At a Glance: Community Health Needs Assessment
Littleton Adventist Hospital

Area Served

Arapahoe, Douglas and Jefferson Counties

Priorities

- Mental Health/Suicide Prevention
- Healthy Eating Active Living (HEAL)/Obesity
- Access to Health Care

Partners

Arapahoe County-Community Resources-Senior Resources, Arapahoe/Douglas Mental Health Network, City of Littleton, CSU Extension Office, Doctors Care, Kids In Need of Dentistry-Oral Care, Littleton Public Schools, Littleton Community Retreat, Tri County Health Department, South Metro Health Alliance, Tri County Health Department, Littleton Fire and Rescue
Executive Summary

The Patient Protection and Affordable Care Act, enacted March 23, 2010, added new requirements for nonprofit hospitals to maintain their tax-exempt status, including a requirement to conduct a Community Health Needs Assessment (CHNA) once every three years to gauge the health needs of their communities and to develop strategies and implementation plans for addressing them. This CHNA was conducted in compliance with these new federal requirements and as an opportunity for Littleton Adventist Hospital to fulfill our commitment to our organizational mission to “extend the healing ministry of Christ by caring for those who are ill and by nurturing the health of the people in our communities.”

CHNA Methodology and Process

Service Area Definition:
To define our community for the CHNA and to analyze demographic and health indicator data, we used the STARK-Law service areas, defined as the lowest number of contiguous ZIP codes that account for 75% of a hospital’s inpatient admissions. We used the main counties within the STARK-Law service area to analyze our health driver and health outcome data, as health outcome data was generally not available at the ZIP code level.

Qualitative and Quantitative Data Collection:
We began the data collection process by selecting quantitative indicators for analysis. Community Commons, a population health indicator data platform, was utilized throughout the quantitative data collection process. This platform compiles data from the US Census, the Behavioral Risk Factor Surveillance System, the CDC, the National Vital Statistics System, and the American Community Survey, among others. Specific health indicator data were selected, including community demographic information, behavior and environmental health drivers and outcomes indicators, as well as coverage, quality, and access data. These indicators were selected because they most accurately describe the community in terms of its demographics, disparities, population, and distinct health needs.

Additionally, we sought to engage our community in the qualitative data collection process. Once health needs were prioritized, we determined groups and individuals appropriate for focus groups, being sure to solicit input from underserved or minority groups within the communities we serve. These focus groups helped identify particularly important needs as seen by our communities, help us identify gaps in knowledge, and understand current external efforts around health needs that could be improved by healthcare participation.

Prioritization Process:
Littleton Adventist Hospital created a CHNA subcommittee to review the qualitative and quantitative health data, prioritize health needs in our communities, and to develop implementation strategies to address the prioritized needs. This subcommittee was made up of both hospital staff and community stakeholders including representatives from local public health departments. We prioritized health needs in our community using the Centura Health prioritization method, adapted from the Hanlon Method for Prioritizing Health Problems. First, members of the hospital subcommittee individually rated each identified need against the size of the problem, the seriousness of the problem, and how much the need already aligned with Centura Health and the community’s existing efforts. Based on the criteria rankings assigned to each health need, we calculated priority scores using the formula: $D = C \times (A + 2B)$, where:

- $D$ = Priority Score
- $A$ = Size of health need ranking
- $B$ = seriousness of health need ranking
- $C$ = Alignment ranking
After calculating priority scores for each identified health need, we gave the need with the highest score a rank of 1, with the next highest score receiving a rank of 2, and so forth. This helped us identify the health needs in our community.

**Prioritized Need: Mental Health/Suicide Prevention**

The health need mental health/suicide prevention for Littleton Adventist Hospital (LAH) was prioritized because the health indicators for mental health were either higher than surrounding county and state average data, or not meeting the goal of Healthy People 2020. Littleton Adventist Hospital’s service area’s suicide rate is 16.2 per 100,000 compared to Colorado’s 17.2. This is much higher than the Healthy People 2020 goal of 10.2 per 100,000. Douglas County had higher suicide rates in 2013 than both Arapahoe and Jefferson Counties. Additionally, 15.3% of individuals in our service area reported a lack of social or emotional support and, 48.2% of teens experienced sadness with suicidal ideation in the past 12 months, greater than the rates in Denver and Arapahoe Counties. Roughly, 14% of Douglas County adolescents considered suicide in the past 12 months, the same alarmingly high rate as the state.

Several hospital activities and initiatives are available to address this need. Mental health training programs are offered to associates and community members in order to raise the competency levels of people who deal with mental health issues. These programs include Mental Health First Aid and Youth Mental Health First Aid (Y/MHFA), an in-person training that teaches how to help people developing a mental illness or in a crisis, Moving Forward (Grief and Loss Program), Community Resiliency Training, AMSR Training (Assessing Mental Health and Suicide Risks), Love Matters Most Day, Motivational Interviewing Program and Training, Unit Health Coaches, and First Watch Program in partnership with the Littleton Fire and Rescue.

**Prioritized Need: Healthy Eating Active Living/Obesity**

This was identified as a health need because our service area had higher rates of overweight individuals as compared to the state average, as well as higher rates of individuals with high cholesterol. Additionally, Arapahoe County, one of the main counties in our service area had an obesity rate at roughly 23%, higher than the state average of 20%. Our focus groups confirmed that healthy eating active living/obesity is a high priority need in our community. Our participants stated this issue disproportionately affected vulnerable populations, such as those with low incomes, the elderly and minorities. We felt it was imperative that we worked to remove barriers to healthy eating and increase opportunities for active living in our community.

Programs at the hospital to address obesity include the Pathways to Health and Wellness (PHW), CafeWell, CREATION Health, and Unit Health Coaches.

**Prioritized Need: Access to Care**

Improving access to care is a critical factor in addressing the mental health and obesity needs identified in the CHNA process. As a nonprofit and faith-based hospital, Littleton Adventist Hospital has a mission to understand all of the potential factors that prevent members of our community from accessing the care, both mental and physical, that they need. The rising costs of healthcare can prevent members of our communities from seeking care or from continuing with the care they need. Additionally, the recent expansion of Medicaid has greatly increased the number of patients in our communities seeking specialty care. This increased demand has led to access barriers for our Medicaid populations who are typically the most vulnerable and underserved members of our community. In our community, 24.4% of adults had no dental exam in the past year, and 4% have poor dental health. In 2012, 16.3% of adults and 7.8% of children under 19 were uninsured.
Access to care programs are designed to increase enrollment in insurance programs and connection to primary care homes. These programs enable low income residents to obtain health services, which was one of the top concerns of people in the Food Bank focus groups. Programs at the hospital include Centura Community Health Advocates and Eligibility Specialists that assist with insurance enrollment; and Centura Health Physician Group that connects patients to primary care homes.

**Implementation Planning Process:**

The first step to developing our implementation plans was to present evidence-based practices focused on addressing mental health/suicide prevention, and healthy eating active living/obesity, and access to healthcare to our hospital subcommittees. Next, we completed an environmental scan to determine which established efforts in Littleton Adventist Hospital and our community we could leverage or build upon to meet the health needs. We then used the PEARL test to determine if a program or strategy would be effective and appropriate.

To create our implementation plan, we modified the CHAPS Action Plan, provided by CDPHE. For each health priority we created SMART goals, strategies, and metrics.

Once our community’s health needs were identified and prioritized, we began the process of developing an implementation plan to address mental health/suicide, healthy eating active living/obesity, and access to care. The first step was to present evidence-based practices focused on mental health/suicide, healthy eating active living/obesity, and access to care to our hospital subcommittees. Next, we completed an environmental scan to identify those established efforts (in Littleton Adventist Hospital and our community) we could leverage or build upon to meet the health needs. We then used the PEARL test to determine if a program or strategy would be effective and appropriate. Our last step was to hear from a panel of experts on mental health, healthy eating, and active living, before we created our plans.

**Implementation Plan Review and Approval:**

The final implementation plans were presented to and approved by the Littleton Adventist Hospital Board on March 24, 2016.
Our Mission
We extend the healing ministry of Christ by caring for those who are ill and by nurturing the health of the people in our communities.

Our Vision
Centura Health will fulfill a covenant of caring for our communities with excellence and integrity to become their partner for life.

Our Core Values
Compassion
Respect
Integrity
Spirituality
Stewardship
Imagination
Excellence
Introduction

Centura Health, Littleton Adventist Hospital and Our Community

Background on the Community Health Needs Assessment

The evolving health care landscape has provided health systems throughout the country the opportunity to work with partners in their communities to improve and promote population health. The Patient Protection and Affordable Care Act, enacted March 23, 2010, added new requirements for nonprofit hospitals to maintain their tax-exempt status. One such provision requires nonprofit hospitals to conduct a Community Health Needs Assessment (CHNA) once every three years to gauge the health needs of their communities and to develop strategies and implementation plans for addressing them. This CHNA was conducted in compliance with these new federal requirements.

In addition to Affordable Care Act (ACA) compliance, the implementation of the CHNA furthers Centura Health’s and Littleton Adventist Hospital’s mission and vision. As the region’s largest health care provider, Centura Health fulfills our mission to extend the healing ministry of Christ by caring for those who are ill and by nurturing the health of the people in our communities. We honor our commitment to provide outstanding care within our hospital walls and to move upstream to positively impact our patients’ lives.
Our Goals for the Community Health Needs Assessment

The CHNA process gave Littleton Adventist Hospital the opportunity to work closely with our community to identify existing and emerging health needs, understand community assets and gaps, and to implement strategies to improve health. This approach continues to strengthen partnerships between Littleton Adventist Hospital, our local public health departments, community leaders, and stakeholders. Our goal is to build our organizational capacity in population health best practices and to better position Littleton Adventist Hospital to provide sustainable, whole-person care to our patients and communities. The CHNA process provided valuable information to guide us in integrating our community health work with our hospital and strategic plans.

With this focus, we bring new dynamism to our historical legacy of addressing community needs. We are moving from the older model of simply caring for the sick to delivering and supporting the full spectrum of health, wellness and prevention resources the community depends upon in a world in which both acute and chronic health needs are prevalent and overwhelming. We specifically looked at factors that we know impact the social determinants of health. We recognize the important role that social factors such as housing, education, and employment play in affecting a wide range of health risks and outcomes and contributing to the disparities we see across race/ethnicity and geography. Health can be impacted by where we live, and we know that communities with unstable housing, high rates of poverty and crime, and substandard education have higher rates of morbidity and mortality. We looked at specific indicators representative of the social determinants of health in our prioritization process. Through the CHNA we sought to bring awareness to the importance of the social determinants, and work to promote and create social and physical environments that promote health equity and improve population health.

We seek to create efficiencies in our processes, community partnerships, and delivery of care. We have continued to build upon existing relationships between Littleton Adventist Hospital and the Tri-County Public Health Department. Together, we have taken great strides to create a model to which hospitals and health care systems around the nation can look to address their own community’s needs. By following the model of activating primary care networks, advancing evidence-based practices, and providing training for care teams and community providers, Littleton Adventist Hospital is continuing to strengthen opportunities for good health and addressing the determinants of poor health in the communities we serve.

To more fully integrate a population health mindset throughout the Centura Health system, we leveraged existing data resources, internal expertise, and the strength of our network to design a system-wide CHNA process. This helped to assure key stakeholders’ increased knowledge of public health and to engage internal systems in population health data to help explain the drivers of emergency room and inpatient visits. The knowledge we gained from the CHNA process helped our hospitals more effectively lay out their strategic plan for addressing the needs in their communities. Over the course of the year, this CHNA process facilitated collaboration within our family of hospitals, helping us build a stronger system in which our hospitals benefit from powerful learning networks and relationships, rather than function as separate entities.
Littleton Adventist Hospital: Our Services and History

Since opening in 1989, Littleton Adventist Hospital has provided people throughout Littleton and the surrounding communities compassionate, personalized, whole-person care. Littleton Adventist Hospital is a full-service, award-winning, 231 bed hospital specializing in trauma and emergency care, brain care, bones, joints and muscles, cancer care, as well as women’s and children’s services. As part of Centura Health, Colorado’s largest health network with 16 hospitals and a number of senior living communities, medical clinics, Flight for Life® Colorado, and home care and hospice services, Littleton Adventist Hospital provides care that transcends the walls of the hospital to nurture the health of its communities.

Distinctive Services

Littleton Adventist Hospital offers leading medical experts, cutting-edge technology, and a broad array of specialties and services. Our distinctive services include:

- Deep brain stimulation for treatment of Parkinson’s disease, essential tremor, and obsessive-compulsive disorder
- Intra-operative radiation therapy for women with early-stage breast cancer that delivers targeted radiation therapy directly to the breast tissue immediately after lumpectomy
- Minimally-invasive procedures and surgery
- Level III Neo-natal intensive care unit (NICU)
- Primary stroke center with advanced capabilities

Our expertise in these areas have earned us a number of awards and honors throughout the years. Littleton Adventist Hospital is proud to have received the following awards:

- Healthgrades Distinguished Hospital Award for Clinical Excellence, 2015 and 2016
- Five-Star for Treatment of Heart Failure 2016
- Five-Star for Treatment of Sepsis 2016
- Gastrointestinal Care Excellence Award 2016
- Five-Star for Treatment of Stroke 2016
- Five-Star for Hip Fracture Treatment 2016
- Pulmonary Care Excellence Award 2015 and 2016
- American College of Surgeons trauma survey: no deficiencies
- National Accreditation Program for Breast Centers
- Stroke Gold Plus- Target: Stroke Elite Plus
Commitment to Our Community

At Littleton Adventist Hospital, the work we do outside of medical care is born out of the second part of our mission, to nurture the health of the people in our communities. From access for the uninsured, to strengthening community partnerships to build vibrant and healthy neighborhoods, Littleton Adventist Hospital is a partner for life.

As a private, non-profit hospital, our dedication is solely to fulfilling our organizational mission by living out our core values and protecting the health and wellbeing of our communities. Our community benefit activities are integral to our religious mission and are the basis of our tax-exempt status. Throughout Centura Health, these community benefit activities include improving community health by providing services to low-income patients and connecting patients with services after discharge, community building, such as economic development and community health programs, subsidized health services like hospice, home care, research to advance the field, financial and in-kind contributions to the community, and community benefit planning.

In fiscal year 2015, Littleton Adventist Hospital provided over 17 million dollars in total community benefit. Community services included providing medical direction for our emergency services partners, support of resiliency services for Littleton Public Schools, food drives and helping the underserved gain access to healthcare through our partnership with Doctors Care. We value our partnerships with community organizations such as Arapahoe Douglas Mental Health Network, South Metro Health Alliance, Meals on Wheels, and Integrated Family Community Services, among others.
Our Community

To define our community for the CHNA and to analyze demographic and health indicator data, we used the STARK-Law service areas. The STARK-Law service area is defined as the lowest number of contiguous ZIP codes that accounts for 75 percent of a hospital’s inpatient admissions. These ZIP codes have a combined population of 474,343.

The demographic makeup of these communities is as follows:

Race and Ethnicity: Of the total population in the Littleton Adventist Hospital service area, 90.1 percent are white, 3.8 are Asian, 2.5 are two or more races, and 1.4 percent are black.

Education Level: 50.7% of our community has an Associate’s degree or higher, CO average is 44.7%

Unemployment Rate: The unemployment rate is three percent, age 16+.

Unemployment Rate: 3.6%, CO average is 4.0%

Population with Limited English Proficiency: 3.1%, CO average is 6.7%

High School Graduation Rate: 74.8%, CO average is 77.6%

Population Living in Households with Income Below 200% of Federal Poverty level: 13.8%, CO average is 29.6%
Population Demographics in Littleton Adventist Hospital’s Service Area

Race

- White 90.1%
- Black 1.4%
- Asian 3.8%
- Multiple races 2.5%

Associate’s Degree or Higher

- Littleton Service Area: 50.7%
- State Average: 44.7%

High School Graduation Rate

- Littleton Service Area: 74.8%
- State Average: 77.6%

Limited English Proficiency

- Littleton Service Area: 3.1%
- State Average: 6.7%

Unemployment Rate

- Littleton Service Area: 3.6%
- State Average: 4.0%

Households Below 200% of Federal Poverty Level

- Littleton Service Area: 13.8%
- State Average: 29.6%
Our Approach to the Community Health Needs Assessment

In order to assess the needs of our community, we created a hospital subcommittee to solicit and take into account input from individuals representing the broad interest of our community. Our hospital subcommittee was made up of key stakeholders and individuals who represented the broader interests of our community.

Our subcommittee:

- Reviewed the quantitative data and provided insight;
- Prioritized health needs using the Centura Health Prioritization Method;
- Identified implementation strategies to maximize impact on a specific health need; and
- Coordinated and collaborated implementation strategies across prioritized needs.

Each subcommittee member was provided with a written description of his/her role. The subcommittee met four times for two hours at each meeting between March and December 2015.

Littleton Adventist Hospital’s Partnerships with Public Health

Littleton Adventist Hospital has a very close relationship with the Tri-County Health Department in many ways. We serve together on various community health boards such as the South Metro Health Alliance as well as the South Metro Denver Chamber Health and Wellness Council. We also utilized our partnership to help establish an effective and strategic plan to accurately prioritize our CHNA health needs. The Tri-County Health Department continues to serve on Littleton Adventist Hospital’s CHNA community board and will be a valued member as we strive to positively impact the health of our community.
Stage 1: Scanning the Data Landscape

The CHNA was conducted through a collaborative partnership between Littleton Adventist Hospital, the Tri County Health Department and community stakeholders. We used the main counties within the STARK-Law service area to analyze our health driver and health outcome data. Health outcome data was generally not available at the ZIP code level. Littleton Adventist Hospital’s main service area encompasses Arapahoe, Denver, Douglas, and Jefferson counties, which was the data used for this process.

The subcommittee used both quantitative and qualitative data to gain a full understanding of our community and specific health needs. We began the data collection process by selecting quantitative indicators for analysis. Community Commons, a website and data platform that houses population health indicator data, was utilized throughout the process.

In this process, certain health indicator data were selected, including community and population demographic information, behavior and environmental health drivers and health outcomes indicators, as well as coverage, quality, and access data. These indicators were selected because they most accurately describe the community in terms of its demographics, disparities, population, and distinct health needs. These areas address the social determinants of health, quality of life, and healthy behaviors, all things that we know impact community health. To be sure we were measuring all determinants of health, we conducted a full legal and environmental scan of issues and policies impacting health in our community.
### Table 1. Health Indicator Data:

The health needs in the table below were analyzed during the prioritization process. See Appendix B for the full dataset.

<table>
<thead>
<tr>
<th>Health Need</th>
<th>Indicator</th>
<th>Community Value</th>
<th>Colorado Value</th>
<th>Healthy People 2020 Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>Percentage of adults 18 and older who self report that they have ever been told by a health professional that they had asthma</td>
<td>13.6%</td>
<td>12.9%</td>
<td>N/A</td>
</tr>
<tr>
<td>Breast Cancer</td>
<td>Cases per 100,000 females per year, age adjusted</td>
<td>132.4</td>
<td>125.3</td>
<td>N/A</td>
</tr>
<tr>
<td>Cervical Cancer</td>
<td>Cases per 100,000 females per year, age adjusted</td>
<td>5.4</td>
<td>6.2</td>
<td>7.1</td>
</tr>
<tr>
<td>Colorectal Cancer</td>
<td>Cases per 100,000 population per year of colon and rectum cancer, age adjusted</td>
<td>36.5</td>
<td>36.9</td>
<td>38.7</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Percentage of adults aged 20 and older who have ever been told by a doctor that they have diabetes</td>
<td>5.2%</td>
<td>6.1%</td>
<td>N/A</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>Death rate due to coronary heart disease per 100,000 population</td>
<td>120.5</td>
<td>137.4</td>
<td>N/A</td>
</tr>
<tr>
<td>Homicide</td>
<td>Rate per 100,000 population</td>
<td>2.5</td>
<td>3.7</td>
<td>5.5</td>
</tr>
<tr>
<td>Infectious Disease</td>
<td>Chlamydia rate per 100,000 population</td>
<td>349.4</td>
<td>422.8</td>
<td>N/A</td>
</tr>
<tr>
<td>Infectious Disease</td>
<td>HIV Rate per 100,000 population</td>
<td>150.5</td>
<td>265</td>
<td>N/A</td>
</tr>
<tr>
<td>Lung Disease</td>
<td>Death rate due to chronic lower respiratory disease per 100,000 population</td>
<td>47.9</td>
<td>48.4</td>
<td>N/A</td>
</tr>
<tr>
<td>Maternal, Infant, and Child Health</td>
<td>Infant mortality rate per 1,000 births</td>
<td>5.8</td>
<td>5.5</td>
<td>6</td>
</tr>
<tr>
<td>Maternal, Infant, and Child Health</td>
<td>Teen birth rate per 1,000 female teens</td>
<td>23.7</td>
<td>36.5</td>
<td>N/A</td>
</tr>
<tr>
<td>Maternal, Infant, and Child Health</td>
<td>Percentage of low birth weight births</td>
<td>9.0%</td>
<td>8.8%</td>
<td>7.80%</td>
</tr>
<tr>
<td>Mental Health</td>
<td>Percentage of adults who lack social or emotional support</td>
<td>15.3%</td>
<td>16.9%</td>
<td>N/A</td>
</tr>
<tr>
<td>Obesity/Overweight, Physical Activity and Nutrition</td>
<td>Percentage of adults 18 and older who self-report a Body Mass Index (BMI) greater than 30.0</td>
<td>19.0%</td>
<td>20.2%</td>
<td>N/A</td>
</tr>
<tr>
<td>Oral Health</td>
<td>Percentage of adults who did not receive a dental exam in the past year</td>
<td>24.0%</td>
<td>31.1%</td>
<td>N/A</td>
</tr>
<tr>
<td>Oral Health</td>
<td>Percentage of adults with poor dental health</td>
<td>7.9%</td>
<td>10.0%</td>
<td>N/A</td>
</tr>
<tr>
<td>Prostate Cancer</td>
<td>Cases per 100,000 males per year, age adjusted</td>
<td>154.2</td>
<td>147.6</td>
<td>N/A</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>Adults reporting heavy alcohol consumption</td>
<td>16.5%</td>
<td>17.6%</td>
<td>N/A</td>
</tr>
<tr>
<td>Suicide</td>
<td>Rate per 100,000 population</td>
<td>16.2</td>
<td>17.2</td>
<td>10.2</td>
</tr>
<tr>
<td>Unintentional Injury</td>
<td>Death rate due to unintentional injury (accident) per 100,000 population</td>
<td>37.7</td>
<td>45.1</td>
<td>36</td>
</tr>
</tbody>
</table>
Stage 2: Delving into the Data to Identify Priorities

Our Littleton Adventist Hospital CHNA Subcommittee received a health indicator data presentation compiled by the CHNA Steering Committee. The subcommittee identified and prioritized community health needs using the Centura Health prioritization method as detailed below. They identified the most pressing needs in the Arapahoe, Douglas and Jefferson communities based on health indicators, health drivers, and health outcomes.

Our subcommittee defined a health need as a poor health outcome and its associated health driver, or a health driver associated with a poor health outcome where the outcome has not yet arisen as a need. To fit the definition of a health need, the need must be confirmed by more than one indicator and/or data source, and must be analyzed according to its performance against the state benchmark or Healthy People 2020.

Process to Identify Priority and Non-Priority Health Needs

The Centura Health prioritization method was adapted from the Hanlon Method for Prioritizing Health Problems. First, members of the hospital subcommittee individually rated each identified need against the size of the problem, the seriousness of the problem, and how much the need aligned with Centura Health and the community’s existing efforts. The criteria rating rubric for this step is shown below, along with the scores assigned to each need:

<table>
<thead>
<tr>
<th>Rating</th>
<th>Size of Health Problem</th>
<th>Seriousness of Health Problem</th>
<th>Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 or 10</td>
<td>&gt;25% /rate much higher than Colorado benchmark</td>
<td>Very Serious</td>
<td>Alignment with CHNA, CHIP, community groups, hospital and system strengths</td>
</tr>
<tr>
<td>7 or 8</td>
<td>10%-24.9% /rate somewhat higher than Colorado benchmark</td>
<td>Relatively Serious</td>
<td>Alignment with 3 of the following: CHNA, CHIP, community groups, hospital and system strengths</td>
</tr>
<tr>
<td>5 or 6</td>
<td>1%-9.9% /rate slightly higher than Colorado benchmark</td>
<td>Serious</td>
<td>Alignment with 2 of the following: CHNA, CHIP, community groups, hospital and system strengths</td>
</tr>
<tr>
<td>3 or 4</td>
<td>.1%-9.9% /rate same as Colorado benchmark</td>
<td>Moderately Serious</td>
<td>Alignment with 1 of the following: CHNA, CHIP, community groups, hospital and system strengths</td>
</tr>
<tr>
<td>1 or 2</td>
<td>.01%-0.09% /rate slightly lower than Colorado benchmark</td>
<td>Relatively Not Serious</td>
<td>Some alignment with 1 or two of the following: CHNA, CHIP, community groups, hospital and system strengths</td>
</tr>
<tr>
<td>0</td>
<td>&lt;.01% /rate lower than Colorado benchmark</td>
<td>Not Serious</td>
<td>No Alignment and/or no community gap in need being addressed</td>
</tr>
</tbody>
</table>

Guiding Considerations

Does it require immediate attention? What is the economic impact? What is the impact on quality of life? Is there a high hospitalization rate? Is there public demand? Is this health need being addressed by our last CHNA? Is this health need addressed in our last CHIP? Is this health need addressed by a local public health department’s CHIP? Is this health need addressed by a strong local community organization?
Based on the criteria rankings assigned to each health need above, we calculated priority scores using the formula: \[ D = C[A + (2B)] \], where:

- \( D \): Priority Score
- \( A \): Size of health need ranking
- \( B \): Seriousness of health need ranking
- \( C \): Alignment ranking

After calculating priority scores for each identified health need, we gave the need with the highest score a rank of 1, with the next highest score receiving a rank of 2, and so forth. This helped us identify the health needs in our community.

Once our community’s health needs were rated by the criteria above, we used the ‘PEARL’ test to determine the feasibility of addressing those needs. The questions we considered in the PEARL test included:

- **Propriety** - Is a program for the health problem suitable?
- **Economics** - Does it make economic sense to address the problem? Are there economic consequences if the problem is not carried out?
- **Acceptability** - Will a community accept the program? Is it wanted?
- **Resources** - Is funding available or potentially available for a program?
- **Legality** - Do current laws allow program activities to be implemented?

In addition to the PEARL test questions, we also considered Centura Health’s Mission and Values when considering health needs to prioritize and address. The final question we considered was whether our activities and strategies to address the health need align with our organizational mission to extend the healing ministry of Christ by caring for those who are ill and by nurturing the health of the people in our communities.

Littleton Adventist Hospital identified three needs as priority areas for which we have the ability to impact. These include:

- Mental Health/Suicide Prevention
- Healthy Eating Active Living/Obesity
- Access to Care

Additional data provided by the Tri-County Public Health Department was also reviewed. Please see more information in Appendix C.

**Stage 3: Engaging our Community to Understand and Act**

We sought to engage our community in the qualitative data collection process. Once health needs were prioritized, the hospital subcommittee worked together to determine groups and individuals appropriate for focus groups, being sure to solicit input from underserved or minority groups within the communities we serve. We made sure to solicit input from those who know experiences of the underserved, minority, and aging populations best through personal experience or close work with them. From discussion within our CHNA committee, we decided to target our geriatric population and hold the focus group with residents at an assisted living facility in the area.
Next, the group identified questions to ask the focus group to gain a better understanding of issues in access to care, mental health/suicide, and healthy eating active living/obesity. Specifically, we wanted to identify focus areas, gaps in knowledge, needs not met, or current external efforts around these needs that could be improved by health care participation.

Castle Rock, Littleton, Parker, and Porter conducted focus groups together and shared their results. The focus groups were with a ministerial alliance group, two food banks, and one independent living facility. Each focus group lasted one hour. Highlights of the focus groups are as follows.

Ministerial Alliance: When asked about the most significant health issue in their community, the pastors identified teen suicide, followed by mental health issues in the general population, such as depression, anxiety and ADHD. The most common causes of depression and suicide were believed to be isolation, lack of foundation in Jesus Christ, and a breakdown in the family structure. The group believed that events that are designed to promote an integrated community experience would be effective in preventing and reducing mental health problems.

Food Banks: The first food bank identified “mental health” as the biggest health concern, with stress related to financial issues as the biggest contributor to depression. The inability to pay for health services due to their high cost was the biggest concern for the second focus group. When discussing obesity, participants in both focus groups agreed that the people who struggle the most with weight are the poor, elderly and minorities. There is a gap in linking obesity management with mental health concerns.

Senior Living: The residents stated that poor treatment by doctors was a significant issue. They felt that hospitals wanted to “treat and street” because they are quick to discharge, quick to medicate, hold short visits, and have rushed interactions with patients. At Littleton Adventist Hospital, we understand the time restraints on healthcare providers in seeing patients. We offer support to our healthcare providers in the form of training of staff members, offering resources, and offering community and Centura resources that providers can provide to their patients. When asked about mental health issues, many participants agreed that depression and anxiety about failing health are common among seniors. Regarding obesity, the focus group agreed that healthy food is expensive at grocery stores, where most of them shop for food.

Stage 4: Developing the Implementation Plan

Once our community’s health needs were identified and prioritized, we began the process to develop an implementation plan to address mental health/suicide, healthy eating active living/obesity, and access to care. The first step was to present evidence-based practices focused on mental health/suicide, healthy eating active living/obesity, and access to care to our hospital subcommittees. Next, we completed an environmental scan to identify those established efforts (in Littleton Adventist Hospital and our community) we could leverage or build upon to meet the health needs. We then used the PEARL test to determine if a program or strategy would be effective and appropriate.

On September 17, 2015, the CHNA hospital leads from each Centura Health hospital attended a panel at Porter Adventist Hospital. The panel featured local experts on mental health, healthy eating, and active living initiatives:

- Shannon Breitzman, Branch Director, Injury, Suicide and Violence Prevention, CDPHE
- Doug Muir, Director of Behavioral Health Service Line, Porter Adventist Hospital
- Sarah Kurz, VP of Policy and Communication, Livewell Colorado
- Kim Patton, HRSA, Acting Deputy Regional Administrator, Mental Health
- Reg Cox, Senior Minister, Lakewood Church of Christ
- Andrea Bon-Wilson, Psychological and Behavioral Counselor, Cardiac Rehabilitation and Health Wellness, HELP for Diabetes Program, St. Anthony Hospital
The panelists spoke about available resources and programs in their communities that are impactful and gaining traction locally, regionally, and/or statewide that address mental health and/or healthy eating and active living. They also spoke to current programming gaps that health care systems or hospitals can help to address.

To create our implementation plan, we modified the Colorado Health Assessment and Planning System (CHAPS) Action Plan, provided by Colorado Department of Public Health and Environment. CHAPS is a standardized process used by local public health departments to meet the community health needs assessment and planning requirements. For each health priority we created specific, measurable, achievable, realistic, and time bound (SMART) goals, strategies, and metrics.

The hospital leads from the South Denver group of hospitals, which included Castle Rock, Littleton, Parker, and Porter met as a group in this meeting and several times after this meeting. As a regional group, they decided to pursue several community health initiatives together for the following reasons: 1) all four subcommittees had prioritized mental health and obesity as their primary health issues, 2) their service areas and communities overlapped and/or were in the same counties, 3) the hospitals were interested in collaborating with the same community partners, and 4) several community representatives were serving on multiple subcommittees and expressed a desire to consolidate the meetings.

As a result, a regional meeting of all four hospital subcommittees was held on December 4, 2015 for 2.5 hours with the purpose of prioritizing health initiatives and programs under the mental health and HEAL/obesity categories. In this meeting, representatives of community groups provided brief overviews of their programs and answered questions, thus providing participants with a greater understanding of their programs. The participants were then asked to rate the programs according to the following criteria: the program’s ability to impact upstream (root) causes, demonstration of evidence based strategy, and demonstrated sustainability. The results of this process were shared with the group and followed by a quick rating process that identified the top strategy choices for collaboration. Because the rating process allowed them to rate many programs highly, the results of this endeavor demonstrated that many mental health programs were rated as equally important, and many HEAL programs were within a similar range.

After this exercise, the group was informed that we would pick the strategies by considering the quantitative data, resources within the Centura Health South Denver Operating Group, and the presence of community collaboration as we work together to achieve our goals.

In addition to these regional initiatives, Littleton Adventist Hospital decided to continue to pursue local initiatives, which were determined or influenced by our strengths, interests, and local resources. These initiatives include Screening, Brief Intervention, Referral to Treatment (SBIRT), Moving Forward Programs, Resiliency Training, and Motivational Interviewing Training.

The Social-Ecological Model

The social-ecological model recognizes the complex interplay between individual, relationship, community, and societal factors. Individuals are responsible for making and maintaining lifestyle choices, such as healthy eating and active living. However, the ability to make these choices is determined largely by the social environment we live in (i.e., community norms, laws, policies). Barriers to healthy eating and active living are shared by the community, and removal of the barriers makes behaviors attainable and sustainable. The overlapping rings in the model illustrate how factors at one level influence factors at another level (see Figure 2). Therefore the most effective approach to impacting health outcomes is a combination of efforts at the individual, interpersonal, organizational, community, and public policy levels.

The following are examples of factors in the social-ecological model for the areas of priority for this Community Health Needs Assessment. To achieve long-term health outcomes among our communities, changes at every
level of the model will both support people making the healthy choices and removing the barriers to making the healthy choices. The model makes it such that a person can leave the physician’s office and their community – people and environment – will support the person in the changes recommended by the physician. It also makes it possible for healthy choices to be supported in diverse communities or various income and race/ethnicity.

**Healthy Eating:**

Individual: Eat nine servings of fruits/vegetables daily

Interpersonal: When friends gather, there are fruits/vegetables served

Organizational: At work and in schools, vending machines and cafeterias offer fruits/vegetables

Community: Stores that sell fruits/vegetables are in all communities (e.g., food pantries, convenience stores and grocery stores)

Public policy: Women, Infants and Children Program for lower income moms can be used to purchase all healthy options within a store

**Active Living:**

Individual: Exercise for 150 minutes/week

Interpersonal: Friends and neighbors go for walks together as a part of their routines

Organizational: At work and in schools, there are daily opportunities to get up and move for longer periods of time (e.g., breaks and recess)

Community: There are places to walk in communities that support people safely walking where they would typically go (e.g., sidewalks to stores)

Public policy: Complete Streets policies guide cities and states to create sidewalks and bike lanes along with roads

Health in Littleton Adventist Hospital’s Community

Identified Health Needs

A community health need is defined as either:

- A poor health outcome and its associated health drivers
- A health driver associated with a poor health outcome, where the outcome itself has not yet arisen as a need

We used a specific set of criteria to identify the health needs in our communities. Specifically, we sought to ensure that the identified needs fit the above definition, and that the need was confirmed by more than one indicator and/or data source. Finally, we determined that the indicators related to the health need performed poorly against either the Colorado state average or the Healthy People 2020 benchmark. We utilized the Centura Health Prioritization Method to determine our prioritized needs.

The health needs identified in this CHNA included:

- Mental Health/Suicide Prevention
- Healthy Eating Active Living/Obesity
- Access to Care

Prioritized Health Needs

Littleton Adventist Hospital prioritized mental health/suicide prevention, healthy eating active living/obesity, and access to care.

In the three counties (Arapahoe, Douglas and Jefferson) that makes up the service area for LAH, per 100,000 persons there are 2298 mental health hospitalizations for Douglas county, 2922 for Arapahoe County and 2697 for Jefferson county compared to 2868 for Colorado overall.

The health need mental health/suicide was selected because Littleton Adventist Hospital's service area's suicide rate is 16.2 per 100,000. This is much higher than the Healthy People 2020 goal of 10.2 per 100,000. Douglas County had higher suicide rates in 2013 than both Arapahoe and Jefferson Counties. Additionally, 15.3% of the LAH service area reported a lack of social or emotional support. Roughly 48% of teens experienced sadness with suicidal ideation in the past 12 months, greater than the rates in Denver and Arapahoe Counties, and 14% of Douglas County adolescents considered
suicide in the past 12 months. Teens experiencing sadness were more likely to smoke cigarettes, binge drink, use marijuana, and be recently sexually active.

Data gathered from our focus group also pointed to suicide as a high need in our community. Ministers in a focus group identified teen suicide and mental health issues (depression, anxiety) in the general population as the predominant health issues in Littleton. They believe that isolation and a breakdown in family structure contribute to depression and suicide.

The health need healthy eating active living/obesity was prioritized because 35.4% of adults in the community are overweight, compared to 35.3% in the state. Additionally, 33.9% of adults in the community reported high cholesterol, higher than the state average of 33.4%. Arapahoe County had the highest obesity rate at roughly 23%, higher than the state average of 20.2%.

Looking towards the future of our community, we know that unhealthy behaviors are frequently established during childhood and remain throughout a person's life. Approximately 69% of children who are obese at 2-5 years remained obese at ages 6-11. Obesity tracks with higher rates of diabetes, high cholesterol, and heart disease.

Data gathered from our focus groups in South Denver food banks corroborated that obesity is a problem, especially among vulnerable populations, such as those with low incomes, the elderly and minorities. The group identified obstacles to healthy eating such as the expense of fresh fruits and vegetables, the high cost of recreation centers, and the lack of affordable transportation to recreation centers.

An understanding of the non-clinical factors that influence health, including environmental quality and the built environment, is important to fully grasp the needs of the communities we serve. Environmental factors, including access to healthy foods and recreation facilities, impact behavior and health outcomes.

An analysis of the environmental indicators for Douglas, Arapahoe, and Jefferson Counties revealed that our community has both opportunities and barriers to living a healthy and active lifestyle. There are 12 recreation and fitness facilities per 100,000 residents in our community, which is higher than the state average of Colorado (11.4). Additionally, only 3.75% of the low-income population in our service area experiences low food access and there are fewer liquor stores per person than there are in the rest of the state.

However, there are fewer grocery stores, more fast food restaurants, and fewer SNAP- and WIC-authorized food stores in our community. Access to these resources is vital for healthy eating in our neighborhoods.
Moving forward into our implementation plans, we recognize both the opportunities and barriers to achieve a healthy and active lifestyle in our community.

Although Douglas County has a higher income per capita than many CO counties, there is still a segment of the population that struggles with access to health services. Thus access to care was prioritized as a health need in LAH’s service area based on several factors. Firstly, roughly 19% of adults do not have a primary care physician. Additionally, 24.4% had no dental exam in the past year, and 4% have poor dental health. In terms of insurance enrollment, which we know impacts access to care, 16.3% of adults and 7.8 of children under 19 were uninsured in 2012.

Littleton Adventist Hospital is passionate about nurturing the health of the community by partnering and creating opportunities for the community that better their whole health; mind, body and spirit. Thus, this Community Health Needs Assessment and Implementation Plan incorporates a focus on reducing obesity in the community through healthy eating and active living, strong mental health supported by increasing protective factors and timely interventions to reduce and eliminate anxiety and depression, and connecting residents to insurance coverage so that they can access care when they need it.

Several groups are available to address mental health, Obesity / Healthy Eating Active Living (HEAL), and access to care in the community including Tri-County Health Department, Doctors Care, South Metro Denver Chamber Health and Wellness Council, South Metro Health Alliance, Meals on Wheels, Integrated Community Services, and Littleton Fire and Rescue.

There are also several hospital activities and initiatives available that address mental health/suicide prevention, healthy eating active living/obesity, and access to care.

Mental Health training programs are offered to both associates and community members in order to raise the competency levels of people who deal with mental health issues. These programs include Mental Health First Aid and Youth Mental Health First Aid: In-person training that teaches how to help people developing a mental illness or in a crisis, Moving Forward (Grief and Loss Program), Community Resiliency Training, Assessing Mental Health and Suicide Risks, Love Matters Most Day, Motivational Interviewing Program and Training, Unit Health Coaches, and First Watch Program in partnership with the Littleton Fire and Rescue.

Obesity / Healthy Eating Active Living (HEAL) programs are designed to reduce obesity levels and promote healthy lifestyles among associates and the community. Programs at the hospital include the Pathways to Health and Wellness (PHW): Teaches lifestyle modifications that result in weight loss and improved biometrics, CafeWell and CREATION Health: Interactive web-based program for health improvements and weight loss, Unit Health Coaches, Adventist Community Services, and STRIDE Event (Littleton Public Schools).

Access to care programs are designed to increase enrollment in insurance programs and connection to primary care homes. These programs enable low income residents to obtain health services, which was one of the top concerns of people in the food bank focus groups. Programs at the hospital include:

- Centura Community Health Advocates and Eligibility Specialists: Assist with insurance enrollment
- Centura Health Physician Group: Connects patients to primary care homes

Access to Care

In addition to the above prioritized health needs, Centura Health and Littleton Adventist Hospital recognize that access to care is a critical factor to assess, screen, and provide treatment that improves and maintains health. We have a primary duty to ensure we address barriers to access, and link our communities to the care they need.
Access to care has been a top priority for Centura Health throughout our history. Our founders recognized a community need for health care services and built the first hospitals to meet that need. More recently, we have proactively redesigned our core services and facilities to create low-cost healthcare options, including urgent care and neighborhood health centers, closer to our patient’s homes.

While not a driver of health outcomes, improving access to care is a critical factor in addressing the mental health and obesity needs identified in the CHNA process. As a nonprofit and faith-based hospital, Littleton Adventist Hospital has a mission to understand all of the potential factors that prevent members of our community from accessing the care, both mental and physical, that they need. The rising costs of healthcare can prevent members of our communities from seeking care or from continuing with the care they need. Additionally, the recent expansion of Medicaid has greatly increased the number of patients in our communities seeking specialty care. This increased demand has led to access barriers for our Medicaid populations who are typically the most vulnerable and underserved members of our community.

Centura Health continually promotes programs and services to ensure that individuals in our communities can access the care they need. Throughout the organization, we engage Community Health Advocates (CHA) who work with uninsured individuals or those without a primary care doctor to enroll them into coverage and link them with providers. Our goals are to increase the number of patients in our communities who have a designated primary care medical home and to decrease the number who are uninsured. We identify uninsured patients in our Emergency Departments, our community-based partner organizations, and at local events to engage them with CHAs to guide them through the insurance enrollment process and navigation to the appropriate source of care. Once they have received the coverage they need, our Advocates refer the patients to providers so they may begin to receive high quality and consistent medical care.

Littleton Adventist Hospital’s service area shows a 16.3% uninsured rate for residents between the age of 18-64 and 7.8% uninsured for children under the age of 19 for a total of 176,804 uninsured. There are 80.3 primary care physicians per 100,000 and 19.1% of adults report they do not have a regular doctor.

Source: Robert Wood Johnson Foundation
Access to Mental Health Services

Inadequate access to mental health services is also a concern in the communities we serve. Centura Health has recognized this gap and is currently working with mental health partners and providers to better integrate mental health services into our hospitals, clinics, and neighborhood health centers. At Littleton Adventist Hospital we are currently working with Arapahoe Douglas Mental Health Network and the Colorado Crisis Connection to provide mental health services to our patients and our communities.

Littleton Adventist Hospital has partnered with the Arapahoe Douglas Mental Health Network in looking for ways we can better support our community in mental health. We have held the Assessing Mental Health and Suicide Risk training here at Littleton Adventist Hospital along with our CNO participating on their board. Littleton Adventist Hospital also trains in Mental Health First Aide, Moving Forward Grief Recovery Program and is in the process of using a grant to establish resiliency training in the community.

Other Issues Impacting Health across the State and in Our Community

Smoking

The Colorado Clean Indoor Air Act is a state law limiting smoking in indoor areas and within 15 feet of building entryways. The law does not extend to outdoor areas. Many cities and counties in Colorado have enacted ordinances to make their smoking laws more stringent than state law. In many cases, cities and counties have extended their restrictions to widen the perimeter of restricted entryways and extend no smoking laws to outdoor areas like downtown areas, parks, transit waiting areas, and dining patios. Some counties have also chosen to apply all of their existing smoking laws to the use of electronic cigarettes. Littleton, Golden, Lakewood, Wheat Ridge, and Arvada have expanded smoking laws to include electronic cigarettes. Golden and Littleton have banned smoking in certain downtown areas. Arvada, Wheat Ridge, Golden, and Lakewood have expanded smoking bans to included transit waiting areas, parks, and trails.
SNAP and WIC Accepted at Farmer’s Markets

Many Coloradans purchase their fresh fruits and vegetables from their local farmers’ market. Farmers’ markets are an excellent way for people to access nutritious, locally grown products. Ideally, farmers’ markets would be accessible to all Coloradans, regardless of income levels. Supplemental Nutrition Assistance Program (SNAP) payments are accepted at numerous farmers’ markets across the state. Women, Infants, and Children (WIC) payments are accepted only at 7 farmers’ markets across the state. There are a few farmers’ markets in Douglas, Arapahoe, and Jefferson counties that accept SNAP benefits; however there are none that accept WIC benefits.

Colorado’s Lack of Affordable Housing

The average cost of rent in Colorado is growing three times faster than the national average. For a Coloradan to afford a median-priced rental in the state, the resident must make thirty-five dollars an hour, which is four times as much as Colorado’s minimum wage.

High “Self Sufficiency Standard”

The cost of living in Colorado has risen 32% from 2001 to 2015. Between 2001 and 2005, health care went up by 86%, food by 63%, child-care by 48%, and housing increased by 27%. The state’s minimum wage is insufficient to support families anywhere inside the state, and is only sufficient to support one-person households in Otero, Bent, and Custer Counties. 76% of workers in the most common occupations do not earn wages sufficient to support their families.

Homelessness

Sturm College of Law at the University of Denver has conducted an extensive report addressing Colorado’s homelessness issues. Closely related to the issue of a shortage of affordable housing in many Colorado towns is a failure to address the needs of homeless residents. In Colorado’s 76 largest cities, there are 351 city ordinances in Colorado that criminalize life-sustaining behaviors for the homeless. These laws disproportionately impact homeless residents. Sturm College of Law at the University of Denver’s report estimates that six Colorado cities spent at least $5 million enforcing fourteen anti-homeless ordinances between 2010 and 2014, and this is a conservative estimate. These funds could be better used to fund programs to rehabilitate and support the homeless, many of whom suffer from behavioral health issues.

Marijuana Legalization – Effect on Tourists

Out-of-state visitors to Colorado emergency rooms for marijuana-related symptoms accounted for 163 per 10,000 visits in 2014, up from 78 per 10,000 visits in 2012, according to research published by Dr. Howard Kim, a Northwestern research fellow and emergency medicine physician. The 109% increase far outpaced the 44% increase among Colorado residents since the state’s recreational marijuana sales began Jan. 1, 2014.

Access to Care for Undocumented Individuals

Due to current laws and regulations, it is difficult for undocumented individuals to get health insurance. Also, families with both documented and undocumented individuals are apprehensive of applying for coverage even when they are eligible, out of fear that the undocumented members of their family will be reported to immigration authorities. However, there are currently strong legal protections against using information received through health insurance against an undocumented individual. Centura Health and other community organizations must educate the community regarding these rules to encourage more undocumented individuals to apply for coverage.

Preventable Motor Vehicle Accidents

Colorado is only one of fifteen states in the country with secondary safety belt laws – meaning that law
enforcement drivers can only cite drivers for not wearing seat belts if they are stopped for another violation. Colorado safety belt usage is lower than the national average at 82.4% compared with 87% nationally. Also, it is not mandatory by law for motorcycle riders to wear helmets\textsuperscript{10}. Currently, it is legal for anyone over the age of 18 to use a phone while driving\textsuperscript{11}.

**Education**

Coloradans with less education are more likely to live in poverty. A 2012 report shows that only 4.5% of Coloradans with a bachelor’s degree or higher lived in poverty, while 26.9% of Coloradans without a high school diploma or GED are living in poverty. Furthermore, the unemployment rate for Coloradans with a bachelor degree is 3.9%, which is significantly lower than the state average of 8%. 10.6% of Coloradans without a high school diploma or GED are unemployed. Education is strongly associated with higher earners. Coloradans with a bachelor’s degree had a median income of $47,782, while those with only a high school education or GED had a median income of $28,486.

**Civil Commitment Statute - Statewide**

According to Colorado law, a person can be involuntary committed for psychiatric evaluation if they pose an “imminent danger” of harm to themselves or others\textsuperscript{12}. Spurred by the Aurora movie theater shooting in July 2012, there has been a contentious debate over this current law because it does not fall in line with 43 other states in which there is a lesser standard to involuntarily commit a person that poses a behavioral health risk to the public\textsuperscript{13}. Proposed bills to change this standard have been rejected as policymakers have shown hesitation to encroach on civil rights. Despite civil rights concerns, there are concerns that the current involuntary commitment standard is insufficient. Researchers at the School of Social Welfare at the University of California at Berkeley reported in 2011 that broader commitment criteria are strongly associated with lower homicide rates.

**Shortage of Mental Health Professionals**

There is a shortage of mental health professionals in many Colorado counties\textsuperscript{14}. Colorado ranks near the bottom in psychiatric beds per capita. Also, Colorado ranks in the bottom half in per capita state and federal spending on mental-health\textsuperscript{15}. Despite the Affordable Care Act’s mandate that commercial insurers create “parity” between mental health care services and physical care services, insurers are still able to reimburse hospitals at a higher rate for physical healthcare than mental healthcare. Low funding and low reimbursement rates are leaving providers unable to invest in improving their behavioral health services.

**Lack of Integration between Primary Care and Behavioral Healthcare**

There is high demand for integration between behavioral health services and primary care. A 2014 study found that only 12% of patients who were referred to behavioral health therapy actually completed the treatment\textsuperscript{16}. Policy makers believe that if behavioral health treatment is integrated into primary care, the social stigma behind receiving behavioral healthcare will be eroded and patients will actually receive the treatment they need. There have been statewide attempts to integrate primary care and behavioral health services. Currently, the State is focusing on integrating the Accountable Care Collaborative efforts with the Colorado State Innovation Model and Behavioral Health Organization efforts. The goal of these efforts is to result in integration of physical and behavioral health services for Medicaid patients\textsuperscript{17}.

Also, Colorado has the seventh highest suicide rate in the nation\textsuperscript{18}. In the month before their deaths, a majority of people who have committed suicide were found to have visited a primary care physician\textsuperscript{19}. Increased integration of primary care and behavioral healthcare can result in improved detection tools and support for primary care physicians to identify mental illness and those at risk for suicide.
Bike Friendliness

Bike friendliness is an important function to encourage active lifestyles. Also, bike friendliness means creating roads that are cognizant of bicyclists, which leads to the reduction of unnecessary bike and car accidents. Colorado is currently named by The League of American bicyclists as a top 10 state for bike friendliness. Policies and laws can be enacted to increase bike friendliness and bike safety. Golden received a gold rating from the League of American Bicyclists in 2015 for having bike lanes on 75% of its arterial roads and very good biking laws and ordinances. Arvada received a silver rating for possessing 65% of arterial streets with bike lanes and very good biking laws and ordinances. Lakewood, Castle Rock, Westminster earned a bronze ratings in 2015.

1 http://www.gaspforair.org/gasp/ordinance/ordinance_index.php
2 https://www.ams.usda.gov/local-food-directories/farmersmarkets
11 http://www.denverpost.com/ci_12498806
12 C.R.S. 27-65-105
13 http://www.denverpost.com/news/ci_25831191/debate%C2%AD-rages%C2%AD-colorado%C2%AD-over-involuntary%C2%AD-holds%C2%AD-mental%C2%AD-illness
14 https://www.colorado.gov/pacific/sites/default/files/PCO_HPSA-mental-health-map.pdf
15 http://extras.denverpost.com/mentalillness/
Conclusion

Evaluation

Progress since our last CHNA

In our 2012 CHNA we identified Access to Care, Mental Health, and Obesity as priority areas. Since then we have worked to increase access to care through partnerships with Doctors Care, insurance enrollment, providing charity care, and linking community members to primary care. We have partnered with organizations to influence protective factors that prevent mental health conditions, and continued to refer patients to trusted community partners. To reduce obesity, we built upon CREATION Health wellness programs, making them available to the broader community.

Evaluating our Impact for this CHNA

To understand the impact we are having in our communities, we remain dedicated to consistently evaluating and measuring the effectiveness of our implementation plans and strategies. We will complete bi-annual assessments of core metric progress measures. Littleton Adventist Hospital will also track progress through annual community health improvement plans and community benefit reports.

Community Health Improvement Plans

The CHNA allows Littleton Adventist Hospital to measurably identify, target, and improve health needs in our communities. From this assessment, we will generate annual Community Health Improvement Plans to carry out strategies for the advancement of all individuals in our communities. These plans detail the specifics of implementing the strategies from the CHNA, including the prioritized needs, partnerships in the community to address those needs, goals, initiatives, and progress to date.

Community Benefit Reports

As mentioned previously, a vital aspect of our non-profit and religious hospital status is the benefit we provide to the communities. Each fiscal year, we publish our annual community benefit report that details our communities by county, their demographics, the total community benefit that we provided, and the community benefit services and activities in which we engaged. These reports are an important way to visualize the work we do in our communities and to show the programs and services we offer along with the number of people reached through them. We will continue to use these reports to track our progress with the CHNA implementation strategies because they clearly demonstrate the number of people reached through our programs and services and the resources spent to achieve our goals.

Community Feedback

We welcome feedback to our assessment and implementation plan. Any feedback provided on our plan is documented and shared in future reports.

For comments or questions, please contact: Casey Leno, Director of Mission and Ministry, 303-730-5866

No written feedback from the community was received on our last Community Health Needs Assessment.
Thank You and Recognition

Our Community Health Needs Assessment is as strong as the partnerships that created it. It is through these partnerships that we were able to ensure we were leveraging the assets in our communities, getting the voices of those who are experiencing challenges with their health and social determinants of health and making a plan to which both the community and hospital are committed. Thank you to the following people who committed their time, talent and testimony to this process.

- Cindy Johnson, RHIT, M. Ed, Program Chair, Arapahoe Community College
- Linda Haley, Senior Resource Manager, Arapahoe County Council on Aging
- Barbara Becker, Division Director Community Programs, Arapahoe/Douglas Mental Health Network
- Michael Penny, City Manager, Littleton Colorado
- Sheila Gains, Colorado State University, Govt., Education and Agriculture
- Bebe Kleinman, Executive Director, Doctors Care
- Julie Collett, Executive Director, (Kind) Kids In Need of Dentistry
- Robyn Zagoren, District Wellness Coordinator, Littleton Public Schools
- Susan Thornton, President and Founder, Susan Thornton Associates LLC
- Patty Boyd, RD, MPH, Strategic Partnerships Manager, Tri-County Health Dept.
- Cheryl Curry, CFO, Littleton Adventist Hospital
- Val Purser, Executive Director, South Metro Health Alliance
- Traci Jones, Membership & Communications, South Metro Health Alliance
- Casey Leno, Director Mission and Ministry, Littleton Adventist Hospital
- Edrey Santos, Lead Chaplain, Littleton Adventist Hospital
- Bernadette Albanese, M.D., M.P.H., Tri-County Health Dept.
- Douglas Muir, Director, Behavioral Health, Porter Adventist Hospital
- Mike Simons, Captain, Littleton Fire and Rescue
- Eileen Aire, Consultant/Associate Director, University of Colorado Denver
Appendix A: Data Sources

American Community Survey, 2008-12
Colorado Health and Hospital Association, 2010-12
County Health Rankings, 2008-2010
County Business Patterns, 2012
Dartmouth Atlas of Health Care, 2012
National Center for Education Statistics, 2012-2013
National Center for Education Statistics, 2008-2009
Behavioral Risk Factor Surveillance System, 2006-2012
Behavioral Risk Factor Surveillance System, 2005-09
Behavioral Risk Factor Surveillance System, 2006-2010
Behavioral Risk Factor Surveillance System, 2006-2012
Behavioral Risk Factor Surveillance System, 2011-2012
Federal Bureau of Investigation Uniform Crime Reports, 2010-12
Health Resources and Human Services Administration, Health Professional Shortage Areas, 2014
National Center for Chronic Disease Prevention and Health Promotion, 2012
National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, 2012
National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, 2010
National Environmental Public Health Tracking Network, 2008
National Vital Statistics System, 2006-2010
Small Area Health Insurance Estimates, 2012
State Cancer Profiles, 2007-2011
Area Health Resource File, 2012
US Department of Health & Human Services, Health Resources and Services Administration
USDA Food Access Research Atlas, 2010
Appendix B: First Round of Data

Centura Health Data Approach

- **DEMOGRAPHICS**: Community & Population
- **HEALTH DRIVERS**: Behaviors & Environment
- **HEALTH OUTCOMES**: Morbidity & Mortality
- **ACCESS**: Coverage & Quality Care

Service Area Definition

- Stark versus County
- The Stark Law-defined service area is defined as the lowest number of contiguous zip codes that accounts for 75% of a hospital's inpatient admissions
  - Demographic data was gathered for Stark service areas
- County level data used for health drivers, outcome, and access data
  - Keep it consistent when we prioritize. Outcome data not available at zip code level
Appendix B: First Round of Data

Data Sources

- American Community Survey
- Behavioral Risk Factor Surveillance System
- National Center for Education Statistics
- National Vital Statistics System
- State Cancer Profiles
- Bureau of Labor Statistics

DEMOGRAPHICS: COMMUNITY & POPULATION

Centura’s Communities

Littleton Community

Population, Density (Persons per sq Mile) by Tract, ACS 2008-12

- Over 3,000
- 1,001 - 3,000
- 501 - 1,000
- 251 - 500
- Under 251
- No Data or Code Suppressed
- Dissemination Area

Littleton Stark Service Area

Service Area Population: 474,343

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Population in Age Range</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 0-4</td>
<td>20,478</td>
<td>6.3%</td>
</tr>
<tr>
<td>Age 5-17</td>
<td>94,900</td>
<td>20.0%</td>
</tr>
<tr>
<td>Age 18-24</td>
<td>31,084</td>
<td>6.6%</td>
</tr>
<tr>
<td>Age 25-34</td>
<td>59,158</td>
<td>12.5%</td>
</tr>
<tr>
<td>Age 35-44</td>
<td>73,215</td>
<td>15.4%</td>
</tr>
<tr>
<td>Age 45-54</td>
<td>79,163</td>
<td>16.7%</td>
</tr>
<tr>
<td>Age 55-64</td>
<td>59,439</td>
<td>12.5%</td>
</tr>
<tr>
<td>Age 65+</td>
<td>77,966</td>
<td>10.1%</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2008-12
Appendix B: First Round of Data

**RACE AND ETHNICITY**

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>Black</th>
<th>Asian</th>
<th>Native American/Alaska Native</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>90.13%</td>
<td>1.42%</td>
<td>3.83%</td>
<td>0.36%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>84.15%</td>
<td>3.99%</td>
<td>2.71%</td>
<td>0.97%</td>
</tr>
<tr>
<td>Native Hawaiian/Pacific Islander</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some Other Race</td>
<td>0.05%</td>
<td>1.74%</td>
<td>2.48%</td>
<td></td>
</tr>
<tr>
<td>Multiple Races</td>
<td>0.12%</td>
<td>4.74%</td>
<td>3.31%</td>
<td></td>
</tr>
</tbody>
</table>

**Hispanic Population**

<table>
<thead>
<tr>
<th></th>
<th>Total Population</th>
<th>Non-Hispanic</th>
<th>Hispanic or Latino</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>474,343</td>
<td>90.49%</td>
<td>9.51%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>5,042,853</td>
<td>79.37%</td>
<td>20.63%</td>
</tr>
</tbody>
</table>

**Population with Limited English Proficiency**

<table>
<thead>
<tr>
<th></th>
<th>Service Area</th>
<th>Colorado</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>3.1%</td>
<td></td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>6.7%</td>
<td></td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2008-12

**Population With a Disability**

<table>
<thead>
<tr>
<th></th>
<th>Service Area</th>
<th>Colorado</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>6.9%</td>
<td></td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>9.9%</td>
<td></td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2008-12

**Unemployment Rate**

<table>
<thead>
<tr>
<th></th>
<th>Service Area</th>
<th>Colorado</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>3.6%</td>
<td></td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>4.0%</td>
<td></td>
</tr>
</tbody>
</table>


**INCOME**

<table>
<thead>
<tr>
<th></th>
<th>Service Area</th>
<th>Colorado</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>16.6%</td>
<td></td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>41.6%</td>
<td></td>
</tr>
</tbody>
</table>

Source: National Center for Education Statistics, 2011-13

**Population Living in Households With Income Below 200 Percent of the Federal Poverty Level**

<table>
<thead>
<tr>
<th></th>
<th>Service Area</th>
<th>Colorado</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>13.8%</td>
<td></td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>29.6%</td>
<td></td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2008-12
Appendix B: First Round of Data

**EDUCATION**

<table>
<thead>
<tr>
<th>Service Area</th>
<th>High School Graduation Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>50.7%</strong></td>
<td>44.7%</td>
</tr>
<tr>
<td>Colorado</td>
<td>77.6%</td>
</tr>
<tr>
<td><strong>74.8%</strong></td>
<td>Healthy People 2020 82.4%</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2008-12, National Center for Education Statistics, 2008-09

**HEALTH BEHAVIORS**

<table>
<thead>
<tr>
<th>Adults reporting heavy alcohol consumption</th>
<th>Adults eating less than 5 fruits and vegetables daily</th>
<th>Current smokers</th>
<th>Adults with no leisure time physical activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong> 16.5%</td>
<td>75.2%</td>
<td>14.2%</td>
<td>13.5%</td>
</tr>
<tr>
<td><strong>Colorado</strong> 17.6%</td>
<td>75.0%</td>
<td>16.8%</td>
<td>15.2%</td>
</tr>
</tbody>
</table>


**ENVIRONMENT**

<table>
<thead>
<tr>
<th>Liquor Store Access Per 100,000 Population</th>
<th>Low Income Population with low food access</th>
<th>Recreation and Fitness Facility Access Per 100,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong> 19.8</td>
<td>3.8%</td>
<td>11.5</td>
</tr>
<tr>
<td><strong>Colorado</strong> 24.6</td>
<td>6.4%</td>
<td>10.8</td>
</tr>
</tbody>
</table>


**ENVIRONMENT**

<table>
<thead>
<tr>
<th>Air Quality/Ozone Percentage of Days With Ozone Levels Exceeding Standards</th>
<th>Violent Crime Rate of Violent Crime Reported by Law Enforcement per 100,000 Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong> 0.2%</td>
<td><strong>Service Area</strong> 243.6</td>
</tr>
<tr>
<td><strong>Colorado</strong> 0.1%</td>
<td><strong>Colorado</strong> 321.0</td>
</tr>
</tbody>
</table>

Appendix B: First Round of Data

### General Health

**Poor General Health**

- **Service Area**: 10.9%
- **Colorado**: 12.8%

*Source: Behavioral Risk Factor Surveillance System, 2006-2013*

### Obesity

**Obesity Adults**

- **Service Area**: 19%
- **Colorado**: 20.2%

**Overweight Adults**

- **Service Area**: 35.4%
- **Colorado**: 35.3%

*Source: National Center for Chronic Disease Prevention and Health Promotion, 2012 Behavioral Risk Factor Surveillance System, 2011-2012*

### Health Outcomes

**Asthma**

- **Service Area**: 13.6%
- **Colorado**: 12.9%

**Diabetes**

- **Service Area**: 5.2%
- **Colorado**: 6.1%

Source: National Center for Chronic Disease Prevention and Health 2012*

### Health Outcomes: Beginnings

**Teen Birth Rate (Per 1,000)**

- **Service Area**: 23.7
- **Colorado**: 35.6

**Low Birth Weight Percentage of Births**

- **Service Area**: 9.0%
- **Colorado**: 8.8%

**Healthy People 2020**

- **Service Area**: 7.8%

Source: National Vital Statistics System, 2009-2012*

### Chlamydia (Rate Per 100,000)

- **Service Area**: 349.4
- **Colorado**: 422.8

*Source: National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, 2012 National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, 2010*

### Heart Health

<table>
<thead>
<tr>
<th></th>
<th>Percentage of Adults With High Blood Pressure</th>
<th>Percentage of Adults With High Cholesterol</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>2.7%</td>
<td>23.5%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>2.7%</td>
<td>23.1%</td>
</tr>
</tbody>
</table>

Appendix B: First Round of Data

**HEALTH OUTCOMES**

### Cancer Incidence by Type

<table>
<thead>
<tr>
<th>Type</th>
<th>Service Area</th>
<th>Colorado</th>
<th>Healthy People 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>132.4</td>
<td>125.3</td>
<td>40.9</td>
</tr>
<tr>
<td>Cervical</td>
<td>5.4</td>
<td>6.2</td>
<td>7.1</td>
</tr>
<tr>
<td>Colon and Rectal</td>
<td>36.5</td>
<td>36.8</td>
<td>38.7</td>
</tr>
<tr>
<td>Lung</td>
<td>47.9</td>
<td>48.4</td>
<td>N/A</td>
</tr>
<tr>
<td>Prostate</td>
<td>154.2</td>
<td>147.6</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source: State Cancer Profiles, 2007-2011

**MORTALITY**

<table>
<thead>
<tr>
<th>Type</th>
<th>Service Area</th>
<th>Colorado</th>
<th>Healthy People 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>145.3</td>
<td>149.3</td>
<td>160.6</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>120.5</td>
<td>137.4</td>
<td>N/A</td>
</tr>
<tr>
<td>Ischemic Heart Disease</td>
<td>71.3</td>
<td>83.0</td>
<td>103.4</td>
</tr>
<tr>
<td>Stroke</td>
<td>33.0</td>
<td>36.5</td>
<td>33.8</td>
</tr>
<tr>
<td>Lung Disease</td>
<td>44.3</td>
<td>49.8</td>
<td>NA</td>
</tr>
<tr>
<td>Infant Mortality</td>
<td>5.8</td>
<td>5.5</td>
<td>6.0</td>
</tr>
<tr>
<td>Motor Vehicle</td>
<td>4.6</td>
<td>5.6</td>
<td>NA</td>
</tr>
<tr>
<td>Unintentional Injury</td>
<td>37.7</td>
<td>45.3</td>
<td>36.0</td>
</tr>
<tr>
<td>Homicide</td>
<td>2.5</td>
<td>3.7</td>
<td>5.5</td>
</tr>
<tr>
<td>Suicide</td>
<td>16.2</td>
<td>17.2</td>
<td>10.2</td>
</tr>
</tbody>
</table>


**HEALTH OUTCOMES: MORTALITY**

### Years of Potential Life Lost Due to Premature Death

(Per 100,000 Population)

**Service Area**

5,164

**Colorado**

6,073

Source: County Health Rankings, 2006-2010

**ACCESS: COVERAGE & QUALITY CARE**

Litteton Adventist Hospital

**ACCESS: COVERAGE**

### Uninsured Adults Ages 18-64

<table>
<thead>
<tr>
<th></th>
<th>Population</th>
<th>Population Without Medical Insurance</th>
<th>Percentage Uninsured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area</td>
<td>911,475</td>
<td>148,206</td>
<td>16.3%</td>
</tr>
<tr>
<td>Colorado</td>
<td>3,256,899</td>
<td>635,874</td>
<td>19.52%</td>
</tr>
</tbody>
</table>

Source: Small Area Health Insurance Estimates, 2012
**ACCESS: COVERAGE**

### Uninsured Children Under Age 19

<table>
<thead>
<tr>
<th></th>
<th>Population</th>
<th>Population Without Medical Insurance</th>
<th>Percentage Uninsured</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>366,303</td>
<td>28,598</td>
<td>7.8%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>1,276,087</td>
<td>121,166</td>
<td>9.5%</td>
</tr>
</tbody>
</table>

Source: Small Area Health Insurance Estimates, 2012

---

**ACCESS: MENTAL HEALTH**

<table>
<thead>
<tr>
<th></th>
<th>Mental Health Hospitalizations (Per 100,000)</th>
<th>Lack of Social or Emotional Support</th>
<th>Age-Adjusted Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Douglas County</td>
<td>2298</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arapahoe County</td>
<td>2922</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jefferson County</td>
<td>2697</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>2868</td>
<td></td>
<td>15.3%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td></td>
<td></td>
<td>16.9%</td>
</tr>
</tbody>
</table>

Source: Colorado Health and Hospital Association 2010-11, Behavioral Risk Factor Surveillance System, 2006-12

---

**ACCESS: QUALITY CARE**

### Mammogram

<table>
<thead>
<tr>
<th></th>
<th>Percent Female Medicare Enrollees in last two years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>62.6%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>60.5%</td>
</tr>
</tbody>
</table>


### Pap Test

<table>
<thead>
<tr>
<th></th>
<th>Percent in last three years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>76.8%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>75.5%</td>
</tr>
</tbody>
</table>

### Sigmoidoscopy or Colonoscopy

<table>
<thead>
<tr>
<th></th>
<th>Percent 33% and over</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>65.1%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>60.8%</td>
</tr>
</tbody>
</table>


---

**ACCESS: ORAL HEALTH**

### Adult Dental Care Utilization

<table>
<thead>
<tr>
<th></th>
<th>Percent with no Dental Exam in the past year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>24.4%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>31.1%</td>
</tr>
</tbody>
</table>


### Poor Dental Health

<table>
<thead>
<tr>
<th></th>
<th>Percent Adults with Poor Dental Health</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>7.9%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>10.0%</td>
</tr>
</tbody>
</table>


---

**ACCESS: QUALITY CARE**

### Adults without a Regular Doctor

<table>
<thead>
<tr>
<th></th>
<th>Access to Primary Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>19.1%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>23.6%</td>
</tr>
</tbody>
</table>


### Access to Primary Care

<table>
<thead>
<tr>
<th></th>
<th>Number of Primary Care Physicians per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>80.3%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>79.2%</td>
</tr>
</tbody>
</table>

Source: Area Health Resource File, 2012

---

**ACCESS: QUALITY CARE**

### Diabetes Management

<table>
<thead>
<tr>
<th></th>
<th>Percentage of Medicare enrollees with diabetes who had a Hemoglobin A1c Test in past year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>84.6%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>83.4%</td>
</tr>
</tbody>
</table>

Source: Dartmouth Atlas of Health Care, 2012

### High Blood Pressure Management

<table>
<thead>
<tr>
<th></th>
<th>Percentage of Adults not taking their blood pressure medication</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Area</strong></td>
<td>25.1%</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>26.5%</td>
</tr>
</tbody>
</table>

Source: Behavioral Risk Factor Surveillance System, 2006-2010

---
Appendix B: First Round of Data

**ACCESS: QUALITY CARE**

<table>
<thead>
<tr>
<th>Pneumonia Vaccination</th>
<th>Preventable Hospital Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area</td>
<td>Service Area</td>
</tr>
<tr>
<td><strong>78.2%</strong> Colorado</td>
<td><strong>34.8</strong> Colorado</td>
</tr>
<tr>
<td><strong>74.5%</strong></td>
<td><strong>38.2</strong></td>
</tr>
</tbody>
</table>

Behavioral Risk Factor Surveillance System, 2006-2012

Source: Dartmouth Atlas of Health Care, 2012

**Centura Health Data Approach**

- **Demographics**
  - Community
  - Population

- **Health Drivers**
  - Behaviors
  - Environment

- **Health Outcomes**
  - Morbidity
  - Mortality

Access

Coverage

Quality Care
Appendix C: Data From Local Public Health Departments

Obesity and Mental Health: Indicators Telling a Story

August 10, 2015

Weight, diet, physical activity

- Body mass index (BMI) is a widely used measure of unhealthy (over)weight, as defined by:
  - For adults, a BMI of 25 to 29 (overweight) or 30 or greater (obesity)
  - For children and adolescents, a BMI at or above the 85th to 94th BMI-for-age percentile (overweight) and above the 95th BMI-for-age percentile (obesity)

Hospital Service Area: Demographic Description Handout

Adult Overweight & Obesity is Common

- Jefferson
- Denver
- Arapahoe
- COLORADO

Source: Colorado Health Data Coalition (CHDC), Defining Overweight and Obese.

Appendix C: Data From Local Public Health Departments
Appendix C: Data From Local Public Health Departments

Slight Regional Variation in Obesity-Related Outcomes

<table>
<thead>
<tr>
<th>County</th>
<th>Told you have diabetes</th>
<th>Told you have hypertension</th>
<th>Told you have high cholesterol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ampahoe</td>
<td>6.3%</td>
<td>24.9%</td>
<td>32.6%</td>
</tr>
<tr>
<td>Denver</td>
<td>7.3%</td>
<td>24.7%</td>
<td>33.9%</td>
</tr>
<tr>
<td>Jefferson</td>
<td>4.5%</td>
<td>25.3%</td>
<td>34.5%</td>
</tr>
<tr>
<td>COLORADO</td>
<td>6.3%</td>
<td>26.3%</td>
<td>34.8%</td>
</tr>
</tbody>
</table>


Lifestyle Behaviors Track With Weight

<table>
<thead>
<tr>
<th></th>
<th>Normal/Underweight</th>
<th>Overweight</th>
<th>Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consuming fruit less than once per day</td>
<td>33%</td>
<td>37%</td>
<td>39%</td>
</tr>
<tr>
<td>Consuming vegetables less than once per day</td>
<td>17%</td>
<td>19%</td>
<td>23%</td>
</tr>
<tr>
<td>At fast food one or more times in past week</td>
<td>59%*</td>
<td>71%*</td>
<td>72%*</td>
</tr>
<tr>
<td>Drink more than one SSB per day</td>
<td>31%</td>
<td>32%</td>
<td>36%</td>
</tr>
<tr>
<td>Exercise past 30 days</td>
<td>18%</td>
<td>8%</td>
<td>77%*</td>
</tr>
<tr>
<td>Exercise &gt;2 hours per week</td>
<td>6%</td>
<td>59%*</td>
<td>51%*</td>
</tr>
</tbody>
</table>

* Statistical difference versus normal weight


Environment Can Impact Health Behavior - Adults

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not easy to purchase healthy foods in neighborhood</td>
<td>11%</td>
</tr>
<tr>
<td>Worry about affording nutritious meals</td>
<td>23%</td>
</tr>
<tr>
<td>Do not have sidewalks or shoulders to safely walk, run, or bike</td>
<td>9%</td>
</tr>
</tbody>
</table>


Environment Can Impact Health Behavior - Children <14 years

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drink more than one SSB per day</td>
<td>18%</td>
</tr>
<tr>
<td>Eat fast food more than one time per week</td>
<td>66%</td>
</tr>
<tr>
<td>Do not walk, bike, or skateboard to school more than one day per week</td>
<td>69%</td>
</tr>
<tr>
<td>Households with children who could not afford food they needed in past year</td>
<td>24%</td>
</tr>
</tbody>
</table>


Obesity Risk - Take Home Points

- Obesity tracks with diabetes, risks for heart disease
- Childhood obesity progresses into adulthood
- Black, Hispanic, low income, less educational attainment populations are disproportionately affected
- Nutritional and physical activity choices are less than optimal in overweight and obese adults
- Behaviors are established during childhood

Mental Health & Substance Abuse

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

Sources: Healthy People 2020, National Institute of Mental Health, National Institute on Drug Abuse.
### How Common is Depression & Anxiety in Adults?

<table>
<thead>
<tr>
<th></th>
<th>8 or more poor mental health days in past month</th>
<th>Current depression</th>
<th>Ever had anxiety disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arapahoe</td>
<td>11.6%</td>
<td>9.5%</td>
<td>15.4%</td>
</tr>
<tr>
<td>Denver</td>
<td>14.6%</td>
<td>6.9%</td>
<td>16.6%</td>
</tr>
<tr>
<td>Jefferson</td>
<td>11.7%</td>
<td>5.3%</td>
<td>15.1%</td>
</tr>
<tr>
<td><strong>COLORADO</strong></td>
<td><strong>12.6%</strong></td>
<td><strong>6.8%</strong></td>
<td><strong>15.1%</strong></td>
</tr>
</tbody>
</table>

Source: CPSHE, Behavioral Risk Factor Surveillance System (BRFSS), 2012

### Consequences of Depression in Adults

- Trouble sleeping
- Binge drinking
- Smoking

*Statistical difference versus not depressed

Source: CPSHE, Behavioral Risk Factor Surveillance System (BRFSS), DENVER METRO.COMBINED, 2014

### Consequences of Anxiety in Adults

- Anxiety disorder
- No anxiety disorder

*Statistical difference versus no anxiety

Source: CPSHE, Behavioral Risk Factor Surveillance System (BRFSS), DENVER METRO.COMBINED, 2014

### Sadness Among High School Students

“During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?”

- Consistently across Denver Metro area, teens experiencing sadness are more likely to:
  - Smoke cigarettes
  - Binge drink
  - Use marijuana
  - Be recently sexually active

Source: CPSHE, Healthy Kids Colorado Survey, 2013

### Regional Variations in Adolescent Depression

<table>
<thead>
<tr>
<th></th>
<th>Feeling sad or hopeless</th>
<th>Considered suicide in past 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arapahoe</td>
<td>26%</td>
<td>16%</td>
</tr>
<tr>
<td>Denver</td>
<td>29%</td>
<td>13%</td>
</tr>
<tr>
<td>Jefferson</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>COLORADO</strong></td>
<td><strong>24%</strong></td>
<td><strong>14%</strong></td>
</tr>
</tbody>
</table>

Source: CPSHE, Healthy Kids Colorado Survey, 2013

### Teen Sadness Associated with Suicidal Ideation

<table>
<thead>
<tr>
<th>County</th>
<th>Percentage with suicidal ideation in past 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Experiencing Sadness</td>
</tr>
<tr>
<td>Arapahoe</td>
<td>5.5%</td>
</tr>
<tr>
<td>Denver</td>
<td>4.5%</td>
</tr>
<tr>
<td>Jefferson</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source: CPSHE, Healthy Kids Colorado Survey, 2013

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Appendix C: Data From Local Public Health Departments
Appendix C: Data From Local Public Health Departments

Disparities Among High School Girls, Colorado

- Fell Sad or Hopeless
- Considered suicide
- Suicide attempt
- Suicide attempt w/injury

Mental Health Across the Lifespan: Children

- Difficulty with emotions, behavior, or getting along with others
- Depression
- Anxiety problems
- Attention deficit disorders
- Any depression, anxiety, conduct or attention deficit problems

Mental Health Care Access for Children, 4-14 years of age

<table>
<thead>
<tr>
<th>Condition</th>
<th>Access %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child in need of mental health care</td>
<td>13%</td>
</tr>
<tr>
<td>Not able to receive necessary mental health care</td>
<td>22%</td>
</tr>
</tbody>
</table>

Among children diagnosed with mental health condition:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Access %</th>
</tr>
</thead>
<tbody>
<tr>
<td>On medication for depression</td>
<td>82%</td>
</tr>
<tr>
<td>On medication for anxiety</td>
<td>59%</td>
</tr>
<tr>
<td>On medication for attention deficit disorders</td>
<td>72%</td>
</tr>
</tbody>
</table>

Suicide-Related Hospitalizations by County

- Arapahoe: 166 57.3 182 51.9
- Denver: 185 59.4 180 56.3
- Jefferson: 131 50.4 145 53.4

Suicide Rates by County

<table>
<thead>
<tr>
<th>County</th>
<th>2011</th>
<th>Age-Adjusted Rate per 100K</th>
<th>2012</th>
<th>Age-Adjusted Rate per 100K</th>
<th>2013</th>
<th>Age-Adjusted Rate per 100K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arapahoe</td>
<td>103</td>
<td>47.7</td>
<td>103</td>
<td>46.8</td>
<td>113</td>
<td>48.3</td>
</tr>
<tr>
<td>Denver</td>
<td>95</td>
<td>44.8</td>
<td>115</td>
<td>47.8</td>
<td>95</td>
<td>44.8</td>
</tr>
<tr>
<td>Jefferson</td>
<td>100</td>
<td>17.9</td>
<td>127</td>
<td>22.6</td>
<td>91</td>
<td>15.7</td>
</tr>
</tbody>
</table>

Gender Disparities: Suicide Vs Suicide-Related Hospitalizations*
Gender Disparities in Suicide Deaths

- Higher suicide-related hospitalizations in females, but higher suicide death rates in males
- Method of suicide
  - Males – firearms
  - Females - drugs, hanging

Mental Health Care: Costs, Insurance, Stigma

<table>
<thead>
<tr>
<th>Why did you not receive needed mental health care?</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concerned about the cost of treatment</td>
<td>75%</td>
</tr>
<tr>
<td>Did not think health insurance would cover</td>
<td>33%</td>
</tr>
<tr>
<td>Not comfortable talking with a health professional about personal problems</td>
<td>31%</td>
</tr>
<tr>
<td>Hard time getting an appointment</td>
<td>30%</td>
</tr>
<tr>
<td>Concerned about what would happen if someone found out you had a problem</td>
<td>25%</td>
</tr>
</tbody>
</table>

Source: CO Health Institute. 2013 CO Health Access Survey, Statewide

Mental Health Risk - Take Home Points

- Depression & anxiety are common
- Disparities related to socioeconomic factors
- Such as sleep disturbance, smoking, alcohol use
- Teen depression associated with suicidal ideation
- Perceived concerns about cost and insurance coverage
- Stigma is evident

Questions

Comments

Other Data Requests