Denver Regional Accountable Health Community Gap Analysis and Community-Level Quality Improvement Report

Year 5 (2021-2022)
Table of Contents

Executive Summary .................................................................................................................. 3

Part I: Gap Analysis .................................................................................................................. 4

Introduction ............................................................................................................................. 4

Background and Purpose .......................................................................................................... 5

Goals ...................................................................................................................................... 5

Mission ................................................................................................................................. 6

Vision .................................................................................................................................... 6

Clinical and Community Partners ............................................................................................. 6

Timeline ................................................................................................................................ 6

Community Profile: Denver Regional Accountable Health Community Service Area .............. 6

Methods and Approach ............................................................................................................. 8

Community Profile and Current State Assessments ................................................................. 8

Advisory Board ...................................................................................................................... 9

Quality improvement ............................................................................................................. 9

Definitions ............................................................................................................................ 9

Strengths and Limitations ....................................................................................................... 11

Results and Findings .............................................................................................................. 13

Summary .............................................................................................................................. 13

Current State Assessment of Population Characteristics and Community Needs .................. 14

Community Needs: Prevalence of Health-Related Social Needs ............................................. 22

Current State Assessment of Service Availability and Accessibility ....................................... 26

Food Security ....................................................................................................................... 27

Utilities .................................................................................................................................. 32

Safety .................................................................................................................................... 34

Transportation ...................................................................................................................... 36

Part II: Community-level Quality Improvement Report .......................................................... 39

Advisory Board ..................................................................................................................... 40

Appendix A: Technical and Quantitative Data ..................................................................... 40
Community Profile: Denver Regional AHC Service Area Map ................................................................. 40
Current State Assessment of Population and Community Needs ................................................................. 40
Appendix B: Qualitative Data .................................................................................................................. 42
Current State Assessment of Service Availability and Accessibility ...................................................... 42
Qualitative Data Appendix ....................................................................................................................... 42
Current State Assessment of Service Availability and Accessibility ...................................................... 42
Executive Summary

The Denver Regional Accountable Health Community bridges clinical and community-based partners to identify and address unmet health-related social needs and enhance overall health and well-being of residents across the Denver metro area. Demographic and socioeconomic analysis of neighborhoods served by the Denver Regional AHC suggests that it is well-positioned to reach households that may benefit most from community-based services to meet health-related social needs. Food security persists as the No. 1 reported unmet need, followed by housing security and quality, transportation, utility assistance and safety. While specific capacity and service gaps vary, accessibility of services is the universally reported barrier. Based on data that reported a surge in people reporting housing security needs, in Year 5 the advisory board prioritized closing gaps in the delivery of housing security resources.
Part I: Gap Analysis

Introduction

Denver Regional Council of Governments, a quasigovernmental association of 58 local governments, serves 3.2 million people representing more than half of the state’s population. A board of directors composed of local elected officials guides DRCOG’s Regional Planning and Development, Transportation Planning and Operations and Area Agency on Aging divisions to support the long-term growth, development and well-being of the region. DRCOG collaborates with local governments, regional stakeholders and the public to develop and implement Metro Vision, the region’s shared vision for its future. DRCOG also establishes guidelines, informs policies and allocates funding for transportation and personal mobility.

As the federally designated area agency on aging, DRCOG coordinates community-based services for older adults across an eight-county region. DRCOG’s Area Agency on Aging allocates federal and state funding mandated by the Older Americans Act and the Older Coloradans Act to support 80 community-based services offered through 33 organizations. Services include nutritional support; transportation to appointments, minor home repairs and maintenance; personal care and legal assistance. DRCOG’s Area Agency on Aging also provides older adults (60 and older) and individuals with disabilities (18 and older) with case management, transition services, options counseling, ombudsman services, Medicare counseling and an information and assistance help line.

Through the Area Agency on Aging, DRCOG manages the Denver Regional Accountable Health Community (Denver Regional AHC). Funded by the Center for Medicare and Medicaid Innovation, the Accountable Health Communities model evaluates how systemically addressing health-related social needs (HRSNs) of Medicare and Medicaid beneficiaries affects health outcomes and health care costs. While often used interchangeably, social determinants of health (SDOH) and HRSNs are separate concepts. The Denver Regional AHC seeks to identify and address the HRSNs experienced by people in the Denver region. SDOH are the upstream factors that affect a community’s well-being such as the laws, policies and regulations that are part of the larger political, economic and social systems. HRSNs are the individual, nonmedical needs that affect a person’s overall health such as stable and safe housing, transportation, nutritious food and protection from violence or abuse.

Within the Denver Regional AHC, DRCOG functions as the bridge organization to convene a network of clinical and community-based partners, creating a clinical-community continuum of care to better address individuals’ HRSNs. Clinical partners in primary care, behavioral health, home health and hospital settings complete evidence-based screenings with their patients to identify housing, food, utility, transportation and safety needs. Then navigators assist individuals who qualify to receive services from community-based organizations to alleviate their needs and support their overall well-being.
Background and Purpose

Screening and navigation activities implemented through a person-centered approach allow for people’s needs to be identified and addressed through community-based services. Community-based organizations have addressed HRSNs in local communities for decades, supporting significant numbers of individuals and households, yet gaps and barriers to service and capacity issues exist. This report presents a:

1. Demographic overview of the people living in the Denver Regional AHC area to better understand individuals and households that may benefit from community-based services.
2. Summary of the Denver Regional AHC screening results, including the prevalence of types and numbers of identified HRSNs.
3. Summary of available community-based resources, gaps and barriers to service, and strategies and opportunities for improvement.
4. The information in this report guides the Denver Regional AHC advisory board and project team to analyze existing community-based service gaps and barriers to care, prioritize gaps and develop possible solutions. In program Year 5, the Denver Regional AHC established a project to address the lack of available and affordable housing in the region based on the reported prevalence of housing security needs noted in beneficiary screenings across the AHCs implementation. In short, this gap analysis report is a foundational document to inform the direction of the Denver Regional AHC’s community-level quality improvement efforts to address gaps and barriers to using community-based services and HRSNs in the region.

Goals

Goals of the Denver Regional AHC include:

1) To improve clinical-community alignment for screening and referral.
2) To enhance community-level interventions to address HRSNs.

As part of a national effort funded by the Center for Medicare and Medicaid Innovation, the Denver Regional AHC aims to demonstrate the value and total cost savings of meeting Medicare and Medicaid beneficiaries’ HRSNs through community resources. By collecting data on identified needs, community services delivered and corresponding effects on health, the Denver Regional AHC project team uses the AHC model to gather evidence to inform future policy, allocation of funding and services to better address HRSNs and community health.
The Denver Regional Accountable Health Community’s mission and vision are:

**Mission**
Denver Regional Accountable Health Community improves health outcomes by aligning clinical and community service providers to address unmet social needs.

**Vision**
Barriers to health are removed so people in the Denver region can live healthier lives.

**Clinical and Community Partners**
Clinical partners previously and currently operating as part of the Denver Regional AHC include Aurora Mental Health Center, Centura Health, Denver Health Sam Sandos Westside Family Health Center, Denver Health Emergency Department, Denver Health In-Patient Pediatric Unit, Denver Health Outpatient Clinics, Doctors Care, Dominican Home Health Agency, Jefferson Center for Mental Health, STRIDE Community Health Center and Tri-County Health Department.

Previous and current community partners include Brothers Redevelopment, Energy Outreach Colorado, Hunger Free Colorado, Jewish Family Service, Seniors’ Resource Center, Violence Free Colorado and Volunteers of America. The Denver Regional AHC project team also thanks the additional organizations and individuals who volunteer their time and expertise as part of work groups to enhance the Denver Regional AHC’s community-level quality improvement initiatives.

**Timeline**
During Year 1 of operations (May 2017 through April 2018), the Denver Regional AHC advisory board established a strategic plan and prepared screening and referral workflows between clinical and community partners. Screening and referral commenced in Year 2 (May 2018 through April 2019), and Year 3 of Denver Regional AHC operations ended in April 2020. During Year 4 (May 2020-April 2021), the Denver Regional AHC continued screening and navigation operations, established new clinical and community partnerships, and completed the first phase of its work to address gaps and barriers to community-based services. Despite being affected by the ongoing COVID-19 pandemic, Year 5 was successful — through screening and navigation, the project helped more than 3,200 people with HRSNs.

**Community Profile: Denver Regional Accountable Health Community Service Area**
The Denver Regional AHC includes Adams, Arapahoe, Broomfield, Denver, Douglas and Jefferson counties. The greatest number of individuals served by the Denver Regional AHC reside in the Denver metro area near clinical partner sites that initiate screening and navigation activities (Figure 1).
The density of households served by the Denver Regional AHC is determined by the residential addresses of individuals completing health-related social need screenings. To protect privacy, screenings are displayed based on density in quartiles, meaning that 25% of screenings occur in the lightest shaded area, 25% occur in the next darker shaded and so forth.

The highest density of screened and navigated households spans from the western edge of Golden across the center of the metropolitan area to the eastern edge of Aurora along E-470. From the south to the north the area spans from Lone Tree in the south to Broomfield in the north.
Methods and Approach

Community Profile and Current State Assessments

Observations within this report, as well as supporting analyses, are informed by quantitative and qualitative data. Figure 1 depicts the six-county Denver Regional AHC area, based on the addresses of individuals who completed HRSN screenings at Denver Regional AHC clinical partner sites from the program model start to date, May 2018 through Jan. 31, 2022.

The American Community Survey 2015-2019 demographic and socioeconomic data of the six-county Denver Regional AHC area and HRSN screening results of Medicare and Medicaid beneficiaries from the program model start to date (May 2018 to Feb. 29, 2020) inform the “Current State Assessment of Population and Community Needs” (see page 12). More detailed methodology behind the community profile and current state assessment of population and community needs is provided in the Technical and Quantitative Data Appendix.

The “Current State Assessment of Service Availability and Accessibility” (see page 20) represents contributions from:

1) Community-facing staff screening and navigating individuals and households for HRSNs and community-based services.
2) The Denver Regional AHC advisory board and work groups composed of clinical and community-based organization leadership with other subject matter experts, gathered for facilitated discussions. See Qualitative Data Appendix for more details on qualitative data sources.

Advisory Board

The Denver Regional AHC advisory board, composed of leaders from clinical and community-based organizations involved in screening, navigation and delivery of services in the Denver Regional AHC area, meets on a quarterly basis to ensure commitment to the Denver Regional AHC’s mission and vision.

In Year 5, the Advisory Board voted to focus in community quality improvement efforts on the lack of affordable and attainable housing in the Denver region. In July 2021, they voted to authorize project staff to work with housing developers, health care providers, philanthropy and other stakeholders to develop a Health and Housing Roadmap. The roadmap is attached to this report in Part II: Quality Improvement Report.

Quality improvement

Throughout its screening, navigation and community-based service provision efforts, the Denver Regional AHC uses the Plan-Do-Study-Act quality improvement methodology. Plan-Do-Study-Act methodology allows the Denver Regional AHC to complete rapid-cycle improvements to continue evaluating progress toward its goals and remain responsive to the needs of its partners and the community.

Definitions

The following terms guide the understanding and work of the Denver Regional AHC:

Social Determinants of Health (SDOH): upstream factors that create conditions in communities which may support or hinder health, such as laws, policies and regulations

Health-Related Social Needs (HRSNs): individual, nonmedical needs that affect health outcomes, for example, stable and safe housing, nutritious food, protection from violence and transportation

The Denver Regional AHC uses an HRSN screening in clinical settings to refer individuals to community-based organizations to address their individual, nonmedical needs.

High-Risk: Per the national Accountable Health Communities model, individuals screened who report at least one HRSN and two or more emergency department visits in the previous 12 months are considered

high-risk and eligible for navigation services. Navigation services include a person-centered action plan, referral and follow-up to connect the individual to community-based resources.

The HRSN screening tool identifies needs in the following ways²:

**Food Security:** Within the previous 12 months, an individual worried that their food would run out before they have money to buy more; or the food they bought didn’t last and they didn’t have money to get more.

**Housing Security and Quality:** An individual does not currently have a steady place to live or worries about losing their place to live in the future; or has problems with pests, mold, lead paint or pipes, lack of heat, a nonworking oven or stove, missing or nonworking smoke detectors or water leaks.

**Utility Needs:** Within the past 12 months, an individual’s electric, gas, oil or water company threatened to shut off services; or already had these services shut off.

**Safety Needs:** Screening questions are designed to identify instances of child abuse, older adult abuse or domestic violence. This includes reporting instances of anyone, including family and friends, physically harming an individual, insulting or talking down to an individual, threatening an individual with harm or screaming or cursing at an individual.

**Transportation Needs:** Within the past 12 months, an individual reports a lack of reliable transportation, keeping them from medical appointments, meetings, work or getting to things needed for daily life.

**Public health emergency:** The Secretary of the U.S. Department of Health and Human Services may, under section 319 of the Public Health Service Act, determine that:

a) A disease or disorder presents a public health emergency.

b) A public health emergency, including significant outbreaks of infectious disease or bioterrorist attacks, otherwise exists.

**Navigation:** Community service navigation: Assistance provided to help a person with HRSNs that includes an in-depth assessment, patient-centered action planning and follow-up with the community-dwelling beneficiary until they have been matched with a community service provider that meets their needs or the need has been documented as unresolvable.

---

Strengths and Limitations

To promote transparency, knowledge-sharing and improvements, the strengths and limitations of this report include:

**Strengths**

- The HRSN screening is based on validated tools to promote the fidelity and reliability of results, assembled by a technical expert panel convened by the Centers for Medicare and Medicaid Services.
- The Denver Regional AHC convenes community and clinical partners in a coordinated effort to address community needs.
- Beyond its founding clinical and community-based partners, the Denver Regional AHC works with additional subject matter experts and service providers to identify and close gaps in community-based services to improve future availability and accessibility.
- The assessment of gaps and barriers to service is informed by community-facing staff who screen and navigate individuals and families on a daily basis to collect detailed insight into the persistent challenges of accessing services within existing systems.
- The American Community Survey 2015-2019 demographic data used in this report’s “Current State Assessment of Population Characteristics and Community Needs” (see provided detailed
demographic characteristics at the census tract level). American Community Survey data allows for comparisons among areas of the region with high percentages of at-risk households to areas with high screening density.

Limitations

- HRSN screening results are specific to the Medicare and Medicaid beneficiaries screened at Denver Regional AHC clinical partner sites.
- To promote person-centered and trust in care, people are able to leave questions unanswered on the HRSN screening tool, thus screening results are not complete in all cases. For example, in domestic violence situations, a person may not be ready to disclose information or access services at the time of screening due to extenuating and personal circumstances. Moreover, safety-related screening results are underreported.*
- No specific funding exists for the Denver Regional AHC to pay for community-based services or for work groups to invest in additional community-based service capacity which requires offering existing resources and time for improvement efforts.
- Primary input from Medicare and Medicaid beneficiaries is not collected in this report’s assessment of identified gaps and barriers to service.
- The American Community Survey 2015-2020 demographic data used in this report’s “Current State Assessment of Population Characteristics and Community Needs” (see page 14) uses a five-year average of survey data. This leads to a lag of two to three years in American Community Survey data. The 2019 American Community Survey uses data from 2015-2019. Additionally, the American Community Survey questions do not closely enough resemble AHC survey questions to allow for detailed comparisons.
- Throughout 2021, people in the U.S. continued to experience disruption daily lives due to the COVID-19 pandemic. Individuals who had delayed or avoided medical treatment during the start of the COVID-19 pandemic (including emergency and routine care) were now seeking medical attention, and in some cases had experienced a worsening of their condition due to delayed care. This caused an increase in screenings and HRSNs, even as community partners were still struggling to provide services to the increased numbers of individuals seeking help due to the pandemic.

* Immediate safety-related needs are promptly addressed per mandatory reporting and medical reporting options policies.
Results and Findings

Summary

This section comprises two assessments:

2) Current State Assessment of Service Availability and Accessibility.

The “Current State Assessment of Population Characteristics and Community Needs” presents an overview of the demographic and socioeconomic characteristics of people living across the Denver Regional AHC area and of people living within the area’s highest-screened neighborhoods. Specifically, American Community Survey demographic and socioeconomic indicators of the Denver Regional AHC’s highest-screened areas are compared with indicators of at-risk areas and the overall six-county Denver Regional AHC area. This comparison evaluates whether the Denver Regional AHC serves neighborhoods that may benefit the most from community-based services to address unmet needs, following the understanding that socioeconomic factors contribute to almost 40% of health outcomes³.

Next, this report includes demographic and socioeconomic indicators collected during HRSN screenings. Some screening indicators are based on the individual (for example, education level or race) while others are based on the household (for example, household income or household size). To conclude, an
overview of the types and numbers of needs identified by screenings depicts the prevalence of unmet HRSNs in the Denver Regional AHC service area.

The “Current State Assessment of Service Availability and Accessibility” details an assessment of programs and services available to address needs, gaps and barriers to community-based services, contributing factors, strategies and key opportunities for improvement. Understanding the demographic and geographic diversity represented within the Denver region as well as the gaps and barriers to residents seeking services informs the Denver Regional AHC’s community-level quality improvement efforts, which are further explained in the Quality Improvement Plan report submitted to the Centers for Medicare and Medicaid Services.

Current State Assessment of Population Characteristics and Community Needs

Population Characteristics

Complex, interrelated factors influence a community's overall health and well-being. When evaluated across systems, socioeconomic factors contribute to approximately 40% of health outcomes compared with only 30% from health behaviors, 20% from clinical care and 10% from physical environment (Figure 2).³ By adapting a method to identify people who have many HRSNs and require high-cost health care called hot-spotting⁴ and social vulnerability indexing⁵, this report evaluates the Denver Regional AHC’s effectiveness in reaching households that may benefit most from community-based services based on demographic and socioeconomic risk indicators collected in 2019 American Community Survey data. Furthermore, this Gap Analysis assesses whether the Denver Regional AHC clinical and community partners are well-positioned in the region to reach and serve households with potentially unmet HRSNs.

---


In Table 1, demographic and socioeconomic indicators of Denver Regional AHC neighborhoods with higher screening rates are compared with:

a) Neighborhoods that may be considered at-risk for higher unmet HRSNs based on their demographic and socioeconomic characteristics.
b) Neighborhoods across the entire six-county Denver Regional AHC area.

These comparisons can reveal whether the Denver Regional AHC serves neighborhoods more similar to the general population or neighborhoods that may have increased risk of unmet HRSNs.

Neighborhoods served by Denver Regional AHC with demographic and socioeconomic indicators that most closely match those of at-risk neighborhoods are shaded in green. Neighborhoods with characteristics more similar to the general population are shaded in yellow. Neighborhoods with characteristics that fall somewhere in between at-risk neighborhoods and the greater region are shaded in grey. For example, 15% of households in Denver Regional AHC high-screened tracts reported income of less than the federal poverty level, which is nearly identical to the 16% exhibited in at-risk tracts, compared with 9% in the general population.

This report does not claim that these characteristics define an individual or household as vulnerable or at-risk. People are capable and resilient. Multigenerational households can benefit families. Being an older
adult or someone with a disability does not mean an individual is dependent. The demographic and socioeconomic indicators of Table 1 are included with the understanding that complex physical, social and economic factors affect an individual’s access to basic resources and their overall health. However, it is often people within these demographics or socioeconomic situations who experience more negative health outcomes⁶, and thus the Denver Regional AHC tries to better serve such community members in its efforts toward health equity.

## Table 1. Demographic and socioeconomic indicators that may contribute to health-related outcomes compared across Denver Regional AHC-high screened tracts, at-risk tracts and the total Denver Regional AHC six-county area, American Community Survey, 2020. Green-shaded indicator represents neighborhoods served by the Denver Regional AHC that have characteristics that most closely match

<table>
<thead>
<tr>
<th>Indicator</th>
<th>At-risk tracts</th>
<th>High-screened tracts</th>
<th>All tracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>717,871</td>
<td>663,376</td>
<td>2,832,969</td>
</tr>
<tr>
<td>Total households</td>
<td>247,730</td>
<td>255,437</td>
<td>1,088,718</td>
</tr>
<tr>
<td>Mean household size</td>
<td>2.9</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Percent of household with families</td>
<td>63%</td>
<td>57%</td>
<td>64%</td>
</tr>
<tr>
<td>Percent of grandparents with grandchildren under 18 living with their own grandchildren</td>
<td>5%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Percent of single-person households</td>
<td>28%</td>
<td>32%</td>
<td>27%</td>
</tr>
<tr>
<td>Percent of households with income below poverty level during the last 12 months</td>
<td>16%</td>
<td>15%</td>
<td>9%</td>
</tr>
<tr>
<td>Percent of unemployed individuals</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Percent of employed individuals</td>
<td>66%</td>
<td>67%</td>
<td>69%</td>
</tr>
<tr>
<td>Percent of individuals born outside the U.S.</td>
<td>23%</td>
<td>18%</td>
<td>12%</td>
</tr>
<tr>
<td>Percent of persons who speak English less than ‘very well’</td>
<td>18%</td>
<td>13%</td>
<td>7%</td>
</tr>
<tr>
<td>Percent Latinx/Hispanic</td>
<td>49%</td>
<td>40%</td>
<td>22%</td>
</tr>
<tr>
<td>Percent of African American individuals</td>
<td>11%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>Percent of households rent burdened (30% or more of household income spent on rent in the past 12 months)</td>
<td>57%</td>
<td>54%</td>
<td>48%</td>
</tr>
<tr>
<td>Percent of individuals with Medicaid coverage</td>
<td>33%</td>
<td>29%</td>
<td>17%</td>
</tr>
<tr>
<td>Percent of individuals 60 and over</td>
<td>15%</td>
<td>17%</td>
<td>19%</td>
</tr>
<tr>
<td>Percent of individuals younger than 18</td>
<td>26%</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>Percent of individuals with less than a high school education</td>
<td>23%</td>
<td>18%</td>
<td>9%</td>
</tr>
<tr>
<td>Percent of individuals with a disability</td>
<td>11%</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>Percent of households with cash public assistance or Supplemental Nutrition Assistance Program (SNAP)</td>
<td>16%</td>
<td>14%</td>
<td>7%</td>
</tr>
</tbody>
</table>
those of at-risk neighborhoods. Yellow-shaded indicator represents neighborhoods served by the Denver Regional AHC that have characteristics more similar to the general population. Grey-shaded indicator represents neighborhoods served by the Denver Regional AHC that have characteristics in between those of at-risk neighborhoods and of the general population in the Denver Regional AHC area. Detail on data methodology is included in Appendix A.

**Result 1:** This analysis indicates the Denver Regional AHC meets the goal of serving neighborhoods that may benefit the most from community-based services to address HRSNs. Specifically, the Denver Regional AHC serves neighborhoods with a higher proportion of the following individuals and households, compared with the general population (Table 1):

- Households with Medicaid health insurance.
- Households who are rent-burdened.
- Households receiving Supplemental Nutrition Assistance Program (SNAP) or other public benefits.
- Households identifying as Latinx/Hispanic.
- Individuals with less than a high school education.
- Individuals with a disability.
- Households with income below the poverty level.
- Households identifying as African American.

The poverty level does not relate to actual living expenses for a household. The 2021 federal poverty level for family of four was $26,500\(^7\), a meager income to support a household of any number of people in the Denver metro area. However, the DRCOG AHC project team believes in the general utility of the poverty level indicator.

Compared with at-risk tracts, the Denver Regional AHC does not serve as many neighborhoods with grandparents living with grandchildren or households with individuals under 18 years of age, although the Denver Regional AHC serves neighborhoods with a slightly greater proportion of these households than the general population.

Denver Regional AHC serves neighborhoods with a proportion of older adults similar to the general population (17% within the Denver Regional AHC area compared with 19% of the general population). By comparison, the share of the population in at-risk tracts classified as older adults (age 60 and older) is only 15%. As the Area Agency on Aging for the Denver region, DRCOG is responsible for the

---

establishment and continued support of a comprehensive, coordinated system of community-based services to meet the needs of the region’s older adults.

While African American households make up 5% of the general population, African American households make up 11% of at-risk tracts and 9% of neighborhoods served by the Denver Regional AHC. This result is an improvement of three percentage points from the Year 3 gap analysis result and one percentage point from the Year 4 gap analysis. It demonstrates the ongoing success of the Denver Regional AHC in continuing efforts to improve its service to African American households.

**Result 2: Opportunities for greatest improvement to reach more:**

- Percent of unemployed individuals.
- Percent of individuals born outside the U.S.
- Percent of households with families.

The Denver Regional AHC serves neighborhoods somewhere between at-risk tracts and the general population for those born outside of the United States, multigeneration households and older adult households. Through continued expansion of clinical partnerships to contact beneficiaries digitally in Year 5, the Denver Regional AHC was able to improve and reach more of these individuals and households.

In addition to the American Community Survey’s five-year rolling average data, the HRSN screening tool collects demographic and economic information with corresponding HRSNs (Table 2). Demographic and economic information allows the Denver Regional AHC project team to better understand the characteristics of individuals and households screened with unmet needs.

In an effort toward person-centeredness, the Denver Regional AHC allows individuals to refuse screening questions. For example, a person does not have to answer if they do not identify within the screening’s current binary gender responses or with the race or ethnicity categories provided. Therefore, demographic and economic data collected via HRSN screenings is not complete but provides a foundational overview.
### HRSN screenings: demographic/socioeconomic indicators

<table>
<thead>
<tr>
<th></th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age: Median</strong> (interquartile range)</td>
<td>16.2 years (8.7, 39.5 years)</td>
</tr>
<tr>
<td>Female</td>
<td>59%</td>
</tr>
<tr>
<td>Male</td>
<td>41%</td>
</tr>
<tr>
<td><strong>Household size: mean (standard deviation)</strong></td>
<td>4.0 (2.0)</td>
</tr>
<tr>
<td><strong>Race: Note screening allows multiple selections</strong></td>
<td></td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>4.9%</td>
</tr>
<tr>
<td>Asian</td>
<td>2.6%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>12.9%</td>
</tr>
<tr>
<td>Native Hawaiian/Other Pacific Islander</td>
<td>0.6%</td>
</tr>
<tr>
<td>White</td>
<td>68.0%</td>
</tr>
<tr>
<td>Other</td>
<td>14.3%</td>
</tr>
<tr>
<td>No answer</td>
<td>33.8%</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>Hispanic, Latinx or Spanish Origin</td>
<td>63.8%</td>
</tr>
<tr>
<td>No answer</td>
<td>21.7%</td>
</tr>
<tr>
<td><strong>Education: Of those 18 and older</strong></td>
<td></td>
</tr>
<tr>
<td>No school or only kindergarten</td>
<td>0.9%</td>
</tr>
<tr>
<td>Grades 1 through 8</td>
<td>5.3%</td>
</tr>
<tr>
<td>Grades 9 through 11 (some high school)</td>
<td>17.2%</td>
</tr>
<tr>
<td>Grade 12 or General Educational Development diploma (high school graduate, diploma or alternative credential)</td>
<td>38.0%</td>
</tr>
<tr>
<td>College (one year to three years)</td>
<td>26.8%</td>
</tr>
<tr>
<td>College (four years or more)</td>
<td>11.7%</td>
</tr>
<tr>
<td>No answer</td>
<td>37.8%</td>
</tr>
<tr>
<td><strong>Household Income</strong></td>
<td></td>
</tr>
<tr>
<td>Less than $10,000</td>
<td>32.5%</td>
</tr>
<tr>
<td>$10,000 to less than $15,000</td>
<td>12.0%</td>
</tr>
<tr>
<td>$15,000 to less than $20,000</td>
<td>10.8%</td>
</tr>
<tr>
<td>$20,000 to less than $25,000</td>
<td>12.6%</td>
</tr>
<tr>
<td>$25,000 to less than $35,000</td>
<td>15.4%</td>
</tr>
<tr>
<td>$35,000 to less than $50,000</td>
<td>11.0%</td>
</tr>
<tr>
<td>$50,000 to less than $75,000</td>
<td>4.2%</td>
</tr>
<tr>
<td>$75,000 or more</td>
<td>1.4%</td>
</tr>
<tr>
<td>No answer</td>
<td>35.0%</td>
</tr>
</tbody>
</table>
Table 2. Demographic and socioeconomic indicators collected via health-related social need screenings completed by Denver Regional AHC clinical partners, project-to-date (May 1, 2018 - Jan. 31, 2022).

Table 2 presents project-to-date screening data (May 1, 2018-Jan. 31, 2022) to conclude that the Denver Regional AHC serves the populations outlined in results 3-15.

Result 3: More children than any other age group (16.2 median age).

Interquartile range explanation (Table 2): The median age of screened individuals is 16.2 indicating that half of screenings were of an individual younger than 16.2 years and half were of an individual older than 16.2 years. The 25th percentile is 8.7 years, meaning that one quarter of screened individuals were younger than 8.7 years old. The 75th percentile is 39.5 years, meaning that one quarter of screened individuals were older than 39.5. A median age of 16.2 years indicates that most screenings were completed for children. The interquartile range of 8.7 and 39.5 years further demonstrates the dataset represents a younger population; half of screened individuals were between 8.7 and 39.5 years old.

Result 4: More women than men (59% vs. 41%).

Result 5: An average household size of four people, indicating that multiple individuals within a household are likely affected by identified HRSNs such as food security, housing security and quality, transportation, utility and safety needs.

Result 6: A large majority of individuals who identified as white or Hispanic/Latinx/Spanish (68% white; 63.8% of Hispanic, Latinx or Spanish origin). 12.9% identify as Black/African American while other minority communities were less represented: 4.9% American Indian/Alaska Native and 2.6% Asian. 33.8% and 21.7% did not respond to race and ethnicity screening questions. The increase from Year 4 to Year 5 in individuals not responding to race and ethnicity questions is likely due to the expansion of clinical partnerships that included digital screenings that did not require individuals to respond.

Result 7: A varied population in terms of education level (of those 18 and older). 23.4% report less than a high school education. 64.8% report educational attainment between a high school degree and some years of college (38% high school diploma/General Educational Development diploma; 26.8% one to three years of college). Only 11.7% reported four years or more of college.

Result 8: A majority of households have incomes lower than the poverty level (approximately 67.9%, at $26,500 per year assuming an average household of four). Only 5.6% of households reported annual income greater than $50,000.

Overall, the demographic and economic information gathered during HRSN screenings indicates the Denver Regional AHC serves a majority of multiperson households; more white, Hispanic/Latinx
individuals than those from other races/ethnicities; households with a variety of educational levels; and mostly households near or below the poverty level. Further, compared with Year 4, the population served in Year 5 represents a small increase in the number of households who identify as Black or African American and Hispanic, Latinx or Spanish origin, and a large increase in individuals who have less than a high school education. In the next section, screening results depict the types and prevalence of needs identified for individuals and households screened for HRSNs in year five.

Community Needs: Prevalence of Health-Related Social Needs

**Screenings and navigations by year**

![Bar chart showing total screenings, screenings with 1 or more needs, and total navigations by year from 2018-2019 to 2021-2022 Partial.](chart)

**Figure 3.** Total screenings and navigation by year. (Year 2: May 1, 2018 - April 30, 2019; Year 3: May 1, 2019 to April 30, 2020; Year 4: May 1, 2020 to April 30, 2021; Year 5: May 1, 2021 to January 31, 2022).
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Needs</td>
<td>Percent</td>
<td>Needs</td>
<td>Percent</td>
</tr>
<tr>
<td>Total Screenings</td>
<td>13,002</td>
<td></td>
<td>14,692</td>
<td></td>
</tr>
<tr>
<td>Screenings: 0 Needs</td>
<td>8,625</td>
<td>66.3%</td>
<td>9,900</td>
<td>67.4%</td>
</tr>
<tr>
<td>Screenings: 1 or More Needs</td>
<td>4,377</td>
<td>33.7%</td>
<td>4,792</td>
<td>32.6%</td>
</tr>
<tr>
<td>Screenings: 1 Need</td>
<td>2,508</td>
<td>19.3%</td>
<td>2,814</td>
<td>19.2%</td>
</tr>
<tr>
<td>Screenings: 2 Needs</td>
<td>1,176</td>
<td>9.0%</td>
<td>1,326</td>
<td>9.0%</td>
</tr>
<tr>
<td>Screenings: 3 Needs</td>
<td>525</td>
<td>4.0%</td>
<td>544</td>
<td>3.7%</td>
</tr>
<tr>
<td>Screenings: 4 Needs</td>
<td>163</td>
<td>1.3%</td>
<td>104</td>
<td>0.7%</td>
</tr>
<tr>
<td>Screenings: 5 Needs</td>
<td>5</td>
<td>0.0%</td>
<td>4</td>
<td>0.0%</td>
</tr>
<tr>
<td>Screenings: Housing Needs</td>
<td>1,586</td>
<td>12.2%</td>
<td>1,564</td>
<td>10.6%</td>
</tr>
<tr>
<td>Screenings: Housing Needs Security</td>
<td>1,008</td>
<td>7.8%</td>
<td>875</td>
<td>6.0%</td>
</tr>
<tr>
<td>Screenings: Housing Needs Quality</td>
<td>744</td>
<td>5.7%</td>
<td>847</td>
<td>5.8%</td>
</tr>
<tr>
<td>Screenings: Food Needs</td>
<td>2,978</td>
<td>22.9%</td>
<td>3,354</td>
<td>22.8%</td>
</tr>
<tr>
<td>Screenings: Transportation Needs</td>
<td>1,543</td>
<td>11.9%</td>
<td>1,540</td>
<td>10.5%</td>
</tr>
<tr>
<td>Screenings: Utilities Needs</td>
<td>920</td>
<td>7.1%</td>
<td>998</td>
<td>6.8%</td>
</tr>
<tr>
<td>Screenings: Safety Needs</td>
<td>85</td>
<td>0.7%</td>
<td>78</td>
<td>0.5%</td>
</tr>
<tr>
<td>Average Number of Needs</td>
<td>0.55</td>
<td></td>
<td>0.51</td>
<td></td>
</tr>
<tr>
<td>Eligible for Navigation</td>
<td>1494</td>
<td>11.5%</td>
<td>997</td>
<td>6.8%</td>
</tr>
</tbody>
</table>

Table 3. Prevalence of health-related social needs identified by the AHC model screening tool. (Year 2: May 1, 2018-April 30, 2019; Year 3: May 1, 2019 to April 30, 2020; Year 4: May 1, 2020 to April 30, 2021; Year 5: May 1, 2021 to January 31, 2022). Higher risk is defined by having any number of health-related social needs and two or more emergency department visits in the last 12 months.
Result 9: More than half of screenings identified zero unmet HRSNs (54%), meaning that almost half of screenings accounted for all identified needs across the region.

Result 10: Of screenings with identified needs, 23% of households reported only one unmet HRSN.

Result 11: Food security is the top-reported unmet HRSN (32% of screenings with identified needs). Housing (security/quality, 23%) and transportation (15%) needs were reported at similar rates and were identified at approximately half the rate of food security.

Utilities are consistently the fourth most frequently reported unmet HRSN (10% of screenings with identified needs).

Safety-related needs consistently report at the bottom tier of needs (1% of screenings with identified needs). Safety needs are underreported, so this is only a cursory baseline of the potential need in the region.

Result 12: In Year 5, reports of housing security needs rose to 15.2% of all screenings compared to 11.5% that reported housing quality issues. Reports of housing security concerns surged seven percentage points from Year 2, indicating an increased need for housing since the beginning of screening (Table 3).

Result 13: Only 11% of total screenings were of high-risk individuals. However, of screenings with identified HRSNs, 23% were classified as high-risk. This suggests that individuals with HRSNs are more likely to visit emergency departments for medical treatment.

Result 14: Comparing project years, other than housing security, the trends in the number and types of identified HRSNs are similar. These trends persist despite various clinical partners, locations and differences in start-up screening periods. A large increase in reports of all needs began in year’s four and five but the trend still occurred across all sites. This suggests consistent unmet HRSNs across the region within the demographic and socioeconomic neighborhoods the Denver Regional AHC serves (Figures 4 and 5).

Result 15: Consistent with previous project years, the Denver Regional AHC results coincide with other Colorado screening trends. Rocky Mountain Health Plans manages the Accountable Health Communities model on Colorado’s Western Slope. As in the Denver region, Rocky Mountain Health Plans identified food security as the top reported need (21.5% of total screenings) followed by housing security/quality
(15.2%), transportation (10.3%), utilities (7.1%) and safety (2.8%)\(^8\). These results demonstrate consistent unmet HRSNs both in urban and rural areas.

Figure 4. Comparison of the number of health-related social needs identified per screening. (Year 2: May 1, 2018-April 30, 2019; Year 3: May 1, 2019 to April 30, 2020; Year 4: May 1, 2020 to April 30, 2021; Year 5: April 1, 2021 to January 31, 2022).

\(^{8}\) Rocky Mountain Health Plans. (2020, February). Accountable Health Communities Model Update. [PDF].
Figure 5. Comparison of the types of health-related social needs identified per screening. (Year 2: May 1, 2018-April 30, 2019; Year 3: May 1, 2019 to April 30, 2020; Year 4: May 1, 2020 to April 30, 2021; Year 5: May 1, 2021 to January 31, 2022).

Current State Assessment of Service Availability and Accessibility

This section introduces an assessment of the programs and services available to address HRSNs within the area served by the Denver Regional AHC. It represents the knowledge and resources used by the Denver Regional AHC clinical and community partners to address HRSNs. The assessment is not all-encompassing but represents the foundation upon which the Denver Regional AHC work groups was built to identify, prioritize and close gaps in community-based services.

For each HRSN, the following section includes a summary of the prioritized gaps, an assessment of current programs and services, gaps and barriers to service, and key strategies and opportunities for improvement. The Denver Regional AHC project team organized this assessment, but the content originates from Denver Regional AHC clinical and community partners as detailed under each HRSN. This assessment informs the Denver Regional AHC’s advisory board and project team efforts.
Food Security

Overview of Identified Gaps and Barriers to Service and Opportunities for Improvement

Community-facing staff who screen and navigate individuals and households to address unmet needs were surveyed about reported gaps and barriers to receiving service and key strategies and opportunities for improvement. Some of these identified gaps were particularly exacerbated by the COVID-19 pandemic and resulting public health emergency. Identified gaps and barriers to service include:

- Challenges getting to food resources.
- Dietary, cultural or taste needs and preferences.
- Lack of fresh foods available at food banks.
- Hours of operation of food pantries and resources.
- Language barriers.
- Hesitancy among immigrants to use food banks if they don’t have legal documents.

Suggested strategies and opportunities for improvement include:

- Increase availability services to food bank delivery.
- Establish more mobile food pantries.
• Provide funding for gift cards so clients with cultural and dietary sensitivities can purchase their own food.
• Increase supply of fresh foods at food banks.
• Increase number of stores offering grocery delivery using EBT.
• Enhance the ability of clients to order groceries who may not have access to a smartphone or computer.

Baseline Data and Key Metrics

32% of total screenings identified a food security need and 69% of screenings with identified needs reported a food security need, making food security the most prevalent need.

Assessment of Available Programs and Services

A list of primary resources Denver Regional AHC partners use to address food needs, organized in the Denver Regional AHC community resource inventory:

Public Programs:

• Commodity Supplemental Food Program.
• Colorado Works/Temporary Assistance for Needy Families (TANF).
• DoubleUp Food Bucks.
• Free and reduced-cost school lunches.
• Supplemental Nutrition Assistance Program (SNAP).
• The Emergency Food Assistance Program (TEFAP).
• Women, Infants and Children program (WIC).

Food Pantries:

• Adams County Food Bank.
• Bienvenidos Food Bank.
• Community Ministry of Southwest Denver.
• Denver Inner City Parish.
• Double Up Colorado.
• Food Bank of the Rockies.
• Jewish Family Service of Colorado.
• Little Flower Assistance Center.
• Metro Caring.
• Restoration Outreach.
• Southwest Improvement Council.
• The Action Center.
The Salvation Army Aurora Corps.

Meal Delivery Programs:

- City and County of Broomfield Meals on Wheels.
- Project Angel Heart.
- Town of Littleton Cares (TLC) Meals on Wheels.
- Volunteers of America.

Community-based organizations providing services or referrals:

- Benefits in Action.
- Broomfield Fellowship in Serving Humanity (FISH).
- DRCOG Area Agency on Aging.
- Congregate dining centers (for example, Volunteers of America).
- Hunger Free Colorado.
- Mile High United Way 2-1-1 Help Center.
- Seniors’ Resource Center.
Housing Security and Quality

Summary
The work group focused on one area in particular: What can be done over a longer-term period to increase affordability as the economy rebounds from the shock of the public health emergency? As a result, and based on the data from AHC screenings, reports and suggestions from client-staff, and the understanding of the fundamental link between housing and health, in partnership with other DRCOG programs the Denver Regional AHC will devote its Year 5 Quality Improvement effort to addressing housing security in the Denver Regional AHC target area.

Baseline Data and Key Metrics
22.7% of total screenings identified a housing need; 15.2% of those are security-related and 11.5% are quality-related. 50% of screenings with identified needs reported housing needs.

Assessment of Available Programs and Services
A list of primary resources Denver Regional AHC partners use to address housing-related needs, organized in the Denver Regional AHC community resource inventory:

Housing Security-Related Resources

- Local housing authorities.
- Community-based organizations offering housing counseling, rental assistance and other services:
  - Aging Well Resource Center.
  - Almost Home.
  - Atlantis Community.
  - B-Konnnected.
  - Brothers Redevelopment.
  - Center for People with Disabilities.
  - City of Aurora Community Development Division.
  - Colorado Housing Search.
  - Denver County Temporary Rental and Utility Assistance.
  - DRCOG Area Agency on Aging.
  - Help and Hope Center.
  - Jewish Family Service of Colorado.
  - Mile High United Way 2-1-1 Help Center.
  - South Metro Housing Options.
- Shelters, drop-in and resource centers include:
  - Colorado Coalition for the Homeless.
  - Comitis Crisis Center.
Fourth-Year Gap Analysis

Denver Regional Council of Governments

Fifth-Year Gap Analysis

- Denver Human Services: Motel Vouchers.
- Denver Veterans Affairs Community Resource and Referral Center.
- Family Promise of Greater Denver.
- Family Tree.
- Haven of Hope.
- Lawrence Street Community Center.
- New Genesis.
- Sacred Heart House.
- Salvation Army.
- Samaritan House.
- Senior Support Services.
- The Gathering Place.
- Urban Peak.

Housing Quality-Related Resources

- Brothers Redevelopment.
- Colorado Department of Public Health and Environment.
- Colorado Legal Services.
- City of Denver Healthy Families Healthy Homes.
- Denver Urban Renewal Authority.
- Douglas County Department of Community Development.
- Energy Resource Center of Colorado.
- Home Builders Foundation.
- Rebuilding Together Metro Denver.
- Senior Hub.
- Volunteers of America Handyman Program.
- Weatherization programs including:
  - Arapahoe County Human Services.
  - Boulder County Housing Authority Longs Peak Energy Conservation.
  - Energy Outreach Colorado.
  - Energy Resource Center.
  - Low Income Energy Assistance Program (LEAP).
Utilities

Overview of Identified Gaps and Barriers to Service and Opportunities for Improvement

Community-facing staff who screen and navigate individuals and households to address unmet needs were surveyed by Denver Regional AHC staff about reported gaps in and barriers to service and key strategies and opportunities for improvement. Some of the identified gaps were particularly exacerbated by the COVID-19 pandemic and resulting public health emergency. An overview of these identified gaps and barriers to service include:

- Understanding the difference between LEAP and EOC bill payment help.
- Limited or no resources for water bill help.
- Difficulty identifying organizations that receive EOC funding and have funding available.
- Lack of knowledge of available utility resources.
- Difficult/confusing LEAP and EOC application processes.
- Lack of resources/fear for undocumented clients needing assistance.

Suggested strategies and opportunities for improvement include:

- Streamline EOC and LEAP applications into one application.
- Secure more funding and resources for water bill assistance.
- Enable the ability to apply for EOC bill payment assistance through EOC instead of partner organizations.
- Enable the ability of Medicaid clients to apply for LEAP through Colorado’s online benefits application website (PEAK).
- Treat internet access as a utility, since lack of internet is a major barrier to accessing all resources.

**Baseline Data and Key Metrics**

10.2% of total screenings identified a utility need, 22% of screenings with identified needs reported a utility need, making utility assistance the fourth most prevalent need.

**Assessment of Available Programs and Services**

A list of primary resources Denver Regional AHC partners use to address utility needs, organized in the Denver Regional AHC community resource inventory:

*Community-based programs:*

- Almost Home.
- Aurora Interfaith Community Services.
- Aurora Water Cares.
- Broomfield Fellowship in Serving Humanity (FISH).
- Catholic Charities and Community Services.
- Community Ministry of Southwest Denver.
- DRCOG Area Agency on Aging.
- Energy Outreach Colorado.
- Integrated Family Community Services.
- Senior Assistance Center.
- The Action Center.

*Public programs*

- Low-Income Energy Assistance Program (LEAP).
- Denver County Temporary Rental and Utility Assistance Program.
- Salvation Army.
- Xcel Energy.
Safety

Overview of Identified Gaps and Barriers to Service and Opportunities for Improvement

Community-facing staff who screen and navigate individuals and households to address unmet needs were surveyed by Denver Regional AHC staff about reported gaps in, and barriers to, service and key strategies and opportunities for improvement. Some of these identified gaps were particularly exacerbated by the COVID-19 pandemic and resulting public health emergency. Identified gaps and barriers to service include:

- Lack of knowledge/confidence among staff regarding handling safety-related situations.
- Lack of domestic violence shelter space.
- Stigma (taboo topic).
- Immigrants afraid to report abuse due to fear of law enforcement/U.S. Immigration and Customs Enforcement.
- Lack of cultural competency with other cultures related to domestic violence.

Suggested strategies and opportunities for improvement include:

- Increased funding and space for more domestic violence shelters.
- Cultural competency trainings for staff.
- Education/training on how to handle safety-related situations.
- Increasing awareness and understanding to break down barriers and decrease stigma.

Baseline Data and Key Metrics

1% of screenings with identified needs reported a safety need, 2% of screenings with identified needs reported a safety need, making safety the least reported need. Due to the nature of the need, the Denver Regional AHC project team believes the issue is underreported.

Assessment of Available Programs and Services

A list of primary resources Denver Regional AHC partners use to address safety-related needs, organized in the Denver Regional AHC community resource inventory:

Child and Adult Protective Services: Every county human services office within the region operates a child protective and adult protective services program for children and at-risk adults experiencing abuse or neglect.

Welfare checks: Every county sheriff’s office provides welfare checks for at-risk adults or individuals in imminent risk of mistreatment.

Hubs providing referrals to local organizations, programs and services:
• AARP Foundation ElderWatch.
• DRCOG Area Agency on Aging.
• Gateway Domestic Violence Services.
• National Domestic Violence Hotline.
• National Human Trafficking Hotline.
• Rape, Abuse and Incest National Network (RAINN) Hotline.
• Servicios de la Raza.
• Strong Hearts Helpline for Native Americans.
• Violence Free Colorado.
• The Blue Bench Sexual Assault Hotline.
• The Crisis Center Hotline.
• The Trevor Project Hotline.

Community-based programs providing direct services:

• Rose Andom Center.
• SafeHouse Denver, Inc.
Transportation

Overview of Identified Gaps and Barriers to Service and Opportunities for Improvement

Community-facing staff who screen and navigate individuals and households to address unmet needs were surveyed by Denver Regional AHC staff about reported gaps in and barriers to service and key strategies and opportunities for improvement. Some of the identified gaps were particularly exacerbated by the COVID-19 pandemic and resulting public health emergency. An overview of these identified gaps and barriers to service include:

- Unreliable transportation services.
- Limited resources for individuals who don’t have Medicaid, are not older adults or don’t have a disability.
- Lack of transportation for social-related needs.
- Lack of resources for car repair/car insurance/car payments, even when vehicle is needed for getting to and from work.
- Limited options within each transportation provider (for example, limited hours, days, trip reason or distance).
- Expense of public transportation.

Suggested strategies and opportunities for improvement include:
• Improve transportation reliability by holding transportation organizations accountable for late or missed rides.
• Increase funding and resources for transportation for social-related needs for individuals of all ages.
• Provide a free transit pass (EcoPass) to individuals participating in certain public assistance programs.
• Secure additional funding for vehicle repair for working individuals and families.
• Encourage transportation organizations to offer more flexibility with ride locations, hours and trip purpose.

Baseline Data and Key Metrics
15.1% of total screenings identified a transportation need. 33% of screenings with identified needs reported a transportation need, making transportation the third most prevalent need.

Assessment of Available Programs and Services
A list of primary resources Denver Regional AHC partners use to address transportation needs, organized in the Denver Regional AHC community resource inventory:

Community-based programs: In general, rides must be scheduled one week in advance. Due to limited capacity, most service providers prioritize medical and dental appointments with some availability for grocery store trips. Limited trips are available for daily living activities such as hair appointments or religious services.

• A Little Help.
• City and County of Broomfield – Easy Ride.
• City of Littleton – Omnibus.
• Denver Regional Mobility and Access Council.
• DRCOG Area Agency on Aging.
• Littleton Shopping Cart.
• Via Mobility Services.

Public programs: Regional Transportation District: Operates bus and rail services throughout the metro area with additional services and discounts for youth, individuals with disabilities and older adults.

• Access-a-Cab.
• Access-a-Ride.
• Fixed route
• LiVE program
• Senior Ride
Access2Care: For Denver Health patients only.

IntelliRide: Manages non-emergency medical and nonmedical transportation for Health First Colorado (Medicaid) members within the state.

Ride-hailing services: Lyft, Uber, HopSkipDrive
Part II: Community-level Quality Improvement Report

Partnership and Collaboration Activities

Objective: Reduce barriers and gaps to community-based services.

Measure 1: Percent of advisory board members who are satisfied with the operations and effectiveness of the Denver Regional AHC project (Denver Regional AHC advisory board satisfaction survey).

Measure 2: Percent of work group members who are satisfied with the effectiveness of work group activities (Denver Regional AHC work groups satisfaction survey).

Measure 3: Work group Progress Reports (completed work group Plan-Do-Study-Act worksheets).

Measure 4: Work group-specific evaluation (i.e., pre- and post-training surveys).

Measure 5: Partnership Impact Evaluation (work groups partnership impact evaluation surveys).
What are the roles and responsibilities for implementing activities? What is the expected timeline?

**Advisory Board**

The Denver Regional AHC project continues to be guided by its advisory board. The advisory board is composed of local and regional stakeholders, including representatives from all contracted clinical and community partner organizations. The advisory board meets quarterly, currently via a virtual platform, to review progress toward reducing barriers and gaps to community-based services.

Measure 1: Percent of advisory board members who are satisfied with the operations and effectiveness of the Denver Regional AHC project (Denver Regional AHC Advisory Board Satisfaction Survey). In July 2020, advisory board members completed the first annual Denver Regional AHC advisory board satisfaction survey. Out of 22 members who received the survey, 12 responded, representing a 55% response rate. Of the respondents, 91.66% agreed or strongly agreed with the following two prompts:

- “I am satisfied with the overall operations of the Denver Health AHC program including training, technical support and guidance, and partnership development.”
- “I am satisfied with the effectiveness of the Denver Regional AHC program to identify and address people’s social needs.”

**Appendix A: Technical and Quantitative Data**

**Community Profile: Denver Regional AHC Service Area Map**

Map 1. Denver Regional Accountable Health Community Service Area: Highest Concentrations of Screened Households: Constructed using a kernel density tool which determines the density of screenings per square mile. The four shades of color on the map show the various densities of screenings based on beneficiary addresses. Shades are delineated by quartiles, meaning that the lightest color represents 25% of screening density; the next shade represents 25% more of screening density and so forth up to 100%. Density screenings are used instead of specific beneficiary addresses to protect beneficiary identity and privacy. Addresses that listed P.O. boxes, homeless statuses or an invalid street name or ZIP code were omitted.

**Current State Assessment of Population and Community Needs**

**Identification of at-risk census tracts**

Using 2015-2019 American Community Survey Five-Year tract level estimates, Denver Regional AHC project team calculated 11 measures for each census tract in the regional AHC service area.
<table>
<thead>
<tr>
<th><strong>American Community Survey measure</strong></th>
<th><strong>American Community Survey description</strong></th>
<th><strong>ID</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent nonwhite/non-Hispanic</td>
<td>Percent of persons in the census tract that identify as nonwhite/non-Hispanic</td>
<td>B03002</td>
</tr>
<tr>
<td>Percent below poverty line</td>
<td>Percent of households in the census tract with income below the federal poverty line for the last 12 months</td>
<td>B17017</td>
</tr>
<tr>
<td>Percent older adults</td>
<td>Percent of persons 60 and over</td>
<td>B01001</td>
</tr>
<tr>
<td>Percent under 18</td>
<td>Percent of persons under 18 years old</td>
<td>B01001</td>
</tr>
<tr>
<td>Percent minority</td>
<td>Percent of persons who identify as a race other than white only</td>
<td>B02001</td>
</tr>
<tr>
<td>Percent low education</td>
<td>Percent of persons 25 and older with less than high school education</td>
<td>B06009</td>
</tr>
<tr>
<td>Percent without health insurance</td>
<td>Percent of persons without health insurance coverage</td>
<td>B27001</td>
</tr>
<tr>
<td>Percent with disability</td>
<td>Percent of persons with a disability</td>
<td>B18101</td>
</tr>
<tr>
<td>Percent on assistance</td>
<td>Percent of households with cash public assistance or Food Stamps/Supplemental Nutrition Assistance Program</td>
<td>B19058</td>
</tr>
<tr>
<td>Percent born outside of the United States</td>
<td>Percent of persons born outside of the United States, both naturalized U.S. citizens and not a U.S. citizen</td>
<td>B05002</td>
</tr>
<tr>
<td>Median portion of income to rent</td>
<td>Median gross rent as percentage of household income in the past 12 months</td>
<td>B25071</td>
</tr>
</tbody>
</table>

After constructing the above measures, census tracts in the top quartile for each measure were identified. If a census tract was in the top quartile for six or more of the above measures, it was identified as at-risk.

**Identification of high AHC screening density census tracts**

All addresses provided during screenings were geocoded to allow assignment to a census tract. Data for individuals that identified as homeless, provided a post office box or provided addresses that couldn’t be assigned to a known location were excluded.

Density of AHC screenings were calculated as AHC screenings per 1,000 population in each census tract. High screening areas were defined to include all census tracts with densities of screenings in the top quartile.
At-risk census tracts vs. high-screened Denver Regional AHC census tracts
The American Community Survey accounts for “foreign born” individuals. The Denver Regional AHC chooses person-centered language and opts for “individuals born outside the U.S.” in this report.

Appendix B: Qualitative Data

Current State Assessment of Service Availability and Accessibility

Qualitative Data Appendix

Disclaimer: Content in the Summary of Gaps and Barriers to Service is reported from the data sources listed during the specified dates. Content is not verified or altered for accuracy. It is included as a summary of the experiences of the contributors, and furthermore used to guide the direction of priority-setting for the work group.

Between March 15, 2021, and March 22, 2021, Denver Regional AHC staff conducted an electronic survey to update the data from the Year 3 Gap Analysis to identify gaps and barriers to services to address in Year 5. Survey participants were 60 community-facing staff who screen and navigate individuals and households were surveyed and 30 responses were received and analyzed by Denver Regional AHC staff. These individuals represent six clinical partner sites that administer screenings (Denver Health Sam Sandos Westside Family Health Center, Denver Health Emergency Department, Doctors Care, Tri-County Health Department and STRIDE Community Health Center).