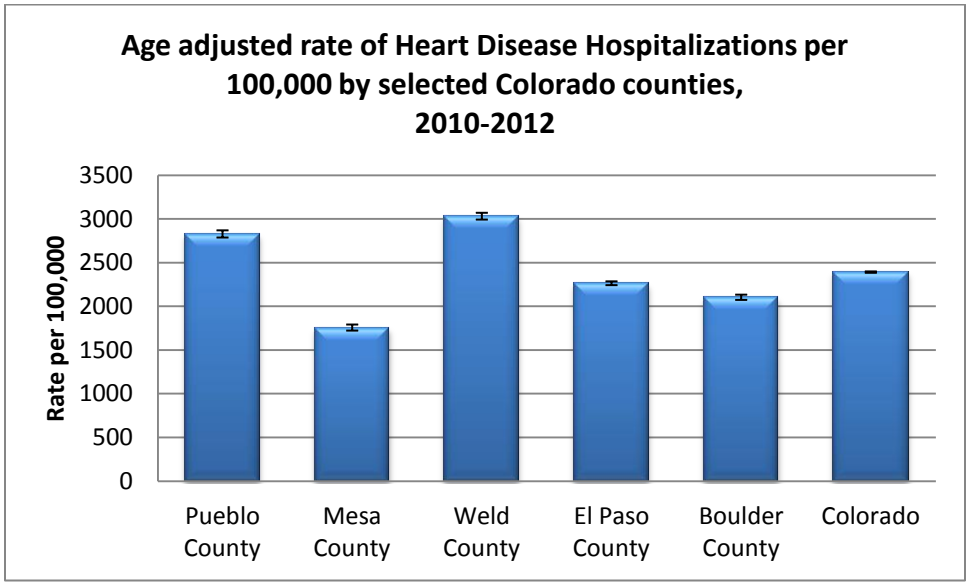
Questions

- How is years of potential life lost and life expectancy linked to poverty and education?
- What does healthy life expectancy (or unhealthy life expectancy) signify to access to care as well as prevention/treatment in Pueblo County?

Leading Causes of Death: Heart Disease/Cerebrovascular Diseases



Source: Colorado Health Indicators/Colorado Health and Hospitalization Association

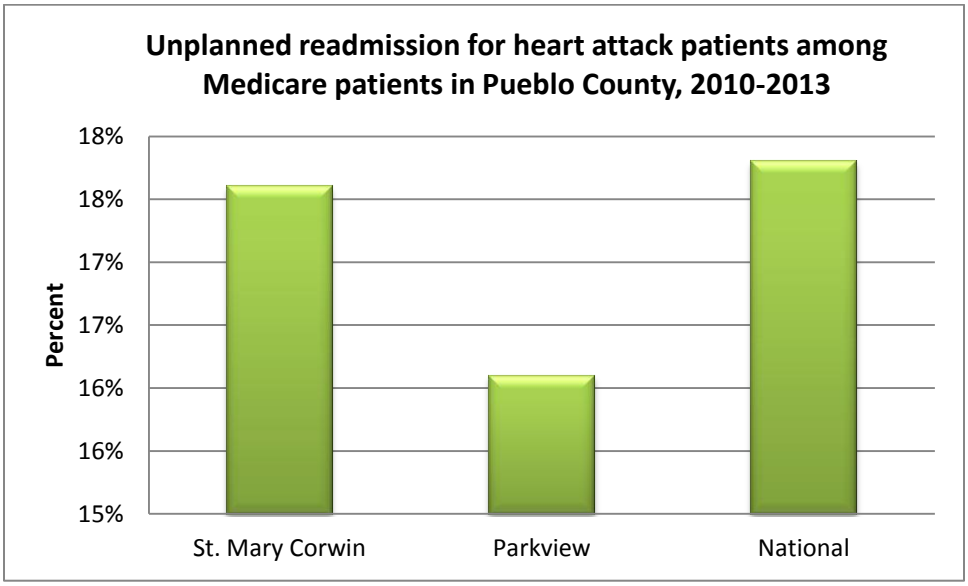


Source: Colorado Health Indicators/Colorado Health and Hospitalization Association

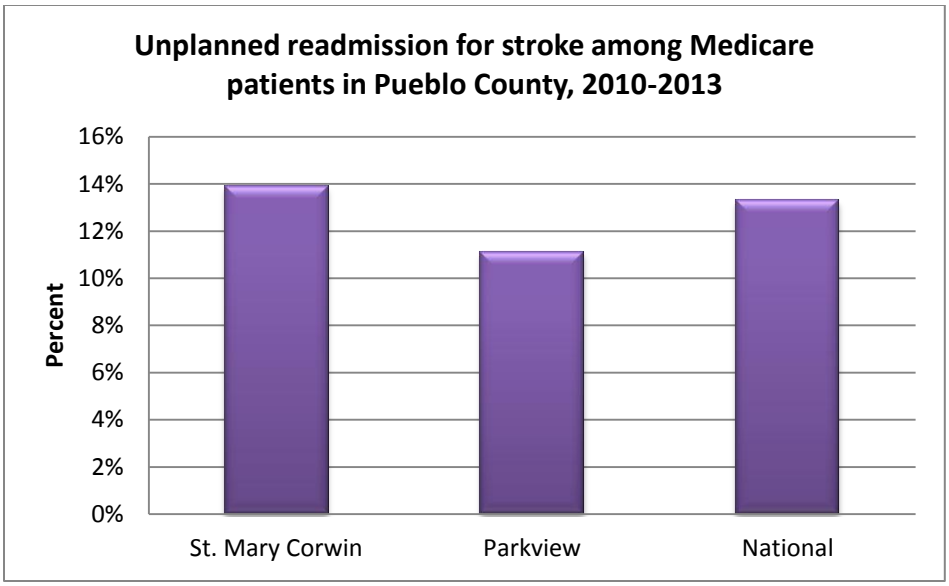
Summary

- 35% of deaths in Pueblo County are linked to heart disease; 11% of deaths in Pueblo County are attributed to cerebrovascular diseases.
- Contributors to higher rates of heart disease and cerebrovascular diseases include unhealthy habits, such as poor eating habits, low exercise, high cholesterol, and smoking.
- Pueblo County has high obesity rates for adults and children. Among adults, 27% of adults are obese with the greatest concern among Hispanics, individuals with lower education, and individuals over the age of 35.
- Childhood obesity is also high in Pueblo County with 22% of children being obese. Childhood obesity has long-term implications on the health of the community, including higher health care costs, lower life expectancy, and poorer overall health.
- There are links between obesity and poverty, obesity and minority populations, and obesity and education.

Utilization/Cost/Access



Source: Medicare.gov (Medicare hospital compare)



Source: Medicare.gov (Medicare hospital compare)

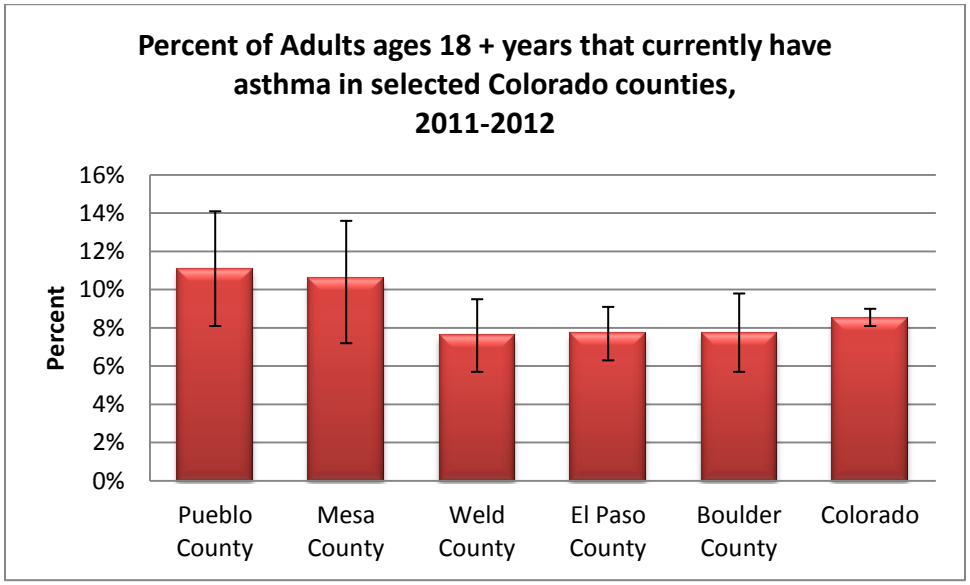
Summary

- Readmission for heart attack and stroke patients are on par with national estimates.
- Access to primary care providers is adequate and on par with Colorado rates.
  - The number of primary care physicians in Pueblo County is 122 or 75.7 per 100,000
  - The number of general family physicians in Pueblo County is 70 or 43.4 per 100,000
  - The number of internal medicine physicians is 41 or 25.4 per 100,000
  - The number of general surgeons is 18 with a rate 11.2 per 100,000.
- Access to hospitals for treatment and hospital readmission appear less of a concern than access to preventive programs or healthy behaviors.

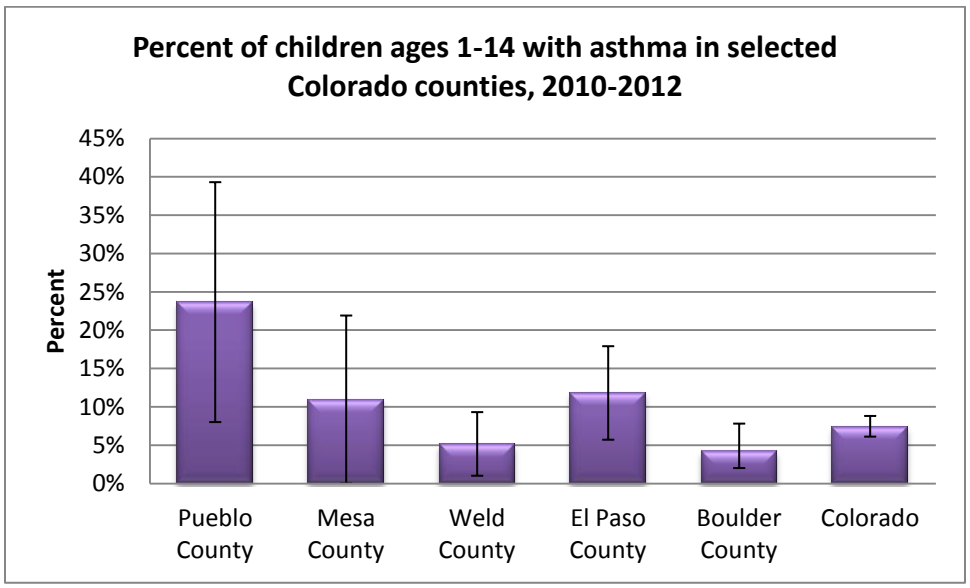
Questions

- What are the overarching concerns if people are dying from heart disease and strokes?
- Why are hospitalizations high?
- Is it an access concern, i.e. access to the hospitals? Timely access to emergency room or operating room? Access to primary care providers? Or quality of care?
- Is the real issue related to prevention?
- Who is doing heart healthy/stroke prevention programs?
- Are current education programs making a difference? Is something else needed?

Leading Causes of Death: Chronic Lower Respiratory Disease



Source: Colorado Health Indicators/Colorado Behavioral Risk Factor Surveillance System



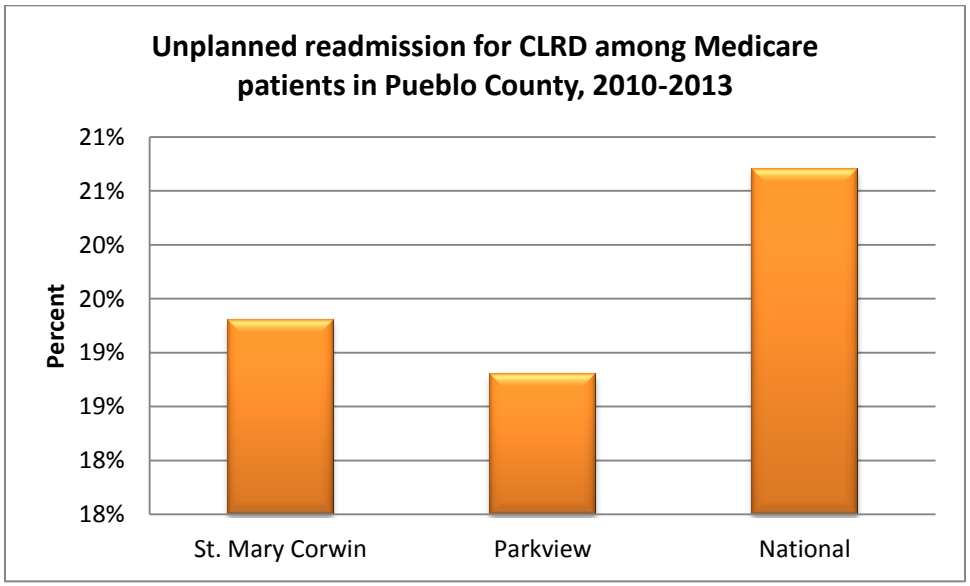
Source: Colorado Health Indicators/Colorado Child Health Survey

Summary

- 16% of deaths in Pueblo County linked to chronic lower respiratory diseases.
- Asthma and asthma complications are high in Pueblo County for adults and children with 11% of adults and 24% of children having asthma.
- Contributors to chronic lower respiratory diseases and asthma deaths include smoking/second hand smoking, poor indoor air quality, and household hygiene.

- Smoking in Pueblo County is high: 23% of adults 18+ smoke cigarettes as compared to a state average of 17.8%.
- Because of high smoking rates, there is a higher percentage of adults 40+ dying from lung/bronchus cancers as compared to other counties and Colorado. In 2009, 60 of 100,000 individuals died from lung and bronchus cancer.

Utilization/Cost/Access



Source: Medicare Hospital Compare

Summary

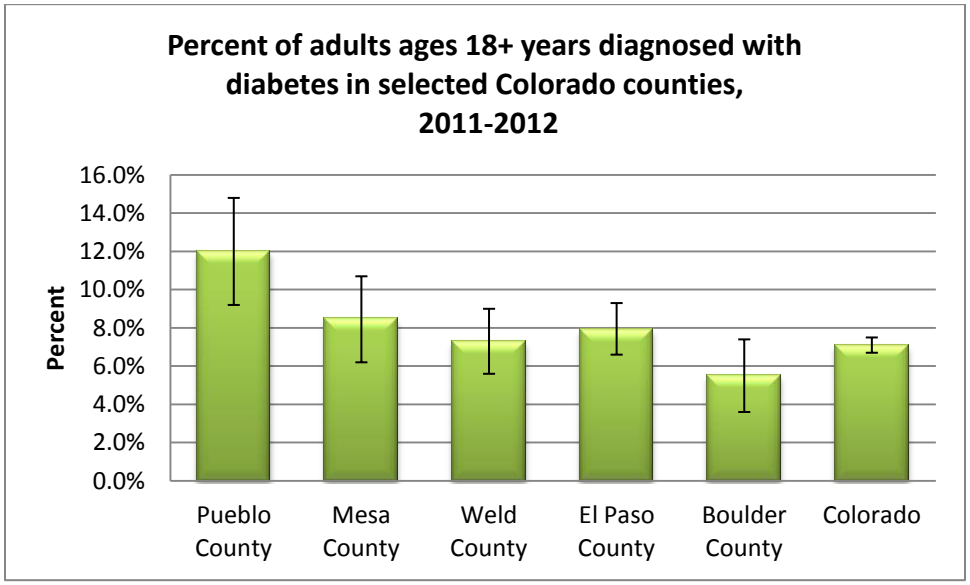
- Asthma is a serious condition in Pueblo County as compared to the rest of the state.
- Cost of care for asthma is higher in Pueblo County than Colorado in the areas of pharmaceuticals and inpatient facilities.
- Pueblo County has two providers specializing in pulmonary diseases, five Otolaryngologists (ENT) and seven specializing in allergy and immunology. Based on national standards set in 2003 by Solucient, the rate of pulmonologists in Pueblo County is slightly lower at 1.24 per 100,000 versus 1.3 per 100,000 while the number of allergists/immunologists in Pueblo County is adequate at 4.3 per 100,000 versus 1.72 per 100,000.
- Pueblo County has 147 respiratory therapists or 91 per 100,000 people—slightly higher than the state rate.
- There are health education/preventive programs being offered.
    - Parkview Medical Center offers asthma education/classes and host of physicians linked with program (ENT, allergy, and pulmonologists).
    - Catholic Charities offers “ONE Step” training on second-hand smoke.

    - PCCHD offers tobacco education and enforcement. This program has worked towards smoke free air, non-cigarette tobacco retail licensing, and youth possession laws to include vapor products.
- Pueblo County housing is slightly older than the Colorado average.
    - Percent of housing units built prior to 1960 is 37.6% in Pueblo County versus 19.8% for the state.
    - Limited programming providing indoor air quality/home hygiene by Pueblo Housing Authority.
- Outdoor air quality in Pueblo County appears to be better than state average.

Questions

- What are the overarching concerns of people dying from chronic lower respiratory diseases in Pueblo County?
- Why is asthma incidence and prevalence so high among adults and children in Pueblo County?
- Is it an access problem, such as too few physicians or health providers?
- Is the problem related to education/prevention?
    - Education is being offered for asthma and tobacco prevention, but it is unclear whether this education gets out to the community.
    - Sufficient education is not offered on indoor air quality and healthy housing.
- Is the issue related to behaviors, such as indoor air quality (smoking indoors) or unsanitary housing?
    - Can these concerns be addressed through education and prevention?
- Is the issue related to age of Pueblo County housing?
    - Housing is older than the state average.

Leading Causes of Death: Diabetes



Source: Colorado Health Indicators/Colorado Behavioral Risk Factor Surveillance Survey

Summary

- 7% of deaths in Pueblo County attributed to diabetes.
- 12% of adults in Pueblo County have been diagnosed with diabetes.
- Contributors to high rates of diabetes and diabetes deaths are related to unhealthy lifestyle habits such as poor eating habits and exercise, and high rates of obesity.

Utilization/Cost/Access

Summary

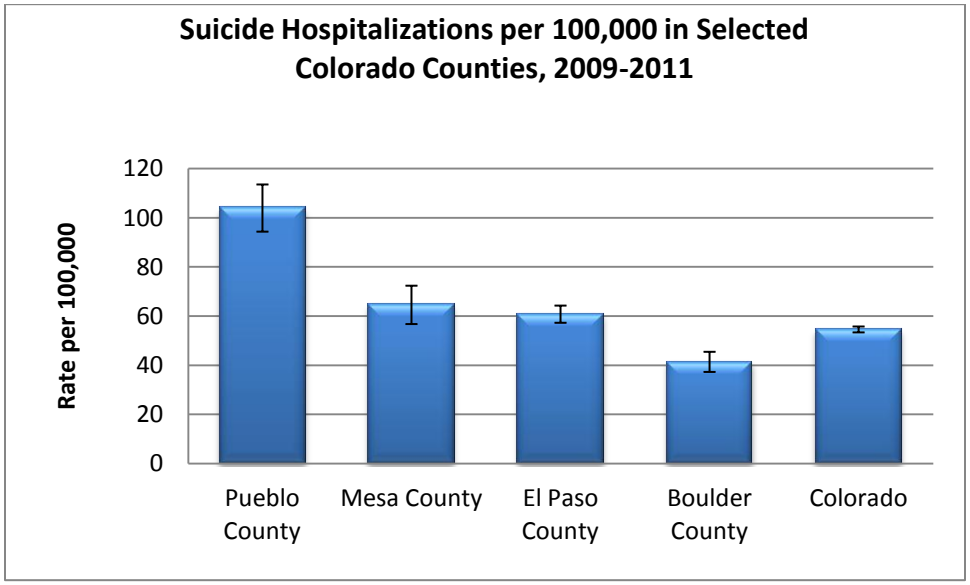
- Disease prevalence and cost of diabetes care is higher in Pueblo County. Cost is higher in the areas of outpatient facilities and pharmaceuticals.
- Access to primary care physicians, such as family practitioners, general practitioners and internal medicine physicians is adequate and on par with state rates. However, the number of pediatricians is much lower than the state.
    - The number of pediatricians in 2013 was 13 or 8 per 100,000—much lower national standards at 13 per 100,000.
- Education/prevention efforts for diabetes are offered through the hospitals, but classes are hospital-centric.
    - Diabetes services are offered at both hospitals and include counseling and education from nurses, and dieticians. The emphasis is self-management.
    - Parkview Medical Center also offers diabetes education classes to the public.

- Pueblo Community Health Center (PCHC) refers diabetic patients to home health agencies to ensure diabetes self-management and follow-up. This is a costly activity, but individuals are more likely to stay on track.
- Colorado State University (CSU) Extension provides "Dining with Diabetes" for newly diagnosed diabetics to make simple changes to their diet.

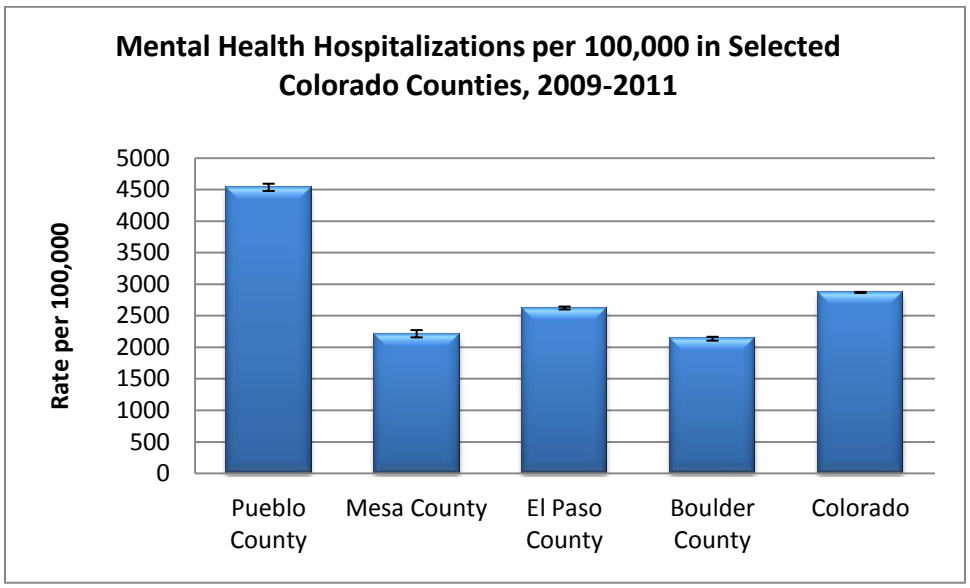
Questions

- Why are so many individuals in Pueblo County dying from diabetes?
- Is this an access problem, such as the number of physicians?
  - It looks as though there are enough physicians for adults, but too few physicians for children in Pueblo County. This could impact whether children are being diagnosed? It could also impact whether physicians are speaking with parents about children's habits, such as eating and exercise.
  - Other questions that emerge include: Are physicians reluctant to talk with patients about healthy habits? Do physicians have enough time to discuss diabetes complications?
- Is this a problem related to education/prevention?
  - Education is being offered, but the classes and self-management appear to be hospital centric.
  - Is there more education/programs needed in the community?
    - If offered, do program track records show that individuals attend classes? Are class capacities met? What are the outcomes? How do you offer classes to kids and teens?
    - Should programs be tailored to Pueblo County needs and population-specific?
- Is this a behavioral issue/concern?
  - What makes people change behaviors? (Near death experience, seeing a loved one die, readiness to change?)
  - How can you get people with diabetes to consistently come to classes?
- Is this an environmental problem?
  - How can we make Pueblo County an overall healthier place, i.e. emphasize healthier eating and exercise? Ordinances? Recreational areas?

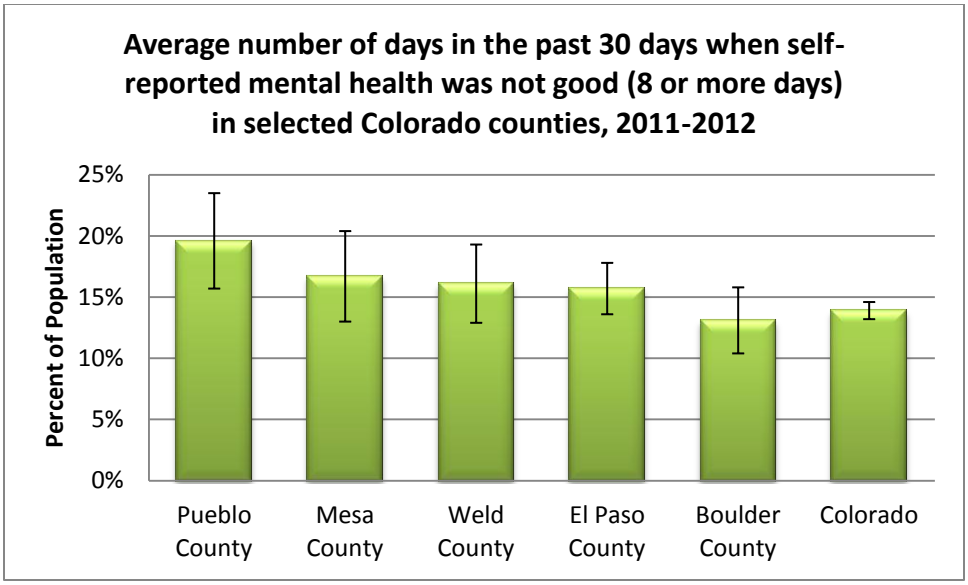
Leading Causes of Death: Suicide



Source: Colorado Health Indicators/Colorado Health and Hospital Association



Source: Colorado Health Indicators/Colorado Health and Hospital Association



Source: Colorado Health Indicators/Colorado Behavioral Risk Factor Surveillance Survey

Summary

- 3% of deaths in Pueblo County are related to suicide.
- Hospitalizations for both mental health and suicides are significantly higher than comparison counties and state.
- High rates of suicide in Pueblo County with 19.8 deaths per 100,000 in 2013. This rate of suicides was highest among individuals ages 55 and older.
- Contributors to suicide include poor physical and mental health, low social support, low SES, ethnicity, low educational attainment and substance abuse issues.
- In Pueblo County more adults report worse general health and eight or more days of poor physical health than other comparison counties and Colorado average.
    - These trends are more pronounced if individuals are from low SES (less than $25,000/year), of minority status, and have less education.
- Adults in Pueblo County also reported being less satisfied with their life and having fewer social supports than comparison counties in Colorado.
    - Again, these trends follow previous statistics and are more pronounced if individuals are from low SES, of minority status, and have less education.
- Though not significant, there are a higher percentage of adults reporting poor mental health days (eight or more days) than comparison counties and state.
- Though substance abuse statistics in Pueblo County are not out of range as compared to the Colorado average, 18.8% of adults (18+) admitted to having five or more drinks on one occasion in 2011-2012. This statistic is higher than those reported in Mesa, Weld, El Paso, and Boulder counties.
- In 2013, 27.1% of youth (14-19) reported binge drinking (consuming five or more drinks in a couple of hours). For the same year, 32% of youth used marijuana in last 30 days. In addition, 18.8% of youth tried prescription drugs, 10.7% tried ecstasy, 9.8% tried cocaine, 6% tried methamphetamines, and 5.4% of youth tried heroin one or more times in their life.

- An influx in homeless population may explain some of the mental health needs in Pueblo County.
    - In 2015, there were 2,700 people experiencing homelessness living in Pueblo County based on a point-in-time count conducted by Posada and Housing and Urban Development (HUD).
        - The number of people experiencing homelessness in Pueblo County has increased 54% from 2013 to 2014.
        - Reasons for the influx in the homeless population in Pueblo County may be due to the lower cost of living in Pueblo County, legalization of marijuana, and potential jobs linked to the marijuana industry.
    - There is a likely association among increase in homelessness, substance abuse, and poor mental health in Pueblo County.

Utilization/Cost/Access

- Hospital admissions for behavioral health in Medicaid patients are extremely high as compared to other patients/payers in Pueblo County and Colorado.
    - 23.67% among Pueblo County Medicaid patients as compared to 4.77% of Colorado Medicaid patients.
- Access to physicians and mental health specialists appears to be good; however the numbers of mental health specialists and licensed providers may be skewed due to the presence of the Colorado Mental Health Institute (CMHIP) at Pueblo, i.e. there may be less access to providers for Pueblo County residents than shown.
    - There are 186 active licensed psychiatric technicians in Pueblo County: a rate of 115.3 per 100,000 as compared to the average state rate of 4.3 per 100,000.
    - There are 56 active licensed psychologists in Pueblo County: a rate of 34.7 per 100,000 as compared to the state average rate of 40 per 100,000.
    - There are 28 active licensed psychiatrists in Pueblo County: a rate of 17.4 per 100,000.
    - Active licensed counselors/therapists in Pueblo County:
        - 9 Addiction Counselors
        - 6 Marriage and Family Therapists
        - 101 Professional Counselors
        - 15 Level I Certified Addiction Counselors
        - 44 Level II Certified Addiction Counselors
        - 90 Level III Certified Addiction Counselors
- Access to mental health education and treatment appears adequate; however the location of CMHIP may again skew our understanding of mental health bed capacity. Most of the beds at CMHIP are occupied by individuals who were court ordered and may not be from Pueblo County.
- County totals of inpatient beds dedicated to mental health related admissions:
    - **Pueblo County-562 beds**
      Colorado Mental Health Institute at Pueblo (CMHIP), 451 bed capacity:

- *Adult population (64 beds)*: Provides inpatient psychiatric evaluation and treatment to adults with acute mental illness. Individualized treatment programs are created to meet the needs of each patient.
- *Circle Program (20 beds)*: a specialty program, is unique in that it treats people who abuse substances and who also have serious psychiatric disorders.
- *Geriatric Treatment Center (40 beds)*: Provides inpatient gero-psychiatric services to persons 59 years of age and older. Hospitalization is designed to provide acute psychiatric treatment to patients with social/behavioral problems, depression or dementia.
- *Locked Adolescent Unit (20 beds)*: Provides inpatient psychiatric care services for older children and adolescents in a locked setting.
- The remaining 307 beds are for individuals involved in the criminal justice system.
- There is no county allocation for beds. Most of CMHIP beds are occupied by individuals that were court ordered from across the entire state, i.e. criminal cases. When beds are available for civil patients, patients must demonstrate an acute need and meet criteria. To date, there is a waiting list for open beds among civil patients.

Parkview Medical Center, 65 bed capacity:

- Inpatient services dedicated to treatment of mental health and substance abuse as well as short-term crisis intervention, evaluation, and stabilization.
- 30 beds are designated for chemical dependency. To date, all chemical dependency beds are occupied with a waiting list of at least a dozen individuals.
- The remaining 35 beds are for adult and adolescent psychiatric patients.

Spanish Peaks Behavioral Health Centers, 16 bed capacity:

- Operates in three counties through eight different locations. They provide adults and children mental health options such as therapy, medications, education, behavioral change, community supports, employment services, and care coordination. They have 16 bed capacity in their acute treatment center for men and women 18 years of age or older who are in an emotional crisis or have a serious psychiatric issues in addition to group therapy housing for adults to help prepare them for transition back to mainstream. Spanish Peaks also provides 24/7/365 crisis services.

Haven Behavioral Hospital of Southern Colorado, 30 bed capacity:

- Provides inpatient services for active duty military, veterans and adult dependents.

Crossroads Turning Points, Inc, 21 bed capacity:

- Provides comprehensive alcohol and drug prevention, intervention, and substance abuse treatment.
- Crossroads bed capacity is specifically for treatment of chemical dependency.

- **Mesa County-49 beds**

  Grand Junction VA Medical Center, 6 bed capacity

  Colorado West Psychiatric Hospital, 43 bed capacity:

  - 32 inpatient beds including eight designated for minors plus an adjacent facility with 11 inpatient beds (can serve minors or adults-beds are not designated).

- **El Paso County-190 beds**

PeakView Behavioral Health, 92 bed capacity:

- Inpatient services for adolescents, adults and seniors.

Aspen Pointe Lighthouse, 16 bed capacity

- Adults only.

Evans U.S. Army Community Hospital, 6 bed capacity:

- Six designated inpatient beds currently although have the capacity for 14.

Cedar Springs Behavioral Hospital, 76 bed capacity:

- Serves adolescents and adults.

- **Weld County-15 beds**

  North Colorado Medical Center, 15 bed capacity:

  - No beds specifically designated for psychiatric purposes, however, they do have 15 beds set aside to treat patients with co-occurring mental health and physical health conditions.

- **Boulder County-85 beds**

  Boulder Community Hospital, 13 bed capacity:

  - Adults only.

  Centennial Peaks Hospital, 72 bed capacity:

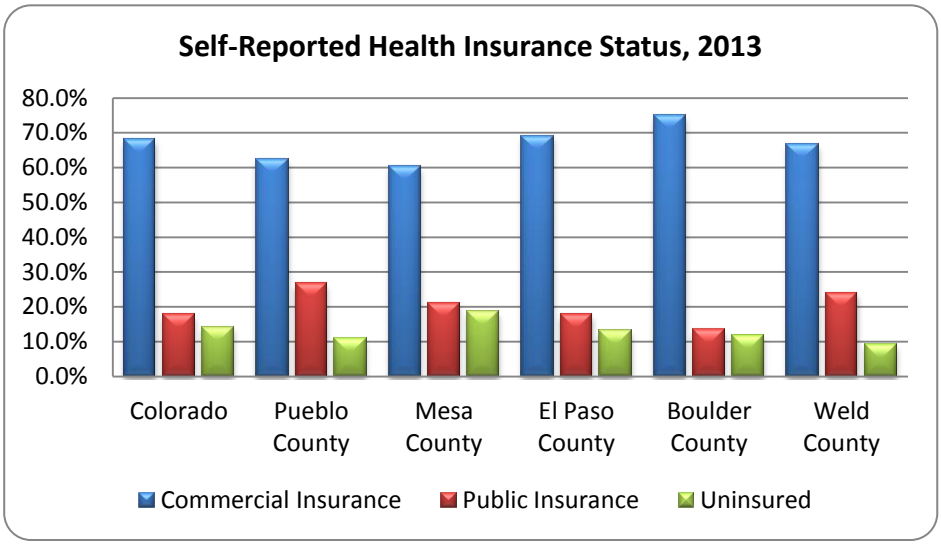
  - Serves adolescents and adults with mental health and/or substance abuse issues.

Questions

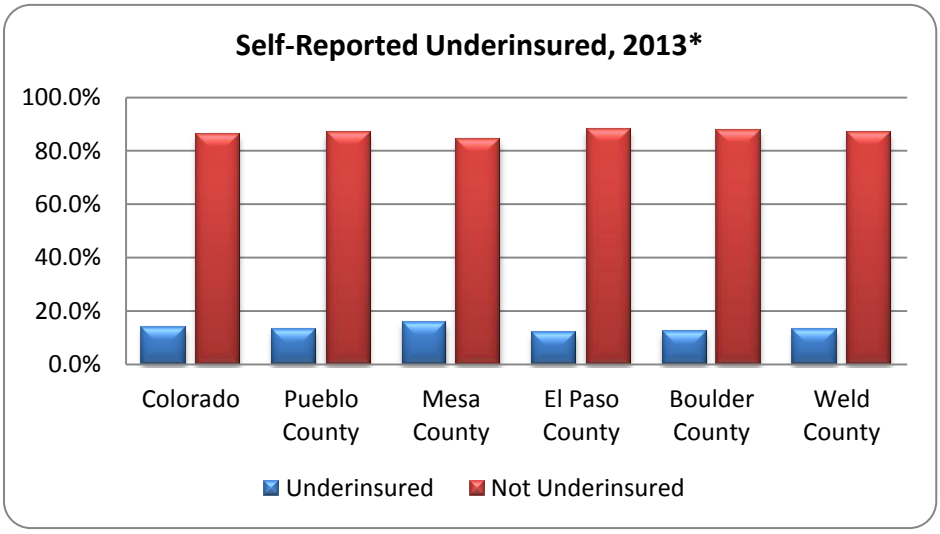
- What are the overarching concerns if suicide and mental health hospitalization are so high in Pueblo County?
- Why is poor mental health such a burden in Pueblo County?
- Is access to resources a concern?
  - Are there enough providers available? The numbers show that there are enough providers; however, does CMHIP skew results? Are the right types of providers available?
  - If mental health resources are available (are they)? Are they accessible (location/hours)? Are wait times too long?
  - Are the right resources available based on individual needs?
- Is this an insurance problem? Is insurance barring individuals from using mental health resources? Are programs capping participation to keep patients from using resources?
- Is the increasing number of people experiencing homelessness in Pueblo County linked to poor mental health in Pueblo County? Does a higher number of the homeless population indicate an increase in substance abuse? How does the legalization of marijuana play a role in the increasing number of people experiencing homelessness?
- Is it a behavioral problem? Is there a stigma associated with mental health resources? Are people not using the resources? Are they waiting too long to use the resources?
- It is a cultural problem? Does Pueblo County's history, educational and cultural base promote more mental health problems?

ACCESS TO CARE IN PUEBLO COUNTY

Coverage

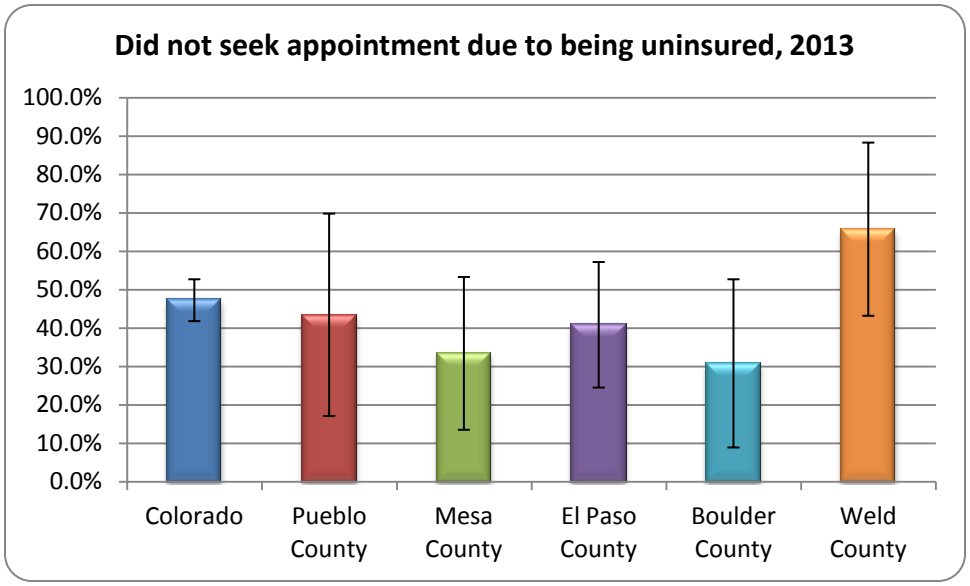


Source: Colorado Health Access Survey



Source: Colorado Health Access Survey

**≥ 200% FPL considered underinsured if at least 10% of annual income is spent on out of pocket expenses, for < 200% FPL underinsured status given if at least 5% is spent*

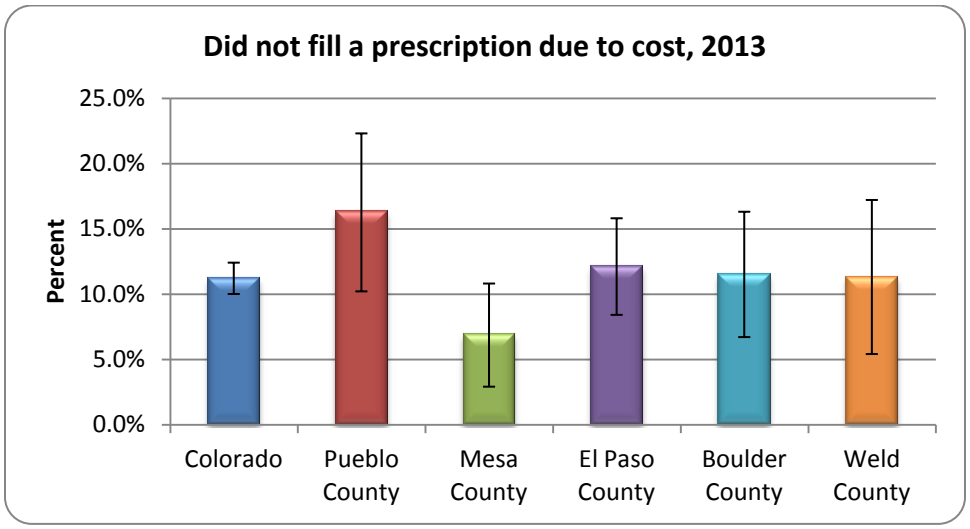


Source: Colorado Health Access Survey

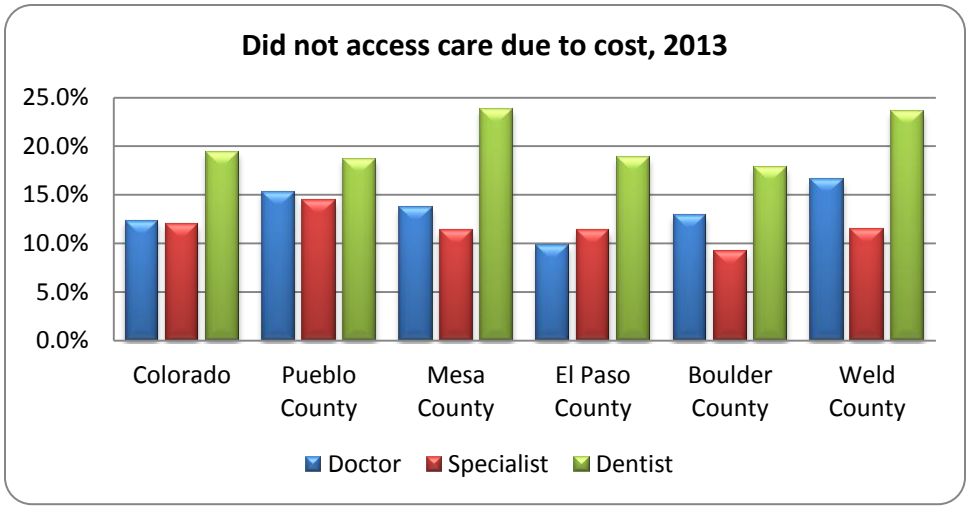
Summary

- Lack of coverage is often seen as the primary barrier to accessing care; Pueblo County had the second lowest percentage of uninsured individuals at 10.9%. Of those who were uninsured, 43% declined to seek an appointment due to lack of coverage.
- Pueblo County self-reported the highest percentage of public insurance coverage at 26.5%.
- Approximately 10% of Pueblo County respondents had been told that a doctor's office did not accept their type of insurance which was similar to other counties and the state.
- Having coverage does not seem to be the issue on the surface; however, 13.1% are classified as underinsured.

Cost



Source: Colorado Health Access Survey



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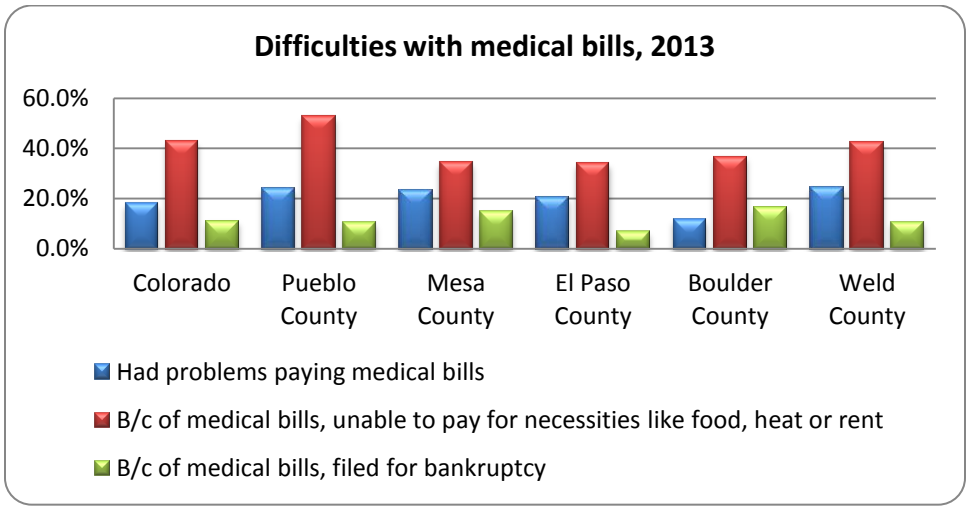
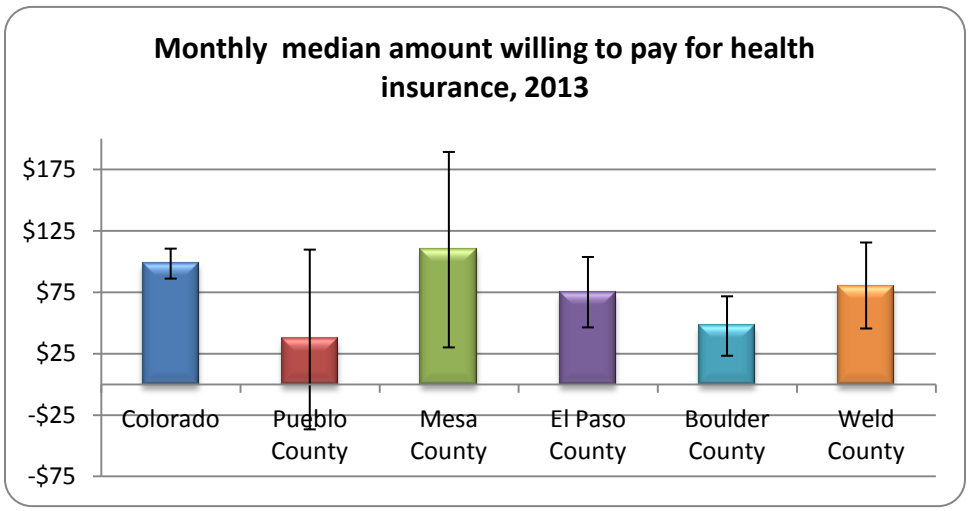


Source: Colorado Health Access Survey



Source: Colorado Health Access Survey

Summary

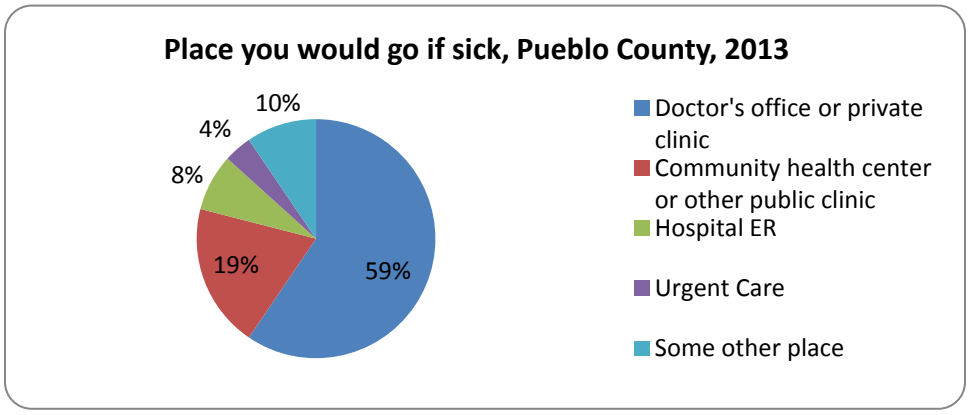
- Postponement or unwillingness to seek care due to cost is common—Pueblo County reports a total of 24% uninsured and underinsured.
- With the exception of Boulder County, all counties had 1 in 5 respondents reporting problems paying bills.
- Pueblo County reported spending a median of $185 out of pocket on prescriptions which was comparable to other counties and Colorado.
- Pueblo County self-reported vision and dental out of pocket costs were surprising at $-1 and $1, respectively. Other counties had similar reports for vision costs which could mean low utilization of services. Mesa County reported spending $95 on dental and Colorado averaged a median of $100 which could also signify low utilization of dental services in Pueblo County.
- Cost appears to be a barrier to accessing care. Pueblo County is not necessarily paying more out of pocket however, so it might be helpful to compare income disparities and cost of care in the future.

Questions

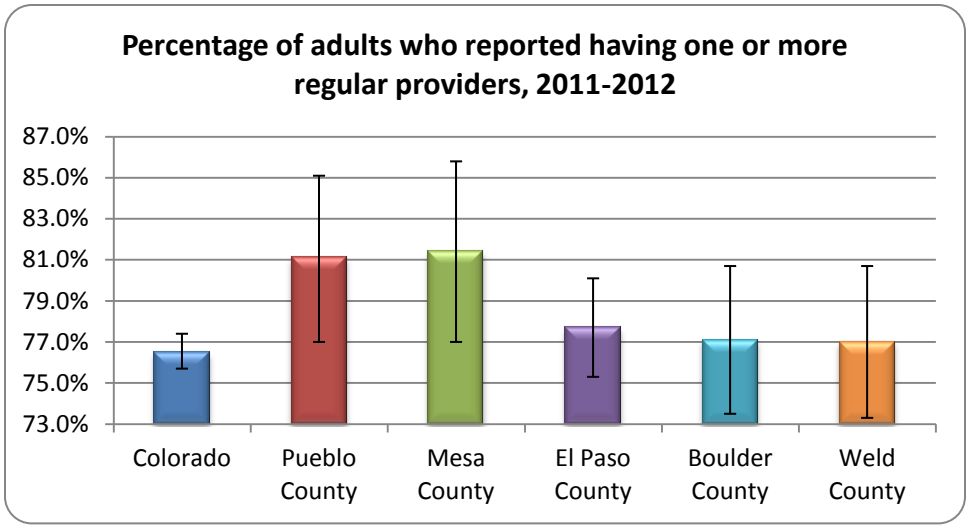
- Would many of these statistics look different now-post ACA?
- Pueblo County reports a large percentage of residents on public insurance—are there problems utilizing this? Is health literacy an issue?
- Pueblo County reported spending $1 on out of pocket dental expenses. Do we have discount programs for this or are we not utilizing available services?
- Is 10-15% consistent with national average for people needing to file for medical bankruptcy?
- Vision costs for all counties were unremarkable; two counties reported spending $0, one reported $1 and another $-1. Are people utilizing vision services?
- What could account for the large difference in median monthly amount willing to pay for coverage?

Services/Utilization

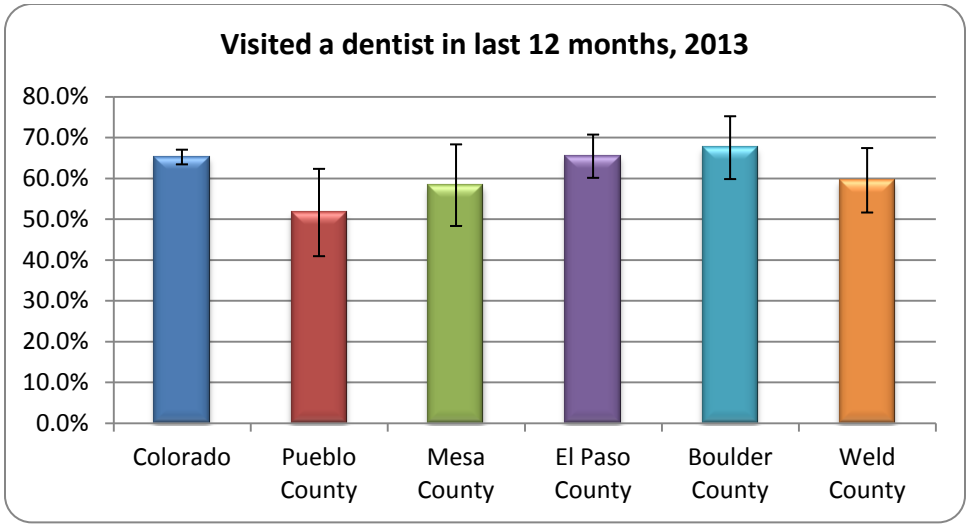
Provider Utilization



Source: Colorado Health Access Survey



Source: Colorado Department of Public Health and Environment



Source: Colorado Health Access Survey

Summary

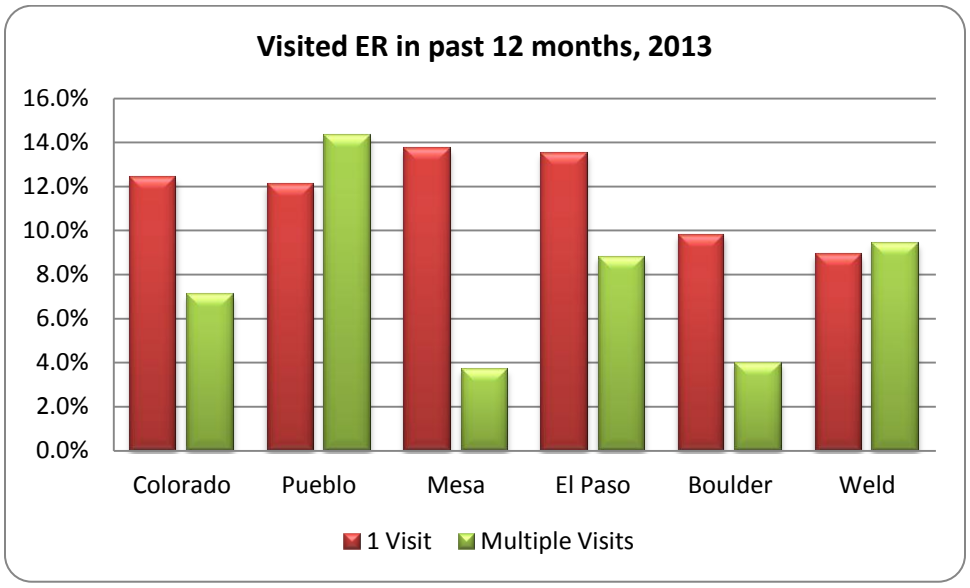
- Having a usual place to go for care is often considered to be an important component of service utilization. In the 2013 CHAS, 86.9% of Pueblo County respondents reported having a usual source of care. This was consistent with other counties and state responses.
- Having a regular primary care provider is linked to patients receiving appropriate care as it allows for improved patient/provider relationships and can aid in integration of care.
- Pueblo County ranked lowest of all counties and the state for self-reported primary use of a doctor's office (highest was Mesa County at 80.3%) and Pueblo County ranked lowest in self-reports of having visited a health care provider in the previous year with just 71% answering "yes".
- Pueblo County ranked highest overall for reported use of community health centers as well as hospital emergency rooms.

- In 2013, approximately 12% of respondents from Pueblo County stated they were told by a doctor's office that new patients were not being accepted (compared to the state average of roughly 8%).
- For all counties and Colorado, individuals were more likely to forgo dental care due to cost than visits to a doctor or specialist.
- Some data suggests that perhaps a more important factor in not going to the ER for non-emergencies is having one or more regular health care providers or a medical home versus simply having a usual source of care. As the chart above shows, there are no significant differences between selected counties for this measure although all appear to be doing better than the state average.

Questions

- Given the low use of primary care physicians, is more education on preventive care needed?
- Pueblo County shows a statistically significant lower utilization of dental services compared to the state average. Could this have implications in Pueblo County given the high rate of heart disease and diabetes?

ER Utilization



Source: Colorado Health Access Survey

Summary

- Top five diagnoses in Pueblo County ERs: acute upper respiratory infection not otherwise specified, abdominal pain unspecified site, otitis media not otherwise specified, urinary tract infection not otherwise specified, and lumbago.
- Pueblo County ranking highest for multiple ER visits is consistent with respondents from Pueblo County having the highest self-reports of going to the ER when sick (7.7%).
- Over 14% of respondents in Pueblo County had multiple visits to the ER in 2013.

- 2013 self-reports of last ER visit being for a non-emergency was 50% for Pueblo County which was higher than the state but consistent with other counties.
- Pueblo County ranked highest of all counties on both the 2011 and 2013 CHAS for going to the ER for a non-emergency due to not being able to get an appointment soon enough (79.3% in 2013).
- There was a wide range (12.2% to nearly 60%) between counties of people going to the ER for non-emergencies because their doctor told them to go. Pueblo County reported 14.6%.
- From 2011 to 2013 the number of people in Pueblo County reporting they visited the ER for a non-emergency due to it being more convenient increased 35% (from 54.8% to 89.8%).
    - Based on peer-reviewed literature, convenience (distance from home/flexibility of hours) is one of the reasons cited for patient use of the ER for non-urgent cases. Other reasons why patients visit the ER include perceived severity of illness, familial/cyclical use of ER, provider told them to go, expected need for greater care, long wait time with PCP, and lack of alternative.
    - Many other reasons exist as to why patients visit the ER frequently, including low health literacy, disconnect between provider and patient perspective on heath (convenience versus severity of illness), hospital marketing, and efficacy of ER services, including immediate results.
- According to Pueblo County Emergency Medical Services (EMS) Council protocols, patients must be transported to a hospital if they request it regardless of whether the EMT feels transport is necessary.
- According to CIVHC 2012 reports, ER visits by adult males in Pueblo County were higher than expected as well as higher than state rates:
    - Males 18-34 yrs rate of visits was 23% higher than expected and 1.8x the state rate
    - Males 35-64 yrs rate of visits was 35% higher than expected and 1.5x the state rate

Questions

- Why is it so convenient to choose the ER in Pueblo County? Why the drastic increase since 2011?

Hospital Admissions

Service Utilization of All Payers, 2012	Rate per Thousand	
	Pueblo County	State
Hospital Admissions	94	60
Outpatient Visits	2,935	1,499
ER Visits-subset of Outpatient	446	254
Professional Claims	7,282	5,204
Prescriptions Filled	13,886	7,838

Source: Center for Improving Value in Health Care

**Both Pueblo County and state had low data completeness scores meaning just 25%-50% of the population is included. Rates represent the population living in a particular area rather than the location where services were received.*

Summary

- Male hospital admission rates for Pueblo County were over two times the state rate. For males 18-34 years old, the utilization was nearly four and a half times that of Colorado.
- Outpatient visits rate (all ages and genders) was 67% higher than expected, nearly 2x the state rate
  - All females, 56% higher than expected rate
  - Females 35-64 yrs, 142% higher than expected rate, 2x the state rate
  - All males, 83% higher than expected rate
  - Males 18-34 yrs, 214% higher than expected rate, 1.9x the state rate
  - Males 35-64 yrs, 228% higher than expected rate, 2.4x the state rate
- High rate of prescriptions filled for all males (32% higher than expected, 1.9x the state rate)
  - Males 18-34 yrs, 43% higher than expected rate, 2.2x the state rate
  - Males 35-64 yrs, 33% higher than expected rate, nearly 2x the state rate
- For all current payers, CIVHC reports 20% of Pueblo County hospital admissions were attributed to Behavioral Health which was 379% higher than the state rate

Readmission Summary

Medicaid and Private Insurance

- Poor readmission indicators among all Pueblo County patients (all payers) in neurology, general surgery and orthopedic surgery.
  - Among Medicaid patients, poor readmission indicators in neurology, orthopedic surgery and "other medical".
  - Among private payers, poor readmission indicators in gastroenterology and general surgery.
- Good readmission indicators in the areas of urology/ nephrology and obstetrics/delivery for all patients.

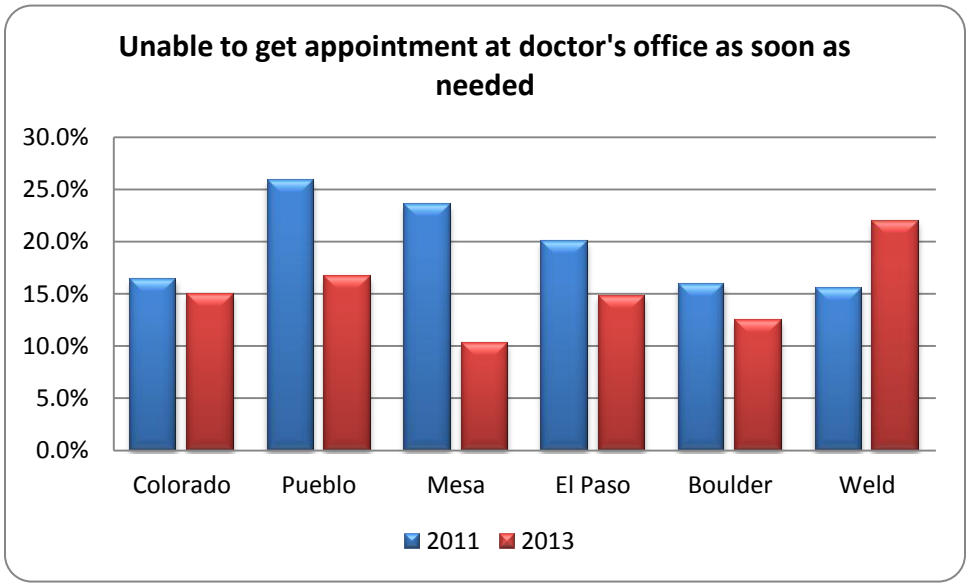
Medicare

- According to Medicare Compare data from 2010-2013, local hospitals did not differ from national rates on the following unplanned readmission categories:
  - Heart attacks
  - Heart failure
  - Hip/knee surgery
  - CLRD
  - Stroke
  - Pneumonia (Parkview Medical Center was better than national rate)
- The Dartmouth Atlas of Health Care supplies the following readmission data for Medicare patients. The data is divided by Hospital Referral Region (HRR) and, for Pueblo, this includes St. Mary-Corwin Medical Center, Parkview Medical Center and Spanish Peaks Regional Health Center in Walsenburg. Pueblo HRR is lower than the state average on all categories where data is available.

Percent of Medicare patients readmitted within 30 days of discharge, 2010

Initial Discharge	Pueblo HRR	State
All medical discharges	13.9%	14.8%
All surgical discharges	9.4%	10.4%
Congestive Heart Failure discharges	no data available	17.3%
Acute Myocardial Infarction discharges	no data available	14.4%
Pneumonia	12.3%	14.4%
Hip Fracture	12.3%	14.4%

Timeliness



Source: Colorado Health Access Survey

Related Patient Satisfaction

Percentage of adults on Medicaid who……	RCCO 4 (Pueblo Co.)	All ACC Respondents	Notes
Rated all their health care in last 6 months a "9" or "10"	34.8%	39.2%	Only asked of those stating they had a personal doctor and who had gone to a doctor's office or clinic in last 6 months.
Indicated "usually" or "always" when asked about getting care quickly	76.1%	77.2%	Asked of those who had gone to a doctor's office or clinic in last 6 months. Combined results from two questions: (1) when you needed care right away, how often did you get care as soon as you needed it (2) how often did you get an appointment for a check-up or routine care at a doc's office or clinic as soon as you needed.

Source: "Through A Client's Eyes", Colorado Health Institute, 2013

Summary

- In Pueblo County, nearly 80% of people who visited the ER for a non-emergency stated they had gone because they could not get an appointment soon enough. Overall, approximately 17% of Pueblo County respondents stated they could not get an appointment as soon as it was needed.
- The latest CHAS (2013) found Pueblo County residents self-reported that half of the time they visited the ER it was for a non-emergency. Attending to these patients likely has a negative effect on wait times and occupies valuable space in the ER.
- A 2009 Merritt Hawkins Survey of Physician Appointment Wait Times found the average time to meet with a family practice physician was equal to or greater than 14 days in 8 of the 15 cities surveyed. The wait time exceeded 21 days in five of the cities.
- November and December 2014 average wait times for appointments at Pueblo Community Health Center (PCHC) were as follows:
    - New patients/ appointments: 51% of appointments were within 31 days
    - Routine appointments: 37% of appointments were within 22 days
    - Complete physicals: 79% of appointments were within 31 days
    - Well Child Checks: 70% of appointments were within 22 days
- Colorado state standards for access to care for Medicaid enrollees lists the maximum number of days to wait for a routine primary care appointment as 30 days. There is no standard provided for wait time for appointments with specialists.
- Average wait time from check in to provider contact at PCHC is 20-25 minutes
- The 2010-2011 National Hospital Ambulatory Medical Care Survey found the median wait time for the ED was about 30 minutes, and the median treatment time was slightly more than 90 minutes.
- ProPublica reports the average ED wait time at Parkview is 36 minutes and at St. Mary Corwin it is 33 minutes.
- Based on patient satisfaction data, there is no significant difference related to getting care quickly between Regional Care Collaborative Organization (RCCO) 4 and other Accountable Care Collaborative (ACC) respondents.

Questions

- Might there be differences in wait times to make an appointment and actually be seen by the doctor between those who utilize a private clinic versus public?
- What are the average times for waiting and treatment at Pueblo County emergency departments by triage level?
- What are the average wait times at area doctor's offices?
- Are there differences in wait times for area specialists versus PCP?
    - If so, does this contribute at all to readmission rates or ER visits?
- Why are patients unable to get timely appointments with a doctor?
    - Is it related to insurance status? Or volume?
    - Could it be possible that people have too high of expectations for wait times with PCPs?

HEALTHCARE WORKFORCE

Safety Net Provider Locations in Pueblo County, 2014

Type	# of Clinics
Community Health Centers	4
Community Mental Health Centers	5
Family Practice Residency Programs	1
Internal Medicine Residency Programs	1
School-Based Health Centers	5
Local Public Health Department and Public Nursing Services	1
Hospital Emergency Departments	3
Community-Based Low-Income Dental Clinics	0
Community Safety Net Clinics	0
Rural Health Clinics	0

Source: Colorado Health Institute

Summary

- Safety net organizations and providers are vital to the health care system as they help meet the needs of uninsured and underinsured individuals.
- Pueblo County has seen an increase in community mental health centers since 2007, going from three centers to five.
- A Family Practice Residency Program was added at St. Mary Corwin Medical Center in 2007 and an Internal Medicine Residency Program was added at Parkview Medical Center in 2012.
- If another safety net location is not offering free or reduced rate dental care, this might be a gap worth exploring.

Questions

- Since the expansion of Medicaid through the ACA, is the current number of area safety net locations adequate to meet the demands of the population?

Medicaid Accepting Providers

- Colorado standards for access to care for Medicaid enrollees states there should be one Primary Care Provider and one of every type of specialist for every 2,000 enrollees. There is also a 30 minute or 30 mile maximum time and distance standard for how far an enrollee should have to travel to see a PCP or specialist.

- According to the Colorado Health Institute's *Filling the Dental Gap* report, 75.3% of Pueblo County's practicing dentists accept Medicaid (55 of 73 dentists). This corresponds to a ratio of 1,052: 1 of Medicaid enrollees to Medicaid dentists.
- The Colorado Health Institute lists the January 2015 Medicaid monthly caseload for Pueblo County as 26,222 enrollees aged 20 and under and 34,722 aged 21 and over for a total of 60,944. The 2013 total population for Pueblo County is listed as 164,280.
    - Providers accepting Medicaid within a 30 mile radius of Pueblo County according to the Colorado Department of Health Care Policy and Financing are listed below. In order for state standards to be met, the number of specialists serving the entire Pueblo County Medicaid population should be approximately 30. If a specialist serves only those aged 20 years and under the number would need to be approximately 13 and for those serving adults aged 21 years and over the number would need to be approximately 17.
    - 15 Optometrists
    - 592 total Physicians (includes Physician Assistants and all Specialists). Selected Specialists:
        - 64 Family Practice
        - 5 Dermatology
        - 3 Endocrinology
        - 6 Gastroenterology
        - 25 Obstetrics/Gynecology
        - 58 Internal Medicine
        - 5 Oncology
        - 6 Ophthalmology
        - 11 Orthopedics
        - 4 Otolaryngology (ENT)
        - 1 Neurology
        - 22 Pediatrics
        - 9 Psychiatry
        - 3 Pulmonary Medicine
        - 1 Rheumatology
        - 6 Urology

Medical Providers in Pueblo County, Mesa County, and Colorado, 2014

Type of Provider	Pueblo County Count	Pueblo County Rate per 1,000 People	Mesa County Rate per 1,000 People	State Rate per 1,000 People
Active Licensed (AL) Physician	423	2.6	3.3	2.8
AL Optometrist (not including Ophthalmologists)	18	0.1	0.2	0.2
AL Podiatrist	9	0.1	0.1	0
AL Physician Assistant	54	0.3	0.5	0.4
AL Certified Nurse Midwife	6	0.0	0.1	0.1
AL Nurse Practitioner	99	0.6	0.6	0.6
AL Registered Nurse	2316	14	12.4	10.8
AL Practical Nurse	505	3.1	2.1	1.6
AL Certified Nurse Aid	2289	13.9	12.1	8.7
AL Dentist	102	0.6	0.7	0.7
AL Dental Hygienist	137	0.8	0.7	0.7
AL Social Worker	7	0	0.1	0.1

AL Psychologist	56	0.3	0.2	0.4
Pharmacist	163	1	1	1
AL Occupational Therapist	42	0.3	0.5	0.5
AL Physical Therapist	73	0.4	0.8	0.9
AL Respiratory Therapist	147	0.9	0.5	0.4
AL Nursing Administration	19	0.1	0.1	0.1
AL Psychiatric Technician for the Mentally Ill	186	*(72% of state)	*(14% of state)	*count,259
AL Psychiatric Technician for the Developmentally Disabled	202	*(25% of state)	*(38% of state)	*count,808
AL Clinical Social Worker	104	0.6	0.5	0.7
* Rate not available				

Source: Colorado Health Institute

Provider Specialties in Pueblo Hospital Service Area* per 100,000 Residents, 2006**

PRIMARY CARE PHYSICIANS	Ratio to U.S. Avg of 1.00
Family Practice	1.4
Pediatrics	0.59
Internal Medicine	0.71
SURGEON SPECIALTIES	**Ratio to U.S. Avg of 1.00**
Cardiovascular/Thoracic	0.78
General Surgery	1.09
Neurosurgery	1.94
Pediatric	0.44
Obstetrics/Gynecology	0.87
Ophthalmology	0.94
Orthopedic	1.19
Otolaryngology	0.95
Urology	1.08
Vascular	0.88

PHYSICIAN SPECIALTIES	Ratio to U.S. Avg of 1.00
Allergy/Immunology	1.52
Cardiology	0.71
Critical Care	0.46
Dermatology	0.91
Emergency Medicine	1.5
Endocrinology	1.24
Gastroenterology	0.67
Geriatrics	1.11
Hematology/Oncology	0.56
Infectious Disease	0.44
Nephrology	1.23
Neurology	0.48
Pulmonology	1.15
Radiation Oncology	1.2
Physical Medicine/Rehabilitation	1.08
Rheumatology	0.56

Source: Dartmouth Atlas

*Includes Parkview Medical Center and St. Mary- Corwin Medical Center

**Though this data is from 2006, it is the most recent publicly available comparison of physician specialty and ratio to population.

Summary

- Overall, Pueblo County is comparable to Colorado rates for medical providers. It appears, however, that the number of providers serving Medicaid clients is less than the recommended state standards for access to care for some specialty types.
- Pueblo County excels in rates of registered nurses, licensed practical nurses, certified nursing assistants and respiratory therapists.
- 72% of the state's psychiatric technicians for the mentally ill are licensed in Pueblo County as are 25% of the state's psychiatric technicians for the developmentally disabled, most likely due to the CMHIP.
- Practicing PCPs is expressed as a percentage of total practicing physicians. Pueblo County ranks at 32.1%, Mesa at 38.9% and Colorado at 28.0%.
- Pueblo County ranks fourth best for ratio of patients to full time PCPs (1,664:1) according to the Colorado Health Institute's 2014 report "Colorado's Primary Care Workforce."

Limitations

The secondary data reviewed and analyzed comes from primarily two sources: the CHI and CHAS. Both sources use self-reported data. Self-reported data can be biased for two reasons: 1) individuals who respond may attempt to answer in a way that they believe the interviewer /survey developer wants them to; or 2) individuals self-select to respond to the surveys, i.e. a specific type of individual participates. For this reason, we included confidence intervals in as many of the graphs as possible to demonstrate the range of responses. In addition, we attempted to couple the secondary data with other information to justify findings.

Data for the number and rate of providers was collected and reported from multiple sources, including CHI, CDPHE, and Bureau of Health Professions. Medicaid provider data was gathered from the Colorado Department of Health Care Policy and Financing. In some cases, number and rates of providers differed by source and year collected. To ensure consistency, data was reported from the same source in specific sections when describing access to providers.

Data on reasons for ER utilization and hospital admissions for males in Pueblo County was unavailable from local hospitals before the completion of this report. Similarly, hospital readmission data was unavailable prior to report completion.

The content chosen for this report was determined by two research assistants. The research assistants did use criteria to justify the content selected: 1) if the confidence intervals of the data points did not overlap and were therefore statistically significant; 2) requests were made by community partners to further explore specific topics; and 3) replicating the structure of national reports that use specific indicators to explore the areas of chronic health conditions and access to care.

In regards to mental health bed capacity, Pueblo County appears to have a larger mental health bed capacity because of the location of CMHIP. However, a majority of the beds located at CMHIP are for court ordered cases, i.e. criminal cases. There is no longer a county allocation to beds. Therefore patients using these beds come from across the state.

Conclusions

When discussing chronic health conditions, access to care is oftentimes listed as a chief contributing factor. Access to care entails more than simply having health care coverage and an adequate number of medical providers available, however. Factors such as cultural norms surrounding health care, perceived or actual cost of care, comfort levels in accessing care, knowledge of how to access care and perceived risks, and benefits to accessing care could all contribute to how or if an individual participates in the health care system.

Indeed, the data analyzed in this report show that health care coverage and number of providers does not seem to be key factors in the leading causes of death for Pueblo County. Heart disease, cerebrovascular diseases, chronic lower respiratory diseases, diabetes and suicide instead seem to be largely linked to unhealthy lifestyle habits and socio-economic factors. Pueblo County's high rates of obesity and smoking combined with low median incomes and educational attainment merge with other factors to result not only in chronic health conditions but also a *healthy* life expectancy a full 11 years shorter than the average life expectancy.

As the health community takes the next steps in choosing evidenced-based strategies, one suggestion is to focus less on access to care and more on appropriate utilization of services as a possible approach to preventing and managing chronic health conditions. Research on appropriate service utilization should include a thorough investigation into wait times at area doctors' offices as well as the elevated male ER utilization and hospital admission rates.

As is often the case in public health, the research on the leading causes of death in Pueblo County seems to imply that individual behavior change will be necessary in prevention efforts. In order to ensure lasting and significant change, all involved in the health system must work to identify common focus areas and work towards common goals.

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Appendix A

Analysis of Handout Responses from Chronic Disease Data and Access to Care Community Meeting

Background

- The Chronic Disease Data and Access to Care Community Meeting was held on Thursday, February 19, 2015 from 8:30-10:30. A total of 18 participants attended the meeting to discuss assets, barriers, and potential projects to improve chronic health conditions and access to care in Pueblo County. Participants represented organizations, including the Pueblo City-County Health Department, St. Mary Corwin Medical Center, Parkview Medical Center, Spanish Peaks Mental Health Center, Pueblo Community Health Center, ICHP, Kaiser Permanente, and Caring for Colorado Foundation.
- Participants were asked to fill out 4 questions each on chronic health conditions and access to care based on the presentation of data. Responses to questions were collected at the end of the meeting. Questions included:
  - What sections stood out to you?
  - What work is occurring in Pueblo County?
  - What work is not occurring in Pueblo County?
  - What is the one thing regarding chronic health conditions that if done, would make a significant difference for the whole community?
- Key findings were analyzed using classical content analysis and are based on responses from 13 participants.

Key findings on what stood out regarding chronic health conditions and access to care.

The group identified 5 major themes related to what stood out in regards to chronic health conditions and access to care. The most frequently mentioned theme was utilization. Utilization, in this context, was seen as a potential problem in Pueblo with higher readmission rates, poor utilization of services/education, high ER use and low PCP use, and higher than average male admissions. The second most frequently mentioned theme was available resources and services. Under this theme, participants found that in some areas resources and services were more prevalent than expected, such as an adequate number of providers. In other aspects, individuals noted shortages in the number of pediatricians, Medicaid accepting providers, and preventive education and providers for cardiovascular diseases. The third frequently mentioned theme was health outcomes. Participants noted concerns over poor health outcomes such as poor mental health, unhealthy life style choices, and poor healthy life expectancy. The fourth frequently mentioned theme was financial difficulties. Participants noted interest in residents trouble paying for necessities, cost as a barrier in health care, and lack of interest in pay for health insurance. Lastly, 3 participants noted the importance of the increasing number of insured residents in Pueblo County.

Table 1: What Stood Out	Frequency (N=12)	%
Utilization	12	100%
Available resources/services	10	83%
Health outcomes	7	58%
Financial difficulties	4	33%
Number of insured	3	25%

Key Findings on assets in Pueblo County

The group identified 6 major themes related to assets to improving chronic health conditions and access to care in Pueblo County. The most frequently mentioned were improved access to care and health education. Improved access to care was discussed in terms of increased hospital resources in the community, expansion of the community health center, and more screenings. Health education was discussed in terms of a local diabetes project, smoking workgroup, and early childhood work. The second most frequently mentioned theme was increased insurance enrollment, which was attributed to work being conducted by Pueblo StepUp to enroll kids and adults in Medicaid and CHP+ and hospital policies and programs to reduce potentially avoidable readmissions and ER use. The third most frequently mentioned theme was community coordination of programs to improve public health and access to care through the establishment of Pueblo Triple Aim and the community health plan. Lastly, mental health integration was mentioned by one person as an asset to Pueblo County.

Table 2: Assets in Pueblo County	Total Frequency (N=9)	%
Improved access to care	5	55%
Health education	5	55%
Increased insurance enrollment	4	44%
Hospital policies/programs	4	44%
Community coordination	2	22%
Mental health integration	1	11%

Key Findings on barriers to care in Pueblo County

Participants identified six main themes related to barriers to care in Pueblo County. The most frequently mentioned theme was lack of sufficient social supports and resources to care. Under this theme, participants discussed difficulties in getting resources to targeted audiences based on geography and culture, a lack of education by residents regarding resource availability, and two few providers accepting the Medicaid population. The second most frequently mentioned theme was lack of a community

mindset about the importance of prevention and health. Under this theme, 30% of participants noted that there was a lack of programming and work addressing the impact of ethnic/cultural and familial perception of health and changing behaviors. The third most frequently mentioned theme was ER over-utilization. Over-utilization of the ER was attributed to too few acute care beds for those with chemical dependency and mental illness, lack of a 24/7 primary care access, and doctors referring patients to the ER. The fourth most frequently mentioned theme was the connection and collaboration with businesses and other organizations to leverage resources and create community buy-in. Male hospitalizations and Marijuana use were cited each by one person as barriers to care in Pueblo County.

Table 3: Barriers to Care in Pueblo County	Frequency (N=10)	%
Lack of sufficient social supports and resources	8	**80%**
Lack of community mindset about the importance of health	7	**70%**
ER over-utilization	5	**50%**
Lack of connection to local businesses and community buy-in	2	**20%**
Male hospitalizations	1	**10%**
Marijuana use	1	**10%**

Key findings on potential evidence based projects

Participants identified two main areas to focus a potential community-wide evidence based project. Both areas were seen with equal weight and included 1) increasing resources to community/population with highest need; and 2) cultural/environmental shifts and changes related to health behaviors and value of health.

Under the theme of increasing resources, participants cited:

-Linking patients with social support services
-Using neighborhood community health workers as a first point of access/prevention
-Finding solutions for underinsured who cannot attend copays or deductibles
-Increasing the size of the community health center
-Increasing number of doctors who will take Medicaid
-Expanding mental health services, i.e. Spanish Peaks: 1
-Extending hours for PCPs

Under cultural and environmental shifts theme, participants provided specific examples of projects, including:

-Improving attitude and value of preventive care
-Reducing smoking and tobacco use
-Increasing transportation
-Improving prescription drug Rx and medical compliance

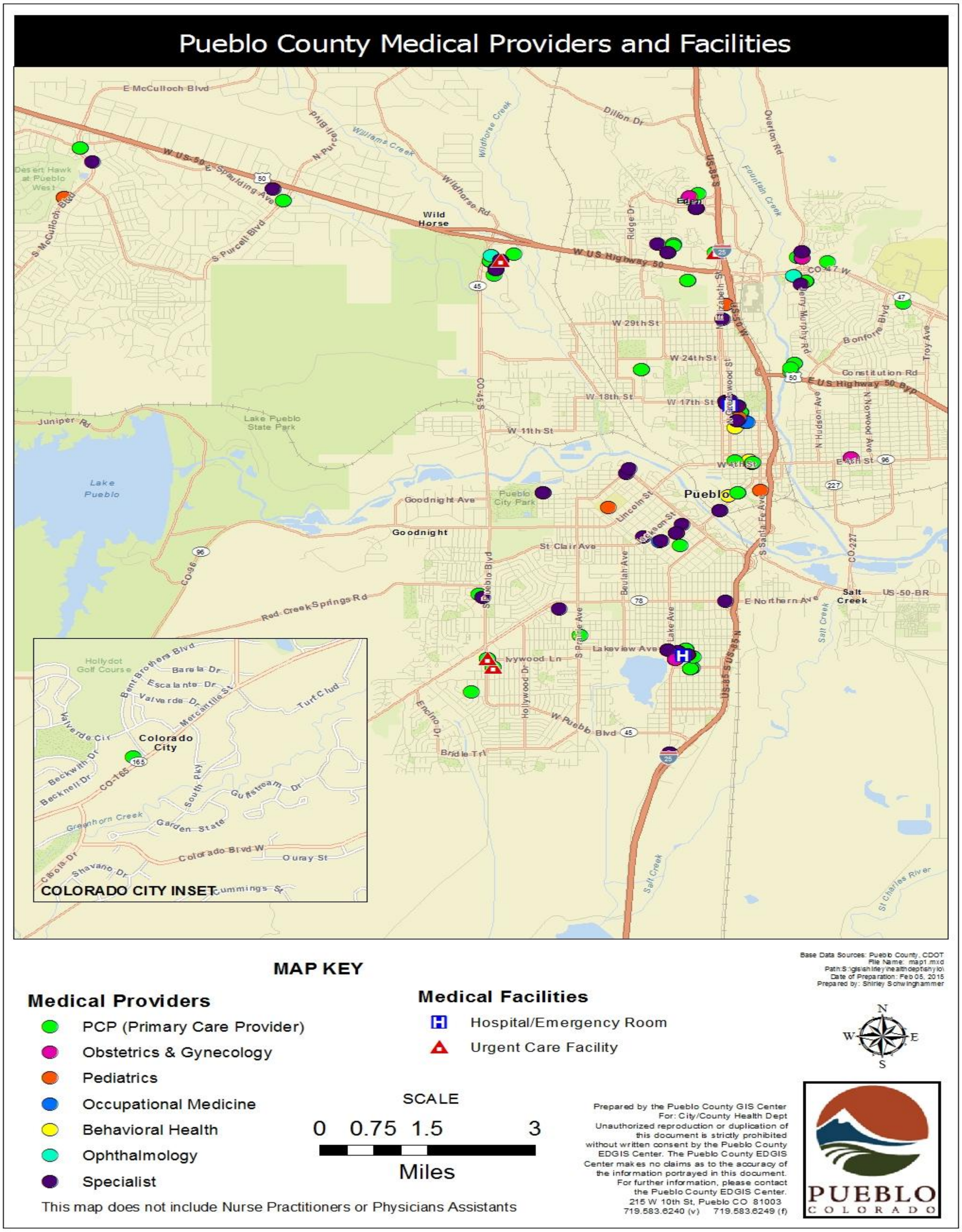
-Providing post hospitalization education
-Changing patient expectations: 1
-Increasing appropriate use of primary care

Table 4. Potential evidence based projects	Frequency (N=13)	%
Increase resources to community/population with highest need	13	100%
Cultural/environmental shifts and changes related to health behaviors and value of health	13	100%
Need for singular CHA	1	8%

Lastly, participants jotted notes in regards to questions on the data presentation and potential areas for more research. The following are a list of these notes:

1. Are there pockets of higher vs. lower incidence/prevalence for the indicators presented? Can we identify concentrations? GIS? Are there some areas better/worse than others? Any data on the disparity that may/may not exist?
2. What about future PCP- retiring physicians etc. projecting?
3. What about exploring barriers-cultural, financial, etc-to getting people to buy in to routine health visits?
4. What about more information on mental health and substance abuse?
5. What about a review of Ortho readmission rates?
6. What are the differences in chronic health conditions and access to care using post ACA data?
7. Does access to transportation influence how/when and where residents are seeking care?
8. How does poverty influence seeking insurance, health care, filling rx, etc.?

Appendix B



Pueblo County Medical Providers and Facilities
COLORADO CITY INSET
MAP KEY
Medical Providers
PCP (Primary Care Provider)
Obstetrics & Gynecology
Pediatrics
Occupational Medicine
Behavioral Health
Ophthalmology
Specialist
This map does not include Nurse Practitioners or Physicians Assistants
Medical Facilities
Hospital/Emergency Room
Urgent Care Facility
SCALE
0 0.75 1.5 3
Miles
N
S
W
E
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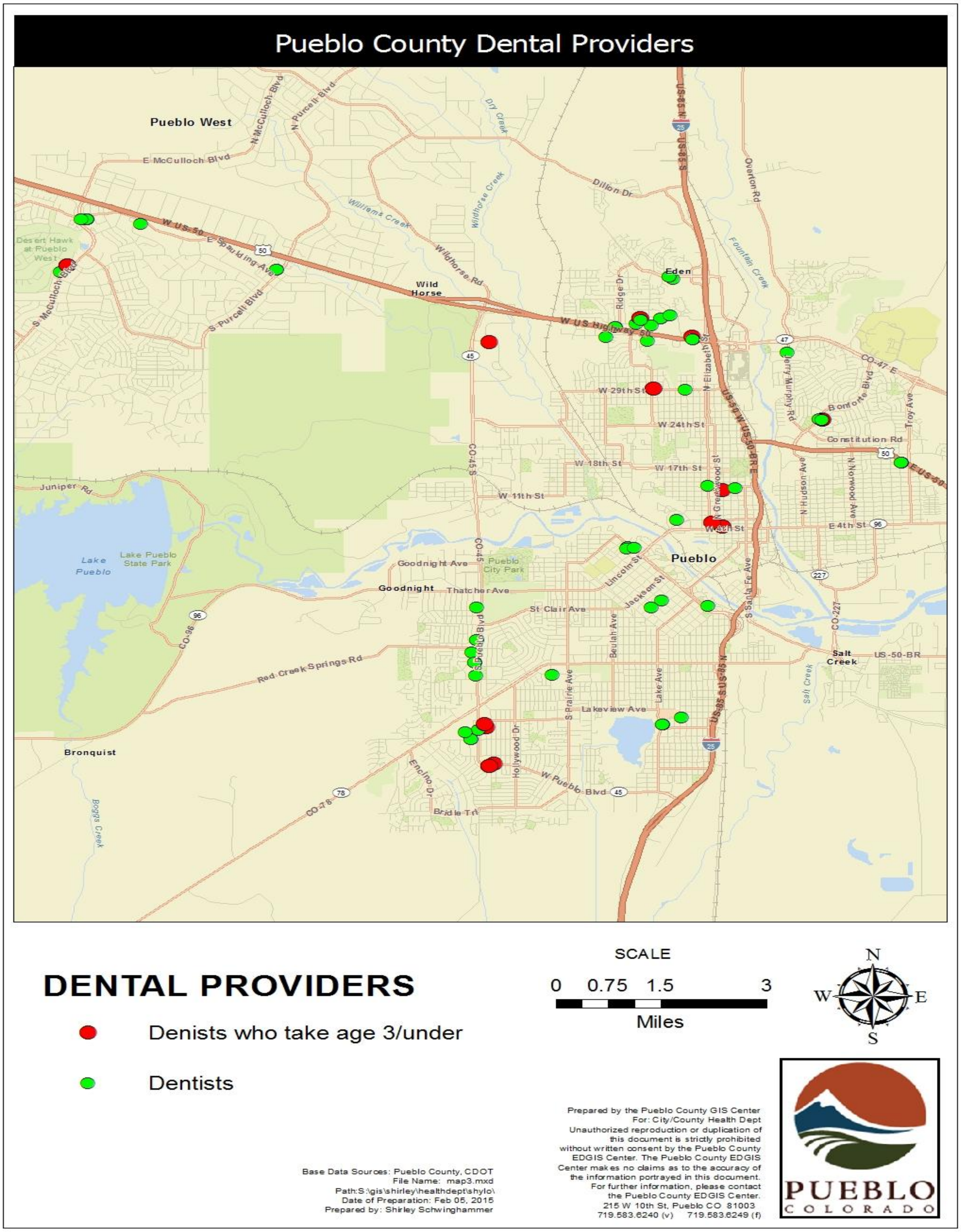
Appendix C


Pueblo County Dental Providers
Pueblo West
E McCulloch Blvd
N McCulloch Blvd
N Purcell Blvd
Desert Hawk at Pueblo West
S McCulloch Blvd
S Purcell Blvd
W US-50
E Spaulding Ave
Williams Creek
Wildhorse Creek
Wildhorse Rd
Wild Horse
Dry Creek
Dillon Dr
Eden
Ridge Dr
W US Highway 50
N Elizabeth St
Fountain Creek
Overton Rd
Jerry Murphy Rd
CO-47 E
Bonforte Blvd
Constitution Rd
Troy Ave
E US-50
W 29th St
W 24th St
W 18th St
W 17th St
W 11th St
N Greenwood St
W 4th St
E 4th St
N Hudson Ave
N Norwood Ave
Juniper Rd
Lake Pueblo
Lake Pueblo State Park
Goodnight Ave
Goodnight
Thatcher Ave
Pueblo City Park
Pueblo
Lincoln St
Jackson St
St Clair Ave
S Santa Fe Ave
CO-45
CO-96
Red Creek Springs Rd
Beulah Ave
S Prairie Ave
Lake Ave
Lakeview Ave
Salt Creek
US-50-BR
CO-227
Bronquist
Hollywood Dr
Encino Dr
W Pueblo Blvd
Bridle Trl
CO-78
Boggs Creek
DENTAL PROVIDERS
Denists who take age 3/under
Dentists
SCALE
0 0.75 1.5 3
Miles
N
W
E
S
Base Data Sources: Pueblo County, CDOT
File Name: map3.mxd
Path:S:\gis\shirley\healthdept\shylo\
Date of Preparation: Feb 05, 2016
Prepared by: Shirley Schwinghammer
Prepared by the Pueblo County GIS Center
For: City/County Health Dept
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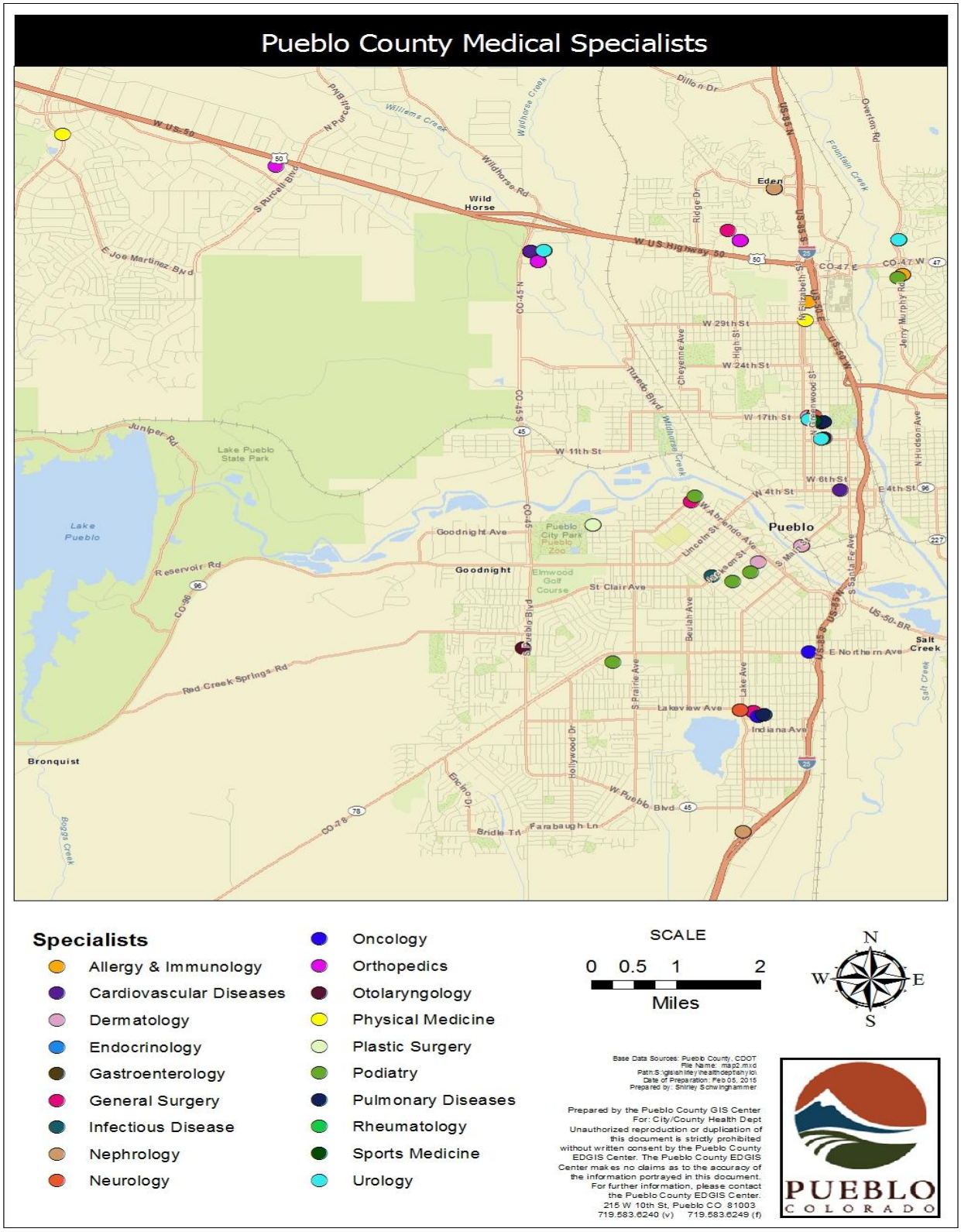
Appendix D


Pueblo County Medical Specialists
Specialists
Allergy & Immunology
Cardiovascular Diseases
Dermatology
Endocrinology
Gastroenterology
General Surgery
Infectious Disease
Nephrology
Neurology
Oncology
Orthopedics
Otolaryngology
Physical Medicine
Plastic Surgery
Podiatry
Pulmonary Diseases
Rheumatology
Sports Medicine
Urology
SCALE
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Miles
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S
PUEBLO
COLORADO