IBM Watson Health™

# Community Health Needs Assessment of Northeast Georgia

## District 2 Public Health
## Habersham Medical Center
## Northeast Georgia Medical Center Gainesville
## Northeast Georgia Medical Center Braselton
## Northeast Georgia Medical Center Barrow
## Northeast Georgia Medical Center Lumpkin
## Stephens County Hospital

***Approved by:***

**The Hospital Authority of Habersham County, Georgia, September 17th, 2019, posted to www.habershammedical.com**
**Northeast Georgia Medical Center Board of Directors, August 27, 2019, posted to www.nghs.com**
**Northeast Georgia Health System Board of Directors, September 24, 2019, posted to www.nghs.com**
**Stephens County Hospital Authority Board, September 16, 2019, posted to stephenscountyhospital.com**

# Table of Contents

## Executive Summary

The following organizations have partnered and collaborated to conduct a Community Health Needs Assessment (CHNA) for communities they (CHNA Partners) serve in northeastern Georgia:

- District 2 Public Health
- Habersham Medical Center
- Northeast Georgia Medical Center Gainesville
- Northeast Georgia Medical Center Braselton
- Northeast Georgia Medical Center Barrow
- Northeast Georgia Medical Center Lumpkin
- Stephens County Hospital

These CHNA Partners understand the importance of serving the health needs of their communities. In order to do that successfully, they must first take a comprehensive look at the issues that patients, families, and neighbors face when making healthy life choices and health care decisions.

Beginning in November 2018, the CHNA Partners began the process of assessing the health needs of the communities served by the hospital facilities and the health department with a collaborative community health needs assessment. IBM Watson Health (Watson Health) was engaged to help collect and analyze the data for this process, and to compile a final report to be made publicly available by September 30, 2019.

The communities served by each of the CHNA Partners overlapped and combined to include all or part of 16 counties in northeast Georgia. While a collaborative approach was utilized, a needs analysis was conducted for each CHNA Partner's defined community; community-specific subsections are included in this report. Northeast Georgia Health System (NGHS) defined four communities served by their four hospital facilities: NGHS Greater Braselton Service Area (GBSA), NGHS Primary Service Area (PSA), NGHS Secondary Service Area 400 (SSA 400), and NGHS Secondary Service Area North (SSA North).

Watson Health performed a quantitative and a qualitative assessment. Over 129 public health indicators were examined, and a benchmark analysis of the data was conducted. The analysis compared community values to the overall state of Georgia and United States (U.S.) values. For the qualitative assessment, input from over 500 people was included via several different qualitative methods; focus groups, interviews, in-person surveys, and listening sessions. Participants in these sessions included District 2 Public Health as well as individuals or organizations serving and/or representing the interests of medically underserved, low-income, and minority populations in the community.

Needs were first identified when an indicator for a community was worse than the Georgia state benchmark. A need differential analysis conducted on all of the low performing indicators determined the relative severity by using the percent difference from benchmark. The outcome of this quantitative analysis aligned with the qualitative findings to create a list of health needs in the community. Each health need received

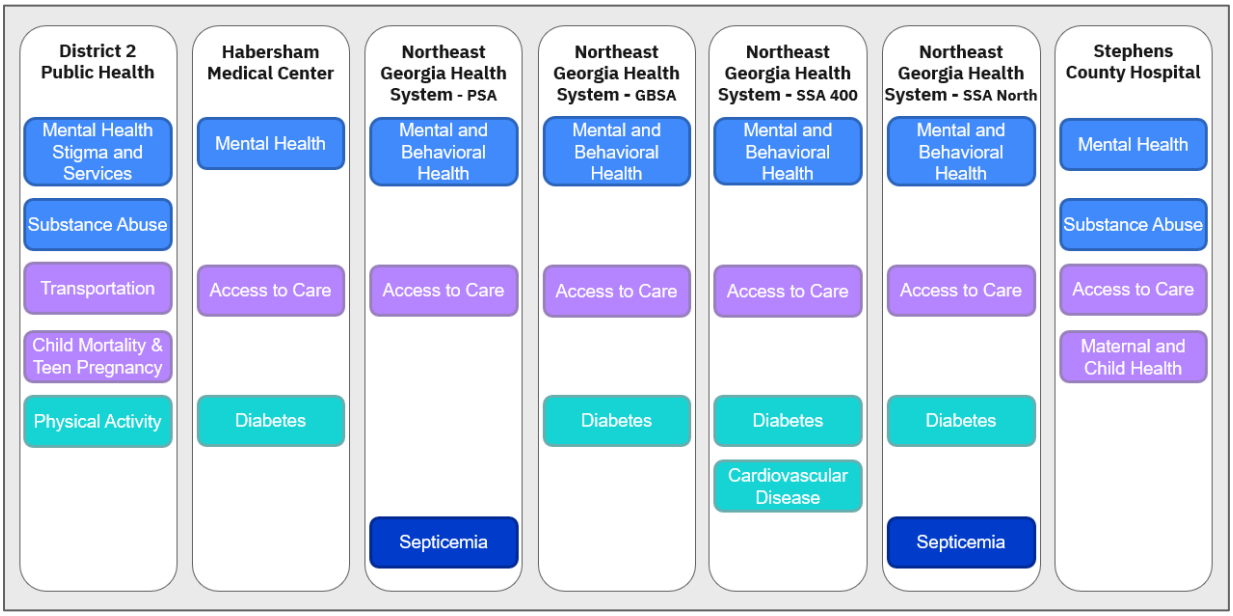
assignment into one of four quadrants in a health needs matrix. The matrix shows the convergence of needs identified in the qualitative data (interview and focus group feedback) and quantitative data (health indicators) and identifies the top health needs for each community.

In June 2019, a session was held with the CHNA Partners and their community advisors to identify and prioritize the significant health needs for each CHNA Partner's community. The meeting was moderated by Watson Health and included an overview of the CHNA process for the communities of northeast Georgia; the methodology for determining the top health needs; and the selection and prioritization of significant health needs for the communities served.

The group was provided an overview of the CHNA process undertaken for northeast Georgia. The participants reviewed the CHNA findings and the Health Needs Matrix for each community. Working in community specific work groups, they identified the significant community health needs to prioritize. The community work group participants used criteria selected by the CHNA Partners to score each community's significant health needs. The list of significant health needs for each community was then prioritized based on the overall scores.

In the prioritization session described above, each community work group was tasked with recommending up to five (5) priority needs their respective CHNA Partner should address through their CHNA implementation strategies. After each work group established their recommendations, the groups reconvened to review their recommended priorities across the communities. Common priorities were identified, and collectively the group discussed areas of potential collaboration and synergies in implementation efforts between the CHNA Partners. The recommended priority health needs are as follows:

*Recommended Priority Health Needs*




*Note: priority needs that are common across communites are shaded based on their commonality by category*

*Source: IBM Watson Health, 2019*

A description of these needs is included in the body of this report. The hospital facilities will each develop implementation strategies with specific initiatives to address the chosen health needs, to be completed and adopted by each hospital partner by February 15, 2020.

An evaluation of each hospital's implementation strategy drafted after the 2016 assessment is included in **Appendix I** of this document.

The Community Health Needs Assessment for northeast Georgia has been presented and approved by each hospital partners' governing body, and the full assessment is available to the public at no cost for download and comment via each CHNA Partner's website:

- District 2 Public Health: **http://phdistrict2.org/**
- Habersham Medical Center: **tellus@hcmcmed.org**
- Northeast Georgia Health System: **http://www.nghs.com/community-benefit-resources**
- The Stephens County Hospital: **stephenscountyhospital.com**

The CHNA partners collaborated with Watson Health to develop an interactive Tableau dashboard that displays the quantitative data collected as part of the 2019 CHNA. The Community Health Data provides access to over 120 county-level public health indicators as well as proprietary Watson Health estimates for demographics, community need, disease prevalence, insurance coverage, and emergency department visits. The dashboard is available to the community at **http://www.nghs.com/community-benefit-resources**.

This assessment and the corresponding implementation strategies are intended to meet the requirements for hospital community benefit planning and reporting as set forth in federal law, including but not limited to the Internal Revenue Code Section 501(r).

## Community Health Needs Assessment Requirement

As a result of the Patient Protection and Affordable Care Act (PPACA), all tax-exempt organizations operating hospital facilities are required to assess the health needs of their community through a Community Health Needs Assessment (CHNA) once every three years.

The written CHNA Report must include descriptions of the following:

- The community served and how the community was determined
- The process and methods used to conduct the assessment, including sources and dates of the data and other information as well as the analytical methods applied to identify significant community health needs
- How the organization took into account input from persons representing the broad interests of the community served by the hospital, including a description of when and how the hospital consulted with these persons or the organizations they represent
- The prioritized significant health needs identified through the CHNA as well as a description of the process and criteria used in prioritizing the identified significant needs
- The existing healthcare facilities, organizations, and other resources within the community available to meet the significant community health needs
- An evaluation of the impact of any actions that were taken, since the hospital facility(s) most recent CHNA, to address the significant health needs identified in that last CHNA

PPACA also requires hospitals to adopt an Implementation Strategy to address prioritized community health needs identified through the assessment. An Implementation Strategy is a written plan that addresses each of the significant community health needs identified through the CHNA and is a separate but related document to the CHNA report.

The written Implementation Strategy must include the following:

- List of the prioritized needs the hospital plans to address and the rationale for not addressing other significant health needs identified
- Actions the hospital intends to take to address the chosen health needs
- The anticipated impact of these actions and the plan to evaluate such impact (e.g. identify data sources that will be used to track the plan's impact)
- Programs and resources the hospital plans to commit to address the health needs
- A description of any planned collaboration between the hospital and other facilities or organizations in addressing the health needs

## CHNA Overview, Methodology, and Approach

The following organizations have partnered and collaborated to conduct a CHNA for communities they serve in northeastern Georgia:

- District 2 Public Health
- Habersham Medical Center
- Northeast Georgia Medical Center Gainesville
- Northeast Georgia Medical Center Braselton
- Northeast Georgia Medical Center Barrow
- Northeast Georgia Medical Center Lumpkin
- Stephens County Hospital

These CHNA Partners began the 2019 CHNA process in November 2018 and partnered with Watson Health to complete a CHNA for their combined communities.

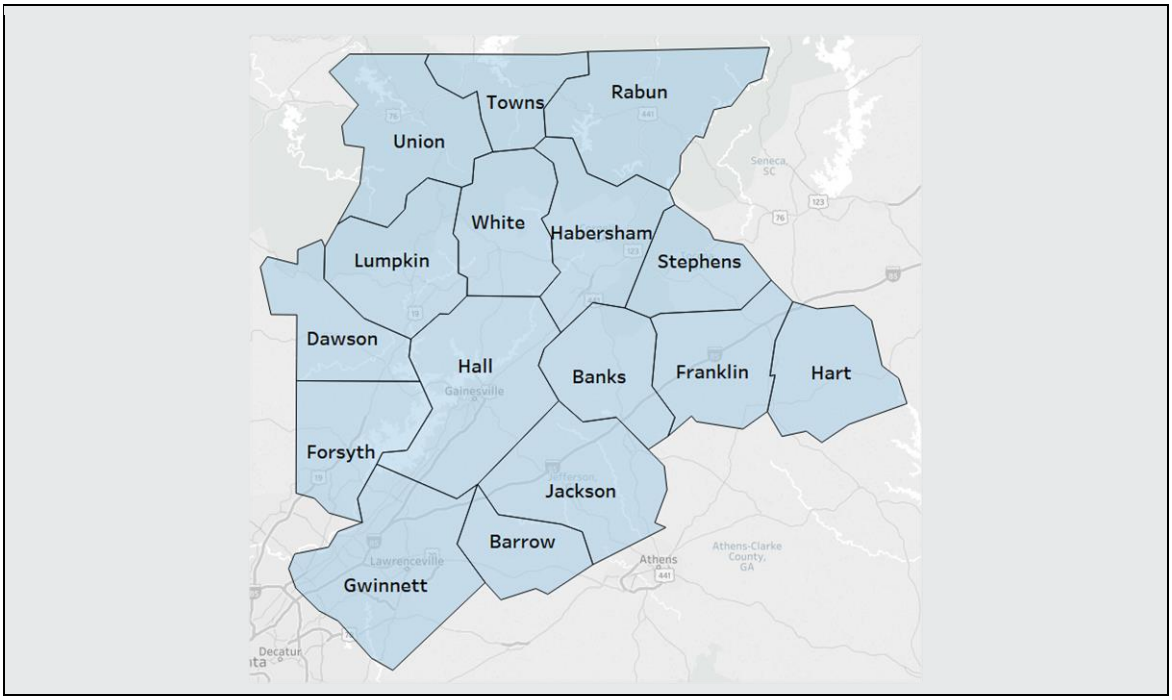
*Consultant Qualifications & Collaboration*

Watson Health delivers analytic tools, benchmarks, and strategic consulting services to the healthcare industry, combining rich data analytics in demographics, including the Community Needs Index, planning, and disease prevalence estimates, with experienced strategic consultants to deliver comprehensive and actionable Community Health Needs Assessments.

*Community Served Definition*

The communities served by each of the CHNA Partners overlap and combined include all or part of sixteen counties in northeast Georgia. Given the overlap between their respective communities, the CHNA Partners collaborated to conduct this assessment of the northeast Georgia region. While a collaborative approach was utilized, a needs analysis was conducted for each Partner's defined community and community-specific subsections are included in this report. Northeast Georgia Health System (NGHS) defined four communities served by their four hospital facilities: NGHS Greater Braselton Service Area (GBSA), NGHS Primary Service Area (PSA), NGHS Secondary Service Area 400 (SSA 400), and NGHS Secondary Service Area North (SSA North).

*Combined Community Served Map*
*Northeast Georgia Region*




*Source: Watson Health, 2019*

*Counties Included in Combined Communities Served*

| Counties | Collaborating Partners | | | |
|---|---|---|---|---|
| | District 2 Public Health | Habersham Medical Center | Northeast Georgia Health System | Stephens County Hospital |
| **Hall** | X | | X | |
| **Barrow** | | | X | |
| **Gwinnett** | | | X | |
| **Jackson** | | | X | |
| **Banks** | X | X | X | |
| **Habersham** | X | X | X | |
| **Rabun** | X | X | X | |
| **Stephens** | X | | X | X |
| **Towns** | X | | X | |
| **Union** | X | | X | |
| **White** | X | | X | |
| **Dawson** | X | | X | |
| **Lumpkin** | X | | X | |
| **Forsyth** | X | | | |
| **Franklin** | X | | | X |
| **Hart** | X | | | |

*Assessment of Health Needs*

To identify the health needs of the community, the CHNA Partners established a comprehensive method of accounting for all available relevant data, including community input. The basis of identification of community health needs was the weight of qualitative and quantitative data obtained when assessing the community. Surveyors conducted interviews and focus groups with individuals representing public health, community leaders/groups, public organizations, and other providers. In some communities, supplementary qualitative data was included. In addition, quantitative data collected from several public sources was benchmarked against a state value to indicate the level of need.

*Quantitative Assessment of Health Needs – Methodology and Data Sources*

Public health indicators were used to assess community health needs from a quantitative data perspective. This included collection of 129 data elements grouped into 11 categories and evaluated for the counties where data was available. The categories, indicators, and sources are included in **Appendix A**.

A benchmark analysis was conducted to determine the public health indicators that demonstrated a community health need from a quantitative perspective. Benchmark health indicators included (when available): overall U.S. values and state of Georgia values.

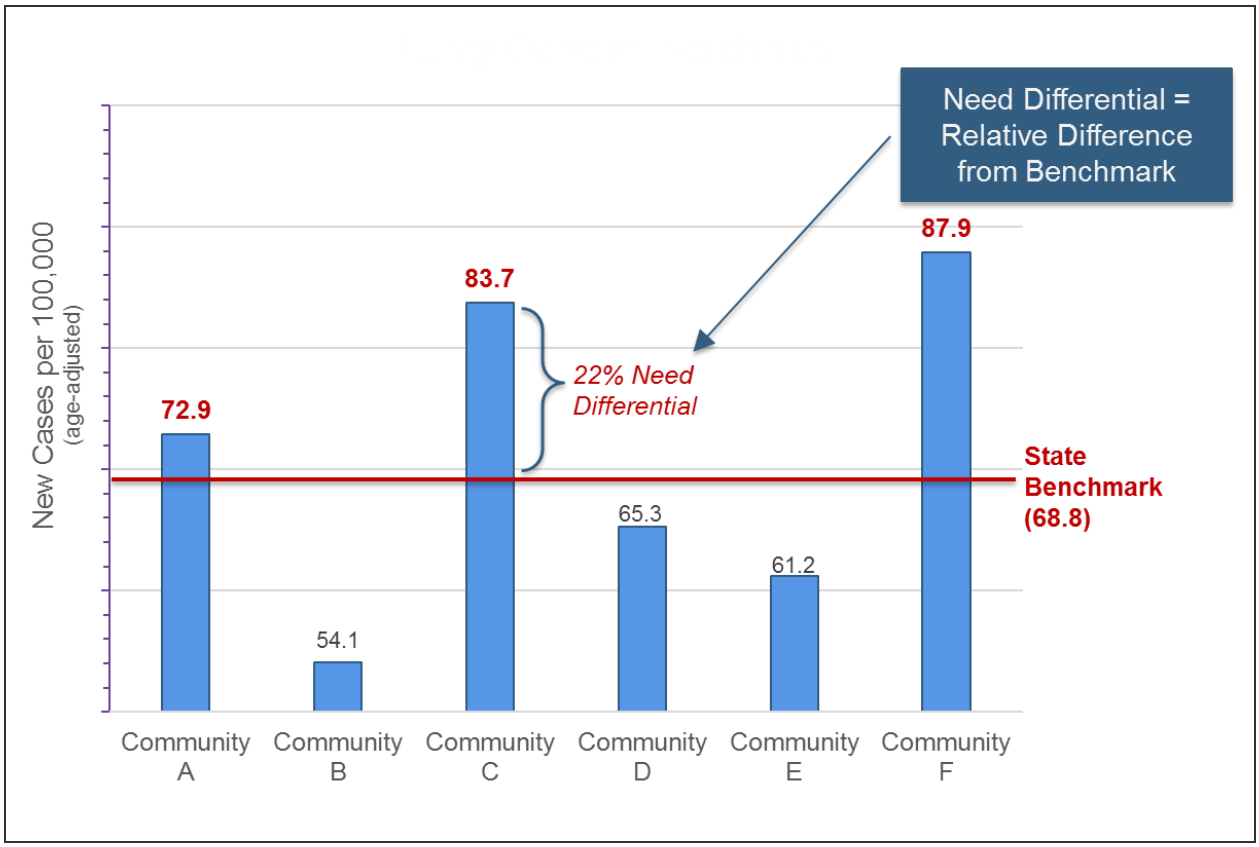
According to America's Health Rankings 2018 Annual Report, the health of Georgia residents ranks 39$^{th}$ out of the 50 states.[1] The health status of Georgia compared to other states in the nation presented many opportunities to impact health within local communities, including opportunities for those communities that ranked highly. Therefore, the benchmark for the community served was set to the state value.

Once the community benchmark was set to the state value, it was determined which indicators for the community did not meet the state benchmarks. This created a subset of indicators for further analysis. A need differential analysis was conducted to understand the relative severity of need for these indicators. The need differential established a standardized way to evaluate the degree each indicator differed from its benchmark. Health community indicators with need differentials above the 50$^{th}$ percentile were ordered by severity; the highest ranked indicators were the top health needs from a quantitative perspective.

The outcomes of the quantitative data analysis were compared to the qualitative data findings.

[1] America's Health Rankings, 2018

*Health Indicator Benchmark Analysis Example*




*Source: IBM Watson Health, 2019*

*Qualitative Assessment of Health Needs and Community Input – Approach*

In addition to analyzing quantitative data, Watson Health collected qualitative data via a variety of sources to gather the input of persons representing the broad interests of the communities served throughout the region. Input from over 500 people was included in the assessment via several different approaches.

- Watson Health focus groups and key informant interviews (100 people)
- Johnson Group in-person surveys conducted at the following locations (199 people):
  - The Primary Care Clinic located at the Hall County Health Department
  - The Good News Clinics
  - The Gainesville Housing Authority Melrose Community Apartments
  - Tower Heights Apartments, operated by the Gainesville Housing Authority
- NGHS Hall County Mental and Behavioral Health Listening Sessions (60 people)
- Union General & Chatuge Regional Hospital 2018 CHNA community survey and key informant interviews (148 people)

Watson Health conducted eight (8) focus groups with a total of 75 participants as well as 25 key informant interviews to gather the input of persons representing the broad interests of the communities served throughout the region. The focus groups and interviews solicited feedback from leaders and representatives who serve the community and have insight into community needs.

The focus groups familiarized participants with the CHNA process and solicited input to understand health needs from the community's perspective. Focus groups, formatted for individual as well as small group feedback, helped identify barriers and social determinants influencing the community's health needs.

Watson Health conducted key informant interviews for the communities served by the hospitals. The interviews provided insight into participants' concerns about the general health status of the community and the various drivers that contributed to health issues.

Participation in the Watson Health interview and focus groups included input from at least one state, local, or regional governmental public health department (or equivalent department or agency) with knowledge, information, or expertise relevant to the health needs of the community, as well as individuals or organizations who served and/or represented the interests of medically underserved, low-income and minority populations in the community.

Participation from community leaders/groups, public health organizations, other healthcare organizations, and other healthcare providers ensured that the input received represented the broad interests of the community served. A list of the organizations which participated in the Watson Health sessions can be found in **Appendix B**. Summary findings from the focus groups and interviews can be found in **Appendix C**.

Additional qualitative data sources supplemented the focus groups and interviews. These included: Johnson Group's Hall County health survey of uninsured individuals (199 surveys completed); Hall County Mental and Behavioral Health Listening Sessions (60+ participants from key stakeholder organizations); and qualitative findings from Union General & Chatuge Regional Hospitals 2018 CHNA Reports (148 community-based surveys, four key informant interviews). Information on the additional qualitative data sources can be found in **Appendix D**.

In addition to soliciting input from public health and various stakeholders in the community, the CHNA Partners were also required to consider written input received on their most recently conducted CHNA and subsequent implementation strategies. The prior hospital assessments were available on the CHNA Partners' respective websites to receive public comment or feedback on the report findings. To date the hospital CHNA Partners have addressed questions and shared information related to their prior assessments but have not received written input on their 2016 CHNA reports. The CHNA Partners continue to welcome feedback from the community on this 2019 CHNA. Feedback can be provided at the following sites:

- District 2 Public Health: **http://phdistrict2.org/**
- Habersham Medical Center: **tellus@hcmcmed.org**
- Northeast Georgia Health System: **www.nghs.com/community-benefit-resources**

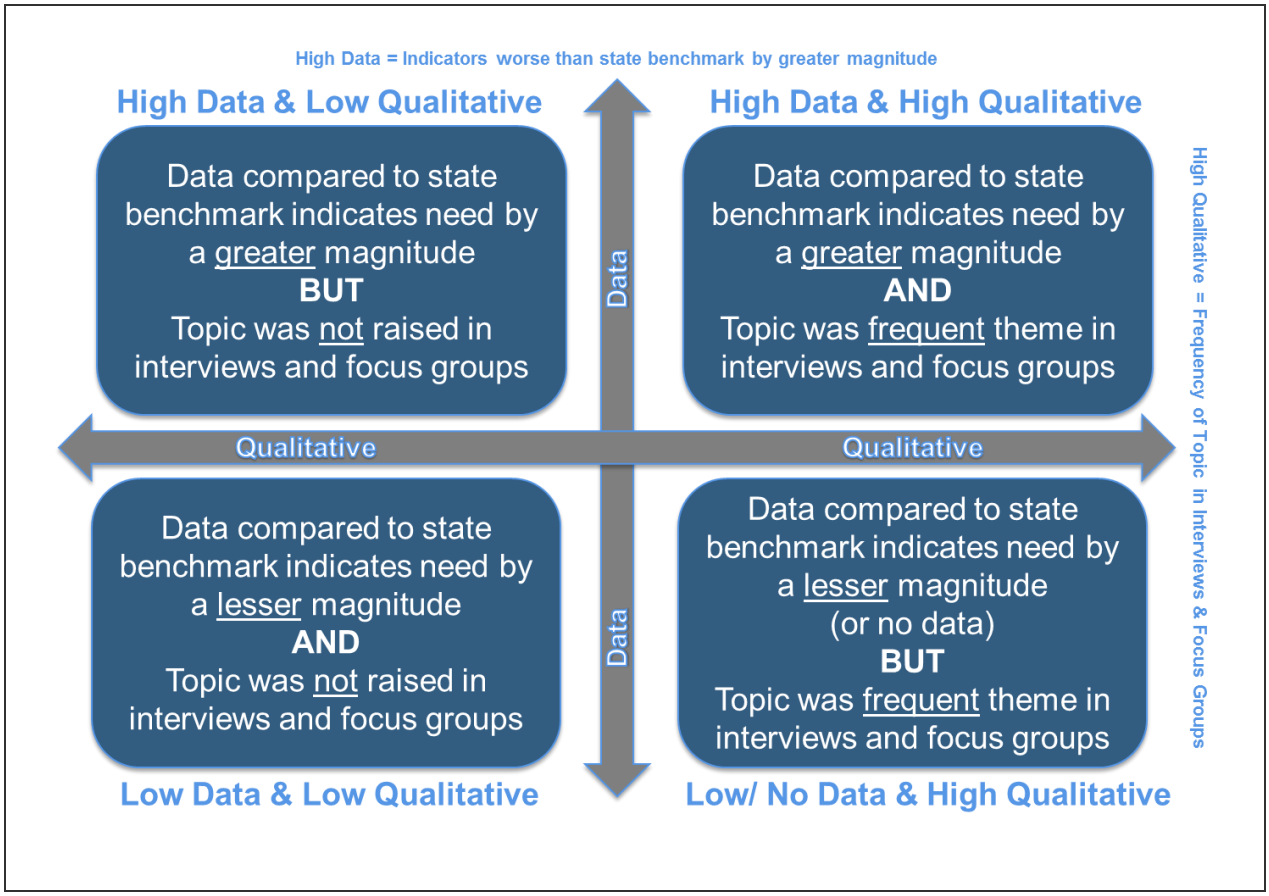
- Stephens County Hospital: **stephenscountyhospital.com/contact/**

Community input from qualitative data collection was organized into themes around community needs. These themes were compared to the quantitative data findings.

*Methodology for Defining Community Need*

Using qualitative feedback from the interviews and focus groups, as well as the health indicator data, the issues affecting the communities served are assembled in the Health Needs Matrix below to help identify the top health needs for the community. The upper right quadrant of the matrix is where the needs identified in the qualitative data (interviews, surveys, listening sessions, focus group feedback, etc.) and quantitative data (health indicators) converge to identify the top health needs for this community.

*The Health Needs Matrix*




*Source: IBM Watson Health, 2019*

*Information Gaps*

Most public health indicators were available only at the county level. In evaluating data for entire counties versus more localized data, it was difficult to understand the health needs for specific population pockets within a county. This creates a challenge in tailoring interventions to address community health needs, as placement and access to specific programs in one part of the county may or may not actually affect the population

who truly need the service. The publicly available health indicator data was supplemented with Watson Health's ZIP code estimates to assist in identifying specific populations within a community where health needs may be greater.

*Approach to Identify and Prioritize Significant Health Needs*

On June 19, 2019, a session was held with the CHNA Partners and their community advisors to identify and prioritize the significant health needs for each Partner's community. The Partners and their advisors utilized a comprehensive method of taking into account all available relevant data, including community input. Moderated by Watson Health, the meeting included: an overview of the CHNA process for the northeast Georgia region; the methodology for determining the top health needs; the selection and prioritization of significant health needs for each Partner community; and identification of common priorities across the communities of northeast Georgia.

Participants included the executive sponsor and project sponsor from each of the CHNA Partners. In addition, each Partner invited community advisors to the prioritization session. Community advisors were individuals with a deep knowledge of each Partner's community and were involved/invested in community development. Participants were organized into working groups for each CHNA Partner's community. A list of the participants and their community working groups is included in **Appendix E**.

Prioritization of the health needs took place in two steps. In the first step, participants reviewed the CHNA findings and the Health Needs Matrix for each community and agreed that the needs in the upper right quadrant of the matrix, those identified as high data/high qualitative, were significant. The work groups then reviewed the other quadrants of the matrix where either the quantitative data or qualitative input indicated a need (upper left and lower right quadrants respectively). Leveraging the professional experience and community knowledge of their group via discussion, each group determined if any needs from the other quadrants were considered significant due to their potential or actual impact on the community. This first step established a list of significant health needs for each CHNA Partner community.

In the second step, participants ranked the significant health needs on a set of prioritization criteria chosen by the CHNA Partners:

1. Magnitude: The number of people affected actually or potentially by the need and/or the magnitude of the need compared to other needs in the community
2. Alignment: Alignment with mission, vision, and values of each organization
3. Consequences: Extent of disability, premature death, social, economic or other burdens to the community
4. Root Cause: The issue is a root cause of other problems, thereby possibly affecting multiple issues

Through discussion and consensus, the groups rated their community's significant health needs on the four chosen criteria utilizing a scale of 1 (low) to 10 (high). The criteria scores were summed to create an overall score for each need and the significant health needs for each community were prioritized based on the overall scores. The outcome of this process was a community-specific list of prioritized

significant health needs. The lists are located in their respective community sub-sections under “Prioritized Significant Health Needs”.

*Recommended Health Needs to be Addressed by the CHNA Partners*

Each CHNA Partner must choose which of the prioritized significant health needs they will address via their CHNA implementation strategies. In the prioritization session described above, each work group was tasked with recommending up to five priority needs their respective CHNA Partner should address. In making their recommendations, the participants were asked to consider opportunities for collaboration and expertise sharing between the CHNA Partners and other community organizations. The resulting recommended needs are listed in their respective community sub-sections under “Recommended Health Needs to be Addressed**.**” A table of health indicators that support the recommended health needs is in **Appendix H**.

Once each work group established their recommendations for the priority needs to be addressed by their CHNA Partner, the groups reconvened to review their recommended priorities across the communities. Common priorities were identified, and the group discussed areas of potential collaboration and synergies in implementation efforts between the CHNA Partners.

*Existing Resources to Address Health Needs*

Part of the assessment process included gathering input on community resources potentially available to address the significant health needs identified through the CHNA. Qualitative assessment participants identified community resources that may assist in addressing the health needs identified for their community. A description of these resources is in **Appendix F**.

*Community Health Data*

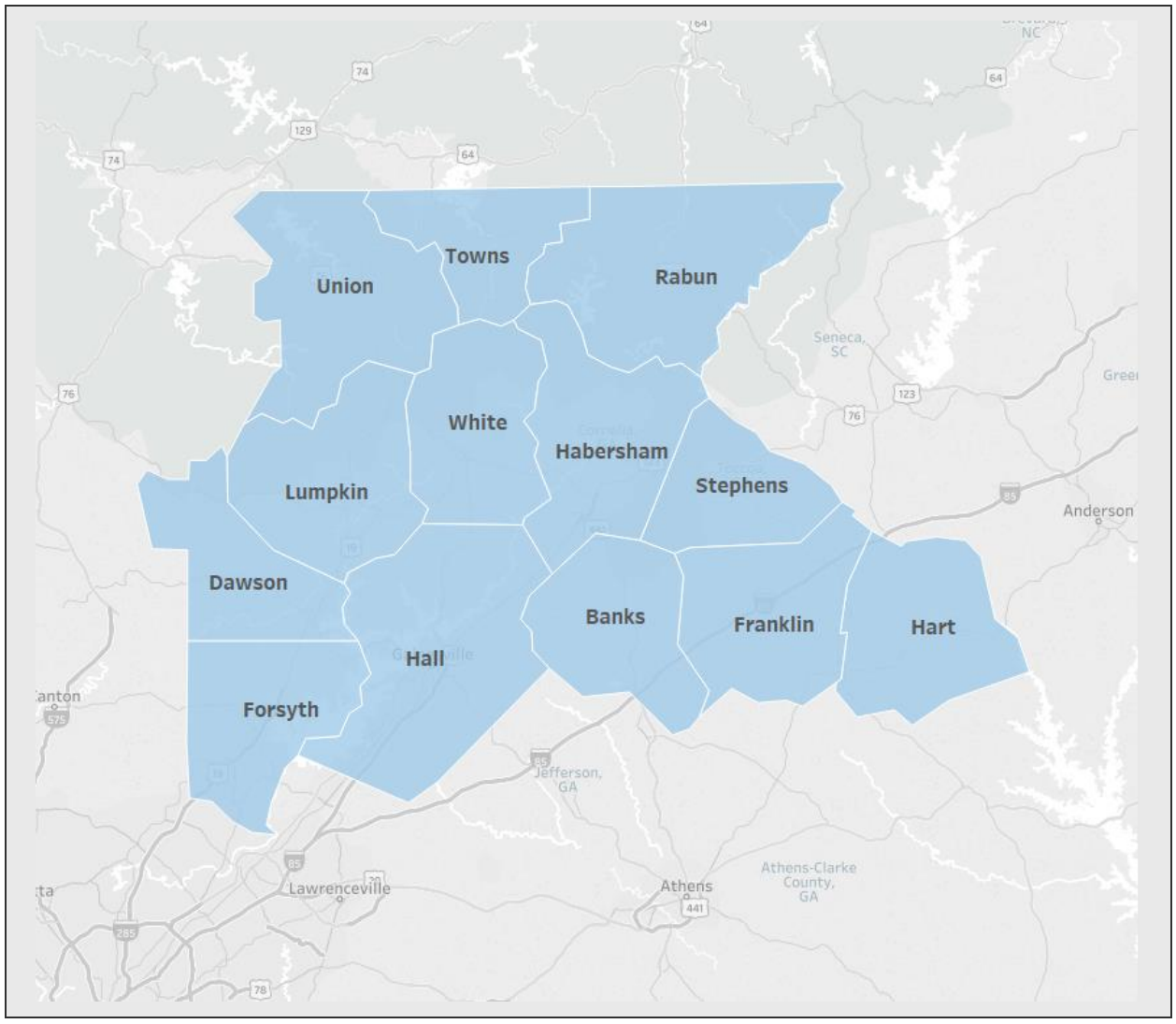
The CHNA partners collaborated with Watson Health to develop an interactive Tableau dashboard that displays the quantitative data collected as part of the 2019 CHNA. The Community Health Data provides access to over 120 county-level public health indicators as well as proprietary Watson Health estimates for demographics, community need, disease prevalence, insurance coverage, and emergency department visits. The dashboard is available to the community at **http://www.nghs.com/community-benefit-resources**.

## Community Health Needs Assessment – District 2 Public Health

*Community Served Definition*

The Georgia Department of Public Health funds and collaborates with eighteen separate public health districts throughout the state. District 2 Public Health is comprised of 13 counties in northeast Georgia: Banks, Dawson, Forsyth, Franklin, Habersham, Hall, Hart, Lumpkin, Rabun, Stephens, Towns, Union, and White. For the purpose of this assessment, the geographic boundaries of the community served by District 2 Public Health includes these 13 counties.

*Map of Community Served*




*Source: District 2 Public Health, 2019*

*Demographic and Socioeconomic Summary*

According to population statistics, the overall District 2 Public Health community is expected to grow 6.6% by 2023, an increase of over 42,000 people. The 6.6% projected population growth is higher than both the state's 5-year projected growth rate (5.0%) and the national projected growth rate (3.5%). The median age is older than both the state and national medians. Median household income for the overall community is lower than both benchmarks however there is significant income disparity within the community served. The overall community has a lower proportion of Medicaid beneficiaries than the state of Georgia benchmark and an uninsured rate that is greater than the national rate.

*Demographic and Socioeconomic Comparison: Community Served and State/U.S. Benchmarks*

| Geography | | Benchmarks | | | Community Served |
|---|---|---|---|---|---|
| | | United States | Georgia | Northeast Georgia Region | District 2 Public Health |
| Total Current Population | | 326,533,070 | 10,467,269 | 1,743,817 | 643,952 |
| 5 Yr Projected Population Change | | 3.5% | 5.0% | 7.2% | 6.6% |
| Median Age | | 38.3 | 36.9 | 40.3 | 42.5 |
| Population 0-17 | | 22.6% | 24.0% | 25.3% | 23.5% |
| Population 65+ | | 15.9% | 13.8% | 13.1% | 17.1% |
| Women Age 15-44 | | 19.6% | 20.4% | 20.0% | 18.7% |
| Non-White Population | | 30.0% | 43.0% | 36.2% | 19.2% |
| Hispanic Population | | 18.2% | 9.7% | 16.6% | 14.1% |
| Insurance Coverage | Uninsured | 9.4% | 17.1% | 11.9% | 13.3% |
| | Medicaid | 19.0% | 11.8% | 10.4% | 9.6% |
| | Private Market | 9.6% | 10.8% | 11.5% | 10.6% |
| | Medicare | 16.1% | 14.4% | 12.5% | 16.5% |
| | Employer | 45.9% | 45.8% | 53.7% | 50.0% |
| Median HH Income | | $62,175 | $55,559 | $56,929 | $50,362 |
| Limited English | | 26.2% | 19.3% | 28.9% | 20.3% |
| No High School Diploma | | 7.4% | 8.9% | 7.9% | 9.3% |
| Unemployed | | 6.8% | 7.8% | 6.3% | 6.2% |

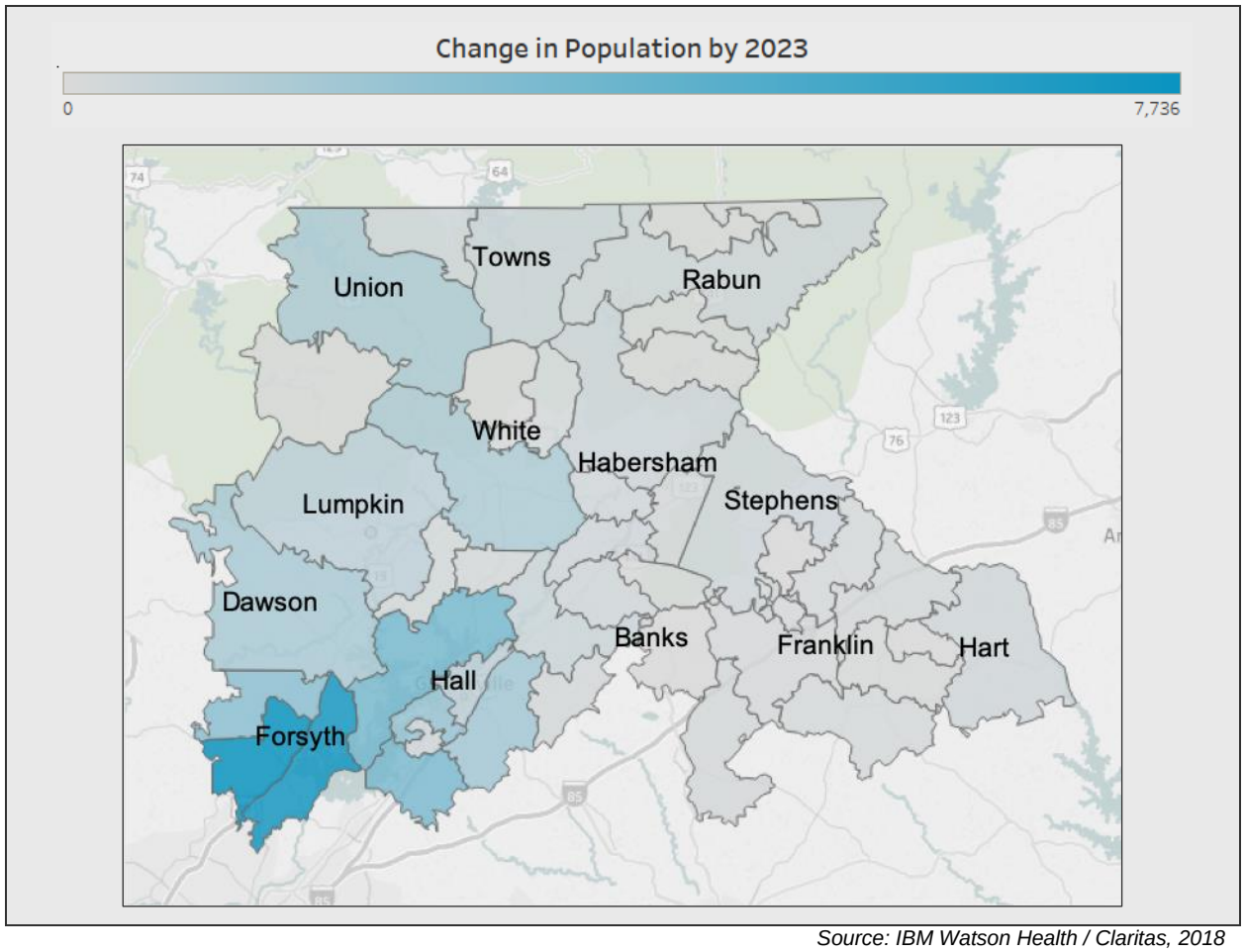
*Source: IBM Watson Health / Claritas, 2018; US Census Bureau 2017 (U.S. Median Income)*

Note: children (ages 0-17), older adults (ages 65+) and women of childbearing age (ages 18-44) are identified as population groups that have unique healthcare needs.

The southwestern portion of District 2 is expected to experience the most growth and the ZIP codes within that area projected to add the most people in five years are:

- 30040 – Cumming 7,736 people
- 30041 – Cumming 7,219 people
- 30506 – Gainesville 3,388 people
- 30542 – Flowery Branch 3,244 people

*2018 - 2023 Total Population Projected Change by ZIP Code*

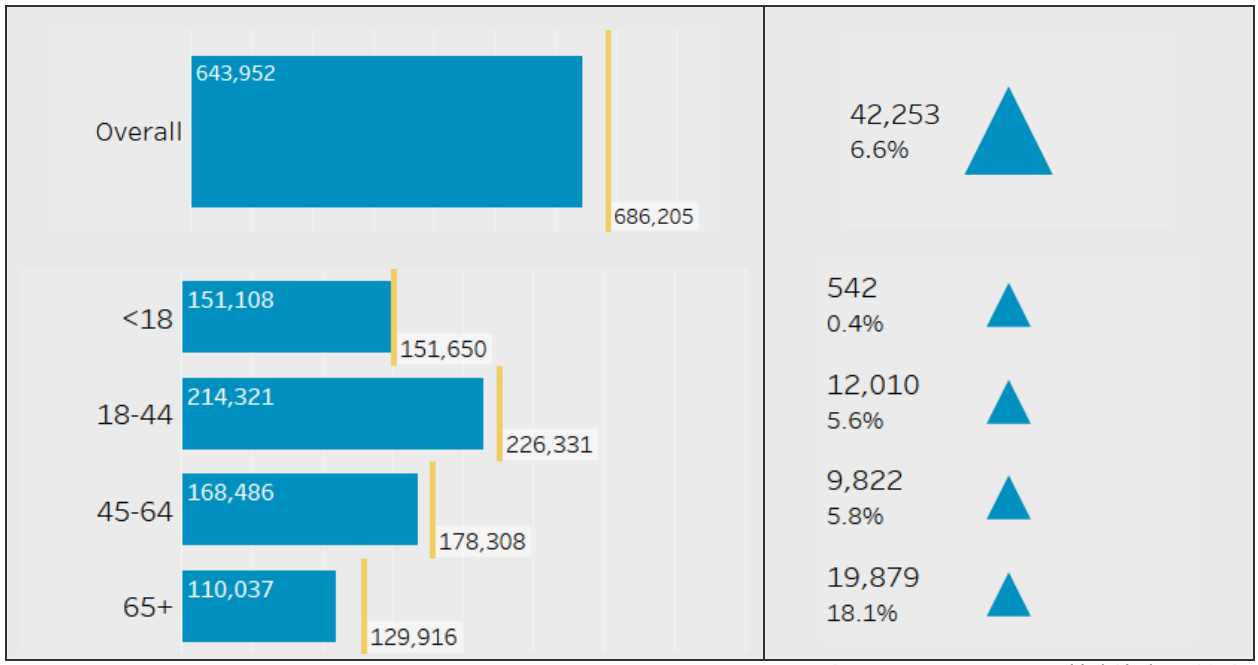



*Source: IBM Watson Health / Claritas, 2018*

The community's population skews younger with 33.3% of the population ages 18-44 and 23.5% under age 18. The largest cohort (18-44) is expected to grow by 12,010 people by 2023. The age 65 plus cohort is the smallest but is expected to experience the fastest growth (18.1%) over the next five years, adding 19,879 seniors to the community. Growth in the senior population will likely contribute to increased utilization of services as the population continues to age.

*Population Distribution by Age*

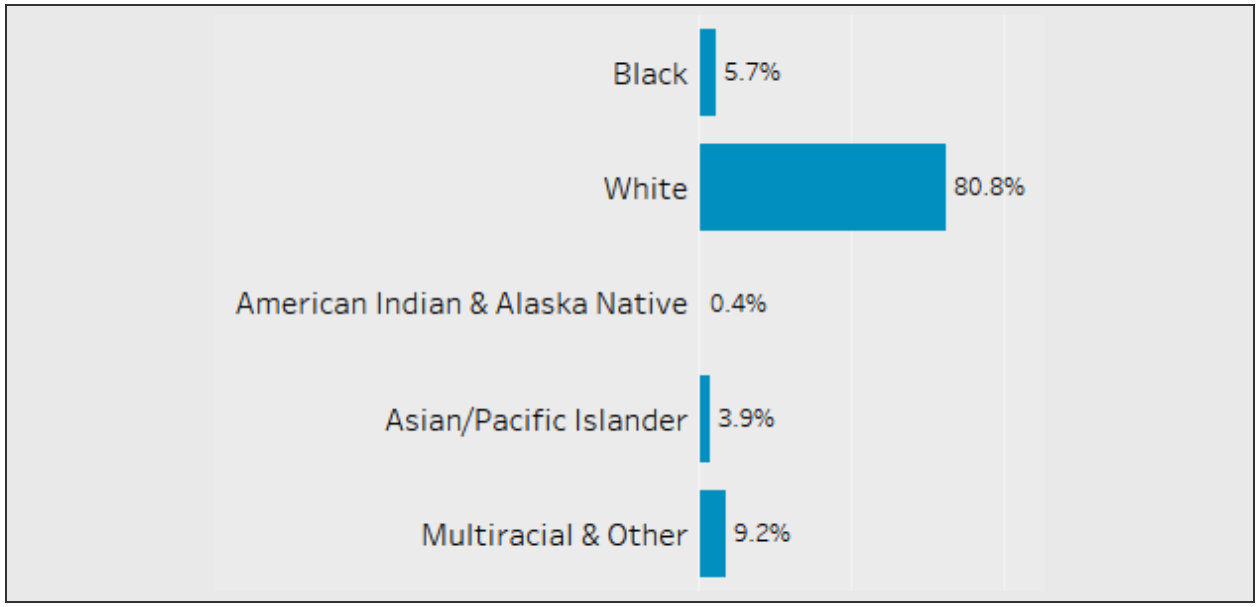
*2018 Population by Age Cohort* *Change by 2023*



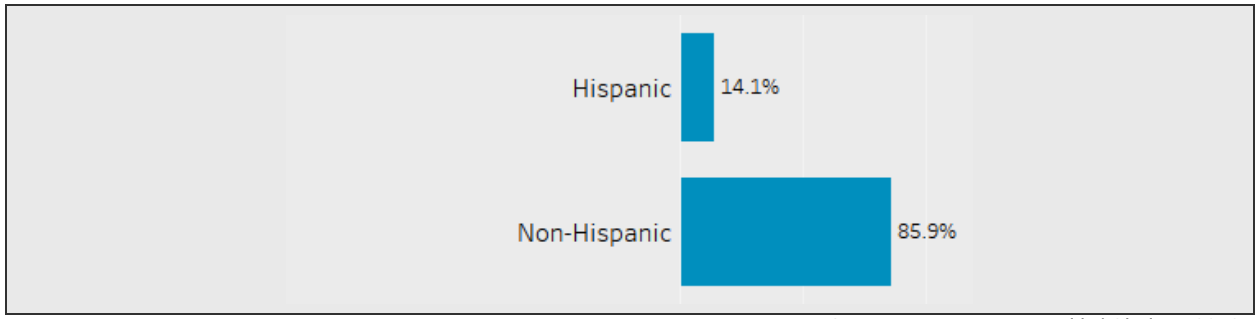

*Source: IBM Watson Health / Claritas, 2018*

Population statistics are analyzed by race and by Hispanic ethnicity. The community is primarily racially White (80.8%), with those of Black race comprising 5.7% of the population and the other racial groups constituting the remaining 13.5%. The racial group projected to grow the fastest in the next five years is Asian/Pacific Islander (37.6%); this group will add the most non-white population in the next five years (9,343 people). The Hispanic population (all races) comprises just over 14% of the community's population. Meanwhile, the expected growth rate of the Hispanic population is over 12,000 people (13.4%) by 2023.

*2018 Population by Race*

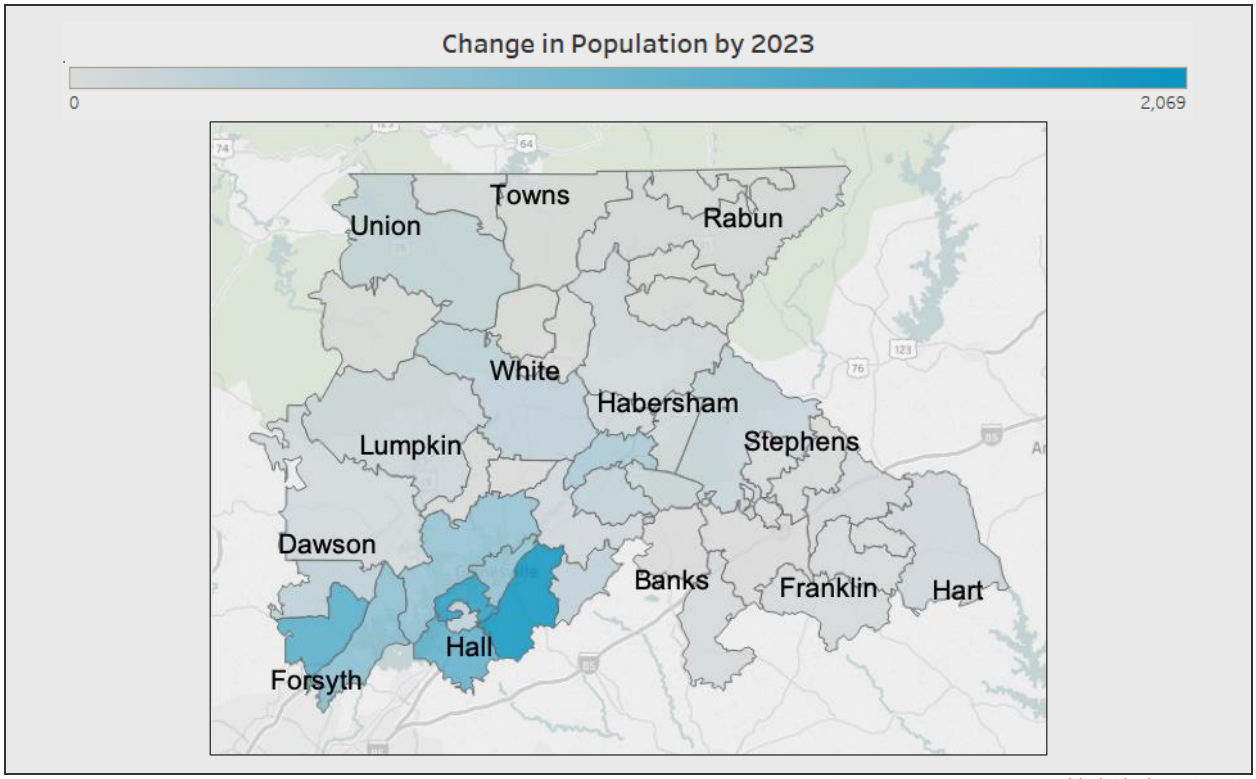



*2018 Population by Ethnicity*




*Source: IBM Watson Health / Claritas, 2018*

*2018 - 2023 Hispanic Population Projected Change by ZIP Code*

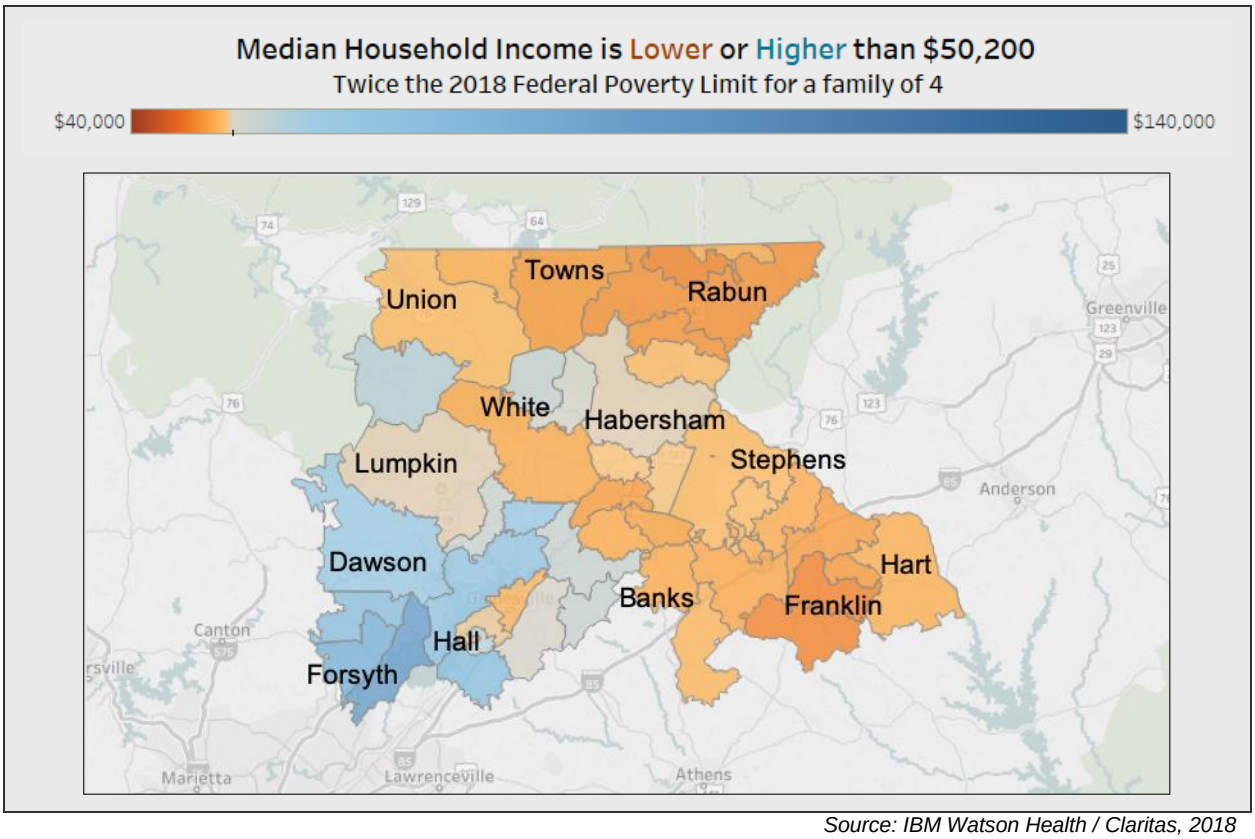



*Source: IBM Watson Health / Claritas, 2018*

The 2018 median household income for the United States is $62,175 and $55,559 for the state of Georgia. The median household income for the ZIP codes within this community ranges from $34,369 for ZIP Code 30520-Canon to $112,231 for ZIP Code 30041-Cumming. Thirty (30) of the 45 community ZIP codes have median household incomes less than $50,200 which is twice the 2018 Federal Poverty Limit for a family of four. For the following nine (9) ZIP codes, the median income values are less than $40,000.

- 30520 – Canon $34,369
- 30568 – Rabun Gap $34,615
- 30662 – Royston $34,640
- 30525 – Clayton $36,814
- 30576 – Tiger $37,372
- 30516 – Bowersville $38,527
- 30546 – Hiawassee $38,621
- 30531 – Cornelia $39,431
- 30553 – Lavonia $39,434

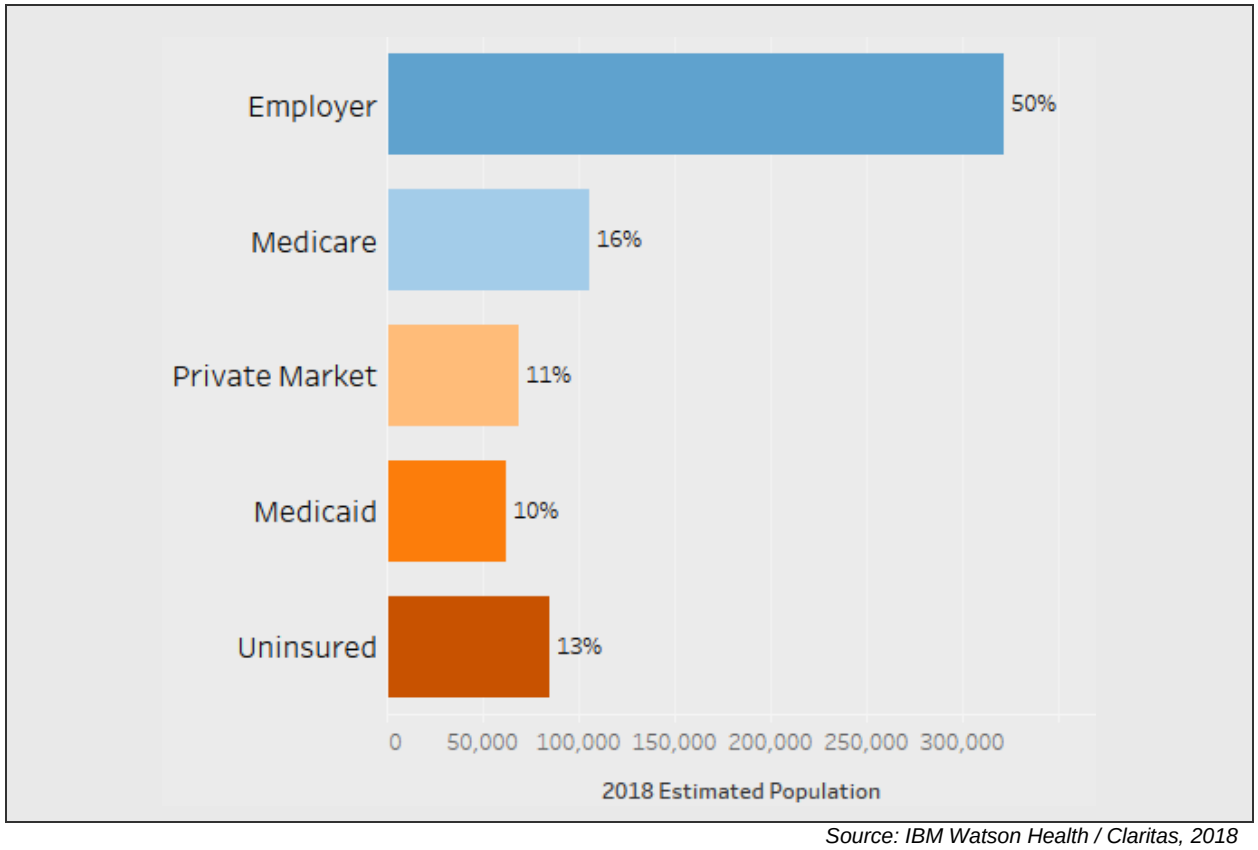
*2018 Median Household Income by ZIP Code*




*Source: IBM Watson Health / Claritas, 2018*

Half of the population (50%) is insured through employer sponsored health coverage, followed by those with Medicare (16%), and those without health insurance (13%). The remainder of the population are divided between private market – 11% (the purchasers of coverage directly or through the health insurance marketplace) and Medicaid (10%). The percentage of population uninsured in this community is lower than the percentage uninsured in the state (17%). The community has a higher percent of people with employer sponsored coverage than the state (45%).

*2018 Estimated Distribution of Covered Lives by Insurance Category*




*Source: IBM Watson Health / Claritas, 2018*

The community includes 38 Health Professional Shortage Areas and 12 Medically Underserved Areas as designated by the U.S. Department of Health and Human Services Health Resources Services Administration.[2] **Appendix G** includes the details on each of these designations.

*Health Professional Shortage Areas and Medically Underserved Areas and Populations*

| | Health Professional Shortage Areas (HPSA) | | | | Medically Underserved Area/Population (MUA/P) |
|---|---|---|---|---|---|
| District 2 Public Health | Dental Health | Mental Health | Primary Care | Grand Total | MUA/P |
| Banks | 1 | 1 | 1 | 3 | 1 |
| Dawson | | 1 | 1 | 2 | |
| Forsyth | 1 | 2 | 1 | 4 | 1 |
| Franklin | 1 | 1 | 1 | 3 | 1 |
| Habersham | 2 | 2 | 2 | 6 | 1 |
| Hall | | 1 | 1 | 2 | 1 |
| Hart | 1 | 1 | 1 | 3 | 2 |
| Lumpkin | 1 | 1 | 1 | 3 | 1 |
| Rabun | | 1 | 1 | 2 | 1 |
| Stephens | | 1 | 1 | 2 | |
| Towns | | 1 | 2 | 3 | 1 |
| Union | 1 | 1 | 1 | 3 | 1 |
| White | | 1 | 1 | 2 | 1 |
| **Total** | **8** | **15** | **15** | **38** | **12** |

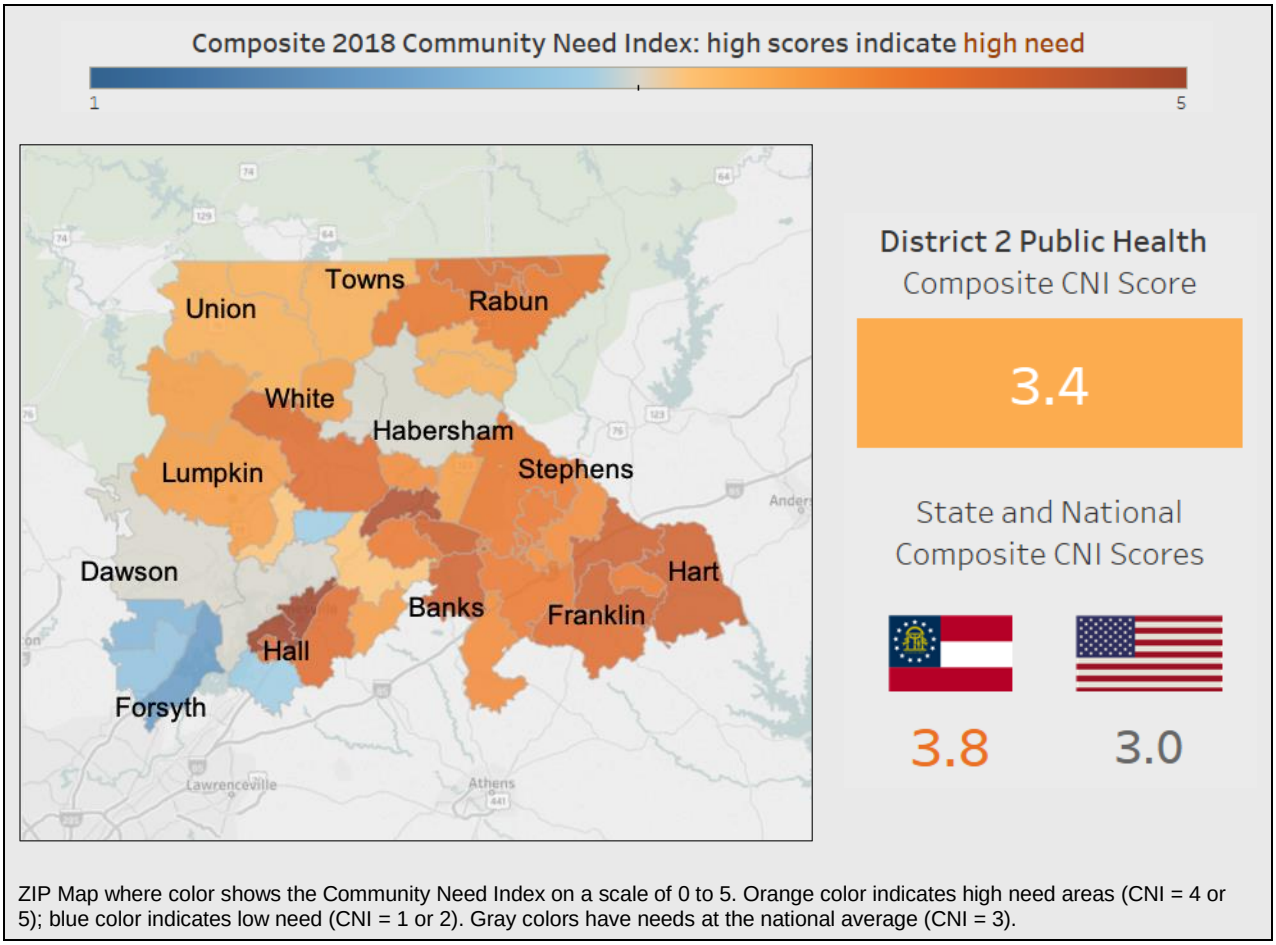
*Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018*

[2] U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018

The Watson Health Community Need Index (CNI) is a statistical approach to identifying areas within a community where health disparities may exist. Leveraging U.S. Census Data and Watson Health Insurance Coverage Estimates, the CNI takes into account vital socio-economic factors (income, cultural, education, insurance and housing) about a community to generate a CNI score for every populated ZIP code in the United States. The CNI is strongly linked to variations in community healthcare needs and is an indicator of a community's demand for various healthcare services. The CNI score by ZIP code identifies specific areas within a community where healthcare needs may be greater.

Overall, the composite CNI score for the community served is 3.4, lower than the state CNI (3.8) and greater than the national benchmark score of 3.0. Thirty-six of the 45 ZIP codes in the community have scores greater than national benchmark score pointing to potentially more significant health needs among those populations. There are three ZIP codes in the community where the CNI score is greater than 4.5; Gainesville ZIP codes 30501 and 30504, and 30531-Cornelia, pointing to potentially even greater health needs in those areas.

*2018 Community Need Index by ZIP Code*




ZIP Map where color shows the Community Need Index on a scale of 0 to 5. Orange color indicates high need areas (CNI = 4 or 5); blue color indicates low need (CNI = 1 or 2). Gray colors have needs at the national average (CNI = 3).

*Source: IBM Watson Health / Claritas, 2018*

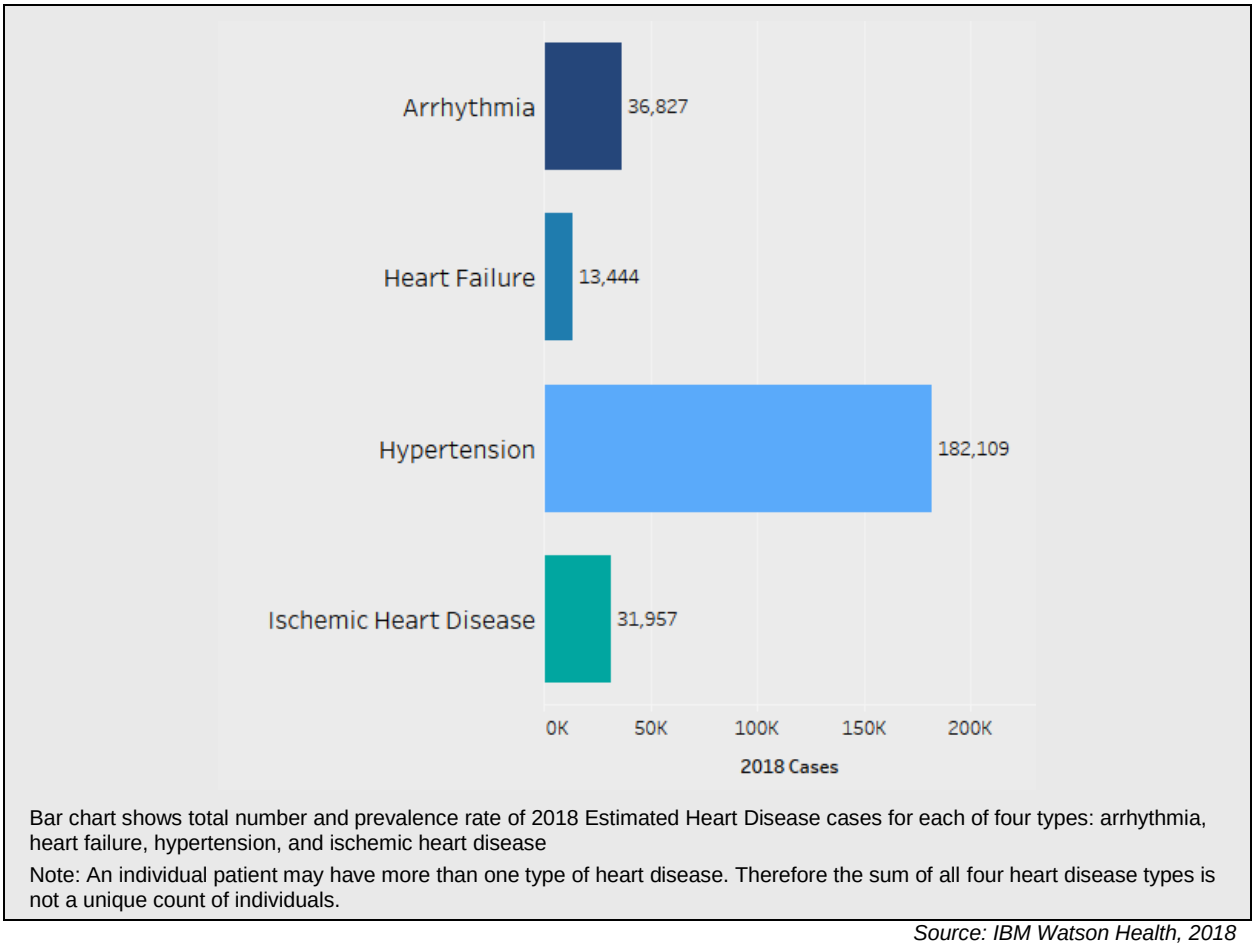
*Watson Health Community Data*

Watson Health supplements the publicly available data and population statistics with estimates of localized disease prevalence of heart disease and cancer as well as emergency department visit estimates.

Watson Health Heart Disease Estimates identify hypertension as the most prevalent heart disease diagnosis; there are over 182,000 estimated cases in the community overall. The 30041 ZIP code of Cumming has the most estimated cases of each heart disease type driven primarily by population size. The 30545 ZIP code of Helen has the highest estimated prevalence rates for Arrhythmia (978 cases per 10,000 population) and Ischemic Heart Disease (1,081 cases per 10,000). The 30546 ZIP code of Hiawassee has the highest estimated prevalence rates for Heart Failure (357 cases per 10,000), and the 30572 ZIP code of Suches has the highest estimated prevalence rate for Hypertension (4,181 cases per 10,000).

Slightly more females are identified as living with Arrythmia, Heart Failure, and Hypertension than males, but more males are identified as living with Ischemic Heart Disease than females (61% versus 39%).

*2018 Estimated Heart Disease Cases*



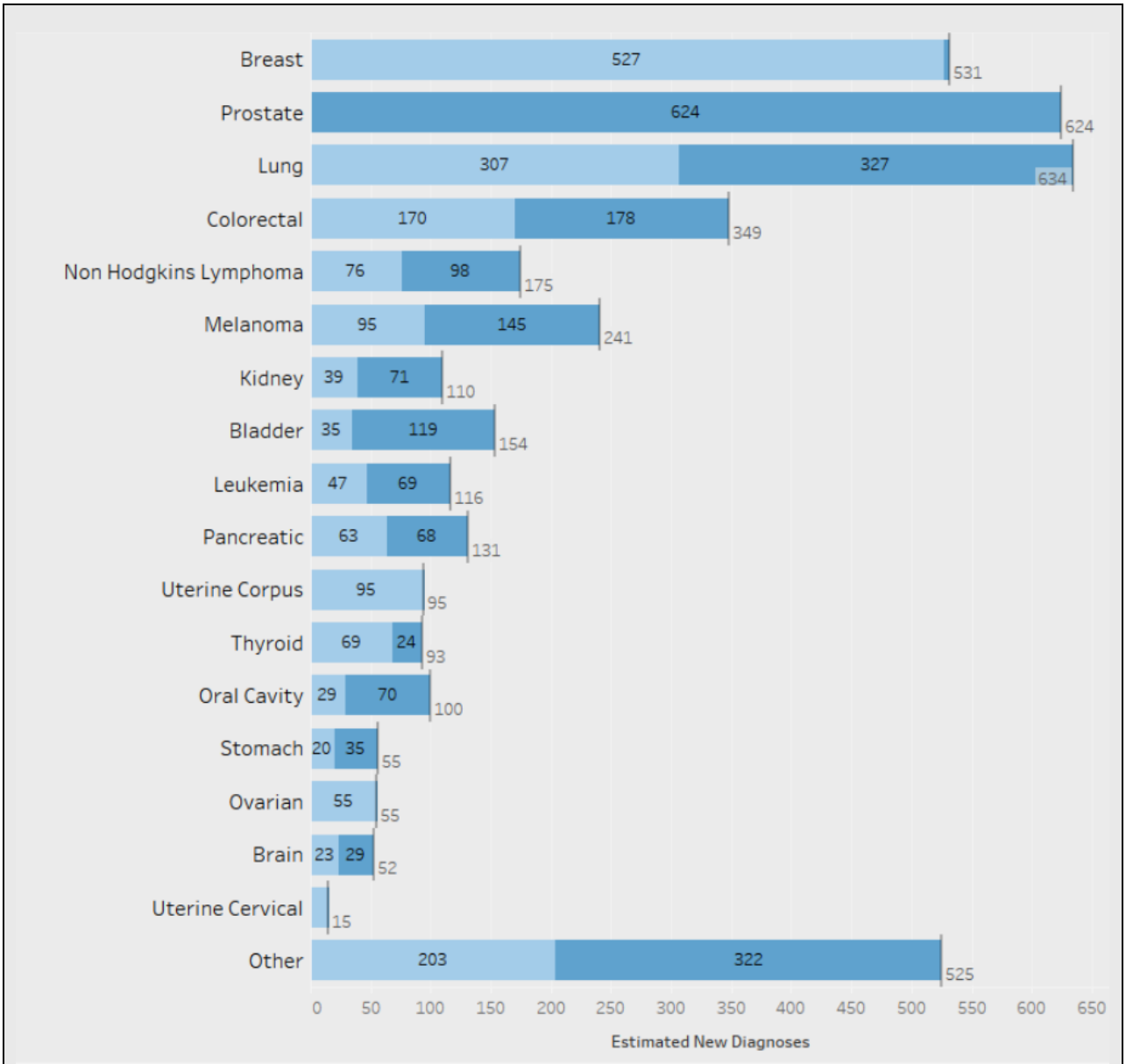

Bar chart shows total number and prevalence rate of 2018 Estimated Heart Disease cases for each of four types: arrhythmia, heart failure, hypertension, and ischemic heart disease

Note: An individual patient may have more than one type of heart disease. Therefore the sum of all four heart disease types is not a unique count of individuals.

*Source: IBM Watson Health, 2018*

For this community, Watson Health's 2018 Cancer Estimates reveals the cancers estimated to have the greatest number of new cases in 2018 are lung (634), prostate (624) and breast (531) cancers. The cancers projected to have the greatest rate of growth in the next five years are thyroid, pancreatic, and melanoma. Growth projections are based on both population changes and disease rates.

*2018 Estimated New Cancer Cases*




Bar chart shows estimated new diagnoses per year for each of the 17 types of Cancer and 1 category for all other cancers. Color shows details about sex with light blue for females and dark blue for males.

*Source: IBM Watson Health, 2018*

*Estimated Cancer Cases and Projected 5 Year Change by Type*

| Cancer Type | 2018 Estimated New Cases | 2023 Estimated New Cases | 5 Year Growth (%) |
|---|---|---|---|
| Bladder | 154 | 176 | 14.5% |
| Brain | 52 | 57 | 9.4% |
| Breast | 531 | 594 | 11.8% |
| Colorectal | 349 | 335 | -3.9% |
| Kidney | 110 | 125 | 13.9% |
| Leukemia | 116 | 131 | 13.1% |
| Lung | 634 | 700 | 10.5% |
| Melanoma | 241 | 279 | 16.0% |
| Non-Hodgkin's Lymphoma | 175 | 198 | 13.2% |
| Oral Cavity | 100 | 114 | 14.4% |
| Ovarian | 55 | 61 | 10.8% |
| Pancreatic | 131 | 152 | 16.2% |
| Prostate | 624 | 651 | 4.4% |
| Stomach | 55 | 61 | 9.9% |
| Thyroid | 93 | 108 | 17.0% |
| Uterine Cervical | 15 | 16 | 5.8% |
| Uterine Corpus | 95 | 108 | 14.3% |
| All Other Cancers | 525 | 596 | 13.4% |
| Grand Total | 4,053 | 4,462 | 10.1% |

*Source: IBM Watson Health, 2018*

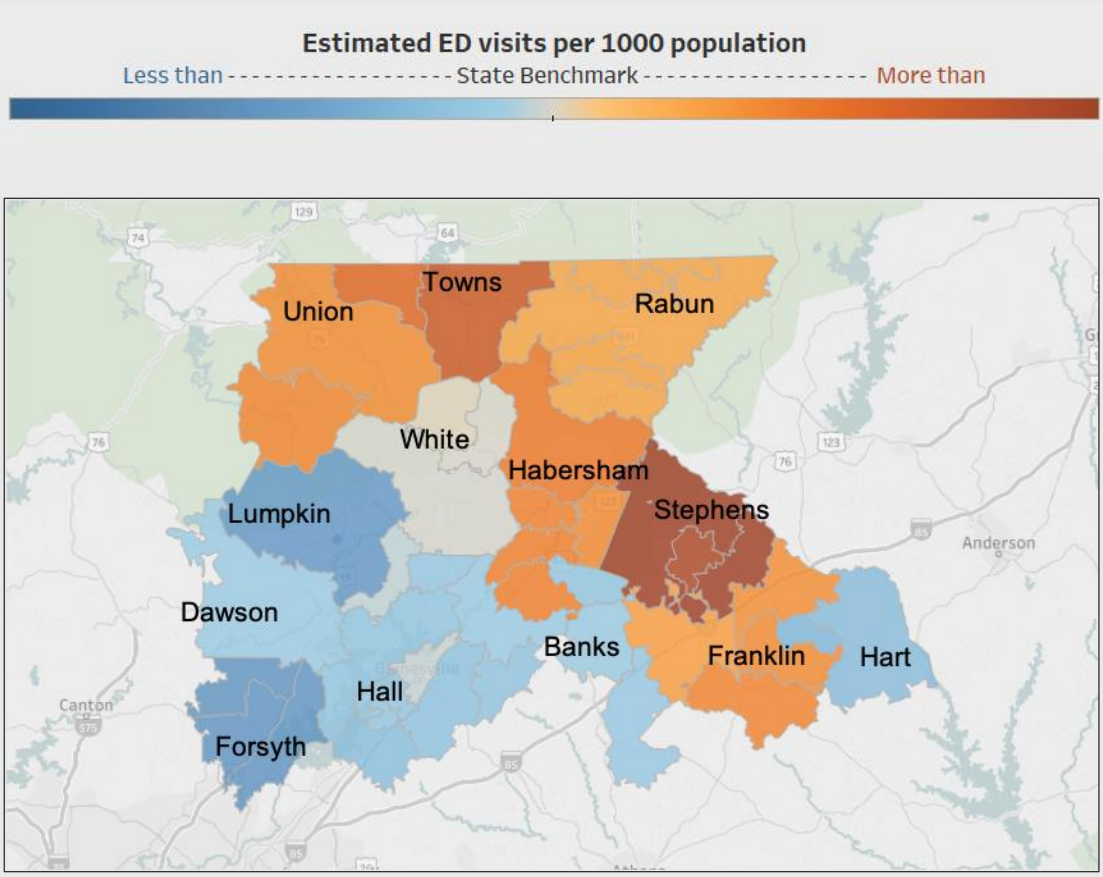
Based on population characteristics and regional utilization rates, Watson Health projects all emergency department (ED) visits in this community to increase by 7.6% over the next five years. Almost half of the community ZIP codes have higher ED use rates for their population than the Georgia state benchmark of 439 visits and the U.S. benchmark of 435 visits per 1,000. The highest estimated ED use rates are in the ZIP codes 30557-Martin (804 ED visits per 1,000 population), 30577-Toccoa (799 ED visits per 1,000), and 30538-Eastanollee (769 ED visits per 1,000).

These ED visits consist of three main types: those resulting in an inpatient admission, emergent ED visits treated and released, and non-emergent ED visits that are lower acuity. Non-emergent ED visits present to the ED but can possibly be treated in more appropriate and less intensive outpatient settings.

Non-emergent ED visits can be an indication of systematic issues within the community regarding access to primary care, managing chronic conditions, or other access to care issues such as ability to pay. Watson Health estimates non-emergent ED visits will increase by 2.9% over the next five years in this community. Over one-third (16 out of 45) of the District 2 Public Health ZIP codes have an estimated non-emergent ED visit rate higher than the state benchmark of 185 visits per 1,000 population. The five ZIP codes with the highest estimated number of non-emergent ED visits are:

- 30577 – Toccoa
- 30557 – Martin
- 30538 – Eastanollee
- 30582 – Young Harris
- 30531 – Cornelia

*Total Estimated 2018 Emergency Department Visit Rate*




Estimated ED Visits per 1000 Population

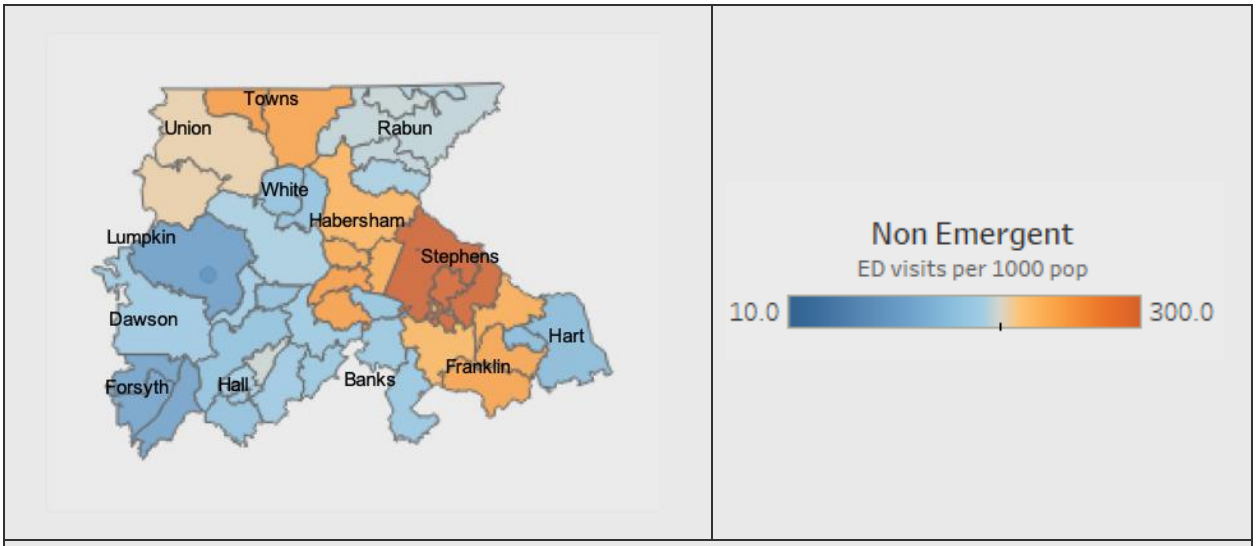
| Emergent Status | Georgia | USA |
|---|---|---|
| Non Emergent | 185 | 179 |
| Emergent | 190 | 189 |
| Inpatient Admission | 64 | 67 |
| Total | 439 | 435 |

ZIP map color shows total Emergency Department visits per 1,000 popultaion. Orange colors are higher than the state benchmark, blue colors are less than the state benchmark, and gray colors are similar.

*Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Non-Emergent Estimated 2018 Emergency Department Visits by ZIP Code*




ZIP map color shows total Emergency Department vists per 1,000 population by non-emergent status. Orange colors are higher than the state benchmark (see table at right), blue colors are less than the state benchmark, and gray colors are similar. Color range is set for the entire study region. ED visits are defined by the presence of specific CPT® codes in claims. Non-emergency visits to the ED do not necessarily require treatment in a hospital emergency department and can potentially be treated in a fast-track ED, an urgent care treatment center, a clinic or physician's private office.

*Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Public Health Indicators*

Public health indicators (129 total) were collected and analyzed to assess community health needs. For each health indicator, a comparison was made between the most recently available community data and benchmarks for the same/similar indicator. The basis of benchmarks was available data for the U.S. and the state of Georgia. A list of these indicators is in **Appendix A**.

Where the community indicators showed greater need when compared to the state of Georgia comparative benchmark, the difference between the community values and the state benchmark was calculated (need differential). The highest ranked indicators with need differentials in the 50$^{th}$ percentile of greater severity pinpointed community health needs from a quantitative perspective.

*Focus Groups & Interviews*

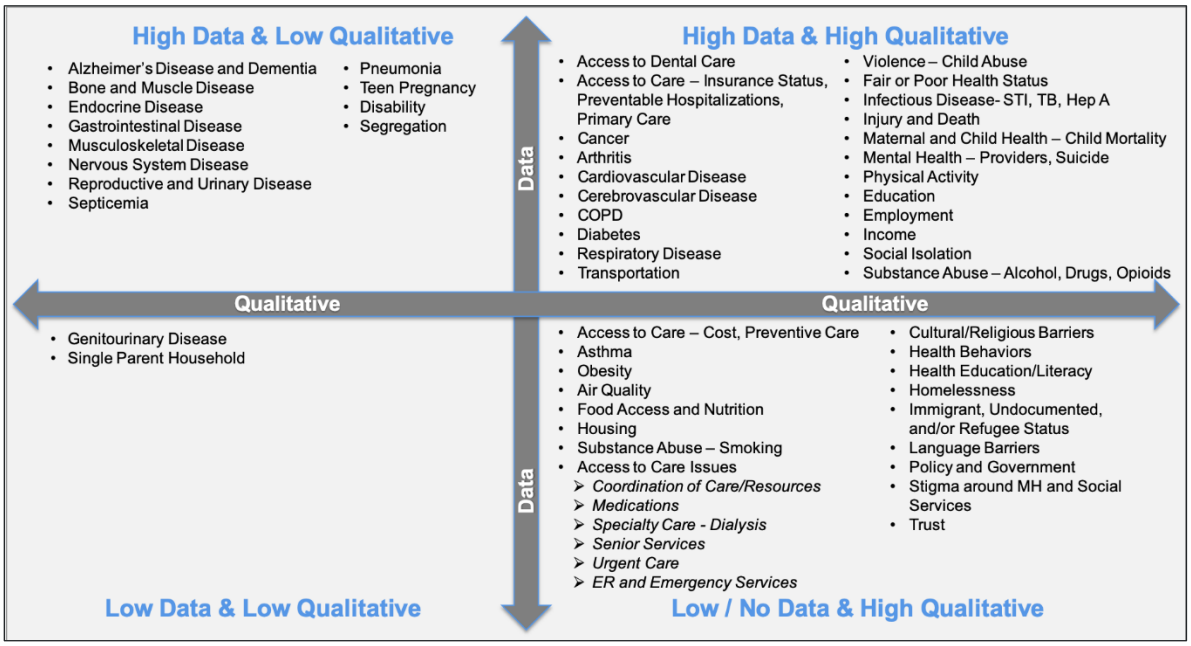
In the Watson Health focus group sessions and interviews, participants identified and discussed the greatest health needs in the community, as well as the barriers and strengths impacting overall health status. For this community, five (5) focus group sessions (listed below) with a total of 32 participants and 20 interviews were conducted March through April 2019. A list of the organizations providing input can be found in **Appendix B**. Summary findings from the focus groups and interviews can be found in **Appendix C**. Additional input gathered via the Johnson Group Hall County Survey; NGHS Hall County Mental and Behavioral Health Listening Sessions; and Union General and Chatuge Regional Hospitals 2018 CHNA Reports were used to assess need from a qualitative perspective (**Appendix D**).

| Focus Group | Date | Location | Number of Participants |
|---|---|---|---|
| Dawson County Focus Group | March 5, 2019 | Medical Plaza 400 Dawsonville, GA | 3 |
| Hall County Focus Group | March 5, 2019 | Fair Street Neighborhood Center Gainesville, GA | 8 |
| Habersham & Stephens Counties Focus Group | March 6, 2019 | Habersham Medical Center Demorest, GA | 9 |
| Lumpkin County Focus Group | March 8, 2019 | UNG Professional & Continuing Education Dahlonega, GA | 5 |
| Hall County Hispanic Focus Group | April 13, 2018 | Norma Hernandez Income Tax Offices Gainesville, GA | 7 |

*Prioritized Significant Health Needs for District 2 Public Health*

The Health Needs Matrix identified through the community health needs assessment (see Methodology for Defining Community Needs section) shows the convergence of needs identified in the qualitative data (interview and focus group feedback) and quantitative data (health indicators). The top health needs for this community are defined in the Health Needs Matrix below.

*Community Health Needs Matrix*




*Note: Lower right quadrant items in italics do not have quantitative data indicators available*

*Source: IBM Watson Health, 2019*

Through the prioritization process, the significant health needs for this community were identified, reviewed, and prioritized (see "Approach to Identify and Prioritize Significant Health Needs" section). The resulting prioritized health needs for the community are provided in the table below.

*Prioritized Significant Community Health Needs*

| Priority Rank | Health Need |
|---|---|
| 1 | Substance Abuse |
| 1 | Physical Activity |
| 1 | Infectious Disease - STI, TB, Hepatitis A |
| 1 | Transportation |
| 1 | Diabetes |
| 2 | Cardiovascular Disease |

| Priority Rank | Health Need |
|---|---|
| 2 | Stigma around Mental Health and Social Services (added) |
| 2 | Maternal and Child Health (added Teen Pregnancy) |
| 3 | Access to Care (added Cost, Preventive Care, and Senior Services) |
| 3 | Immigrant, Undocumented and/or Refugee Status (added) |
| 4 | Income |
| 4 | Social Isolation |
| 5 | Cancer |
| 6 | Violence - Child Abuse |
| 6 | Mental Health |
| 7 | Alzheimer's Disease and Dementia (added) |
| 8 | Cerebrovascular Disease |
| 9 | COPD and Respiratory Disease |
| 10 | Access to Dental Care |
| 10 | Education |
| 11 | Employment |
| 12 | Injury and Death |
| 13 | Arthritis |
| 14 | Fair or Poor Health Status |

*Notes: Needs noted as "added" were pulled from quadrants other than the upper right (high data/high qualitative) as they were considered significant by the prioritization working group.*
*Needs with the same priority rank received the same overall score in the prioritization process*

*Source: IBM Watson Health, 2019*

*Recommended Health Needs to be Addressed for District 2 Public Health*

As part of the prioritization work session, work group participants recommended a set of prioritized significant health needs that should be addressed by each CHNA Partner (see "Recommended Health Needs to be Addressed by the CHNA Partners" section). The members of this community's prioritization work group recommended the following significant needs to be addressed via District 2 Public Health's CHNA implementation strategy:

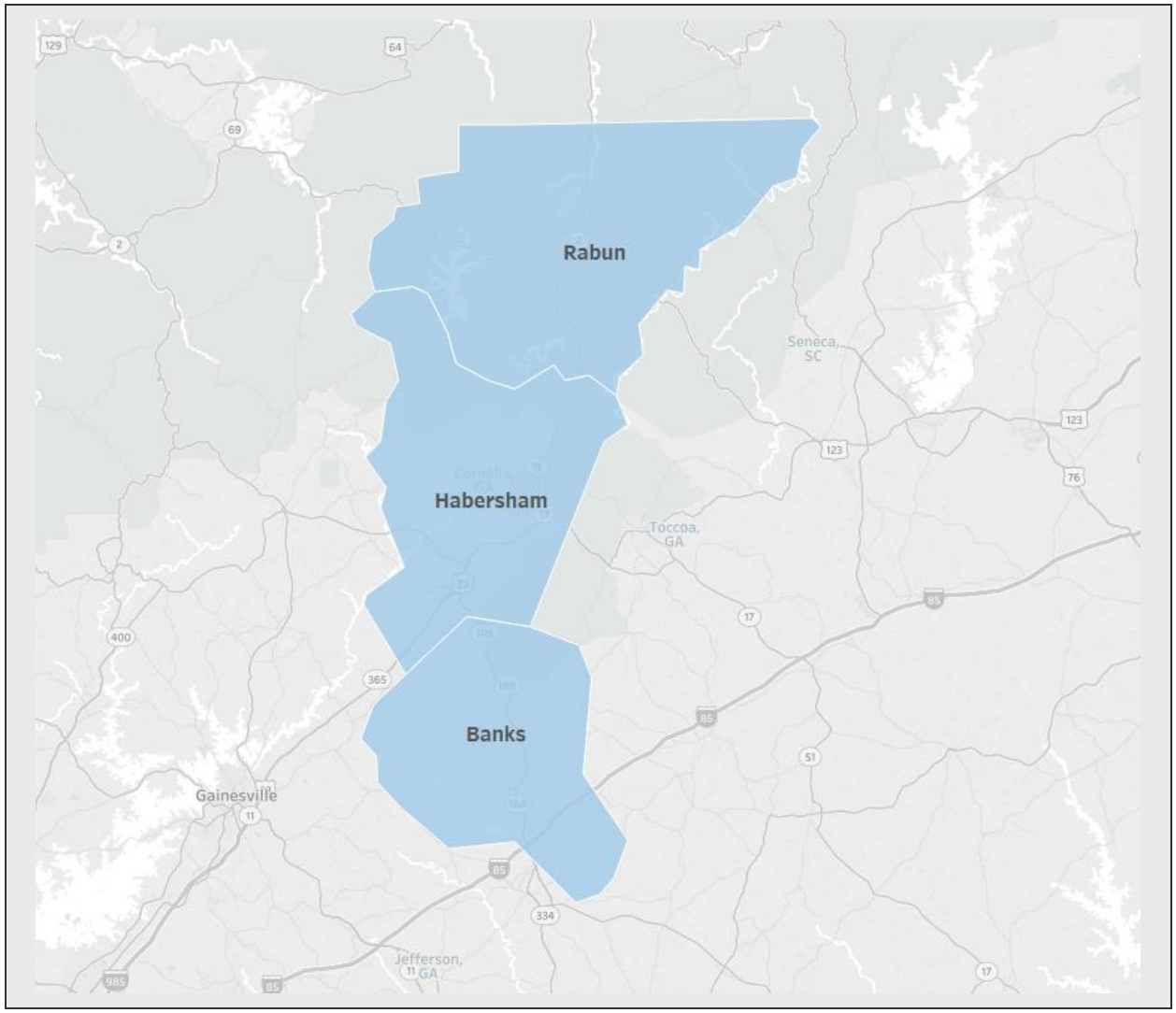
- Substance Abuse
- Physical Activity
- Transportation
- Mental Health Stigma and Services
- Child Mortality and Teen Pregnancy

## Community Health Needs Assessment – Habersham Medical Center

*Community Served Definition*

For the purpose of this assessment, the geographic boundaries of the community served by Habersham Medical Center (HMC) includes the counties from which a majority of HMC patients originate. The counites included are where HMC has a minimum of 20% market share based on inpatient and outpatient claims. The HMC community served is comprised of Banks, Habersham, and Rabun counties.

*Map of Community Served*




*Source: Habersham Medical Center, 2019*

*Demographic and Socioeconomic Summary*

According to population statistics, the HMC community is expected to grow 3.6% by 2023, an increase of more than 2,700 people. The 3.6% projected population growth is less than the state's 5-year projected growth rate (5.0%) but slightly higher when compared to the national projected growth rate (3.5%). The median age is much older than both the state and national benchmarks. Median household income for the community is much lower than state and national benchmarks. The overall community has a slightly lower proportion of Medicaid beneficiaries than the state of Georgia benchmark and the estimated uninsured rate is greater than the national and state levels.

*Demographic and Socioeconomic Comparison: Community Served and State/U.S. Benchmarks*

| Geography | | Benchmarks | | | Community Served |
|---|---|---|---|---|---|
| | | United States | Georgia | Northeast Georgia Region | Habersham Medical Center |
| Total Current Population | | 326,533,070 | 10,467,269 | 1,743,817 | 76,542 |
| 5 Yr Projected Population Change | | 3.5% | 5.0% | 7.2% | 3.6% |
| Median Age | | 38.3 | 36.9 | 40.3 | 43.6 |
| Population 0-17 | | 22.6% | 24.0% | 25.3% | 21.3% |
| Population 65+ | | 15.9% | 13.8% | 13.1% | 20.3% |
| Women Age 15-44 | | 19.6% | 20.4% | 20.0% | 18.9% |
| Non-White Population | | 30.0% | 43.0% | 36.2% | 14.0% |
| Hispanic Population | | 18.2% | 9.7% | 16.6% | 12.0% |
| Insurance Coverage | Uninsured | 9.4% | 17.1% | 11.9% | 18.4% |
| | Medicaid | 19.0% | 11.8% | 10.4% | 11.0% |
| | Private Market | 9.6% | 10.8% | 11.5% | 9.4% |
| | Medicare | 16.1% | 14.4% | 12.5% | 20.3% |
| | Employer | 45.9% | 45.8% | 53.7% | 40.9% |
| Median HH Income | | $62,175 | $55,559 | $56,929 | $42,041 |
| Limited English | | 26.2% | 19.3% | 28.9% | 17.2% |
| No High School Diploma | | 7.4% | 8.9% | 7.9% | 11.9% |
| Unemployed | | 6.8% | 7.8% | 6.3% | 7.6% |

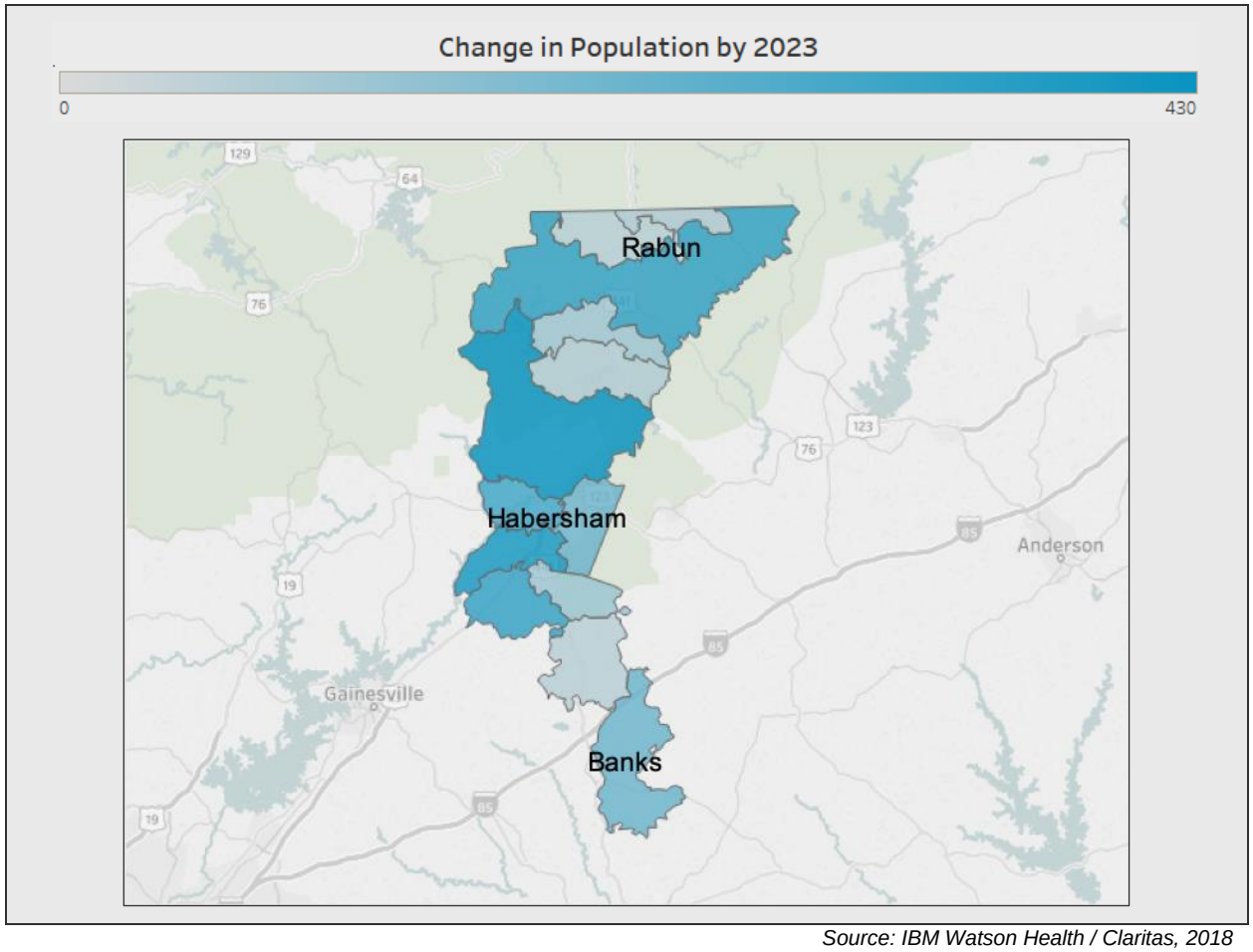
*Source: IBM Watson Health / Claritas, 2018; US Census Bureau 2017 (U.S. Median Income)*

Note: children (ages 0-17), older adults (ages 65+) and women of childbearing age (ages 18-44) are identified as population groups that have unique healthcare needs.

The ZIP codes expected to experience the most growth in five years are:

- 30523 – Clarkesville 430 people
- 30531 – Cornelia 397 people
- 30525 – Clayton 333 people
- 30510 – Alto 330 people
- 30535 – Demorest 303 people

*2018 - 2023 Total Population Projected Change by ZIP Code*

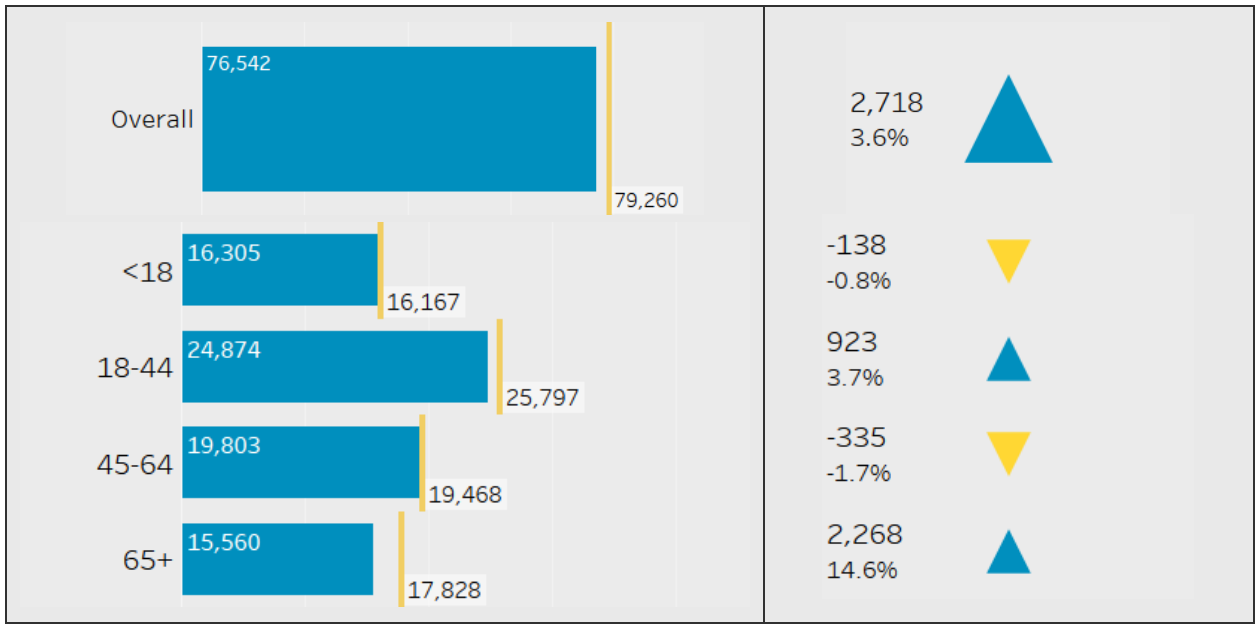



*Source: IBM Watson Health / Claritas, 2018*

The community's population skews slightly younger with 53.8% of the population younger than 44 (32.5% of the population ages 18-44 and 21.3% under age 18). The largest cohort (18-44) is expected to grow by 923 people by 2023. Two (2) cohorts are expected to decrease in population size by 2023, the under age 18 (-138 people) and the 45-64 cohorts (-335 people). The age 65 plus cohort is the smallest, representing 20.3% of the population, but is expected to experience the fastest growth (14.6%) over the next five years; adding 2,268 seniors to the community. Growth in the senior population will likely contribute to increased utilization of services as the population continues to age.

*Population Distribution by Age*

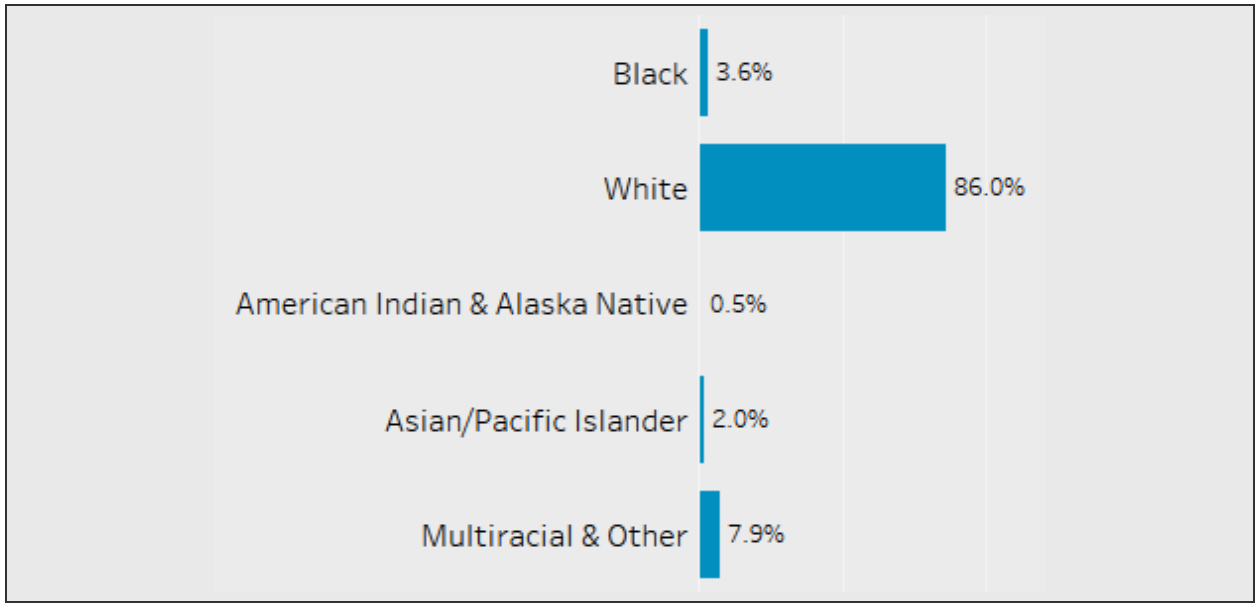
*2018 Population by Age Cohort* *Change by 2023*



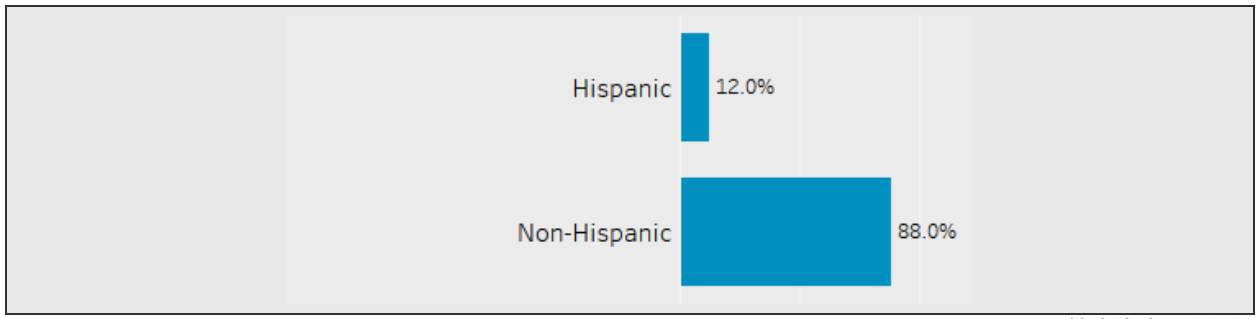

*Source: IBM Watson Health / Claritas, 2018*

Population statistics are analyzed by race and by Hispanic ethnicity. The community is primarily racially White (86.0%), with the Black population comprising 6.0% of the population and a combination of other racial groups comprising the remaining 8.0% of the population. In terms of ethnicity, the community population is primarily non-Hispanic (88.0%) but projected growth in the Hispanic population is expected to outpace other groups increasing 1,338 people by 2023.

*2018 Population by Race*

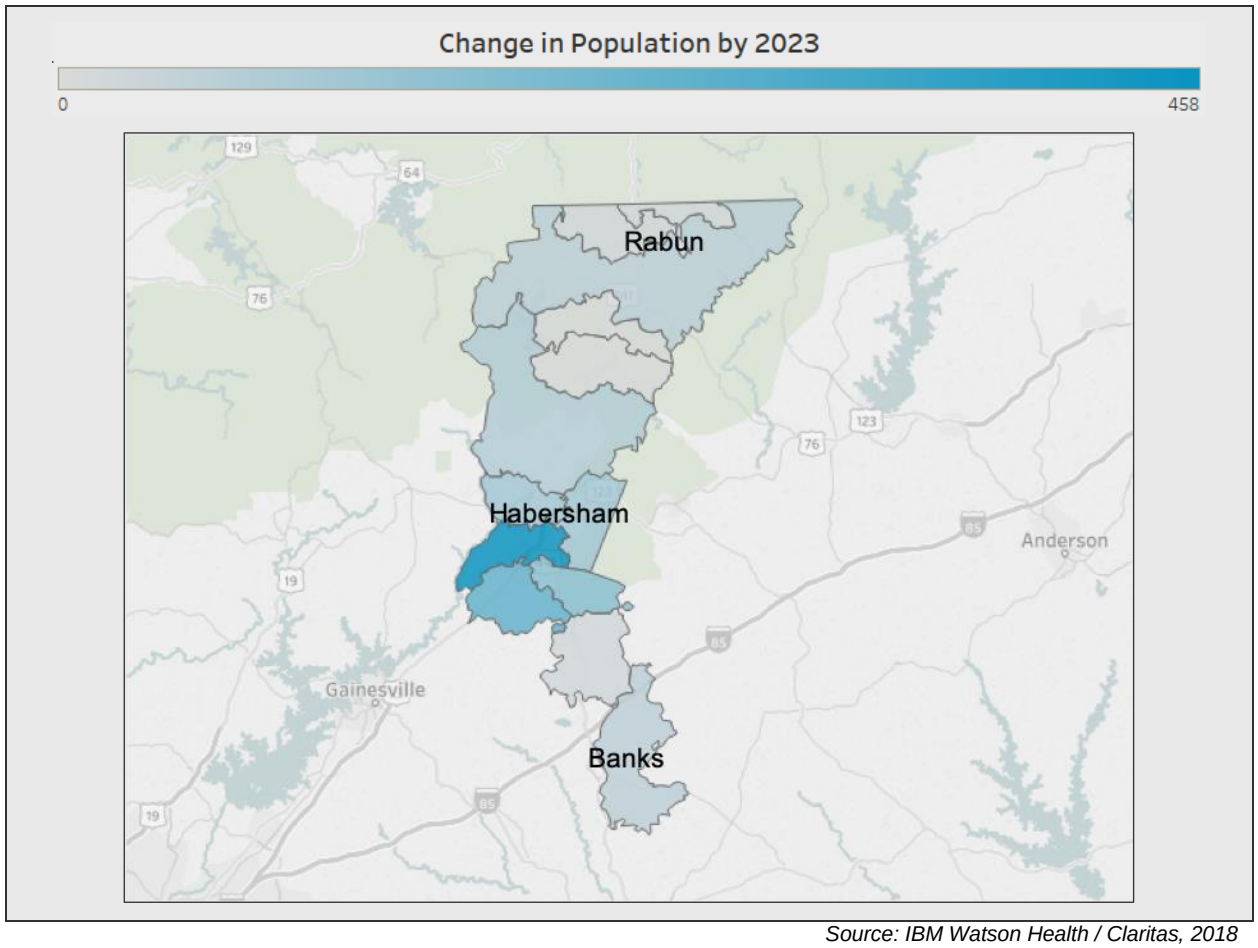



*2018 Population by Ethnicity*




*Source: IBM Watson Health / Claritas, 2018*

*2018 - 2023 Hispanic Population Projected Change by ZIP Code*

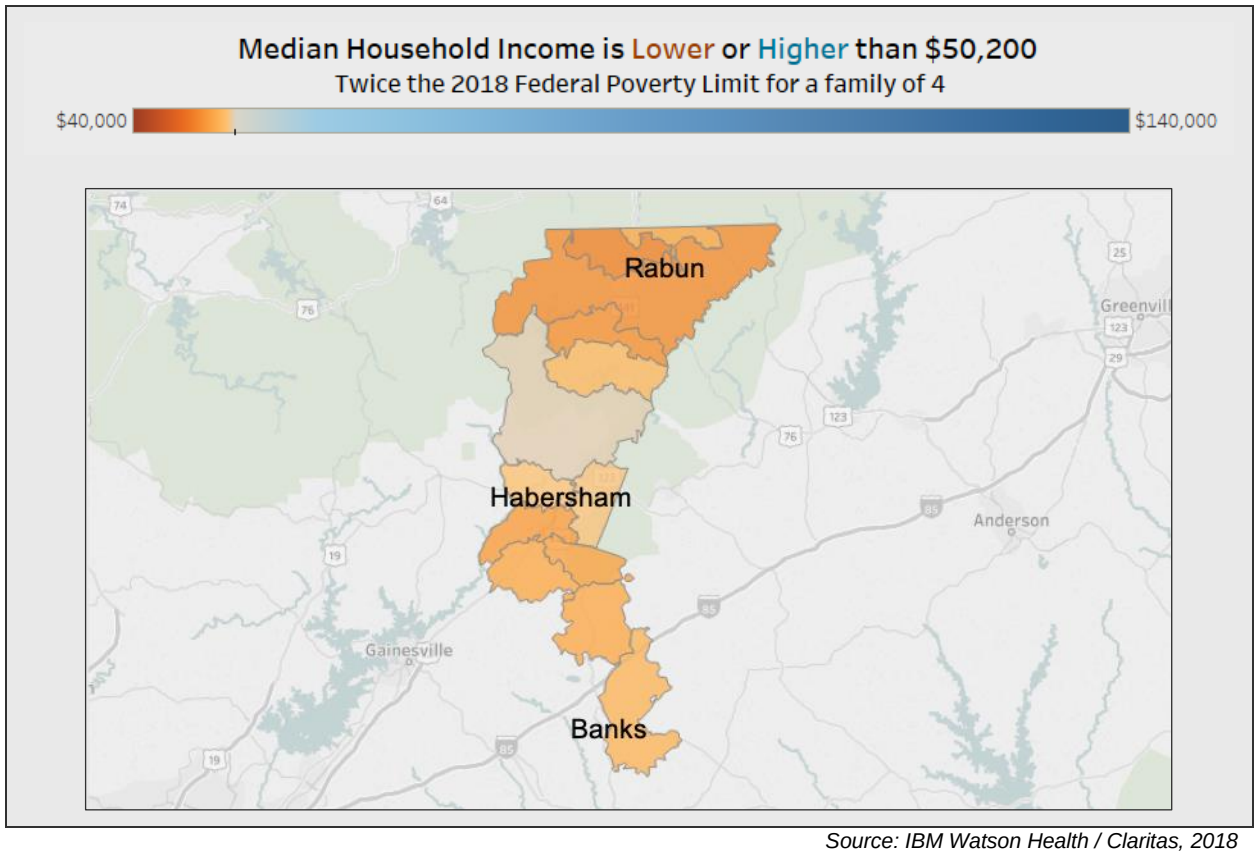



*Source: IBM Watson Health / Claritas, 2018*

The 2018 median household income for the United States is $62,175 and $55,559 for the state of Georgia. The median household income for the ZIP codes within this community ranges from $34,615 for ZIP code 30568-Rabun Gap to $49,253 for ZIP code 30523-Clarkesville. All 13 ZIP Codes in the Habersham service area have median household incomes less than $50,200, twice the 2018 Federal Poverty Limit for a family of four:

- 30523 – Clarkesville $49,253
- 30563 – Mount Airy $47,158
- 30535 – Demorest $46,919
- 30552 – Lakemont $45,214
- 30530 – Commerce $44,227
- 30547 – Homer $41,815
- 30510 – Alto $41,707
- 30537 – Dillard $41,486
- 30511 – Baldwin $40,518
- 30531 – Cornelia $39,431
- 30576 – Tiger $37,372
- 30525 – Clayton $36,814
- 30568 – Rabun Gap $34,615

*2018 Median Household Income by ZIP Code*

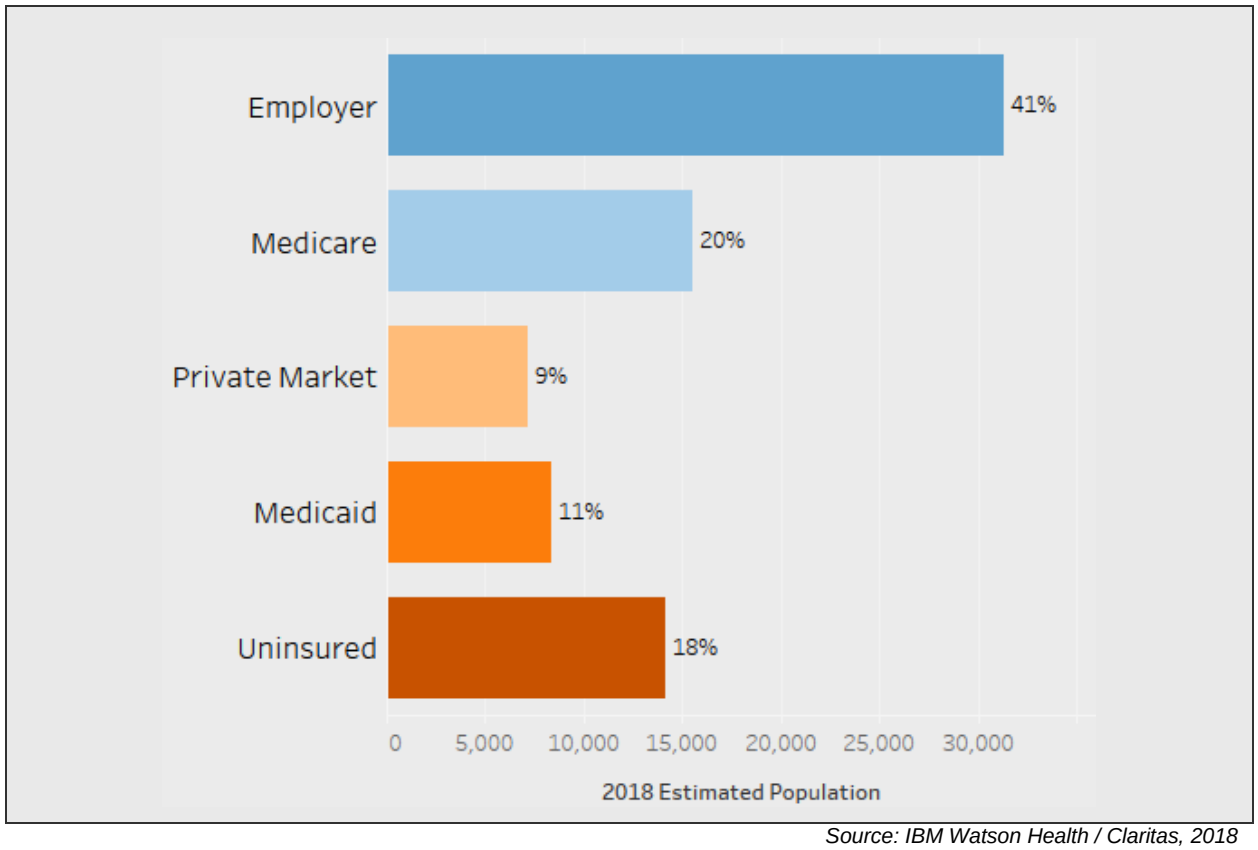



*Source: IBM Watson Health / Claritas, 2018*

Much of the population (41%) is insured through employer sponsored health coverage, followed by those with Medicare (20%), and residents without health insurance (18%). The remainder of the population is divided between those with Medicaid (11%) and private market insurance (9%); purchasers of coverage directly or through the health insurance marketplace.

The proportion of residents who have Medicare (20%) coverage and who are uninsured (18%) is higher than the proportion for the state of Georgia (14% and 17% respectively).

*2018 Estimated Distribution of Covered Lives by Insurance Category*




*Source: IBM Watson Health / Claritas, 2018*

The community includes 11 Health Professional Shortage Areas and three (3) Medically Underserved Areas as designated by the U.S. Department of Health and Human Services Health Resources Services Administration.[3] **Appendix G** includes the details on each of these designations.

*Health Professional Shortage Areas and Medically Underserved Areas and Populations*

| | Health Professional Shortage Areas (HPSA) | | | | Medically Underserved Area/Population (MUA/P) |
|---|---|---|---|---|---|
| **Habersham Medical Center** | **Dental Health** | **Mental Health** | **Primary Care** | **Grand Total** | **MUA/P** |
| Banks | 1 | 1 | 1 | 3 | 1 |
| Habersham | 2 | 2 | 2 | 6 | 1 |
| Rabun | | 1 | 1 | 2 | 1 |
| **Total** | **3** | **4** | **4** | **11** | **3** |

*Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018*

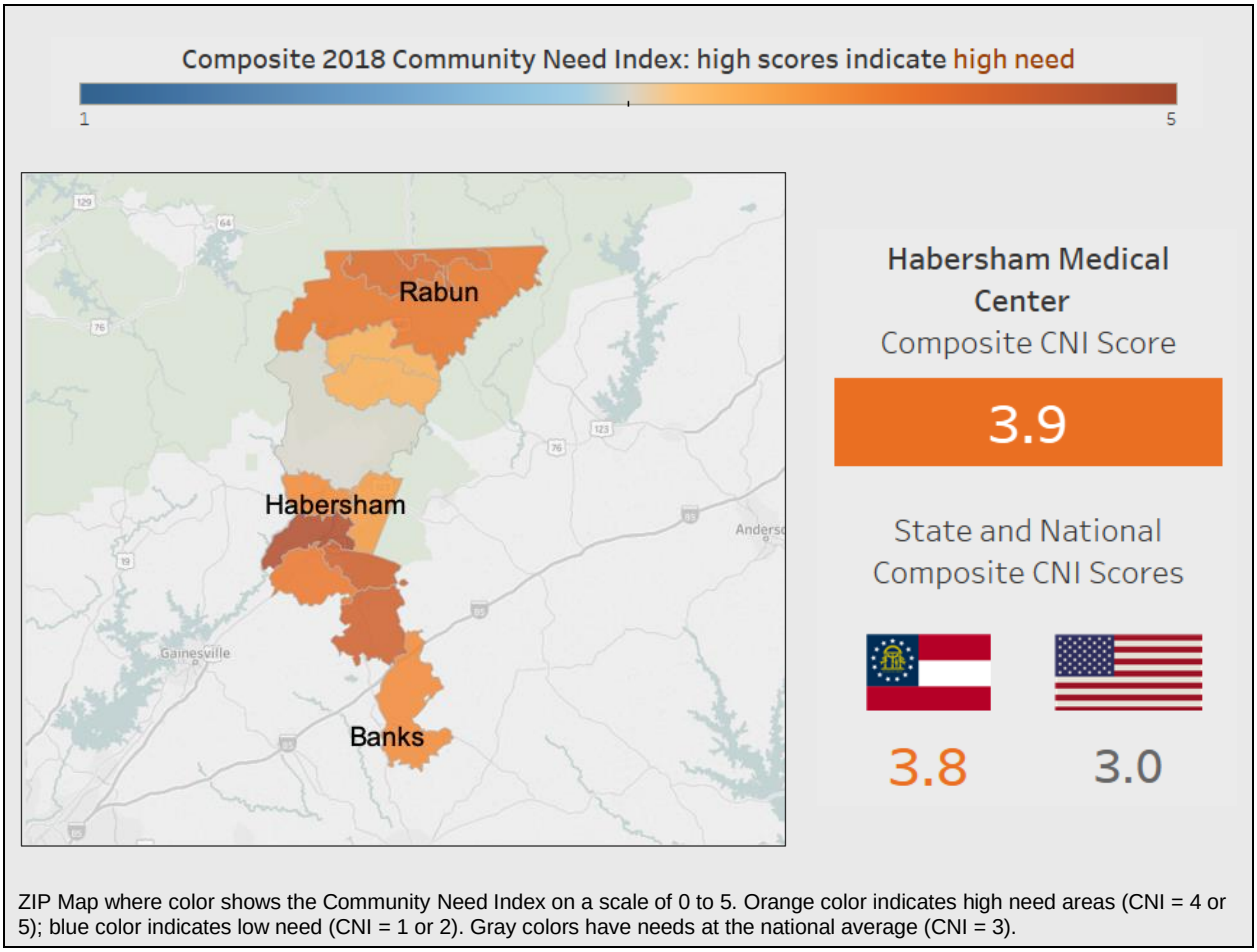
[3] U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018

The Watson Health Community Need Index (CNI) is a statistical approach to identifying areas within a community where health disparities may exist. Leveraging U.S. Census Data and Watson Health Insurance Coverage Estimates, the CNI takes into account vital socio-economic factors (income, cultural, education, insurance and housing) about a community to generate a CNI score for every populated ZIP code in the United States. The CNI strongly links to variations in community healthcare needs and is an indicator of a community's demand for various healthcare services. The CNI score by ZIP code identifies specific areas within a community where healthcare needs may be greater.

Overall, the composite CNI score for the community served is 3.9, higher than the state CNI of 3.8 and national benchmark of 3.0, potentially indicating greater health care needs in this community. The CNI score in ZIP code 30531-Cornelia is 4.8; a score greater than 4.5 may point to even more significant health needs among this population.

Twelve of the 13 ZIP codes in the community have insurance barrier scores of 5, reflecting the percentage of the labor force without employment and percentage of population without health insurance. Additionally, seven of the 13 ZIP codes have education barrier scores of 5, which means these ZIP codes rank in the bottom quintile across the nation for the percentage of population over age 25 without a high school diploma.

*2018 Community Need Index by ZIP Code*




ZIP Map where color shows the Community Need Index on a scale of 0 to 5. Orange color indicates high need areas (CNI = 4 or 5); blue color indicates low need (CNI = 1 or 2). Gray colors have needs at the national average (CNI = 3).

*Source: IBM Watson Health / Claritas, 2018*

*Watson Health Community Data*

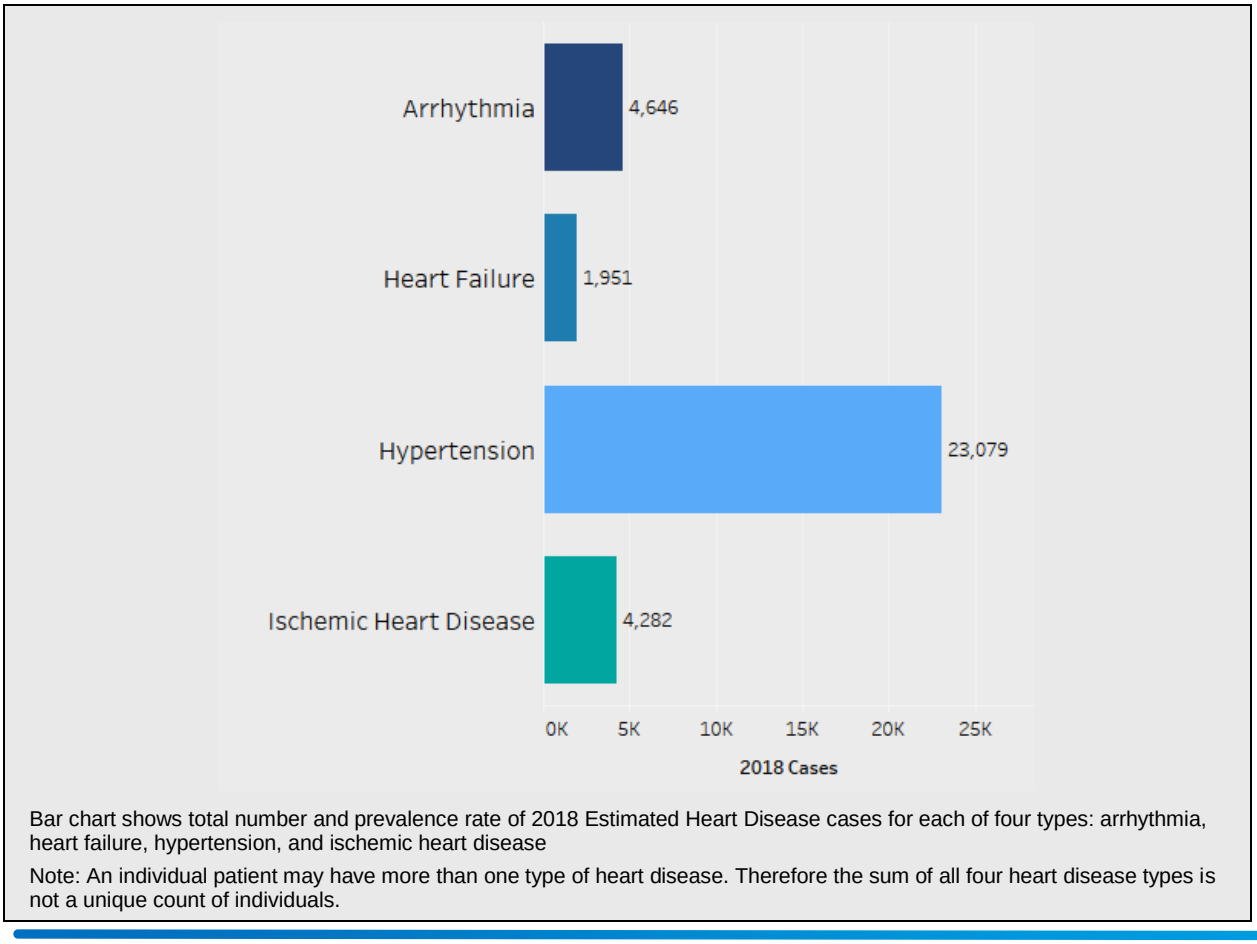
Watson Health supplements the publicly available data and population statistics with estimates of localized disease prevalence of heart disease and cancer as well as emergency department visit estimates.

Watson Health Heart Disease Estimates identify hypertension as the most prevalent heart disease diagnosis; with over 23,000 estimated cases in the community. The 30523 ZIP code of Clarkesville has the most estimated cases of each heart disease type, driven primarily by population size.

Slightly more females are identified as living with Arrythmia, Heart Failure, and Hypertension than males, but more males are identified as living with Ischemic Heart Disease than females (62% versus 38%).

The 30523 ZIP code of Clarkesville has the highest estimated prevalence rates for Heart Failure (308 cases per 10,000 population), Hypertension (3,454 cases per 10,000 population), and Ischemic Heart Disease (716 cases per 10,000 population). The 30552 ZIP code of Lakemont has the highest estimated prevalence rate for Arrhythmia (725 cases per 10,000 population.

*2018 Estimated Heart Disease Cases*



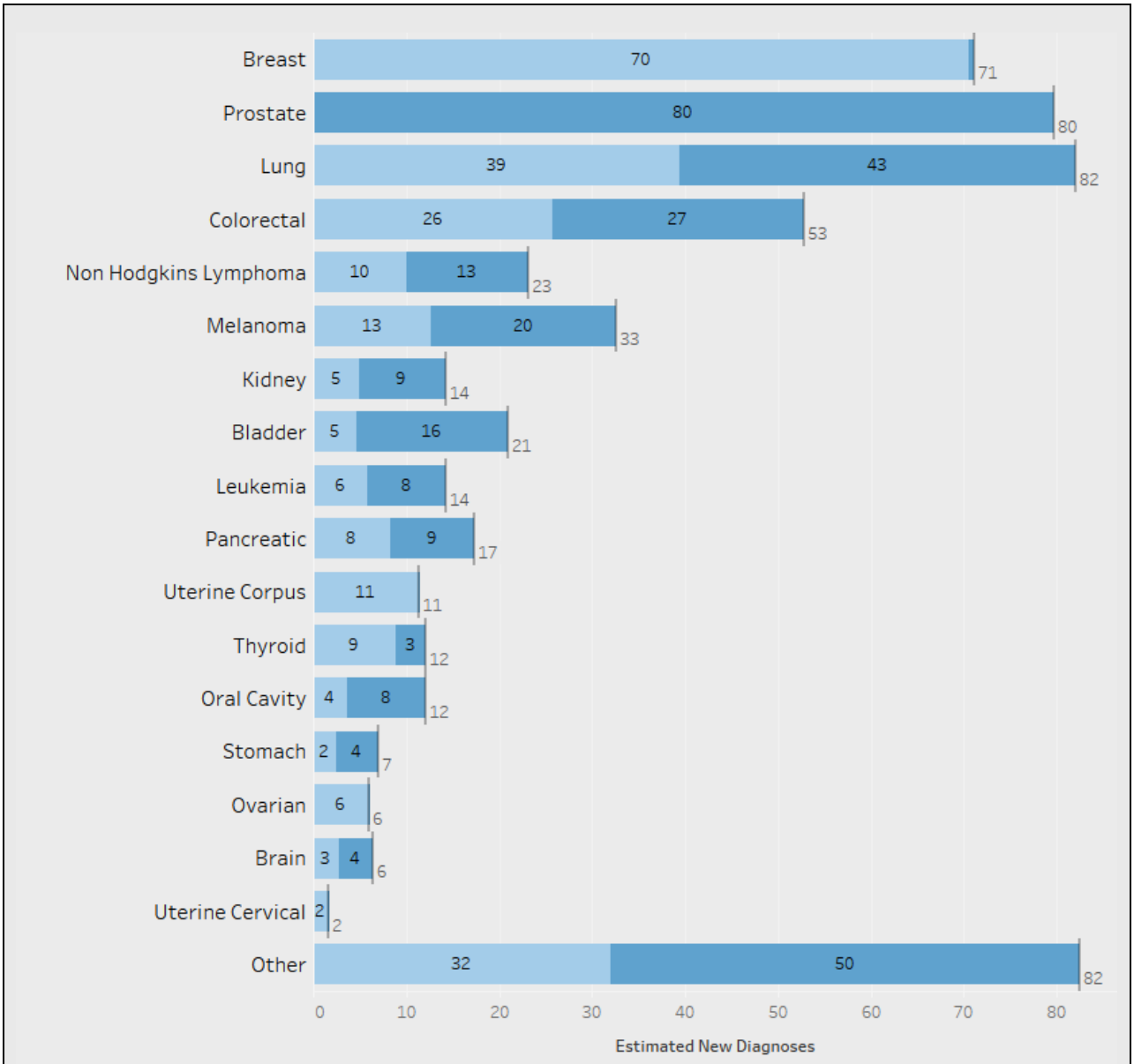

Bar chart shows total number and prevalence rate of 2018 Estimated Heart Disease cases for each of four types: arrhythmia, heart failure, hypertension, and ischemic heart disease

Note: An individual patient may have more than one type of heart disease. Therefore the sum of all four heart disease types is not a unique count of individuals.

*Source: IBM Watson Health, 2018*

For this community, Watson Health's 2018 Cancer Estimates reveal the cancers estimated to have the greatest number of new cases in 2018 are lung, prostate, and breast. The cancers projected to have the greatest rate of growth in the next five years are melanoma (13.3%), thyroid (12.9%), pancreatic (12.1%), and bladder (11.1%). Growth projections are based on both population changes and disease rates.

*2018 Estimated New Cancer Cases*




Bar chart shows estimated new diagnoses per year for each of the 17 types of Cancer and 1 category for all other cancers. Color shows details about sex with light blue for females and dark blue for males.

*Source: IBM Watson Health, 2018*

*Estimated Cancer Cases and Projected 5 Year Change by Type*

| Cancer Type | 2018 Estimated New Cases | 2023 Estimated New Cases | 5 Year Growth (%) |
|---|---|---|---|
| Bladder | 21 | 23 | 11.1% |
| Brain | 6 | 7 | 6.3% |
| Breast | 71 | 77 | 7.7% |
| Colorectal | 53 | 48 | -8.5% |
| Kidney | 14 | 16 | 9.7% |
| Leukemia | 14 | 16 | 9.6% |
| Lung | 82 | 87 | 6.6% |
| Melanoma | 33 | 37 | 13.3% |
| Non-Hodgkin's Lymphoma | 23 | 25 | 9.6% |
| Oral Cavity | 12 | 13 | 9.6% |
| Ovarian | 6 | 6 | 6.3% |
| Pancreatic | 17 | 19 | 12.1% |
| Prostate | 80 | 80 | -0.1% |
| Stomach | 7 | 7 | 4.7% |
| Thyroid | 12 | 14 | 12.9% |
| Uterine Cervical | 2 | 2 | 1.5% |
| Uterine Corpus | 11 | 12 | 9.3% |
| All Other Cancers | 82 | 91 | 9.9% |
| Grand Total | 547 | 580 | 6.1% |

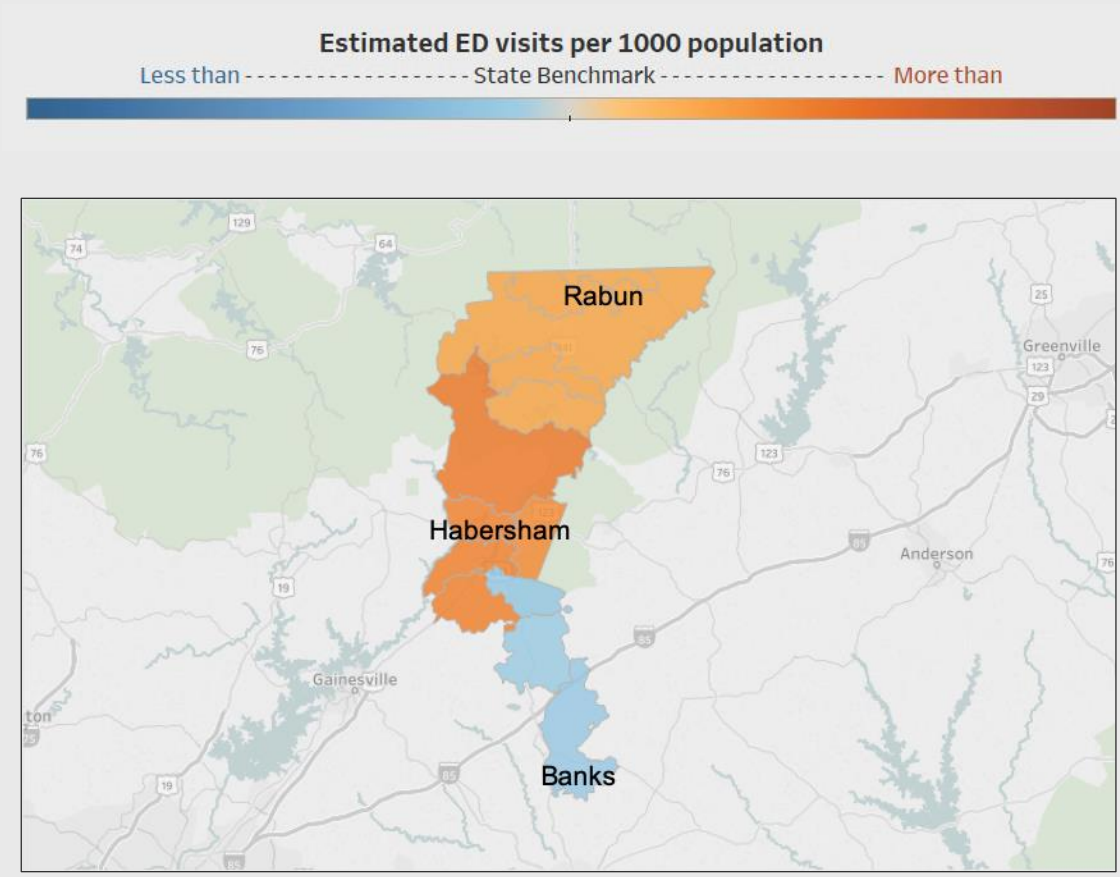
*Source: IBM Watson Health, 2018*

Based on population characteristics and regional utilization rates, Watson Health projects all emergency department (ED) visits in this community will increase by 5.7% over the next five years. Ten of the communities 13 ZIP codes have ED use rates higher than those for the state of Georgia (439 visits per 1,000 population) and the U.S. benchmark (435 visits per 1,000 population).

These ED visits consist of three main types: those resulting in an inpatient admission, emergent ED visits treated and released, and non-emergent ED visits that are lower acuity. Non-emergent ED visits present to the ED but can possibly be treated in more appropriate and less intensive outpatient settings.

Non-emergent ED visits can be an indication of systematic issues within the community regarding access to primary care, managing chronic conditions, or other access to care issues such as ability to pay. Five (5) ZIP codes have estimated Non-emergent ED visit rates higher than the state benchmark of 185 visits per 1,000 population: ZIP codes 30531-Cornelia, 30510-Alto, 30535-Demorest, 30563-Mount Airy, and 30523-Clarkesville. Watson Health estimates non-emergent ED visits to increase by an average of 1.4% over the next five years in this community.

*Total Estimated 2018 Emergency Department Visit Rate*




Estimated ED Visits per 1000 Population

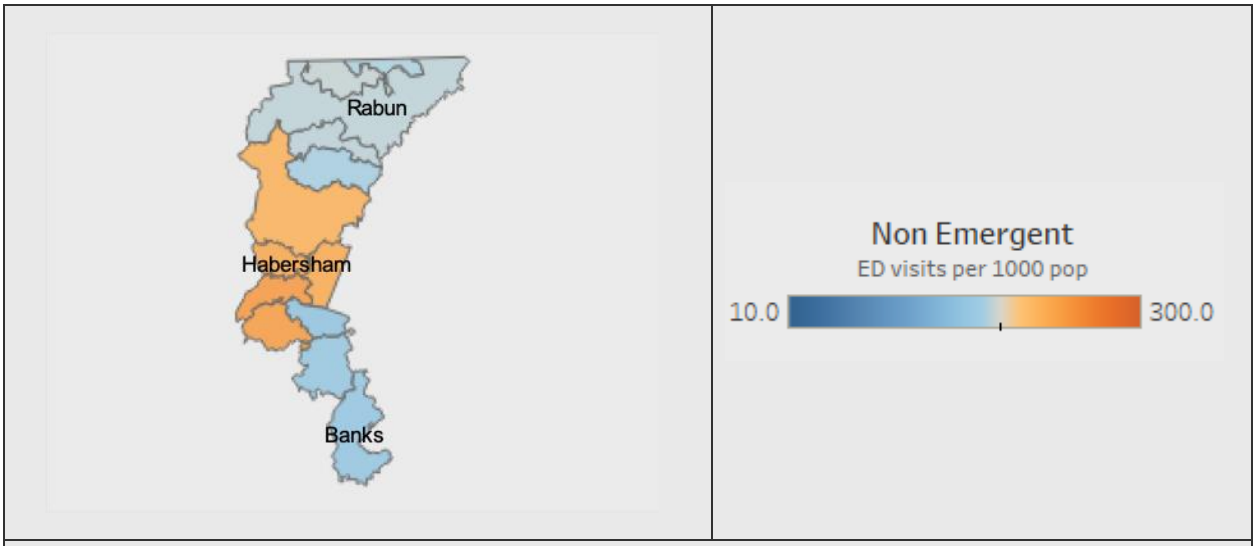
| Emergent Status | Georgia | USA |
|---|---|---|
| Non Emergent | 185 | 179 |
| Emergent | 190 | 189 |
| Inpatient Admission | 64 | 67 |
| Total | 439 | 435 |

ZIP map color shows total Emergency Department visits per 1,000 popultaion. Orange colors are higher than the state benchmark, blue colors are less than the state benchmark, and gray colors are similar.

*Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Non-Emergent Estimated 2018 Emergency Department Visits by ZIP Code*




ZIP map color shows total Emergency Department vists per 1,000 population by non-emergent status. Orange colors are higher than the state benchmark (see table at right), blue colors are less than the state benchmark, and gray colors are similar. Color range is set for the entire study region. ED visits are defined by the presence of specific CPT® codes in claims. Non-emergency visits to the ED do not necessarily require treatment in a hospital emergency department and can potentially be treated in a fast-track ED, an urgent care treatment center, a clinic or physician's private office.

*Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Public Health Indicators*

Public health indicators (129 total) were collected and analyzed to assess community health needs. For each health indicator, a comparison was made between the most recently available community data and benchmarks for the same/similar indicator. The basis of benchmarks was available data for the U.S. and the state of Georgia. A list of these indicators is in **Appendix A.**

Where the community indicators showed greater need when compared to the state of Georgia comparative benchmark, the difference between the community values and the state benchmark was calculated (need differential). The highest ranked indicators with need differentials in the 50$^{th}$ percentile of greater severity pinpointed community health needs from a quantitative perspective.

*Focus Groups & Interviews*

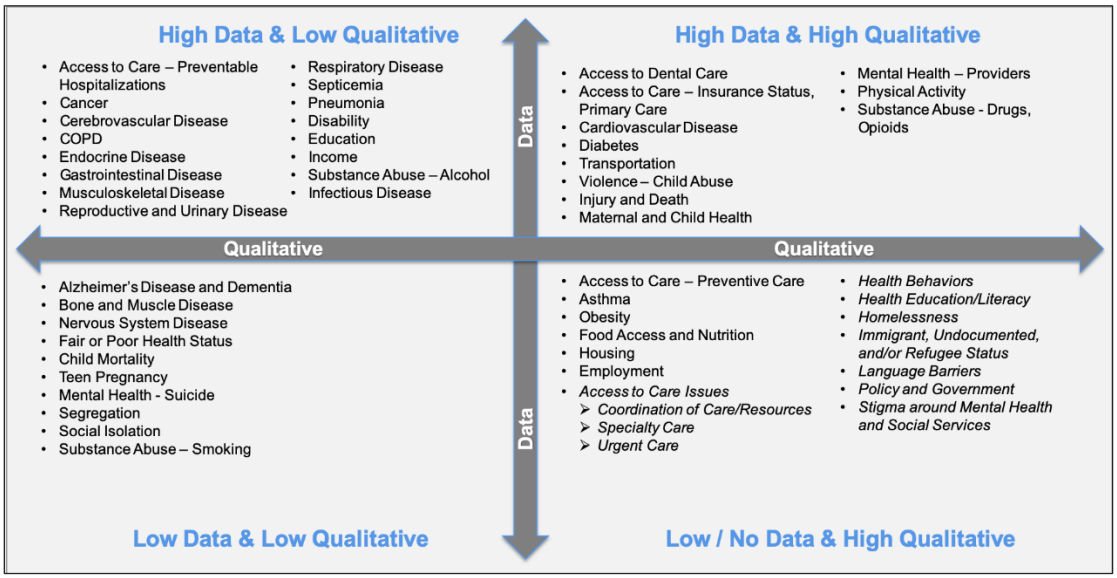
In the Watson Health focus group sessions and interviews, participants identified and discussed the greatest health needs in the community, as well as the barriers and strengths impacting overall health status. For this community, one focus group session (listed below) with nine (9) participants and two (2) interviews was conducted between March and April 2019. A list of the organizations providing input can be found in **Appendix B**. Summary findings from the focus groups and interviews can be found in **Appendix C**.

| Focus Group | Date | Location | Number of Participants |
|---|---|---|---|
| Habersham & Stephens Counties Focus Group | March 6, 2019 | Habersham Medical Center<br>Demorest, GA | 9 |

*Prioritized Significant Health Needs for Habersham Medical Center*

The Health Needs Matrix identified through the community health needs assessment (see Methodology for Defining Community Needs section) shows the convergence of needs identified in the qualitative data (interview and focus group feedback) and quantitative data (health indicators). The top health needs for this community are defined in the Health Needs Matrix below.

*Community Health Needs Matrix*




*Note: Lower right quadrant items in italics do not have quantitative data indicators available*

*Source: IBM Watson Health, 2019*

Through the prioritization process, the significant health needs for this community were identified, reviewed, and prioritized (see "Approach to Identify and Prioritize Significant Health Needs" section). The resulting prioritized health needs for the community are provided in the table below.

*Prioritized Significant Community Health Needs*

| Priority Rank | Health Need |
|---|---|
| 1 | Access to Care |
| 1 | Violence - Child Abuse |
| 2 | Mental Health |
| 3 | Diabetes |
| 3 | Substance Abuse |
| 4 | Cardiovascular Disease |
| 4 | Physical Activity |
| 5 | Maternal and Child Health |
| 6 | Access to Dental Care |
| 7 | Injury and Death |
| 7 | Transportation |

*Notes: HMC prioritization working group did not add needs from quadrants other than the upper right (high data/high qualitative). Needs with the same priority rank received the same overall score in the prioritization process*

*Source: IBM Watson Health, 2019*

*Recommended Health Needs to be Addressed for Habersham Medical Center*

As part of the prioritization work session, work group participants recommended a set of prioritized significant health needs that should be addressed by each CHNA Partner (see "Recommended Health Needs to be Addressed by the CHNA Partners" section). The members of this community's prioritization work group recommended the following significant needs to be addressed via Habersham Medical Center's CHNA implementation strategy:

- Access to Care
- Mental Health
- Diabetes

*CHNA Implementation Strategy*

HMC will choose which needs it will address from those identified in the assessment. An implementation strategy with specific initiatives to address the chosen health will be completed and adopted by the hospital by February 15, 2020.

An evaluation of the HMC 2016 CHNA implementation strategy and its impact can be found in **Appendix I.**

## Community Health Needs Assessment – NGHS Greater Braselton Service Area

*Community Served Definition*

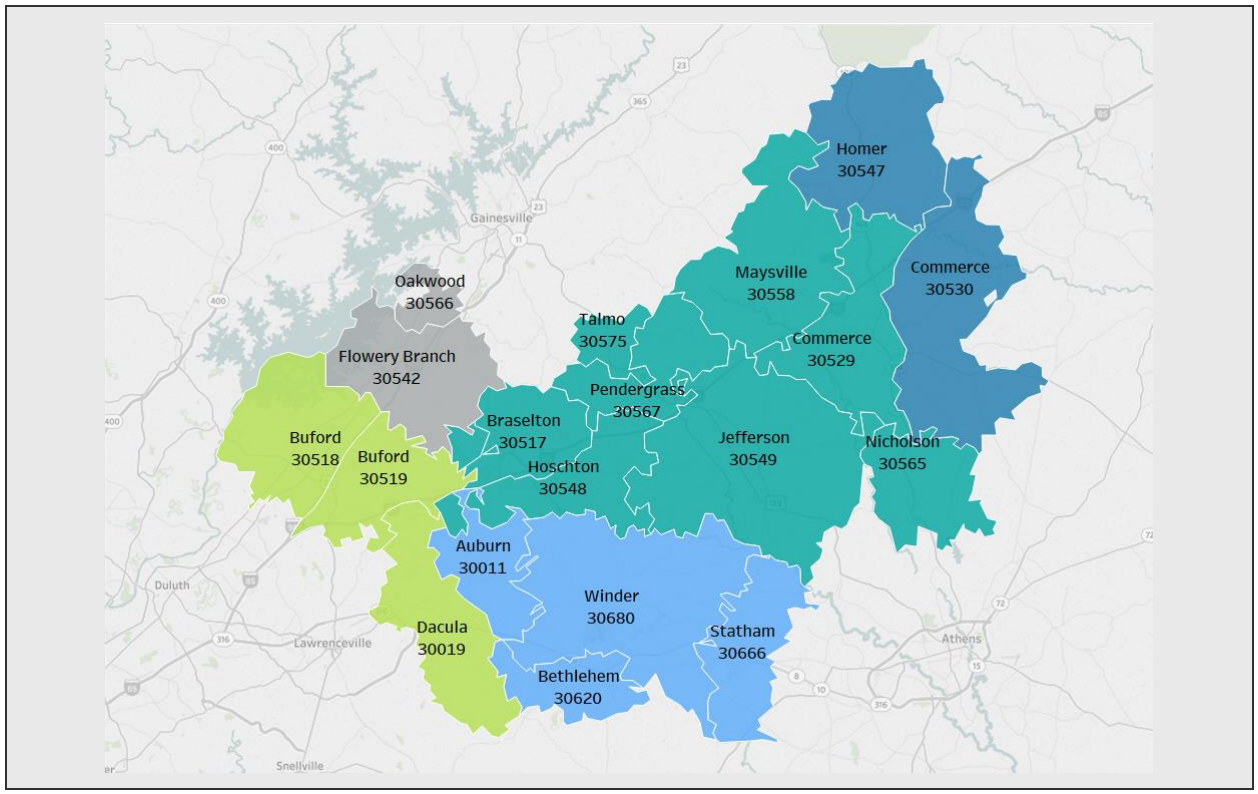
For the purpose of this assessment, the geographic boundaries of the community served by NGHS encompass the counties and ZIP codes where 90% of NGHS hospital admissions originate (**Appendix K**). These counties were grouped into four communities based on consideration for patient volume, location, and the broad interests of the community, including medically underserved populations, low-income persons, minority groups, or those with chronic disease needs. The NGHS Greater Braselton Service Area (GBSA) is comprised of 19 ZIP codes from Banks, Barrow, Gwinnett, Hall, and Jackson counties.

| ZIP Code | City | County |
|---|---|---|
| 30011 | Auburn | Barrow, GA |
| 30019 | Dacula | Gwinnett, GA |
| 30517 | Braselton | Jackson, GA |
| 30518 | Buford | Gwinnett, GA |
| 30519 | Buford | Gwinnett, GA |
| 30529 | Commerce | Jackson, GA |
| 30530 | Commerce | Banks, GA |
| 30542 | Flowery Branch | Hall, GA |
| 30547 | Homer | Banks, GA |
| 30548 | Hoschton | Jackson, GA |

| ZIP Code | City | County |
|---|---|---|
| 30549 | Jefferson | Jackson, GA |
| 30558 | Maysville | Jackson, GA |
| 30565 | Nicholson | Jackson, GA |
| 30566 | Oakwood | Hall, GA |
| 30567 | Pendergrass | Jackson, GA |
| 30575 | Talmo | Jackson, GA |
| 30620 | Bethlehem | Barrow, GA |
| 30666 | Statham | Barrow, GA |
| 30680 | Winder | Barrow, GA |

This community was defined by ZIP codes, however public health indicators are most commonly available by county. Therefore, the counties which principally comprise a majority of the community were used in determining health needs. The principal counties used for the NGHS GBSA community needs analysis are Banks, Barrow, and Jackson counties.

*Map of Community Served*




*Source: NGHS, 2019*

*Demographic and Socioeconomic Summary*

The population of the community served is expected to grow 8.6% by 2023, an increase of more than 32,800 people. The 8.6% projected population growth is higher than the state's 5-year projected growth rate (5.0%) and the national projected growth rate (3.5%). The median age is older than the state benchmark but younger than the US median. Median household income for the overall community is higher than both the state and U.S. benchmarks.

*Demographic and Socioeconomic Comparison:*
*Community Served and State/U.S. Benchmarks*

| Geography | | Benchmarks | | | Community Served |
|---|---|---|---|---|---|
| | | United States | Georgia | Northeast Georgia Region | NGHS Greater Braselton Service Area |
| Total Current Population | | 326,533,070 | 10,467,269 | 1,743,817 | 383,014 |
| 5 Yr Projected Population Change | | 3.5% | 5.0% | 7.2% | 8.6% |
| Median Age | | 38.3 | 36.9 | 40.3 | 37.9 |
| Population 0-17 | | 22.6% | 24.0% | 25.3% | 26.2% |
| Population 65+ | | 15.9% | 13.8% | 13.1% | 12.4% |
| Women Age 15-44 | | 19.6% | 20.4% | 20.0% | 19.7% |
| Non-White Population | | 30.0% | 43.0% | 36.2% | 26.8% |
| Hispanic Population | | 18.2% | 9.7% | 16.6% | 12.4% |
| Insurance Coverage | Uninsured | 9.4% | 17.1% | 11.9% | 10.1% |
| | Medicaid | 19.0% | 11.8% | 10.4% | 9.4% |
| | Private Market | 9.6% | 10.8% | 11.5% | 11.3% |
| | Medicare | 16.1% | 14.4% | 12.5% | 13.9% |
| | Employer | 45.9% | 45.8% | 53.7% | 55.3% |
| Median HH Income | | $62,175 | $55,559 | $56,929 | $64,152 |
| Limited English | | 26.2% | 19.3% | 28.9% | 22.0% |
| No High School Diploma | | 7.4% | 8.9% | 7.9% | 8.2% |
| Unemployed | | 6.8% | 7.8% | 6.3% | 6.3% |

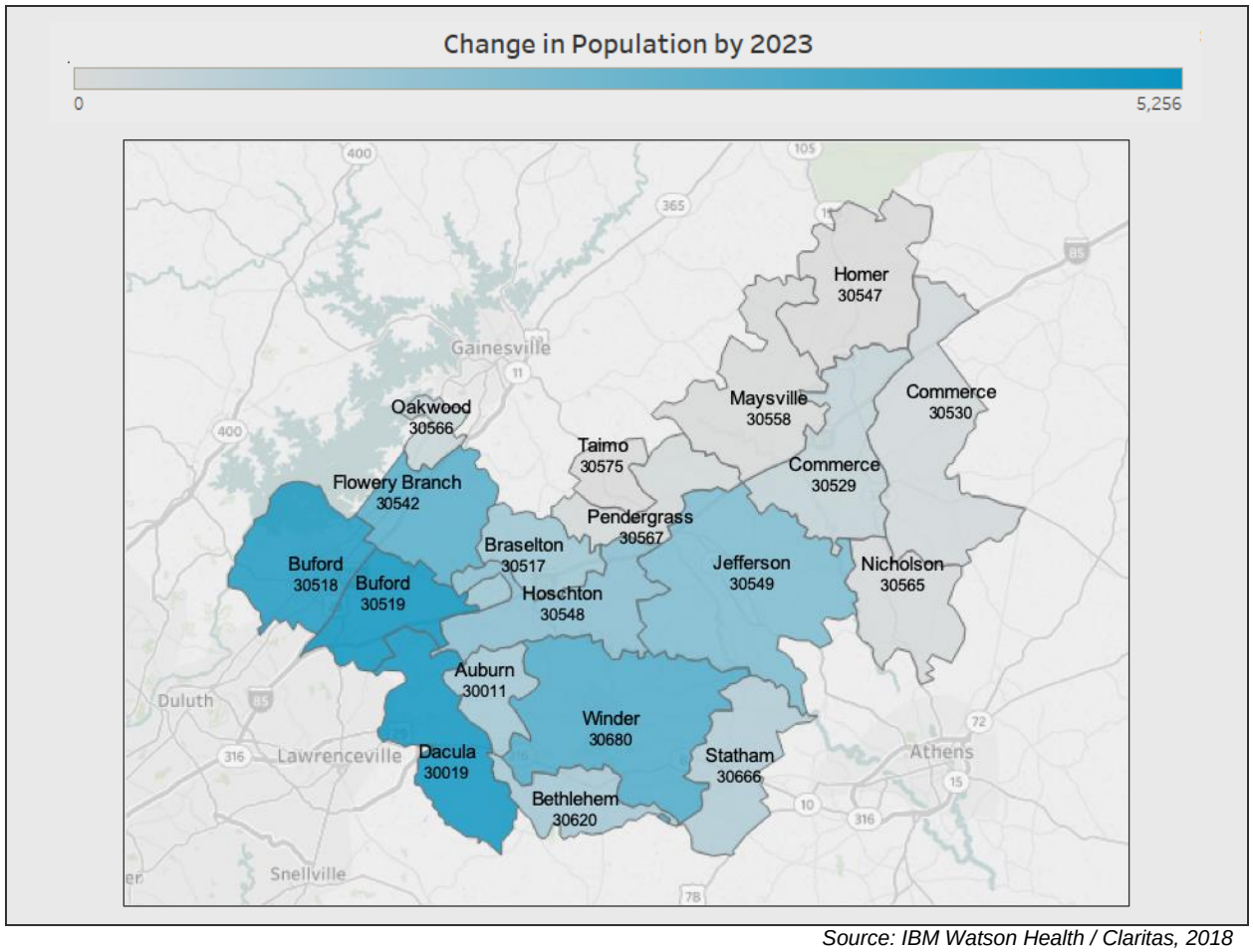
*Source: IBM Watson Health / Claritas, 2018; US Census Bureau 2017 (U.S. Median Income)*

Note: children (ages 0-17), older adults (ages 65+) and women of childbearing age (ages 18-44) are identified as population groups that have unique healthcare needs.

The ZIP codes expected to experience the most growth in number of people by 2023 are:

- 30519 – Buford 5,256 people
- 30019 – Dacula 5,148 people
- 30518 – Buford 4,709 people
- 30680 – Winder 3,500 people
- 30542 – Flowery Branch 3,244 people
- 30549 – Jefferson 2,229 people

*2018 - 2023 Total Population Projected Change by ZIP Code*

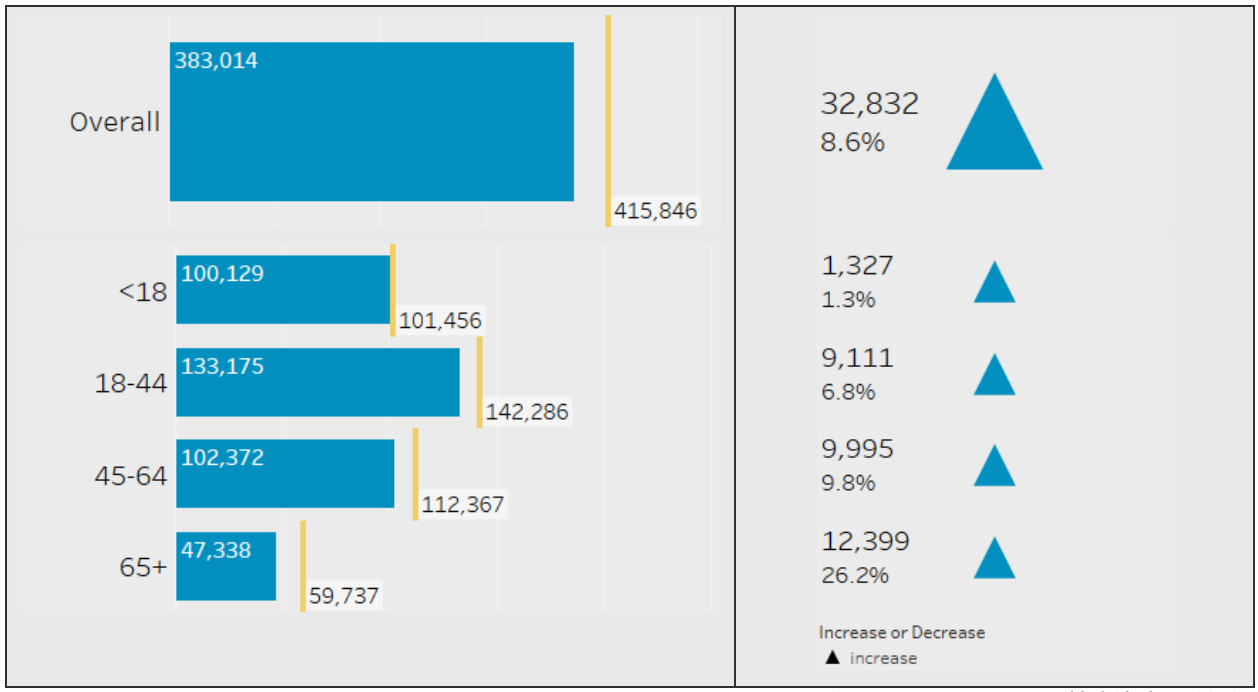



*Source: IBM Watson Health / Claritas, 2018*

The community's population skews younger with 35% of the population ages 18-44 and 26% under age 18. The largest cohort (18-44) is expected to grow by 9,111 people by 2023. The age 65 plus cohort is the smallest, representing 12% of the total 2018 population, but is expected to experience the fastest growth (26.2%) over the next five years adding 12,399 seniors to the community. Growth in the senior population will likely contribute to increased utilization of services as the population continues to age.

*Population Distribution by Age*

*2018 Population by Age Cohort* *Change by 2023*

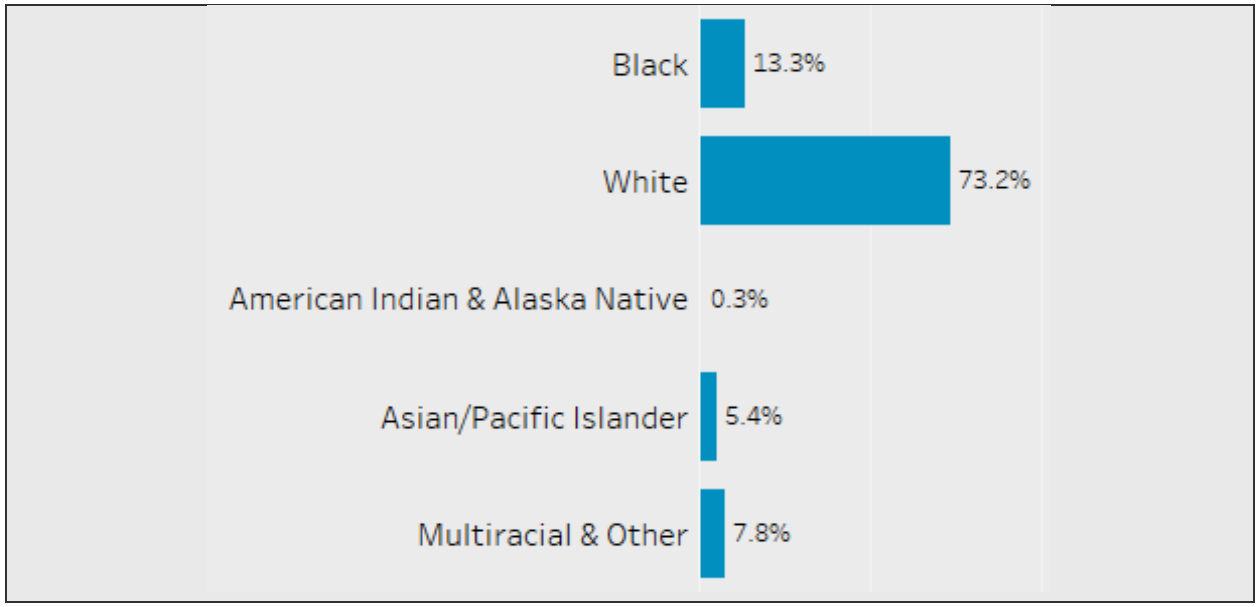



*Source: IBM Watson Health / Claritas, 2018*

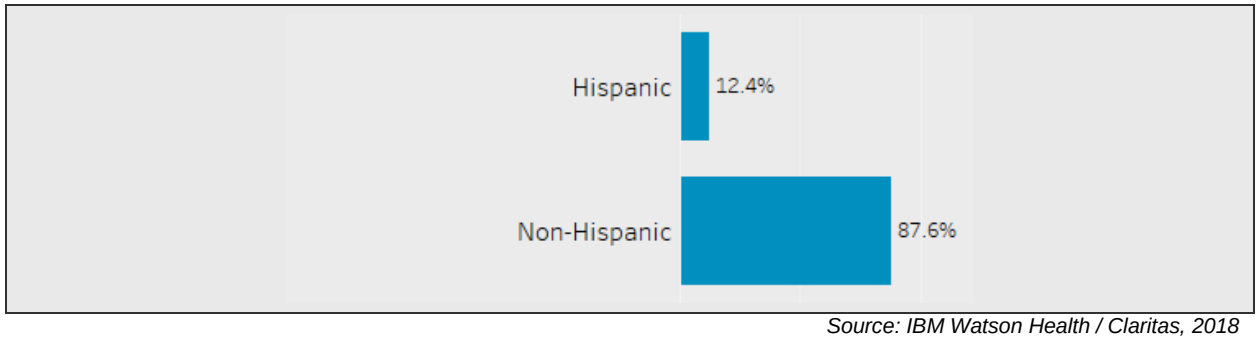
Population statistics are analyzed by race and by Hispanic ethnicity. The community is primarily White (73.2%), with those of Black race comprising 13.3% of the population and the other racial groups constituting the remaining 13.5%. The Asian/Pacific Islander population in the community is projected to experience the greatest amount of growth by 2023 (23.9%), followed by the multi-racial population (23%), and the Black population (22.3%). The White population is projected to experience the least amount of growth over the next five years (3.9%).

The non-Hispanic population (all races) is expected to grow by over 24,700 people (7.4%) by 2023. The expected growth of the Hispanic population (all races) is over 8,000 people (17%) by 2023. The Hispanic population is projected to increase in the towns of Buford, Flowery Branch, Winder, and Dacula—the top growth ZIPs in this community.

*2018 Population by Race*

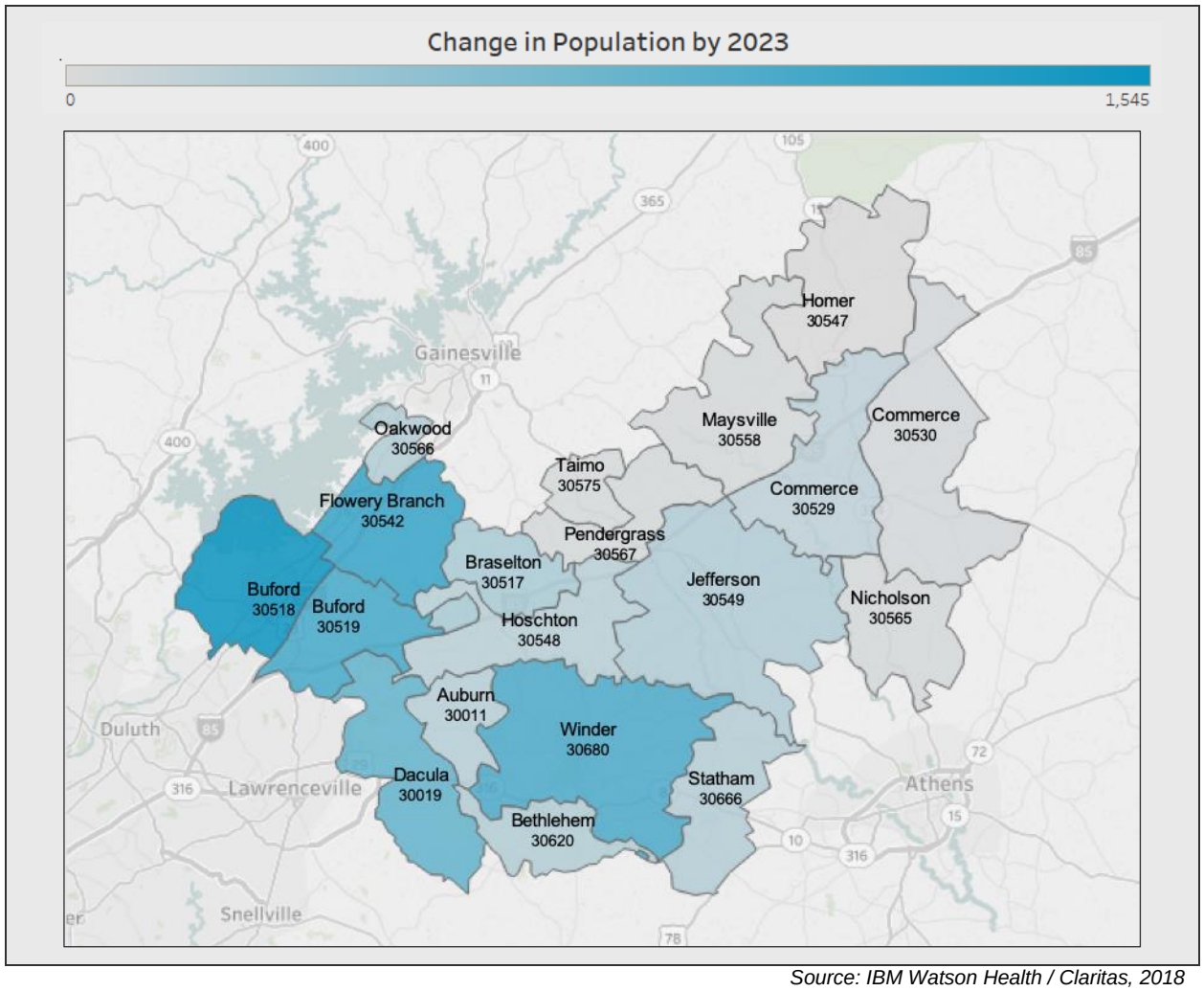



*2018 Population by Ethnicity*




*Source: IBM Watson Health / Claritas, 2018*

*2018 - 2023 Hispanic Population Projected Change by ZIP Code*

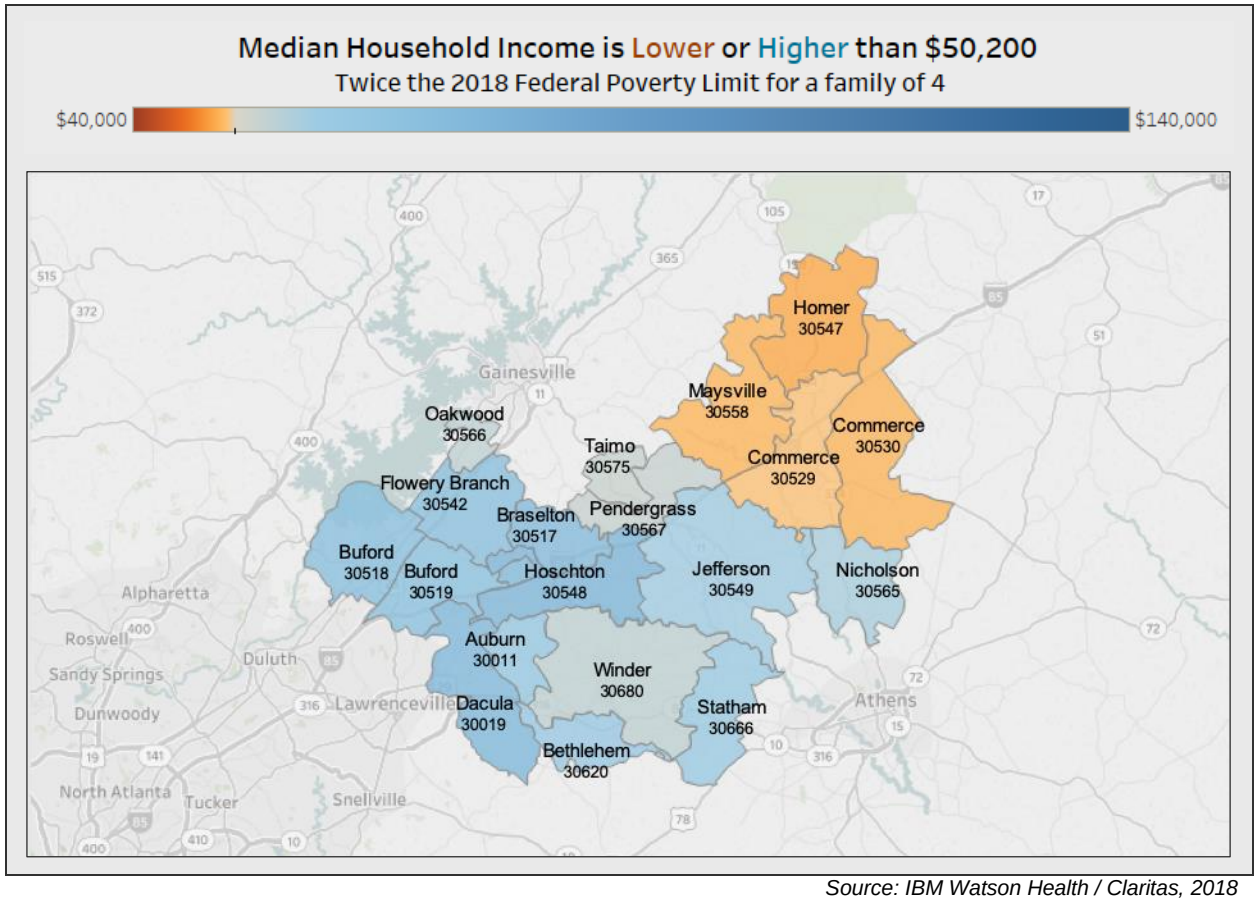



*Source: IBM Watson Health / Claritas, 2018*

The 2018 median household income for the United States is $62,175 and $55,559 for the state of Georgia. The median household income for the ZIP codes within this community range from $41,815 for Homer ZIP code 30547 to $90,304 for Hoschton ZIP code 30548. There are four (4) ZIP Codes with median household incomes less than $50,200, twice the 2018 Federal Poverty Limit for a family of four:

- 30547 – Homer $41,815
- 30530 – Commerce $44,227
- 30558 – Maysville $44,414
- 30529 – Commerce $46,904

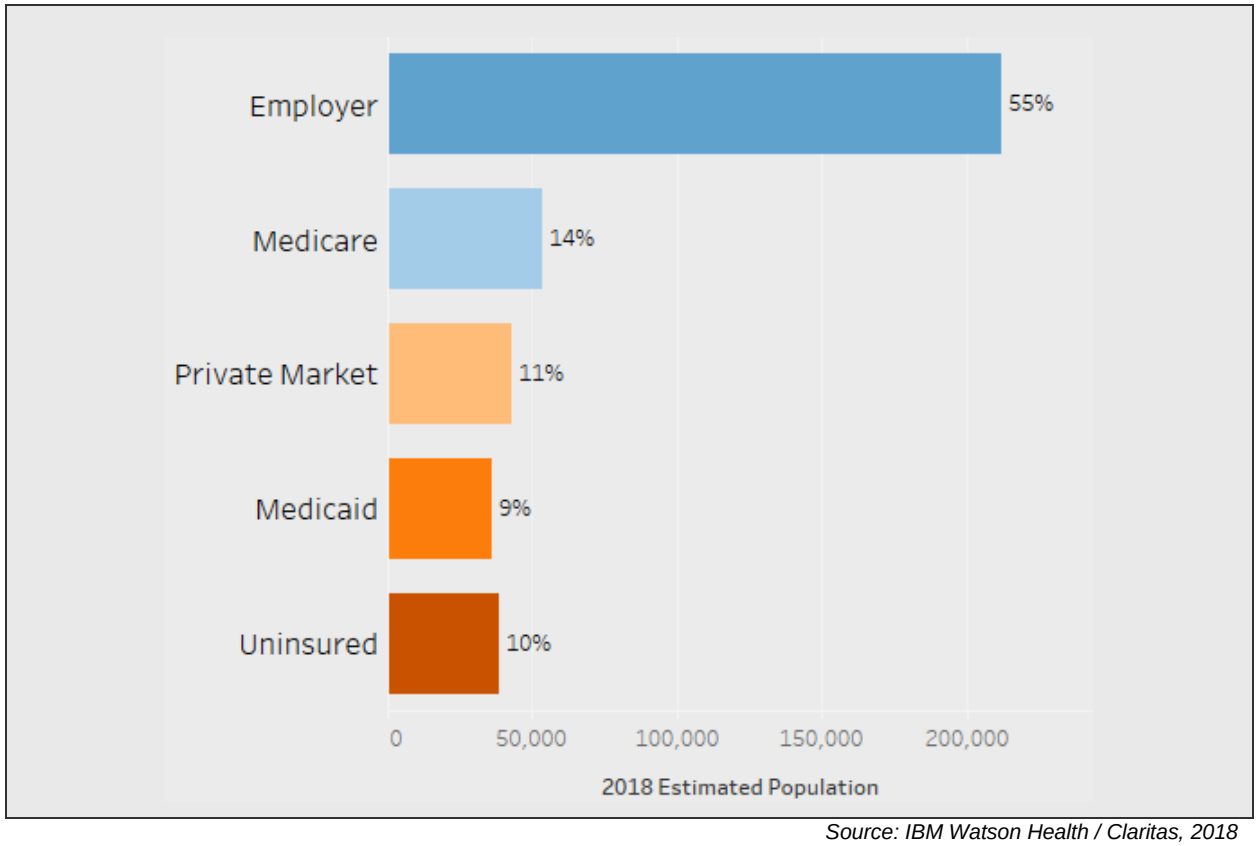
*2018 Median Household Income by ZIP Code*




*Source: IBM Watson Health / Claritas, 2018*

Most of the population (55%) are insured through employer sponsored health coverage. The remainder of the population is divided between people on Medicare (14%), people who purchase coverage directly from or through the private health insurance marketplace (11%), people who are Uninsured (10%) or people on Medicaid (9%). This community has a larger proportion of employer sponsored coverage and a smaller proportion of uninsured when compared to the distribution in the state of Georgia (46% employer and 17% uninsured).

*2018 Estimated Distribution of Covered Lives by Insurance Category*




*Source: IBM Watson Health / Claritas, 2018*

The community includes eight (8) Health Professional Shortage Areas and two (2) Medically Underserved Areas as designated by the U.S. Department of Health and Human Services Health Resources Services Administration.[4] **Appendix G** includes the details on each of these designations.

*Health Professional Shortage Areas and Medically Underserved Areas and Populations*

| | Health Professional Shortage Areas (HPSA) | | | | Medically Underserved Area/Population (MUA/P) |
|---|---|---|---|---|---|
| NGHS-GBSA | Dental Health | Mental Health | Primary Care | Grand Total | MUA/P |
| Banks | 1 | 1 | 1 | 3 | 1 |
| Barrow | 1 | 1 | 1 | 3 | |
| Jackson | | 1 | 1 | 2 | 1 |
| **Total** | **2** | **3** | **3** | **8** | **2** |

*Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018*

[4] U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018

The Watson Health Community Need Index (CNI) is a statistical approach to identifying areas within a community where health disparities may exist. Leveraging U.S. Census Data and Watson Health Insurance Coverage Estimates, the CNI takes into account vital socio-economic factors (income, cultural, education, insurance and housing) about a community to generate a CNI score for every populated ZIP code in the United States. The CNI strongly links to variations in community healthcare needs and is an indicator of a community's demand for various healthcare services. The CNI score by ZIP code identifies specific areas within a community where healthcare needs may be greater.

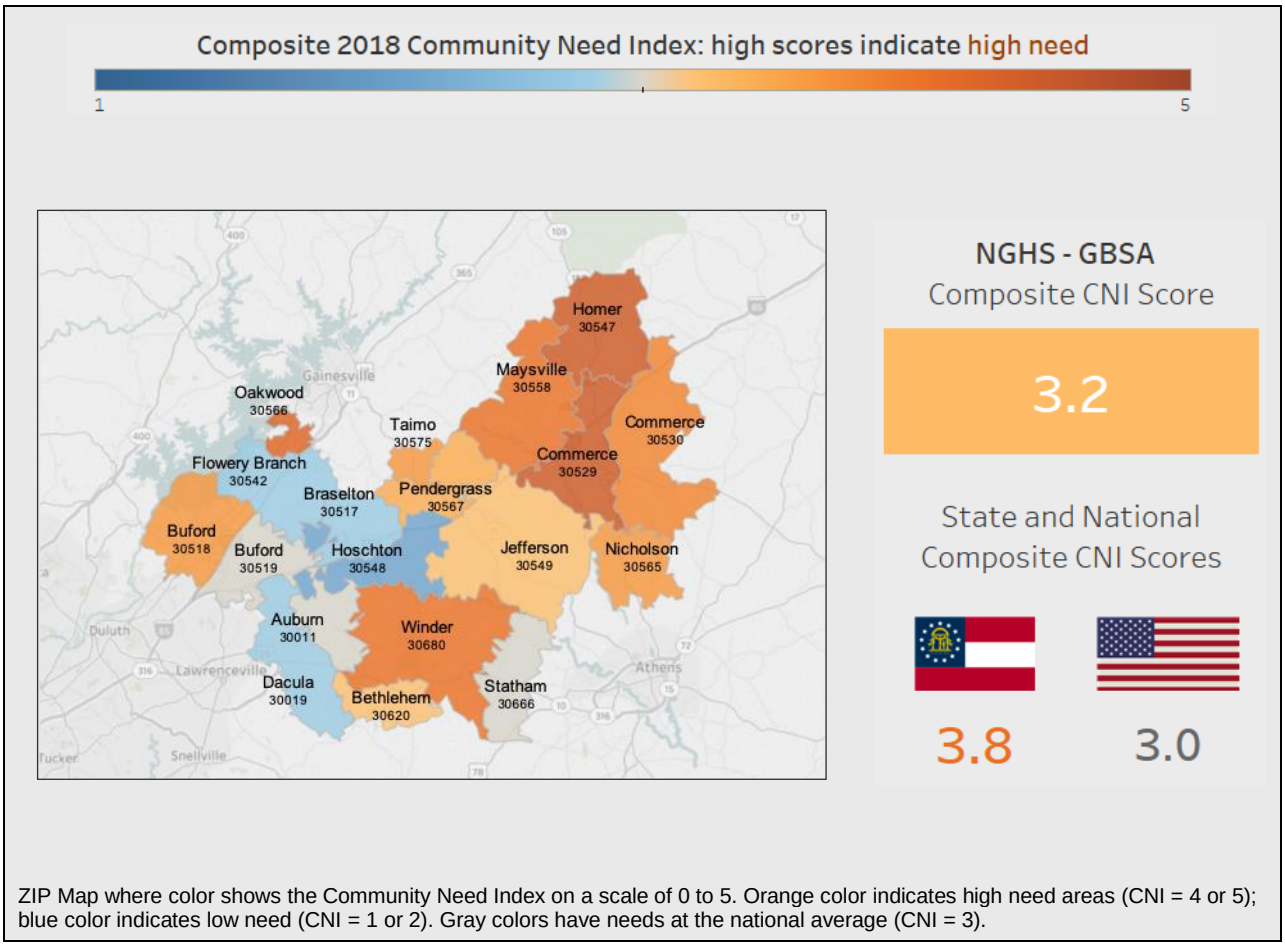
Overall, the composite CNI score for the community served is 3.2 which is lower than the state CNI score (3.8) and higher than the national benchmark score of 3.0. Five ZIP Codes in the community have CNI scores of 4 and above, pointing to potentially higher health needs within the population.

- 30547 – Homer 4.4
- 30529 – Commerce 4.4
- 30566 – Oakwood 4.2
- 30680 – Winder 4.0
- 30558 – Maysville 4.0

Nine out of the 19 ZIPs in the community have an education barrier sub-score of 5. These ZIP Codes rank in the bottom quintile across the nation for the percentage of population over age 25 without a high school diploma:

- 30530 – Commerce
- 30529 – Commerce
- 30547 – Homer
- 30558 – Maysville
- 30565 – Nicholson
- 30566 – Oakwood
- 30567 – Pendergrass
- 30575 – Talmo
- 30680 – Winder

*2018 Community Need Index by ZIP Code*




ZIP Map where color shows the Community Need Index on a scale of 0 to 5. Orange color indicates high need areas (CNI = 4 or 5); blue color indicates low need (CNI = 1 or 2). Gray colors have needs at the national average (CNI = 3).

*Source: IBM Watson Health / Claritas, 2018*

*Watson Health Community Data*

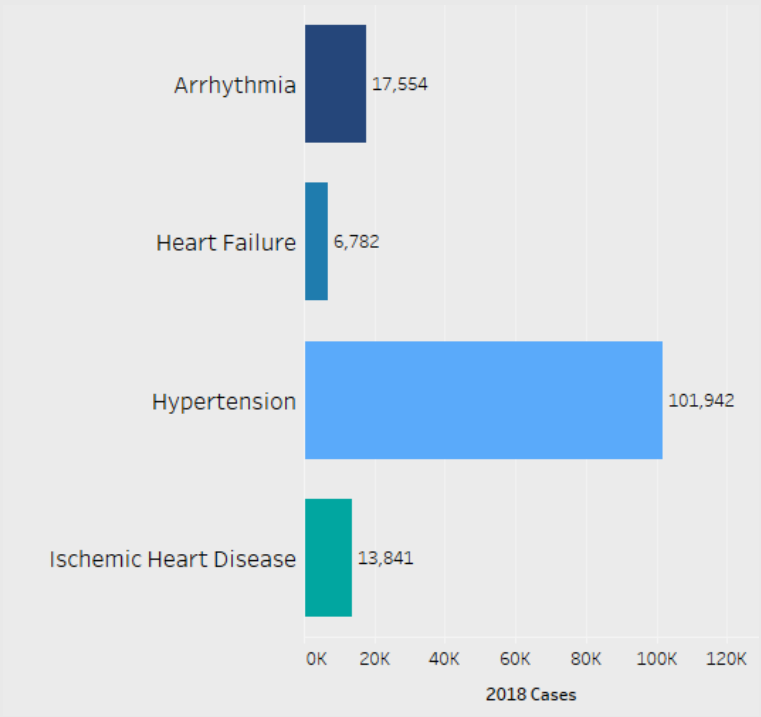
Watson Health supplements the publicly available data and population statistics with estimates of localized disease prevalence of heart disease and cancer as well as emergency department visit estimates.

Watson Health Heart Disease Estimates identify hypertension as the most prevalent heart disease diagnosis; there are over 101,900 estimated cases in the community overall affecting slightly more females (51.6%) than males (48.4%).

The cities of Winder, Flowery Branch, Buford, and Dacula all rank in the top five highest number of cases for each of the four heart disease types. Winder ZIP Code 30680 has the most estimated cases in three of four heart disease types including Arrhythmia (2,344 cases), Heart Failure (903 cases), and Ischemic Heart Disease (1,772). Buford ZIP Codes 30519 and 30518 have the highest number of Hypertension cases at 13,472 and 13,447 respectively.

The 30547 ZIP code of Homer has the highest estimated prevalence rates for Arrhythmia (587 cases per 10,000 population), Heart Failure (234 cases per 10,000 population), and Ischemic Heart Disease (496 cases per 10,000 population), while ZIP code 30558 Maysville has the highest estimated prevalence rate of Hypertension with 2,991 cases per 10,000.

*2018 Estimated Heart Disease Cases*



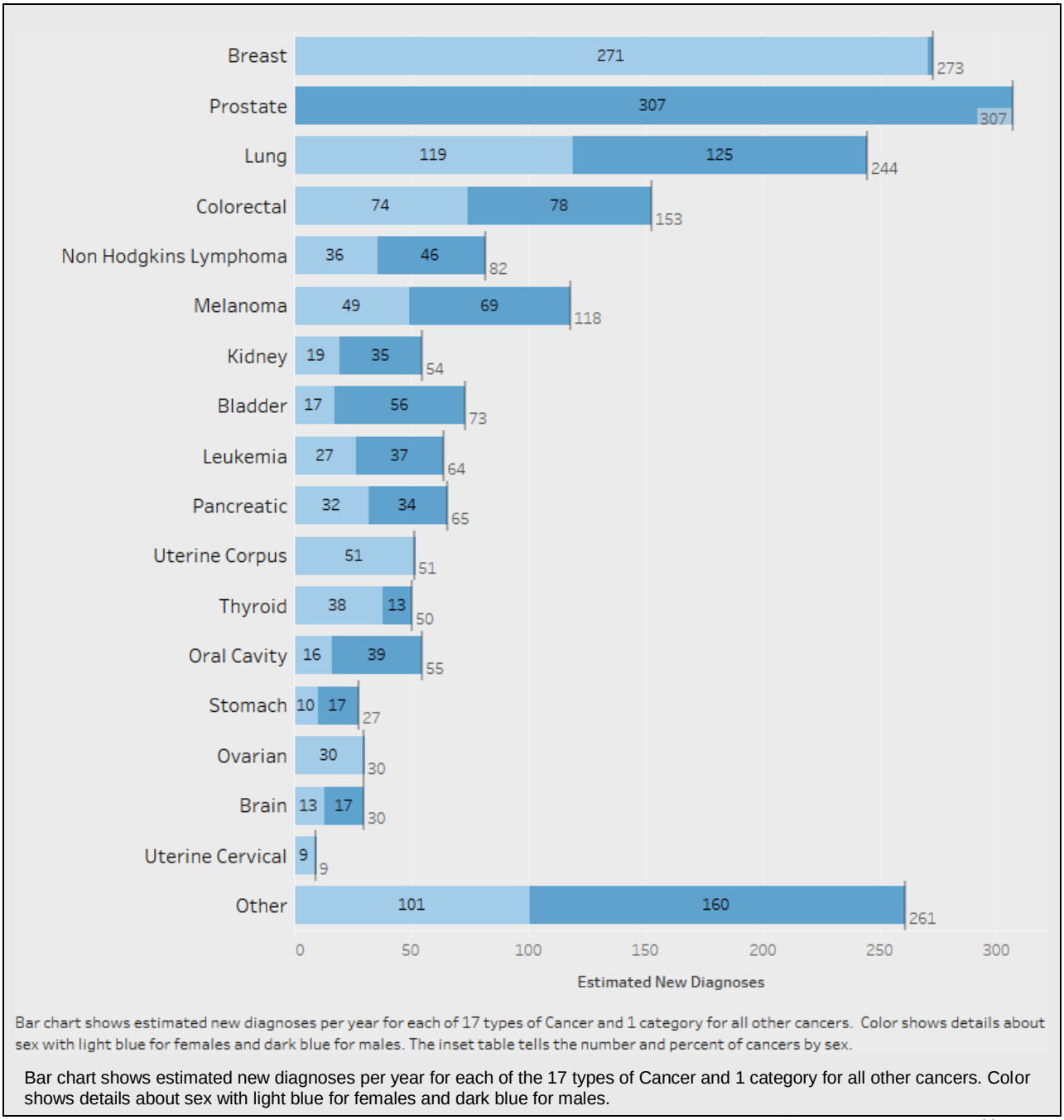

Bar chart shows total number and prevalence rate of 2018 Estimated Heart Disease cases for each of four types: arrhythmia, heart failure, hypertension, and ischemic heart disease

Note: An individual patient may have more than one type of heart disease. Therefore the sum of all four heart disease types is not a unique count of individuals.

*Source: IBM Watson Health, 2018*

For this community, Watson Health's 2018 Cancer Estimates reveal the cancers estimated to have the greatest number of new cases in 2018 are prostate (307), breast (273), and lung (244) cancers. The cancers projected to have the greatest rate of growth in the next five years are pancreatic (22.5%), bladder (20.2%), thyroid (19.9%), and kidney (19.5%) based on both population changes and disease rates.

*2018 Estimated New Cancer Cases*




Bar chart shows estimated new diagnoses per year for each of the 17 types of Cancer and 1 category for all other cancers. Color shows details about sex with light blue for females and dark blue for males.

*Source: IBM Watson Health, 2018*

*Estimated Cancer Cases and Projected 5 Year Change by Type*

| Cancer Type | 2018 Estimated New Cases | 2023 Estimated New Cases | 5 Year Growth (%) |
|---|---|---|---|
| Bladder | 73 | 88 | 20.2% |
| Brain | 30 | 33 | 12.1% |
| Breast | 273 | 318 | 16.5% |
| Colorectal | 153 | 159 | 4.0% |
| Kidney | 54 | 65 | 19.5% |
| Leukemia | 64 | 75 | 17.3% |
| Lung | 244 | 284 | 16.2% |
| Melanoma | 118 | 139 | 17.9% |
| Non-Hodgkin's Lymphoma | 82 | 96 | 17.5% |
| Oral Cavity | 55 | 65 | 18.6% |
| Ovarian | 30 | 34 | 14.6% |
| Pancreatic | 65 | 80 | 22.5% |
| Prostate | 307 | 341 | 11.4% |
| Stomach | 27 | 32 | 16.6% |
| Thyroid | 50 | 61 | 19.9% |
| Uterine Cervical | 9 | 10 | 8.5% |
| Uterine Corpus | 51 | 61 | 19.2% |
| All Other Cancers | 261 | 309 | 18.6% |
| Grand Total | 1,947 | 2,251 | 15.6% |

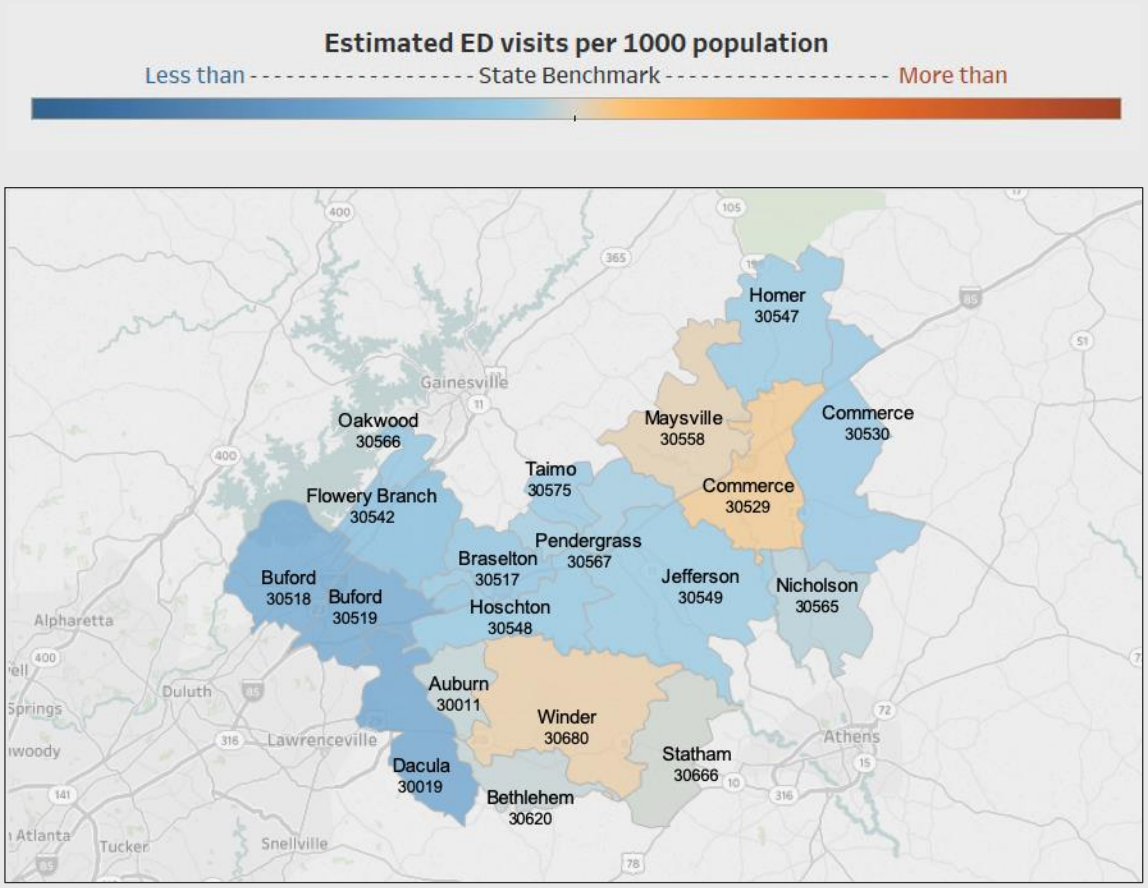
*Source: IBM Watson Health, 2018*

Based on population characteristics and regional utilization rates, Watson Health projects all emergency department (ED) visits in this community will increase by 10% over the next five years. Three ZIP codes have total ED use rates higher than the state of Georgia (439 visits per 1000 population). Commerce – ZIP code 30529, Winder – ZIP code 30680 and Maysville – ZIP code 30558 have ED use rates of 459, 451 and 448 visits per 1,000 population respectively.

These ED visits consist of three main types: those resulting in an inpatient admission, emergent ED visits treated and released, and non-emergent ED visits that are lower acuity. Non-emergent ED visits present to the ED but can potentially be treated in more appropriate and less intensive outpatient settings.

Non-emergent ED visits can be an indication of systematic issues within the community regarding access to primary care, managing chronic conditions, or other access to care issues such as ability to pay. Watson Health estimates non-emergent ED visits will increase by 4.7% over the next five years in this community. Only Winder ZIP code 30680 has an estimated non-emergent ED visit rate that is greater than the state benchmark of 185 visits per 1,000 population (189 visits per 1,000 population).

*Total Estimated 2018 Emergency Department Visit Rate*




Estimated ED Visits per 1000 Population

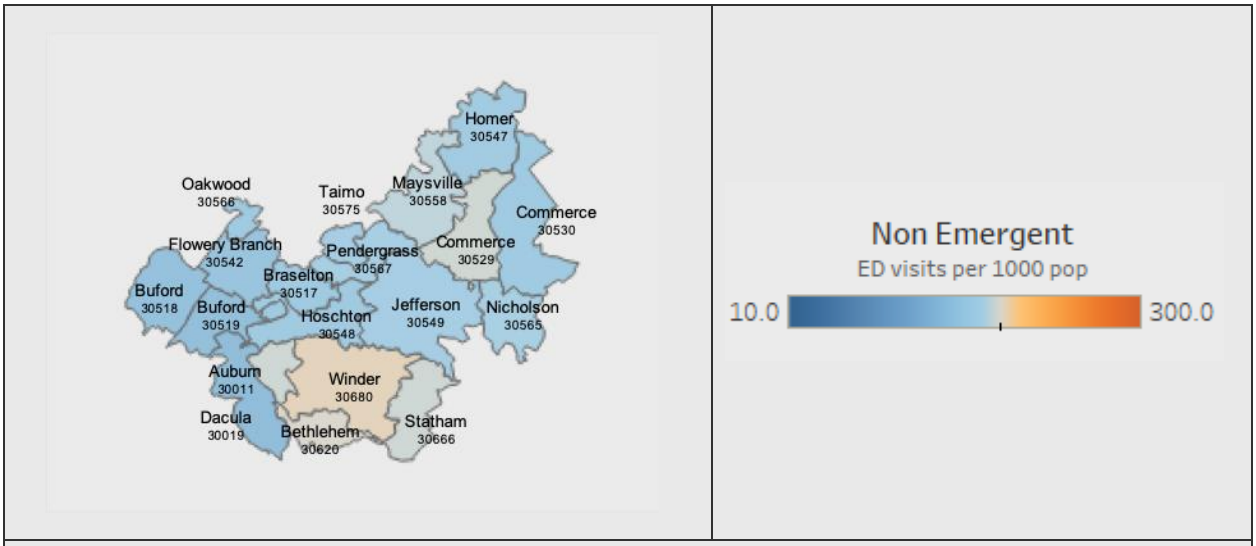
| Emergent Status | Georgia | USA |
|---|---|---|
| Non Emergent | 185 | 179 |
| Emergent | 190 | 189 |
| Inpatient Admission | 64 | 67 |
| Total | 439 | 435 |

ZIP map color shows total Emergency Department visits per 1,000 popultaion. Orange colors are higher than the state benchmark, blue colors are less than the state benchmark, and gray colors are similar.

*Note: These are not actual Hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Non-Emergent Estimated 2018 Emergency Department Visits by ZIP Code*




ZIP map color shows total Emergency Department vists per 1,000 population by non-emergent status. Orange colors are higher than the state benchmark (see table at right), blue colors are less than the state benchmark, and gray colors are similar. Color range is set for the entire study region. ED visits are defined by the presence of specific CPT® codes in claims. Non-emergency visits to the ED do not necessarily require treatment in a hospital emergency department and can potentially be treated in a fast-track ED, an urgent care treatment center, a clinic or physician's private office.

*Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Public Health Indicators*

Public health indicators (129 total) were collected and analyzed to assess community health needs. For each health indicator, a comparison was made between the most recently available community data and benchmarks for the same/similar indicator. The basis of benchmarks was available data for the U.S. and the state of Georgia. A list of these indicators is found in **Appendix A**.

Where the community indicators showed greater need when compared to the state of Georgia comparative benchmark, the difference between the community values and the state benchmark was calculated (need differential). The highest ranked indicators with need differentials in the 50$^{th}$ percentile or greater severity pinpointed community health needs from a quantitative perspective.

*Focus Groups & Interviews*

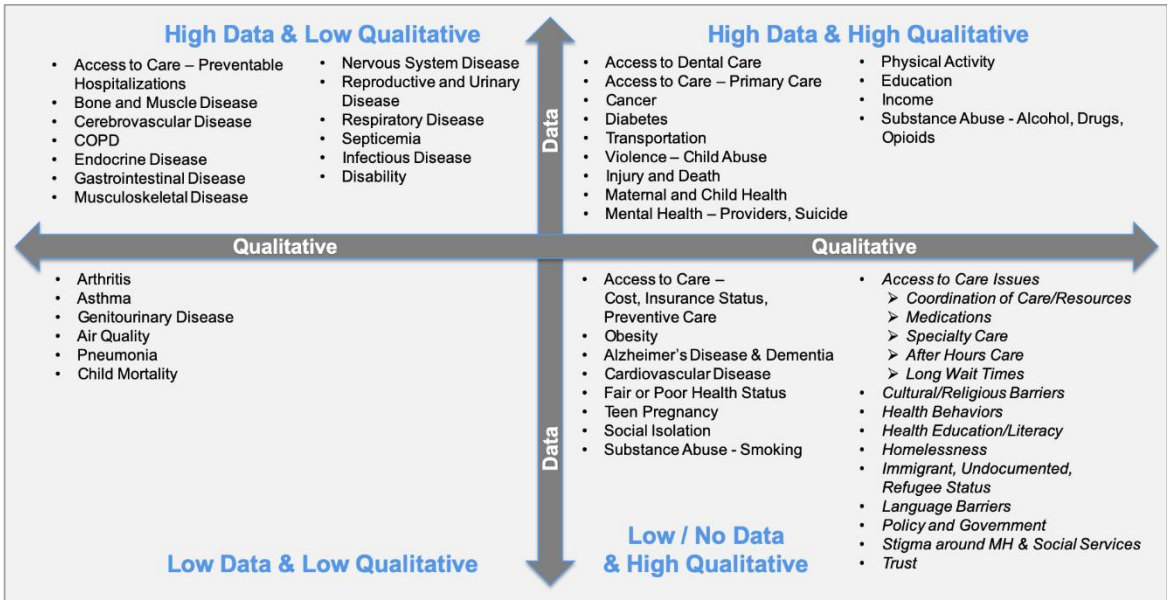
In the Watson Health focus group sessions and interviews, participants identified and discussed the greatest health needs in the community, as well as the barriers and strengths impacting overall health status. For this community, three (3) focus group sessions (listed below) with a total of 20 participants and six (6) interviews were conducted March through April 2019. A list of the organizations providing input can be found in **Appendix B**. Summary findings from the focus groups and interviews can be found in **Appendix C**.

| Focus Group | Date | Location | Number of Participants |
|---|---|---|---|
| Barrow County Focus Group | March 4, 2019 | NGMC Barrow<br>Winder, GA | 5 |
| Gwinnett and Jackson Counties Focus Group | March 7, 2019 | NGMC Braselton<br>Braselton, GA | 6 |
| NGHS Advisory Board Focus Group - GBSA | February 4, 2019 | NGMC Gainesville<br>Gainesville, GA | 9 |

*Prioritized Significant Health Needs for NGHS – GBSA*

The Health Needs Matrix identified through the community health needs assessment (see Methodology for Defining Community Needs section) shows the convergence of needs identified in the qualitative data (interview and focus group feedback) and quantitative data (health indicators). The top health needs for this community are defined in the Health Needs Matrix below.

*Community Health Needs Matrix*




*Note: Lower right quadrant items in italics do not have quantitative data indicators available*

*Source: IBM Watson Health, 2019*

Through the prioritization process, the significant health needs for this community were identified, reviewed, and prioritized (see "Approach to Identify and Prioritize Significant Health Needs" section). The resulting prioritized health needs for the community are provided in the table below.

*Prioritized Significant Community Health Needs*

| Priority Rank | Health Need |
|---|---|
| 1 | Mental Health |
| 2 | Substance Abuse |
| 3 | Diabetes |
| 3 | Access to Care (added Preventable Hospitalizations) |
| 4 | Maternal and Child Health |
| 5 | Physical Activity |

| Priority Rank | Health Need |
|---|---|
| 6 | Injury and Death |
| 6 | Violence - Child Abuse |
| 7 | Income |
| 7 | Education |
| 8 | Septicemia (added) |
| 9 | Access to Dental Care |
| 10 | Cancer |
| 11 | Transportation |

*Notes: Needs noted as "added" were pulled from quadrants other than the upper right (high data/high qualitative) as they were considered significant by the prioritization working group.*
*Needs with the same priority rank received the same overall score in the prioritization process*

*Source: IBM Watson Health, 2019*

*Recommended Health Needs to be Addressed for NGHS – GBSA*

As part of the prioritization work session, work group participants recommended a set of prioritized significant health needs that should be addressed by each CHNA Partner (see "Recommended Health Needs to be Addressed by the CHNA Partners" section). The members of this community's prioritization work group recommended the following significant needs to be addressed via the CHNA implementation strategy:

- Mental and Behavioral Health
- Access to Care
- Diabetes

*CHNA Implementation Strategy*

NGHS will choose which needs it will address from those identified in this assessment. An implementation strategy with specific initiatives to address the chosen health needs will be completed and adopted by the hospitals by February 15, 2020.

An evaluation of the NGHS 2016 CHNA implementation strategy and its impact can be found in **Appendix I.**

## Community Health Needs Assessment – NGHS Primary Service Area

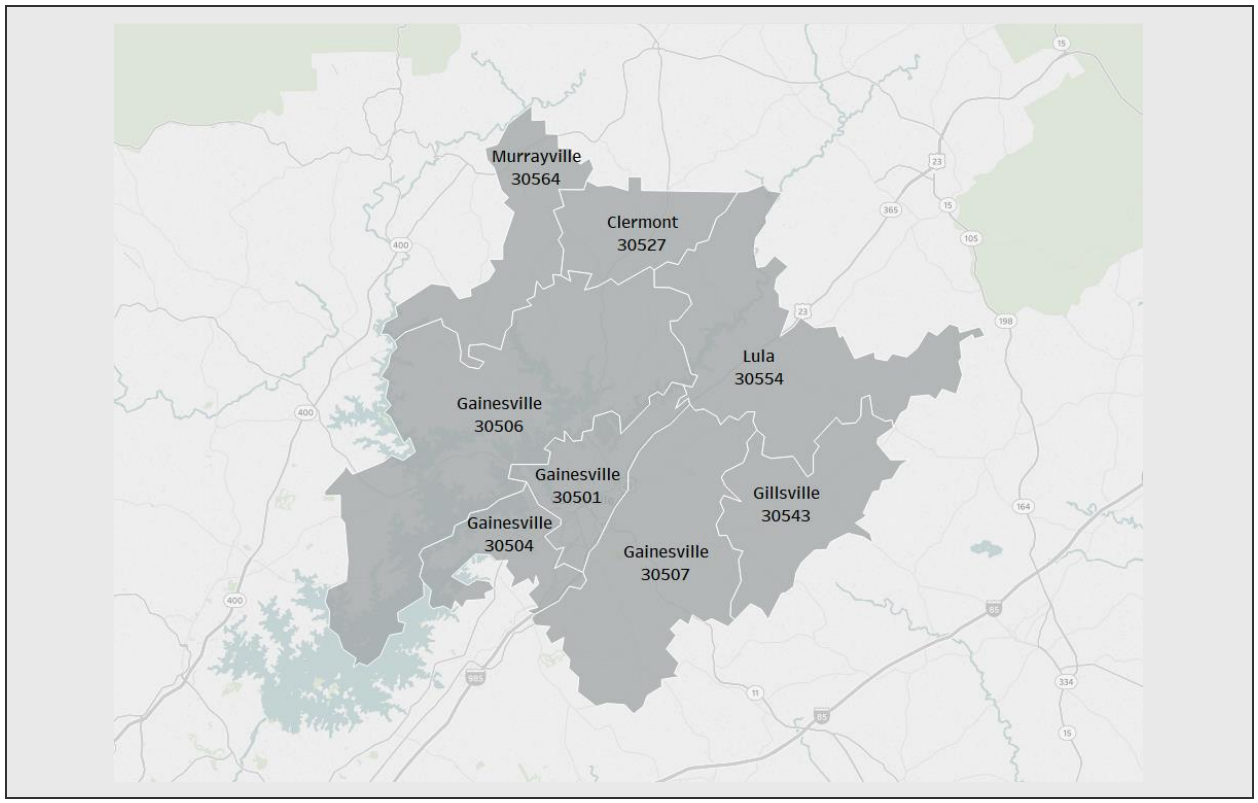
*Community Served Definition*

For the purpose of this assessment, the geographic boundaries of the community served by NGHS encompass the counties and ZIP codes where 90% of NGHS hospital admissions originate **(Appendix K)**. These counties were grouped into four communities based on consideration for patient volume, location, and the broad interests of the community, including medically underserved populations, low-income persons, minority groups, or those with chronic disease needs. The NGHS Primary Service Area (PSA) is comprised of eight ZIP codes from Hall County.

| ZIP Code | City | County |
|---|---|---|
| 30501 | Gainesville | Hall, GA |
| 30504 | Gainesville | Hall, GA |
| 30506 | Gainesville | Hall, GA |
| 30507 | Gainesville | Hall, GA |
| 30527 | Clermont | Hall, GA |
| 30543 | Gillsville | Hall, GA |
| 30554 | Lula | Hall, GA |
| 30564 | Murrayville | Hall, GA |

This community was defined by ZIP codes, however public health indicators are most commonly available by county. Therefore, the counties which principally comprise a majority of the community were used in determining health needs. The principal county used for the NGHS PSA community needs analysis is Hall County.

*Map of Community Served*




*Source: NGHS, 2019*

*Demographic and Socioeconomic Summary*

The population of the community served is expected to grow 6.2% by 2023, an increase of 9,755 people. The 6.2% projected population growth is higher than both the state's 5-year projected growth rate (5.0%) and the national projected growth rate (3.5%). The median age is younger than both the state and national medians. Median household income for the overall community is lower than both benchmarks.

*Demographic and Socioeconomic Comparison: Community Served and State/U.S. Benchmarks*

| Geography | | Benchmarks | | | Community Served |
|---|---|---|---|---|---|
| | | United States | Georgia | Northeast Georgia Region | NGHS Primary Service Area |
| Total Current Population | | 326,533,070 | 10,467,269 | 1,743,817 | 157,458 |
| 5 Yr Projected Population Change | | 3.5% | 5.0% | 7.2% | 6.2% |
| Median Age | | 38.3 | 36.9 | 40.3 | 38.0 |
| Population 0-17 | | 22.6% | 24.0% | 25.3% | 25.8% |
| Population 65+ | | 15.9% | 13.8% | 13.1% | 14.5% |
| Women Age 15-44 | | 19.6% | 20.4% | 20.0% | 19.6% |
| Non-White Population | | 30.0% | 43.0% | 36.2% | 29.8% |
| Hispanic Population | | 18.2% | 9.7% | 16.6% | 30.9% |
| Insurance Coverage | Uninsured | 9.4% | 17.1% | 11.9% | 13.7% |
| | Medicaid | 19.0% | 11.8% | 10.4% | 14.2% |
| | Private Market | 9.6% | 10.8% | 11.5% | 10.6% |
| | Medicare | 16.1% | 14.4% | 12.5% | 15.1% |
| | Employer | 45.9% | 45.8% | 53.7% | 46.4% |
| Median HH Income | | $62,175 | $55,559 | $56,929 | $55,328 |
| Limited English | | 26.2% | 19.3% | 28.9% | 32.6% |
| No High School Diploma | | 7.4% | 8.9% | 7.9% | 11.4% |
| Unemployed | | 6.8% | 7.8% | 6.3% | 5.4% |

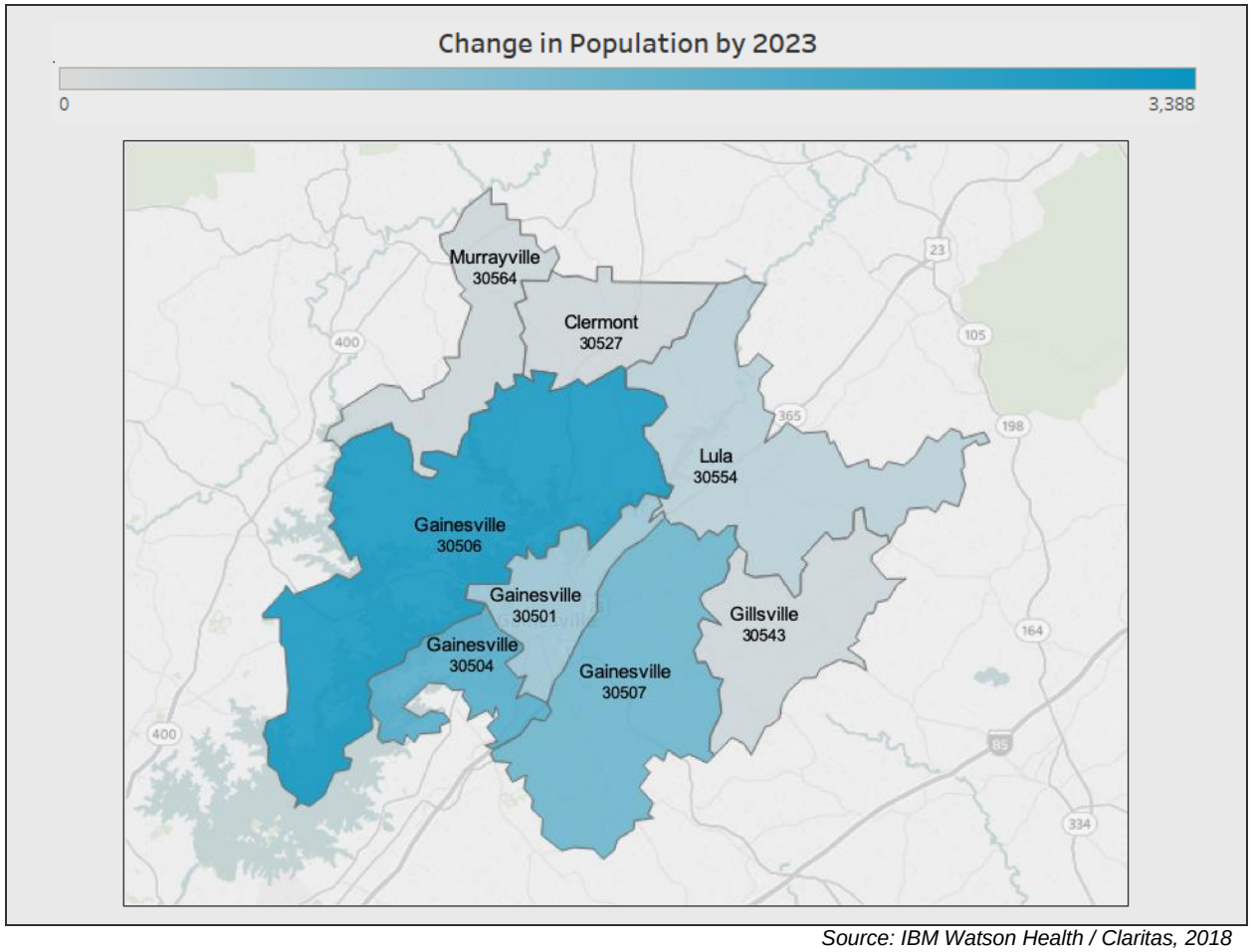
*Source: IBM Watson Health / Claritas, 2018; US Census Bureau 2017 (U.S. Median Income)*

Note: children (ages 0-17), older adults (ages 65+) and women of childbearing age (ages 18-44) are identified as population groups that have unique healthcare needs.

Three Gainesville ZIP codes are expected to experience the most growth in number of people by 2023:

- 30506 – Gainesville 3,388 people
- 30504 – Gainesville 2,238 people
- 30507 – Gainesville 1,845 people

*2018 - 2023 Total Population Projected Change by ZIP Code*

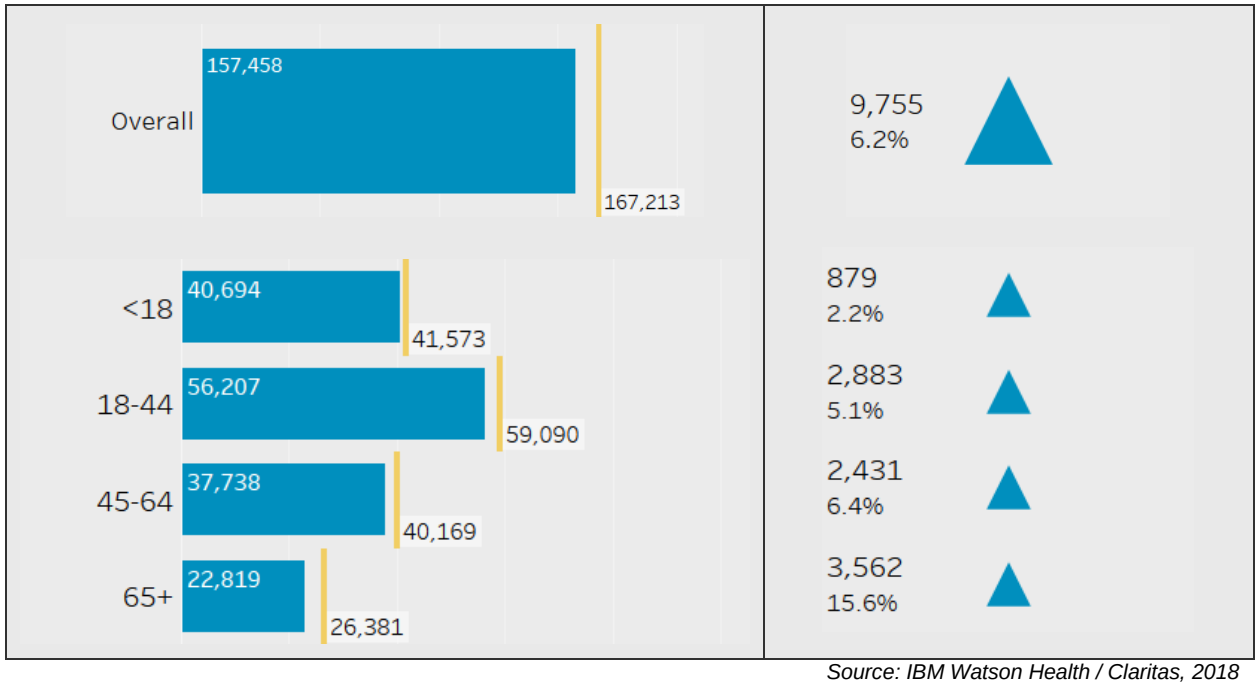



*Source: IBM Watson Health / Claritas, 2018*

The community's population skews younger with 36% of the population ages 18-44 and 26% under age 18. The largest cohort (18-44) is expected to grow by 2,883 people by 2023 (5.1%). The age 65 plus cohort is the smallest, representing 14% of total 2018 population estimates, but is expected to experience the fastest growth (15.6%) over the next five years adding 3,562 seniors to the community. Growth in the senior population will likely contribute to increased utilization of services as the population continues to age.

*Population Distribution by Age*

*2018 Population by Age Cohort* *Change by 2023*

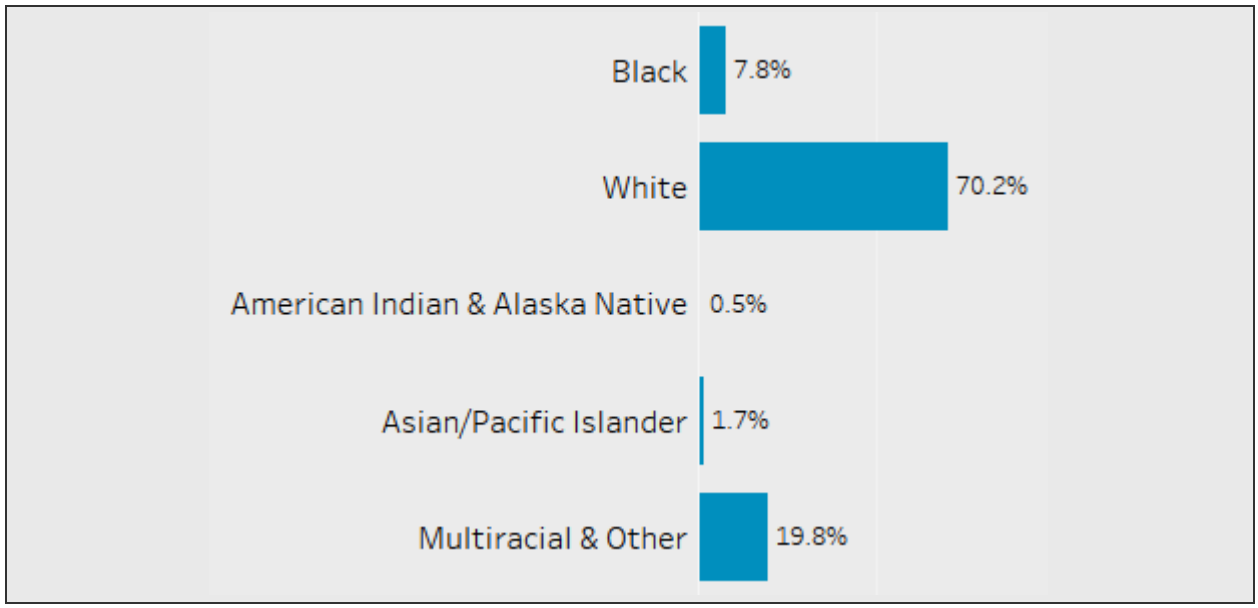



*Source: IBM Watson Health / Claritas, 2018*

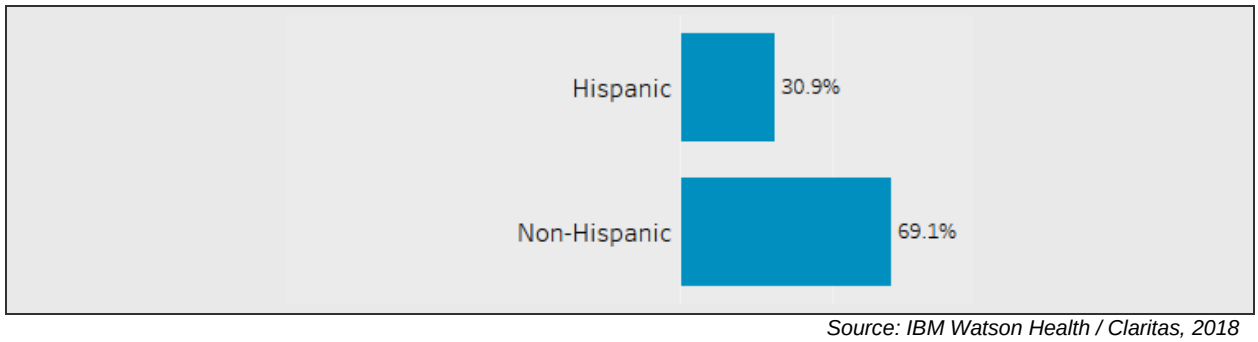
Population statistics are analyzed by race and by Hispanic ethnicity. The community is primarily racially White (70.2%), with those of Black race comprising 7.8% of the population and the other racial groups constituting the remaining 22%. The multi-racial population in the community is projected to experience the greatest amount of growth by 2023 (16.4%), followed by Other (11.9%), and Asian/Pacific Islander (11.7%). The White population is projected to experience the least amount of growth over the next five years (3.8%).

The non-Hispanic population (all races) is expected to grow by 4,200 people (3.9%) by 2023. The expected growth of the Hispanic population (all races) is over 5,500 people (11.4%) by 2023. Most of this growth (3,800 people) is in two Gainesville ZIP codes: ZIP codes 30507 and 30504.

*2018 Population by Race*

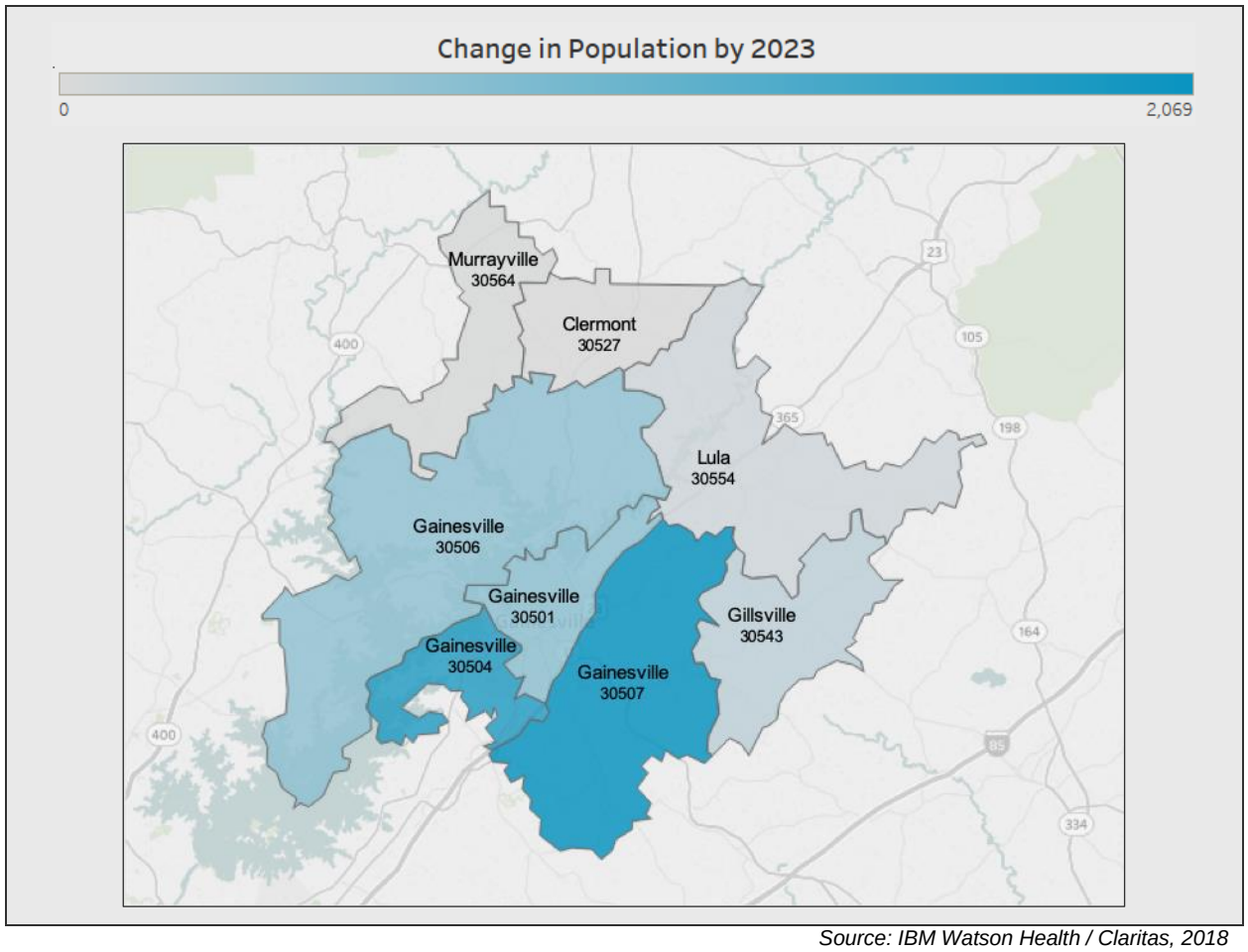



*2018 Population by Ethnicity*




*Source: IBM Watson Health / Claritas, 2018*

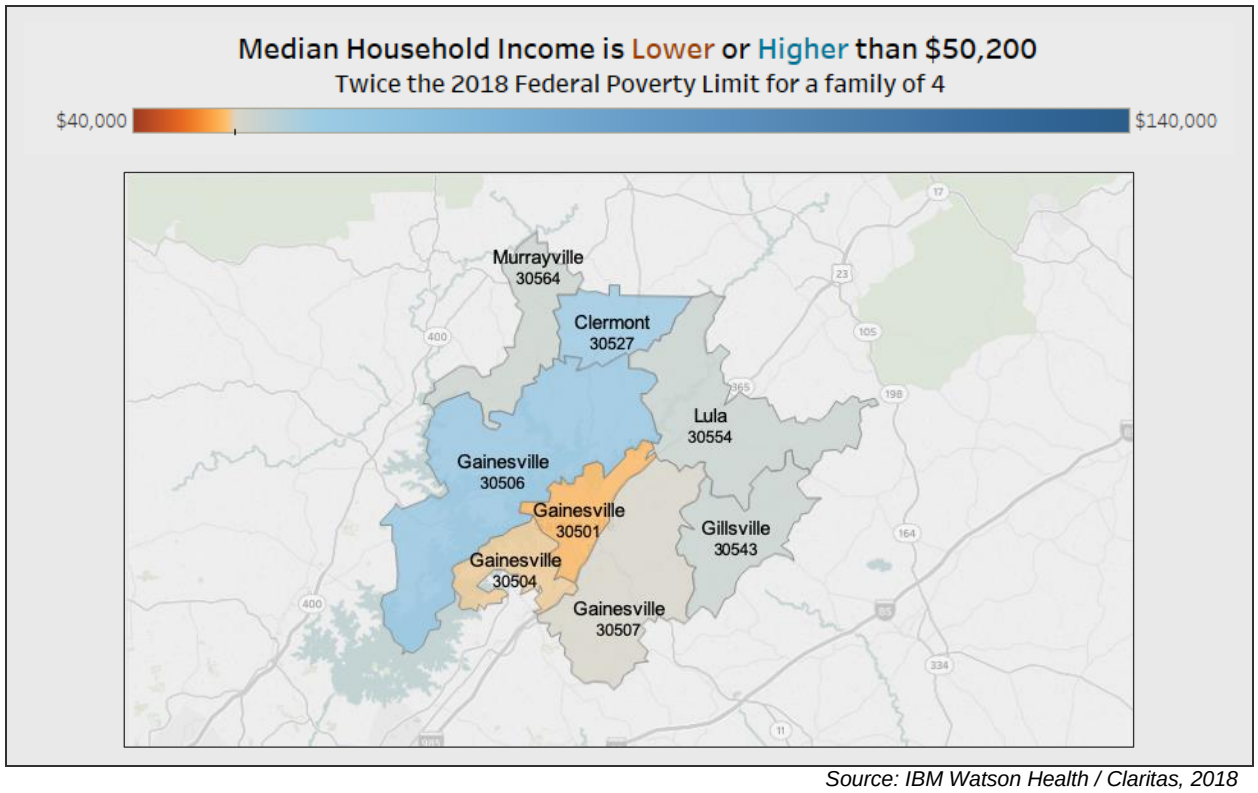
*2018 - 2023 Hispanic Population Projected Change by ZIP Code*




*Source: IBM Watson Health / Claritas, 2018*

The 2018 median household income for the United States is $62,175 and $55,559 for the state of Georgia. The median household income for the ZIP codes within this community range from $44,486 for Gainesville ZIP code 30501 to $71,851 for Gainesville ZIP code 30506. There are two (2) ZIP Codes with median household incomes less than $50,200, twice the 2018 Federal Poverty Limit for a family of four: Gainesville ZIP code 30501 ($44,486) and ZIP code 30504 ($48,114).

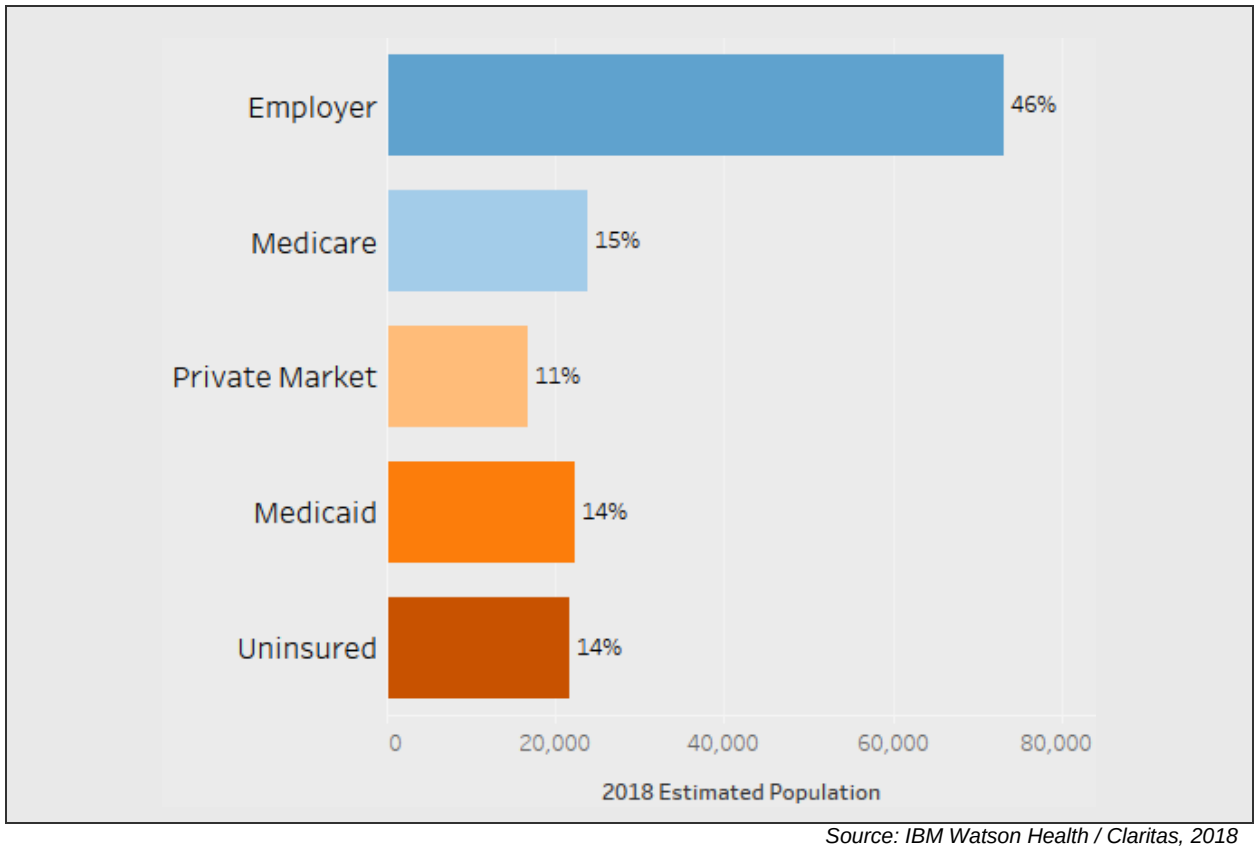
*2018 Median Household Income by ZIP Code*




*Source: IBM Watson Health / Claritas, 2018*

Most of the population (46%) are insured through employer sponsored health coverage. The remainder of the population is divided between people on Medicare (15%), people who purchase coverage directly from or through the private health insurance marketplace (11%), people who are on Medicaid (14%) or uninsured (14%). This community has a larger proportion of people on Medicaid and a smaller proportion of uninsured when compared to the distribution in the state of Georgia.

*2018 Estimated Distribution of Covered Lives by Insurance Category*




*Source: IBM Watson Health / Claritas, 2018*

The community includes two (2) Health Professional Shortage Areas and one (1) Medically Underserved Area as designated by the U.S. Department of Health and Human Services Health Resources Services Administration.[5] **Appendix G** includes the details on each of these designations.

*Health Professional Shortage Areas and Medically Underserved Areas and Populations*

| | Health Professional Shortage Areas (HPSA) | | | | Medically Underserved Area/Population (MUA/P) |
|---|---|---|---|---|---|
| NGHS-PSA | Dental Health | Mental Health | Primary Care | Grand Total | MUA/P |
| Hall | | 1 | 1 | 2 | 1 |
| **Total** | **0** | **1** | **1** | **2** | **1** |

*Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018*

[5] U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018

The Watson Health Community Need Index (CNI) is a statistical approach to identifying areas within a community where health disparities may exist. Leveraging U.S. Census Data and Watson Health Insurance Coverage Estimates, the CNI takes into account vital socio-economic factors (income, cultural, education, insurance and housing) about a community to generate a CNI score for every populated ZIP code in the United States. The CNI strongly links to variations in community healthcare needs and is an indicator of a community's demand for various healthcare services. The CNI score by ZIP code identifies specific areas within a community where healthcare needs may be greater.

Overall, the composite CNI score for the community served is 4.0 which is higher than the state CNI score (3.8) and the national benchmark score of 3.0. Three ZIP Codes in the community have CNI scores of 4 and above, pointing to potentially higher health needs within the population.

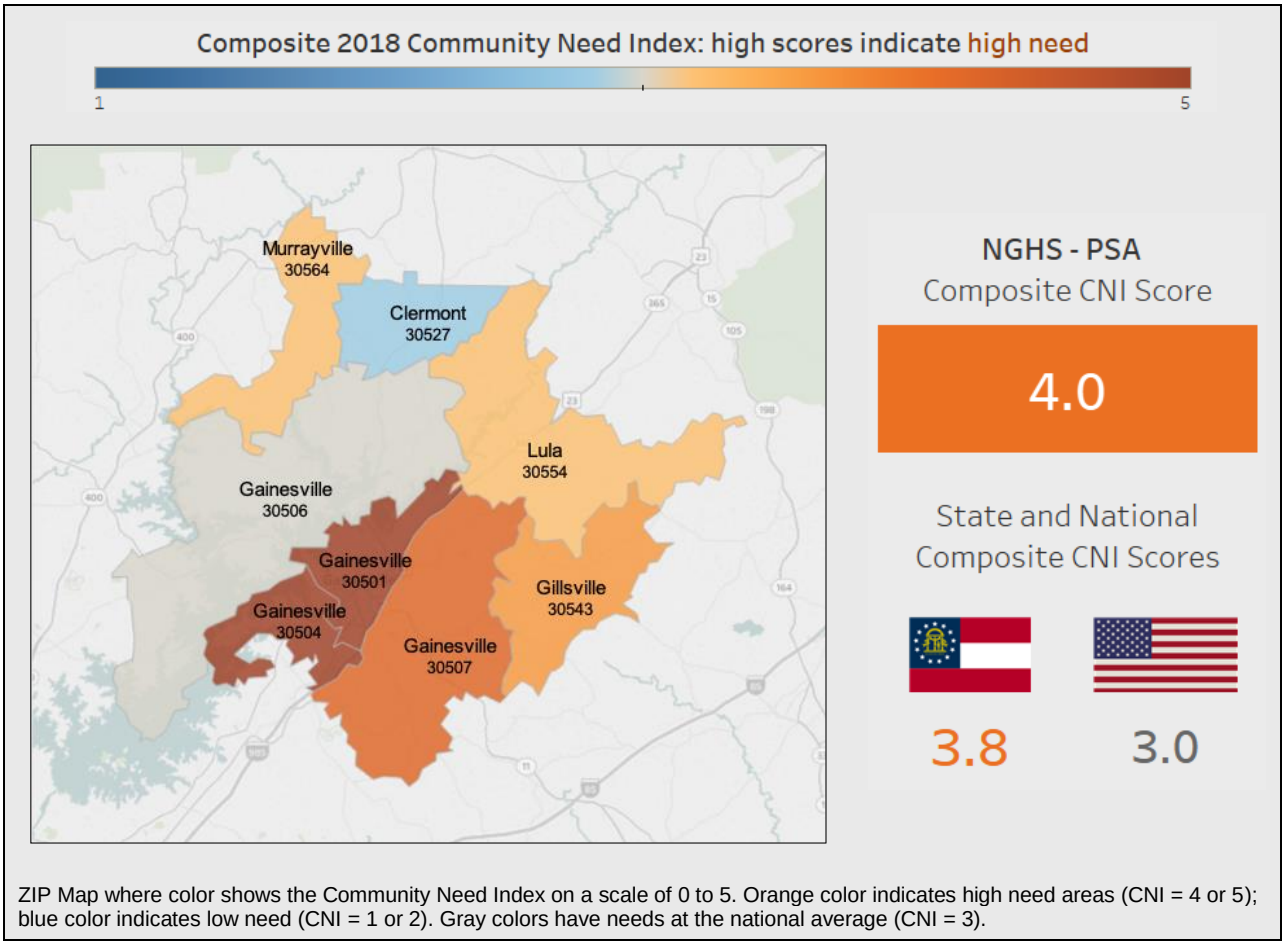
- 30504 – Gainesville 5.0
- 30501 – Gainesville 5.0
- 30507 – Gainesville 4.2

ZIP codes with a CNI score of 5 rank in the bottom quintile on all five (5) barriers: income, culture, education, insurance, and housing. The education barrier sub-score is a 4 or 5 in all ZIP codes in this community.

The insurance barrier sub-score is a 4 or 5 in seven (7) of the eight (8) ZIP codes in this community:

- 30501 – Gainesville
- 30504 – Gainesville
- 30564 – Murrayville
- 30527 – Clermont
- 30507 – Gainesville
- 30543 – Gillsville
- 30554 – Lula

*2018 Community Need Index by ZIP Code*




ZIP Map where color shows the Community Need Index on a scale of 0 to 5. Orange color indicates high need areas (CNI = 4 or 5); blue color indicates low need (CNI = 1 or 2). Gray colors have needs at the national average (CNI = 3).

*Source: IBM Watson Health / Claritas, 2018*

*Watson Health Community Data*

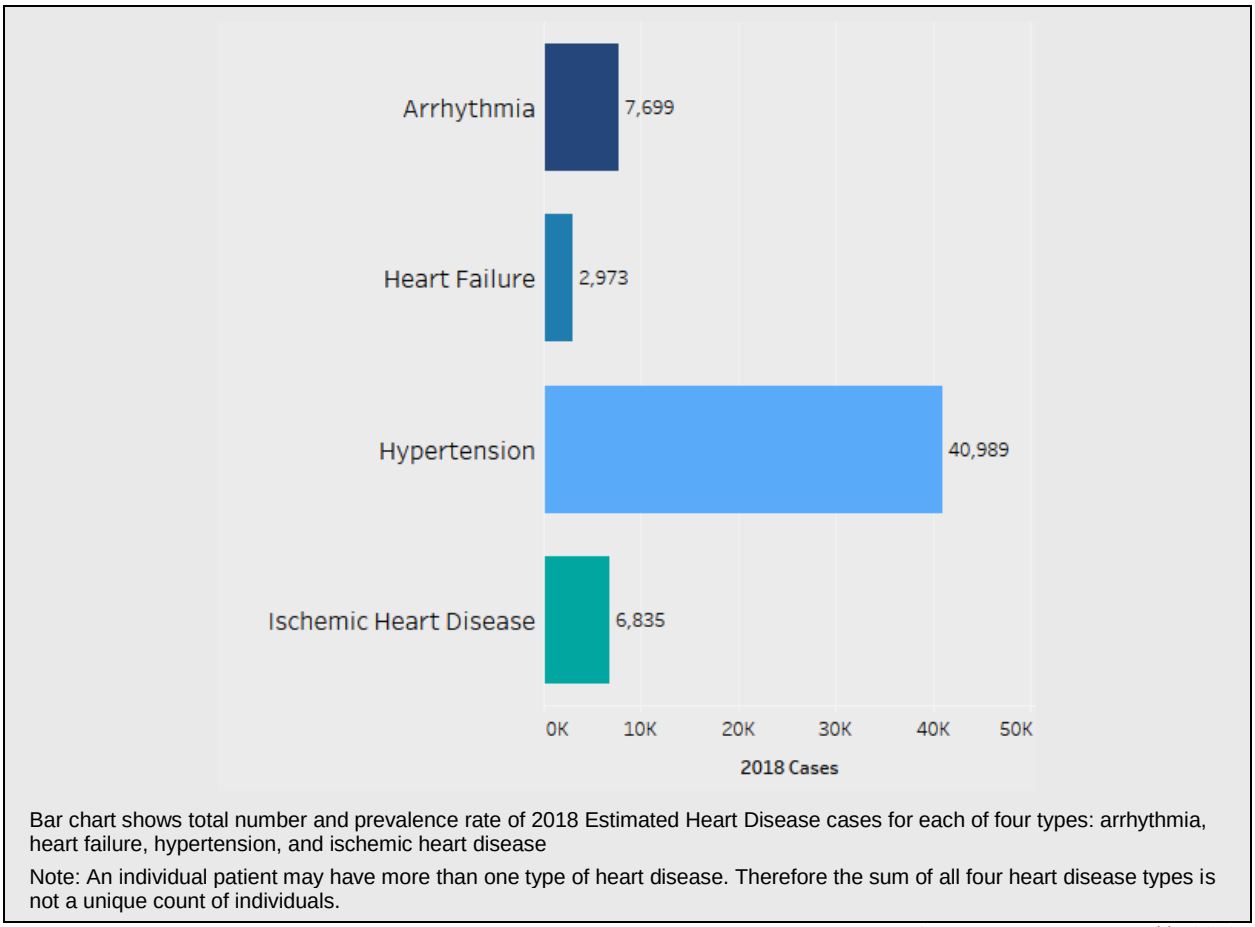
Watson Health supplements the publicly available data and population statistics with estimates of localized disease prevalence of heart disease and cancer as well as emergency department visit estimates.

Watson Health Heart Disease Estimates identify hypertension as the most prevalent heart disease diagnosis; there are almost 41,000 estimated cases in the community overall affecting slightly more females (51.3%) than males (48.7%).

The 30506 ZIP code of Gainesville has the highest estimated number of cases for all four heart disease types: Arrhythmia (2,690 people), Heart Failure (1,058 people), Hypertension (13,757 people), and Ischemic Heart Disease (2,480). The 30564 ZIP code of Murrayville has the highest estimated prevalence rates for all four heart disease conditions.

- Arrhythmia – 621 cases per 10,000 population
- Heart Failure – 245 cases per 10,000 population
- Hypertension – 3,087 cases per 10,000 population
- Ischemic Heart Disease – 581 cases per 10,000 population

*2018 Estimated Heart Disease Cases*



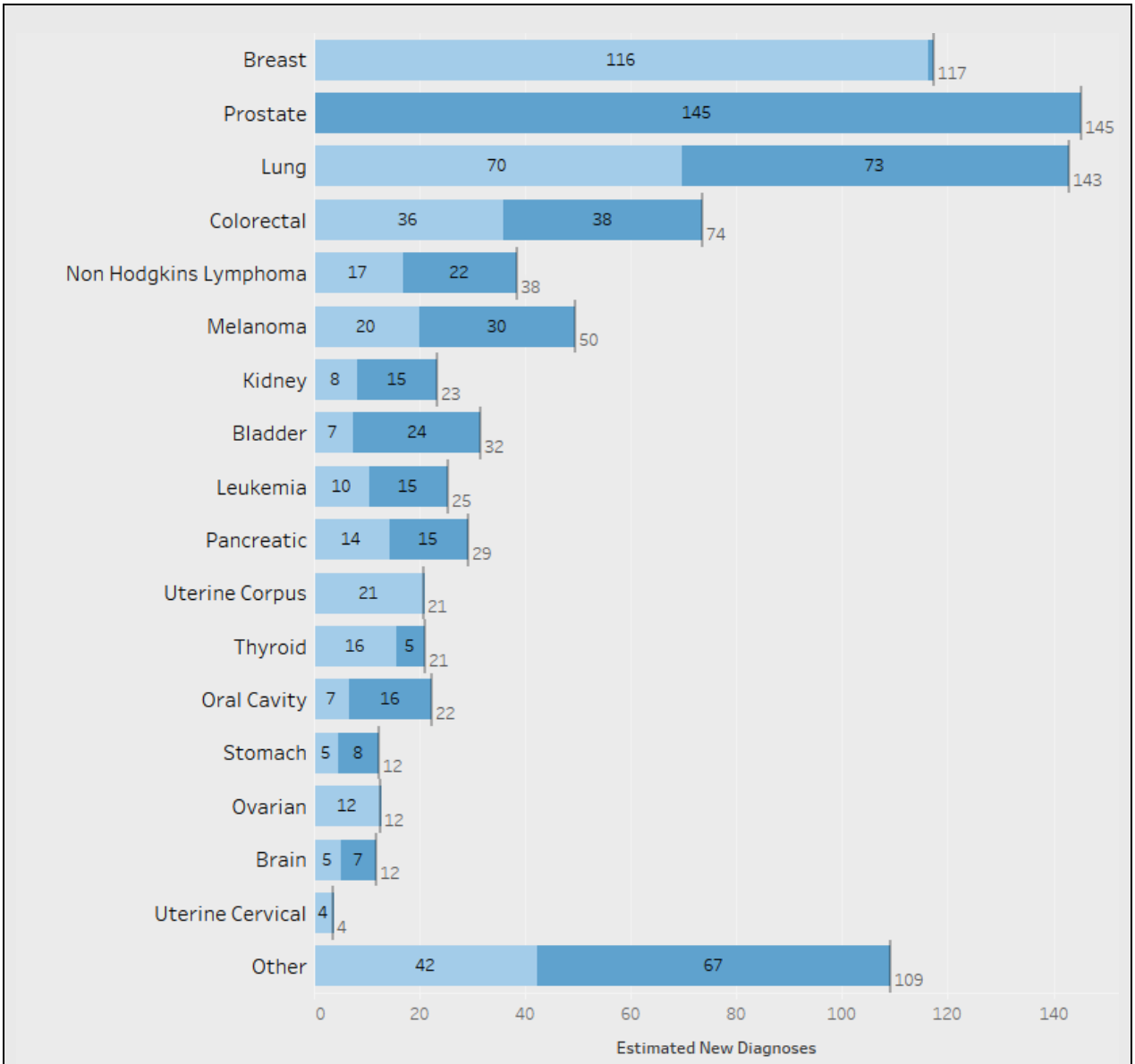

Bar chart shows total number and prevalence rate of 2018 Estimated Heart Disease cases for each of four types: arrhythmia, heart failure, hypertension, and ischemic heart disease

Note: An individual patient may have more than one type of heart disease. Therefore the sum of all four heart disease types is not a unique count of individuals.

*Source: IBM Watson Health, 2018*

For this community, Watson Health's 2018 Cancer Estimates reveal the cancers projected to have the greatest rate of growth in the next five years are Thyroid (16.4%), Melanoma (14.6%), and Pancreatic (14.3%); based on both population changes and disease rates. The cancers estimated to have the greatest number of new cases in 2018 are prostate (145), lung (143) and breast (117).

*2018 Estimated New Cancer Cases*




Bar chart shows estimated new diagnoses per year for each of the 17 types of Cancer and 1 category for all other cancers. Color shows details about sex with light blue for females and dark blue for males.

*Source: IBM Watson Health, 2018*

*Estimated Cancer Cases and Projected 5 Year Change by Type*

| Cancer Type | 2018 Estimated New Cases | 2023 Estimated New Cases | 5 Year Growth (%) |
|---|---|---|---|
| Bladder | 32 | 36 | 12.8% |
| Brain | 12 | 13 | 8.4% |
| Breast | 117 | 130 | 10.9% |
| Colorectal | 74 | 71 | -3.3% |
| Kidney | 23 | 26 | 12.7% |
| Leukemia | 25 | 28 | 11.3% |
| Lung | 143 | 155 | 8.8% |
| Melanoma | 50 | 57 | 14.6% |
| Non-Hodgkin's Lymphoma | 38 | 43 | 11.6% |
| Oral Cavity | 22 | 25 | 12.9% |
| Ovarian | 12 | 14 | 9.0% |
| Pancreatic | 29 | 33 | 14.3% |
| Prostate | 145 | 150 | 3.5% |
| Stomach | 12 | 13 | 8.2% |
| Thyroid | 21 | 24 | 16.4% |
| Uterine Cervical | 4 | 4 | 4.9% |
| Uterine Corpus | 21 | 23 | 12.9% |
| All Other Cancers | 109 | 122 | 12.2% |
| Grand Total | 890 | 969 | 8.9% |

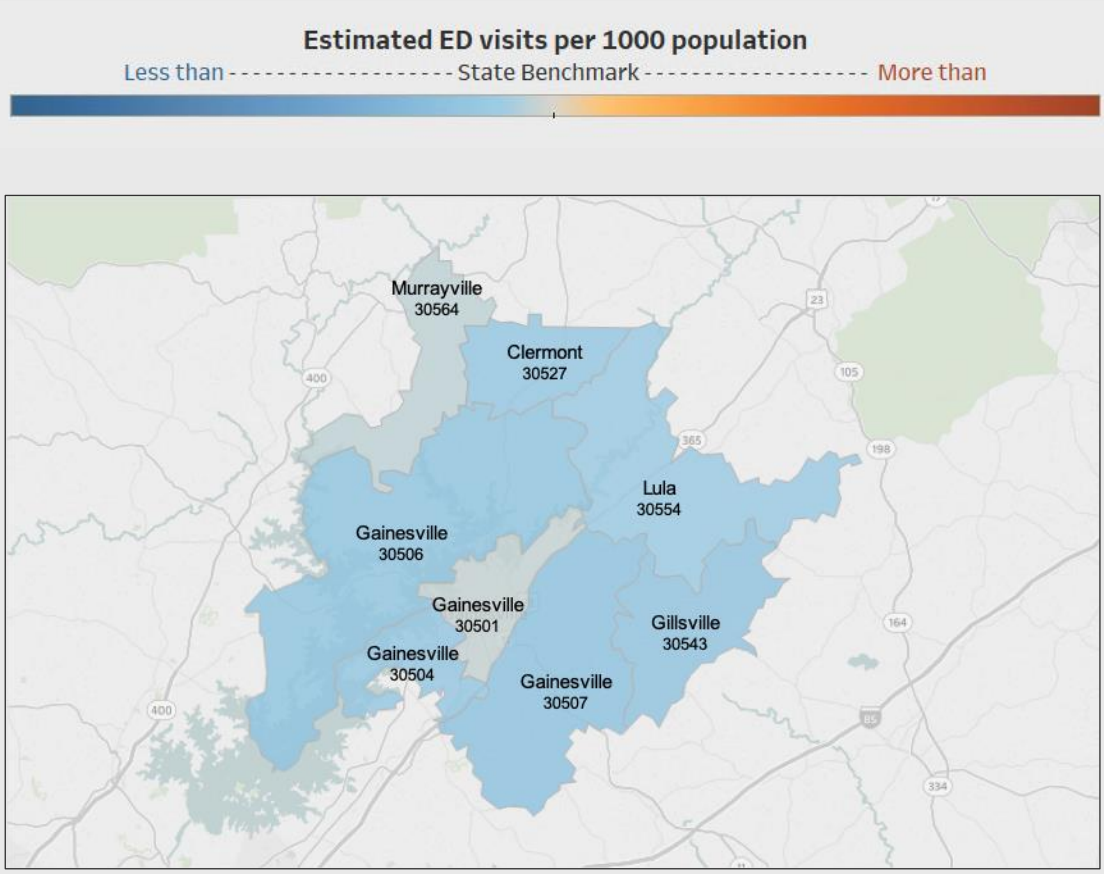
*Source: IBM Watson Health, 2018*

Based on population characteristics and regional utilization rates, Watson Health projects all emergency department (ED) visits in this community will increase by 6.9% over the next five years. All eight (8) ZIP codes have total ED use rates lower than the state of Georgia (439 visits per 1,000 population). The highest estimated ED use rate is in the Gainesville ZIP code 30501 with 427.5 visits per 1,000 population.

These ED visits consist of three main types: those resulting in an inpatient admission, emergent ED visits treated and released, and non-emergent ED visits that are lower acuity. Non-emergent ED visits present to the ED but can potentially be treated in more appropriate and less intensive outpatient settings.

Non-emergent ED visits can be an indication of systematic issues within the community regarding access to primary care, managing chronic conditions, or other access to care issues such as ability to pay. Watson Health estimates non-emergent ED visits will increase by 2.2% over the next five years in this community. None of the ZIP Codes have non-Emergent ED use rates higher than the state benchmark of 185 visits per 1,000 population.

*Total Estimated 2018 Emergency Department Visit Rate*




Estimated ED Visits per 1000 Population

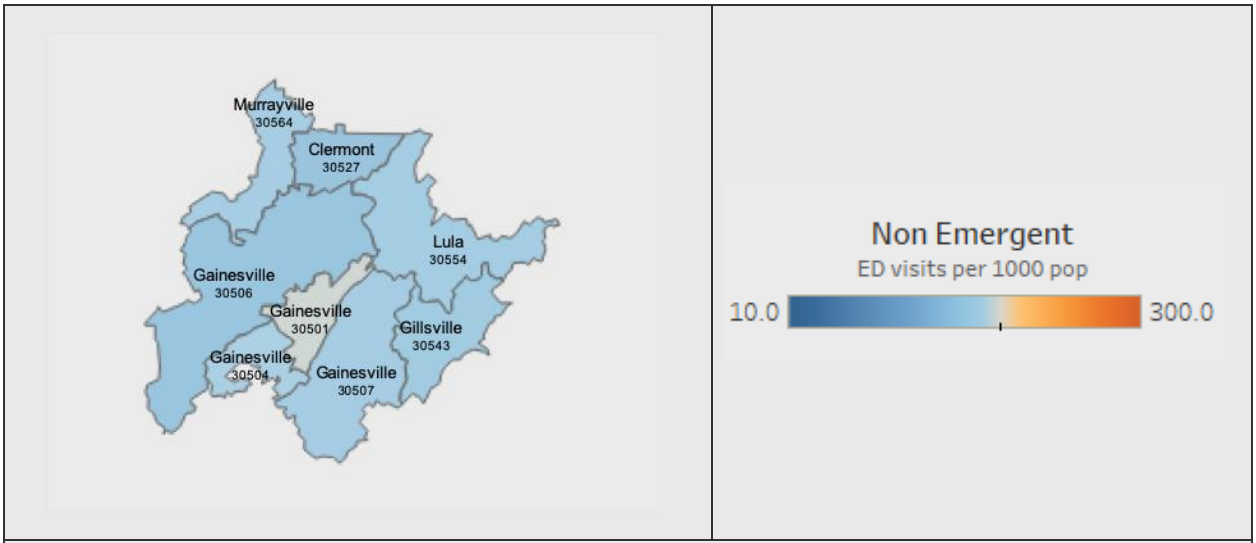
| Emergent Status | Georgia | USA |
|---|---|---|
| Non Emergent | 185 | 179 |
| Emergent | 190 | 189 |
| Inpatient Admission | 64 | 67 |
| Total | 439 | 435 |

ZIP map color shows total Emergency Department visits per 1,000 popultaion. Orange colors are higher than the state benchmark, blue colors are less than the state benchmark, and gray colors are similar.

*Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Non-Emergent Estimated 2018 Emergency Department Visits by ZIP Code*




ZIP map color shows total Emergency Department vists per 1,000 population by non-emergent status. Orange colors are higher than the state benchmark (see table at right), blue colors are less than the state benchmark, and gray colors are similar. Color range is set for the entire study region. ED visits are defined by the presence of specific CPT® codes in claims. Non-emergency visits to the ED do not necessarily require treatment in a hospital emergency department and can potentially be treated in a fast-track ED, an urgent care treatment center, a clinic or physician's private office.

*Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Public Health Indicators*

Public health indicators (129 total) were collected and analyzed to assess community health needs. For each health indicator, a comparison was made between the most recently available community data and benchmarks for the same/similar indicator. The basis of benchmarks was available data for the U.S. and the state of Georgia. A list of these indicators is in **Appendix A**.

Where the community indicators showed greater need when compared to the state of Georgia comparative benchmark, the difference between the community values and the state benchmark was calculated (need differential). The highest ranked indicators with need differentials in the 50$^{th}$ percentile of greater severity pinpointed community health needs from a quantitative perspective.

*Focus Groups & Interviews*

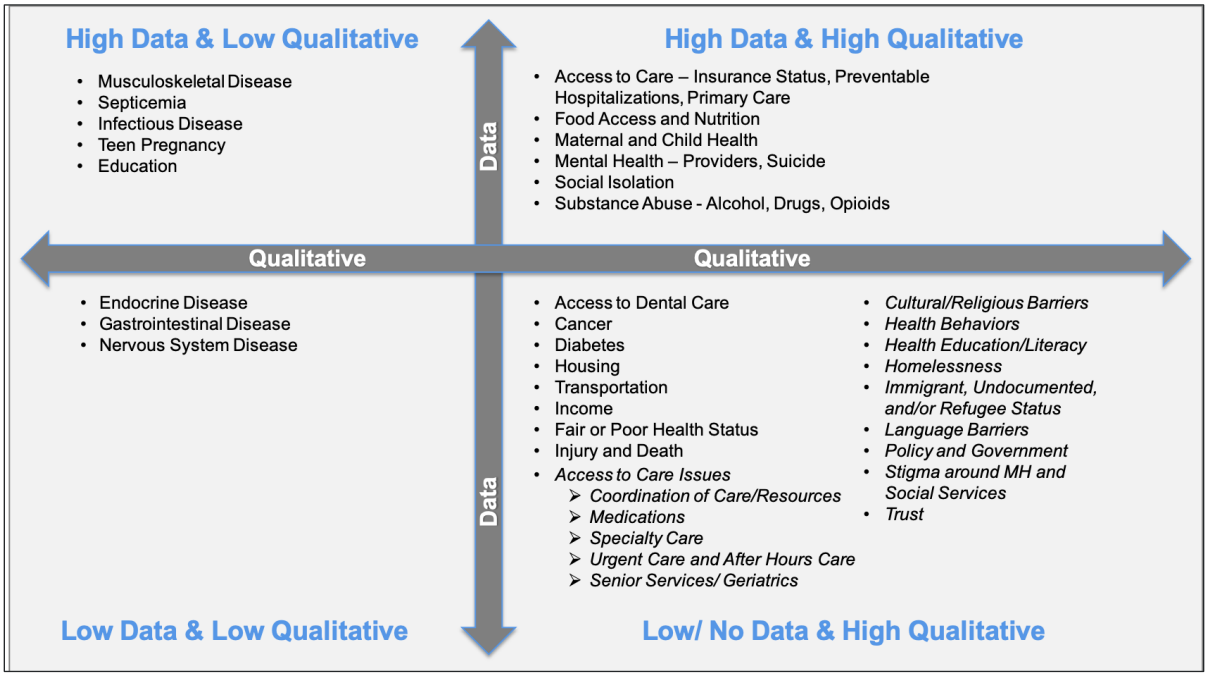
In the Watson Health focus group sessions and interviews, participants identified and discussed the greatest health needs in the community, as well as the barriers and strengths impacting overall health status. For this community, three (3) focus group sessions (listed below) with a total of 28 participants and five (5) interviews were conducted March through April 2019. A list of the organizations providing input can be found in **Appendix B**. Summary findings from the focus groups and interviews can be found in **Appendix C**. Additional input gathered via the Johnson Group Hall County Survey and NGHS Hall County Mental and Behavioral Health Listening Sessions were used to assess need from a qualitative perspective (**Appendix D**).

| Focus Group | Date | Location | Number of Participants |
|---|---|---|---|
| Hall County Focus Group | March 5, 2019 | Fair Street Neighborhood Center Gainesville, GA | 8 |
| Hall County Hispanic Focus Group | April 13, 2018 | Norma Hernandez Income Tax Offices Gainesville, GA | 7 |
| NGHS Advisory Board Focus Group - PSA | February 4, 2019 | NGMC Gainesville Gainesville, GA | 13 |

*Prioritized Significant Health Needs for NGHS – PSA*

The Health Needs Matrix identified through the community health needs assessment (see Methodology for Defining Community Needs section) shows the convergence of needs identified in the qualitative data (interview and focus group feedback) and quantitative data (health indicators). The top health needs for this community are defined in the Health Needs Matrix below.

*Community Health Needs Matrix*




*Note: Lower right quadrant items in italics do not have quantitative data indicators available*

*Source: IBM Watson Health, 2019*

Through the prioritization process, the significant health needs for this community were identified, reviewed, and prioritized (see "Approach to Identify and Prioritize Significant Health Needs" section). The resulting prioritized health needs for the community are provided in the table below.

*Prioritized Significant Community Health Needs*

| Priority Rank | Health Need |
|---|---|
| 1 | Mental Health |
| 2 | Substance Abuse |
| 3 | Access to Care |
| 4 | Maternal and Child Health |
| 5 | Septicemia (added) |

| Priority Rank | Health Need |
|---|---|
| 6 | Food Access and Nutrition |
| 7 | Social Isolation |

*Notes: Needs noted as "added" were pulled from quadrants other than the upper right (high data/high qualitative) as they were considered significant by the prioritization working group.*
*Needs with the same priority rank received the same overall score in the prioritization process*

*Source: IBM Watson Health, 2019*

*Recommended Health Needs to be Addressed for NGHS – PSA*

As part of the prioritization work session, work group participants recommended a set of prioritized significant health needs that should be addressed by each CHNA Partner (see "Recommended Health Needs to be Addressed by the CHNA Partners" section). The members of this community's prioritization work group recommended the following significant needs to be addressed via the CHNA implementation strategy:

- Mental and Behavioral Health
- Access to Care
- Septicemia

*CHNA Implementation Strategy*

NGHS will choose which needs it will address from those identified in this assessment. An implementation strategy with specific initiatives to address the chosen health needs will be completed and adopted by the hospitals by February 15, 2020.

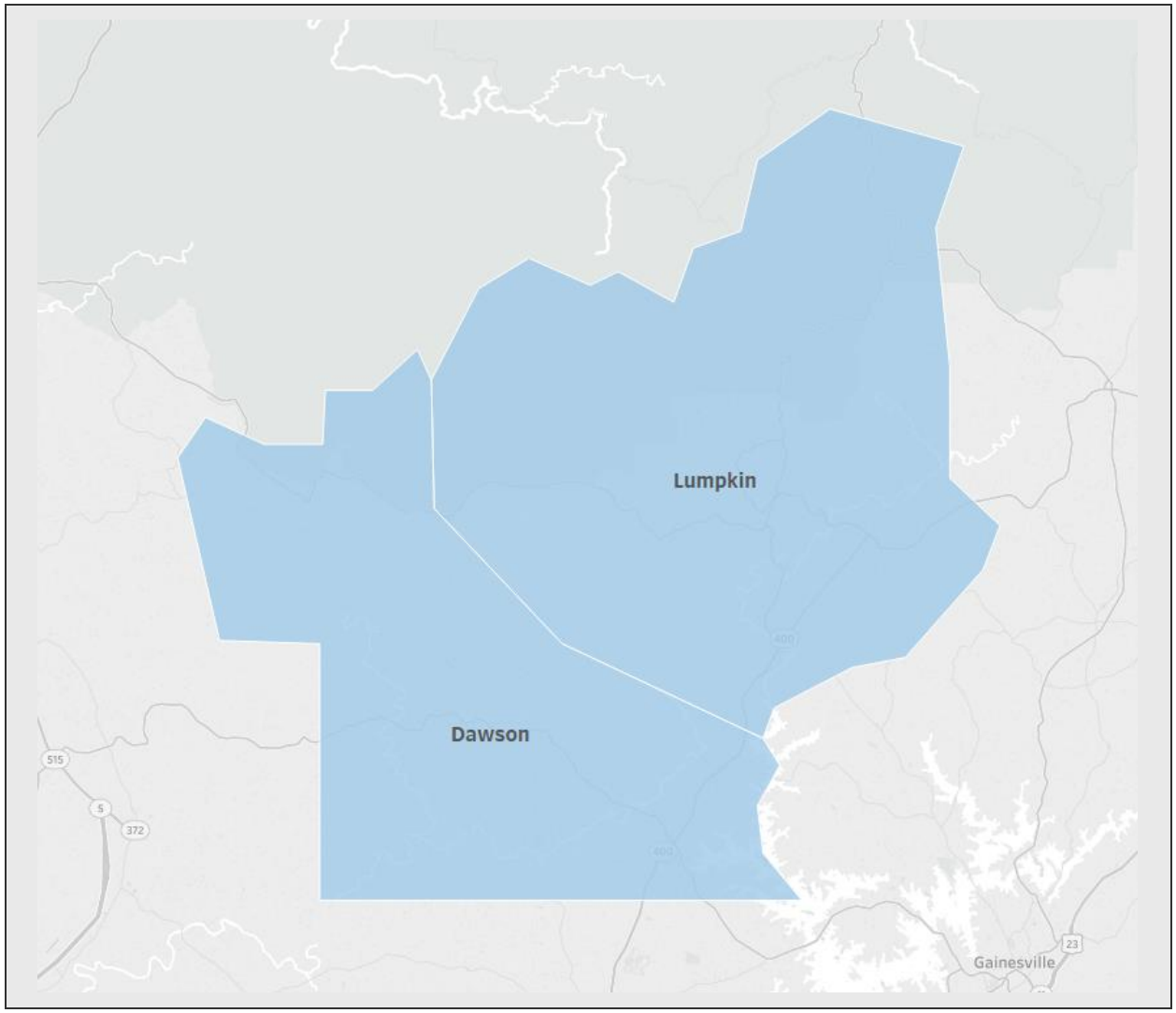
An evaluation of the NGHS 2016 CHNA implementation strategy and its impact can be found in **Appendix I.**

## Community Health Needs Assessment – NGHS Secondary Service Area 400

*Community Served Definition*

For the purpose of this assessment, the geographic boundaries of the community served by NGHS encompass the ZIP counties and ZIP codes where 90% of NGHS hospital admissions originate (**Appendix K**). These counties were grouped into four communities based on consideration for patient volume, location, and the broad interests of the community, including medically underserved populations, low-income persons, minority groups, or those with chronic disease needs. The NGHS Secondary Service Area 400 (SSA 400) is comprised of Dawson and Lumpkin counties.

*Map of Community Served*




*Source: NGHS, 2019*

*Demographic and Socioeconomic Summary*

The population of the community served is expected to grow 4.8% by 2023, an increase of 2,640 people. The 4.8% projected population growth is lower than the state's 5-year projected growth rate (5.0%) but higher than the national projected growth rate (3.5%). The median age is younger than both the state and national medians. Median household income for the overall community is lower than both benchmarks.

*Demographic and Socioeconomic Comparison: Community Served and State/U.S. Benchmarks*

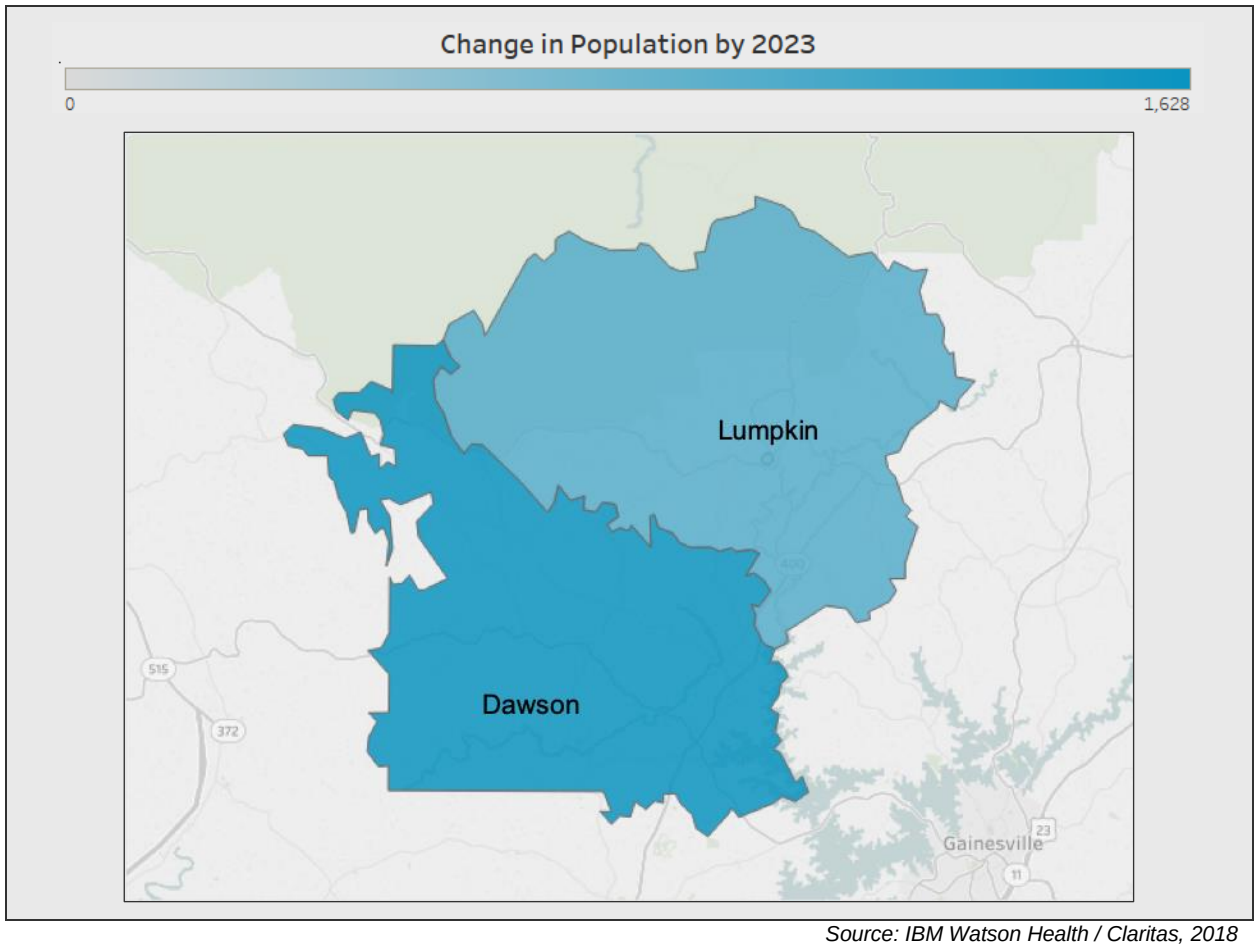
| Geography | | Benchmarks | | | Community Served |
|---|---|---|---|---|---|
| | | United States | Georgia | Northeast Georgia Region | NGHS Secondary Service Area 400 |
| Total Current Population | | 326,533,070 | 10,467,269 | 1,743,817 | 54,433 |
| 5 Yr Projected Population Change | | 3.5% | 5.0% | 7.2% | 4.8% |
| Median Age | | 38.3 | 36.9 | 40.3 | 33.2 |
| Population 0-17 | | 22.6% | 24.0% | 25.3% | 20.0% |
| Population 65+ | | 15.9% | 13.8% | 13.1% | 17.5% |
| Women Age 15-44 | | 19.6% | 20.4% | 20.0% | 19.9% |
| Non-White Population | | 30.0% | 43.0% | 36.2% | 7.0% |
| Hispanic Population | | 18.2% | 9.7% | 16.6% | 4.8% |
| Insurance Coverage | Uninsured | 9.4% | 17.1% | 11.9% | 15.5% |
| | Medicaid | 19.0% | 11.8% | 10.4% | 8.4% |
| | Private Market | 9.6% | 10.8% | 11.5% | 10.6% |
| | Medicare | 16.1% | 14.4% | 12.5% | 17.4% |
| | Employer | 45.9% | 45.8% | 53.7% | 48.0% |
| Median HH Income | | $62,175 | $55,559 | $56,929 | $54,291 |
| Limited English | | 26.2% | 19.3% | 28.9% | 9.8% |
| No High School Diploma | | 7.4% | 8.9% | 7.9% | 10.2% |
| Unemployed | | 6.8% | 7.8% | 6.3% | 8.0% |

*Source: IBM Watson Health / Claritas, 2018; US Census Bureau 2017 (U.S. Median Income)*

Note: children (ages 0-17), older adults (ages 65+) and women of childbearing age (ages 18-44) are identified as population groups that have unique healthcare needs.

Dawson County will drive most of the growth in the community with an expected population increase of 5.9% or 1,628 people, compared to Lumpkin County which is projected to grow by 3.8% (990 people) in ZIP code 30533 - Dahlonega and by 3% (22 people) in ZIP code 30597 - Dahlonega.

*2018 - 2023 Total Population Projected Change by ZIP Code*

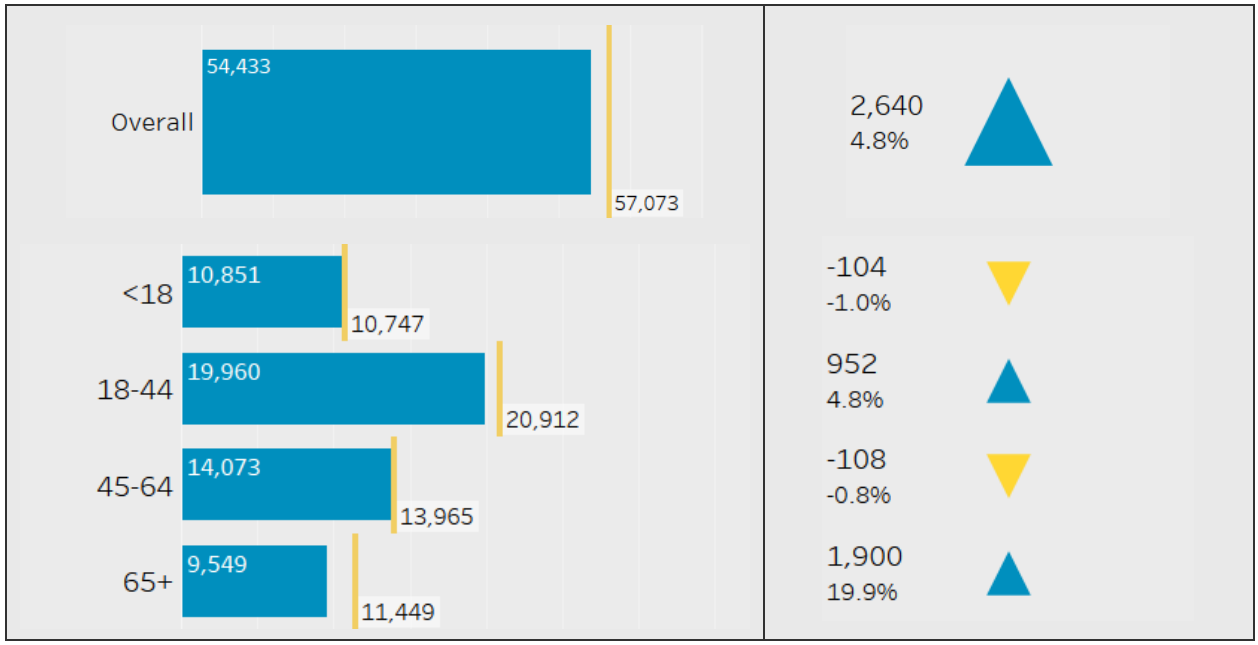



*Source: IBM Watson Health / Claritas, 2018*

The community's population skews younger with 37% of the population ages 18-44 and 20% under age 18. The largest cohort (18-44) is expected to grow by 952 people by 2023 (4.8%). The age 65 plus cohort is the smallest, representing 17.5% of total 2018 population estimates. This group is projected to experience the fastest growth (20%) over the next five years, adding 1,900 seniors to the community. Growth in the senior population will likely contribute to increased utilization of services as the population continues to age.

*Population Distribution by Age*

*2018 Population by Age Cohort* *Change by 2023*

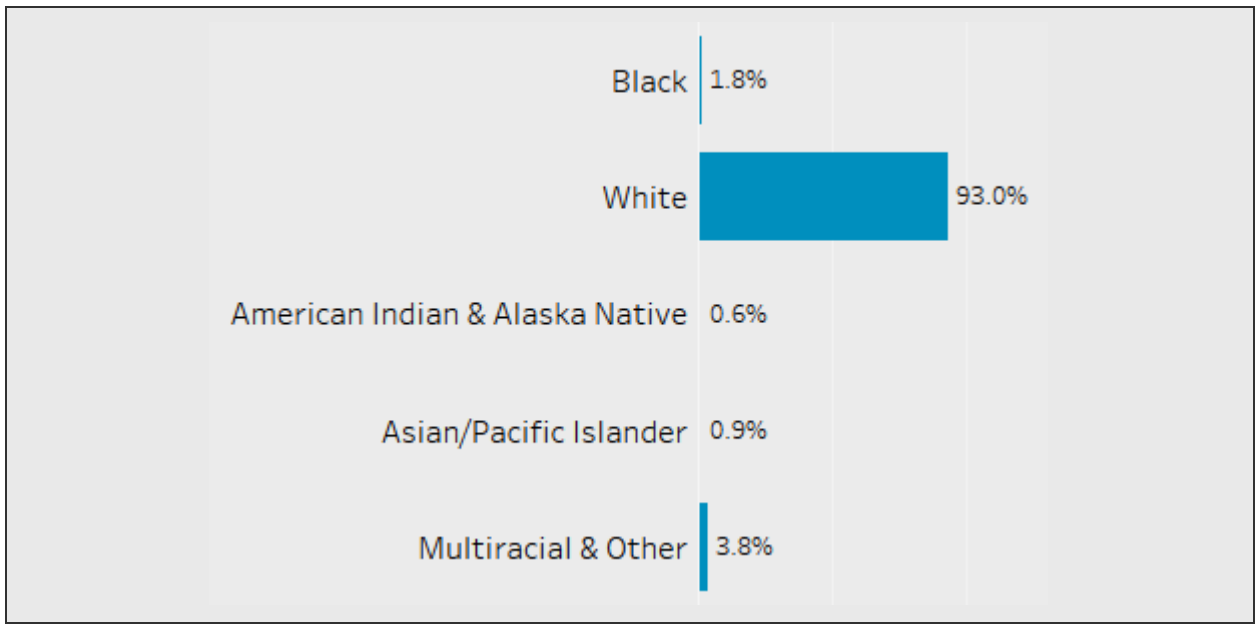



*Source: IBM Watson Health / Claritas, 2018*

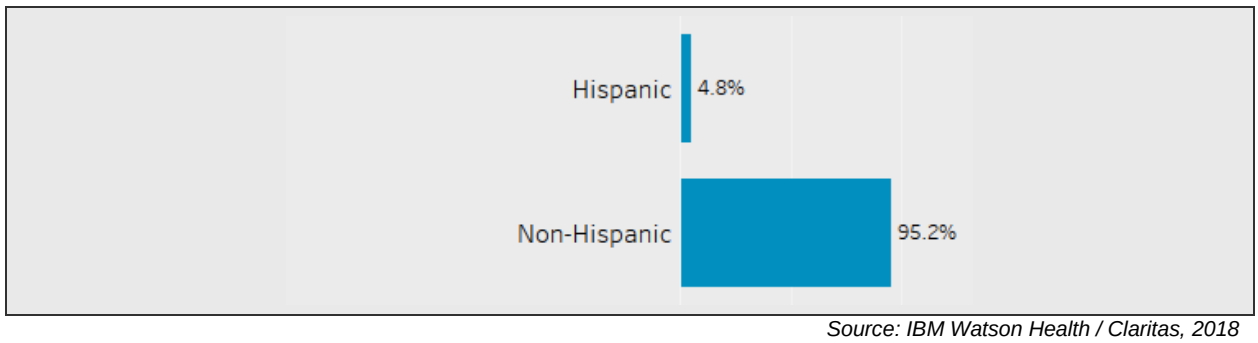
Population statistics are analyzed by race and by Hispanic ethnicity. The community is predominantly White (93%) with all other racial groups comprising the remaining 7% of the population. The Black population is projected to experience the most growth by 2023 (38.5%, 370 people), followed by the Asian/Pacific Islander population (29.1%, 143 people).

The non-Hispanic population (all races) is expected to grow by 2,415 people (4.7%) by 2023 while the Hispanic population is estimated to grow by 225 people (8.5%).

*2018 Population by Race*

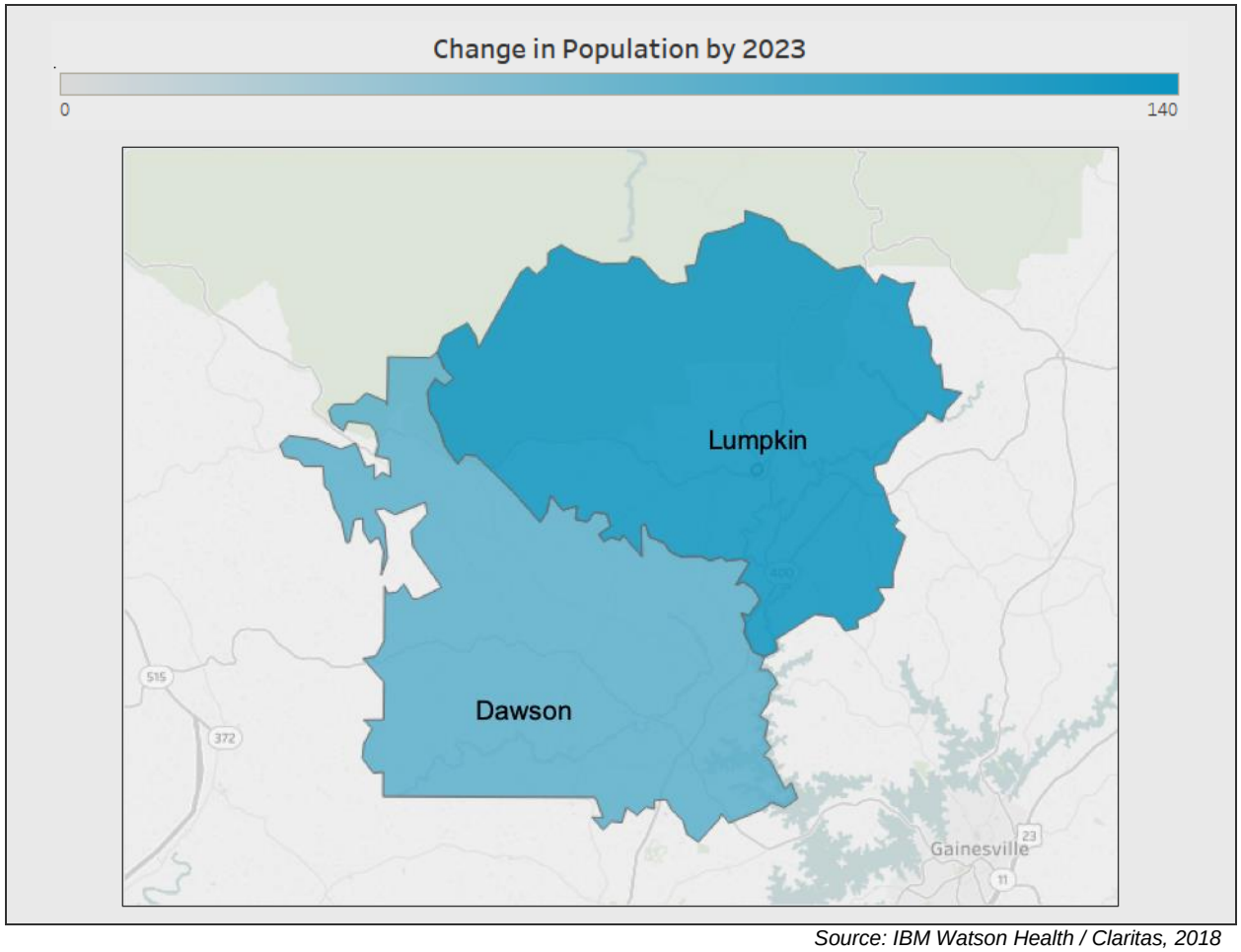



*2018 Population by Ethnicity*




*Source: IBM Watson Health / Claritas, 2018*

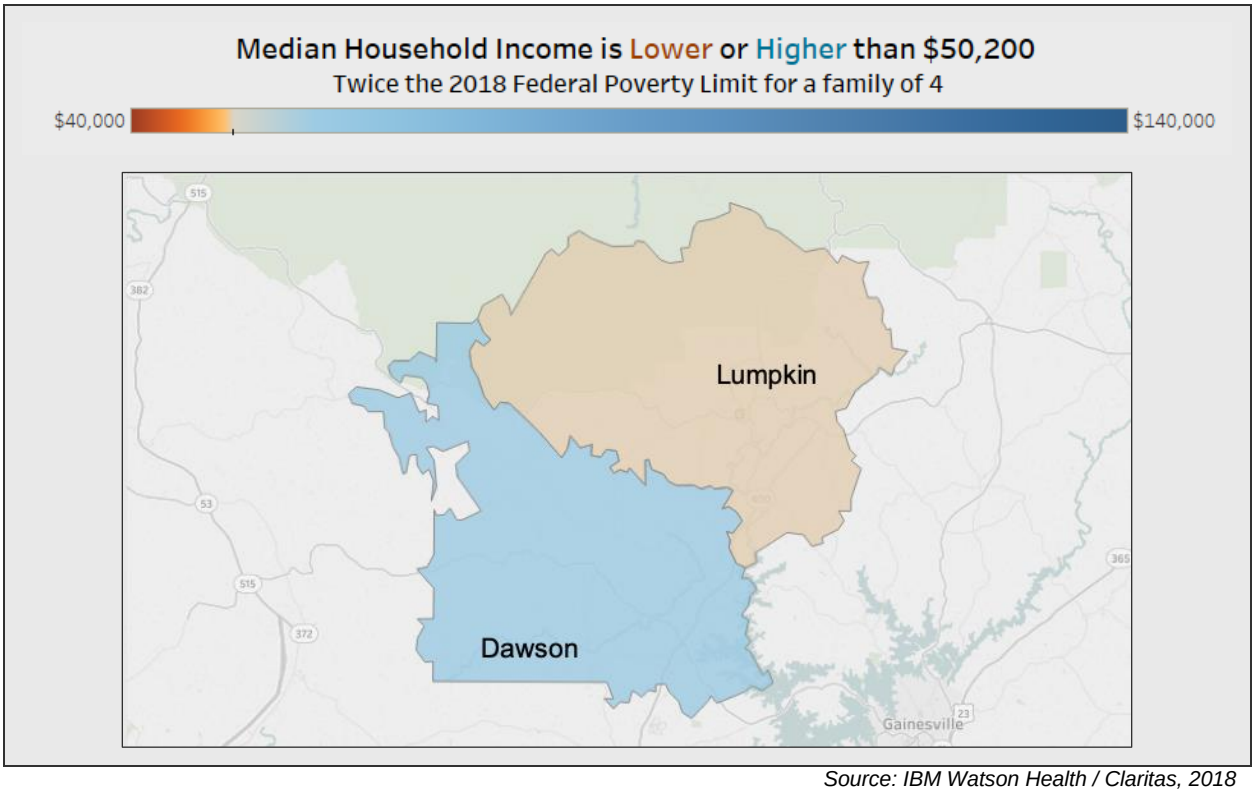
*2018 - 2023 Hispanic Population Projected Change by ZIP Code*




*Source: IBM Watson Health / Claritas, 2018*

The 2018 median household income for the United States is $62,175 and $55,559 for the state of Georgia. The median household income for this community is estimated at $49,225 for Lumpkin and $64,333 for Dawson. Lumpkin's median household income is below twice the 2018 Federal Poverty Limit for a family of four.

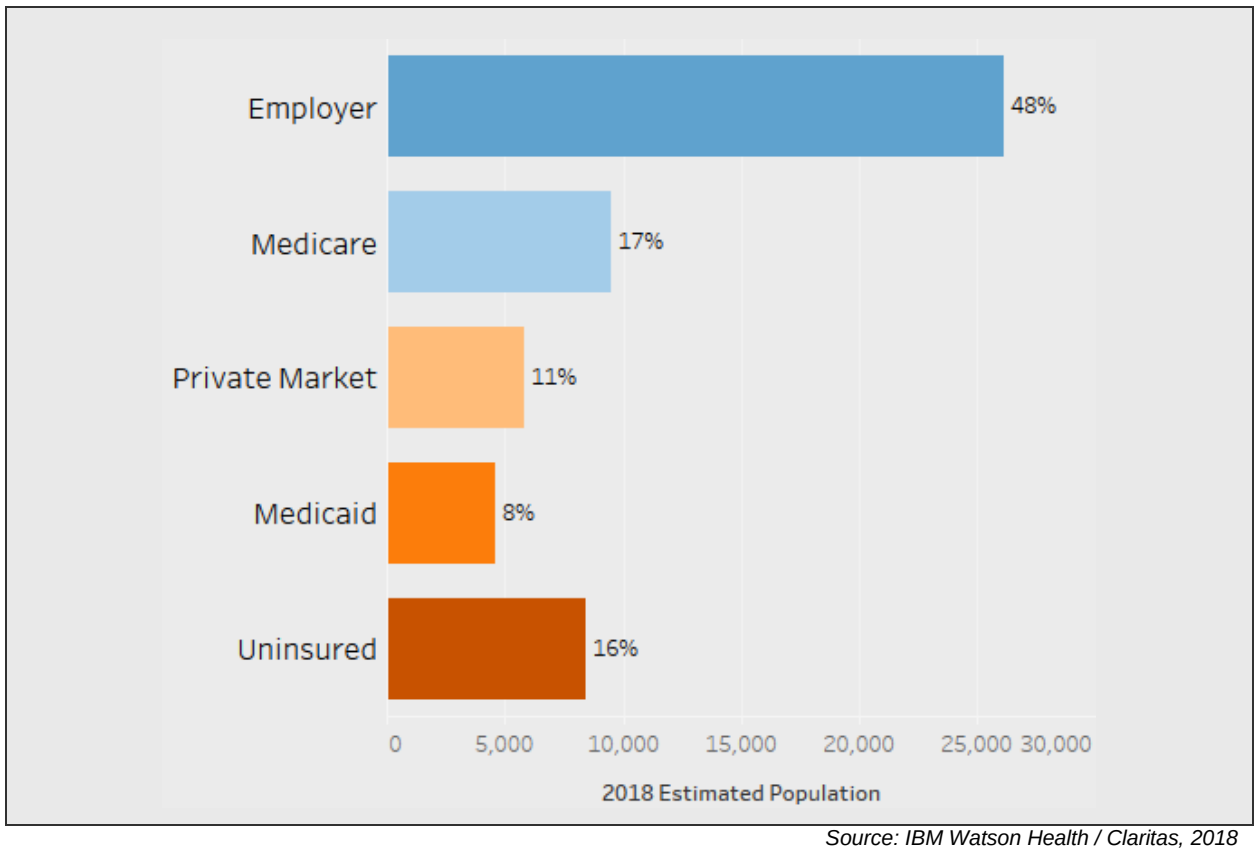
*2018 Median Household Income by ZIP Code*




*Source: IBM Watson Health / Claritas, 2018*

Most of the population (48%) are insured through employer sponsored health coverage. The remainder of the population is divided between people on Medicare (17%), people without insurance (16%), people who purchase coverage directly from or through the private health insurance marketplace (11%), and people who were on Medicaid (8%). This community has a smaller proportion of people who are uninsured or on Medicaid and a larger proportion of people with Employer sponsored coverage or Medicare when compared to the distribution in the state of Georgia.

*2018 Estimated Distribution of Covered Lives by Insurance Category*




*Source: IBM Watson Health / Claritas, 2018*

The community includes five (5) Health Professional Shortage Areas and one (1) Medically Underserved Areas as designated by the U.S. Department of Health and Human Services Health Resources Services Administration.[6] **Appendix G** includes the details on each of these designations.

*Health Professional Shortage Areas and Medically Underserved Areas and Populations*

| | Health Professional Shortage Areas (HPSA) | | | | Medically Underserved Area/Population (MUA/P) |
|---|---|---|---|---|---|
| **NGHS-SSA 400** | **Dental Health** | **Mental Health** | **Primary Care** | **Grand Total** | **MUA/P** |
| Dawson | | 1 | 1 | 2 | |
| Lumpkin | 1 | 1 | 1 | 3 | 1 |
| **Total** | **1** | **2** | **2** | **5** | **1** |

*Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018*

[6] U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018

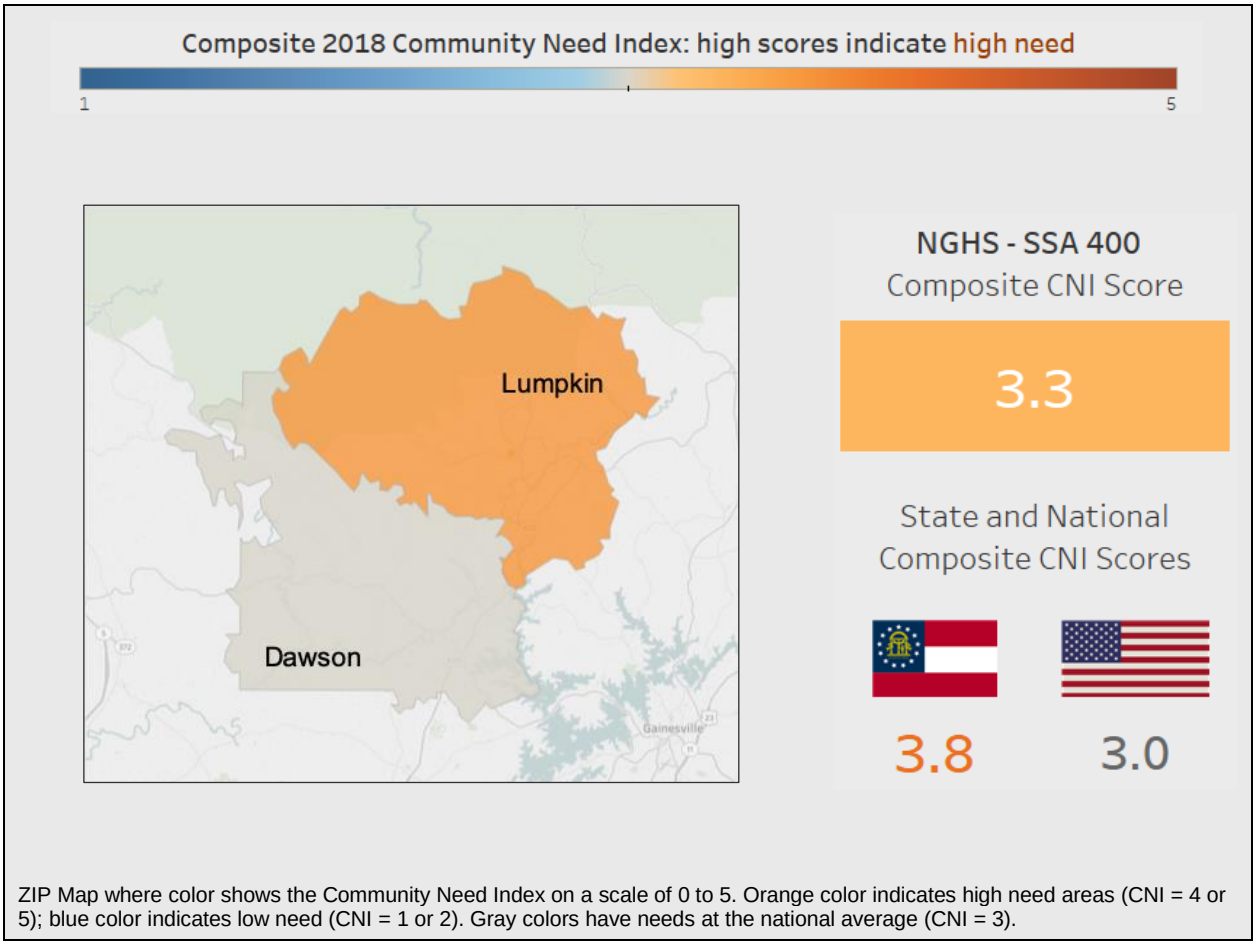
The Watson Health Community Need Index (CNI) is a statistical approach to identifying areas within a community where health disparities may exist. Leveraging U.S. Census Data and Watson Health Insurance Coverage Estimates, the CNI takes into account vital socio-economic factors (income, cultural, education, insurance and housing) about a community to generate a CNI score for every populated ZIP code in the United States. The CNI strongly links to variations in community healthcare needs and is an indicator of a community's demand for various healthcare services. The CNI score by ZIP code identifies specific areas within a community where healthcare needs may be greater.

Overall, the composite CNI score for the community served is 3.3 which is lower than the state CNI score (3.8) and higher than the national benchmark score of 3.0. Lumpkin county has a CNI score of 3.6 and Dawson county has a CNI score of 3.0.

All three ZIP codes in the community have an education barrier sub-score of 4 and insurance barrier sub-score of 4 or 5:

- 30533 – Dahlonega
- 30597 – Dahlonega
- 30534 – Dawsonville

*2018 Community Need Index by ZIP Code*




ZIP Map where color shows the Community Need Index on a scale of 0 to 5. Orange color indicates high need areas (CNI = 4 or 5); blue color indicates low need (CNI = 1 or 2). Gray colors have needs at the national average (CNI = 3).

*Source: IBM Watson Health / Claritas, 2018*

*Watson Health Community Data*

Watson Health supplements the publicly available data and population statistics with estimates of localized disease prevalence of heart disease and cancer as well as emergency department visit estimates.

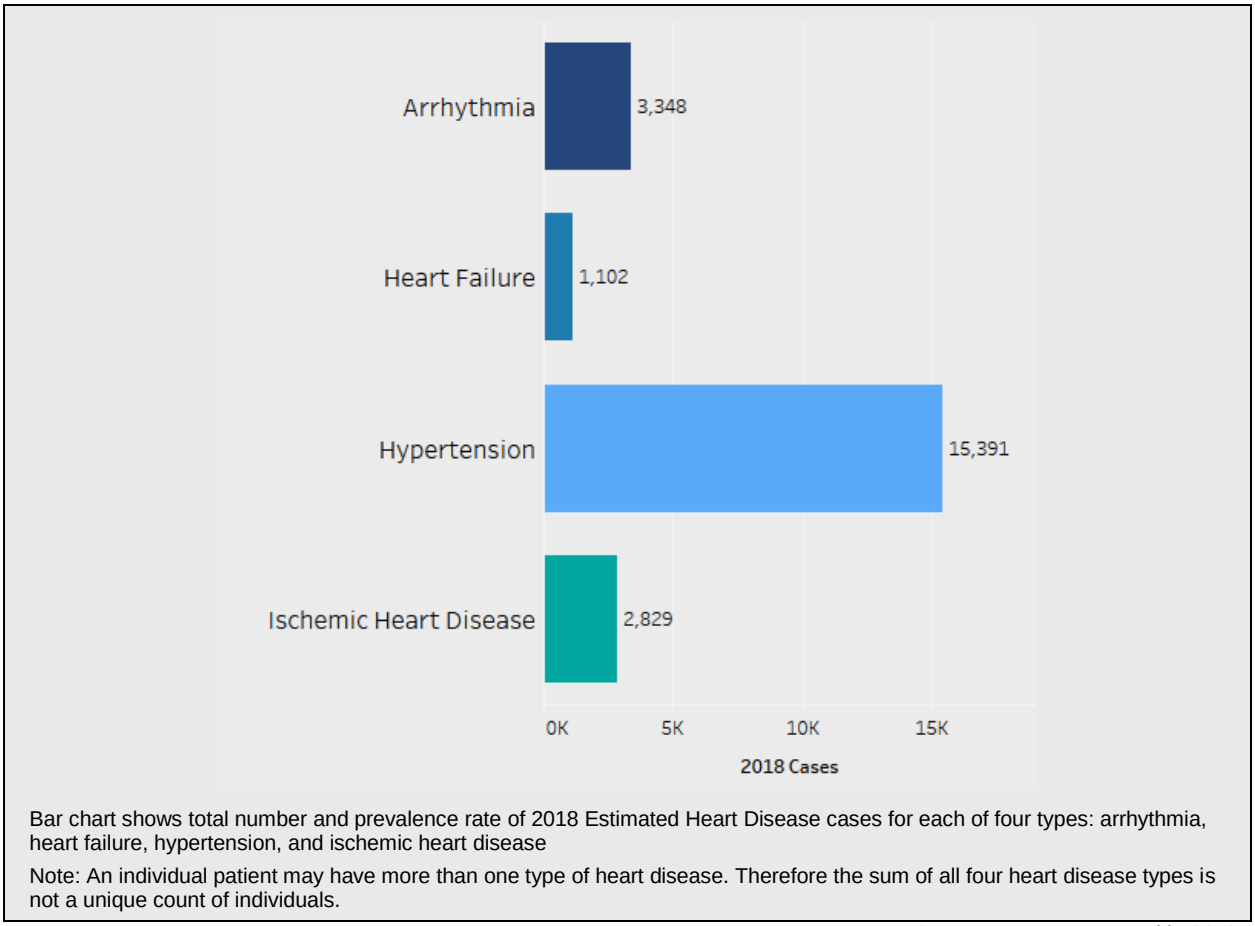
Watson Health Heart Disease Estimates identify hypertension as the most prevalent heart disease diagnosis; there are almost 15,400 estimated cases in the community overall affecting slightly more females (51.4%) than males (48.6%).

Dawsonville ZIP code 30534 has a higher estimated number of cases for each of the four heart disease types compared to Lumpkin ZIP codes.

- Arrhythmia – 1,748 cases
- Heart Failure – 551 cases
- Hypertension – 7,849 cases
- Ischemic Heart Disease – 1,418 cases

Dawsonville also has a higher prevalence rate per 10,000 population for arrythmia (635) and hypertension (2,852). Dahlonega ZIP code 30533 in Lumpkin county has a slightly higher prevalence rate per 10,000 population for heart failure (207) and ischemic heart disease (530).

*2018 Estimated Heart Disease Cases*



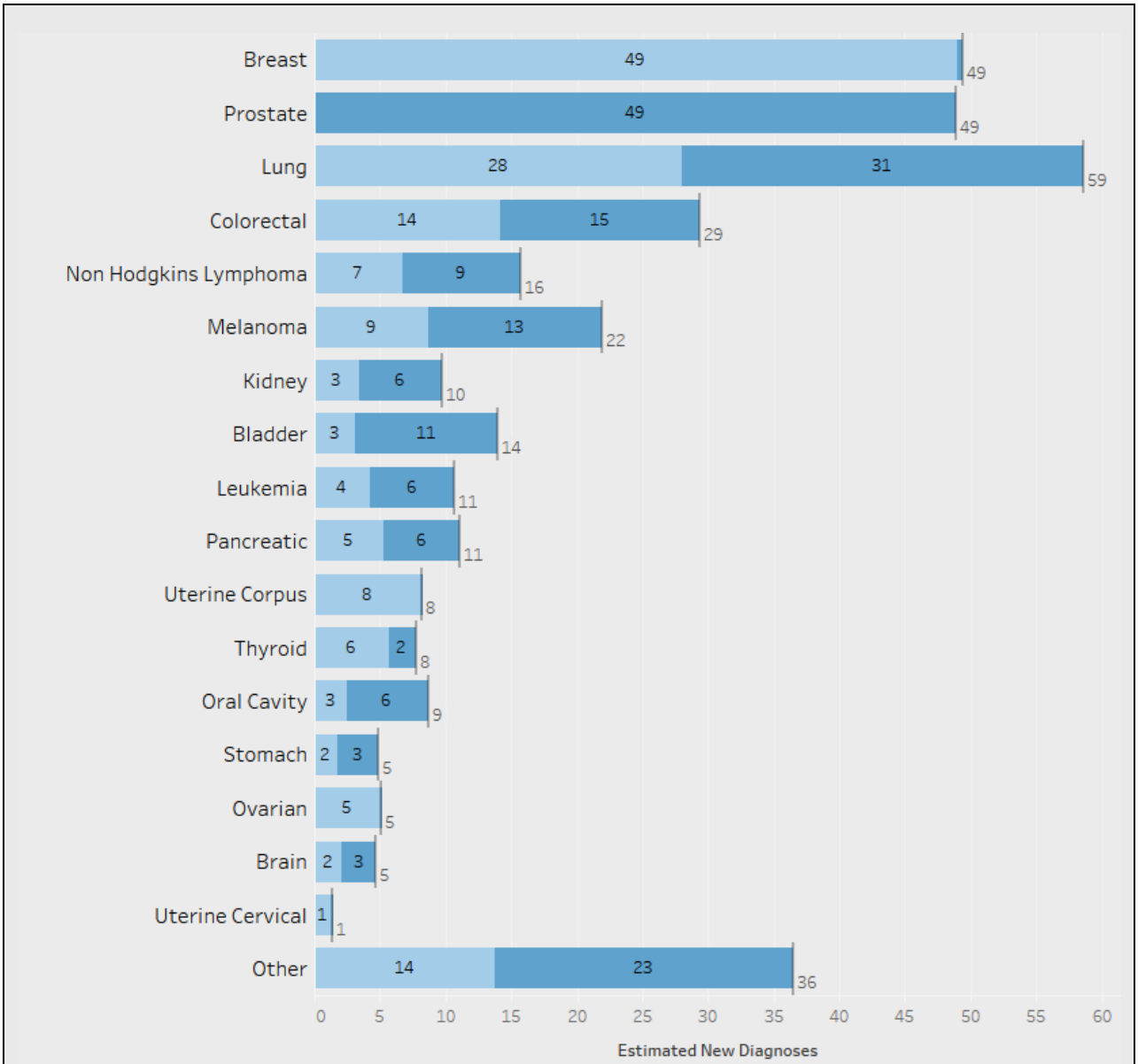

Bar chart shows total number and prevalence rate of 2018 Estimated Heart Disease cases for each of four types: arrhythmia, heart failure, hypertension, and ischemic heart disease

Note: An individual patient may have more than one type of heart disease. Therefore the sum of all four heart disease types is not a unique count of individuals.

*Source: IBM Watson Health, 2018*

For this community, Watson Health's 2018 Cancer Estimates reveal the cancers projected to have the greatest rate of growth in the next five years are Pancreatic (16.2%), Melanoma (15.9%), and Thyroid (15.1%) based on both population changes and disease rates. The cancers estimated to have the greatest number of new cases in 2018 are lung (59), prostate (49), and breast (49).

*2018 Estimated New Cancer Cases*




Bar chart shows estimated new diagnoses per year for each of the 17 types of Cancer and 1 category for all other cancers. Color shows details about sex with light blue for females and dark blue for males.

*Source: IBM Watson Health, 2018*

*Estimated Cancer Cases and Projected 5 Year Change by Type*

| Cancer Type | 2018 Estimated New Cases | 2023 Estimated New Cases | 5 Year Growth (%) |
|---|---|---|---|
| Bladder | 14 | 16 | 14.9% |
| Brain | 5 | 5 | 8.8% |
| Breast | 49 | 55 | 10.5% |
| Colorectal | 29 | 28 | -5.3% |
| Kidney | 10 | 11 | 12.8% |
| Leukemia | 11 | 12 | 13.0% |
| Lung | 59 | 65 | 10.5% |
| Melanoma | 22 | 25 | 15.9% |
| Non-Hodgkin's Lymphoma | 16 | 18 | 12.9% |
| Oral Cavity | 9 | 10 | 12.8% |
| Ovarian | 5 | 5 | 9.4% |
| Pancreatic | 11 | 13 | 16.2% |
| Prostate | 49 | 50 | 3.1% |
| Stomach | 5 | 5 | 8.0% |
| Thyroid | 8 | 9 | 15.1% |
| Uterine Cervical | 1 | 1 | 3.4% |
| Uterine Corpus | 8 | 9 | 12.2% |
| All Other Cancers | 36 | 41 | 13.1% |
| Grand Total | 346 | 379 | 9.4% |

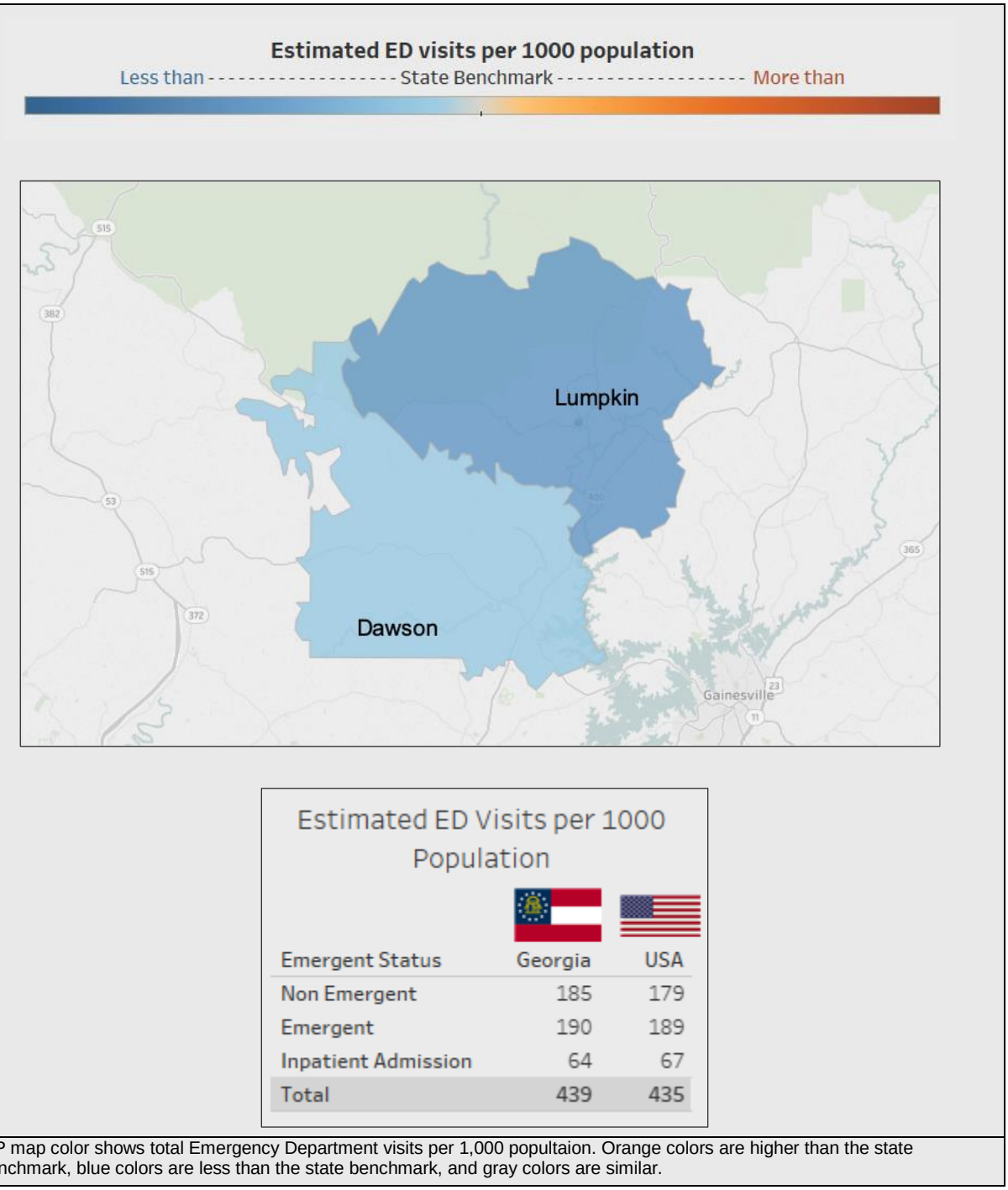
*Source: IBM Watson Health, 2018*

Based on population characteristics and regional utilization rates, Watson Health projects all emergency department (ED) visits in this community will increase by 7.9% over the next five years. Both counties have total ED use rates lower than the state of Georgia (439 visits per 1000 population). Dawson county has a higher ED use rate than Lumpkin county with 396 visits per 1,000 population. Lumpkin county's Dahlonega ZIP code 30533 has an estimated ED use rate of 260 visits per 1,000 population.

These ED visits consist of three main types: those resulting in an inpatient admission, emergent ED visits treated and released, and non-emergent ED visits that are lower acuity. Non-emergent ED visits present to the ED but can potentially be treated in more appropriate and less intensive outpatient settings.

Non-emergent ED visits can be an indication of systematic issues within the community regarding access to primary care, managing chronic conditions, or other access to care issues such as ability to pay. Watson Health estimates that non-emergent ED visits will increase by an average of 2.6% over the next five years in this community. Both Dawson and Lumpkin counties have lower estimated non-emergent ED use rates than the state benchmark of 185 visits per 1,000 population. Based on projections, Dawson county's non-emergent ED use rate will increase 2.7% by 2023, while Lumpkin county's non-emergent use rate will increase 2.4% for ZIP code 30533 and 0.6% for ZIP code 30597.

*Total Estimated 2018 Emergency Department Visit Rate*




Estimated ED Visits per 1000 Population

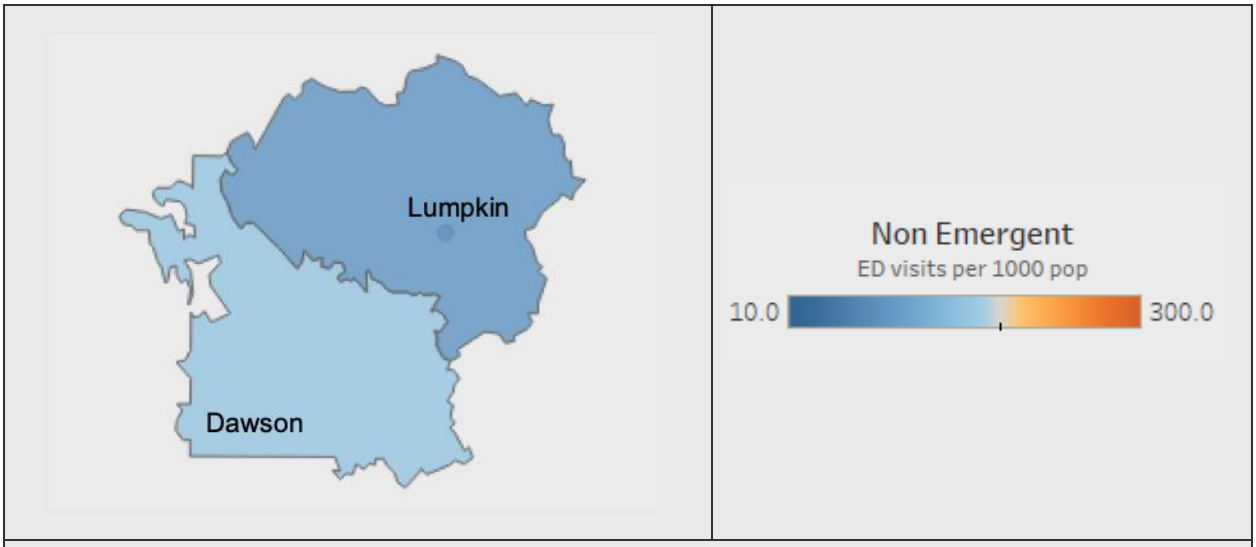
| Emergent Status | Georgia | USA |
|---|---|---|
| Non Emergent | 185 | 179 |
| Emergent | 190 | 189 |
| Inpatient Admission | 64 | 67 |
| Total | 439 | 435 |

ZIP map color shows total Emergency Department visits per 1,000 popultaion. Orange colors are higher than the state benchmark, blue colors are less than the state benchmark, and gray colors are similar.

*Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Non-Emergent Estimated 2018 Emergency Department Visits by ZIP Code*




ZIP map color shows total Emergency Department vists per 1,000 population by non-emergent status. Orange colors are higher than the state benchmark (see table at right), blue colors are less than the state benchmark, and gray colors are similar. Color range is set for the entire study region. ED visits are defined by the presence of specific CPT® codes in claims. Non-emergency visits to the ED do not necessarily require treatment in a hospital emergency department and can potentially be treated in a fast-track ED, an urgent care treatment center, a clinic or physician's private office.

*Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Public Health Indicators*

Public health indicators (129 total) were collected and analyzed to assess community health needs. For each health indicator, a comparison was made between the most recently available community data and benchmarks for the same/similar indicator. The basis of benchmarks was available data for the U.S. and the state of Georgia. A list of these indicators is in **Appendix A**.

Where the community indicators showed greater need when compared to the state of Georgia comparative benchmark, the difference between the community values and the state benchmark was calculated (need differential). The highest ranked indicators with need differentials in the 50$^{th}$ percentile of greater severity pinpointed community health needs from a quantitative perspective.

*Focus Groups & Interviews*

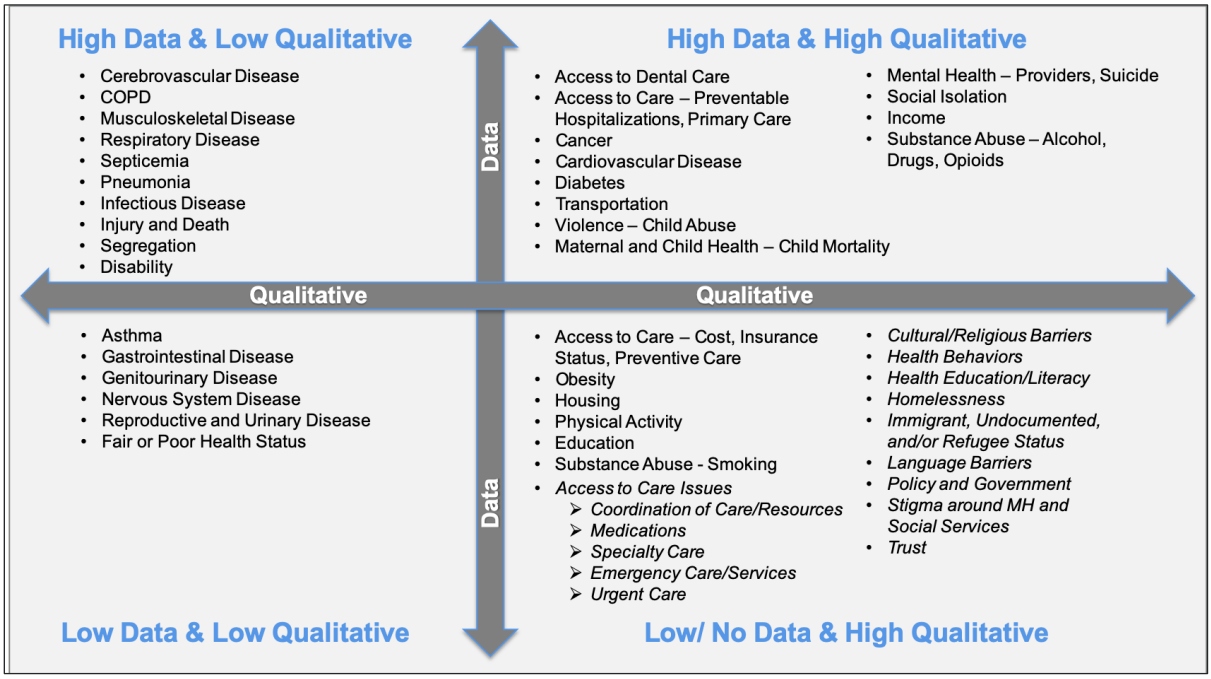
In the Watson Health focus group sessions and interviews, participants identified and discussed the greatest health needs in the community, as well as the barriers and strengths impacting overall health status. For this community, three (3) focus group sessions (listed below) with a total of 13 participants and six (6) interviews were conducted March through April 2019. A list of the organizations providing input can be found in **Appendix B**. Summary findings from the focus groups and interviews can be found in **Appendix C**.

| Focus Group | Date | Location | Number of Participants |
|---|---|---|---|
| Dawson County Focus Group | March 5, 2019 | Medical Plaza 400 Dawsonville, GA | 3 |
| Lumpkin County Focus Group | March 8, 2019 | UNG Professional & Continuing Education Dahlonega, GA | 5 |
| NGHS Advisory Board Focus Group – SSA 400 | February 4, 2019 | NGMC Gainesville Gainesville, GA | 5 |

*Prioritized Significant Health Needs for NGHS – SSA 400*

The Health Needs Matrix identified through the community health needs assessment (see Methodology for Defining Community Needs section) shows the convergence of needs identified in the qualitative data (interview and focus group feedback) and quantitative data (health indicators). The top health needs for this community are defined in the Health Needs Matrix below.

*Community Health Needs Matrix*




*Note: Lower right quadrant items in italics do not have quantitative data indicators available*

*Source: IBM Watson Health, 2019*

Through the prioritization process, the significant health needs for this community were identified, reviewed, and prioritized (see "Approach to Identify and Prioritize Significant Health Needs" section). The resulting prioritized health needs for the community are provided in the table below.

*Prioritized Significant Community Health Needs*

| Priority Rank | Health Need |
|---|---|
| 1 | Mental Health |
| 2 | Substance Abuse |
| 3 | Diabetes |
| 3 | Access to Care |
| 4 | Maternal and Child Health |

| Priority Rank | Health Need |
|---|---|
| 5 | Cardiovascular Disease |
| 6 | Smoking (added) |
| 7 | Violence - Child Abuse |
| 8 | Septicemia (added) |
| 9 | Income |
| 9 | Access to Dental Care |
| 10 | Social Isolation |
| 11 | Cancer |
| 12 | Transportation |

*Notes: Needs noted as "added" were pulled from quadrants other than the upper right (high data/high qualitative) as they were considered significant by the prioritization working group.*
*Needs with the same priority rank received the same overall score in the prioritization process*

*Source: IBM Watson Health, 2019*

*Recommended Health Needs to be Addressed for NGHS – SSA 400*

As part of the prioritization work session, work group participants recommended a set of prioritized significant health needs that should be addressed by each CHNA Partner (see "Recommended Health Needs to be Addressed by the CHNA Partners" section). The members of this community's prioritization work group recommended the following significant needs to be addressed via the CHNA implementation strategy:

- Mental and Behavioral Health
- Access to Care
- Diabetes
- Cardiovascular Disease

*CHNA Implementation Strategy*

NGHS will choose which needs it will address from those identified in this assessment. An implementation strategy with specific initiatives to address the chosen health needs will be completed and adopted by the hospitals by February 15, 2020.

An evaluation of the NGHS 2016 CHNA implementation strategy and its impact can be found in **Appendix I.**

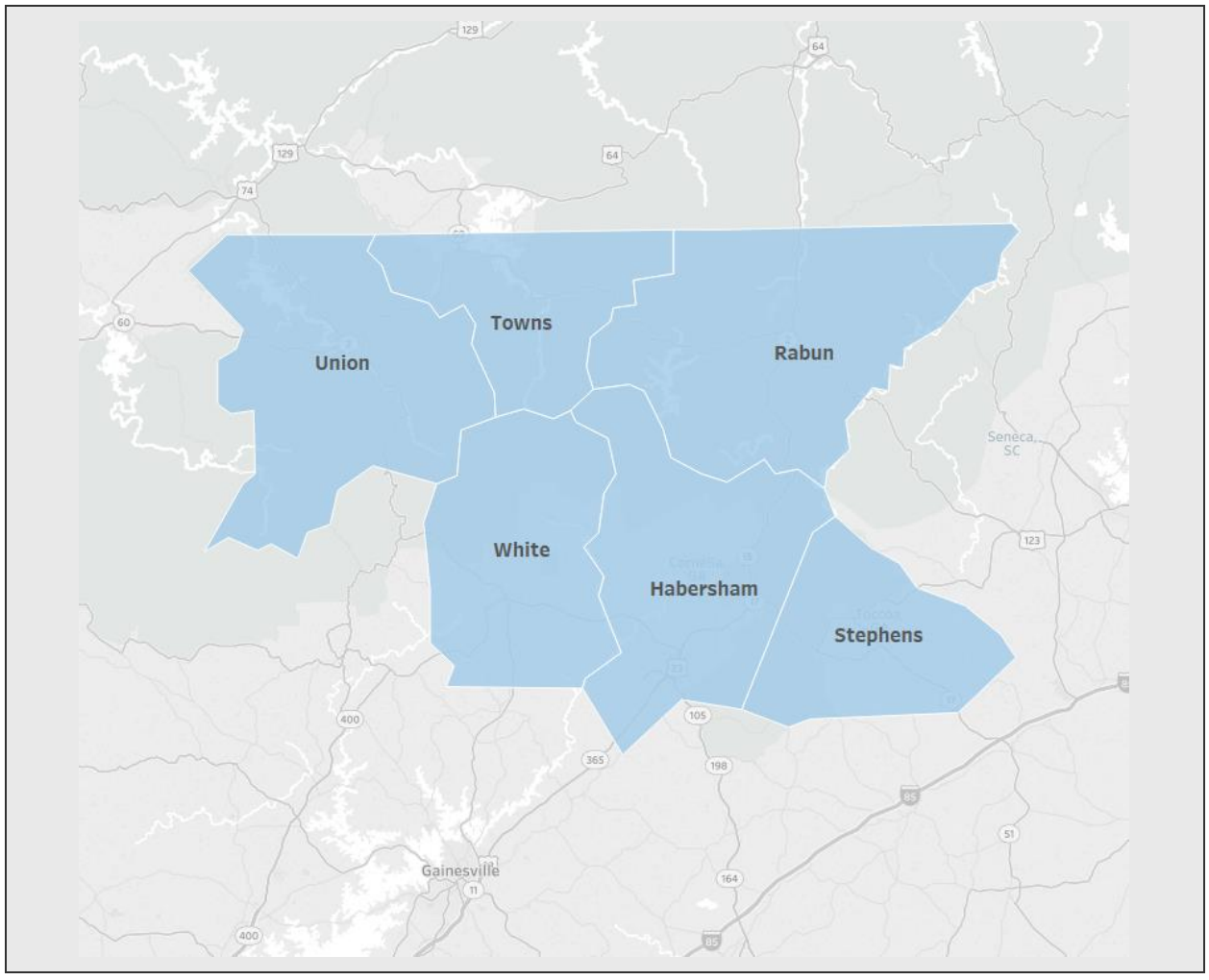
## Community Health Needs Assessment – NGHS Secondary Service Area North

*Community Served Definition*

For the purpose of this assessment, the geographic boundaries of the community served by NGHS encompass the counties and ZIP codes where 90% of NGHS hospital admissions originate (**Appendix K**). These counties were grouped into four communities based on consideration for patient volume, location, and the broad interests of the community, including medically underserved populations, low-income persons, minority groups, or those with chronic disease needs. The NGHS Secondary Service Area North (SSA North) is comprised of one ZIP code from Banks County (30511 – Baldwin) and six counties: Habersham, Rabun, Stephens, Towns, Union, and White.

The counties which principally comprise a majority of the community were used in determining health needs. The principal counites used for the NGHS SSA North community needs analysis are Habersham, Rabun, Stephens, Towns, Union, and White counties.

*Map of Community Served*




*Source: NGHS, 2019*

*Demographic and Socioeconomic Summary*

The population of the community served is expected to grow 4.4% by 2023, an increase of more than 7,100 people. The 4.4% projected population growth is less than the state's 5-year projected growth rate (5.0%) but higher when compared to the national projected growth rate (3.5%). The median age is older than both the state and national medians. Median household income for the overall community is lower than both benchmarks.

*Demographic and Socioeconomic Comparison: Community Served and State/U.S. Benchmarks*

| Geography | | Benchmarks | | | Community Served |
|---|---|---|---|---|---|
| | | United States | Georgia | Northeast Georgia Region | NGHS Secondary Service Area North |
| Total Current Population | | 326,533,070 | 10,467,269 | 1,743,817 | 160,801 |
| 5 Yr Projected Population Change | | 3.5% | 5.0% | 7.2% | 4.4% |
| Median Age | | 38.3 | 36.9 | 40.3 | 46.7 |
| Population 0-17 | | 22.6% | 24.0% | 25.3% | 19.6% |
| Population 65+ | | 15.9% | 13.8% | 13.1% | 23.8% |
| Women Age 15-44 | | 19.6% | 20.4% | 20.0% | 17.5% |
| Non-White Population | | 30.0% | 43.0% | 36.2% | 11.3% |
| Hispanic Population | | 18.2% | 9.7% | 16.6% | 7.5% |
| Insurance Coverage | Uninsured | 9.4% | 17.1% | 11.9% | 17.3% |
| | Medicaid | 19.0% | 11.8% | 10.4% | 10.7% |
| | Private Market | 9.6% | 10.8% | 11.5% | 8.8% |
| | Medicare | 16.1% | 14.4% | 12.5% | 25.5% |
| | Employer | 45.9% | 45.8% | 53.7% | 37.6% |
| Median HH Income | | $62,175 | $55,559 | $56,929 | $43,951 |
| Limited English | | 26.2% | 19.3% | 28.9% | 12.4% |
| No High School Diploma | | 7.4% | 8.9% | 7.9% | 10.7% |
| Unemployed | | 6.8% | 7.8% | 6.3% | 8.6% |

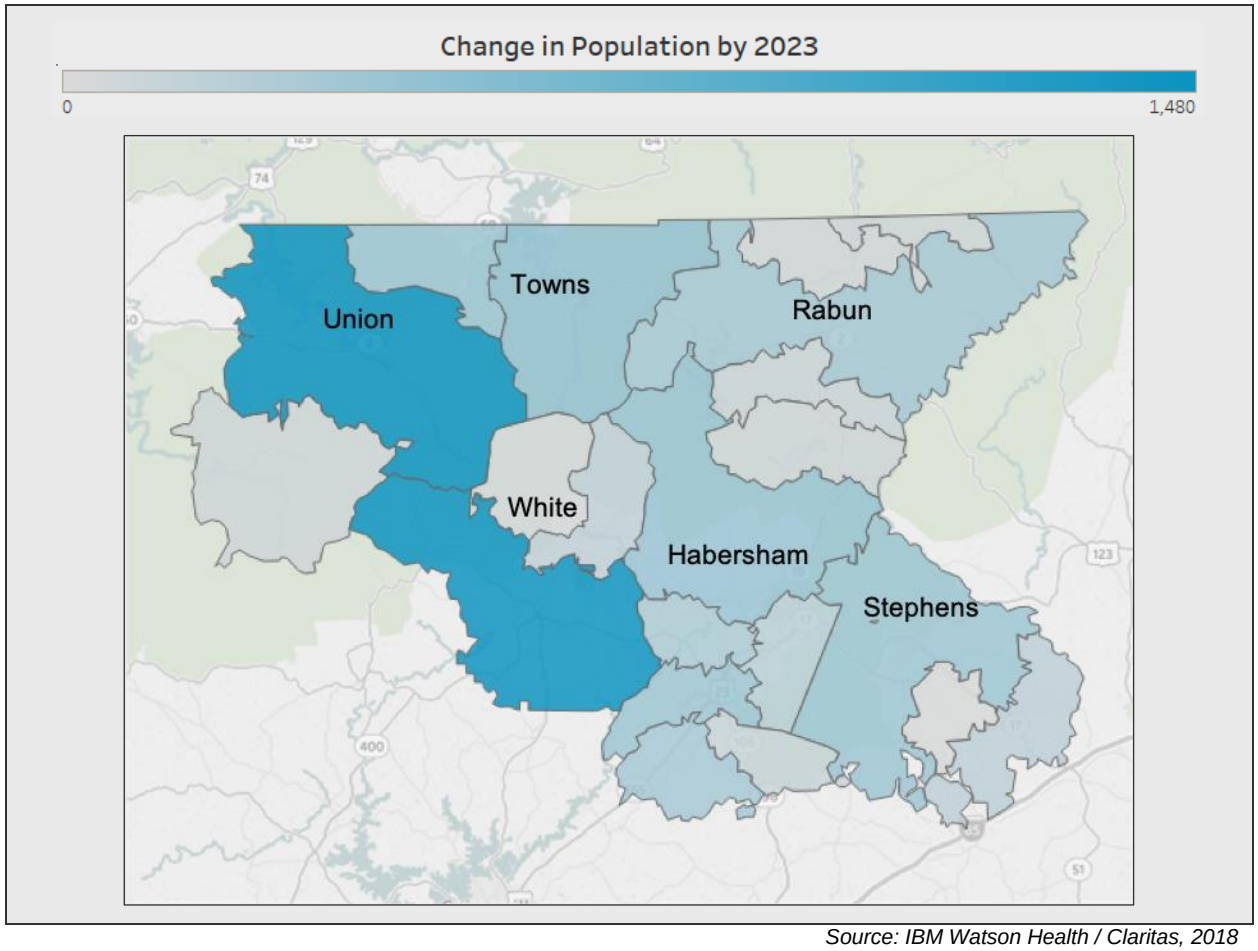
*Source: IBM Watson Health / Claritas, 2018; US Census Bureau 2017 (U.S. Median Income)*

Note: children (ages 0-17), older adults (ages 65+) and women of childbearing age (ages 18-44) are identified as population groups that have unique healthcare needs.

The ZIP codes expected to experience the most growth in five years are:

- 30512 – Blairsville 1,480 people
- 30528 – Cleveland 1,463 people

*2018 - 2023 Total Population Projected Change by ZIP Code*

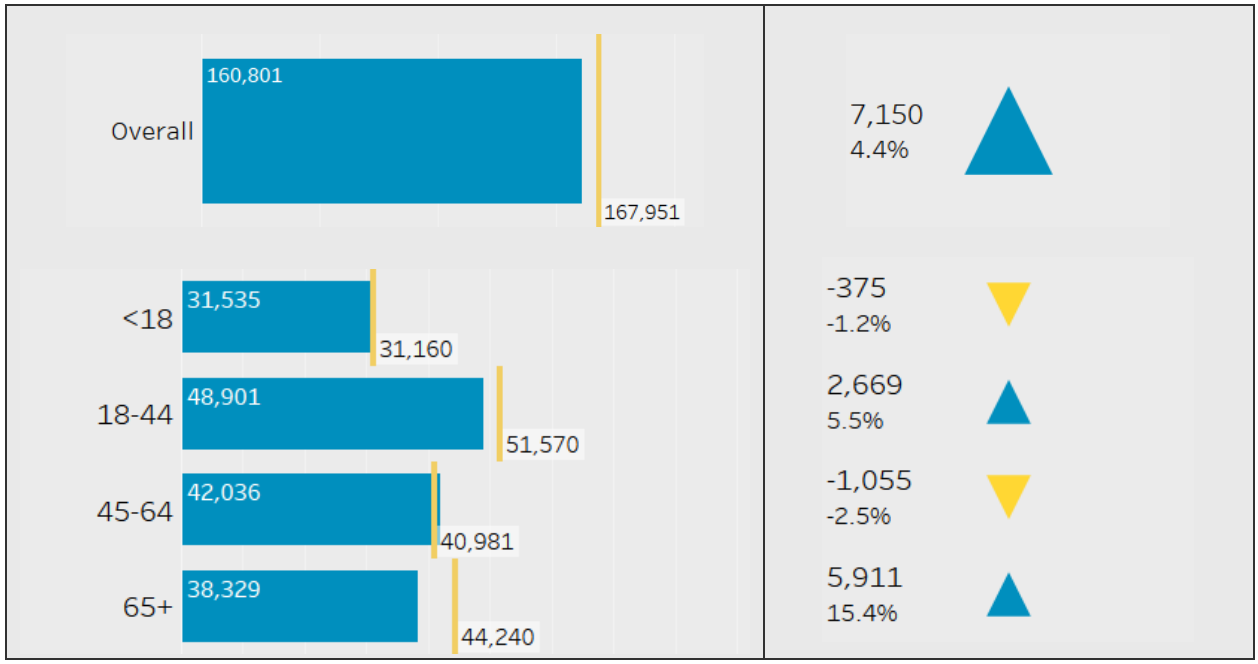



*Source: IBM Watson Health / Claritas, 2018*

The community's population is split with half the population 44 years and younger and the other half 45 years and older. The largest cohort (18-44) represents 30% of the population and is expected to grow by 2,669 people by 2023. The age 65 plus cohort accounts for 24% of the population and is projected to experience the fastest growth (15.4%) over the next five years, adding more than 5,900 seniors to the community. Growth in the senior population will likely contribute to increased utilization of services as the population continues to age.

*Population Distribution by Age*

*2018 Population by Age Cohort* *Change by 2023*

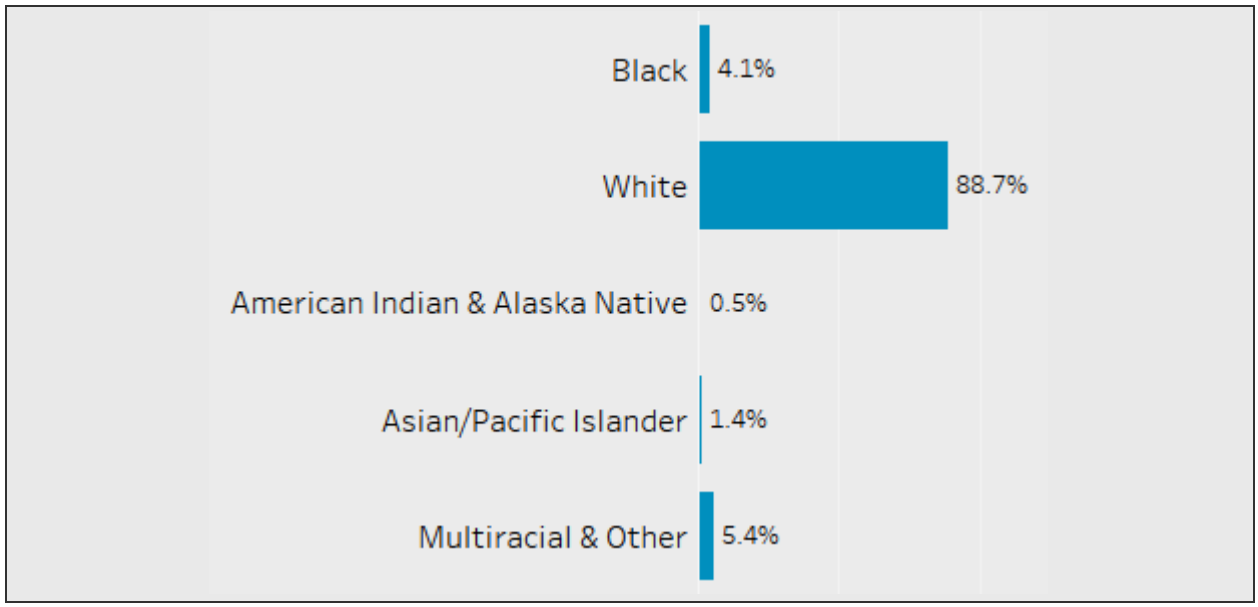



*Source: IBM Watson Health / Claritas, 2018*

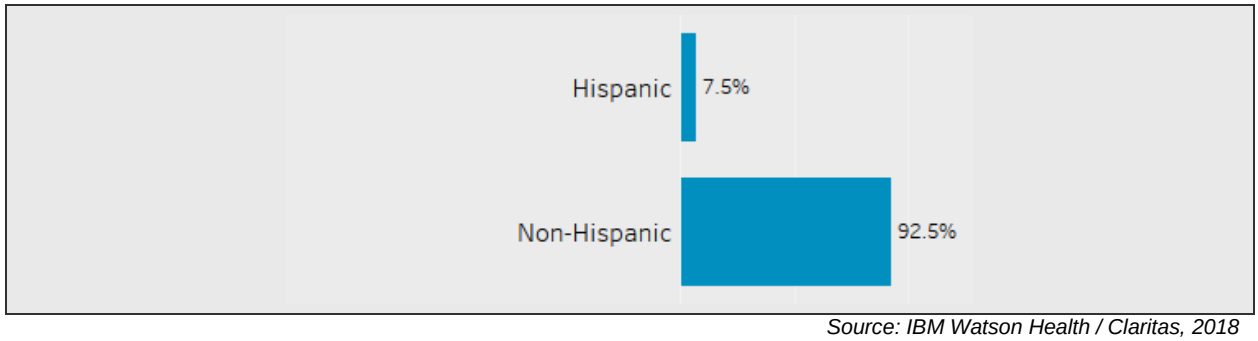
Population statistics are analyzed by race and by Hispanic ethnicity. The community is primarily racially White (88.7%), with people who define themselves as multiracial and other making up the second largest group at 5.4%. The Asian/Pacific Islander population is projected to experience the greatest growth by 2023 (18.7%). The White population is projected to experience the least amount of growth over the next five years (2.9%).

The expected growth rate of the Hispanic population (all races) is over 2,100 people (17.7%) by 2023, while the non-Hispanic population (all races) is expected to grow by approximately 5,000 people (3.4%) by 2023.

*2018 Population by Race*

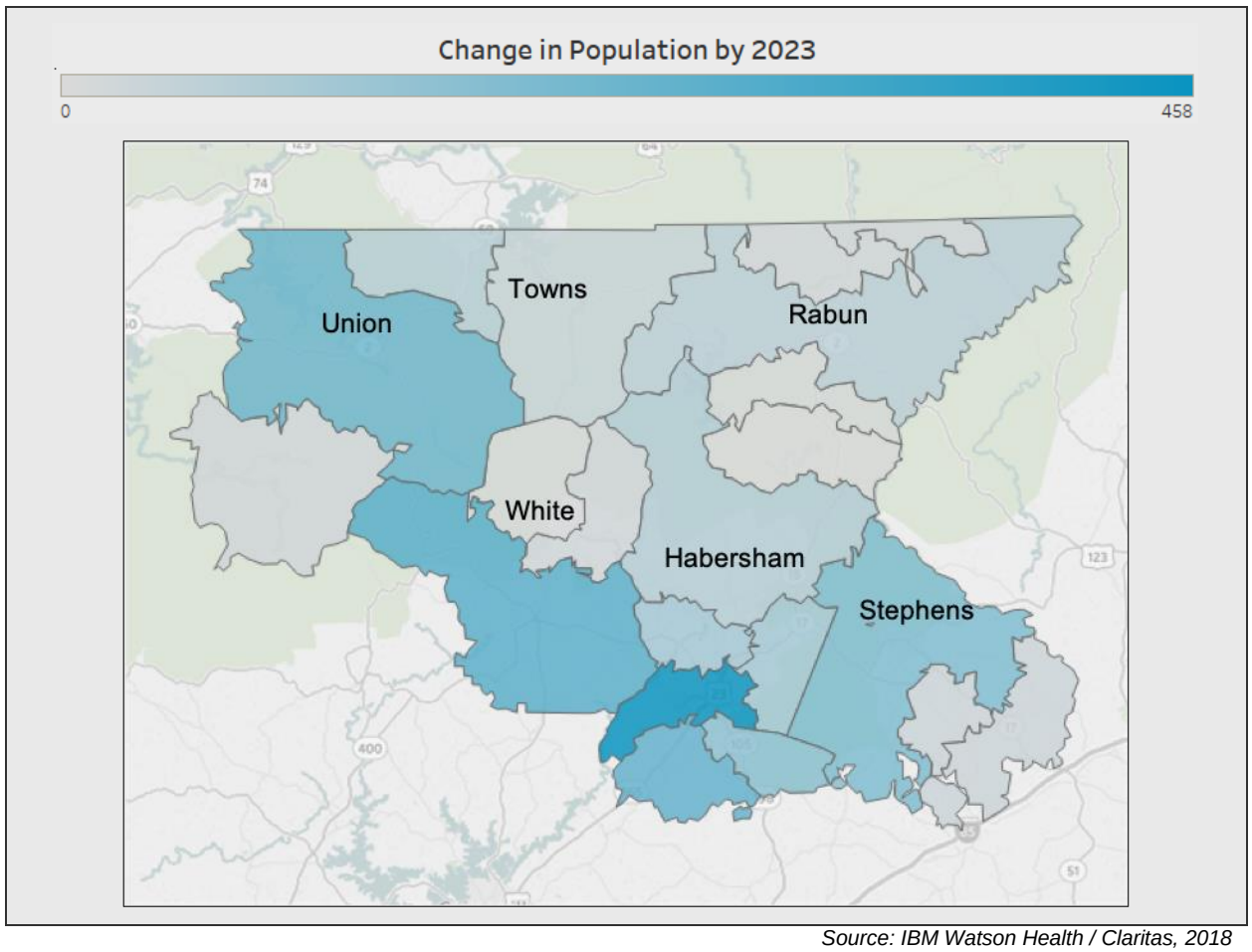



*2018 Population by Ethnicity*




*Source: IBM Watson Health / Claritas, 2018*

*2018 - 2023 Hispanic Population Projected Change by ZIP Code*

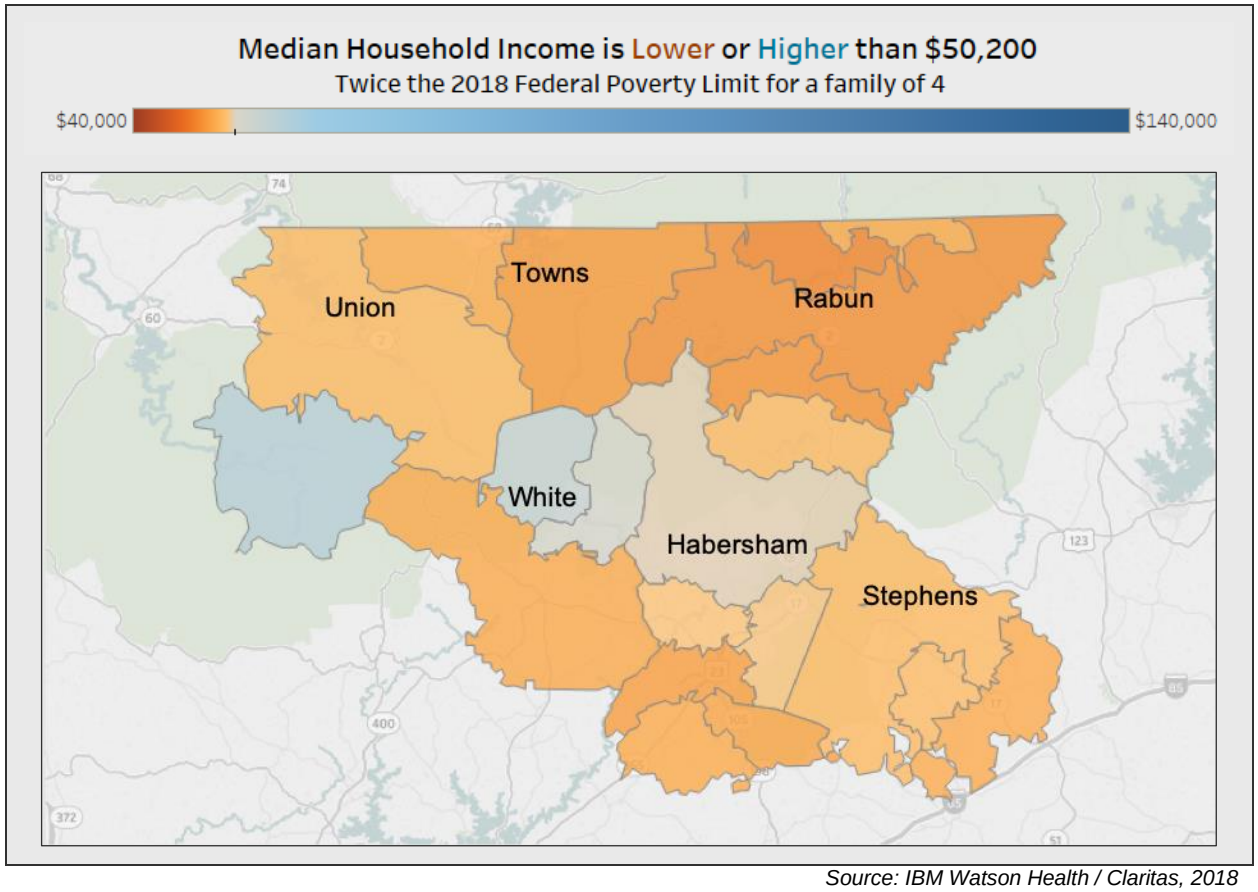



*Source: IBM Watson Health / Claritas, 2018*

The 2018 median household income for the United States is $62,175 and $55,559 for the state of Georgia. The median household income for the ZIP codes within this community range from $34,615 for ZIP code 30568 - Rabun Gap to $57,561 for ZIP code 30572 - Suches. Eighteen (18) of the 21 ZIP Codes in the SSA North service area have median household incomes less than $50,200, twice the 2018 Federal Poverty Limit for a family of four. Five (5) ZIP codes have median income values less than $40,000.

- 30531 – Cornelia $39,431
- 30546 – Hiawassee $38,621
- 30576 – Tiger $37,372
- 30525 – Clayton $36,814
- 30568 – Rabun Gap $34,615

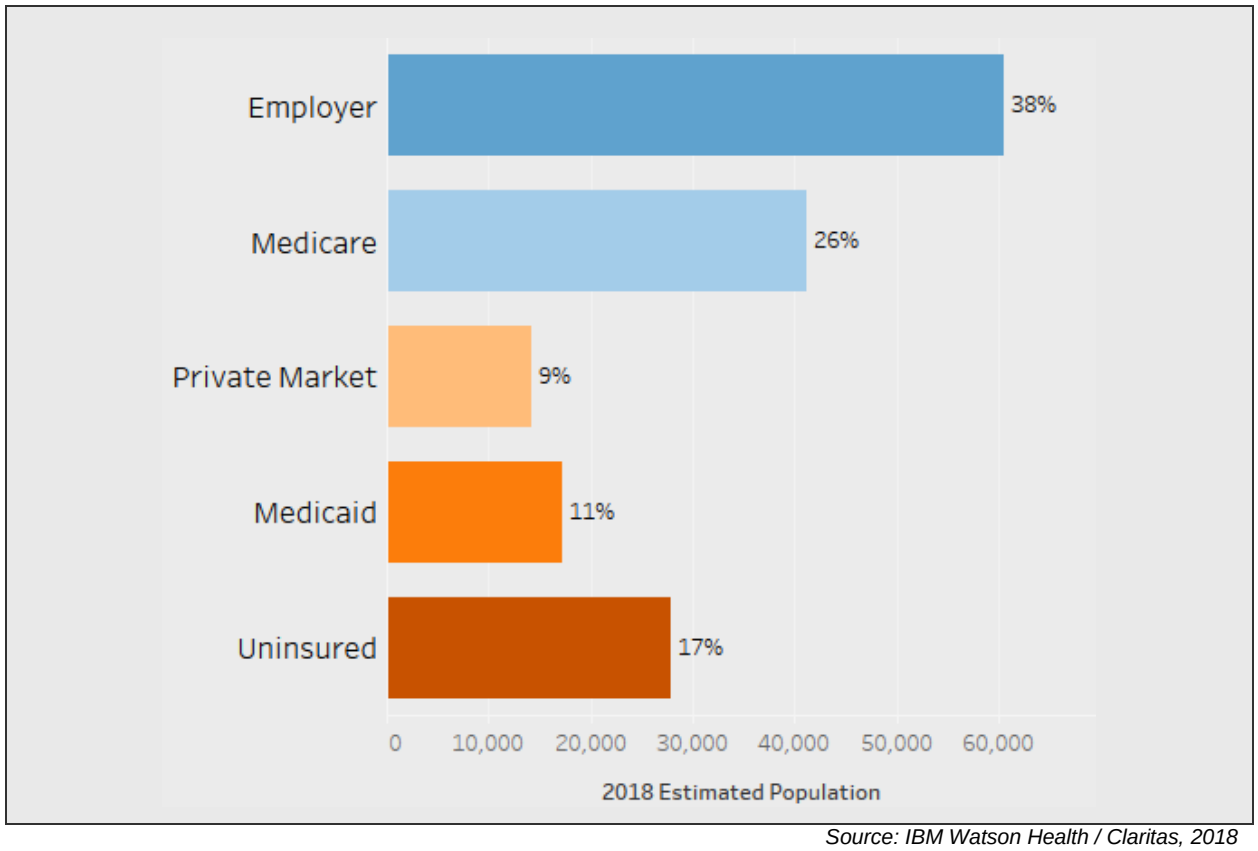
*2018 Median Household Income by ZIP Code*




*Source: IBM Watson Health / Claritas, 2018*

Most of the population are covered via Employer sponsored plans (38%) and Medicare (26%). The remainder of the population is divided between those who purchase coverage directly from or through the private health insurance marketplace (9%), people who are on Medicaid (11%), and the uninsured (17%). The percentage of the population in this community who are covered by Medicaid or uninsured is similar to estimates for the state (11.8% and 17.1% respectively).

*2018 Estimated Distribution of Covered Lives by Insurance Category*




*Source: IBM Watson Health / Claritas, 2018*

The community includes 18 Health Professional Shortage Areas and five (5) Medically Underserved Areas as designated by the U.S. Department of Health and Human Services Health Resources Services Administration.[7] **Appendix G** includes the details on each of these designations.

*Health Professional Shortage Areas and Medically Underserved Areas and Populations*

| | Health Professional Shortage Areas (HPSA) | | | | Medically Underserved Area/Population (MUA/P) |
|---|---|---|---|---|---|
| **NGHS-SSA North** | **Dental Health** | **Mental Health** | **Primary Care** | **Grand Total** | **MUA/P** |
| Habersham | 2 | 2 | 2 | 6 | 1 |
| Rabun | | 1 | 1 | 2 | 1 |
| Stephens | | 1 | 1 | 2 | |
| Towns | | 1 | 2 | 3 | 1 |
| Union | 1 | 1 | 1 | 3 | 1 |
| White | | 1 | 1 | 2 | 1 |
| **Total** | **3** | **7** | **8** | **18** | **5** |

*Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018*

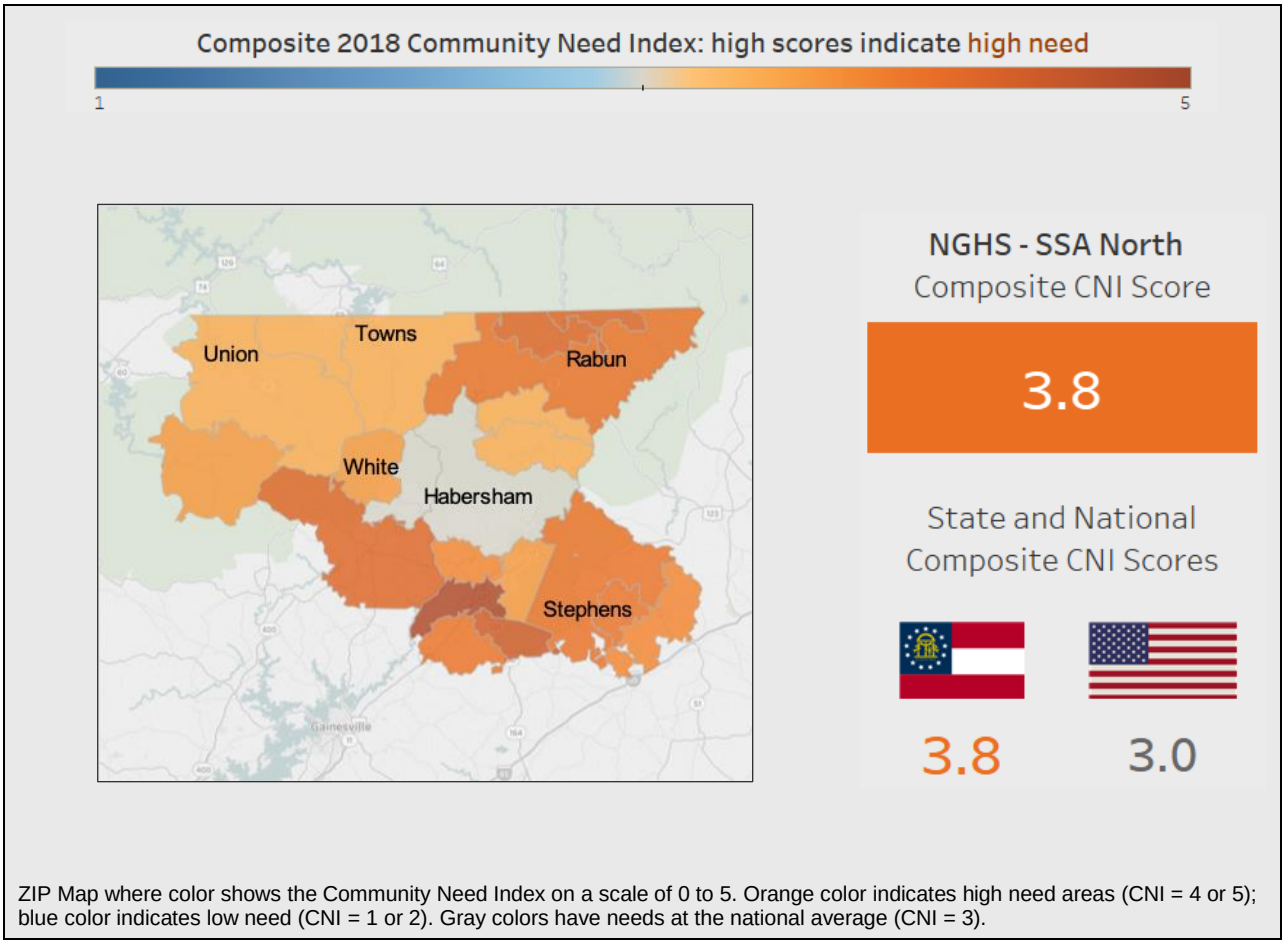
[7] U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018

The Watson Health Community Need Index (CNI) is a statistical approach to identifying areas within a community where health disparities may exist. Leveraging U.S. Census Data and Watson Health Insurance Coverage Estimates, the CNI takes into account vital socio-economic factors (income, cultural, education, insurance and housing) about a community to generate a CNI score for every populated ZIP code in the United States. The CNI strongly links to variations in community healthcare needs and is an indicator of a community's demand for various healthcare services. The CNI score by ZIP code identifies specific areas within a community where healthcare needs may be greater.

Overall, the composite CNI score for the community served is 3.8, equal to the CNI for the state of Georgia and higher than the national benchmark score of 3.0. The overall CNI score potentially indicates greater health care needs in this community. In ZIP code 30531 - Cornelia, the CNI score (4.8) is greater than 4.5, pointing to potentially more significant health needs among the population.

Additionally, 18 of the 21 ZIPs in the community have insurance barrier sub-scores of 5, reflecting the high uninsured population.

*2018 Community Need Index by ZIP Code*




ZIP Map where color shows the Community Need Index on a scale of 0 to 5. Orange color indicates high need areas (CNI = 4 or 5); blue color indicates low need (CNI = 1 or 2). Gray colors have needs at the national average (CNI = 3).

*Source: IBM Watson Health / Claritas, 2018*

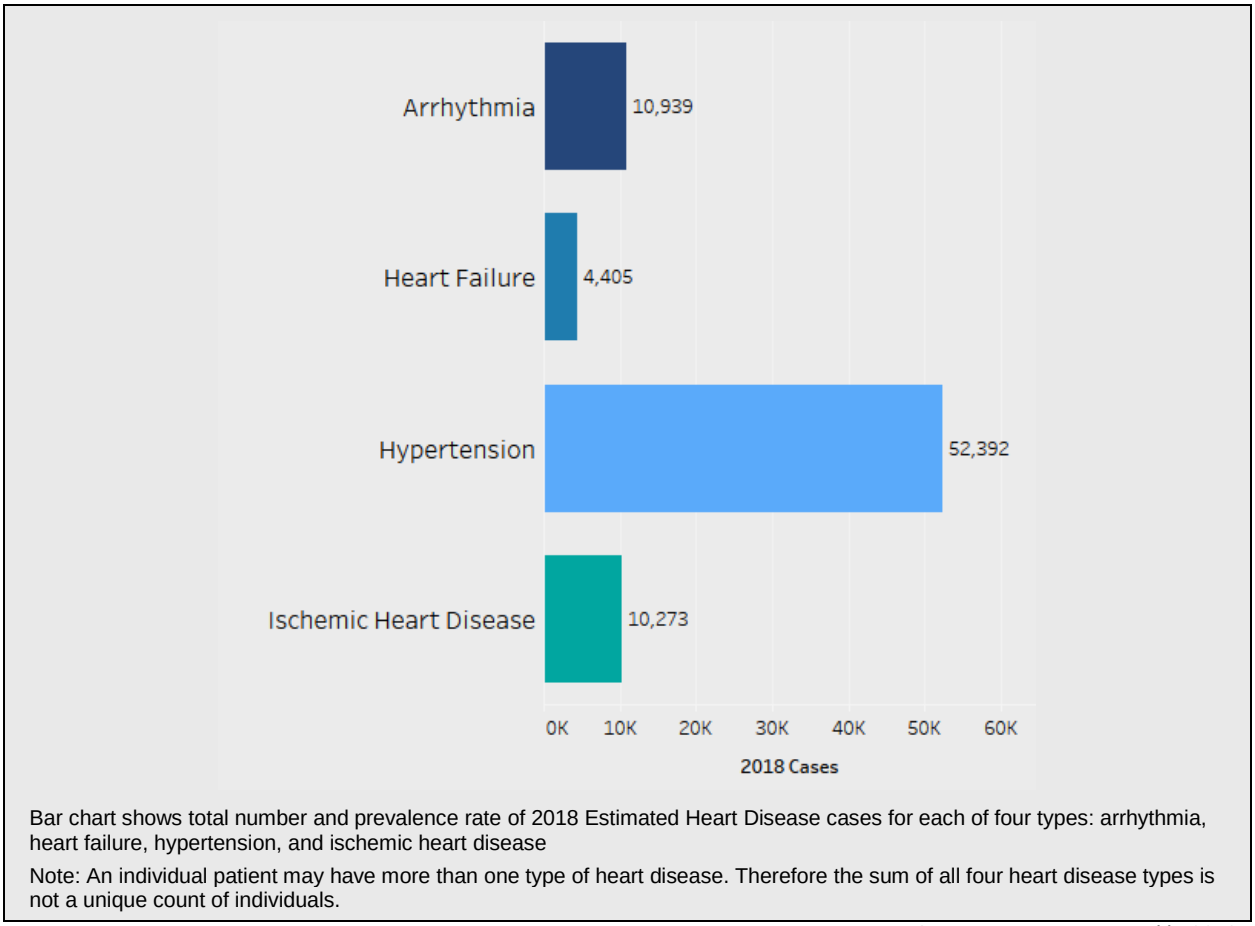
*Watson Health Community Data*

Watson Health supplements the publicly available data and population statistics with estimates of localized disease prevalence of heart disease and cancer as well as emergency department visit estimates.

Watson Health Heart Disease Estimates identify hypertension as the most common heart disease diagnosis; there are almost 52,400 estimated cases in the community overall. The 30512 ZIP code of Blairsville has the most estimated cases of Hypertension, Arrhythmia, and Heart Failure while the 30528 ZIP code of Cleveland has the most estimated cases of Ischemic Heart Disease.

The 30545 ZIP code of Helen has the highest estimated prevalence rates for Arrhythmia (978 cases per 10,000 population) and Ischemic Heart Disease (1,081 cases per 10,000 population). The 30546 ZIP code of Hiawassee has the highest estimated prevalence rate for Heart Failure (357 cases per 10,000 population), while the 30572 ZIP code of Suches has the highest prevalence rate for Hypertension (4,181 cases per 10,000 population).

*2018 Estimated Heart Disease Cases*



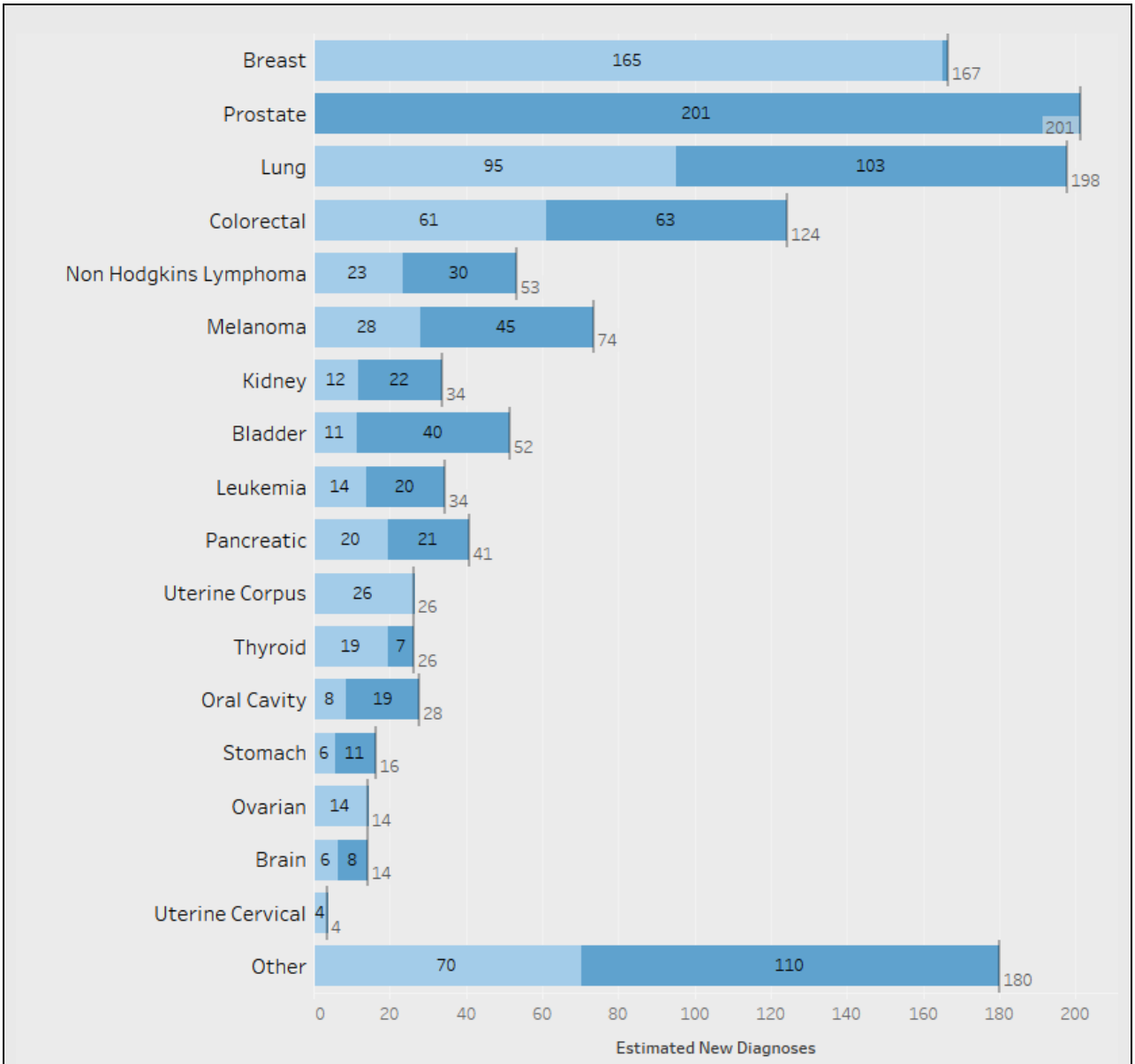

Bar chart shows total number and prevalence rate of 2018 Estimated Heart Disease cases for each of four types: arrhythmia, heart failure, hypertension, and ischemic heart disease

Note: An individual patient may have more than one type of heart disease. Therefore the sum of all four heart disease types is not a unique count of individuals.

*Source: IBM Watson Health, 2018*

For this community, Watson Health's 2018 Cancer Estimates reveal the cancers estimated to have the greatest number of new cases in 2018 are prostate (201), lung (198), and breast (167) cancers. The cancers projected to have the greatest rate of growth in the next five years are melanoma, thyroid, and pancreatic. Growth is based on both population changes and disease rates.

*2018 Estimated New Cancer Cases*




Bar chart shows estimated new diagnoses per year for each of the 17 types of Cancer and 1 category for all other cancers. Color shows details about sex with light blue for females and dark blue for males.

*Source: IBM Watson Health, 2018*

*Estimated Cancer Cases and Projected 5 Year Change by Type*

| Cancer Type | 2018 Estimated New Cases | 2023 Estimated New Cases | 5 Year Growth (%) |
|---|---|---|---|
| Bladder | 52 | 58 | 12.3% |
| Brain | 14 | 15 | 7.5% |
| Breast | 167 | 181 | 8.5% |
| Colorectal | 124 | 114 | -8.7% |
| Kidney | 34 | 37 | 10.7% |
| Leukemia | 34 | 38 | 10.9% |
| Lung | 198 | 213 | 7.5% |
| Melanoma | 74 | 85 | 15.0% |
| Non Hodgkins Lymphoma | 53 | 59 | 10.8% |
| Oral Cavity | 28 | 31 | 10.5% |
| Ovarian | 14 | 15 | 7.1% |
| Pancreatic | 41 | 46 | 13.0% |
| Prostate | 201 | 202 | 0.6% |
| Stomach | 16 | 17 | 5.5% |
| Thyroid | 26 | 30 | 13.8% |
| Uterine Cervical | 4 | 4 | 1.9% |
| Uterine Corpus | 26 | 29 | 9.8% |
| All Other Cancers | 180 | 199 | 10.8% |
| Grand Total | 1,286 | 1,373 | 6.8% |

*Source: IBM Watson Health, 2018*

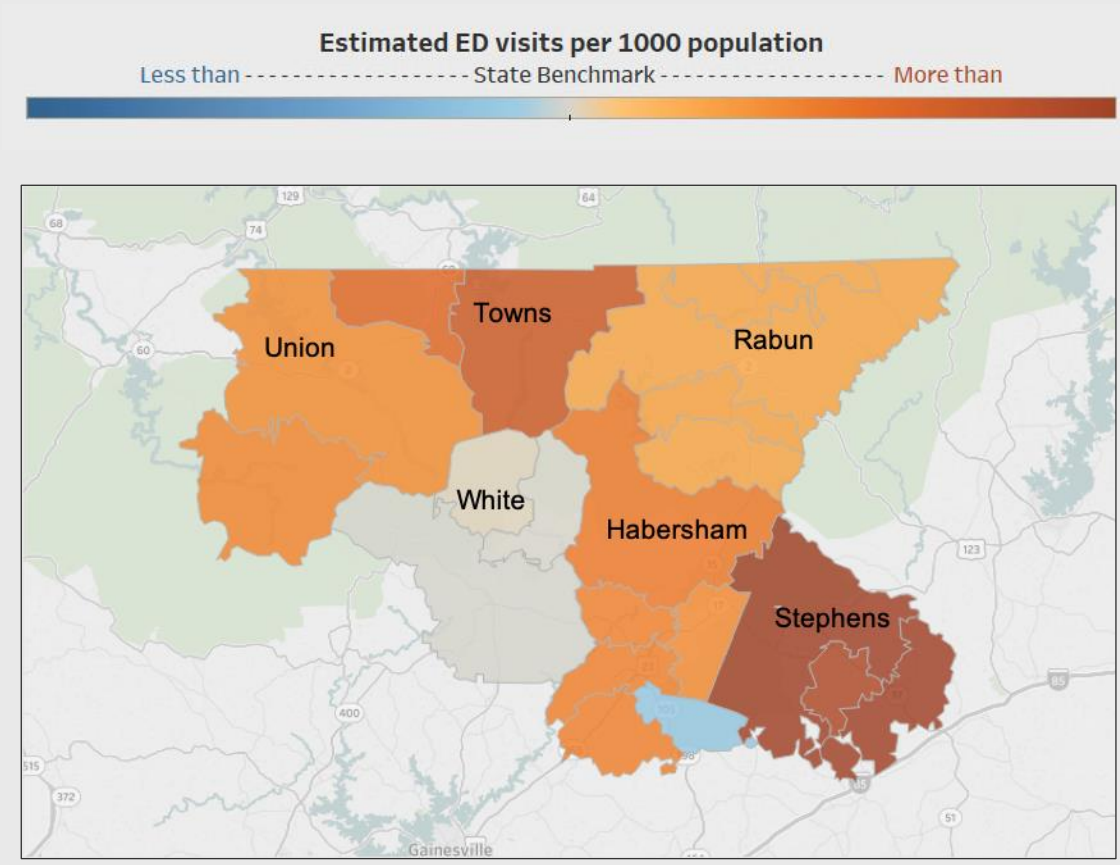
Based on population characteristics and regional utilization rates, Watson Health projects all emergency department (ED) visits in this community will increase by 6.4% over the next five years. The highest estimated ED use rates are in the ZIP codes of 30557 -Martin (804 ED visits per 1,000 residents), 30577 - Toccoa (799 ED visits per 1,000), and 30538 - Eastanollee (769 ED visits per 1,000), compared to the Georgia state benchmark of 439 visits per 1,000 and the U.S. benchmark of 435 visits per 1,000.

These ED visits consist of three main types: those resulting in an inpatient admission, emergent ED visits treated and released, and non-emergent ED visits that are lower acuity. Non-emergent ED visits present to the ED but can potentially be treated in more appropriate and less intensive outpatient settings.

Non-emergent ED visits can be an indication of systematic issues within the community regarding access to primary care, managing chronic conditions, or other access to care issues such as ability to pay. Watson Health estimates non-emergent ED visits will increase by 2.3% over the next five years in this community. Twelve (12) ZIP codes have estimated non-emergent ED visit rates higher than the state benchmark of 185 visits per 1,000 population. The five ZIP codes with the highest estimates are:

- 30577 – Toccoa 312 visits per 1,000 population
- 30557 – Martin 307 visits per 1,000 population
- 30538 – Eastanollee 306 visits per 1,000 population
- 30582 – Young Harris 241 visits per 1,000 population
- 30531 – Cornelia 241 visits per 1,000 population

*Total Estimated 2018 Emergency Department Visit Rate*




Estimated ED Visits per 1000 Population

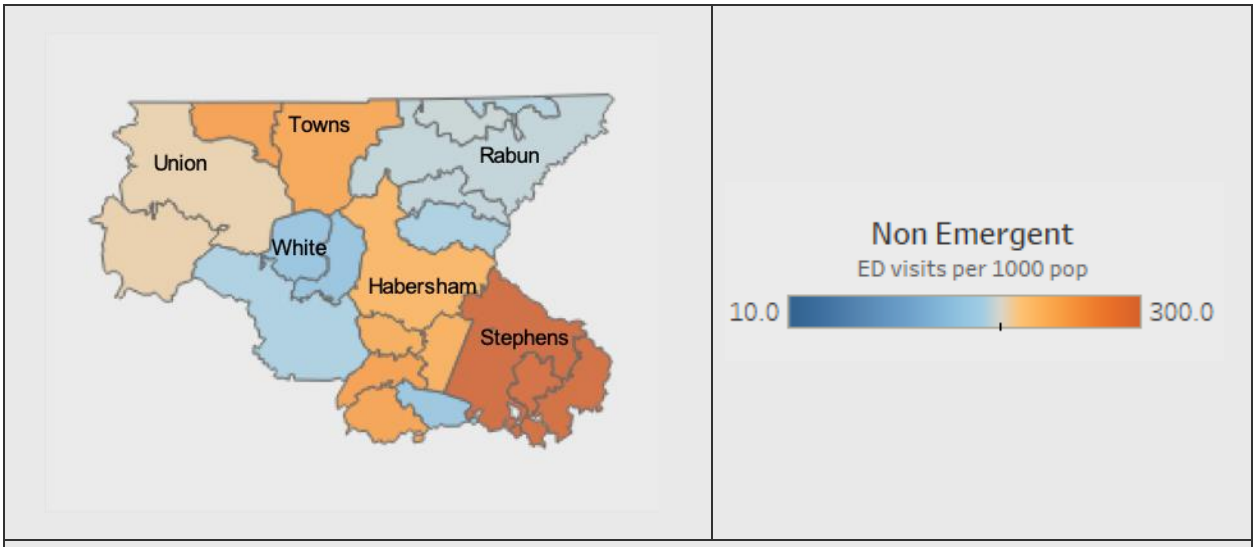
| Emergent Status | Georgia | USA |
|---|---|---|
| Non Emergent | 185 | 179 |
| Emergent | 190 | 189 |
| Inpatient Admission | 64 | 67 |
| Total | 439 | 435 |

ZIP map color shows total Emergency Department visits per 1,000 popultaion. Orange colors are higher than the state benchmark, blue colors are less than the state benchmark, and gray colors are similar.

*Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Non-Emergent Estimated 2018 Emergency Department Visits by ZIP Code*




ZIP map color shows total Emergency Department vists per 1,000 population by non-emergent status. Orange colors are higher than the state benchmark (see table at right), blue colors are less than the state benchmark, and gray colors are similar. Color range is set for the entire study region. ED visits are defined by the presence of specific CPT® codes in claims. Non-emergency visits to the ED do not necessarily require treatment in a hospital emergency department and can potentially be treated in a fast-track ED, an urgent care treatment center, a clinic or physician's private office.

*Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Public Health Indicators*

Public health indicators (129 total) were collected and analyzed to assess community health needs. For each health indicator, a comparison was made between the most recently available community data and benchmarks for the same/similar indicator. The basis of benchmarks was available data for the U.S. and the state of Georgia. A list of these indicators is in **Appendix A**.

Where the community indicators showed greater need when compared to the state of Georgia comparative benchmark, the difference between the community values and the state benchmark was calculated (need differential). The highest ranked indicators with need differentials in the 50$^{th}$ percentile of greater severity pinpointed community health needs from a quantitative perspective.

*Focus Groups & Interviews*

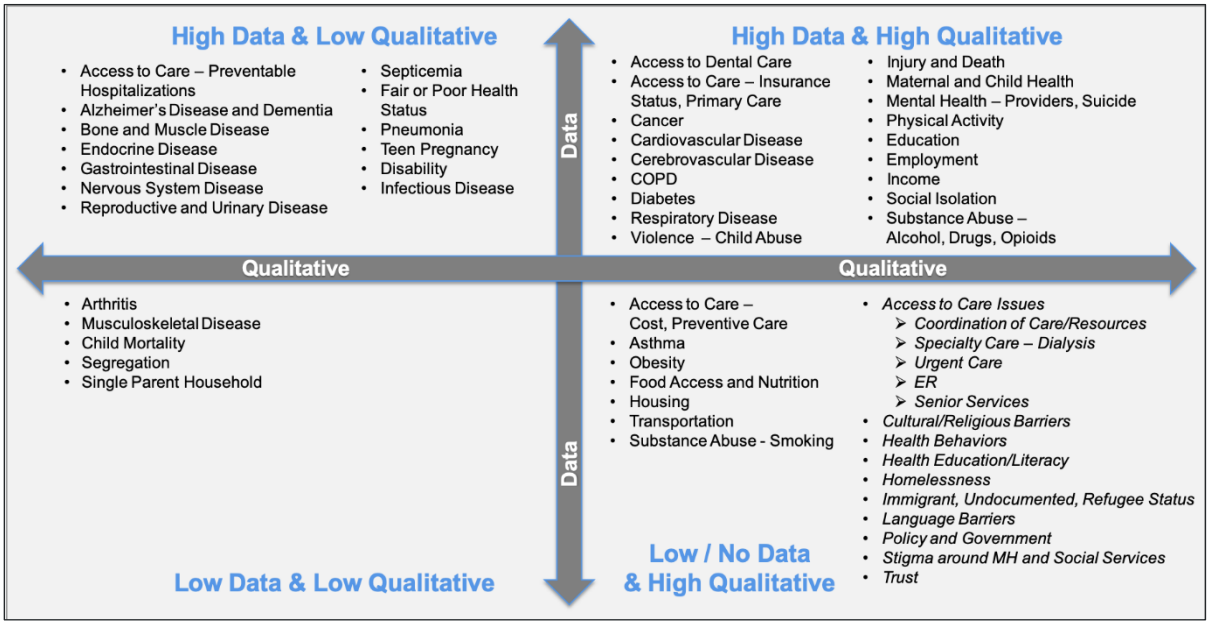
In the Watson Health focus group sessions and interviews, participants identified and discussed the greatest health needs in the community, as well as the barriers and strengths impacting overall health status. For this community, two (2) focus group session (listed below) with a total of 14 participants and three (3) interviews were conducted March through April 2019. A list of the organizations providing input can be found in **Appendix B**. Summary findings from the focus groups and interviews can be found in **Appendix C**. Additional input gathered via the Union General and Chatuge Regional Hospitals 2018 CHNA Reports were used to assess need from a qualitative perspective (**Appendix D**).

| Focus Group | Date | Location | Number of Participants |
|---|---|---|---|
| Habersham & Stephens Counties Focus Group | March 6, 2019 | Habersham Medical Center<br>Demorest, GA | 9 |
| NGHS Advisory Board Focus Group – SSA North | February 4, 2019 | NGMC Gainesville<br>Gainesville, GA | 5 |

Prioritized Significant Health Needs for NGHS – SSA North

The Health Needs Matrix identified through the community health needs assessment (see Methodology for Defining Community Needs section) shows the convergence of needs identified in the qualitative data (interview and focus group feedback) and quantitative data (health indicators). The top health needs for this community are defined in the Health Needs Matrix below.

*Community Health Needs Matrix*




*Note: Lower right quadrant items in italics do not have quantitative data indicators available*

*Source: IBM Watson Health, 2019*

Through the prioritization process, the significant health needs for this community were identified, reviewed, and prioritized (see "Approach to Identify and Prioritize Significant Health Needs" section). The resulting prioritized health needs for the community are provided in the table below.

*Prioritized Significant Community Health Needs*

| Priority Rank | Health Need |
|---|---|
| 1 | Mental Health |
| 2 | Substance Abuse |
| 3 | Diabetes |
| 3 | Access to Care (added Preventable Hospitalizations) |
| 4 | Maternal and Child Health |
| 5 | Cardiovascular Disease |

| Priority Rank | Health Need |
|---|---|
| 6 | Income |
| 6 | Physical Activity |
| 7 | Violence - Child Abuse |
| 8 | Education |
| 9 | Septicemia (added) |
| 10 | Access to Dental Care |
| 10 | Employment |
| 11 | Cerebrovascular Disease |
| 12 | Social Isolation |
| 13 | Cancer |
| 14 | COPD and Respiratory Disease |
| 15 | Injury and Death |

*Notes: Needs noted as "added" were pulled from quadrants other than the upper right (high data/high qualitative) as they were considered significant by the prioritization working group. Needs with the same priority rank received the same overall score in the prioritization process*

*Source: IBM Watson Health, 2019*

*Recommended Health Needs to be Addressed for NGHS – SSA North*

As part of the prioritization work session, work group participants recommended a set of prioritized significant health needs that should be addressed by each CHNA Partner (see "Recommended Health Needs to be Addressed by the CHNA Partners" section). The members of this community's prioritization work group recommended the following significant needs to be addressed via the CHNA implementation strategy:

- Mental and Behavioral Health
- Access to Care
- Diabetes
- Septicemia

*CHNA Implementation Strategy*

NGHS will choose which needs it will address from those identified in this assessment. An implementation strategy with specific initiatives to address the chosen health needs will be completed and adopted by the hospitals by February 15, 2020.

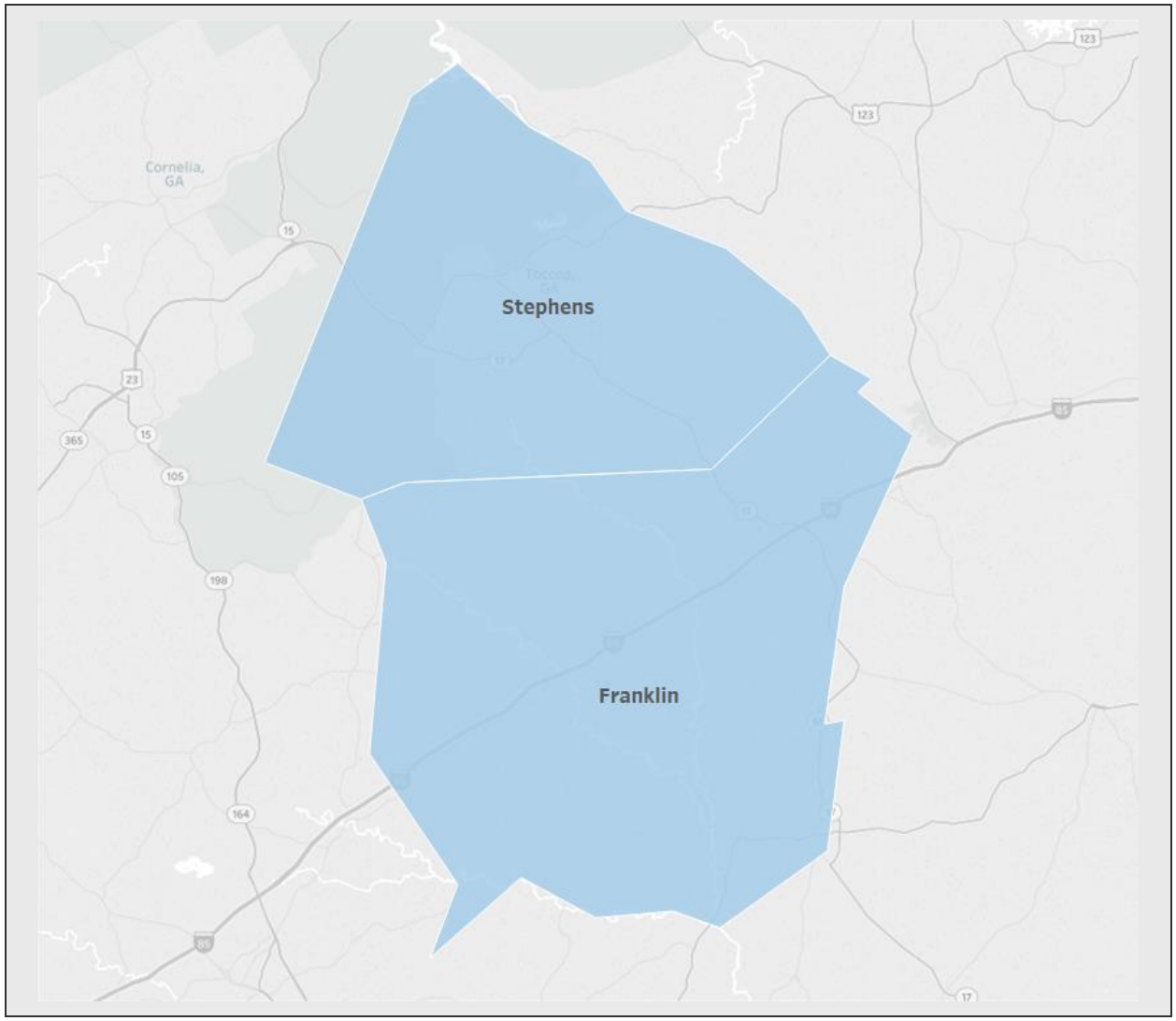
An evaluation of the NGHS 2016 CHNA implementation strategy and its impact can be found in **Appendix I.**

## Community Health Needs Assessment – Stephens County Hospital

*Community Served Definition*

For the purpose of this assessment, the geographic boundaries of the community served by Stephens County Hospital (SCH) includes the counties which form the hospital's primary service area. The SCH community served is comprised of Stephens and Franklin counties.

*Map of Community Served*




*Source: Stephens County Hospital, 2019*

*Demographic and Socioeconomic Summary*

According to population statistics, the SCH community is expected to grow 2.3% by 2023, an increase of almost 1,300 people. The 2.3% projected population growth is less than half of the state's five-year projected growth rate (5.0%) and is also lower than the national projected growth rate (3.5%). The median age is much older than both the state and national benchmarks. Median household income for the community is much lower than state and national benchmarks. The community has a higher proportion of Medicaid beneficiaries than the state of Georgia benchmark and the estimated uninsured rate is greater than the national and state levels.

*Demographic and Socioeconomic Comparison: Community Served and State/U.S. Benchmarks*

| Geography | | Benchmarks | | | Community Served |
|---|---|---|---|---|---|
| | | United States | Georgia | Northeast Georgia Region | Stephens County Hospital |
| Total Current Population | | 326,533,070 | 10,467,269 | 1,743,817 | 55,132 |
| 5 Yr Projected Population Change | | 3.5% | 5.0% | 7.2% | 2.3% |
| Median Age | | 38.3 | 36.9 | 40.3 | 41.6 |
| Population 0-17 | | 22.6% | 24.0% | 25.3% | 21.8% |
| Population 65+ | | 15.9% | 13.8% | 13.1% | 20.0% |
| Women Age 15-44 | | 19.6% | 20.4% | 20.0% | 18.2% |
| Non-White Population | | 30.0% | 43.0% | 36.2% | 16.6% |
| Hispanic Population | | 18.2% | 9.7% | 16.6% | 4.3% |
| Insurance Coverage | Uninsured | 9.4% | 17.1% | 11.9% | 20.9% |
| | Medicaid | 19.0% | 11.8% | 10.4% | 14.3% |
| | Private Market | 9.6% | 10.8% | 11.5% | 8.4% |
| | Medicare | 16.1% | 14.4% | 12.5% | 26.6% |
| | Employer | 45.9% | 45.8% | 53.7% | 29.7% |
| Median HH Income | | $62,175 | $55,559 | $56,929 | $40,315 |
| Limited English | | 26.2% | 19.3% | 28.9% | 9.7% |
| No High School Diploma | | 7.4% | 8.9% | 7.9% | 14.8% |
| Unemployed | | 6.8% | 7.8% | 6.3% | 8.8% |

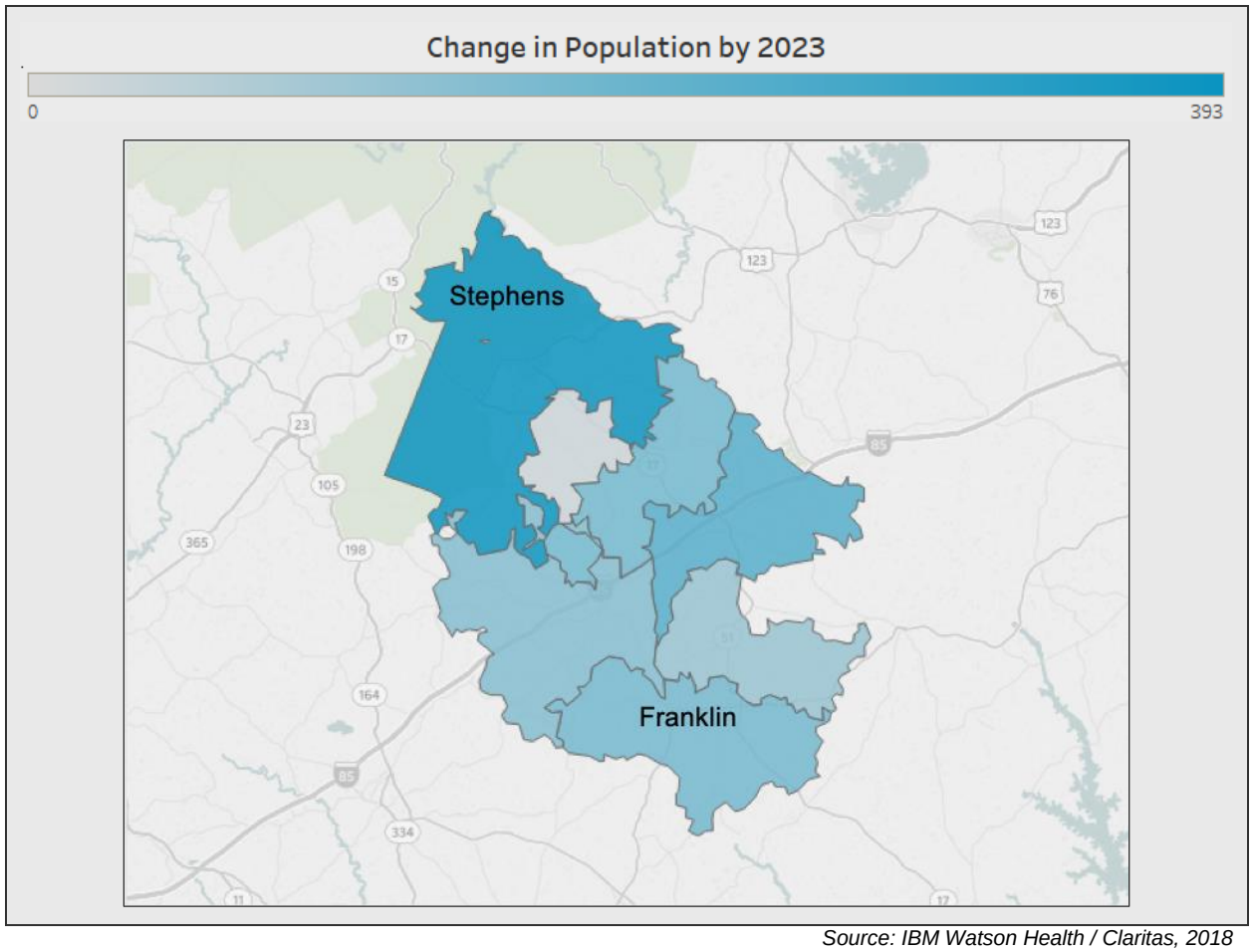
*Source: IBM Watson Health / Claritas, 2018; US Census Bureau 2017 (U.S. Median Income)*

Note: children (ages 0-17), older adults (ages 65+) and women of childbearing age (ages 18-44) are identified as population groups that have unique healthcare needs.

The ZIP codes expected to experience the most growth in five years are:

- 30577 – Toccoa 393 people
- 30553 – Lavonia 239 people

*2018 - 2023 Total Population Projected Change by ZIP Code*

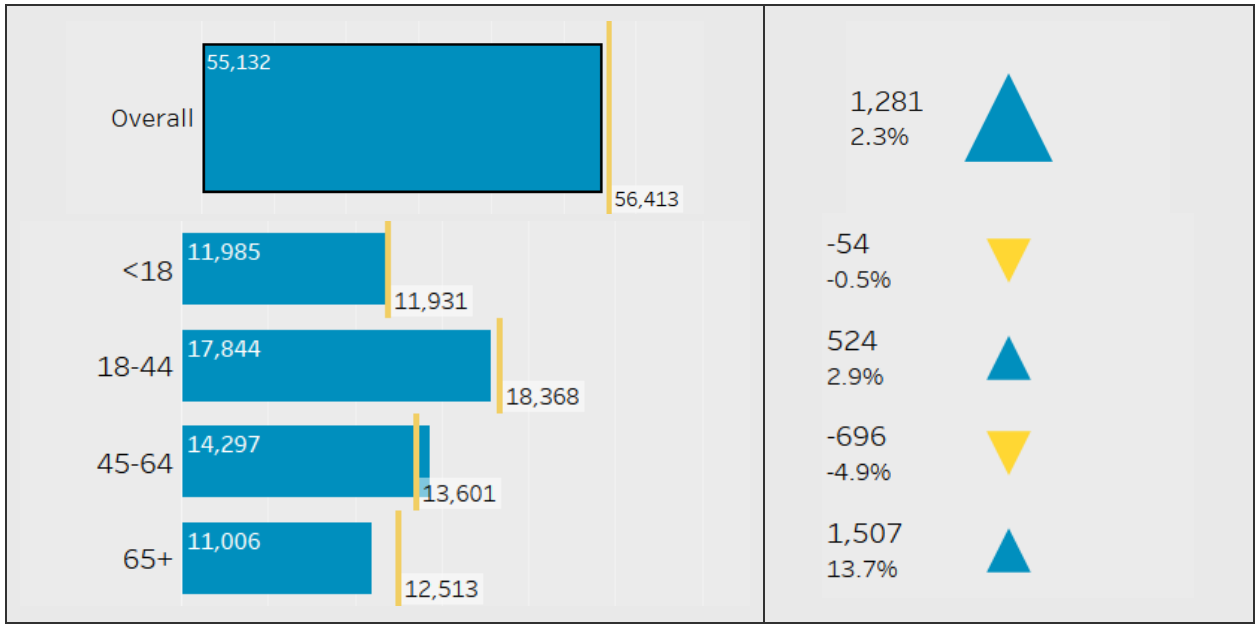



*Source: IBM Watson Health / Claritas, 2018*

The community's population skews younger with 54% of the population age 44 and younger (32.4% of the population ages 18-44 and 21.7% under age 18). Two cohorts are expected to decrease in number by 2023, those under age 18 (-54 people) and those age 45-64 (-696 people). The age 65 plus cohort is the smallest, representing 20.0 % of the population or 11,000 people, but is expected to experience the fastest growth (13.7%) over the next five years; adding 1,507 seniors to the community. Growth in the senior population will likely contribute to increased utilization of services as the population continues to age.

*Population Distribution by Age*

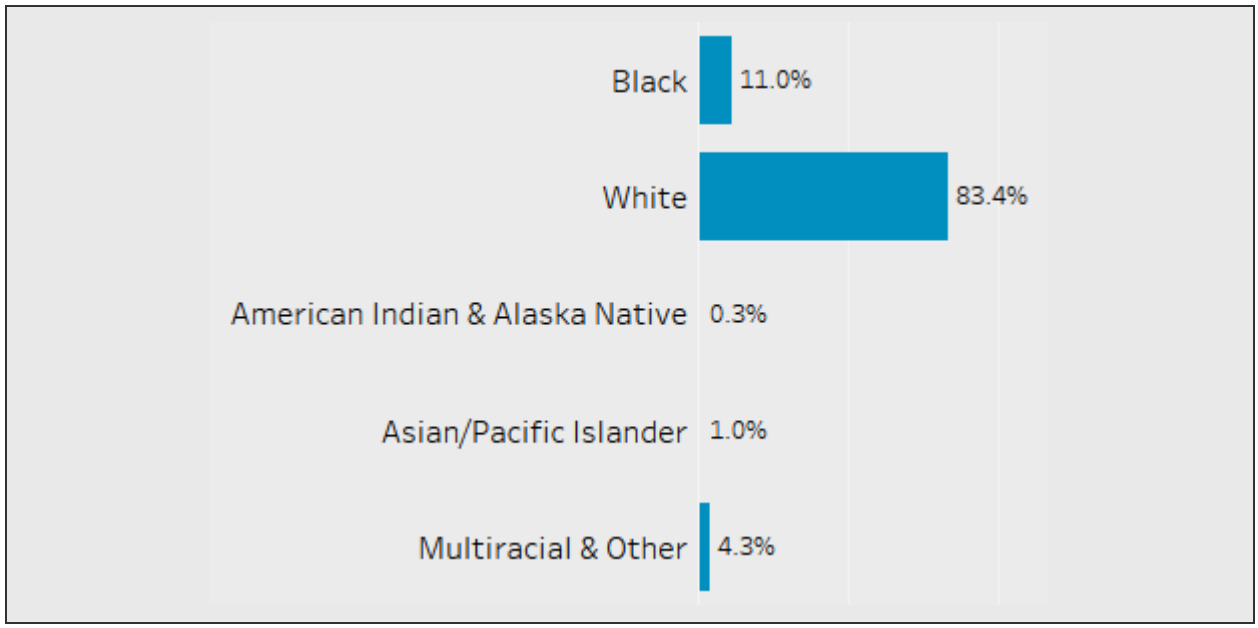
*2018 Population by Age Cohort* *Change by 2023*



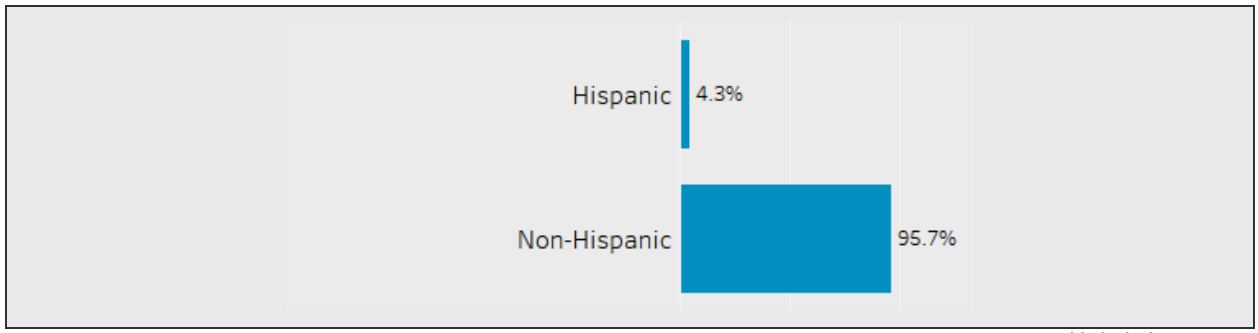

*Source: IBM Watson Health / Claritas, 2018*

Population statistics are analyzed by race and by Hispanic ethnicity. The community is primarily racially White (83.4%), with the Black population comprising 11.0% of the population and a combination of other racial groups comprising the remaining 5.6% of the population. However, the White population is projected to grow the slowest (0.3%) adding just 145 people in five years while the Black population is projected to increase more than other racial groups, adding 535 people (8.8% growth). In terms of ethnicity, the community population is primarily non-Hispanic (95.7%) but the Hispanic population is projected to grow by 430 people (18.3%) by 2023.

*2018 Population by Race*

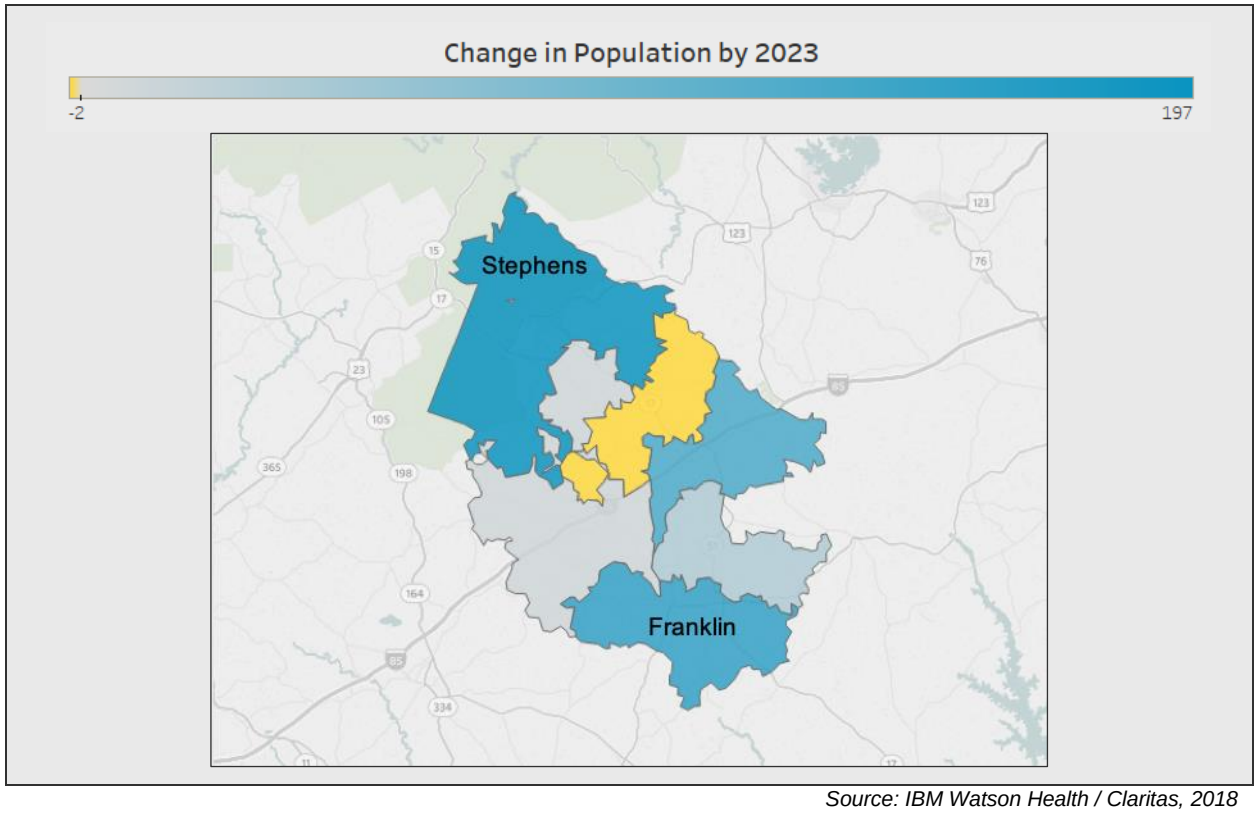



*2018 Population by Ethnicity*



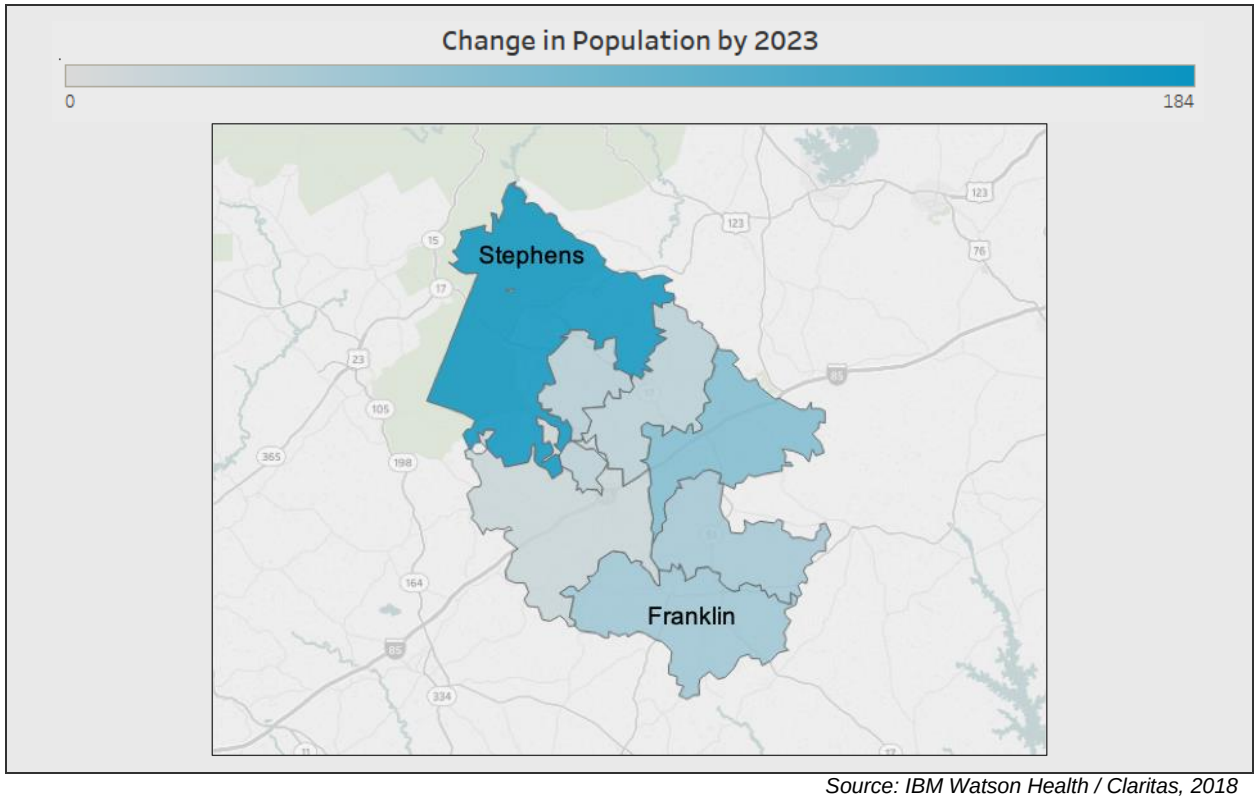

*Source: IBM Watson Health / Claritas, 2018*

*2018 - 2023 Black Population Projected Change by ZIP Code*




*Source: IBM Watson Health / Claritas, 2018*

*2018 - 2023 Hispanic Population Projected Change by ZIP Code*

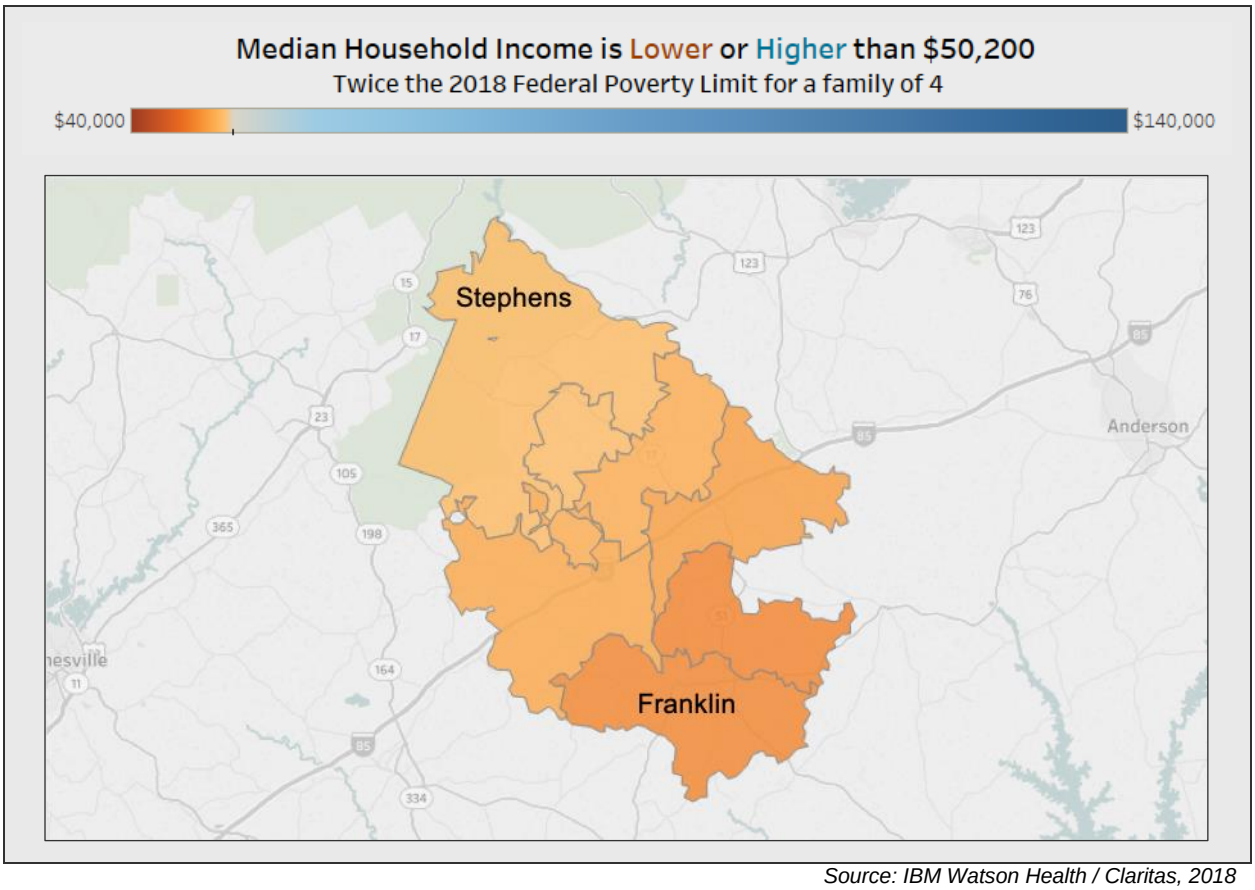



*Source: IBM Watson Health / Claritas, 2018*

The 2018 median household income for the United States is $62,175 and $55,559 for the state of Georgia. The median household income for the ZIP codes within this community ranges from $34,369 for ZIP code 30520-Cannon to $45,362 for ZIP code 30538-Eastanollee. All seven (7) ZIP Codes in the community have median household incomes less than $50,200, twice the 2018 Federal Poverty Limit for a family of four:

- 30520 – Canon $34,369
- 30662 – Royston $34,640
- 30553 – Lavonia $39,434
- 30521 – Carnesville $41,359
- 30557 – Martin $42,000
- 30577 – Toccoa $44,841
- 30538 – Eastanollee $45,362

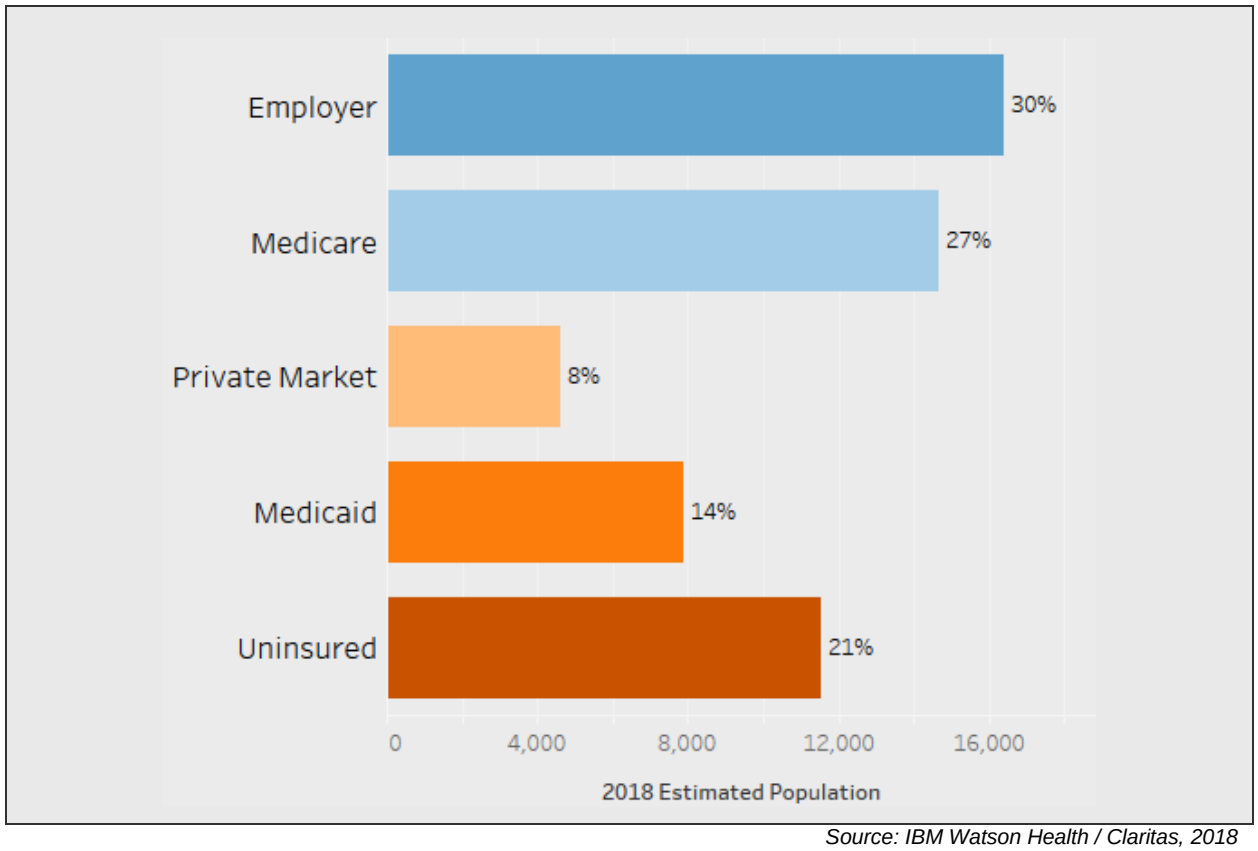
*2018 Median Household Income by ZIP Code*




*Source: IBM Watson Health / Claritas, 2018*

The top two health insurance categories in the community are employer sponsored health coverage (30%) and Medicare (27%). The proportion of people with employer sponsored coverage is considerably less than the state benchmark (46%). The proportion of Medicare enrollees is substantially higher than the state benchmark (14%). Almost 21% of the population is uninsured which is also higher than the state benchmark of 17%. Four (4) ZIP codes have a proportion of uninsured higher than the state percentage: 30520-Canon (26%), 30662-Royston (26%), 30553-Lavonia (22%), and 30538-Eastanollee (20%). The remaining categories are comparable to state proportions with only 8% of the community enrolled in private market insurance coverage (the purchasers of coverage directly or through the health insurance marketplace) and 14% covered by Medicaid.

*2018 Estimated Distribution of Covered Lives by Insurance Category*




*Source: IBM Watson Health / Claritas, 2018*

The community includes five (5) Health Professional Shortage Areas and one (1) Medically Underserved Areas as designated by the U.S. Department of Health and Human Services Health Resources Services Administration.[8] **Appendix G** includes the details on each of these designations.

*Health Professional Shortage Areas and Medically Underserved Areas and Populations*

| | Health Professional Shortage Areas (HPSA) | | | | Medically Underserved Area/Population (MUA/P) |
|---|---|---|---|---|---|
| **Stephens County Hospital** | **Dental Health** | **Mental Health** | **Primary Care** | **Grand Total** | **MUA/P** |
| Franklin | 1 | 1 | 1 | 3 | 1 |
| Stephens | | 1 | 1 | 2 | |
| **Total** | **1** | **2** | **2** | **5** | **1** |

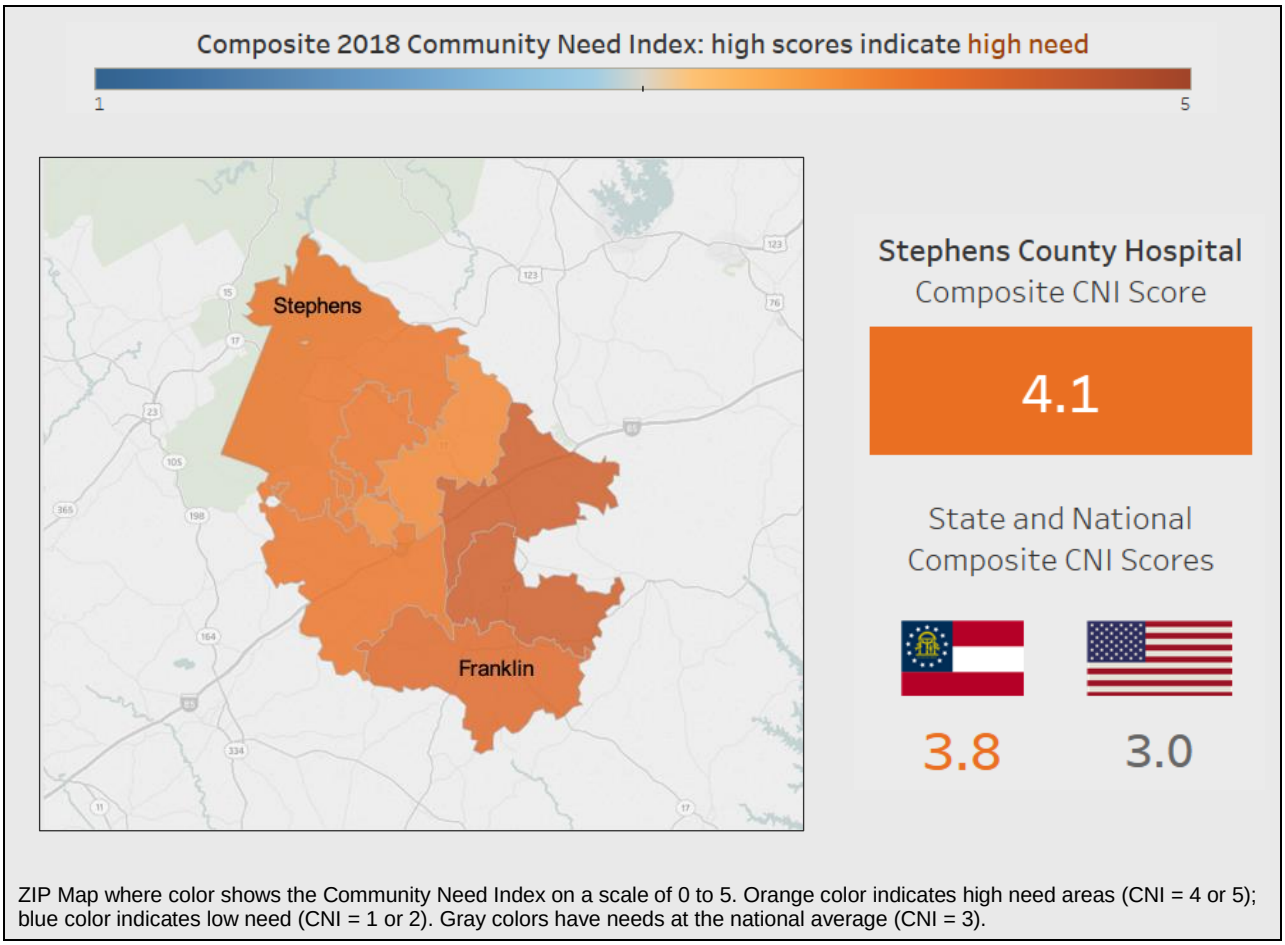
*Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018*

[8] U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018

The Watson Health Community Need Index (CNI) is a statistical approach to identifying areas within a community where health disparities may exist. Leveraging U.S. Census Data and Watson Health Insurance Coverage Estimates, the CNI takes into account vital socio-economic factors (income, cultural, education, insurance and housing) about a community to generate a CNI score for every populated ZIP code in the United States. The CNI strongly links to variations in community healthcare needs and is an indicator of a community's demand for various healthcare services. The CNI score by ZIP code identifies specific areas within a community where healthcare needs may be greater.

Overall, the composite CNI score for the community served is 4.1, higher than the CNI national benchmark of 3.0, potentially indicating greater health care needs in this community. All seven (7) ZIPs in the community have insurance barrier scores of 5, reflecting the high uninsured and high unemployment rates. Additionally, six (6) ZIPs have education barrier scores of 5, meaning these ZIP Codes ranked in the bottom quintile across the nation for the percentage of population over age 25 without a high school diploma.

*2018 Community Need Index by ZIP Code*




ZIP Map where color shows the Community Need Index on a scale of 0 to 5. Orange color indicates high need areas (CNI = 4 or 5); blue color indicates low need (CNI = 1 or 2). Gray colors have needs at the national average (CNI = 3).

*Source: IBM Watson Health / Claritas, 2018*

*Watson Health Community Data*

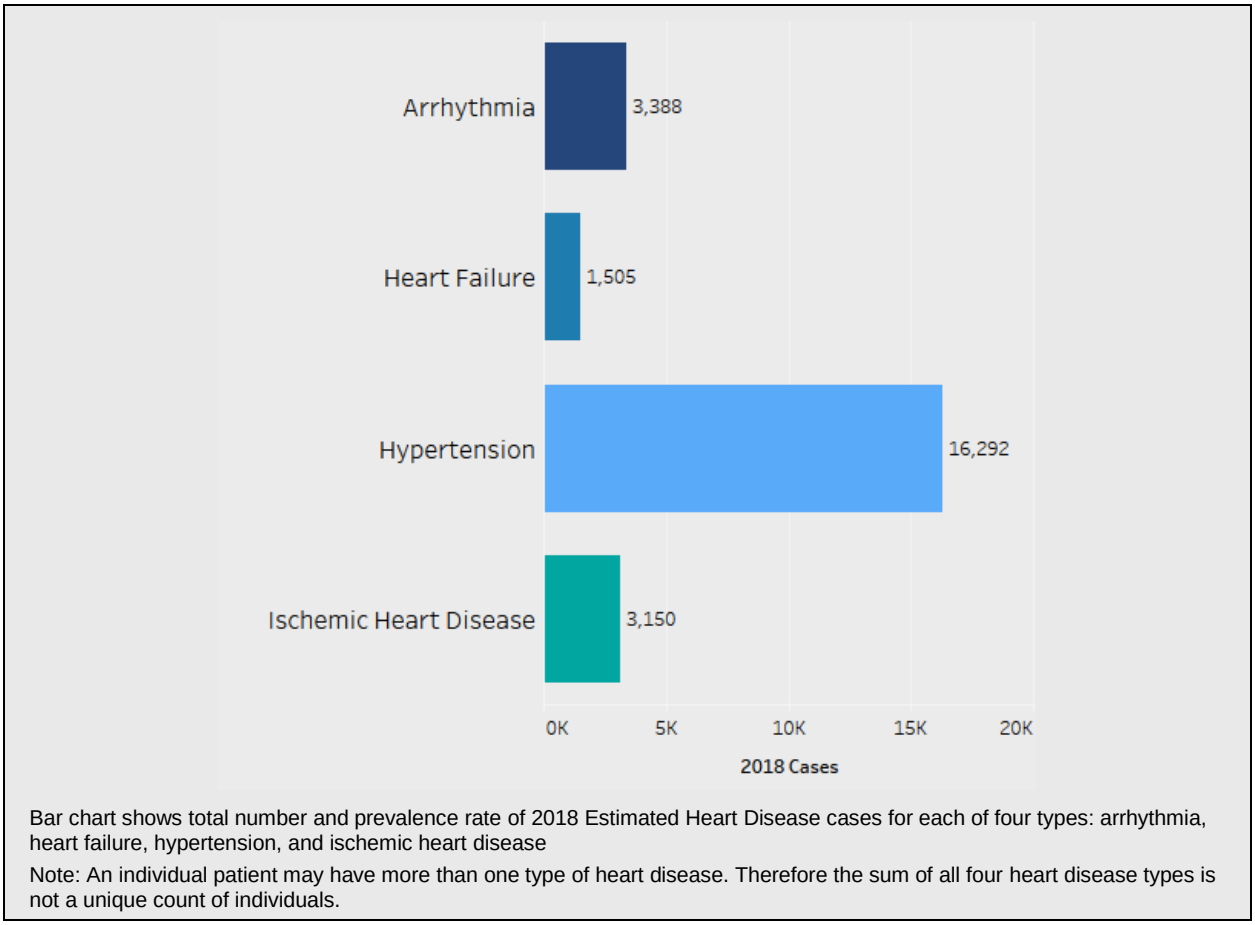
Watson Health supplements the publicly available data and population statistics with estimates of localized disease prevalence of heart disease and cancer as well as emergency department visit estimates.

Watson Health Heart Disease Estimates identify hypertension as the most prevalent heart disease diagnosis; there are almost 16,300 estimated cases in the community overall. The 30577 ZIP code of Toccoa has the most estimated cases of each heart disease type driven primarily by population size.

Slightly more females are identified as living with Arrythmia, Heart Failure, and Hypertension than males, but more males are identified as living with Ischemic Heart Disease than females (60% versus 40%).

The 30553 ZIP code of Lavonia has the highest estimated prevalence rates for Arrhythmia (644 cases per 10,000 population) and Hypertension (3,2048 cases per 10,000 population). The 30557 ZIP code of Martin has the highest estimated prevalence for Heart Failure (287 cases per 10,000 population), and Ischemic Heart Disease (630 cases per 10,000 population).

*2018 Estimated Heart Disease Cases*



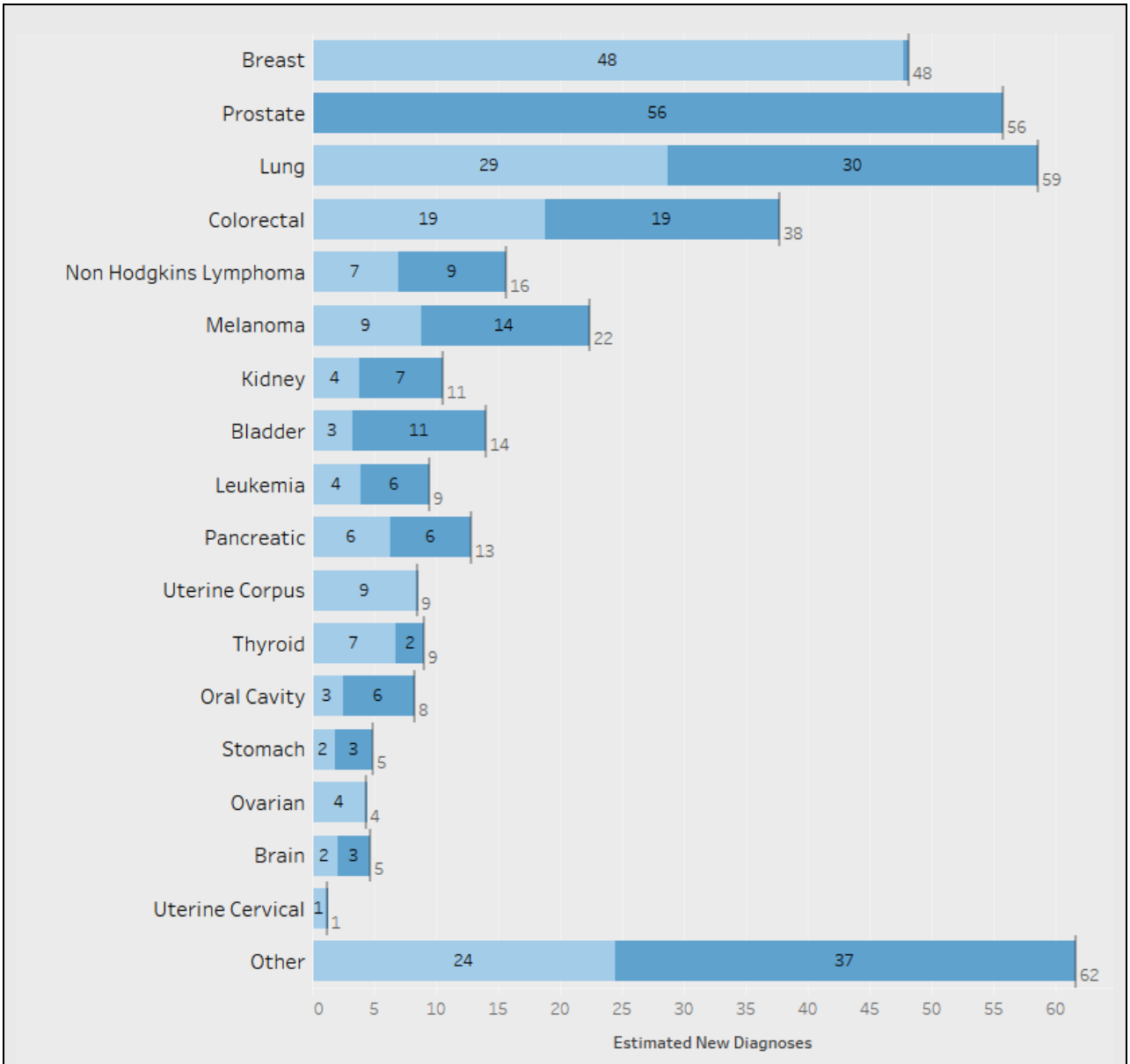

Bar chart shows total number and prevalence rate of 2018 Estimated Heart Disease cases for each of four types: arrhythmia, heart failure, hypertension, and ischemic heart disease

Note: An individual patient may have more than one type of heart disease. Therefore the sum of all four heart disease types is not a unique count of individuals.

*Source: IBM Watson Health, 2018*

For this community, Watson Health's 2018 Cancer Estimates reveal the cancers estimated to have the greatest number of new cases in 2018 are lung, prostate, breast, and colorectal cancers. The cancers projected to have the greatest rate of growth in the next five years are melanoma, thyroid, pancreatic, and bladder. Growth rates are based on both population changes and disease rates.

*2018 Estimated New Cancer Cases*




Bar chart shows estimated new diagnoses per year for each of the 17 types of Cancer and 1 category for all other cancers. Color shows details about sex with light blue for females and dark blue for males.

*Source: IBM Watson Health, 2018*

*Estimated Cancer Cases and Projected 5 Year Change by Type*

| Cancer Type | 2018 Estimated New Cases | 2023 Estimated New Cases | 5 Year Growth (%) |
|---|---|---|---|
| Bladder | 14 | 15 | 10.1% |
| Brain | 5 | 5 | 4.8% |
| Breast | 48 | 51 | 5.5% |
| Colorectal | 38 | 34 | -8.9% |
| Kidney | 11 | 11 | 8.5% |
| Leukemia | 9 | 10 | 8.4% |
| Lung | 59 | 62 | 5.5% |
| Melanoma | 22 | 25 | 11.4% |
| Non Hodgkins Lymphoma | 16 | 17 | 8.1% |
| Oral Cavity | 8 | 9 | 7.9% |
| Ovarian | 4 | 5 | 4.2% |
| Pancreatic | 13 | 14 | 10.9% |
| Prostate | 56 | 55 | -1.1% |
| Stomach | 5 | 5 | 4.3% |
| Thyroid | 9 | 10 | 11.0% |
| Uterine Cervical | 1 | 1 | -1.3% |
| Uterine Corpus | 9 | 9 | 7.1% |
| Other | 62 | 67 | 8.6% |
| Grand Total | **388** | **406** | **4.8%** |

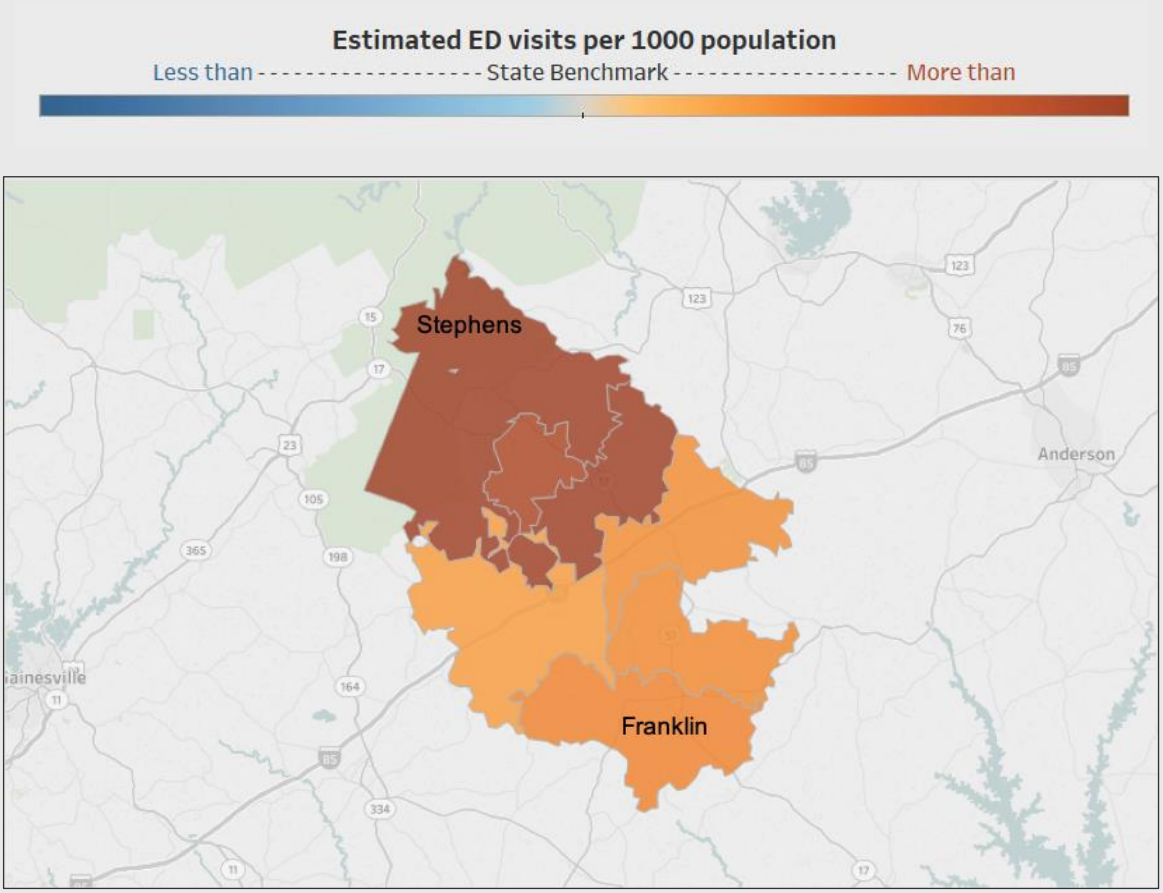
*Source: IBM Watson Health, 2018*

Based on population characteristics and regional utilization rates, Watson Health projects all emergency department (ED) visits in this community to increase by 3.6% over the next five years. All community ZIP codes have higher ED use rates than the Georgia state benchmark of 439 visits and the U.S. benchmark of 435 visits per 1,000. The highest estimated ED use rates are in the ZIP codes 30557-Martin (804 ED visits per 1,000 residents), 30577-Toccoa (799 ED visits per 1,000), and 30538-Eastanollee (769 ED visits per 1,000).

These ED visits consist of three main types: those resulting in an inpatient admission, emergent ED visits treated and released, and non-emergent ED visits that are lower acuity. Non-emergent ED visits present to the ED but can possibly be treated in more appropriate and less intensive outpatient settings.

Non-emergent ED visits can be an indication of systematic issues within the community regarding access to primary care, managing chronic conditions, or other access to care issues such as ability to pay. Each of the seven ZIP codes has an estimated non-emergent ED visit rate higher than the state benchmark of 185 visits per 1,000 population. Watson Health estimates non-emergent ED visits to increase slightly (0.7%) over the next five years in this community.

*Total Estimated 2018 Emergency Department Visit Rate*




Estimated ED Visits per 1000 Population

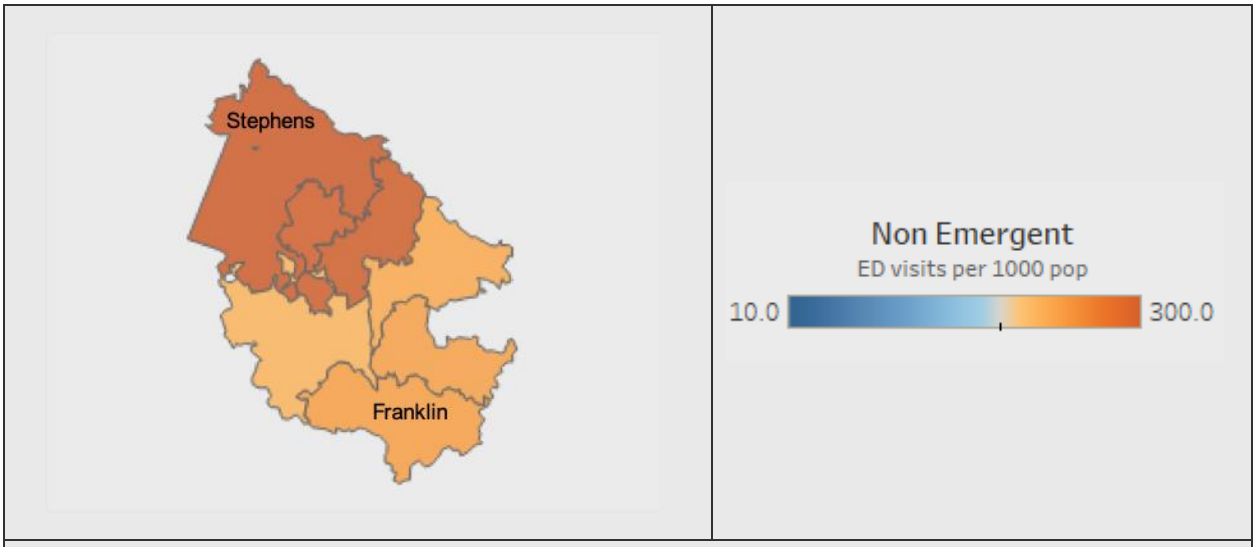
| Emergent Status | Georgia | USA |
|---|---|---|
| Non Emergent | 185 | 179 |
| Emergent | 190 | 189 |
| Inpatient Admission | 64 | 67 |
| Total | 439 | 435 |

ZIP map color shows total Emergency Department visits per 1,000 popultaion. Orange colors are higher than the state benchmark, blue colors are less than the state benchmark, and gray colors are similar.

*Note: These are not actual hosptial ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Non-Emergent Estimated 2018 Emergency Department Visits by ZIP Code*




ZIP map color shows total Emergency Department vists per 1,000 population by non-emergent status. Orange colors are higher than the state benchmark (see table at right), blue colors are less than the state benchmark, and gray colors are similar. Color range is set for the entire study region. ED visits are defined by the presence of specific CPT® codes in claims. Non-emergency visits to the ED do not necessarily require treatment in a hospital emergency department and can potentially be treated in a fast-track ED, an urgent care treatment center, a clinic or physician's private office.

*Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.*

*Source: IBM Watson Health, 2018*

*Public Health Indicators*

Public health indicators (129 total) were collected and analyzed to assess community health needs. For each health indicator, a comparison was made between the most recently available community data and benchmarks for the same/similar indicator. The basis of benchmarks was available data for the U.S. and the state of Georgia. A list of these indicators is in **Appendix A**.

Where the community indicators showed greater need when compared to the state of Georgia comparative benchmark, the difference between the community values and the state benchmark was calculated (need differential). The highest ranked indicators with need differentials in the 50$^{th}$ percentile of greater severity pinpointed community health needs from a quantitative perspective.

*Focus Groups & Interviews*

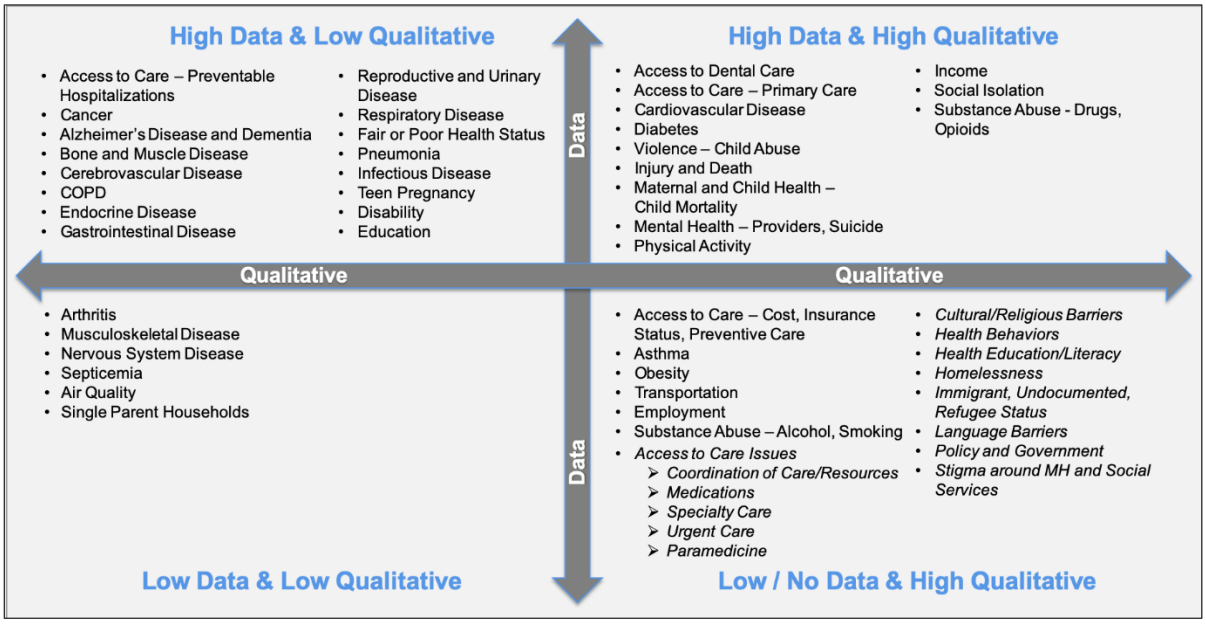
In the Watson Health focus group sessions and interviews, participants identified and discussed the greatest health needs in the community, as well as the barriers and strengths impacting overall health status. For this community, one (1) focus group session (listed below) with nine (9) participants and four (4) interviews were conducted March through April 2019. A list of the organizations providing input can be found in **Appendix B**. Summary findings from the focus groups and interviews can be found in **Appendix C**.

| Focus Group | Date | Location | Number of Participants |
|---|---|---|---|
| Habersham & Stephens Counties Focus Group | March 6, 2019 | Habersham Medical Center<br>Demorest, GA | 9 |

*Prioritized Significant Health Needs for Stephens County Hospital*

The Health Needs Matrix identified through the community health needs assessment (see Methodology for Defining Community Needs section) shows the convergence of needs identified in the qualitative data (interview and focus group feedback) and quantitative data (health indicators). The top health needs for this community are defined in the Health Needs Matrix below.

*Community Health Needs Matrix*




*Note: Lower right quadrant items in italics do not have quantitative data indicators available*

*Source: IBM Watson Health, 2019*

Through the prioritization process, the significant health needs for this community were identified, reviewed, and prioritized (see "Approach to Identify and Prioritize Significant Health Needs" section). The resulting prioritized health needs for the community are provided in the table below.

*Prioritized Significant Community Health Needs*

| Priority Rank | Health Need |
|---|---|
| 1 | Substance Abuse |
| 2 | Access to Care - Primary Care |
| 3 | Physical Activity |
| 3 | Diabetes |
| 4 | Mental Health |
| 5 | Income |

| Priority Rank | Health Need |
|---|---|
| 6 | Access to Care - Preventable Hospitalizations (added) |
| 6 | Maternal and Child Health |
| 7 | Cardiovascular Disease |
| 8 | Social Isolation |
| 8 | Injury and Death |
| 9 | Violence - Child Abuse |
| 10 | Access to Dental Care |

*Notes: Needs noted as "added" were pulled from quadrants other than the upper right (high data/high qualitative) as they were considered significant by the prioritization working group.*
*Needs with the same priority rank received the same overall score in the prioritization process*

*Source: IBM Watson Health, 2019*

*Recommended Health Needs to be Addressed for Stephens County Hospital*

As part of the prioritization work session, work group participants recommended a set of prioritized significant health needs that should be addressed by each CHNA Partner (see "Recommended Health Needs to be Addressed by the CHNA Partners" section). The members of this community's prioritization work group recommended the following significant needs to be addressed via Stephens County Hospital's CHNA implementation strategy:

- Substance Abuse
- Access to Care- Primary Care and Preventable Hospitalizations
- Mental Health
- Maternal and Child Health

*CHNA Implementation Strategy*

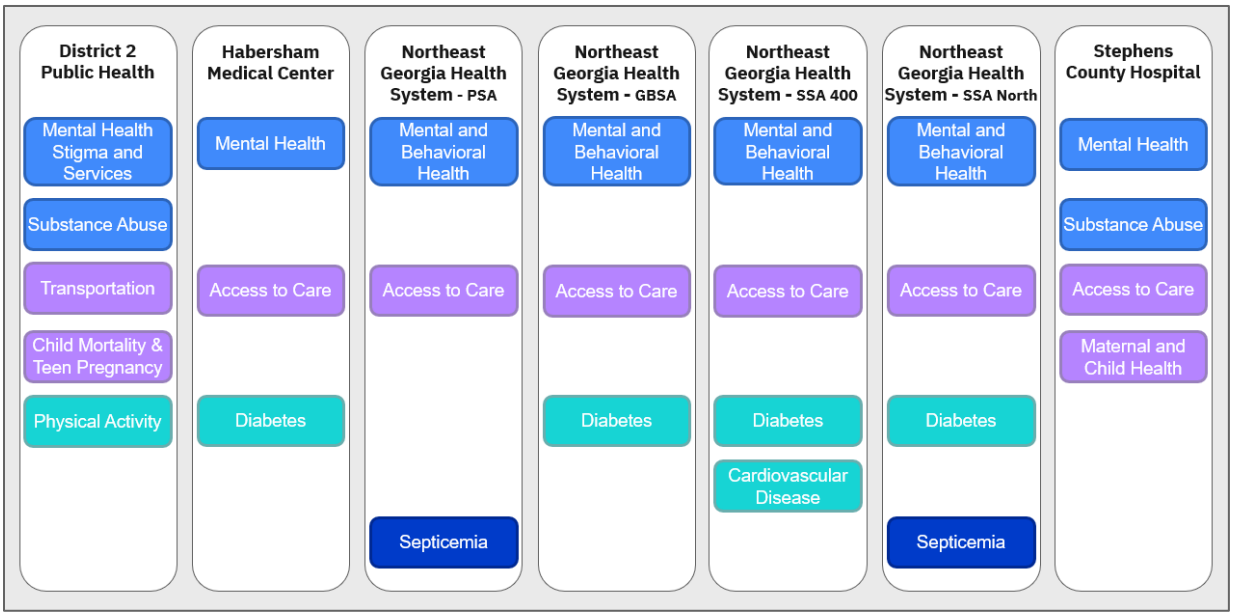
SCH will choose which needs it will address from those identified in this assessment. An implementation strategy with specific initiatives to address the chosen health will be completed and adopted by the hospital by February 15, 2020.

An evaluation of the SCH 2016 CHNA implementation strategy and its impact can be found in **Appendix I.**

## Priority Health Needs for Northeast Georgia

During prioritization of the community health needs, participants in the session recommended priority needs to be addressed for each CHNA Partner community and identified common priorities across the communities as outlined below (see *Recommended Health Needs to be Addressed by the CHNA Partners* section):

*Recommended Priority Health Needs*




*Note: priority needs that are common across communites are shaded based on their commonality by category*

*Source: IBM Watson Health, 2019*

## Description of Northeast Georgia Region Priority Health Needs

*Mental and Behavioral Health*

Mental health is an important part of overall health and well-being. Mental health includes emotional, psychological, and social well-being. How we act, feel, think is affected by our state of mental health. It also determines how we handle stress, relate to others, and make healthy choices. Mental health is important at every stage of life, from childhood and adolescence through adulthood. Individuals that struggle with maintaining their mental health are more likely to have issues with addictions, poor social connections, possible transient living situations, and have increased difficulty in getting and maintaining successful work history.

Individual challenges with mental health are common in the United States, with an estimated half of all Americans diagnosed with a mental illness or disorder at some point in their lifetime. Mental illnesses, such as depression, are the third most common cause of hospitalization in the U.S. for those aged 18-44 years; adults living with serious mental illness die on average 25 years earlier than others.[9] Many diagnoses fall under the umbrella of mental health including: drug/alcohol abuse, depression, and psychiatric disorders. Some mental health episodes are causal and episodic, but most are life-long struggles affecting all aspects of life. There is not one treatment that will work for every patient nor a single medication that will resolve the condition; mental health treatment is a process that requires the correct diagnoses, as well as ongoing treatment and access to care.

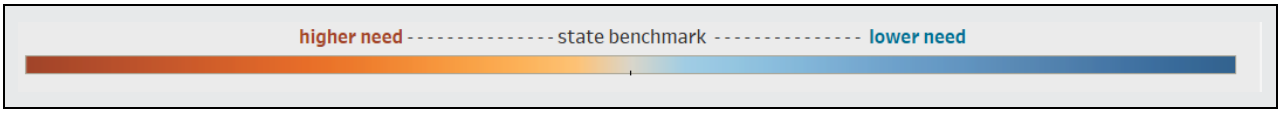
There are many reasons that prevent people with mental health issues from seeking and following up with treatment and care. Beliefs and attitudes toward mental illness set the stage for how individuals interact with, provide opportunities for, and help support a person with mental illness. Beliefs and attitudes toward mental illness also frame how individuals experience and express their own emotional problems and psychological distress and whether they disclose these symptoms and seek care. Whether stigma is experienced as social exclusion or discrimination, or felt as a pervasive and underlying sense of being different from others, it can be debilitating for people and poses a challenge for public health prevention efforts. Most people with serious and persistent mental illness (i.e. mental disorders that interfere with some area of social functioning) are unemployed and live below the poverty line, and many face major barriers to obtaining decent, affordable housing.[10]

Data on mental health diagnoses for the overall population can be difficult to gather. In some instances, self-reported survey data is available to help understand the prevalence of mental health issues, but stigma and fear can influence self-reported data. In other instances, we may need to look at proxy measures such as hospital emergency department or inpatient discharges. Nine of the 16 northeast Georgia counties had self-reported mentally unhealthy days that exceeded the state benchmark

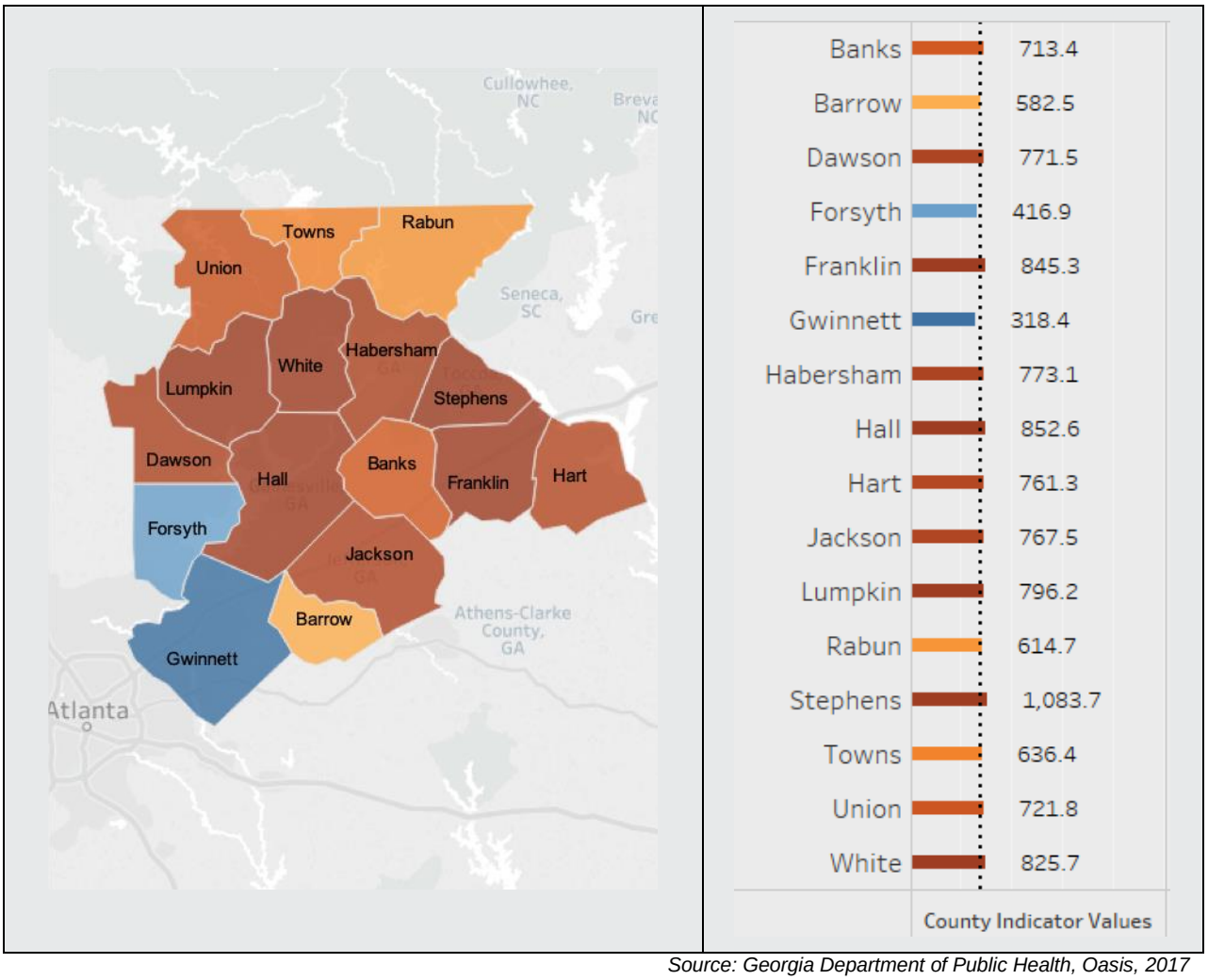
[9] Center for Disease Control and Prevention, 2019
[10] Centers for Disease Control and Prevention: Attitudes Toward Mental Illness: Results from the Behavioral Risk Factor Surveillance System; 2012

of 3.8 days month by a difference of 5% to 11% relative to the state value (relative difference).[11] However, 14 of the counties ranged from a 10% to 104% relative difference to state benchmark for inpatient discharges related to mental and behavioral disorders.[12] This indicator was a top 10 ranked need in four of those 14 counties (Hall, Stephens, Habersham, and White).[13] Identifying health disparities between and among specific populations in the community can be challenging based on the availability of local data. However, we do know that at the state level black and multi-racial populations experience discharge rates for mental and behavior disorders at a higher rate than the state benchmark of 531.5 discharges per 100,000 population.[14]

*Mental and Behavioral Disorders*
*2017 Discharge Rate per 100,000 Population (age-adjusted)*

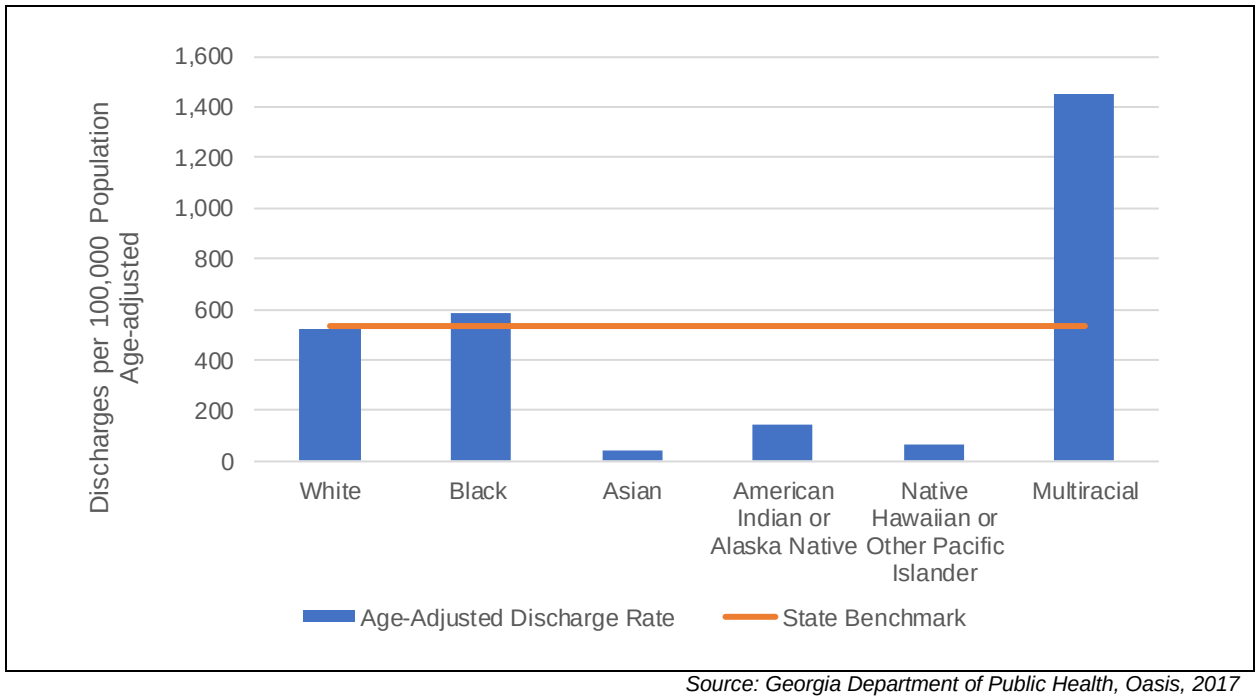



[11] 2016, Behavioral Risk Factor Surveillance System
[12] Source: Georgia Department of Public Health, Oasis, 2017
[13] Source: Georgia Department of Public Health, Oasis, 2017
[14] Source: Georgia Department of Public Health, Oasis, 2017




*Source: Georgia Department of Public Health, Oasis, 2017*

*Mental and Behavioral Disorders*
*Georgia Discharge Rate by Race*




*Source: Georgia Department of Public Health, Oasis, 2017*

Suicide, according to the National Institutes of Health, is a major public health concern in the United States and is among the leading causes of death. Based on recent nationwide surveys, suicide in some populations is on the rise. Suicide was the second leading cause of death among individuals between the ages of 10 and 34, and the fourth leading cause of death among individuals between the ages of 35 and 54.[15] Suicide and the associated mental health issues are a prevalent concern across the U.S. and in Georgia. The Georgia state suicide rate benchmark was 13.1 per 100,000 deaths. **Ten of the 16 northeast Georgia counties had rates higher than the state of Georgia benchmark. Dawson County had the highest rate at 30.2 suicide deaths per 100,000, a 131% relative difference from the state value making it the top ranked need in the county.[16] Suicide was a top ranked need in Franklin and Hart counties as well with rates of 25.8 and 23.4 suicide deaths respectively.[17]**

[15] National Institute of Mental Health, Suicide, 2019
[16] CDC WONDER Online Database, 2014-2017
[17] CDC WONDER Online Database, 2014-2017

*Suicide*

*2014 - 2017 Death Rate per 100,000 Population (age-adjusted)*


*Source: Georgia Department of Public Health, Oasis, 2017*

Note: Due to population/sample size, data are not available for every county

Disconnected youth, according to Measure of America, 2019, are youths aged 16-24 who are neither working nor in school. A fundamental indicator of societal progress and well-being is how successfully its citizens transition from one life phase to another. In the U.S. in 2016, there were 4,599,100 disconnected youths, or one in nine teens and young adults.[18] **Disconnected youth are at an increased risk of violent behavior, smoking, alcohol consumption and drug use, and may have emotional deficits and less cognitive and academic skill than their peers who are working, and/or in school. Rural counties have a youth disconnection rate of 19.3%, on average, compared to 12.9% in urban centers and 11.3% in suburbs.[19]**

[18] Opportunity Nation, Youth Disconnection 2019
[19] Opportunity Nation, Youth Disconnection 2019

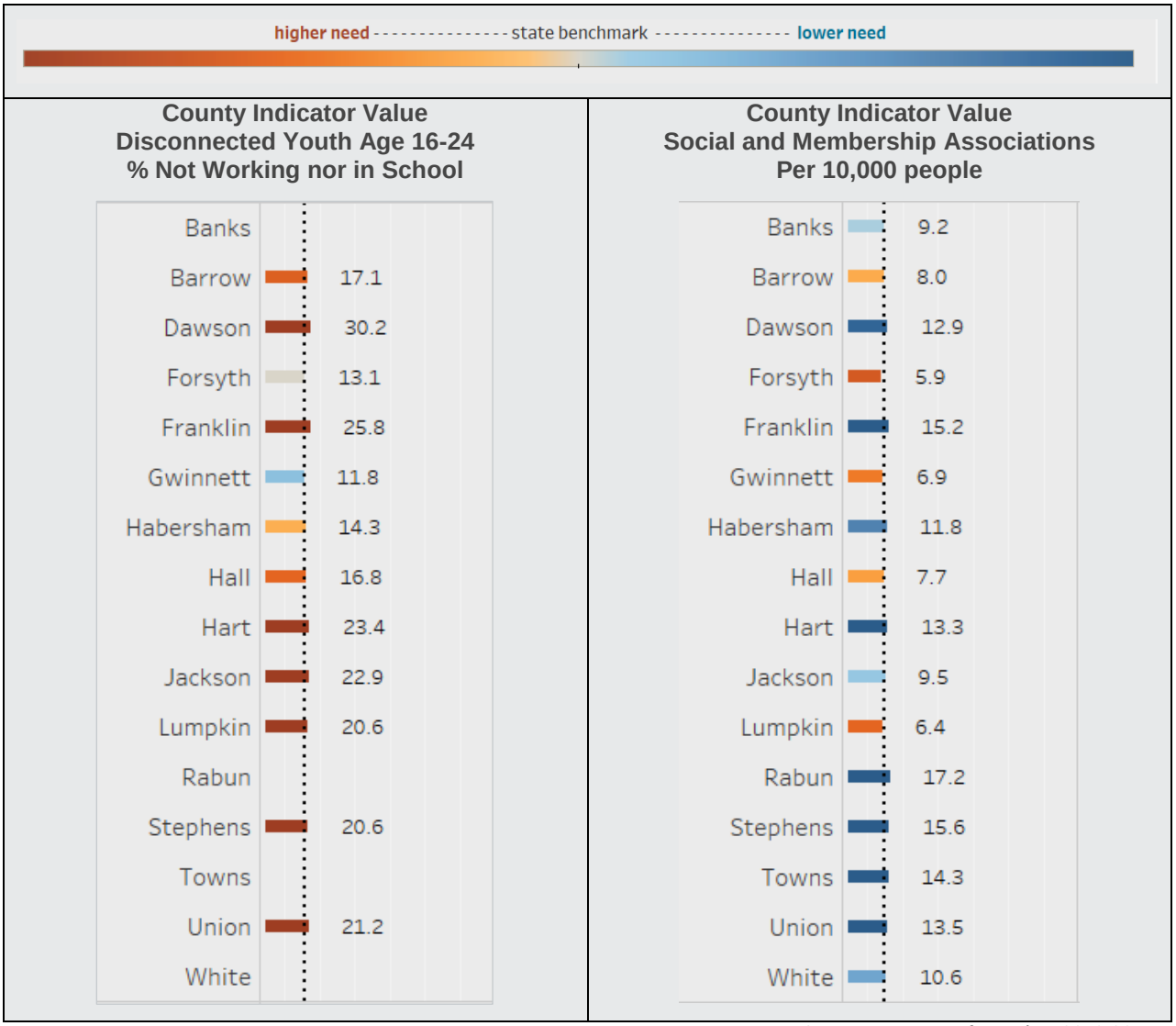
**In northeast Georgia seven counties had a rate above the state benchmark of 17%. There were three counties where the relative difference from the state benchmark was greater than 26%: Hart County (26% relative difference, Stephens County (39% relative difference) and Franklin County (78% relative difference).[20]**

Nationally, young women are slightly less likely to be disconnected, with a rate of 11.2% compared to the male rate of 12.1%. However, disconnected young women face particularly high poverty rates and unique challenges like early marriage and motherhood that merit attention and resources from communities. Youth disconnection also has economic implications. Community leaders and educators would need to proactively seek to identify youths that are at a higher risk of being disconnected and ensure that community resources are accessible.[21] Lacking a stable living situation, youth often fall short on the emotional and financial support of parents or other consistent, caring adults, an additional barrier in the transition to adulthood.

**Family and social support is vital to remaining mentally healthy.** Poor family support, minimal contact with others, and limited involvement in community life are associated with increased morbidity and early mortality. Furthermore, **social support networks have been identified as powerful predictors of health behaviors, suggesting that individuals without a strong social network are less likely to make healthy lifestyle choices than individuals with a strong network.** Researchers have argued that social trust is enhanced when people belong to voluntary groups and organizations because people who belong to such groups tend to trust others who belong to the same group.[22] **Five counties in northeast Georgia had rates of social and membership associations (such as civic organizations, sports organizations, religious organizations, political organizations, and professional organizations) per population lower than that of the state of Georgia (8.9 per 10,000 population). Lumpkin, Hall, Barrow, Gwinnett and Forsyth counties all had rates 10% to 34% lower relative to the state benchmark.[23]**

[20] Measure of America, 2010-2014
[21] Opportunity Nation, Youth Disconnection, 2019
[22] County Health Rankings, 2018
[23] County Business Patterns, 2015

*Social Isolation*




*Source: Measure of America, 2010-2014, County Business Patterns, 2015*

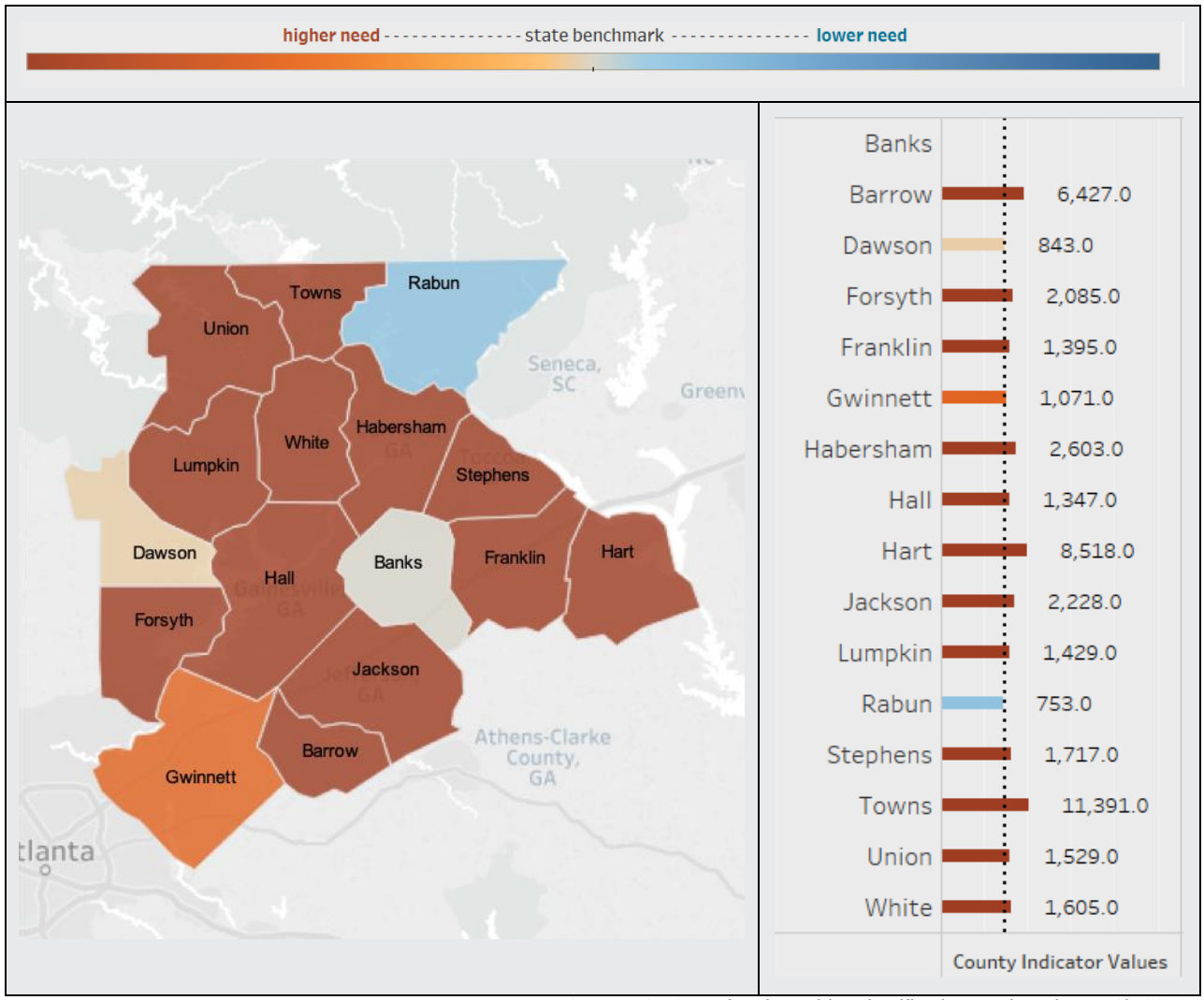
*Note: Due to population/sample size, data are not available for every county*

Access to mental health providers and services is an issue nationally. Nine million adults (or 1 in 5) report having an unmet mental health need and mental health provider shortages across the country continue to exist.[24] Rural areas especially have challenges with accessing mental health care services. Primary Care Providers (PCPs) are often relied upon to treat patients with mental health needs. These providers encounter expertise, time, and financial reimbursement constraints trying to address the gap in mental health services. Communities that have a lack of primary care providers are even more vulnerable.

[24] Mental Health America, 2019

According to the CMS National Provider Identification File, the state benchmark for populations to one mental healthcare provider was 1 provider to 829 people.[25] **Most counties in the region, except Banks and Rabun counties, were higher than the state benchmark indicating a greater need and population with significant vulnerability when it comes to accessing mental health services**. Half the counties which indicate a need relative to the benchmark have mental health provider ratios more than twice that of the state level.[26] **Access to mental health providers is the number one ranked need in six of the counties: Hall, Jackson, Habersham, Barrow, Hart, and Towns.**

*Access to Mental Health Providers*
*2017 Ratio of Population to One Mental Health Provider*




*Source: CMS, National Provider Identification Registry (NPPES), 2018*

Note: Due to population/sample size, data are not available for every county

[25] CMS, National Provider Identification Registry (NPPES), 2018
[26] CMS, National Provider Identification Registry (NPPES), 2018

*Substance Abuse*

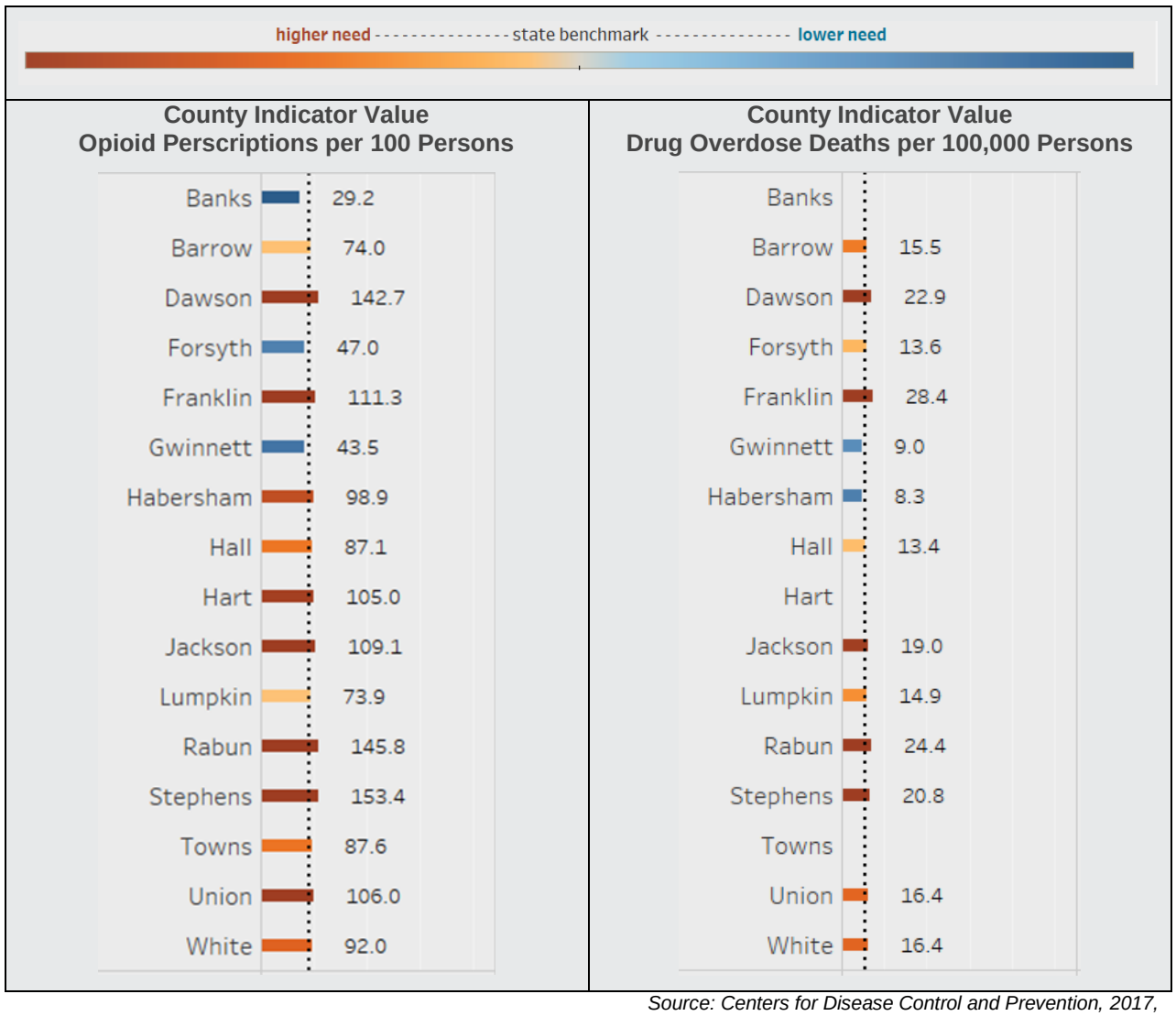
Opioids were involved in 47,600 overdose deaths in 2017 (67.8% of all drug overdose deaths). Twenty-three of the 50 states in the U.S. have seen a statistically significant increase in opioid drug deaths from 2016 to 2017, including Georgia. The realization that over half of the overdose deaths are opioid related is a key reason to address this issue in the community. There were 70,237 drug overdose deaths in the United States in 2017. Opioids, mainly synthetic opioids (other than methadone), are currently the main driver of drug overdose deaths.[27]

**All counties in northeast Georgia exceed the state rate for opioid prescriptions per 100 persons (70.9) and over half the counties exceed the rate by more than 2 times.**[28,29] The Georgia state benchmark for drug overdose deaths was 12.7 per 100,000. In the northeast Georgia region, data were available for 13 of the 16 counties and **11 of those counties all had drug overdose death rates higher than the Georgia benchmark**. **The county with the greatest need was Franklin County with a rate of 28.4 deaths per 100,000, 123% difference relative to the state benchmark.**[30] Rabun and Dawson counties also had rates relative to the benchmark that indicate a significant need. Opioid deaths remain a growing and significant concern across both Georgia and the nation. Many social service agencies are impacted by the opioid epidemic burden and face challenges meeting the needs which present across all socioeconomic groups.

Excessive alcohol use, including binge drinking (drinking 5 or more drinks on an occasion for men or 4 or more drinks on an occasion for women), can lead to increased risk of health problems such as injuries, violence, liver diseases, and cancer.[31] Of the 16 counties within the northeast Georgia region, self-reported data for 12 of the counties indicate a higher rate of excessive drinking than the Georgia state benchmark of 15.1 percent of the population.[32] Six counties had rates of alcohol-impaired driving deaths that exceed the state benchmark (23.3% of all driving deaths) and three counties had percentages that were 50% or greater relative to the state benchmark (Rabun, 36.8%; Habersham, 39.5; and Hart, 47.6%).[33]

[27] Centers for Disease Control and Prevention, 2019
[28] amFAR Opioids and Health Indicators Database**,** Centers for Disease Control and Prevention, 2017
[29] Describes the number of opioid prescriptions dispensed, per 100 U.S. residents. This measure uses IQVIA data from pharmacies which dispense nearly 90% of all retail prescriptions in the US. It includes prescriptions paid for by commercial insurance, Medicaid, Medicare, or cash or equivalent. Cough and cold formulations containing opioids and buprenorphine products typically used to treat opioid use disorder are excluded, and IQVIA data does not include methadone dispensed through methadone maintenance treatment programs.
[30] CDC WONDER mortality data, 2014-2016
[31] Centers for Disease Control and Prevention, Alcohol and Public Health**,** 2019
[32] Behavioral Risk Factor Surveillance System, 2016
[33] Fatality Analysis Reporting System, 2012-2016

*Substance Abuse – Drugs*




*Source: Centers for Disease Control and Prevention, 2017, CDC WONDER mortality data, 2014-2016*

Note: Due to population/sample size, data are not available for every county

*Access to Care – Primary Care*

According to the CDC's Healthy People 2020 (HP2020), the goal for access to health services is to "improve access to comprehensive, quality healthcare services." Such services are vital for achieving health equity and increasing the quality of life for everyone. In the United States, many people do not receive timely and appropriate health care. About one in four Americans lack a health center to receive regular medical services and a primary care provider, and almost one in five Americans under age 65 years do not have medical insurance coverage.[34]

There is a national wide scarcity of physicians across the United States, while particularly challenging in small towns and cities, metropolitan areas are not exempt. Demographic shifts, such as growth in the elderly or near elderly populations increase the need for primary care access. Estimates of the scope of the provider shortage in America vary, however, it is generally agreed upon that thousands of additional Primary Care Providers (PCPs) are needed to meet the current demand and that tens of thousands of additional caregivers will be needed to meet the growing aging population across the country.

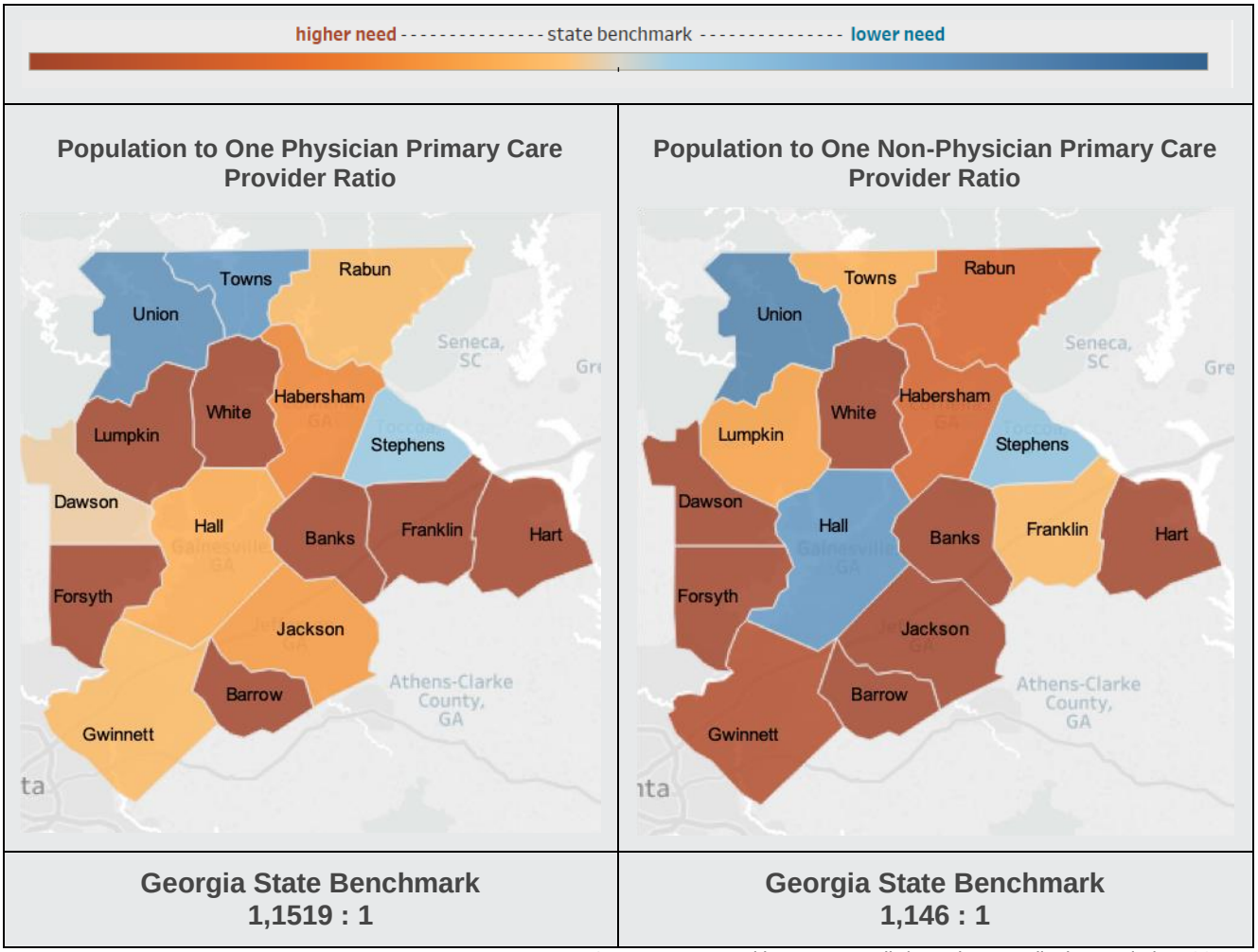
Primary care physician extenders (e.g. nurse practitioners, physician assistants, and clinical nurse specialists) could help close the gap in access to primary care services when they are located in a community. Non-physician providers or physician extenders are typically licensed professionals such as Physician Assistants or Nurse Practitioners who treat and see patients. Dependent upon state regulations, extenders may practice independently or in physician run practices. Physician extenders expand the scope of primary care providers within a geographic area and help bridge the gap for both access to care and management of healthcare costs.

Access to both physician and non-physician primary care providers is a need in northeast Georgia. **Thirteen of the 16 northeast Georgia counties indicated a greater need or vulnerability in the population as compared to the state benchmark of 1,519 population per primary care physician. For eight of those 13 counties, primary care physician access was a top ten ranked need within the county. The population to primary care physician ratio for Banks (4,624:1), Barrow (5,025:1) and Franklin (5,578:1) counties was more than 200% higher than state value indicating an even greater need in those counties.[35]**

Access to non-physician primary care providers was also indicated as a need with 13 counties having less of these types of providers than the Georgia state benchmark 1,146 population to one provider. Again, eight counties had non-physician primary care access as a top ten ranked need within the county and two counties had ratios more than 200% higher than the state benchmark: Barrow (4,059:1) and Hart (5,111:1) counties.[36] As the physician shortage continues there will be greater reliance on non-physician extenders to care for the baby boomer population among others.

[34] Centers for Disease Control and Prevention, 2019
[35] Area Health Resource File/American Medical Association, 2015
[36] CMS, National Provider Identification, 2017

*Access to Primary Care*




*Source: Area Health Resource File/American Medical Association, 2015; CMS, National Provider Identification, 2017*

*Access to Care – Preventable Hospitalizations*

Preventable hospital stays are included in the broader measure of access to care. In communities where access to care is problematic, whether the issues are physical, economic or a lack of providers, the result can be an increase in medical/psychological conditions, diseases and hospitalizations. This indicator measures the hospital discharge rate for ambulatory sensitive conditions and is age adjusted across different counties.

Preventable hospital stays for ambulatory sensitive conditions examines people who were admitted to the hospital for conditions that, with appropriate care, can normally be managed in the ambulatory care setting. While not exhaustive, examples of these conditions include convulsions, chronic obstructive pulmonary disease, pneumonia, asthma, congestive heart failure, hypertension, angina, cellulitis, diabetes complications, gastroenteritis, kidney/urinary infection, and dehydration.

Several measures of preventable hospitalizations were used in this assessment: preventable stays for Medicare fee-for-service enrollees, preventable stays for acute conditions (all patients), preventable stays for avoidable illnesses (all patients), and preventable hospital stays for chronic conditions (all patients**). All counties except for one (Forsyth), exceeded the state benchmark in at least one of the measures**. Avoidable hospital stays can be prevented by utilizing a primary care provider for prevention and acute ambulatory care; managing chronic conditions; and ensuring that a healthy lifestyle is a key component.

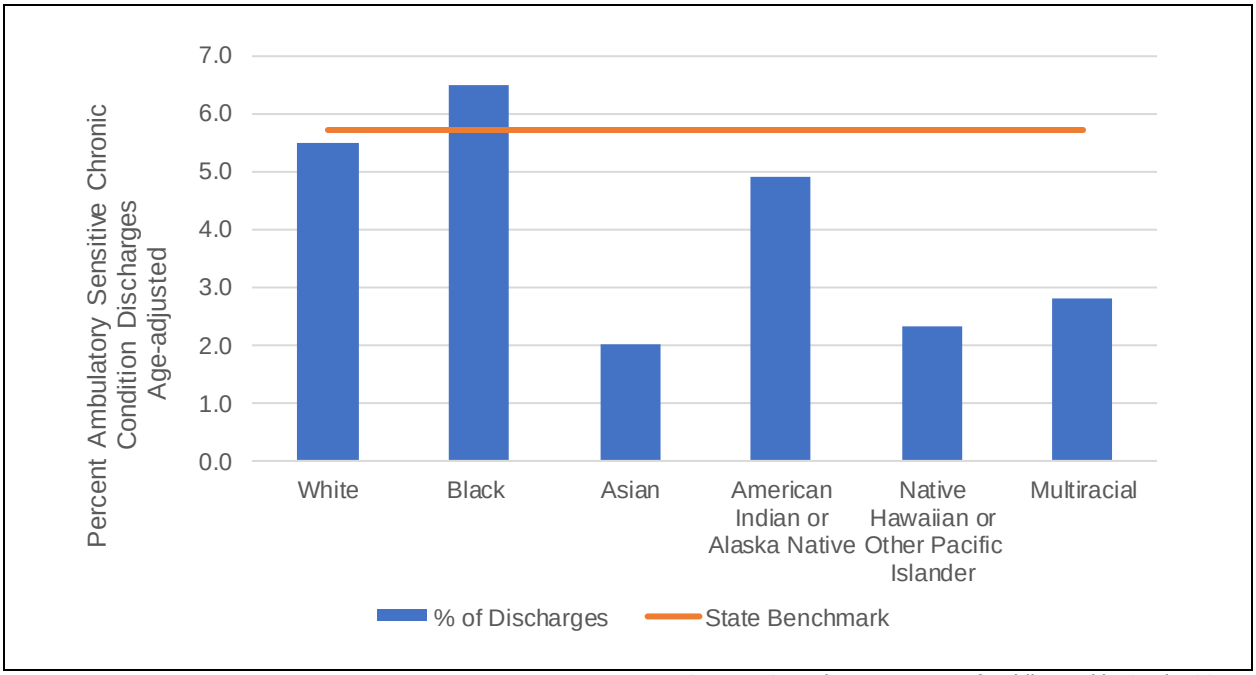
*Preventable Hospitalizations*

| State Benchmark/ County | Preventable Hospital Stays: Medicare | Ambulatory Sensitive Discharges: Acute Conditions | Ambulatory Sensitive Discharges: Avoidable Illnesses | Ambulatory Sensitive Discharges: Chronic Conditions |
|---|---|---|---|---|
| **Georgia** | **50.2** | **12.2** | **2.0** | **5.7** |
| Banks | 69.3 | 16.2 | 2.3 | 5.8 |
| Barrow | 63.8 | 13.2 | 2.3 | 6.2 |
| Dawson | 58.5 | 12.8 | 2.5 | 5.0 |
| Forsyth | 44.8 | 9.7 | 1.8 | 3.7 |
| Franklin | 61.8 | 15.2 | 1.9 | 6.8 |
| Gwinnett | 43.3 | 9.5 | 2.1 | 3.9 |
| Habersham | 53.2 | 17.4 | 2.0 | 4.6 |
| Hall | 44.6 | 13.8 | 2.6 | 5.0 |
| Hart | 53.6 | 13.8 | 1.8 | 6.1 |
| Jackson | 50.2 | 14.3 | 2.6 | 5.7 |
| Lumpkin | 69.8 | 15.3 | 2.9 | 5.9 |
| Rabun | 67.0 | 20.1 | 1.6 | 6.3 |
| Stephens | 74.1 | 18.0 | 1.9 | 6.8 |
| Towns | 42.8 | 18.8 | 1.9 | 4.8 |
| Union | 34.8 | 16.9 | 2.4 | 5.9 |
| White | 51.2 | 15.2 | 2.9 | 5.0 |
| Measure: | Discharges per 1,000 Medicare Enrollees (age-adjusted) | Percent of Discharges (age-adjusted) | Percent of Discharges (age-adjusted) | Percent of Discharges (age-adjusted) |
| Source: | Dartmouth Atlas of Health Care, 2015 | Georgia Department of Public Health, OASIS, 2017 | | |

Identifying health disparities between and among specific populations in the community can be challenging based on the availability of local data. However, we do know that at a state level black populations experience discharge rates for ambulatory sensitive chronic conditions at a higher rate than the state benchmark of 5.7% of all discharges.[37]

[37] Source: Georgia Department of Public Health, Oasis, 2017

*Ambulatory Sensitive Chronic Conditions Discharges by Race*



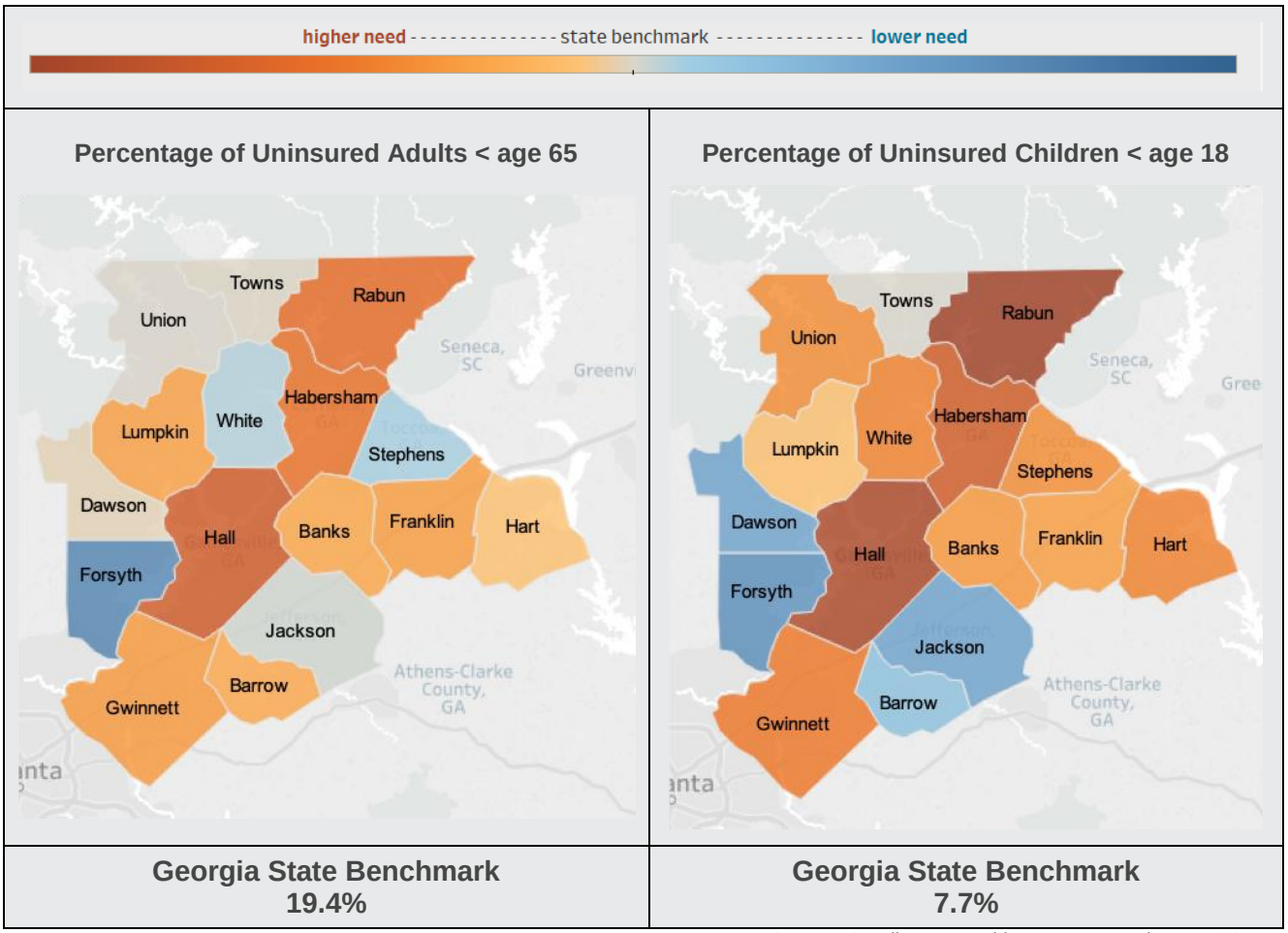

*Source: Georgia Department of Public Health, Oasis, 2017*

*Access to Care – Insurance Coverage*

Lack of insurance coverage is correlated to more significant health care problems in the population. Lack of coverage primarily impacts the population under age 65 given the availability of Medicare to the older population, as the majority of individuals over the age of 65 have access to Medicare or disability insurance. The uninsured population under 18 years of age is a particular healthcare challenge. Children and teens without access to a routine provider will be more likely to utilize emergency room services, often for low acuity conditions such as earaches, sore throats, teeth pain, etc. The percentage of adults under age 65 without insurance for the state of Georgia is 19.4%. The statewide percentage of children under age 18 that are uninsured is 7.7%. **Ten of sixteen counties had uninsured rates for the adults under age 65 population that were higher relative to the state value and nine counties had uninsured rates for children that were higher than the state. Four of those counties (Habersham, Hall, Rabun and White) were more than 20% greater than the state benchmark for both measures.**[38,39]

[38] Small Area Health Insurance Estimates, 2015
[39] U.S. Census Bureau, American Community Survey, Five Year Estimates, 2012-2016

*Access to Insurance Coverage*




*Source: Small Area Health Insurance Estimates, 2015;*
*U.S. Census Bureau, American Community Survey, Five Year Estimates, 2012-2016*

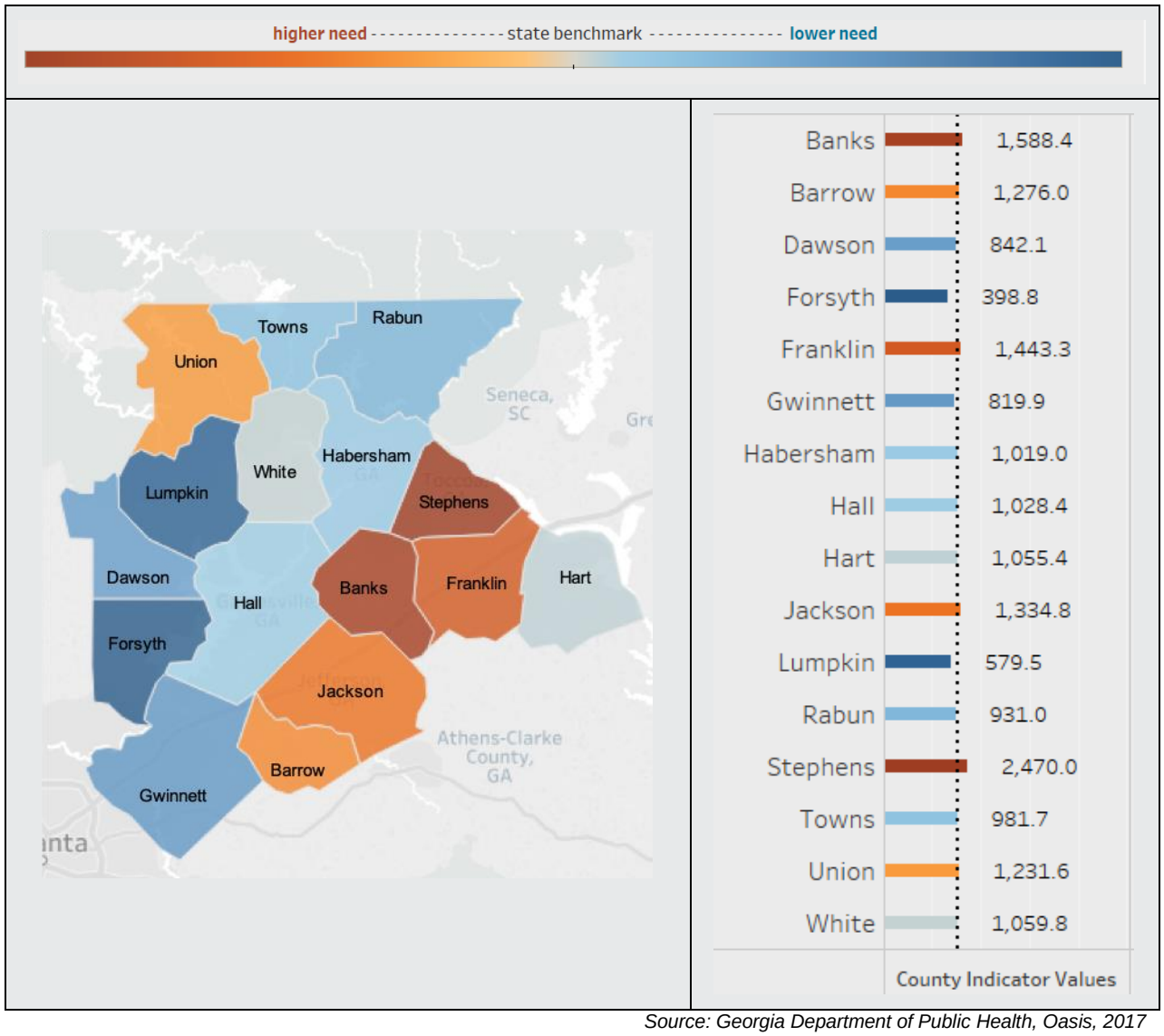
*Access to Care –Teen Pregnancy, Maternal & Child Health, and Child Mortality*

Access to maternal and child healthcare is of high importance especially in communities with a significant number of individuals of childbearing age. Pregnancy can provide an opportunity to identify existing health risks in women and to prevent future health problems for women and their children. The risk of maternal and infant mortality and pregnancy-related complications can be reduced by increasing access to quality care before pregnancy, during pregnancy, and between pregnancies. Moreover, healthy birth outcomes and early identification and treatment of developmental delays and disabilities and other health conditions among infants can prevent death or disability and enable

children to reach their full potential.[40] Higher Emergency Department visit rates for pregnancy/childbirth complications as well as fetal/infant conditions can point to potential issues with access to the right healthcare resources for pregnant mothers and their infants. The state-wide ED visit rate for pregnancy and childbirth complications was 1,077 ED visits per 100,000 population (age-adjusted). **Four of the 16 counties in the northeast Georgia region have ED visit rates greater than the state benchmark: Union, 1,232; Franklin, 1,443; Banks, 1,588; and Stephens, 2,470. The Stephens County rate is 129% higher relative to the benchmark. The state benchmark for ED visit rates for fetal and infant conditions is 53.0 visits per 100,000 people. Four counties in the region have rates that exceed the state value: Dawson, 55.5; Habersham, 58.9; Franklin, 65.6; and Union, 93.3. The Union County rate is 76% higher relative to the state benchmark.[41] Counties with higher values likely have a higher percentage of individuals with high risk pregnancies and may or may not correlate to lack of providers.**

[40] Healthy People 2020, Maternal, Infant, and Child Health**,** 2019
[41] Georgia Department of Public Health, OASIS, 2017

*Pregnancy and Childbirth Complications*
*2017 ED Visit Rate per 100,000 Population (age-adjusted)*

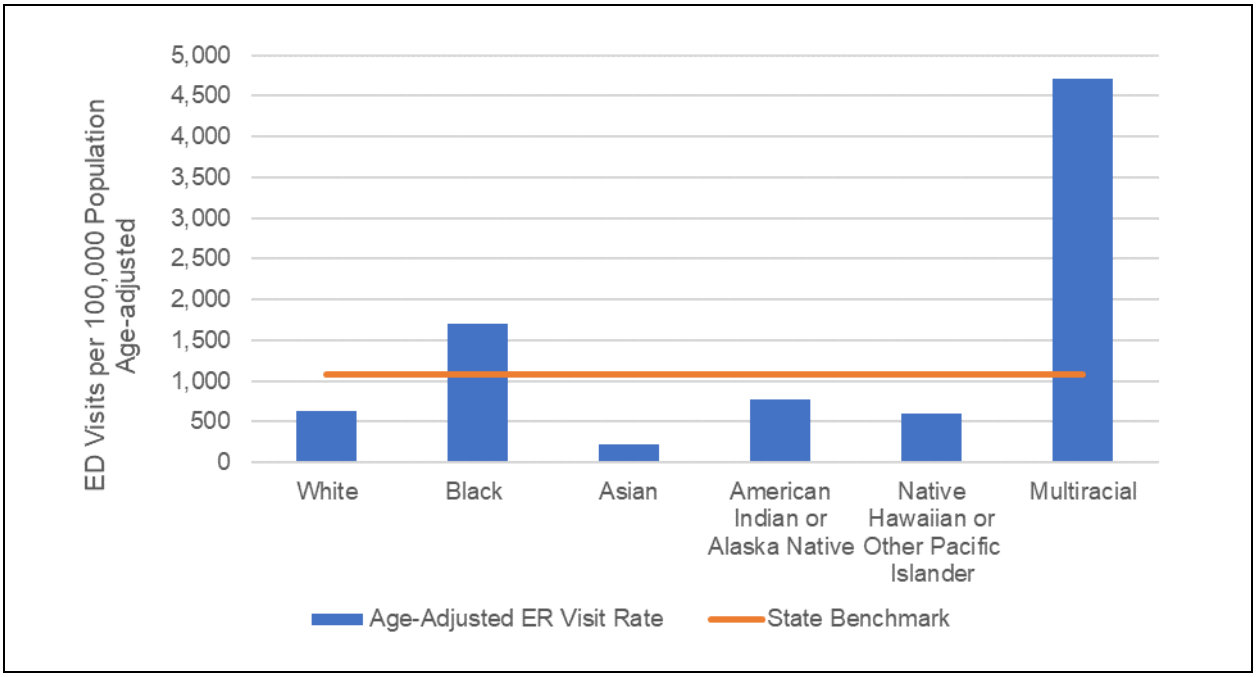



*Source: Georgia Department of Public Health, Oasis, 2017*

Identifying health disparities between and among specific populations in the community can be challenging based on the availability of local data. However, we do know that at a state level black and multi-racial populations experience ED visit rates pregnancy and childbirth complications conditions at a higher rate than the state benchmark of 1,077 ED visits per 100,000 population.[42]

[42] Georgia Department of Public Health, OASIS, 2017

*Pregnancy and Childbirth Complications*
*ED Visit Rate by Race*




*Source: Georgia Department of Public Health, Oasis, 2017*

Maternal education is highly important for birth outcomes since it can affect the infant's health through multiple pathways such as higher income, better access to health insurance, increased health knowledge, better cognitive ability, and less risky health behaviors. Overall for state of Georgia, 14.5% of women giving birth had less than 12 years of education. **Ten of sixteen counties in northeast Georgia had rates higher than the state. Five counties had rates that were 50% or more higher than the overall state benchmark: Franklin, 22.1%; Habersham, 31.7%; Rabun, 22.8%; Union, 21.8%; and White, 28.3%.**[43]

Teen births in the U.S. have declined over the last 20 years to the lowest level ever recorded, but still more than 86,000 teens ages 15 to 17 gave birth in 2012. Giving birth during the teen years has been linked with increased medical risks and emotional, social, and financial costs to the mother and her children. Becoming a teen mom affects whether the mother finishes high school, goes to college, and the type of job she will get, especially for younger teens ages 15 to 17.[44] The Georgia state benchmark for teen birth rates (ages 15-19) is 31.6 per 1,000 female population the same age; and the state of Georgia value is higher than the U.S. rate of 27.0/1,000. **Of the sixteen counties within the northeast Georgia region, seven counties have higher teen birth rates**

[43] Birth Certificate Records, Georgia Department of Human Resources, Division of Public Health, Office of Health Information and Policy, 2016
[44] Centers for Disease Control and Prevention, Preventing Pregnancy in Younger Teens, 2014

**than the Georgia benchmark. Three counties had rates that were more than 24% higher than the state rate: Franklin, 46.6; Hall, 39.3; and Stephens, 41.7.[45]**

Child mortality rates provide insight to both access of care and potentially, the social determinants that affect overall health. Child mortality is the number of deaths among children under age 18 per 100,000 population. The Georgia state benchmark for child mortality is 60.6 per 100,000 population. **Five counties had rates that exceeded the state benchmark: Stephens at 61.0, Banks at 64.4, Hart at 91.9, Franklin at 102.9 and Dawson at 105.5.[46]** It is important to note that child death is a relatively rare event, especially in small counties. Statistics depend on large numbers of events to detect small changes, and small changes in small communities may be hard to detect.[47]

*Access to Care – Transportation*

Each year, 3.6 million people in the United States do not obtain medical care due to transportation issues. Transportation issues include: lack of vehicle access, inadequate infrastructure, long distances and lengthy times to reach needed services, transportation costs and adverse policies that affect travel. Transportation challenges affect both rural and urban communities. Because transportation touches many aspects of a person's life, adequate and reliable transportation services are fundamental to healthy communities. Transportation issues can affect a person's access to health care services. These issues may result in missed or delayed health care appointments, increased health expenditures and overall poorer health outcomes. Transportation can also be a vehicle for wellness. Developing affordable and appropriate transportation options, walkable communities, bike lanes, bike-share programs and other healthy transit options can help boost health.[48]

From a lack of public transit option in the more densely populated portions of the region, to the additional challenges of accessing healthcare services in the rural areas, access to reliable transportation was consistently raised as a theme in the community input sessions.

[45] National Center for Health Statistics - Natality files, 2010-2016
[46] CDC WONDER mortality data, 2013-2016
[47] County Health Rankings, 2018
[48] American Hospital Association, Transportation and the Role of Hospitals, 2017

*Chronic Disease – Diabetes*

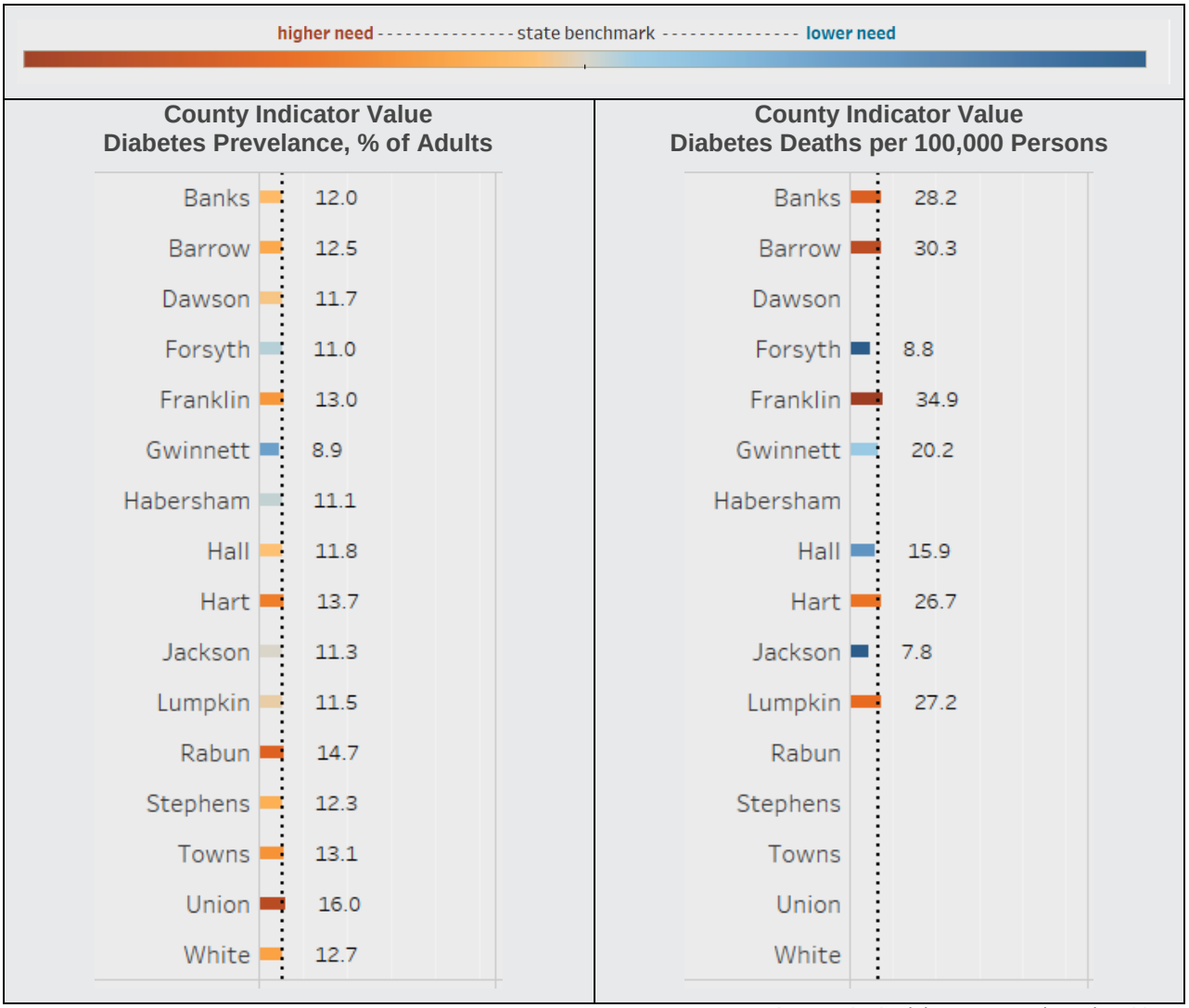
An estimated 30.3 million people of all ages - or 9.4% of the U.S. population - had diabetes in 2015. The percentage of adults with diabetes increased with age, reaching a high of 25.2% among those aged 65 years or older. Compared to non-Hispanic whites, the age adjusted prevalence of diagnosed and undiagnosed diabetes was higher among Asians, non-Hispanic blacks, and Hispanics between 2011–2014.[49]

Diabetes is an important marker for a range of health behaviors. This can be a valuable source of data for communities to understand the impact of health behaviors and disease management on both their population and their health care system.[50] Diabetes is a serious disease and when not well controlled and monitored, it can be life threatening. Hospital admissions for uncontrolled diabetes is considered an avoidable event. Diabetes, when properly controlled through health management and outpatient care, should not result in the need for inpatient care. When a community has elevated rates for hospital admissions due to uncontrolled diabetes, it points to challenges in health education, behavior modification, and the outpatient care system.

**Of the 16 counties in the Northeast Georgia region, 12 of the counties had a higher rate of diabetes prevalence in adults than the Georgia state benchmark of 11.3%. Three counties had rates that were more than 20% greater relative to the benchmark: Hart, 13.7%; Rabun, 14.7; and Union, 16%.[51] Additionally, five counties exceeded the state benchmark for the diabetes death rate, all were 26% or higher than the state benchmark of 21.5 diabetes deaths per 100,000 population (Hart, 26.7; Lumpkin, 27.2; Banks, 28.2; Barrow, 30.3; and Franklin, 34.9).[52]**

[49] Centers for Disease Control and Prevention, National Diabetes Statistics Report**,** 2017
[50] Diabetes Prevalence**,** County Health Rankings, 2018
[51] CDC Diabetes Interactive Atlas, 2014
[52] Georgia Department of Public Health, OASIS, 2017

*Diabetes*




*Source: CDC Diabetes Interactive Atlas, 2014*
*Georgia Department of Public Health, OASIS, 2017*

Note: Due to population/sample size, data are not available for every county

Communities with high populations of diabetic and pre-diabetic residents must address the gaps in care effectively and efficiently, because the disease poses a significant burden on overall health. Trending and tracking both prevalence and complication rates of diabetes will position them to best provide care for the community at large. Development of programs focusing on how to effectively manage diabetes, prevention education, and overall health and nutrition education are essential.

*Chronic Disease – Cardiovascular Disease*

Heart disease is the leading cause of death in America. Cardiovascular disease is a category of diseases and conditions that include coronary artery disease, high blood pressure, cardiac arrest, congestive heart failure, arrhythmia, peripheral artery disease,

stroke and congenital heart disease. More than 27.6 million Americans are diagnosed with cardiovascular disease. Associated conditions are obesity, diabetes, hypertension along with other co-morbid conditions.[53] **Within the northeast Georgia region, seven counties had heart disease death rates higher than the state benchmark of 75.6 deaths per 100,000 population. Four of these counties had death rates 22% - 78% higher relative to the benchmark (Towns, 92.0; Rabun, 92.7, Stephens, 95.9; and Lumpkin 134.8).[54]**

*Chronic Disease – Physical Activity*

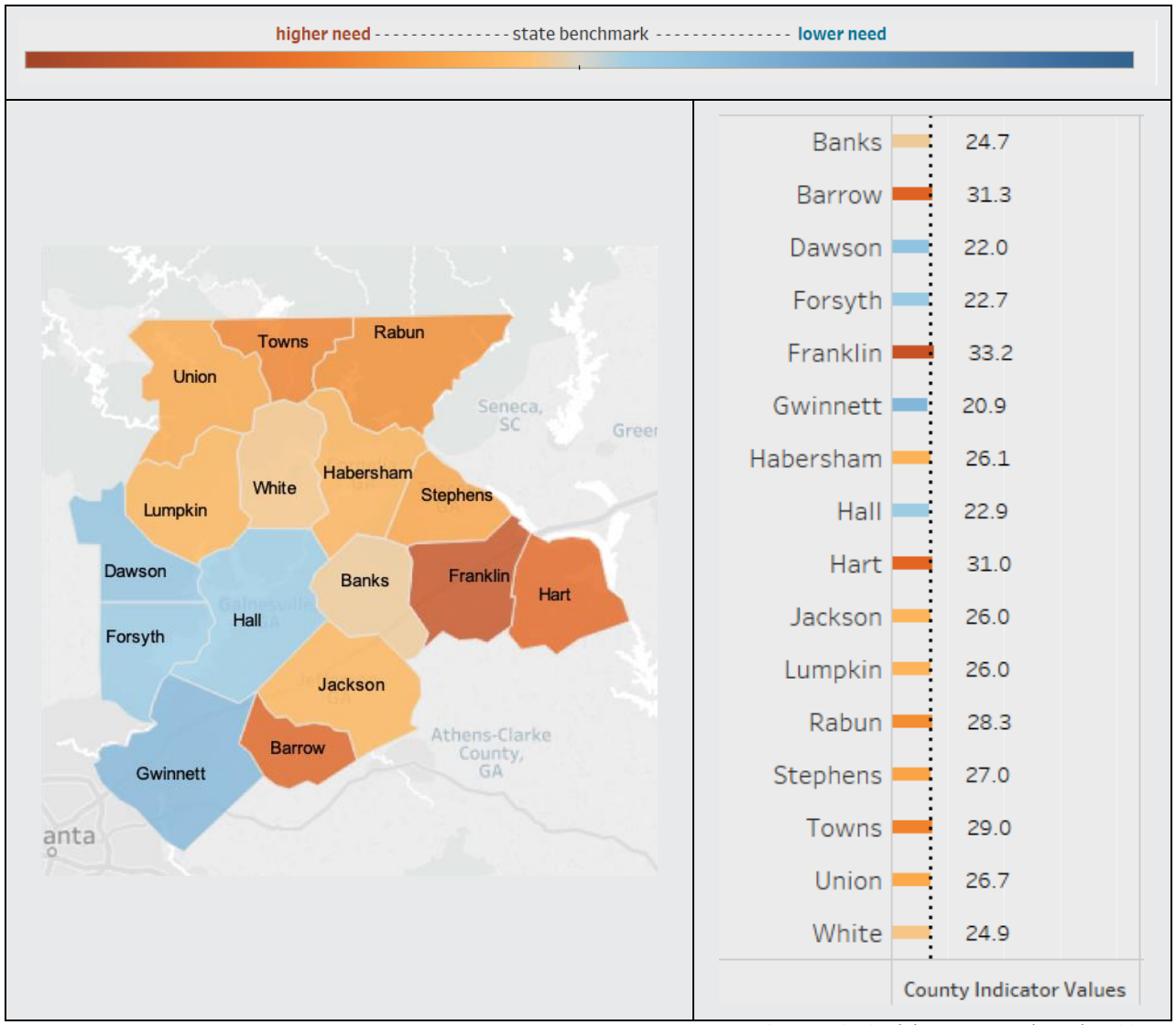
Physical inactivity is the percentage of adults age 20 and over reporting no leisure-time; physical activity such as running, calisthenics, golf, gardening, or walking for exercise.[55] Decreased physical activity has been related to several disease conditions such as type 2 diabetes, cancer, stroke, hypertension, cardiovascular disease, and premature mortality. Inactivity causes 11% of premature mortality in the United States and caused more than 5.3 million of the 57 million deaths that occurred worldwide in 2008.[56] Physical inactivity is linked to increased healthcare expenditures, particularly with circulatory system diseases.

**Within the 16 counties of the northeast Georgia region, 12 counties have an opportunity to improve physical activity as their rates of physical inactivity exceed the Georgia state benchmark of 24.1% and the U.S. national benchmark of 23%. Four counties exceeded the state benchmark by greater than 20%.[57]**

[53] Center for Disease Control and Prevention, Heart Disease Facts, 2019
[54] CDC WONDER mortality data, 2016
[55] County Health Rankings**,** Physical Inactivity, 2018
[56] Lee IM, Shiroma EJ, Lobelo F, Puska P, Blair SN, Katzmarzyk PT, for the Lancet Physical Activity Series Working Group, Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy, The Lancet. 2012; 380.9838:219-229
[57] CDC Diabetes Interactive Atlas, 2014

*Physical Inactivity*

*Percentage of Adults Reporting no Leisure Time Physical Activity*




*Source: CDC Diabetes Interactive Atlas, 2014*

*Septicemia*

Septicemia (Sepsis) is a serious medical condition. It is caused by an overwhelming immune response to infection in which the body releases immune chemicals into the blood to combat the infection. Those chemicals trigger widespread inflammation, which leads to blood clots and leaky blood vessels. As a result, blood flow is impaired, and that deprives organs of nutrients and oxygen and leads to organ damage.

In severe cases, one or more organs fail. In the worst cases, blood pressure drops, the heart weakens, and the patient spirals toward septic shock. Once this happens, multiple organs—lungs, kidneys, liver—may quickly fail, and the patient can die. Sepsis is a major challenge in hospitals, where it's one of the leading causes of death. It is also a main reason why people are readmitted to the hospital. Sepsis occurs unpredictably and can progress rapidly.[58]

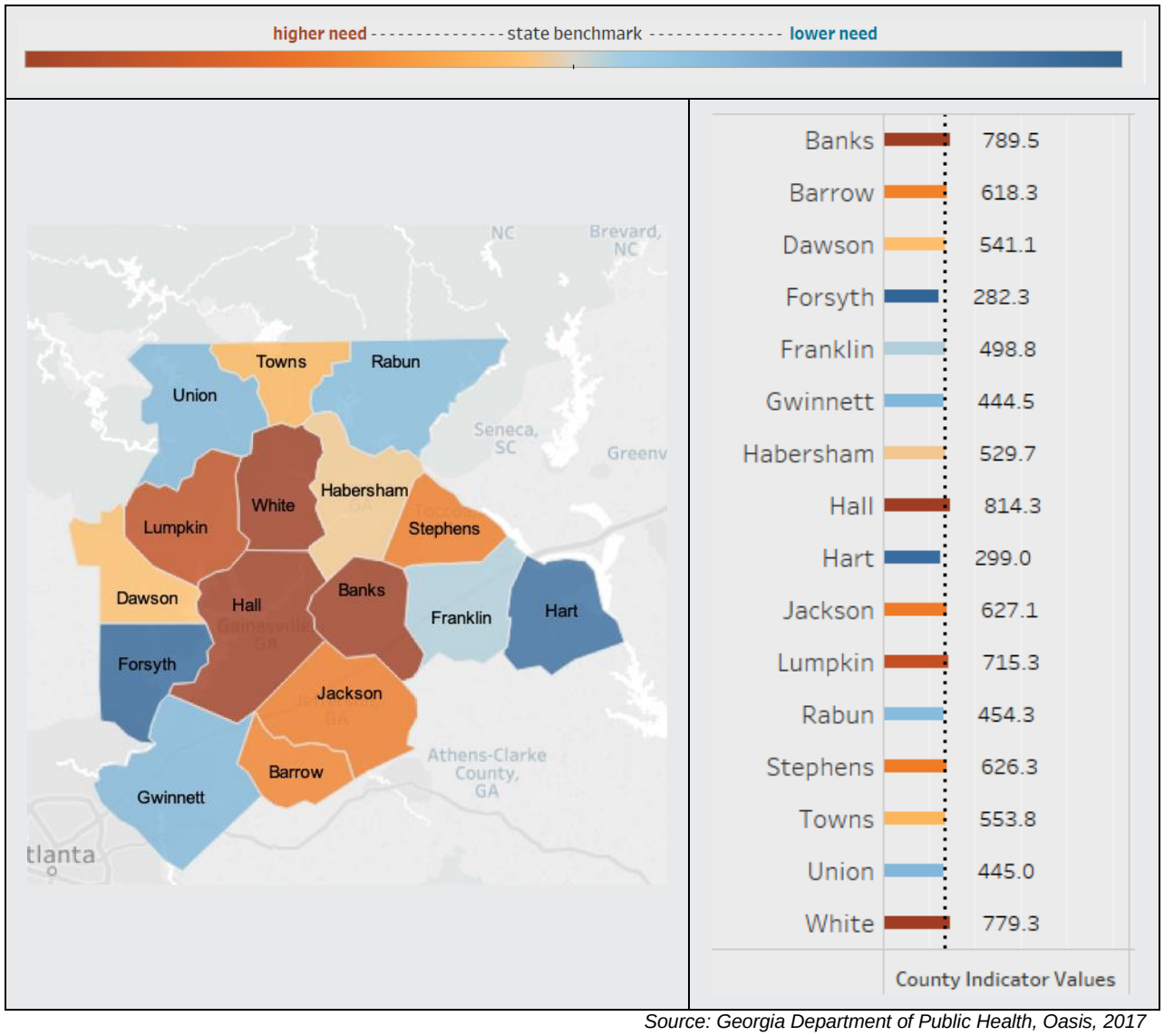
Anyone can get sepsis. The people at highest risk are infants, children, the elderly, and people who have serious injuries or medical problems such as diabetes, AIDS, cancer, or liver disease. Severe sepsis strikes more than a million Americans every year, and 15 to 30 percent of those people die. The number of sepsis cases per year has been on the rise in the United States.[59]

Common symptoms of sepsis are fever, chills, rapid breathing and heart rate, rash, confusion, and disorientation. Sepsis is treated in the hospital and often in serious conditions people are treated in intensive care units. Treatment almost always includes the use of antibiotic medications and fluids. Sepsis treatment is expensive. It often involves a prolonged stay in the intensive care unit and complex therapies with high costs. The Agency for Healthcare Research and Quality lists sepsis as the most expensive condition treated in U.S. hospitals, costing nearly $24 billion in 2013.[60]

**There is opportunity to improve septicemia in the northeast Georgia community. The overall Georgia state benchmark is 514.5 discharges per 100,000 population (age-adjusted). Ten of the 16 counties had values above the state benchmark. Three of the counties had discharge rates that were more than 50% higher relative to the state value (White, 779.3; Banks, 789.5, and Hall 813.3).[61]**

[58] National Institute of General Medicine Sciences, Sepsis, 2019
[59] National Institute of General Medicine Sciences, Sepsis, 2019
[60] Agency for Healthcare Research and Quality Healthcare Cost and Utilization Project Statistical Brief No. 204; May 2016. National inpatient hospital costs: the most expensive conditions by payer, 2013.
[61] Georgia Department of Public Health, Oasis, 2017

*Blood Poisoning (Septicemia)*
*2017 Discharge Rate per 100,000 Population (age-adjusted)*




*Source: Georgia Department of Public Health, Oasis, 2017*

*Summary*

The CHNA Partners collaborated to conduct a Community Health Needs Assessment for communities they serve in northeastern Georgia. Using both qualitative community feedback as well as publicly available and proprietary health indicators, the CHNA Partners identified and prioritized health needs in their communities and the region. Implementation plans with specific tactics and time frames will be developed to improve the health of the communities served and address the Partners' priority health needs. The northeast Georgia CHNA Partners have identified needs that are common between communities in order to establish synergies, foster opportunities for collaboration, and maximize resources as they work to improve the health status of the northeast Georgia region.

## Appendix A: Key Health Indicator Sources

| Category | Public Health Indicator | Source |
|---|---|---|
| Access to Care | Uninsured Children < 18 Years of Age | 2012-2016 U.S. Census Bureau, American Community Survey, Five Year Estimates, Table B27001 |
| | Diabetic Screening - Medicare | 2014 Dartmouth Atlas of Health Care |
| | Mammography Screening - Medicare | 2014 Dartmouth Atlas of Health Care |
| | Number of Primary Care Physicians per 100,000 Population | 2015 Area Health Resource File/American Medical Association |
| | Population to One Primary Care Physician | 2015 Area Health Resource File/American Medical Association |
| | Preventable Hospital Stays - Medicare - Discharge Rate | 2015 Dartmouth Atlas of Health Care |
| | Price-Adjusted Medicare Reimbursements per Enrollee | 2015 Dartmouth Atlas of Health Care |
| | Uninsured Adults < 65 Years of Age | 2015 Small Area Health Insurance Estimates |
| | Number of Dentists per 100,000 Population | 2016 Area Health Resource File/National Provider Identification file |
| | Population to One Dentist | 2016 Area Health Resource File/National Provider Identification file |
| | Population to One Mental Health Provider | 2017 CMS, National Provider Identification |
| | Population to One Non-Physician Primary Care Provider | 2017 CMS, National Provider Identification |
| | Ambulatory Sensitive Discharges: Acute Conditions | 2017 OASIS |
| | Ambulatory Sensitive Discharges: Avoidable Illnesses | 2017 OASIS |
| | Ambulatory Sensitive Discharges: Chronic Conditions | 2017 OASIS |
| Cancer | All Cancer Incidence | 2011-2015 State Cancer Registry |
| | Breast Cancer Incidence | 2011-2015 State Cancer Registry |
| | Breast Cancer Incidence - Medicare | 2011-2015 State Cancer Registry |
| | Colon Cancer Incidence | 2011-2015 State Cancer Registry |
| | Colon Cancer Incidence - Medicare | 2011-2015 State Cancer Registry |
| | Lung Cancer Incidence | 2011-2015 State Cancer Registry |
| | Lung Cancer Incidence - Medicare | 2011-2015 State Cancer Registry |
| | Prostate Cancer Incidence | 2011-2015 State Cancer Registry |
| | All Cancer Death Rate | 2016 CDC WONDER Online Database, Compressed Mortality File 1999-2016; Centers for Disease Control and Prevention, National Center for Health Statistics. |
| | Cancers - Discharge Rate | 2017 OASIS |
| | Cancers - ER Visit Rate | 2017 OASIS |

| Category | Public Health Indicator | Source |
|---|---|---|
| Conditions/Diseases | Chronic Condition: Heart Disease - Percent of FFS Medicare | 2007-2015 CMS.gov Chronic conditions |
| | Chronic Condition: Arthritis - Percent of FFS Medicare | 2007-2015 CMS.gov Chronic conditions |
| | Chronic Condition: Asthma - Percent of FFS Medicare | 2007-2015 CMS.gov Chronic conditions |
| | Chronic Condition: Stroke Survivors - Percent of FFS Medicare | 2007-2015 CMS.gov Chronic conditions |
| | Adult Obesity | 2014 CDC Diabetes Interactive Atlas |
| | Diabetes Diagnoses - Adults Age 20+ | 2014 CDC Diabetes Interactive Atlas |
| | Birth Defects - Discharge Rate | 2017 OASIS |
| | Birth Defects - ER Visit Rate | 2017 OASIS |
| | Blood Diseases (Anemias) - Discharge Rate | 2017 OASIS |
| | Blood Diseases (Anemias) - ER Visit Rate | 2017 OASIS |
| | Blood Poisoning (Septicemia) - Discharge Rate | 2017 OASIS |
| | Bone and Muscle Diseases - ER Visit Rate | 2017 OASIS |
| | Digestive System Diseases - Discharge Rate | 2017 OASIS |
| | Digestive System Diseases - ER Visit Rate | 2017 OASIS |
| | Endocrine, Nutritional, and Metabolic Diseases - ER Visit Rate | 2017 OASIS |
| | Infectious and Parasitic - Discharge Rate | 2017 OASIS |
| | Infectious and Parasitic Diseases - ER Visit Rate | 2017 OASIS |
| | Major Cardiovascular Diseases - Discharge Rate | 2017 OASIS |
| | Major Cardiovascular Diseases - ER Visit Rate | 2017 OASIS |
| | Musculoskeletal System and Connective Tissue Diseases - Discharge Rate | 2017 OASIS |
| | Nervous System Diseases - Discharge Rate | 2017 OASIS |
| | Nervous System Diseases - ER Visit Rate | 2017 OASIS |
| | Other Diseases of the Genitourinary System | 2017 OASIS |
| | Other Endocrine, Nutritional and Metabolic Diseases | 2017 OASIS |
| | Reproductive and Urinary System Diseases - ER Visit Rate | 2017 OASIS |
| | Respiratory Diseases - Discharge Rate | 2017 OASIS |
| | Respiratory System Disease - ER Visit Rate | 2017 OASIS |
| Environment | Access to Exercise Opportunities | 2010-2016 Business Analyst, Delorme map Data, ESRI, & US Census Tigerline Files |
| | Daily Particulate Matter Days | 2012 Environmental Public Health Tracking Network |
| | Driving Alone to Work | 2012-2016 American Community Survey, 5-year estimates |
| | Food Insecurity | 2015 Map the Meal Gap |

| Category | Public Health Indicator | Source |
|---|---|---|
| | Food - Limited Access to Healthy Foods | 2015 United States Department of Agriculture (USDA) |
| | Food Environment Index | 2015 USDA Food Environment Atlas, Map the Meal Gap from Feeding America |
| | Driving Alone to Work with Long Commute > 30 minutes | 2012-2016 American Community Survey, 5-year estimates |
| Health Behaviors | Percent Needing but Not Receiving Addiction Treatment | 2014 Substance Abuse and Mental Health Services Administration. |
| | Percent of People 12+ Reporting Drug Dependence | 2014 Substance Abuse and Mental Health Services Administration. |
| | Percent of Population 12+ Reporting Non-medical Use of Pain Relievers | 2014 Substance Abuse and Mental Health Services Administration. |
| | Physical Inactivity | 2014 CDC Diabetes Interactive Atlas |
| | Adult Smoking | 2016 Behavioral Risk Factor Surveillance System |
| | Excessive Drinking | 2016 Behavioral Risk Factor Surveillance System |
| | Insufficient Sleep | 2016 Behavioral Risk Factor Surveillance System |
| | Opioid Prescriptions per 100 Persons | 2017 Centers for Disease Control and Prevention |
| Health Status | Frequent Mental Distress | 2016 Behavioral Risk Factor Surveillance System |
| | Frequent Physical Distress | 2016 Behavioral Risk Factor Surveillance System |
| | Physically Unhealthy Days | 2016 Behavioral Risk Factor Surveillance System |
| | Poor or Fair Health | 2016 Behavioral Risk Factor Surveillance System |
| Infectious Conditions / Diseases | New HIV Diagnoses per 100,000, Age 13+ | 2015 Centers for Disease Control and Prevention |
| | Chlamydia Incidence | 2015 National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention |
| | HIV Prevalence Age 13+ | 2015 National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention |
| | STD Incidence for Youth, Ages 15-19 | 2016 Georgia Department of Human Resources, Division of Public Health, Epidemiology Branch, Notifiable Disease Section |
| | Pneumonia - Discharge Rate | 2017 OASIS |
| Injury & Death | Infant Mortality | 2010-2016 CDC WONDER Mortality Data |
| | Firearm Fatalities | 2012-2016 CDC WONDER Mortality Data |
| | Injury-Related Deaths - Planned and Unplanned | 2012-2016 CDC WONDER Mortality Data |
| | Alcohol-Impaired Driving Deaths | 2012-2016 Fatality Analysis Reporting System |
| | Child Mortality < 18 Years of Age | 2013-2016 CDC WONDER Mortality Data |
| | Motor Vehicle Traffic Death | 2013-2016, CDC WONDER Online Database, Compressed Mortality File 1999-2016; Centers for Disease Control and Prevention, National Center for Health Statistics. |
| | Drug Overdose Deaths | 2014-2016 CDC WONDER Mortality Data |
| | Years of Potential Life Lost before Age 75 | 2014-2016 National Center for Health Statistics - Mortality Files |
| | Suicide Rate | 2014-2017 CDC WONDER Online Database; Underlying Cause of Death Database, 1999-2017; Centers for Disease Control and Prevention, National Center for Health Statistics |

| Category | Public Health Indicator | Source |
|---|---|---|
| | Cerebrovascular Disease Death Rate | 2015-2016 CDC WONDER Online Database; Compressed Mortality File 1999-2016; Centers for Disease Control and Prevention, National Center for Health Statistics |
| | Chronic Lower Respiratory Disease (CLRD) Death Rate | 2015-2016 CDC WONDER Online Database; Compressed Mortality File 1999-2016; Centers for Disease Control and Prevention, National Center for Health Statistics |
| | Unintentional Death Rate | 2015-2016 CDC WONDER Online Database; Compressed Mortality File 1999-2016; Centers for Disease Control and Prevention, National Center for Health Statistics |
| | Heart Disease Death Rate | 2016 CDC WONDER Online Database; Compressed Mortality File 1999-2016; Centers for Disease Control and Prevention, National Center for Health Statistics |
| | Drug-Related Deaths | 2017 Centers for Disease Control and Prevention |
| | COPD Deaths | 2017 OASIS |
| | Diabetes Deaths | 2017 OASIS |
| | External Cause of Injury - Discharge Rate | 2017 OASIS |
| | External Cause of Injury - ER Visit Rate | 2017 OASIS |
| | Falls - Discharge Rate | 2017 OASIS |
| | Other Mental and Behavioral Disorder Deaths - Not Related to Drug Use | 2017 OASIS |
| **Maternal & Child Health** | Low Birth Weight | 2010-2016 National Center for Health Statistics - Natality files |
| | Teen Birth Rate per 1000 Population Age 15-19 | 2010-2016 National Center for Health Statistics - Natality files |
| | Births to Mothers with Less than 12 Years of Education | 2016 Birth Certificate Records, Georgia Department of Human Resources, Division of Public Health, Office of Health Information and Policy |
| | Very Low Birth Weight | 2016 State-Level estimates are from the National Center for Health Statistics (NCHS), National Vital Statistics Reports |
| | Preterm Births | 2016 Data from the National Center for Health Statistics (NCHS) |
| | Fetal and Infant Conditions - Discharge Rate | 2017 OASIS |
| | Fetal and Infant Conditions - ER Visit Rate | 2017 OASIS |
| | Pregnancy and Child birthing Complications - Discharge Rate | 2017 OASIS |
| | Pregnancy and Child birthing Complications - ER Visit Rate | 2017 OASIS |
| **Mental Health** | Chronic Condition: Alzheimer's Disease/Dementia - Percent of FFS Medicare | 2007-2015 CMS.gov Chronic conditions |
| | Poor Mental Health Days | 2016 Behavioral Risk Factor Surveillance System |
| | Mental and Behavioral Disorders - Discharge Rate | 2017 OASIS |
| | Mental and Behavioral Disorders - ER Visit Rate | 2017 OASIS |
| **Population** | Severe Housing Problems | 2010-2014 Comprehensive Housing Affordability Strategy (CHAS) Data |

| Category | Public Health Indicator | Source |
|---|---|---|
| | Disconnected Youth Age 16-24 | 2010-2014 Measure of America |
| | Homicides | 2010-2016 Compressed Mortality File (CMF) |
| | Violent Crime Rate | 2012-2014 Uniform Crime Reporting (UCR) Program |
| | High School Dropouts | 2012-2016 U.S. Census Bureau, American Community Survey, Five Year Estimates, Table B14005 |
| | Some College | 2012-2016 American Community Survey, 5-year estimates |
| | Children in Single-Parent Households | 2012-2016 American Community Survey, 5-year estimates |
| | Income Inequality | 2012-2016 American Community Survey, 5-year estimates |
| | Residential Segregation - Black/White | 2012-2016 American Community Survey, 5-year estimates |
| | Residential Segregation - Non-White/White | 2012-2016 American Community Survey, 5-year estimates |
| | Poverty: Families with children with annual incomes less than 150% of the Federal Poverty Threshold | 2012-2016 U.S. Census Bureau, American Community Survey, Five Year Estimates, Table B17022 |
| | Poverty: Individuals Living Below Poverty Level in Past 12 months | 2013-2017 American Community Survey 5-Year Estimates |
| | Disabled Persons Under Age 65 | 2013-2017 U.S. Census Bureau, American Community Survey (ACS) and Puerto Rico Community Survey (PRCS), 5-Year Estimates. |
| | High School Graduation | 2014-2015 EDFacts |
| | Social and Membership Associations | 2015 County Business Patterns |
| | Poverty: Children Eligible for Free Lunch | 2015-2016 National Center for Education Statistics |
| | Children with a Substantiated Incident Of Child Abuse and/or Neglect | 2016 Child Protective Services Data System, Georgia Department of Human Resources, Division of Family and Children Services |
| | Unemployment Rate 16+ | 2016 Local Area Unemployment Statistics (LAUS) program of the Bureau of Labor Statistics |
| | Median Household Income | 2016 Small Area Income and Poverty Estimates (SAIPE) |
| | Poverty: Children in Poverty | 2016 Small Area Income and Poverty Estimates (SAIPE) |
| | Poverty: All People in Poverty | 2017 Census Bureau, Small Area Income and Poverty Estimates (USDA ERS) |
| | Births to Unmarried Women | 2017 OASIS |

## Appendix B: Watson Health Focus Groups and Interviews Participants

| Participant Organization Name | Public Health | Medically Under-served | Low-income | Chronic Disease Needs | Minority Populations | Governmental Public -- Health Dept. | Public Health Knowledge -- Expertise |
|---|---|---|---|---|---|---|---|
| **District 2 Health Department** | | | | | | | |
| Avita Community Partners | X | X | X | X | X | | X |
| Basan Ministries | | X | X | | X | | |
| City of Dawsonville | | X | | | | | |
| City of Hartwell | X | X | X | X | X | X | |
| ConnectAbility | | X | X | X | | | |
| Dahlonega Country Day Academy | | | X | | | | |
| Dawson County Board of Commissioner | X | | | | | | X |
| Dawson County Chamber of Commerce | X | X | X | X | X | | |
| Dawson County Health Department | X | X | X | X | X | X | |
| Dawson County Long Range Planning Committee | | | | X | | | X |
| Dawson County Wee Books Program | | | X | | X | | X |
| District 2 Health Department | X | X | X | X | X | X | X |
| Forsyth County Health Department | X | | X | | X | X | X |
| Forsyth County Schools | | X | X | X | X | | |
| Franklin County Health Department | X | | | | | X | X |
| Franklin County Health Department | X | | | | | X | X |
| Gainesville City School System | | | X | | X | | |
| Gainesville Housing Authority | | X | X | | | | |
| Gainesville-Hall County Community Services | | X | | | | | X |
| GCSS | | | | | | | |
| Georgia Legal Services Program | | X | X | X | X | | |

| Participant Organization Name | Public Health | Medically Under-served | Low-income | Chronic Disease Needs | Minority Populations | Governmental Public -- Health Dept. | Public Health Knowledge -- Expertise |
|---|---|---|---|---|---|---|---|
| Good News Clinics | | X | X | X | | | |
| Good Shepherd Clinic | X | X | X | X | | | |
| Habersham County Emergency Services | X | X | X | X | X | | X |
| Habersham County Schools | | X | X | X | X | | X |
| Habersham Hospital Authority | | | | | | | |
| Habersham Medical Center | X | X | X | X | | | X |
| Habersham Medical Center Foundation | X | X | X | X | X | | |
| Hall County Government | X | | | | | | |
| Hart County Health Department | X | X | X | | X | X | X |
| HomeTown Health | | | | X | | | |
| Lavonia Health and Safety | X | | | | | X | |
| Lumpkin Literacy Coalition/ Community Helping Place | | X | | | | | X |
| Medical Center Foundation | X | | | | | | |
| NAMI | | X | X | X | X | | |
| NGPG Dahlonega Internal Medicine | X | X | X | X | X | | |
| NGPG OBGYN Dahlonega, Dawsonville and Cleveland | | | X | X | X | | |
| NGPG Pediatrics Toccoa, Clarkesville, Demorest | | X | X | X | X | | |
| North Georgia Technical College | | | X | | X | | |
| South Enotah Child Advocacy Center | X | X | X | X | X | | |
| White County Public Safety | X | | | | | | |
| **Habersham Medical Center** | | | | | | | |
| Avita Community Partners | | | X | | | | |
| District 2 Health Department | X | X | X | X | X | X | X |

| Participant Organization Name | Public Health | Medically Under-served | Low-income | Chronic Disease Needs | Minority Populations | Governmental Public -- Health Dept. | Public Health Knowledge -- Expertise |
|---|---|---|---|---|---|---|---|
| Habersham County Emergency Services | X | X | X | X | X | | X |
| Habersham County Schools | | X | X | X | X | | X |
| Habersham Hospital Authority | | | | | | | |
| Habersham Medical Center | X | X | X | X | | | X |
| Habersham Medical Center Foundation | X | X | X | X | X | | |
| HomeTown Health | | | | X | | | |
| NGPG Pediatrics Toccoa, Clarkesville, Demorest | | X | X | X | X | | |
| North Georgia Technical College | | | X | | X | | |
| **NGHS Greater Braselton Service Area** | | | | | | | |
| Barrow County Board of Commissioners | X | X | X | X | X | | |
| Barrow County DFCS | | | X | | X | | |
| Barrow County School System | | X | X | | X | | |
| Caldwell Electric Contractors | | X | | X | | | |
| City of Winder | X | | | | | | |
| District 2 Health Department | X | X | X | X | X | X | X |
| Gwinnett County Fire and Emergency Services | X | X | X | X | X | | |
| Harold Webb Regions Bank | | | | | | | |
| Jackson County Area Chamber of Commerce | X | | | | | | |
| Jackson County Family Connection | X | X | X | X | X | | |
| Jackson County Habitat for Humanity | | X | X | X | X | | |
| Jackson County School System | X | X | X | X | X | | |
| Jackson EMC | X | | | | | | |
| Marathon Health | | | X | X | X | | |

| Participant Organization Name | Public Health | Medically Under-served | Low-income | Chronic Disease Needs | Minority Populations | Governmental Public -- Health Dept. | Public Health Knowledge -- Expertise |
|---|---|---|---|---|---|---|---|
| Medlink Georgia | | X | | X | | | |
| Movement Mortgage | | | | | | | |
| NGHS | X | X | X | X | X | | |
| NGHS Advisory Board | X | X | X | X | X | | X |
| Town of Braselton | | | | | | | |
| United Way of Northeast Georgia | | X | X | | | | |
| Whelchel Dunlap Jarrard & Walker LLP | | | | | | | |
| Winder Housing Authority | | | X | | | | |
| **NGHS Primary Service Area** | | | | | | | |
| Amistad Cristiana International | | | | | X | | X |
| Avita Community Partners | X | X | X | X | X | | X |
| Bank of America | | | | | | | |
| Basan Ministries | | X | X | | X | | |
| District 2 Health Department | X | X | X | X | X | X | X |
| Edward Jones | | | | | | | |
| Gainesville City School System | | | X | | X | | |
| Gainesville Housing Authority | | X | X | | | | |
| Gainesville-Hall County Community Services | | X | | | | | X |
| GCSS | | | | | | | |
| Georgia Legal Services Program | | X | X | X | X | | |
| Georgia Power Co. | | | X | X | X | | |
| Good News Clinic | X | X | X | X | X | | |
| Hall County Government | X | | | | | | |

| Participant Organization Name | Public Health | Medically Under-served | Low-income | Chronic Disease Needs | Minority Populations | Governmental Public -- Health Dept. | Public Health Knowledge -- Expertise |
|---|---|---|---|---|---|---|---|
| Hall County Library | | | | | | | |
| Lakeview Academy | | | | | | | X |
| Lanier Village Estate | | | | | | | |
| Medical Center Foundation | X | | | | | | |
| NAMI | | X | X | X | X | | |
| NGHS Advisory Board | | | | | | | |
| St. John Baptist Church | | | | | X | | |
| State Farm/ Sheila Sanchez Inc | | | | | | | |
| **NGHS Secondary Service Area 400** | | | | | | | |
| Brenau University/ Lumpkin Co. Commissioner | X | X | X | X | X | | X |
| City of Dawsonville | | X | | | | | |
| Community Helping Place | | X | X | X | | | |
| ConnectAbility | | X | X | X | | | |
| Dahlonega Country Day Academy | | | X | | | | |
| Dawson County Board of Commissioner | X | | | | | | X |
| Dawson County Chamber of Commerce | X | X | X | X | X | | |
| Dawson County Health Department | X | X | X | X | X | X | |
| Dawson County Long Range Planning Committee | | | | X | | | X |
| Dawson County Wee Books Program | | | X | | X | | X |
| District 2 Health Department | X | X | X | X | X | X | X |
| Good Shepherd Clinic | X | X | X | X | | | |
| Lumpkin Literacy Coalition/ Community Helping Place | | X | | | | | X |
| Mike Berg & Associates LLC | | | | | | | |

| Participant Organization Name | Public Health | Medically Under-served | Low-income | Chronic Disease Needs | Minority Populations | Governmental Public -- Health Dept. | Public Health Knowledge -- Expertise |
|---|---|---|---|---|---|---|---|
| NGPG Dahlonega Internal Medicine | X | X | X | X | X | | |
| NGPG OBGYN Dahlonega, Dawsonville and Cleveland | | | X | X | X | | |
| South Enotah Child Advocacy Center | X | X | X | X | X | | |
| Tillman, Bailey Samples and Associates | | | | | | | |
| University of North Georgia | | | | | | | |
| **NGHS Secondary Service Area North** | | | | | | | |
| Avita Community Partners | | | X | | | | |
| District 2 Health Department | X | X | X | X | X | X | X |
| Habersham County Emergency Services | X | X | X | X | X | | X |
| Habersham County Schools | | X | X | X | X | | X |
| Habersham County United Way | | X | X | X | X | | X |
| Habersham EMC | | | | | | | |
| Habersham Hospital Authority | | | | | | | |
| Habersham Medical Center | X | X | X | X | | | X |
| Habersham Medical Center Foundation | X | X | X | X | X | | |
| HomeTown Health | | | | X | | | |
| Mountain Judicial Circuit | | | | | | | |
| NGPG Pediatrics Toccoa, Clarkesville, Demorest | | X | X | X | X | | |
| North Georgia Technical College | | | X | | X | | |
| The Gorman Rupp Co. | | X | X | X | X | | |
| White County Public Safety | X | | | | | | |
| **Stephens County Hospital** | | | | | | | |
| Avita Community Partners | | | X | | | | |

| Participant Organization Name | Public Health | Medically Under-served | Low-income | Chronic Disease Needs | Minority Populations | Governmental Public -- Health Dept. | Public Health Knowledge -- Expertise |
|---|---|---|---|---|---|---|---|
| District 2 Health Department | X | X | X | X | X | X | X |
| Franklin County Health Department | X | | | | | X | X |
| Habersham County Emergency Services | X | X | X | X | X | | X |
| Habersham County Schools | | X | X | X | X | | X |
| Habersham Hospital Authority | | | | | | | |
| Habersham Medical Center | X | X | X | X | | | X |
| Habersham Medical Center Foundation | X | X | X | X | X | | |
| HomeTown Health | | | | X | | | |
| Lavonia Health and Safety | X | | | | | X | |
| NGPG Pediatrics Toccoa, Clarkesville, Demorest | | X | X | X | X | | |

*Note: multiple persons from the same organization may have participated*

## Appendix C: Watson Health Focus Groups and Interviews Summary

### Advisory Board Focus Group, Northeast Georgia Health System

A series of focus groups took place with the Northeast Georgia Health System (NGHS) Advisory Board on February 4, 2019 at Northeast Georgia Medical Center's Gainesville campus and included 32 participants.

Advisory board members include community members who are leaders in their respective communities and reflect the demographics of the regional service area. The purpose of the Advisory Board is to gain feedback regarding new program and service opportunities, to respond to broad community issues related to healthcare and to make recommendations to the Board of Trustees of NGHS and to its management as requested.

Focus group facilitators assigned Advisory board members to one of four (4) sub-groups that corresponded to the four (4) NGHS communities; Greater Braselton Service Area (GBSA), Primary Service Area (PSA), Secondary Service Area 400 (SSA 400) and Secondary Service Area North (SSA North). Each sub-group contained Advisory Board members who lived and/or worked in that community. A Watson health facilitator completed the same exercises with all sub-groups and focused discussion on their community.

*NGHS Greater Braselton Service Area (GBSA)*

**The GBSA market includes Jackson County, Barrow County, and portions of Gwinnett, Hall, and Banks counties**. Focus group participants described a growing area in transition from rural to suburban. The primary industry was tourism and more than 800,000 people each year visited the local wineries, luxury hotels, spas, and restaurants. Many residents commuted to Atlanta for work, but there were also local employment opportunities on both ends of the income scale. The community lies along a major railway creating an increased number of industrial warehouse jobs driving the economic boom; both the retail and restaurant industries had grown dramatically in the past 10 years. There had been an influx of large companies into the area such as Amazon, Bed Bath and Beyond, and Home Goods. The population growth had been driven by families moving from Atlanta, attracted by good schools in Gwinnet and Hall counties, as well as retirees seeking more affordable housing and an escape from urban life. The town of Braselton sits at the intersection of Jackson, Barrow, Gwinnett, and Hall counties and had more than 18,000 residents. Focus group participants described Jackson County as still largely rural but growing and slowly becoming more suburban. Overall, the area was economically diverse with less racial and ethnic diversity.

Focus group participants identified multiple factors impacting access to health care. Population growth outpaced infrastructure growth and created a shortage of local specialists, especially orthopedic doctors. Many medical practices were full and didn't accept new patients, regardless of insurance status. Banks and Jackson counties didn't have a hospital, forcing residents to commute to Athens for care. A high amount of radon occurred naturally in the ground, causing an increased incidence of lung cancer. Heavy truck traffic along the I-85 corridor also led to a higher number of motor vehicle accidents.

Finally, low-income community residents often couldn't access health care because they were uninsured, couldn't afford copays, and lacked transportation.

**The discussion of health needs and barriers in the community centered around substance abuse, mental health, access to care, and lack of insurance, as well as lack of health habits and chronic diseases such as obesity and diabetes.**

Substance Abuse

Focus group participants said Barrow County's high rates of substance abuse and police activity were related to smoking (vaping, tobacco, marijuana) and alcohol abuse. Residents often called Bethlehem "Methlehem" because of Methamphetamine production and usage. Widespread opioid use also led to many unintentional drug overdoses.

Mental Health and Substance Abuse

The focus group said the community lacked mental health facilities and services, specifically inpatient psychiatric beds and detox facilities. The growing senior population also led to an increased demand for treatment of Parkinson's disease, Alzheimer's and Dementia.

Obesity and Food Access

The community experienced a high rate of chronic diseases such as obesity, diabetes and heart disease. The focus group said some residents lacked motivation to seek care or prioritize health. The community provided a limited number of outdoor spaces for exercise, few sidewalks and limited accessibility for the disabled. Many residents were unaware of available outdoor recreation services. The group agreed readily accessible fast food and limited healthy food options also acted as barriers to health. They recommended an increased focus on education about health care, healthy foods and exercise options.

*NGHS Primary Service Area (PSA)*

**The PSA market includes Hall County.** The focus group participants described the NGHS PSA community as diverse in both age and ethnicity. The population living in the city of Gainesville was more than fifty percent Hispanic. The community was also aging due to several factors; retirees migrated into the area, younger people migrated out for more urban/suburban environments and the remaining population was aging. Retirees found the area attractive because of its proximity to Atlanta and Athens, its strong arts community and the quality medical care available; plenty of physicians, including every type of specialist and service, were available. The primary local industry was health care, but also included manufacturing and poultry processing. The community had low unemployment and good jobs, even for those without a higher education. Hall County had an active business network and strong chamber of commerce.

The area's rapid growth presented challenges. The high cost of land drove up housing prices and resulted in a lack of affordable housing. The community's infrastructure hadn't kept pace with its growth. In a car-dependent area, the PSA community needed good public transportation. At the same time, people were philanthropic and local community and

government leaders worked well together as they set out to achieve common goals. Local leaders recently came together with a vision for their community called Vision 2030.

**The focus group identified obesity, mental health/addiction and access to care as the community's major health needs and barriers.**

Obesity

Local pace and lifestyle issues contributed to obesity. Families ate fewer healthy meals because they were too busy to cook them. People were more sedentary, with less outdoor play and more screen time. Many residents lacked education about healthy eating and its impact on health; for example, how poor eating habits contributed to heart disease and diabetes. In addition, poorer families couldn't afford healthy food.

Mental Health and Addiction

The PSA community had an inadequate supply of mental health providers, facilities, and services to meet the existing need. Additionally, many residents had limited or no insurance coverage for mental health services. Those seeking treatment for mental health issues felt stigmatized about needing care, a perception that transcended class, insurance status, and income.

Opioid abuse and addiction were prevalent in the community and were often intertwined with mental health issues, yet services for mental health and addiction were siloed. Additionally, the community had insufficient services to treat addiction. Participants worried about the increased use of tobacco in school-age children and blamed the availability of e-cigarettes and vaping.

Access to Care

The cost of health care services and insurance, the shortage of bilingual medical providers and poverty were barriers to care. Some insurance plans covered residents but didn't include NGHS in their network, forcing people to go outside the community for their care. Language barriers created misunderstanding and trust issues for Hispanic members of the community, especially when providers didn't speak Spanish. The community also needed more care options for undocumented residents, who didn't trust clinics and providers with their undocumented status. People living in poverty often wouldn't seek help or use resources available to low-income residents in the community because of the stigma attached to using them (e.g. food pantry).

*NGHS Secondary Service Area 400 (SSA 400)*

**The SSA 400 market includes Dawson and Lumpkin Counties**. The SSA 400 service area of the Northeast Georgia Health System conducted one focus group session with a total of 13 participants in February 2019 during the breakout session of the Advisory Board meeting. This is an area with a mix of rural and suburban sections transitioning to suburban and urban. Lumpkin County was more rural than Dawson because of Dawson County's proximity to Georgia State Route 400. The community was predominantly Caucasian but

was becoming more diversified. People living around the University of North Georgia had more varied ethnic backgrounds.

The SSA 400 community included many low-income residents with high school educations. Roughly 30% of the schools were Title 1, indicating they served a student body with a large concentration of low-income students and required federal subsidies.

The underinsured population

The community had a high underinsured population with less education and a higher proportion of obesity, high blood pressure, and diabetes. This population was hard to reach from a health communication perspective as they were wary of sources outside their smaller communities. Coordination with local religious authorities was a utilized communication route for health care knowledge.

Access to healthcare

This service area had large amounts of farm and protected land with a general lack of major roadways. As such, a main theme from the focus group was significant travel time required to access health services in the area. There was a need for better access across the entire spectrum of health services. One participant noted that she had to travel 40 minutes in labor. At a minimum, the geography of the service area created a need for satellite emergency services.

Focus group participants also noted that tax incentives and the price index has made the community attractive to retirees, driving a large increase in the older population. This increase in retirees joining the community, as well as the aging of the already established population, has created a greater need for care focused on older adults.

*NGHS Secondary Service Area North (SSA North)*

**The SSA North market is comprised of one ZIP code from Banks County (30511 – Baldwin) and the six counties Habersham, Rabun, Stephens, Towns, Union, and White.** The SSA North focus group's eight (8) participants included health agency administrators, medical professionals and representatives from various community organizations. Most of the participants worked with at-risk populations; the group at-large represented moderate to-low-income populations, minorities, and the medically under-served.

Focus group participants described SSA North as a growing faith-based community that was attracting a diverse age group and an increasing number of retirees. Employment was plentiful with a variety of jobs even for those whom did not have a higher education. The reasonable cost of living made the area attractive to a diverse group. Significant increases in agritourism and wineries provided jobs and awareness of the region.

Lack of affordable housing

The counties had a considerable amount of poverty and, until a few years ago, inadequate housing. The community removed the decrepit housing units to improve the affordable housing market. They slowly built mixed housing as new housing went up however, it wasn't

enough to replace what was demolished. Low income residents faced an array of barriers to accessing health services. Even those with insurance were often unable to afford the time and cost to seek preventive care and resorted to using emergency services. The community lacked consistent public transportation, limiting access to health and community services for residents without a car or unable to drive, especially seniors. Many residents worked hourly jobs, could not take time off for medical appointments and had potentially higher injury rates and pain management issues, leading to a high risk of prescription abuse. Language and cultural differences also created barriers to being able to live a productive life. People looking for jobs and healthcare services were challenged by a consistent lack of translators.

Lack of "living wage" employment

Both blue- and white-collar jobs were available however, the predominance of county jobs were for blue collar or "hourly" workers. The group suggested that jobs were available but said most of them didn't offer a living wage. Untrained job seekers could find jobs that provided them with a low weekly wage that made it difficult to find housing, buy groceries or afford healthcare. Young college graduates often had to move to a larger city to find employment for their specialty.

Healthcare and generational habits

Drug and alcohol addictions commonly crossed generational lines. Children didn't learn healthy decision making in their households and were unlikely to make health a priority. Parental drug use influenced their children's use and the cycle became the unfortunate norm. Other health care challenges included chronic diseases like diabetes, hypertension and COPD. Focus group participants were concerned about the lack of mental health care providers. Because no psychiatrists practiced in the county, residents were forced to leave the area for psychiatric care and often waited months for appointments. Follow-up care was problematic because many people lacked transportation.

## Barrow County Focus Group

The Barrow county focus group took place on March 4, 2019 at NGMC Barrow in Winder, GA and included 5 participants.

Focus group participants described Barrow County as an historically rural area with rapid growth in the New Winder area. Growth was propelled by affordable housing options for Atlanta commuters along 316 and I-85. Group participants compared New Winder, an area of population growth, new subdivisions and investments to Old Winder, an area of mostly unchanged residents and demographics. They stated Barrow County consisted of many longtime senior residents, but also an increasing millennial population and community businesses changing to meet the new demographics. Focus group participants said residents in Barrow County were predominantly white, with growing Hispanic, African American and Hmong populations. The school system was depicted as having a transient student population due to half the housing units in the market being rentals. The homeless population was growing because of a shortage of subsidized housing in this community and long waitlists for families.

**Focus group participants identified the lack of health education and generational health behaviors as the top barriers to better health in the community.** The combination of these barriers led to high levels of alcohol and opioid abuse. Participants described the Northeast Georgia Medical Center Barrow as a valuable resource and a much-needed community hospital. Historical physician recruitment and retention challenges drove residents to leave the area for treatment or resulted in long wait times. The market experienced a shortage of psychologists, obstetricians, primary care physicians, pediatricians, and oncologists and most sub-specialties.

The discussion of health needs and barriers in the community centered around access to healthcare, generational habits, and health education.

Access to healthcare

Low income residents faced an array of barriers to accessing health care services. Those with insurance frequently sought out treatment in emergency rooms because they lacked the time to search for preventive services and the resources to pay them. Barrow County's inconsistent public transportation limited access to health and community services for residents without cars, especially seniors. Many residents worked hourly jobs and could not take time off for medical appointments. These hourly workers experienced higher injury rates, leading to pain management issues and a high risk of prescription abuse. Language and cultural barriers, especially in the growing Hmong community, also acted as deterrents to those seeking care.

Chronic diseases like hypertension, diabetes, and cancer were prevalent in this market. Focus group participants believed that high levels of radon in the soil caused high rates of lung cancer and possibly high rates of cancer in general.

Education and generational habits

Focus group participants correlated better education with making better health choices. In households with generational unhealthy behaviors, children were unlikely to make health a

priority. Residents lacking adequate health care knowledge frequently dismissed efforts to help them by saying, "You're going to die of something." The focus group believed the cycle of unhealthy behavior was intertwined with self-medication; parental opioid and alcohol abuse often led to similar abuse by their children. The shortage of local psychiatrists forced residents to travel outside the county for psychiatric care, where they faced long wait times for appointments. The shortage of psychologists and counseling services led to untreated high anxiety and depression rates, as evidenced by the high suicide rate at local schools.

## Dawson County Focus Group

The Dawson county focus group took place on March 5, 2019 at NGHS's Medical Plaza 400 and included 3 participants.

Focus group participants described a tight-knit community that still maintained its historic, "country folk" identity. Families resided in the community for multiple generations, with young people often returning home after completing their college education elsewhere. The primary industries and employers were the government, the school district, agriculture, and chicken processing plants. Recent growth in the IT and Healthcare sectors created new job opportunities but most professionals commuted to Atlanta for work. The community lacked a railway and public transit system, forcing commuters to use Georgia State Route 400 to move in and out of the area. Dawson County was one of the fastest growing counties in the state of Georgia and the U.S., driven by expansion out of the Atlanta metro area. Participants shared that residents had mixed feelings about the growth; some feared the negative impact this might have on the local culture.

**The discussion of health needs and barriers in the community centered around mental and behavioral health; access to care issues; and food access and nutrition.**

Mental and Behavioral Health

Mental health and substance abuse issues plagued the community. Alcohol and drug abuse were prevalent and on the rise. Addiction to methamphetamines was common and created a cycle of generational poverty. The community housed a large homeless population, many of whom struggled with addiction. Opioid abuse was a growing concern as the medical community's pain management practices flooded the county with readily accessible drugs.

The county lacked mental health providers and all forms of mental health services: inpatient, outpatient, counseling, and rehabilitation programs. AVITA acted as the largest mental health provider in the community but the organization's services were limited due to lack of funding. Local policies further added to the challenge of addressing the mental health needs in the county. The local drug court did not provide Methadone treatment or transition services for people struggling to break the cycle of addiction.

Access to Care

Focus group participants described a variety of access to care issues impacting the community. The county had limited low and free cost primary care options. Some uninsured residents received care at Good Shepherd Clinic and the Health Department which offered a variety of preventive care services. Many residents did not have a designated primary care provider and relied on the Emergency Room as their main source of healthcare. Poor health literacy and limited knowledge of the importance of preventive care acted as a barrier to improving the health status of the community.

In some cases, retirees who moved into the area, maintained relationships with their doctors in Atlanta rather than establish new relationships with local providers. Patients needing specialty care services visited the Emergency Room or traveled to NGMC Gainesville. Dawson county lacked cardiologists, so many who were living with cardiovascular disease struggled to properly manage their condition.

High cost of care and lack of insurance acted as major barriers to health. Indigent residents who lacked insurance did not seek preventive care and often waited to see a provider until an emergency arose. Many of the large employers in the community did not offer health insurance to their minimum wage employees. Residents who were fortunate to have dental coverage were burdened by high deductibles and large out of pocket costs. Poor dental hygiene caused by lack of preventive dental care and high use of methamphetamines was common in the community. Children on Medicaid received dental coverage through age 19 but after that point many stopped seeing a dentist.

Food Access and Nutrition

Participants shared that the western portion of the county lacked access to high quality grocery stores. Residents could not afford to eat healthy and often relied on fast food as a low cost and convenient option. The county struggled with high rates of cardiovascular disease, diabetes, and obesity possibly due to poor diet and the access to care issues outlined earlier.

Additional education was needed, particularly for young people, on the benefits of healthy eating. Food pantries were under-utilized due to lack of awareness in the community and potential stigma around seeking social services. Residents in need could benefit from targeted advertising and culturally sensitive messaging.

## Gwinnett and Jackson Counties Focus Group

The Gwinnett and Jackson counties focus group took place on March 7, 2019 at NGMC Braselton in Braselton, GA and included 6 participants.

Focus group participants described a community that was growing and changing rapidly due to recent economic development. Gwinnett county, historically a suburb of Atlanta, had become increasingly urban due to expansion out of the Metro area. The community was ethnically and racially diverse. Projections estimated that by 2025, the population would reach 1.5-2 million residents, driven by the influx of baby boomer retirees and young families. Increased access to Atlanta created job opportunities for residents, but also brought about negative changes. Crime and gun violence in the area were on the rise. Overall, the county offered a variety of healthcare and social services to meet residents' needs. The county boasted a Public Health Department, abundant outdoor recreation opportunities, and a variety of primary and specialty care services.

Participants described Jackson as less diverse and more rural than Gwinnett county. The community maintained a small-town feel: the area remained largely agricultural, was relatively safe, and family friendly. Expansion out of Atlanta had not reached Jackson to the same extent as Gwinnett but the community was beginning to feel the impact. The county lacked infrastructure such as roads, housing, schools and healthcare services to keep pace with the recent population growth. New industries and factories moved into the area creating jobs and economic development; however, these companies primarily offered unskilled, minimum wage employment. The area lacked high paying jobs which forced many residents to commute to Atlanta for work.

**The discussion of health needs and barriers in the community centered around access to care issues; substance abuse; food access and nutrition; and housing.**

Access to Care

Focus group participants shared that while Gwinnett had an abundance of healthcare services and providers available, many of these were at capacity. The local hospital lacked enough beds and had recently started diverting ambulances outside of the county. Jackson on the other hand, lacked specialty care services, after hours clinics, urgent care centers, and a 24-hour pharmacy.

High cost of care and lack of insurance posed a universal barrier to health. Patients with Medicaid did not qualify for low cost or free clinics that only serviced the uninsured and struggled to find providers who would accept their insurance. Generational poverty prevented some residents from utilizing services that had a fee attached. Participants believed that even low-cost services were prohibitive for residents that were focused on meeting basic needs.

In Jackson county, patients faced an additional transportation barrier to accessing services. Residents who lacked transportation, resorted to calling 911 and utilizing the ER for non-emergent care. Patients traveled to Atlanta and surrounding counties for specialty care, forcing them to miss a full day of work for a medical appointment.

Substance Abuse

Focus group participants discussed the rise in substance abuse across both counties. Opioid and heroin overdoses increased as opioid addiction became more prevalent. Opioid addiction, once a problem that primarily affected low income residents was now common in all segments of the population. Participants felt that the over-prescription of pain medicines was to blame for the growth in addiction. Depression was also prevalent in the community, potentially exacerbating substance abuse issues.

Food Access and Nutrition

Local food culture promoted unhealthy eating habits. Participants described a “fried food culture” that valued taste over nutrition. Residents who wished to eat healthier sometimes lacked the knowledge and financial means to prepare a healthy meal. Food pantries struggled to stock fresh foods consistently, while faith-based food pantries focused on serving their congregation. Residents who did not qualify for federal assistance but struggled to afford the high cost of healthy foods were left with limited choices and often resorted to fast food.

Housing

Participants discussed the rapid population growth and its negative impact on housing availability. Jackson county struggled to provide adequate amounts of low income and rental housing for its growing workforce. Residents resorted to sharing homes with other families, creating overcrowded and unsafe living situations. Retirees who lacked savings either moved in with family members or resided in personal care homes which were on the rise in the community. These homes often provided some medical services but were typically unregulated creating quality concerns. Despite the lack of housing, the Jackson and Gwinnett area had a relatively small homeless population due to the lack of shelters and services for this vulnerable group.

## Habersham and Stephens Counties Focus Group

The Habersham and Stephens Counties focus group took place on March 6, 2019 at Habersham Medical Center in Demorest, GA and included nine participants.

Focus group participants described Habersham and Stephens counties as a desirable place to live due to the geography, the climate and the low-crime rate. The counties had good schools, several colleges and employment opportunities; it was also an attractive place to retire. The area was growing but not at the rate of other areas to the south (towards Atlanta). Southern Habersham County had a large Hispanic population, but the remainder of the area was not diverse and was primarily Caucasian. Many members of the growing undocumented population had concerns trusting the health care system. The counties needed more senior living communities because of the aging population and migration of retirees to the area, but the current infrastructure couldn't support them. Participants acknowledged the generational poverty that existed in the community and the need for more low-cost housing options. Impoverished members of the community were reluctant to seek out community/social services due to the stigma of needing assistance.

The participants noted that community groups collaborated well and had good working relationships. Community residents were generous, supported the United Way and worked together to address needs in the community. Residents had good access to health care, access that had improved in recent years. Still, a deficit of specialists and primary care providers led community members to rely on ambulance services. The Habersham County ambulance company ran as many ambulances as a county three times its size. Stephens County did not have enough recreation and activities for younger people, resulting in their migration out of the area.

The discussion of health needs and barriers in the community centered around access to care, mental health and substance abuse, as well as obesity and access to food.

### Access to Care

Focus group participants identified multiple issues affecting access to care. The community had a shortage of primary care providers, yet recruiting efforts were challenging and costly. Some local providers no longer accepted Medicare patients. The walk-in clinics (including an FQHC) had limited hours that were inconvenient for those who worked or had after-hour needs. Urgent care services that helped divert residents' use of the Emergency Department (ED) for non-emergencies were unavailable. The community, which currently had no pediatricians, needed both pediatricians and pediatric specialists. Dental care was in short supply, primarily for children and low-income individuals. The community also lacked pre-natal care for drug-abusers and the undocumented population. Community transportation options were limited, which compounded these access issues.

The focus group discussed other access to care issues, including the cost of care and insurance coverage. Newly insured individuals who purchased coverage through the Affordable Care Act did not understand their benefits and didn't realize they were responsible for out-of-pocket costs associated with doctor or ED visits. Residents with high-deductible plans and the uninsured avoided care because they couldn't afford the out-of-pocket costs. Many community members couldn't afford office visit and medication costs.

Participants also expressed concerns about the challenges elderly residents faced navigating the coordination of care and their Medicare benefits.

Mental Health and Substance Abuse

The group said the community had a shortage of mental health services, including a lack of inpatient mental health services in both counties. The two counties also had a problem with drug abuse, primarily methamphetamines and opioids such as Fentanyl. While the community maintained a low crime rate, any crime that occurred was related to drugs. Participants discussed the “addiction lifestyle” and the fact that drug abuse in the community was often generational, making it a challenge to break the cycle. Domestic violence and child abuse were additional community challenges. The group stressed a need for outreach related to mental health and addiction.

Obesity and Food Access

Focus group participants discussed hunger in the community, especially among the elderly and children. In households dealing with drug addiction, childhood hunger was a concern as addicts prioritized drugs over food. Many residents had poor eating habits, particularly people with limited incomes, because unhealthy foods were less expensive than healthy alternatives. The group noted the relationship between poor eating habits, high obesity rates and prevalence of diabetes in their community.

## Hall County Focus Group

The Hall county focus group took place on March 5, 2019 at the Fair Street Neighborhood Center in Gainesville, GA and included 8 participants.

Focus group participants described Hall County as a growing community with significant diversity in age, ethnicity and jobs. A growing movement in the community drove residents to "do something" regarding housing, healthcare access and schools. A county effort to demolish many decrepit housing units left the county with a lack of housing; however, participants said mixed housing was the future for models. The county was trying to create more affordable housing options for current residents and Atlanta commuters. Focus group participants described Hall county as segregated. Although the county worked for 20 years to be inclusive, participants saw room for opportunity and improvements. Both significant wealth and poverty existed within in the community, although not a lot in the middle class.

Students in the school system were primarily Hispanic, followed by Caucasian students and few African American students. The population of undocumented residents challenged school and healthcare capabilities. Lower income residents struggled to access healthy foods. Participants said food deserts existed in the county, especially for people without reliable transportation.

**Focus group participants were consistent in selecting lack of jobs that produce a "living wage" and a lack of affordable housing in the community as their most significant challenges.** Historically, Hall County experienced a shortage of health care providers, especially sub-specialists. The county was continually challenged by a lack of mental health providers and by mental health resources for undocumented residents.

Lack of affordable housing

Many Hall County residents were living in poverty. Up until a few years ago, the county struggled with inadequate housing. They removed the decrepit housing units to improve the affordable housing market and slowly built mixed housing as new housing went up. However, new housing units didn't replace what was demolished.

Lack of access to health care

Low income residents faced an array of barriers to accessing health services. Even those with insurance were often unable to afford the time and cost to seek preventive care and resorted to using emergency services. Hall County had no consistent public transportation, limiting access to health and community services for residents without a car or an ability to drive, especially seniors. Many residents worked hourly jobs and couldn't take time off for medical appointments. These hourly workers had potentially higher injury rates and need for pain management, leading to a high risk of prescription abuse. Language and cultural barriers were also barriers to a productive life. Job searches and healthcare were particularly challenging due to the consistent lack of translators.

Lack of "living wage" employment

Both blue- and white-collar jobs were available in the county; however, jobs in the county were predominantly blue collar or "hourly" jobs. The group suggested that jobs were

available, but most of the jobs didn't offer a living wage. Untrained job seekers were employed at jobs that didn't provide them with a weekly wage, making it difficult to find housing, buy groceries or afford healthcare. Young people who attended college often had to move to a larger city to find employment for their specialty.

Healthcare and generational habits

Generational behaviors with drug and alcohol addictions were common occurrences. Because children didn't learn healthy decision making in their household, they were unlikely to make health a priority. Parents using drugs influenced their children and the cycle became the unfortunate norm. Chronic diseases like diabetes, hypertension, COPD presented challenges to health. Residents were forced to leave the county for psychiatric and mental health care, often waiting months for appointments, because providers were unavailable in the county. Residents without transportation also had problems accessing follow-up care.

## Hall County Hispanic Focus Group

The Hall county Hispanic focus group took place on April 13, 2019 at the Norma Hernandez Income Tax Offices in Gainesville, GA and included 7 participants.

The Hispanic focus group participants in Hall County described the community as very kind and diverse with rich job opportunities. They discussed the abundant lakes and green space for weekend activities and the large number of Spanish speaking businesses along the "Atlanta highway." More than one participant said, "Everything you need is here" about this area of Gainesville. The City of Gainesville was half Hispanic, but participants noted that Hispanic businesses and residents were geographically concentrated. Gainesville, called the poultry capital of the world because of its many poultry processing plants, had low unemployment. The local education system was “very good,” with many higher education opportunities for the people who could access them. More than three quarters of elementary school students were Hispanic. Gainesville was becoming less segregated, as exemplified by the new "tortilla express" program that encouraged social mingling among downtown businesses.

Participants spent a significant amount of time discussing the unique health needs and barriers for Hall County’s Hispanic population. Basic official information about Gainesville’s Hispanic population was inaccurate, even the population count. Fear of giving information to the government led many residents to avoid being counted in the census, not just the undocumented population. That fear created barriers to Hispanic residents’ access to health care; if people avoided getting a driver’s license and purchasing health insurance, they couldn’t drive to the doctor’s office or access health care services. Hall County provided more plentiful transportation options than other areas, including a city bus along the “Atlanta Highway,” Uber and many Hispanic taxi companies. Because Latino churches were a dominant presence and pastors had a huge influence, some participants suggested that partnering with big churches would be a good way to share information. Very few Hispanic seniors lived alone, usually residing with family members, but social isolation and caregiver support were still hardships.

**The discussion of health needs and barriers in the community centered around the lack of education and awareness of preventive care and wellness, healthcare costs and the need for more urgent care clinics in convenient locations.**

Health education - Awareness, lack of preventive care, wellness

Focus group participants identified the lack of preventive care as the largest health need. They linked lack of care to issues of wellness, awareness and access to information about available services. The group said residents needed more information on how to maintain good health, including regular checkups and care. Health was not a priority for many; "You're going to die of something" was a common sentiment. Participants said that many Hispanic residents did not have insurance, believed that treatment would be inferior without insurance and needed more information about how to enroll.

The focus group described cultural and language barriers to successful health education. In Latino culture, people often espoused “the Latino Way - unless they're dying, they don't go

to the doctor or emergency room." This attitude led to diabetics who didn't get care, patients who fainted before going to the doctor and "natural" Mexican tea and ointment remedies. Language barriers made it more difficult to distribute information. Focus group participants suggested using new ways to share information about providers and wellness, including partnering with schools, distributing information at large Hispanic employers and increasing the number of health fairs held in convenient locations. Participants believed they needed to educate the community that the hospital helped, and that it was against the law to turn people away.

Care in convenient locations

The focus group said the community's top priority was to locate urgent care centers in convenient locations. The hospital recently closed a nearby urgent care center and the community needed more. Participants believed that the healthcare system had no reason to come to "Atlanta Highway," forcing Hispanic residents to travel further for services. The group asked if doctors could set up offices locally and said a local hospital presence would change the perception and awareness of hospital services.

Cost

Cost was the major barrier to better health in the community. The uninsured and underinsured populations avoided preventive care and health services due to costs and needed assistance and education to navigate the system and learn about available resources. In addition, some Hispanic residents had misconceptions and cultural beliefs that increased the barriers to health care treatment. Misconceptions included the belief that going to the hospital would always cost thousands of dollars or lead to large hospital bills, and that treatment at hospitals took a long time. Hispanic residents often turned to remedies and shots from the local market because they were cheap, easily accessible and familiar. Younger people between the ages of 20 and 40 didn't purchase insurance because they didn't think they needed it and thought employer-sponsored insurance was sometimes a waste of money. Many workers in this market were hourly workers who couldn't afford to take time off for medical appointments.

## Lumpkin County Focus Group

The Lumpkin county focus group took place on March 8, 2019 at the University of North Georgia's Professional and Continuing Education building in Dahlonega, GA and included 5 participants.

Focus group participants described Lumpkin County as a commuter community, with the University and Koyo manufacturing being the primary employers. The county experienced slow growth over the last twenty years. Despite some increases in box stores (Walmart, Home Depot, etc.), community residents had to leave the area for most purchases. Participants characterized the community as having both significant wealth and poverty. Affordable housing wasn't available; home prices were expensive and out of the budget of most residents. The county included a large homeless population of whom many lived in tents.

Participants said longtime residents had an Appalachian type culture. The area was not diverse and was 95% Caucasian. Retirees, drawn to the community wineries and arts, found the area attractive. Some of the military veterans who served in the area came back and retired. Students in local schools were primarily Hispanic, followed by Caucasian students and a few African American students. The population of undocumented residents challenged schools and healthcare. Lower income residents, especially those lacking reliable transportation, struggled to access healthy foods in the county, which contained food deserts.

**The focus group participants consistently identified the lack of jobs that produced a "living wage" and lack of affordable housing as the community's most significant challenges. Historically, the county experienced a shortage of health care providers, especially sub-specialists. Residents faced the continual challenge of mental health provider shortages and undocumented residents had no available mental health resources.**

Lack of affordable housing

Lumpkin County had a considerable amount of poverty and, until a few years ago, inadequate housing. To improve the affordable housing market, the county razed the decrepit housing units and slowly built mixed housing as new housing was constructed. Despite the efforts, the new housing didn't sufficiently replace what was demolished.

Lack of access to health care

Low income residents faced an array of barriers to accessing health services. Even those with insurance lacked the time to search for preventive care or the cost of treatment, and they resorted to using emergency services. Lumpkin County had no consistent public transportation, limiting access to health and community services for residents without a car or an ability to drive, especially seniors. Many residents worked hourly jobs, could not take time off for medical appointments, and had potentially higher injury rates and pain management needs, leading to a high risk of prescription abuse. Language and cultural barriers were also barriers to being able to live a productive life; without an adequate number of translators, job searches and healthcare treatment were particularly challenging.

Lack of "living wage" employment

Lumpkin County businesses offered both blue- and white-collar jobs, but the predominance of employment was for blue collar or "hourly" workers. The focus group said other jobs were available, but most of them didn't offer a living wage. Untrained job seekers found jobs that provided them with a weekly wage that made it difficult to find housing, buy groceries or afford healthcare. Young college graduates often had to move to a larger city to find employment for their specialty.

Healthcare and generational habits

Generational behaviors with drug and alcohol addictions were common occurrences. Children didn't learn healthy decision making in their households and were unlikely to make health a priority. Parents using drugs influenced their children's choices and the cycle became the unfortunate norm. Chronic diseases like diabetes, hypertension and COPD presented challenges to health. Focus group participants identified the shortage of mental health care providers as a significant concern. With no psychiatrists in this county, residents were forced to leave the county for care, often waiting months for appointments. These residents had problems accessing follow-up care because they lacked transportation.

## Interviews Summary

As part of the CHNA process, the northeast Georgia CHNA partners collaborated with Watson Health to complete 25 key informant interviews with community members who represented public health, low-income populations, minorities, the medically under-served, and populations with chronic diseases. Participants included public health and social service agency administrators; community leaders; and representatives who serve the community and have insight into community needs. For a list of participating organizations see **Appendix B**.

*Community Interviews*

| Northeast Georgia Community | Interviews Completed |
|---|---|
| District 2 Public Health | 20 |
| Habersham Medical Center | 2 |
| NGHS – GBSA | 6 |
| NGHS – PSA | 5 |
| NGHS – SSA 400 | 6 |
| NGHS – SSA North | 3 |
| Stephens County Hospital | 4 |

*Interview Themes by Community*

| Themes | District 2 Health Dept | HMC | NGHS GBSA | NGHS PSA | NGHS SSA 400 | NGHS SSA North | SCH | Total |
|---|---|---|---|---|---|---|---|---|
| Access to Care - Dental Care | X | X | X | X | X | X | X | 7 |
| Access to Care - Insurance Status | X | X | X | X | X | X | X | 7 |
| Access to Care - Primary Care | X | X | X | X | X | X | X | 7 |
| Conditions/Diseases - Cardiovascular Disease | X | X | X | X | X | X | X | 7 |
| Conditions/Diseases - Diabetes | X | X | X | X | X | X | X | 7 |
| Conditions/Diseases - Obesity | X | X | X | X | X | X | X | 7 |
| Food Access and Nutrition | X | X | X | X | X | X | X | 7 |
| Transportation | X | X | X | X | X | X | X | 7 |
| Infectious Disease - STI | X | X | X | X | X | X | X | 7 |
| Maternal and Child Health | X | X | X | X | X | X | X | 7 |
| Mental Health | X | X | X | X | X | X | X | 7 |
| Access to Care - Other | X | X | X | X | X | X | X | 7 |
| Access to Care - Specialty Care | X | X | X | X | X | X | X | 7 |
| Health Education/Literacy | X | X | X | X | X | X | X | 7 |
| Physical Activity | X | X | X | X | X | X | X | 7 |
| Access to Care - Preventive Care | X | X | X | X | X | X | X | 7 |
| Access to Care - Cost | X | | X | X | X | X | X | 6 |
| Housing | X | X | X | X | | X | X | 6 |
| Infectious Disease - Other | X | X | X | X | X | X | | 6 |
| Infectious Disease - HIV | X | X | X | X | X | X | | 6 |
| Mental Health - Providers | X | X | X | X | X | X | | 6 |
| Access to Care - Coordination of Care/Resources | X | X | X | X | X | X | | 6 |
| Immigrant/Undocumented/Refugee Status | X | X | X | X | X | X | | 6 |
| Language Barriers | X | X | X | X | X | X | | 6 |
| Policy and Government | X | X | X | X | X | X | | 6 |
| Stigma around Mental Health and Social Services | X | X | X | X | X | X | | 6 |
| Income | X | | X | X | X | X | X | 6 |
| Other | X | | X | X | X | | X | 5 |
| Substance Abuse - Opioids | X | | X | X | X | | X | 5 |
| Substance Abuse - Smoking | X | | X | X | X | | X | 5 |
| Cancer - All | X | | X | X | X | | | 4 |
| Homelessness | X | | X | X | X | | | 4 |
| Education | X | X | X | | | X | | 4 |

| Themes | District 2 Health Dept | HMC | NGHS GBSA | NGHS PSA | NGHS SSA 400 | NGHS SSA North | SCH | Total |
|---|---|---|---|---|---|---|---|---|
| Substance Abuse - Alcohol | X | | | X | X | | X | 4 |
| Substance Abuse - Drugs | X | | X | | X | | X | 4 |
| Substance Abuse Care | X | | X | X | X | | | 4 |
| Access to Care - Preventable Hospitalizations | X | | | X | X | | | 3 |
| Violence | X | | X | | X | | | 3 |
| Access to Care - Medications | X | | X | | | | X | 3 |
| Health Behaviors | X | | X | X | | | | 3 |
| Social Isolation | X | | X | | | | X | 3 |
| Fair or Poor Health Status | X | | | X | | | | 2 |
| Injury and Death | X | | | X | | | | 2 |
| Mental Health - Suicide | X | | | | X | | | 2 |
| Cultural/Religious Barriers | X | | | | | | X | 2 |
| Segregation | X | | | | X | | | 2 |
| Cancer - Breast | X | | | | | | | 1 |
| Cancer - Lung | | | X | | | | | 1 |
| Employment | | | X | | | | | 1 |

Note: A value of X indicates that a theme was mentioned by at least one of the interviews for a market

## Appendix D: Additional Qualitative Data

*Hall County Survey conducted by Bill Stiles at the Johnson Group*

March 26, 2019

TO: Christy Moore, Manager, Community Health Improvement
Northeast Georgia Health System

FROM: Bill Stiles, Director of Strategy & Research

SUBJECT: *Community Health Needs Assessment Interview Results*

**Overview**

Over a three-day period in March 2019, a bilingual interview team fielded a short health questionnaire among residents in Hall County, Georgia. The effort was part of Northeast Georgia Health System's data collection process for a new Community Health Needs Assessment (CHNA).

The interview team completed 199 surveys among lower-income and uninsured adults visiting the following public locations:

1. The Primary Care Clinic located at the Hall County Health Department
2. The Good News Clinics
3. The Gainesville Housing Authority Melrose Community Apartments
4. Tower Heights Apartments, operated by the Gainesville Housing Authority

The locations for the interviews were similar to CHNA interviews conducted in 2016. The demographic profile of 2019 participants skews a little older than the 2016 study, but participation by gender and race are very close to the profile of the 2016 effort.

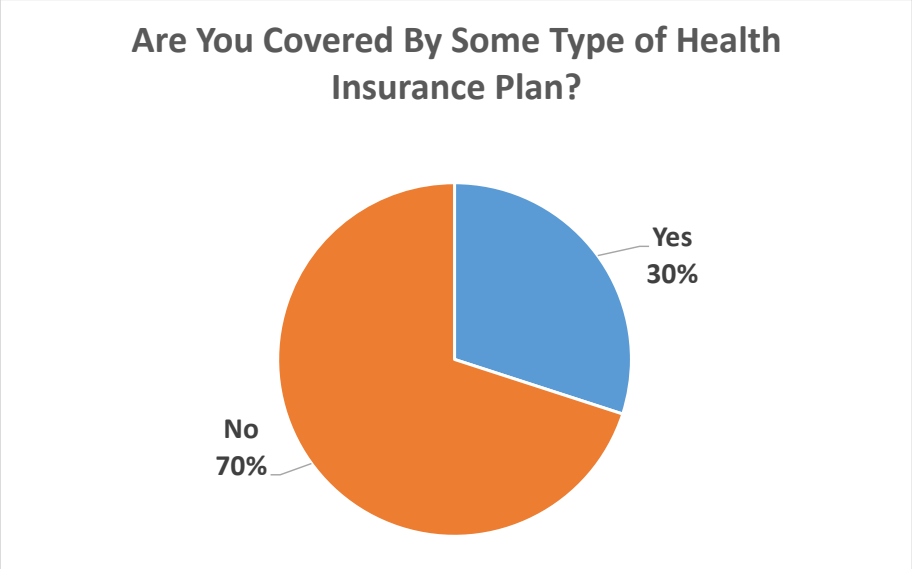
| ***Gender:*** | |
|---|---|
| **Male** | 51 or 26% |
| **Female** | 148 or 74% |

| ***Age:*** | |
|---|---|
| **18 - 24** | 3% |
| **25 - 34** | 12% |
| **35 - 44** | 23% |
| **45 - 54** | 23% |
| **55 - 64** | 23% |
| **65 - Over** | 17% |

| ***Race:*** | |
|---|---|
| **White, Non-Hispanic** | 30% |
| **Black or African American** | 20% |
| **Latino or Hispanic** | 47% |
| **All Others** | 3% |

**Access to Health Insurance**

Most of those interviewed (70%) reported they do not have health insurance of any type. This is a larger percentage than observed in 2016. Exactly 60 respondents (30% of the total) reported they do have insurance. Those with insurance would include the 34 respondents who were age 65 or older, and therefore eligible for Medicare.

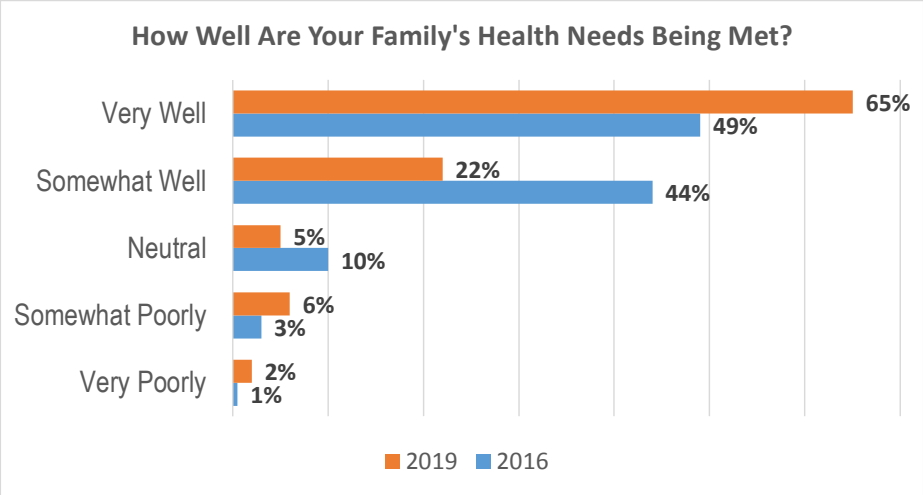



**How Well Are Family Health Needs Met?**

Despite a larger share of those with no health insurance, almost two-thirds of survey participants said their family's health needs are being met *very well*. This is a significant improvement over 2016. As seen in the chart on the following page, 65% said their family's needs are being met *very well*, compared to only 49% who said that three years ago.

The improvement primarily comes from those who, in 2016, said their family's health needs were met *somewhat well*, which shrank form 44% in 2016 to 22% in 2019.

Those on the poorly served end of the scale increased slightly. Though small in number, the share of those who said their needs are being met *somewhat poorly* or *very poorly* increased to 8% in the 2019 interviews, compared to only 4% in 2016.




The 69 people who said their family health needs were met *somewhat* or *very poorly*, or were being met only *somewhat well*, were asked the reasons why. The largest number of them, 41 people, cited lack of insurance as the primary reason. Further, an additional 17% cited financial difficulties or the high cost of care.

| ***Q. What prevents your family from getting the care you/they need?*** | **Number of Responses** | **Percent of Responses** |
|---|---|---|
| **No insurance/lack of coverage** | 41 | 59% |
| **Financial difficulties/Cost of care** | 12 | 17% |
| **Lack of access to doctors** | 4 | 6% |
| **Transportation problems** | 1 | 1% |
| **Legal status/No documentation** | 1 | 1% |
| **Special needs** | 1 | 1% |

Some participants who reported having insurance said they still could not afford care due to their inability to afford copays and deductibles.

**Greatest Health Needs**

When asked to name their greatest health need, most respondents talked about their personal health struggles. The most frequently mentioned health needs were related to personal metabolic issues like diabetes, hypertension and cholesterol.

Participants could name more than one health need. The table below shows the most frequently cited health needs and the number of respondents who mentioned them.

| ***Q. What would you say is your greatest health need?*** | **Number of Responses** |
|---|---|
| **Diabetes** | 38 |
| **High blood pressure** | 28 |
| **Routine care/check-ups** | 24 |
| **Dental care** | 15 |
| **Pain management/joint pain/general pain** | 15 |
| **Thyroid issues** | 12 |
| **High cholesterol** | 9 |
| **Knee pain/knee problems** | 9 |
| **Mental health/depression/anxiety** | 9 |
| **Heart care/heart problems** | 8 |
| **Lack of insurance** | 8 |
| **Cost of care/paying for care** | 8 |
| **Cancer/past cancer** | 6 |
| **Back pain** | 6 |
| **COPD** | 6 |
| **Obesity/weight control** | 5 |
| **Vision** | 5 |
| **Women's issues** | 3 |
| **Asthma** | 3 |
| **None at all** | 13 |

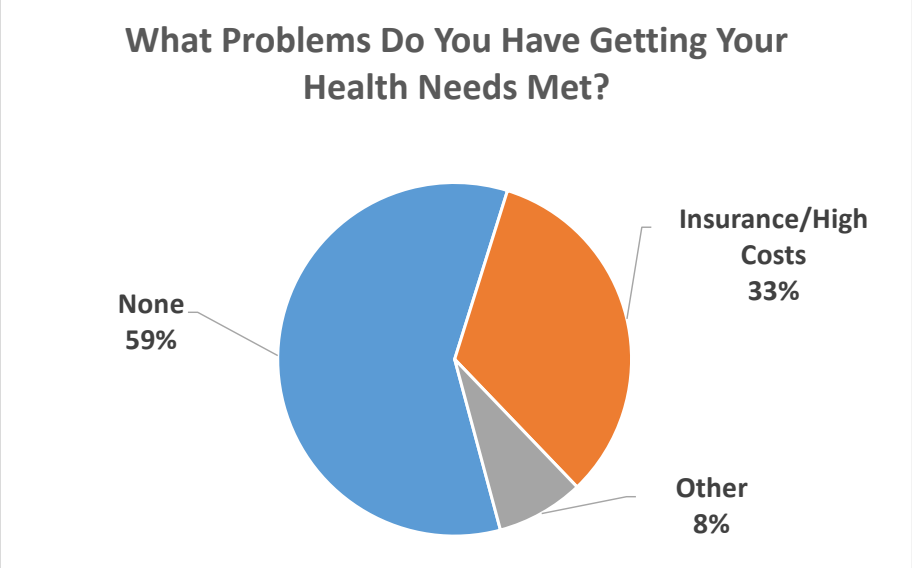
This list is substantially different than the one compiled in 2016. Three years ago, significantly more people cited issues with health insurance and health costs as their greatest health need. This was not the case this time, even though 70% of respondents have no health insurance.

**Problems Getting Health Needs Met**

Over half of all respondents (117 out of 199) reported they are having no problems getting their health needs met, at least not currently. Many of them cited the clinics that are available to them as the reasons why. They might have ongoing health issues, but resources like the Good News Clinics or the NGHS Primary Care Clinic are meeting their needs adequately.

Among those who did report problems getting their health needs met, lack of insurance or the inability to pay for care were the primary reasons why. A total of 65 participants, on third of total participants, reported insurance and/or financial problems. A few reported having insurance, but still being unable to pay for costly medicines or a major surgical procedure, such as a knee replacement.

Among the few remaining respondents (only 17 people), the list of problems focused on specific complaints about medical offices or waiting times. Only one person reported a problem with transportation. No one reported a language barrier.




The 2019 study indicates far fewer problems getting access to health services than was observed in the 2016 study. At that time, 68% of all respondents reported problems with insurance or the cost of care. Only 16% reported they were having no problems at all in 2016.

**The Most Important Community Health Problems**

Interview participants were asked to express their opinions about the top three health problems facing the community. The result is a long list of factors that, when compiled, can be grouped into the following five major issues.

1. *Lack of health insurance and struggles paying the high cost of care and prescription medications. (Referenced 69 times)*

   Insurance and affordability issues are connected. Paying for either insurance premiums or out-of-pocket medical costs are difficult for low-income families.

Insurance is not a guarantee they can afford care. High deductibles can still be daunting. Some who want insurance said they are unable to get it due to unemployment or lack of documentation.

2. *Lack of access to routine medical care, well-patient physicals and sick care. (Referenced 67 times)*

   This is also related to the lack of insurance and the high cost of care. Some residents expressed frustration, saying that if they only had insurance, they would have access to more options for medical care. A few reported a feeling of being disrespected when they try to make a medical appointment.

   Those currently getting care at free clinics appreciate what they have, but some would like to see more choice and more access, including access to doctors outside of the free clinics. Some would also like access to weekend care or evening hours so they do not have to leave work for a medical appointment.

   A small subset of this group (six people) cited lack of access to women's services and prenatal care as problems.

3. *A lack of nutrition education, wellness, weight loss and exercise programs. (Referenced 48 times)*

   Many of those participating recognize the community has a problem with weight and poor nutrition. Many feel the low-income and uninsured community lacks adequate education, instruction and opportunity to learn and adopt healthier habits.

   An additional 12 participants said that diabetes and hypertension are among the top problems in the community.

4. *Drug addiction and alcohol abuse. (Referenced 19 times)*

   The substance abuse problems mentioned included opioid and prescription drug abuse. Several expressed concern that drug issues are making the community less safe.

5. *Communication and community education. (Referenced 15 times)*

   Some in the community feel residents would have more access to health care and related services if they better understood all their options. They suggest more community education about using and accessing free and low-cost health services.

Additional health priorities mentioned by participants include:

Diabetes (10 mentions)
Mental health care (9)
Heart care (9)
Dental care (9)
Elder care issues (8)
Pollution/Dirty air and water (7)
Cancer (6)
Lack of documentation (6)
Women's services/prenatal care (6)
Lack of vision care (5)
Homelessness (4)
Language barriers (4)
Lack of transportation (4)
Pain management (3)
Smoking (2)

**Conclusion**

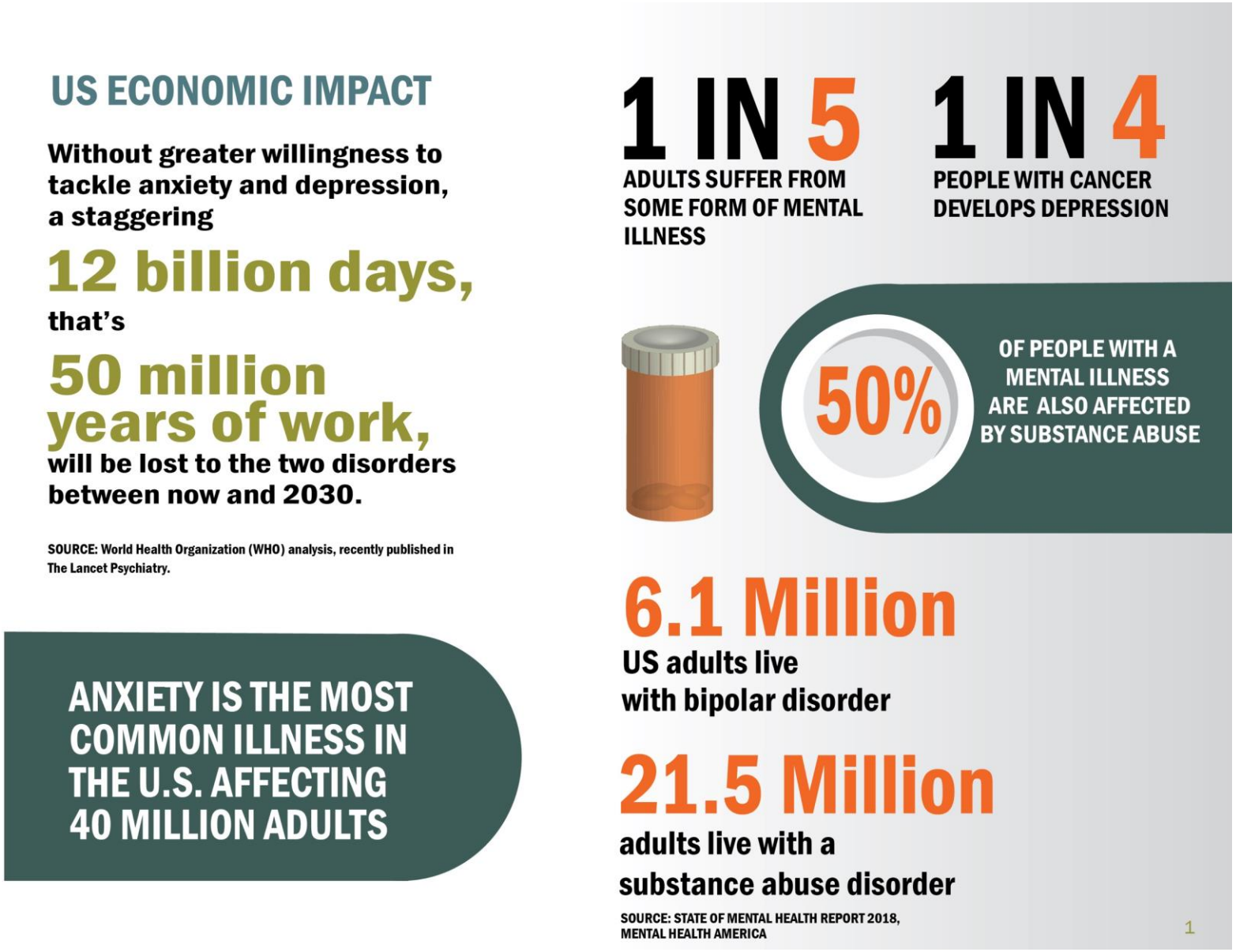
Compared to similar interviews collected for the 2016 CHNA, it appears more lower-income and uninsured Hall County residents have found access to care that meets most of their family's needs. That does not mean health care is always affordable. Many residents still struggle with unexpected costs, but the community seems to be doing better meeting basic needs overall.

The original interview questionnaires are available should Northeast Georgia Health System want them. Their content has been tabulated into a spreadsheet that will be sent along with this summary report.

Thank you for the opportunity to participate in this important project. Should anyone have questions about the questionnaires, the interviews or this report, please contact:

Bill Stiles, Director of Strategy and Research
The Johnson Group
bstiles@johngroup.com
423-305-6425

*NGHS Hall County Mental and Behavioral Health Listening Sessions*


US ECONOMIC IMPACT
Without greater willingness to tackle anxiety and depression, a staggering
12 billion days,
that's
50 million years of work,
will be lost to the two disorders between now and 2030.
SOURCE: World Health Organization (WHO) analysis, recently published in The Lancet Psychiatry.
ANXIETY IS THE MOST COMMON ILLNESS IN THE U.S. AFFECTING 40 MILLION ADULTS
1 IN 5
ADULTS SUFFER FROM SOME FORM OF MENTAL ILLNESS
1 IN 4
PEOPLE WITH CANCER DEVELOPS DEPRESSION
50%
OF PEOPLE WITH A MENTAL ILLNESS ARE ALSO AFFECTED BY SUBSTANCE ABUSE
6.1 Million
US adults live with bipolar disorder
21.5 Million
adults live with a substance abuse disorder
SOURCE: STATE OF MENTAL HEALTH REPORT 2018, MENTAL HEALTH AMERICA
1

# Community-Wide Behavioral/Mental Health Strategy

**Hall County has recognized mental/behavioral health in its latest strategic plan.**


**Behavioral Health Concerns Ranked as one of the**

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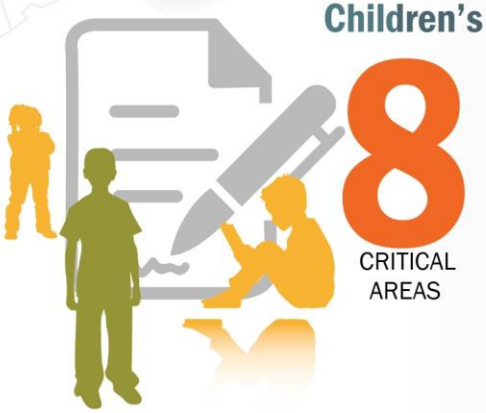
**Governor Deal's Executive Order forms Commission on Children's Mental Health**



**8** CRITICAL AREAS

1) Access to behavioral health services for children
2) Employment/Supported Education programs
3) Behavioral health continuum of care for highest levels of need
4) Telemedicine infrastructure
5) Coordinated services
6) Evidence-based training/monitoring
7) Early intervention and prevention to combat the opioid crisis
8) Multi-pronged suicide prevention

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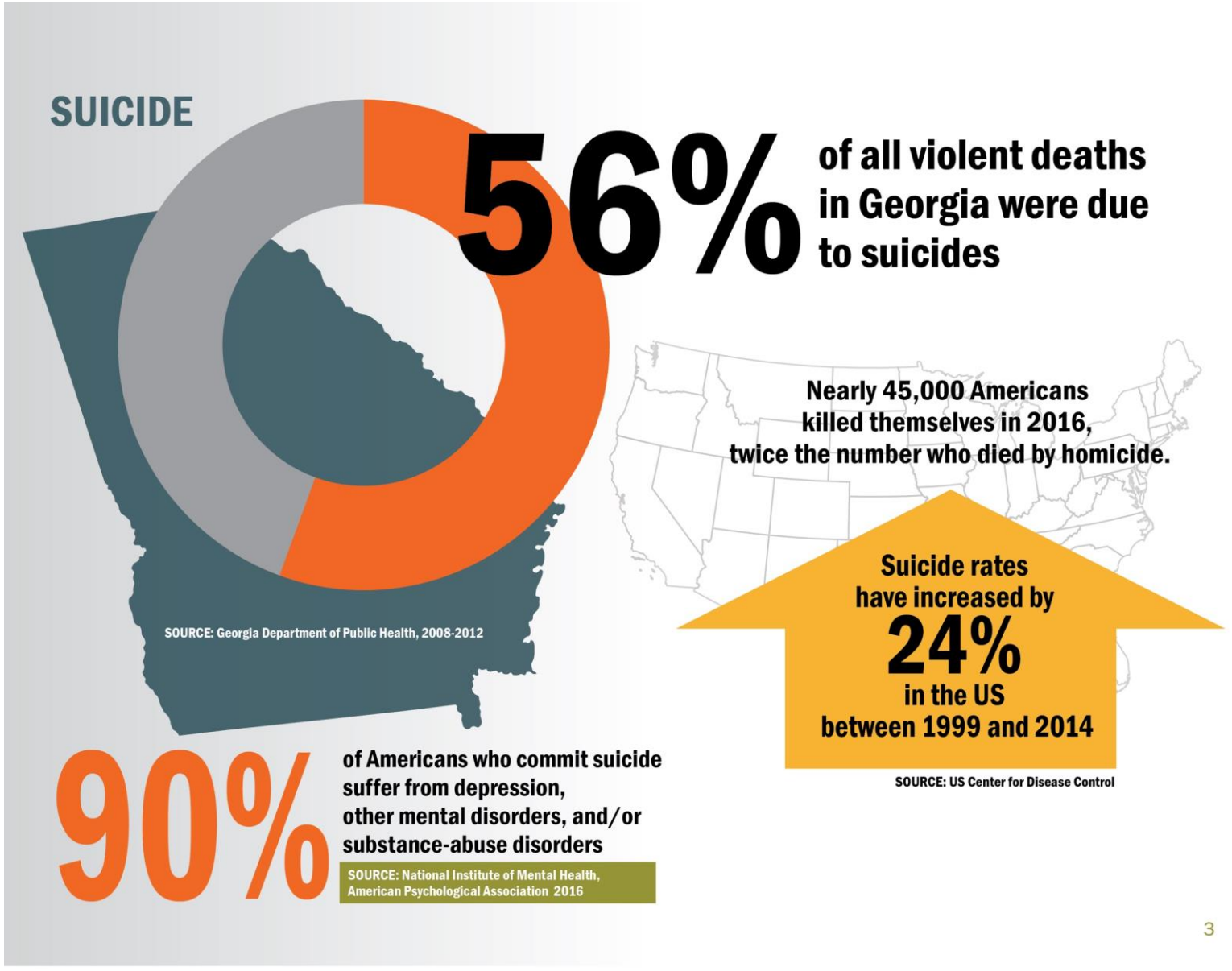

SUICIDE
56% of all violent deaths in Georgia were due to suicides
SOURCE: Georgia Department of Public Health, 2008-2012
Nearly 45,000 Americans killed themselves in 2016, twice the number who died by homicide.
Suicide rates have increased by 24% in the US between 1999 and 2014
SOURCE: US Center for Disease Control
90% of Americans who commit suicide suffer from depression, other mental disorders, and/or substance-abuse disorders
SOURCE: National Institute of Mental Health, American Psychological Association 2016
3

*Roughly 5% of 6th to 12th grade students in Gainesville & Hall County schools reported they had attempted suicide at least once in the previous 12 months.*

**SOURCE: 2018 Georgia Student Health Survey**
**Enrollment figures from PitneyBowes**

**181**
**Gainesville City School**
3467 Total Students Enrolled Grade 6-12

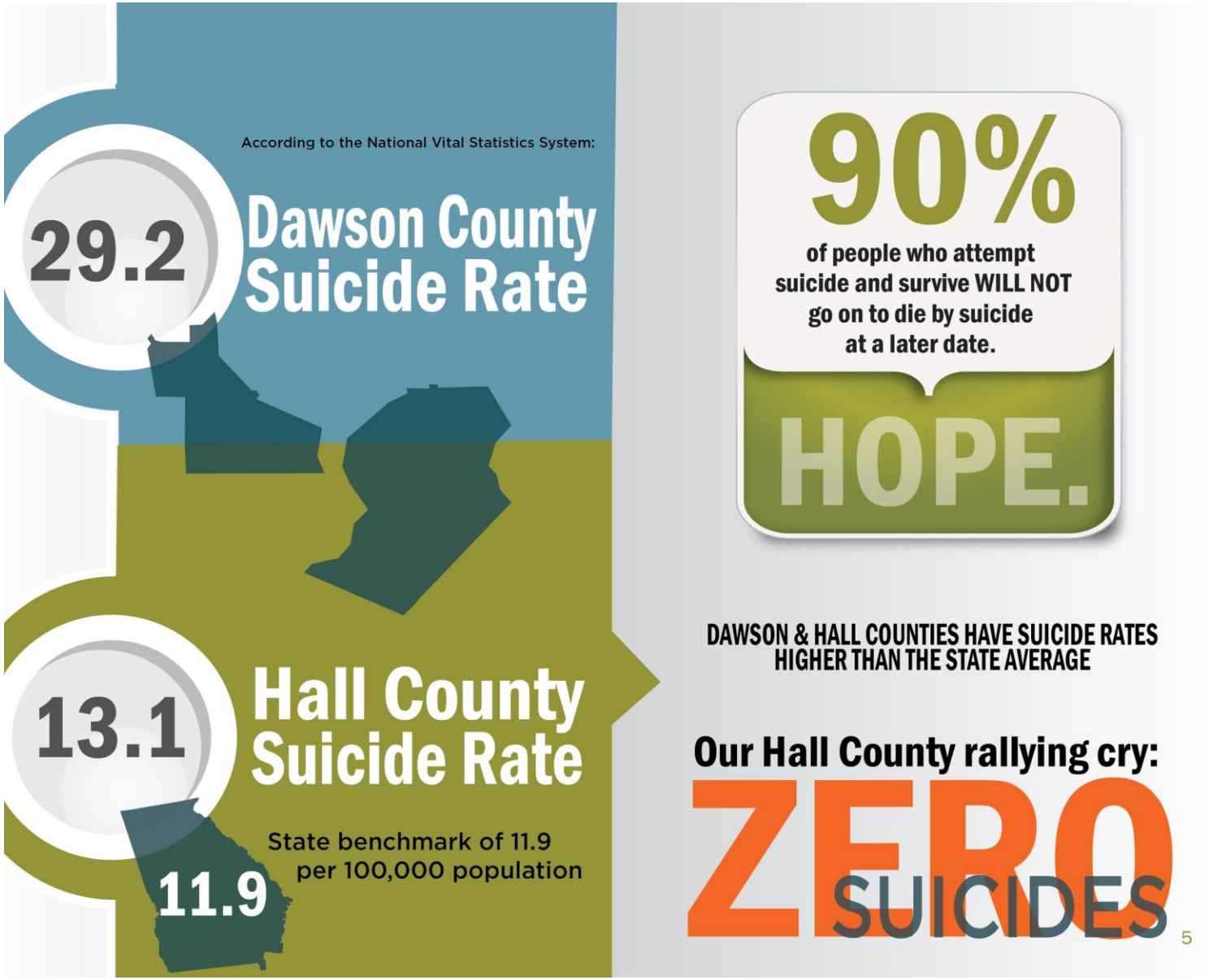
| 110 | 34 | 37 |
|---|---|---|
| 1-2 attempts | 3-5 attempts | +5 attempts |

Hall County Schools
CHARACTER · COMPETENCY · RIGOR FOR ALL

**494**
**Hall County School**
11,062 Total Students Enrolled Grade 6-12

| 317 | 82 | 95 |
|---|---|---|
| 1-2 attempts | 3-5 attempts | +5 attempts |

4


According to the National Vital Statistics System:
29.2
Dawson County Suicide Rate
13.1
Hall County Suicide Rate
State benchmark of 11.9 per 100,000 population
11.9
90%
of people who attempt suicide and survive WILL NOT go on to die by suicide at a later date.
HOPE.
DAWSON & HALL COUNTIES HAVE SUICIDE RATES HIGHER THAN THE STATE AVERAGE
Our Hall County rallying cry:
ZERO SUICIDES
5

## OUR CHILDREN

**1 IN 5**

CHILDREN AGE 3 - 7
HAS A DIAGNOSED
MENTAL HEALTH ISSUE

**Half** of all chronic mental health illnesses begin by the **age of 14**

**10%**

of youth in Ga, ages 12-17, had at least one **MAJOR DEPRESSIVE EPISODE** in the past year

Georgia is ranked 4th highest in the nation.

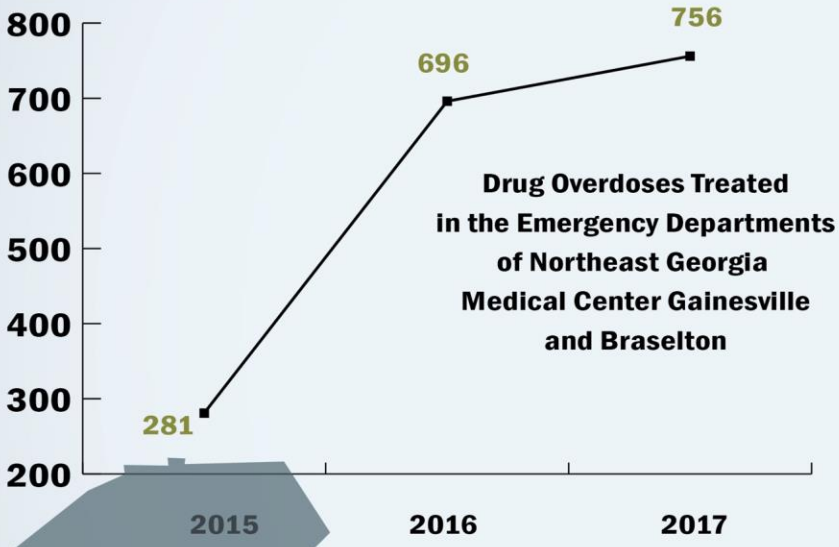
**Kids, who have an unmet mental health need, miss significantly more days of school than kids who don't have those needs**

SOURCE: STATE OF MENTAL HEALTH REPORT 2018, MENTAL HEALTH AMERICA

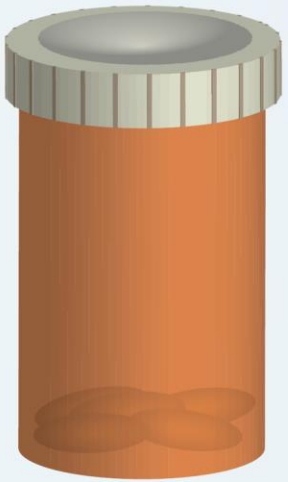
6

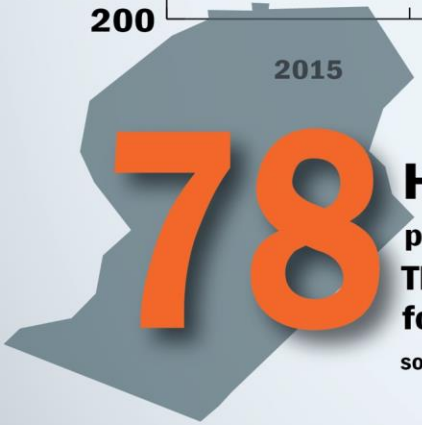
# THE OPIOID EPIDEMIC

**Substance abuse and mental health issues are often co-related**




**Drug Overdoses Treated in the Emergency Departments of Northeast Georgia Medical Center Gainesville and Braselton**






**Hall County Drug Overdose Deaths**

**per 100,000 population**

**The overall rate in Georgia for this period was 13.**

**SOURCE: County Health Rankings: 2014-2016**

7

## ACCESSING CARE

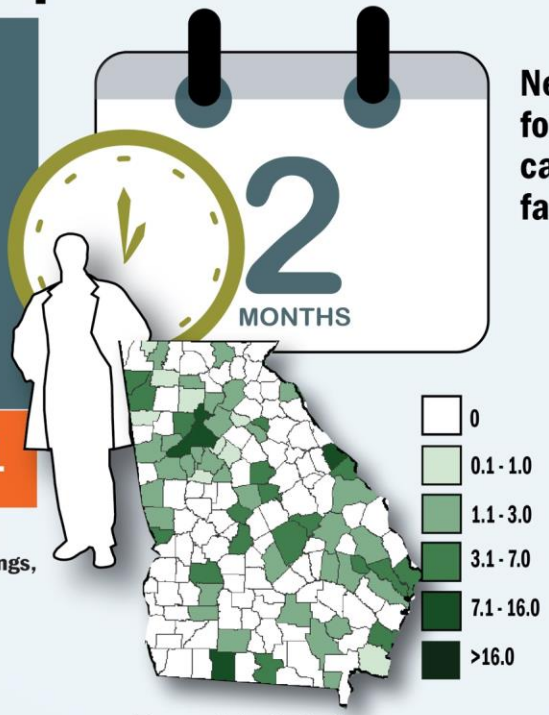
# Providers to Population

**Population to Mental Health provider ratio in Hall County is**

**1360:1**

**GA ratio is 914:1**

Source: Population to Mental Health Provider Ratios, County Health Rankings, 2014, CMS, National Provider Identification File

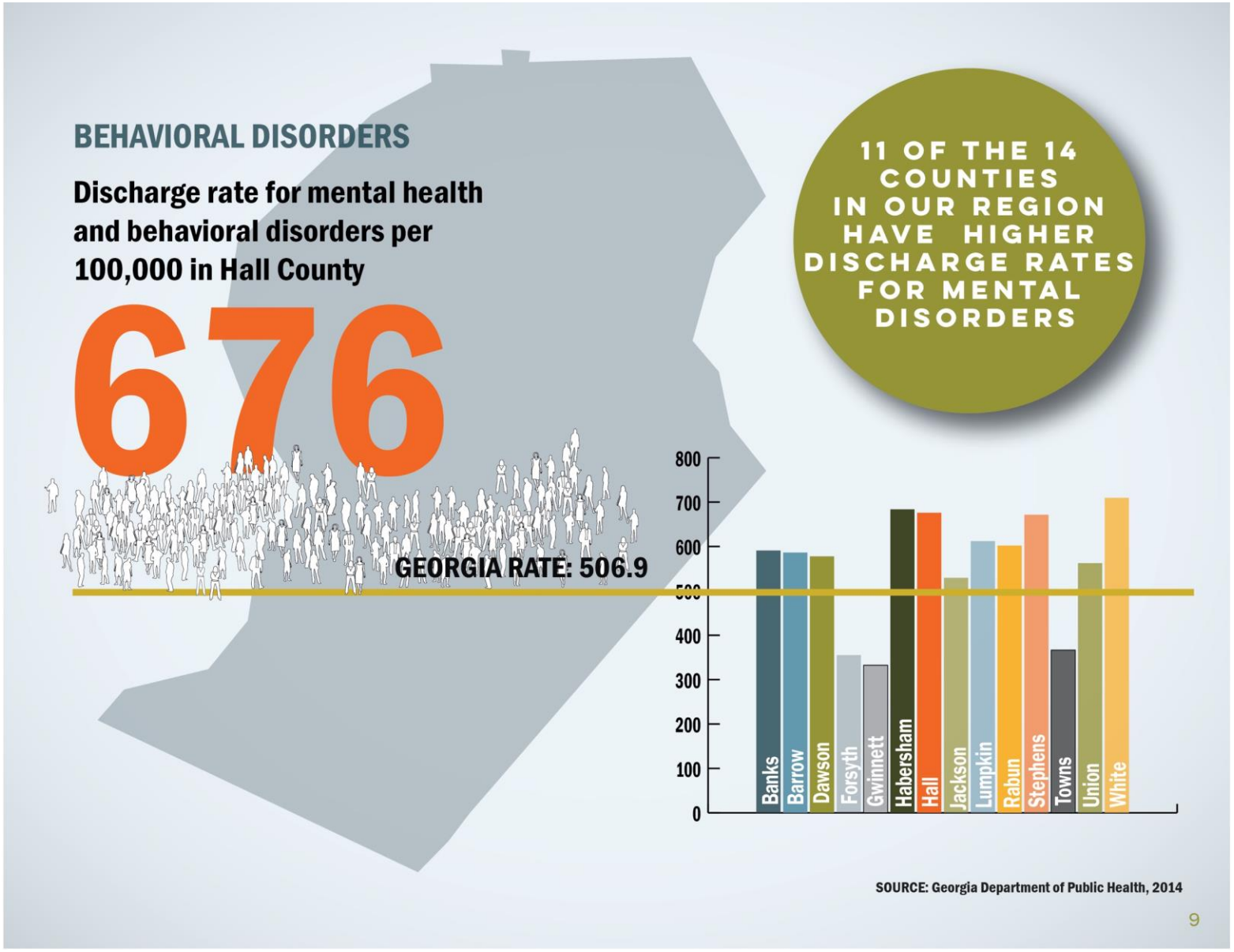



**Next available appointments for psychology and psychiatry can be sometimes be as far out as 1 – 2 months.**

**Psychiatrists per 10,000 children aged 0-17 in Georgia, 2015**

Source: American Medical Association, Center for Disease Control

8


BEHAVIORAL DISORDERS
Discharge rate for mental health and behavioral disorders per 100,000 in Hall County
676
GEORGIA RATE: 506.9
11 OF THE 14 COUNTIES IN OUR REGION HAVE HIGHER DISCHARGE RATES FOR MENTAL DISORDERS
800
700
600
500
400
300
200
100
0
Banks
Barrow
Dawson
Forsyth
Gwinnett
Habersham
Hall
Jackson
Lumpkin
Rabun
Stephens
Towns
Union
White
SOURCE: Georgia Department of Public Health, 2014
9

IN FISCAL YEAR 2017

Health Partners spent

**$2.76 MILLION**

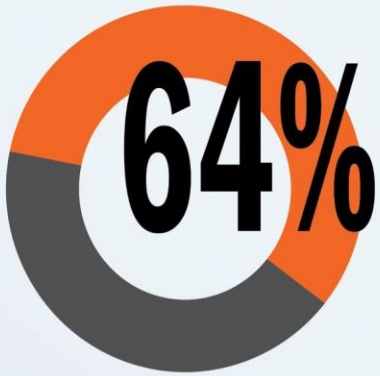
on mental health claims

**SOURCE:**
**NGHS Benefits Plan, Health Partners**

HealthPartners
your integrated network solution

**ANXIETY DISORDER & MAJOR DEPRESSIVE DISORDER**
most common primary diagnosis codes

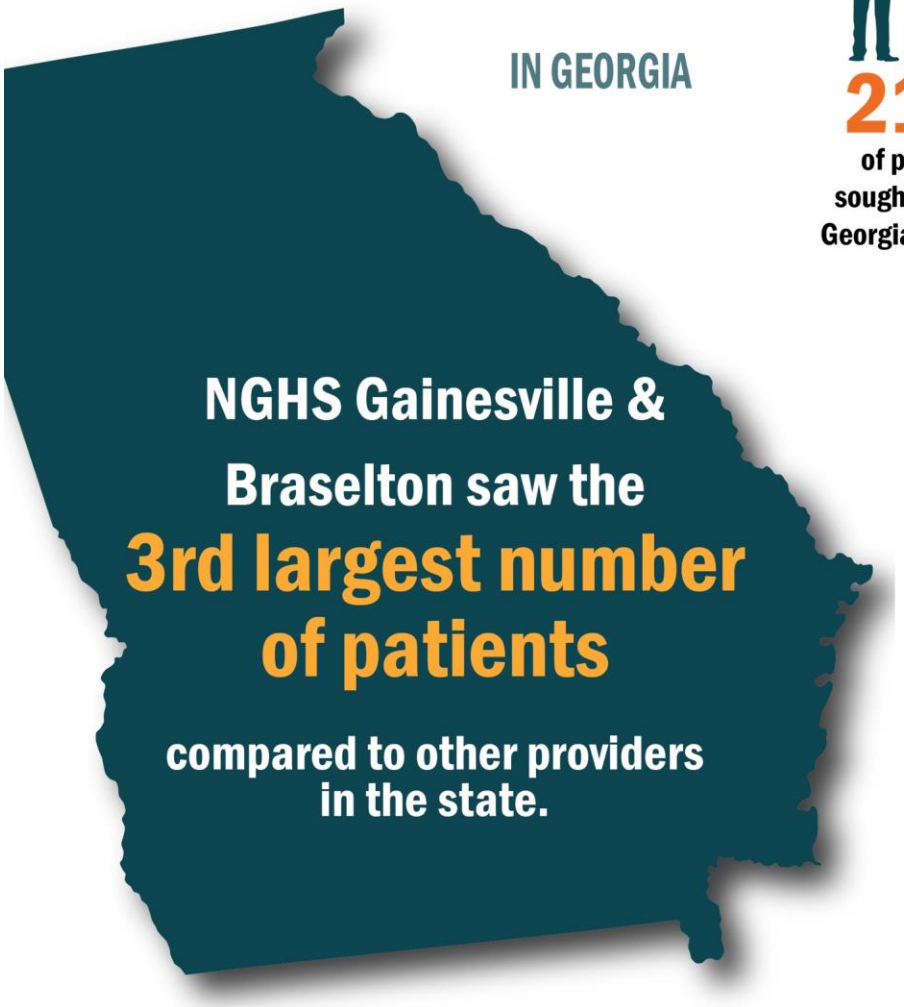
**ALCOHOL DEPENDENCY**
largest expenditure category




**SOURCE: Northeast Georgia Medical Center**

10

## PRIMARY DIAGNOSIS RELATED TO PSYCH




**21.3%**
of patients who sought treatment in Georgia were self-pay.

**Counseling on Substance Use & Abuse**
was the highest diagnosis code **for patients age 0-17,**
with a peak at 14-16 years old.

SOURCE: GHA State Database

11

# Hall County Behavioral Health Initiative

# One Hall Meeting

November 28, 2018

# Listening Sessions with 60+ Participants September, 2017

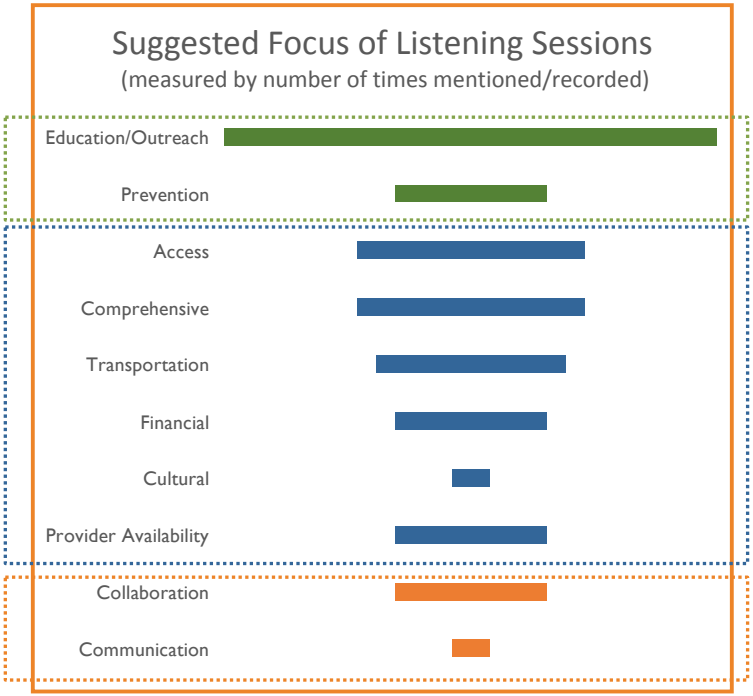
| Organizations Represented at Listening Sessions, September 2018 | | |
|---|---|---|
| AVITA | Good News Clinics | NAMI, Hall Co |
| Basan Ministries | Government Affairs | Newtown Florist Club |
| Brenau University | Hall Co Government | NGHS |
| CenterPoint | Hall Co Sherriff's Office | NGPG BH |
| Children's Center for Hope & Healing | Hall County Schools | PEER Support Group |
| Community Service Center | Hospitalist | Physicians |
| Dir Employee Wellness | Newtown Florist Club | Psychiatrist |
| Employee Health Counselor | NGHS | Rape response therapist |
| Family TIES | NGPG BH | Social Worker |
| GA Legal Services | North Georgia Community Foundation | Twin Lakes Recovery Center |
| GA Mtn Food Bank | Housing Authority | United Way |
| Gainesville City Schools | Lanier Boys and Girls Clubs | YMCA |
| GNC | Laurelwood | |

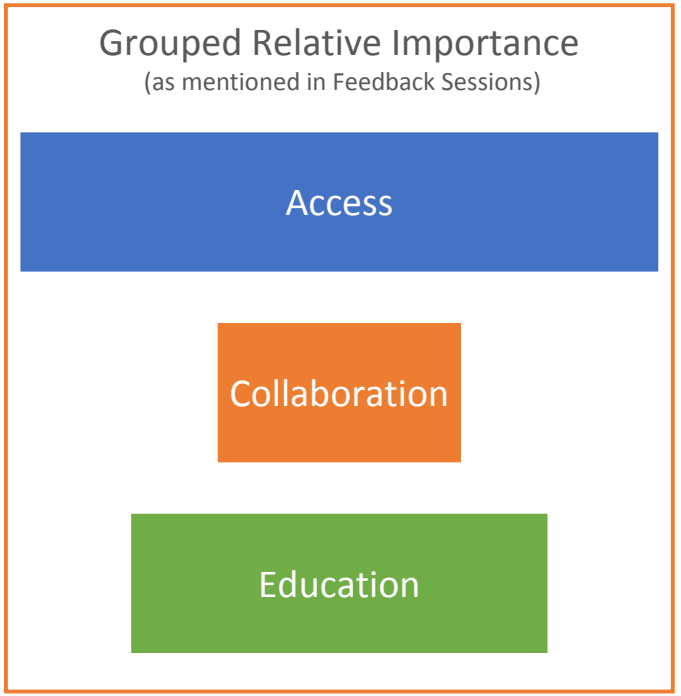
# Listening Sessions – Vision Discussion

| Access | Collaboration | Education |
|---|---|---|
| Easily accessible (where, when, how) | Open communication | Educate our educators |
| Enhance public transportation system | Cultural appropriateness | First Line of Defense - public health model – Mental Health |
| Financial Access (Medicare/Medicaid), reduced costs | Hispanic culture/language, address language barriers, diversity | Outreach/Education, understanding the diagnosis |
| Close gaps in care after discharge and between services | Stigma free, normalizing anxiety and depression, engage churches and schools, education across the community | Mental health navigator |
| Flow chart – navigate the system; seamless throughout the community | Thoughtfully designed wellness campaign that recognizes diversity | Peer driven support |
| Integrated with urgent care | Create hope, create purpose | Improve prevention, screening in schools |
| Flexible – no one size fits all | Start with kids – pre-natal risk factors, big brother/sister program, mentor programs | Build social networks |
| Access at various levels of care across lifespan | Self awareness | Education on signs and symptoms |
| Better screening programs | Connected partners | Enhance advocacy |
| More care continuum options | Behavioral health approach that includes drug/substance use | Planning for future gaps in provider availability, training the community |
| More practitioners | Recovery focus – goal | Provider education, integration of mental health into practices |
| Availability of right provider for individual | Improving housing, transportation and employment (all linked together) | Training for teachers, police, other non-provider |
| Access to trained prescribing physicians | One place to get information and direction | |
| | Collaborative across providers | |

# Gaps and Challenges

## Comments from Listening Sessions, September 2018



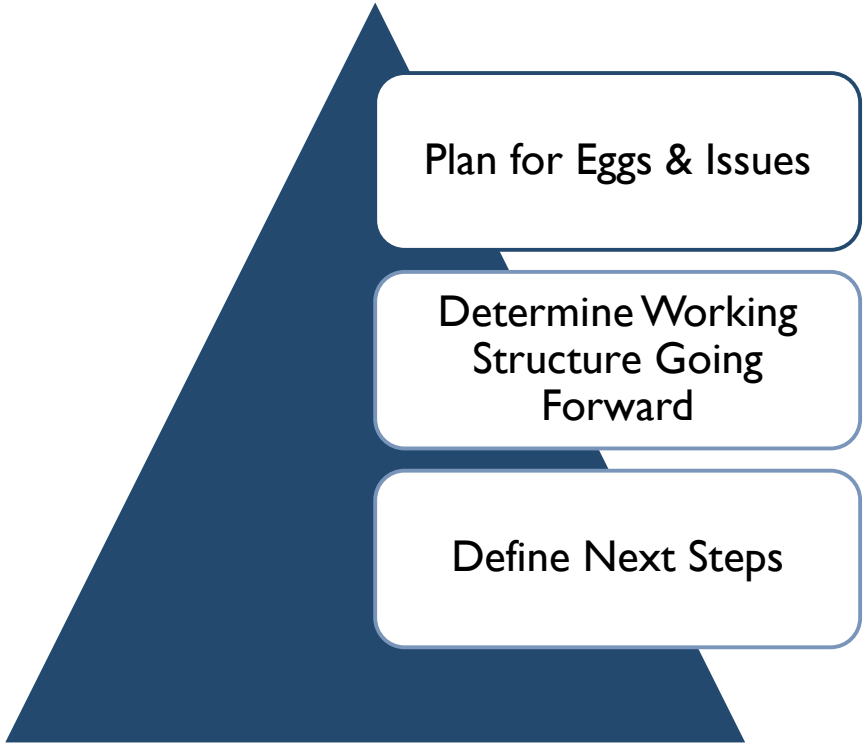



# Hall County Behavioral Health Initiative

# ACE Meeting

December 4, 2018

# Our Purpose Today



# Situation Overview

| | |
|---|---|
| The Problem | We are not meeting the mental and behavioral health needs of our community. |
| Our Objective | We're seeking a more unified approach in reaching our community's mental health needs- need to maximize resources to identify and solve issues effectively. |

# Community-Wide Behavioral/Mental Health Strategy

**Hall County has included mental/behavioral health in its latest strategic plan.**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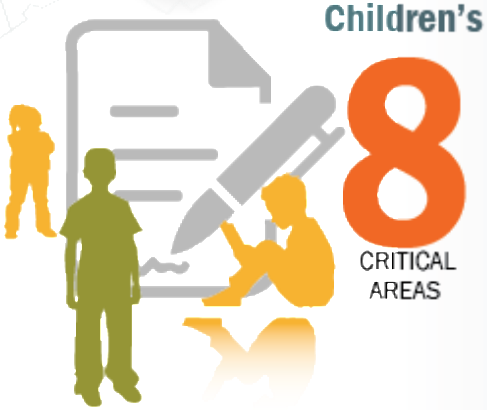

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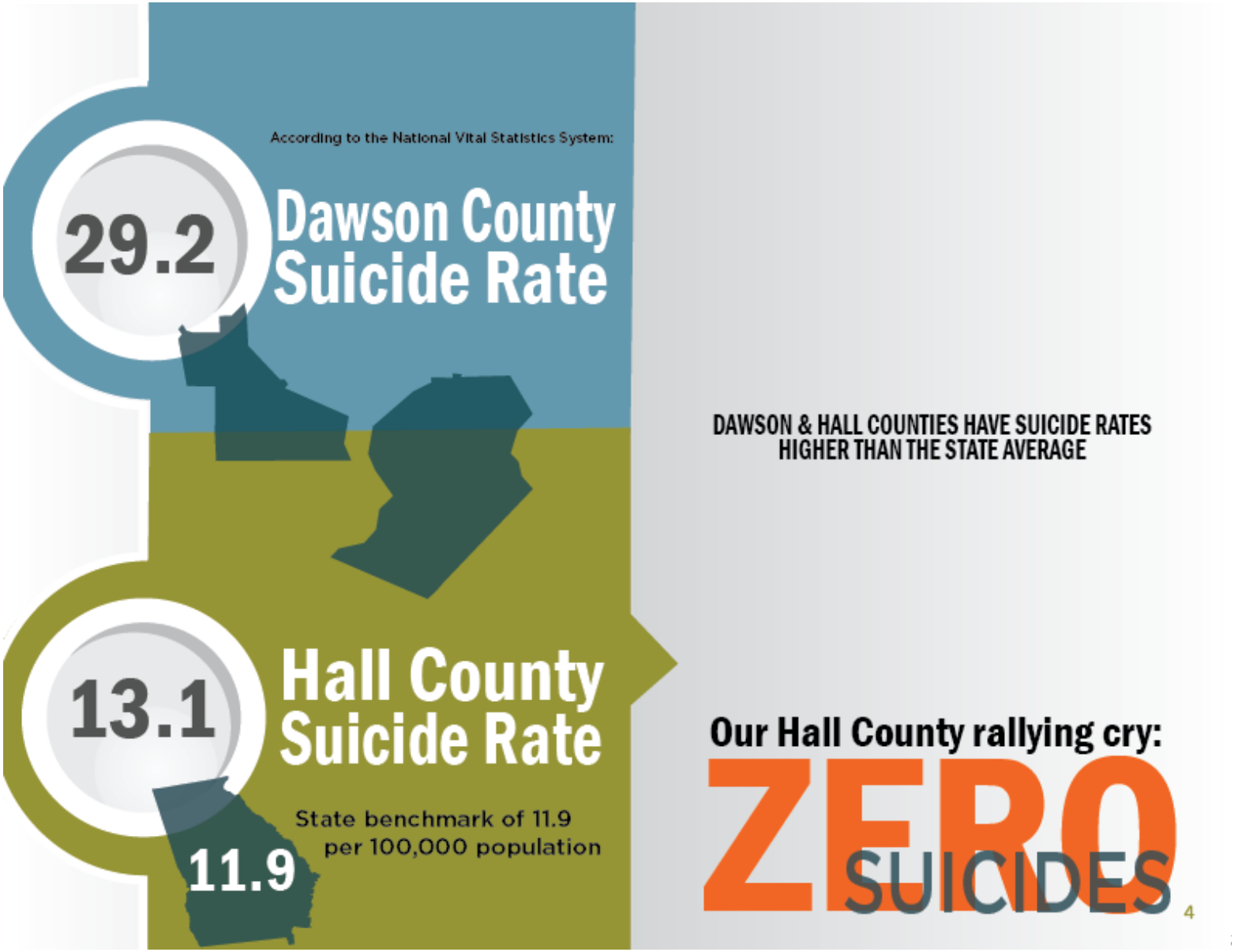
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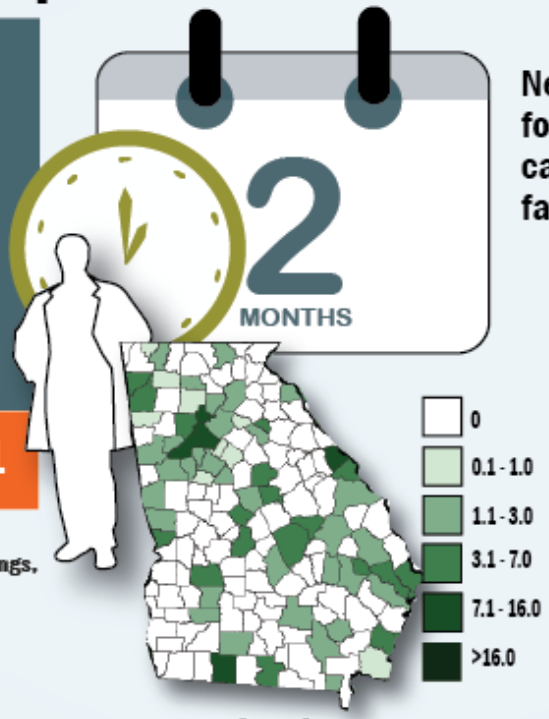


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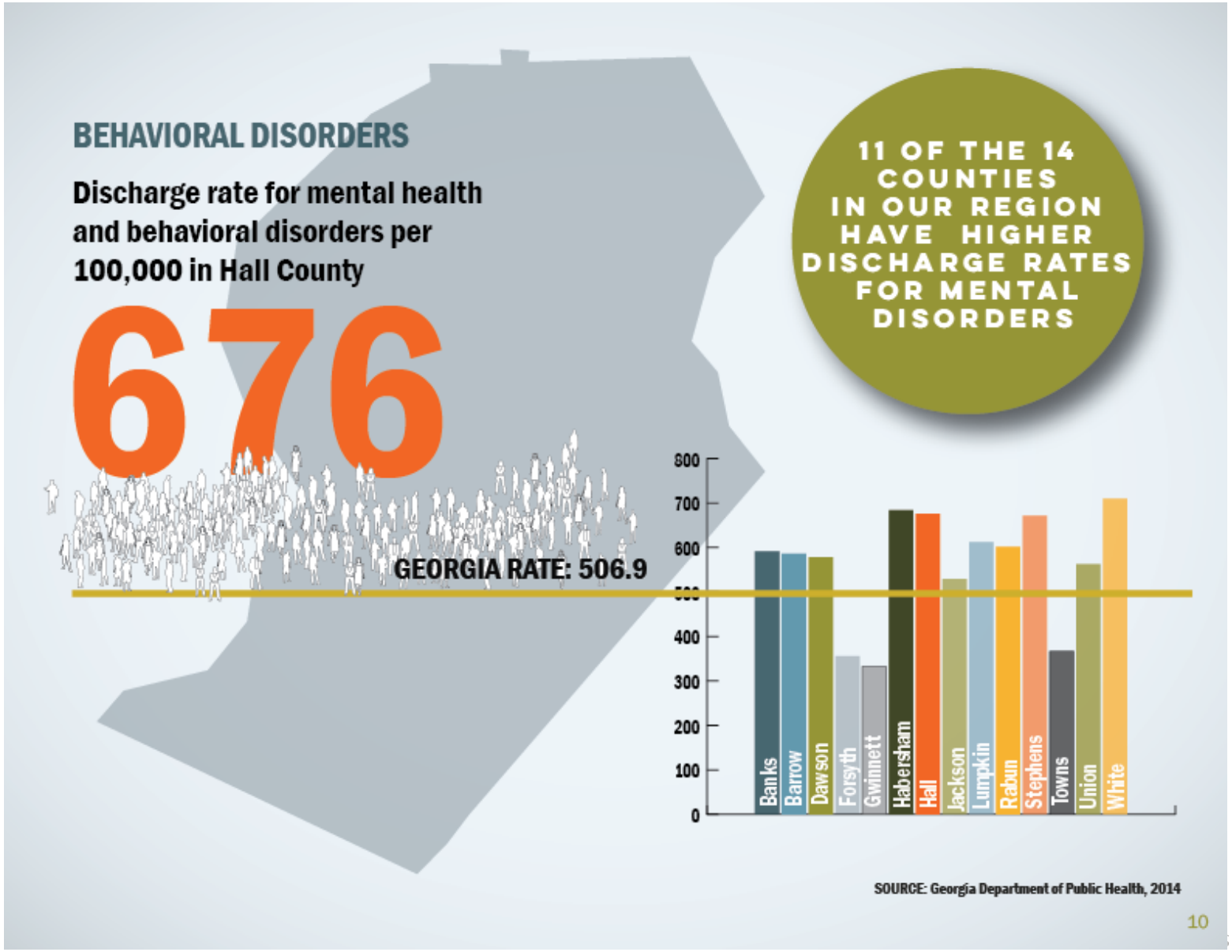
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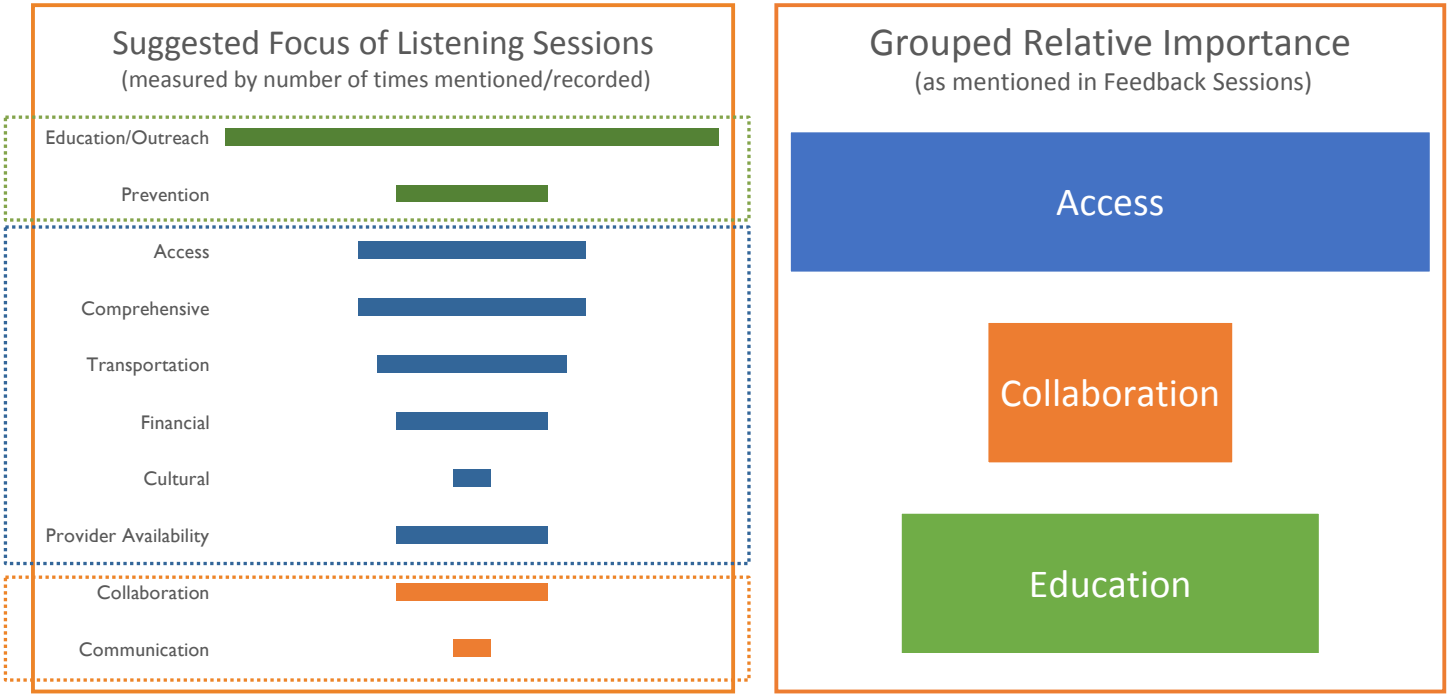
| Employee Health Counselor | NGHS | Rape response therapist |
| Family TIES | NGPG BH | Social Worker |
| GA Legal Services | North Georgia Community Foundation | Twin Lakes Recovery Center |
| GA Mtn Food Bank | Housing Authority | United Way |
| Gainesville City Schools | Lanier Boys and Girls Clubs | YMCA |
| GNC | Laurelwood | |

# Gaps and Challenges

## Comments from Listening Sessions, September 2018



# Combining our community vision

LIVE UNITED
United Way
United Way of Hall County

We envision a future where behavioral health needs are recognized and treated. We seek to increase knowledge of and access to behavioral health services.

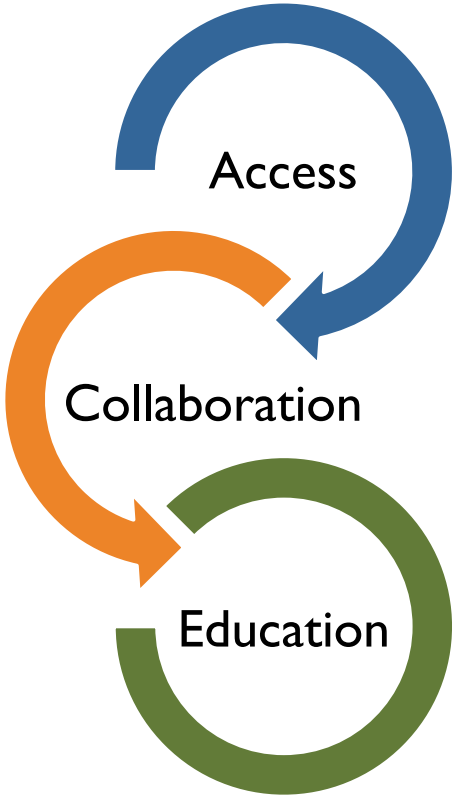
Community listening session consolidated vision

A comprehensive system of integrated services that recognizes and treats the behavioral health needs of people where and when they need care.

11

NewHeightsGroup

# Priorities for Action



# Initial Actions Proposed

**ACCESS**

Acquisition of a shared data platform that will provide information and tracking of clients in support of a robust navigation program.

**COLLABORATION**

Development of a partnership structure that will support ongoing collaborative efforts.

**EDUCATION**

Implementation of an expanded education effort utilizing the trainers that the Gainesville City School system is preparing to offer the Mental Health First Aid Program.

*Union General Hospital and Chatuge Regional Hospital 2018 CHNA Reports*

As part of the 2019 CHNA, qualitative findings from the Union General and Chatuge Regional Hospitals 2018 CHNA Reports were utilized to further assess the needs in Union and Towns counties respectively. The two combined reports gathered qualitative input via 148 community-based surveys and four key informant interviews.

The full reports can be downloaded for free via:

- Union General Hospital 2018 CHNA Report: **http://www.uniongeneralhospital.com/fullpanel/uploads/files/final-2018-chna-union-general-hospital.pdf**
- Chatuge Regional Hospital 2018 CHNA Report: **http://www.uniongeneralhospital.com/fullpanel/uploads/files/final-2018-chna-chatuge-regional-hospital.pdf**

## Appendix E: Prioritization Session Participants

# *CHNA Advisors- Prioritization Work Session Attendees*

| |
|---|
| Absent |
| Walk-In |

| | |
|---|---|
| **NGHS** | Tracy Vardeman, Christy Moore |
| 1. Olivia Skey | Board member, Co-Chair, NGMC CHNA |
| 2. Monica Newton, DO | Physician, Co-Chair, NGMC CHNA |
| 3. Semuel Maysonet | Advisory Board Chair |
| 4. Deborah Mack | Board Member |
| 5. Jessica Dudley | President, UWHC |
| 6. Jackie Wallace | Board Member |
| 7. Jo Brewer | NGMC Admin, Medical Plaza 400 |
| 8. Phillippa Lewis Moss | Board Member NGMC, United Way, NGCF, JEMC |
| 9. Gretchen Holmes | Director of Scholarly Activity and Research, GME |
| **District II Public Health** | Dr. Pamela Logan, Erika Lopez Gil |
| 1. Nadine Wardenga | White County BOH Chair |
| 2. William Wade | Dawson County BOH |
| 3. Elizabeth Fielden | Hall County Family Connection |
| 4. Greg Supianoski | Hall County YMCA |
| 5. Stacy Brooks | Office Manager Advisory Lead |
| 6. Mark Palen | EP Manager, DPH |
| 7. Alan Satterfield | Nursing Manager, DPH |
| 8. Aylin Alvorado (walk in) | Health Educator, Adolescent Health (DPH) |
| **SCH** | Samantha Rickman, Tonya Chitwood |
| 1. Bryan Dorsey | SC Superintendent, Stephens Co Schools |
| 2. David Cronic | TC Manager, NGHS |
| 3. Noel Pauley | Family Connections Director |
| 4. Sherry Beavers | Executive Director, Open Arms GA |
| 5. Tim Martin | DA Director, SCDA |
| 6. Ashely Dunson | Community Paramedicine, Stephens Co. Hospital |
| 7. Joyce Payne | SCHD Manager, DPH |
| 8. Mark Smith | Power House for Kids |
| 9. Van Loskoski (walk in) | VP Physician Practices |
| 10. Michael Carter (walk in) | |
| 11. Sarah Welch (walk in) | |
| 12. Tonya Chitwood (walk in) | |

| **HMC** | Kesha Clinkscale, Vice President of External Affairs<br>Leigh Hunnicutt, Director of Regulatory Services |
|---|---|
| 1. Mike Beecham | Director of Planning and Development, Habersham Co. |
| 2. Jeanne Buffington | Executive Director, Rape Response |
| 3. Kesha Clinkscale | VP, External Affairs & Executive, HMC Foundation |
| 4. Lane Gresham | Director of Community Relations, Tallulah Falls School |
| 5. Kristy Hammond | Membership Coordinator, Habersham Chamber of Commerce and HMC Foundation Board Member |
| 6. Thomas Hatchett | *MD, HMC OBGYN* |
| 7. Leigh Hunnicutt | Director, Regulatory Services |
| 8. Ken Johnson | First Vice President, Investments, Raymond James and HMC Foundation Board Member |

## Appendix F: Community Resources Identified to Potentially Address Significant Health Needs

A list of community resources available by county across the northeast Georgia region can be accessed via **https://www.nghs.com/community-resource-guide**.

Below is a list of additional resources in the northeast Georgia region identified via community input through the CHNA process:

| Community Resources |
|---|
| A Kids Dream |
| Action Incorporated |
| American Cancer Society |
| Avita Community Partners |
| Backpacks Buddies |
| Backpacks of Love |
| Barrow County Cooperative Benevolence Ministries, Inc |
| Barrow County Family Connection |
| Barrow County Food 2 Kids Program |
| Barrow Ministry Village |
| Bethlehem Church |
| Boys and Girls Club |
| Brenau University Counseling |
| Chamber of Commerce |
| Churches |
| Clarkston Community Health Center |
| Community Helping Place |
| Community Paramedicine |
| Crisis intervention Training for Police Officers |
| Faith Based Groups |
| Family Connections |
| Family Resource Center |
| Family Treatment Court |
| Felony Drug Court Program |
| First Baptist Church |
| Food Pantries |
| Foundations for Living |

| Community Resources |
| --- |
| Franklin Georgia Head Start |
| Free & Low-Cost Clinics |
| Georgia Highlands Medical Services |
| Georgia Lions Lighthouse Foundation |
| Georgia Mountain Food Bank |
| Georgia's 9th Congressional District |
| Good News Clinic |
| Good Shepherd Clinic of Dawson County, Inc. |
| Grace Episcopal Church |
| Grace Gate Free Clinic |
| Greater Hall Chamber of Commerce |
| Gwinnett Coalition for Health and Human Services |
| Habitat for Humanity |
| Hall County Free Clinic |
| Harmony House, Darkness to Light (D2L) |
| Hart Partners |
| Health Department |
| Help a Child Smile |
| Hispanic Health Clinics |
| HMA Physician Group |
| iServe Ministries |
| Jackson County Family Connection |
| Jackson Electrical Membership Co-Op |
| Jackson Faith Based Food Pantries |
| Junior League |
| Lakewood Baptist Church |
| Lanier Technical College |
| Longstreet Clinic |
| Low income Dental Clinic in Hall County |
| Meals on Wheels |
| Medical Education Residency program |
| MedLink Georgia Clinic |
| Mustard Seed Counseling |

| Community Resources |
| --- |
| Northeast Georgia Food Bank |
| Open Arms |
| Peace Place |
| Piedmont Rape Crisis Center |
| PINES Piedmont Regional Library System |
| Prince of Peace Catholic Church |
| Project Adam |
| Recreation Centers |
| Ric Rack Charity Thrift Store and Food Bank |
| School System |
| Senior Centers |
| Sharing & Caring Place |
| St. Anthony of Padua Catholic Church |
| St. John Baptist Church |
| St. Mary's Sacred Heart Hospital |
| St. Paul United Methodist Church |
| St. Vincent de Paul Georgia |
| Teen Maze |
| The Chamber of Commerce 2030 Plan |
| The Hart County Botanical Gardens |
| The HOPE Center |
| The Wimberly Center for Community Development |
| Uber Health |
| United Way |
| United Way 211 Helpline |
| USDA, Food Distribution Program |
| Vision 2030 |
| Wee Books Program |
| WIC |
| YMCA |

## Appendix G: Federally Designated Health Professional Shortage Areas and Medically Underserved Areas and Populations

*Health Professional Shortage Areas (HPSA)*[62]

| County Name | HPSA ID | HPSA Name | HPSA Discipline Class | Designation Type |
|---|---|---|---|---|
| Banks | 1138664546 | Low Income - Banks County | Primary Care | Low Income Population HPSA |
| Banks | 6137445572 | Low Income-Banks County | Dental Health | Low Income Population HPSA |
| Banks | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |
| Barrow | 1132460351 | Low Income-Barrow County | Primary Care | Low Income Population HPSA |
| Barrow | 6132181413 | Low Income - Barrow County | Dental Health | Low Income Population HPSA |
| Barrow | 7139976672 | Mental Health Catchment Area 10-Advantage Behavioral Health Systems | Mental Health | High Needs Geographic HPSA |
| Dawson | 1137927685 | Low Income-Dawson County | Primary Care | Low Income Population HPSA |
| Dawson | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |
| Forsyth | 113999131Y | Georgia Highlands Community Health Center | Primary Care | Federally Qualified Health Center |
| Forsyth | 6139991372 | Georgia Highlands Community Health Center | Dental Health | Federally Qualified Health Center |
| Forsyth | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |
| Forsyth | 7139991342 | Georgia Highlands Community Health Center | Mental Health | Federally Qualified Health Center |

[62] U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018

| County Name | HPSA ID | HPSA Name | HPSA Discipline Class | Designation Type |
|---|---|---|---|---|
| Franklin | 1132769023 | Low Income - Franklin County | Primary Care | Low Income Population HPSA |
| Franklin | 6135853677 | Low Income - Franklin County | Dental Health | Low Income Population HPSA |
| Franklin | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |
| Gwinnett | 1132600320 | Phillips State Prison | Primary Care | Correctional Facility |
| Gwinnett | 1136032667 | Low Income-Northwest Gwinnett County | Primary Care | Low Income Population HPSA |
| Gwinnett | 113999130D | Four Corners Primary Care Center | Primary Care | Federally Qualified Health Center |
| Gwinnett | 113999130F | Center for Pan Asian Community Services, Inc. | Primary Care | Federally Qualified Health Center |
| Gwinnett | 613999130E | Four Corners Primary Care Center | Dental Health | Federally Qualified Health Center |
| Gwinnett | 613999130G | Center for Pan Asian Community Services, Inc. | Dental Health | Federally Qualified Health Center |
| Gwinnett | 7135795987 | Phillips State Prison | Mental Health | Correctional Facility |
| Gwinnett | 713999130B | Four Corners Primary Care Center | Mental Health | Federally Qualified Health Center |
| Gwinnett | 713999130D | Center for Pan Asian Community Services, Inc. | Mental Health | Federally Qualified Health Center |
| Habersham | 1138060368 | Low Income-Habersham County | Primary Care | Low Income Population HPSA |
| Habersham | 1132314624 | Lee Arrendale State Prison | Primary Care | Correctional Facility |
| Habersham | 6135285433 | Low Income-Habersham County | Dental Health | Low Income Population HPSA |

| County Name | HPSA ID | HPSA Name | HPSA Discipline Class | Designation Type |
|---|---|---|---|---|
| Habersham | 6135020614 | Lee Arrendale State Prison | Dental Health | Correctional Facility |
| Habersham | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |
| Habersham | 7138642355 | Lee Arrendale State Prison | Mental Health | Correctional Facility |
| Hall | 1136718037 | Low Income-Hall County | Primary Care | Low Income Population HPSA |
| Hall | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |
| Hart | 1134202365 | Hart County | Primary Care | High Needs Geographic HPSA |
| Hart | 6133427009 | Low Income - Hart County | Dental Health | Low Income Population HPSA |
| Hart | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |
| Jackson | 1137890671 | Low Income-Jackson County | Primary Care | Low Income Population HPSA |
| Jackson | 7139976672 | Mental Health Catchment Area 10-Advantage Behavioral Health Systems | Mental Health | High Needs Geographic HPSA |
| Lumpkin | 1134202365 | Hart County | Primary Care | High Needs Geographic HPSA |
| Lumpkin | 6133427009 | Low Income - Hart County | Dental Health | Low Income Population HPSA |
| Lumpkin | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |
| Rabun | 1132432544 | Low Income - Rabun County | Primary Care | Low Income Population HPSA |
| Rabun | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |

| County Name | HPSA ID | HPSA Name | HPSA Discipline Class | Designation Type |
|---|---|---|---|---|
| Stephens | 1133838979 | Low Income-Stephens County | Primary Care | Low Income Population HPSA |
| Stephens | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |
| Towns | 1137756679 | Low Income - Towns County | Primary Care | Low Income Population HPSA |
| Towns | 113999134H | Hiawassee Family Health Practice, Primary Care | Primary Care | Rural Health Clinic |
| Towns | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |
| Union | 1131641363 | Low Income - Union County | Primary Care | Low Income Population HPSA |
| Union | 6136764089 | Low Income - Union County | Dental Health | Low Income Population HPSA |
| Union | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |
| White | 1133522531 | Low Income-White County | Primary Care | Low Income Population HPSA |
| White | 7139510135 | Mental Health Catchment Area 3 - Low Income-Georgia Mountains Service Area | Mental Health | Low Income Population HPSA |

*Medically Underserved Areas and Populations (MUA/P)*[63]

| County Name | MUA/P Source Identification Number | Service Area Name | Designation Type | Rural Status |
|---|---|---|---|---|
| Banks | 601 | Banks County | Medically Underserved Area | Rural |

[63] U.S. Department of Health and Human Services, Health Resources and Services Administration, 2018

| County Name | MUA/P Source Identification Number | Service Area Name | Designation Type | Rural Status |
|---|---|---|---|---|
| Forsyth | 637 | Forsyth County | Medically Underserved Area | Non-Rural |
| Franklin | 4017 | Franklin Service Area | Medically Underserved Area | Rural |
| Gwinnett | 642 | Gwinnett Governor | Medically Underserved Population – Governor's Exception | Non-Rural |
| Habersham | 7924 | Low Income - Habersham County | Medically Underserved Population | Rural |
| Hall | 715 | Med Ind - Southeast Gainesville Service Area | Medically Underserved Area – Governor's Exception | Non-Rural |
| Hart | 645 | Hart County | Medically Underserved Area | Rural |
| Hart | 7569 | Hart County | Medically Underserved Area | Rural |
| Jackson | 718 | Jackson Service Area | Medically Underserved Area | Rural |
| Lumpkin | 661 | Lumpkin County | Medically Underserved Area | Rural |
| Rabun | 685 | Rabun County | Medically Underserved Area | Rural |
| Towns | 7725 | Low Income - Towns | Medically Underserved Area | Rural |
| Union | 702 | Union County | Medically Underserved Area | Rural |
| White | 709 | White County | Medically Underserved Area | Rural |

## Appendix H: Public Health Indicators for Northeast Georgia Region Recommended Priority Needs

| Health Need | Health Indicator | Indicator Type | County Values | | | | | | | | | | | | | | | State Benchmark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Banks | Barrow | Dawson | Forsyth | Franklin | Habersham | Hall | Hart | Jackson | Lumpkin | Rabun | Stephens | Towns | Union | White | |
| Mental and Behavioral Health | Suicide Rate | rate per 100k | | 17.1 | 30.2 | | 25.8 | 14.3 | 16.8 | 23.4 | 22.9 | 20.6 | | 20.6 | | 21.2 | | 13.1 |
| | Mental and Behavioral Disorders - Discharge Rate | rate per 100k | 713.4 | 582.5 | 771.5 | | 845.3 | 773.1 | 852.6 | 761 | 767.5 | 796.2 | 614.7 | 1083.7 | 636.4 | 721.8 | 825.7 | 531.5 |
| | Disconnected Youth Age 16-24 | % | 19.1 | 17.7 | | | 30.2 | 18.2 | 17.1 | 21.5 | 19.7 | | | 23.6 | | | | 17.0 |
| | Other Mental and Behavioral Disorder Deaths - Not Related to Drug Use | rate per 100k | 51.4 | 33.3 | 37.6 | | | | 47.1 | | 33.1 | 52.2 | | | | 35.4 | 38.1 | 30.8 |
| | Mental and Behavioral Disorders - ER Visit Rate | rate per 100k | | 1431.2 | 1249.1 | | | 1103.8 | 1126 | | 1231.4 | | | 1526.2 | 1355 | 1572 | 1142 | 1098.5 |
| | Social and Membership Associations | rate per 10k | | 8.0 | | 5.9 | | | 7.7 | | | 6.4 | | | | | | 8.9 |
| | Poor Mental Health Days | days/mo | 4.0 | 3.8 | | | 4.2 | 4.0 | 3.8 | 4.1 | | 4.1 | 4.0 | 4.1 | 3.8 | | 3.9 | 3.8 |
| | Population to One Mental Health Provider | /provider | | 6427 | 843 | 2085 | 1395 | 2603 | 1347 | 8518 | 2228 | 1429 | 753 | 1717 | 11391 | 1529 | 1605 | 829 |
| | Frequent Mental Distress | % | | | | | 13.6 | | | 13.5 | | 13.0 | | 13.4 | | | | 13.0 |
| | Drug Overdose Deaths | rate per 100k | | 15.5 | 22.9 | 13.6 | 28.4 | | 13.4 | | 19.0 | 14.9 | 24.4 | 20.8 | | 16.4 | 16.4 | 12.7 |
| | Opioid Prescriptions per 100 Persons | rate per 100 | | 74.0 | 142.7 | | 111.3 | 98.9 | 87.1 | #### | 109.1 | 73.9 | 145.8 | 153.4 | 87.6 | 106.0 | 92.0 | 70.9 |
| | Alcohol-Impaired Driving Deaths | % | | 27.3 | | | | 39.5 | 25.8 | 47.6 | | | 36.8 | | | | | 23.3 |

| Health Need | Health Indicator | Indicator Type | County Values | | | | | | | | | | | | | | | State Benchmark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mental and Behavioral Health | Excessive Drinking | % | 16.0 | 16.8 | 17.7 | 17.6 | 15.6 | 16.1 | 16.6 | | 18.5 | 17.7 | | 15.3 | | | 15.9 | 15.1 |
| | Drug-Related Deaths | rate per 100k | | | | | | | 17.1 | | | | | | | | | 14.7 |
| | Adult Smoking | % | 19.5 | 18.1 | | | 20.0 | 19.8 | | 19.7 | | 19.5 | 18.6 | 19.3 | | | | 17.9 |
| | Percent of Population 12+ Reporting Non-medical Use of Pain Relievers | % | | 5.0 | | | | | | | 5.0 | | | | | | | 4.7 |
| | Percent of People 12+ Reporting Drug Dependence | % | | 3.1 | | | | | | | 3.1 | | | | | | | 2.9 |
| Access to Care | Birth Defects - ER Visit Rate | rate per 100k | 31.5 | 15.8 | 27.2 | | | 20.2 | | | | | 41.6 | 19.5 | | | | 12.5 |
| | Fetal and Infant Conditions - Discharge Rate | rate per 100k | 50.9 | | | | 55.5 | 44.8 | | 82.9 | | | 99.4 | 51.3 | | | | 34.8 |
| | Birth Defects - Discharge Rate | rate per 100k | 64.9 | 39.2 | 58.2 | 32.4 | 62.6 | 38.6 | 41.3 | | 39.8 | 53.6 | 90.4 | 44.9 | | 63.8 | 66.3 | 31.7 |
| | Pregnancy and Childbirthing Complications - ER Visit Rate | rate per 100k | ##### | 1276.0 | | | 1443.3 | | | | 1334.8 | | | 2470.0 | | ##### | | 1077.3 |
| | Births to Mothers with Less than 12 Years of Education | % | 14.9 | | | | 22.1 | 31.7 | | 16.6 | 17.3 | 15.8 | 22.8 | 15.3 | | 21.8 | 28.3 | 14.5 |
| | Fetal and Infant Conditions - ER Visit Rate | rate per 100k | | | 55.5 | | 65.6 | 58.9 | | | | | | | | 93.3 | | 53.0 |
| | Child Mortality < 18 Years of Age | rate per 100k | 64.4 | | 105.5 | | 102.9 | | | 91.9 | | | | 61.0 | | | | 60.6 |
| | Teen Birth Rate per 1000 Population Age 15-19 | rate per 1k | 35.0 | | | | 46.6 | 35.8 | 39.3 | 35.6 | | | 32.2 | 41.7 | | | | 31.6 |
| Access to Care | Pregnancy and Childbirthing Complications - Discharge Rate | rate per 100k | ##### | | | 1392.7 | 1429.4 | 1374.0 | 1467.0 | | 1446.2 | | | | | | ##### | 1289.5 |

| Health Need | Health Indicator | Indicator Type | County Values | | | | | | | | | | | | | | | State Benchmark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Access to Care | Low Birth Weight | % | | | | | 9.7 | | | | | | | | | | | 9.5 |
| | Driving Alone to Work with Long Commute > 30 minutes | % | 47.6 | | 57.2 | 50.2 | | | | | | 42.4 | | | | | 43.2 | 40.0 |
| | Driving Alone to Work | % | 83.1 | | | 83.4 | 85.0 | 84.6 | 80.1 | 83.4 | | 85.1 | | 83.9 | | 82.2 | 81.0 | 79.6 |
| | Population to One Primary Care Physician | /provider | 4624 | 5025 | 1554 | | 5578 | 1833 | 1698 | | 1760 | 2416 | 1628 | | | | 4046 | 1519 |
| | Population to One Non-Physician Primary Care Provider | /provider | 2300 | 4059 | 1967 | | 1240 | 1526 | | | 2393 | 1310 | 1505 | | 1266 | | 2626 | 1146 |
| | Uninsured Children < 18 Years of Age | % | 8.9 | | | | 8.8 | 10.4 | 11.3 | | | 8.1 | 15.3 | 9.1 | | 9.1 | 9.3 | 7.7 |
| | Number of Primary Care Physicians per 100,000 Population | rate per 100k | 21.6 | 19.9 | 64.3 | | 17.9 | 54.6 | 58.9 | | 56.8 | 41.4 | 61.4 | | | | 24.7 | 65.8 |
| | Ambulatory Sensitive Discharges: Acute Conditions | % | 16.2 | 13.2 | 12.8 | | 15.2 | 17.4 | 13.8 | | 14.3 | 15.3 | 20.1 | 18.0 | 18.8 | 16.9 | 15.2 | 12.2 |
| | Preventable Hospital Stays - Medicare - Discharge Rate | rate per 1k | 69.3 | 63.8 | 58.5 | | 61.8 | 53.2 | | | 50.2 | 69.8 | 67.0 | 74.1 | | | 51.2 | 50.2 |
| | Uninsured Adults < 65 Years of Age | % | 21.8 | 21.7 | 19.6 | | 22.3 | 24.5 | 26.4 | | | 22.0 | 24.8 | | 19.5 | 19.4 | | 19.4 |
| | Ambulatory Sensitive Discharges: Avoidable Illnesses | % | 2.3 | 2.3 | 2.5 | | | | 2.6 | | 2.6 | 2.9 | | | | 2.4 | 2.9 | 2.0 |
| | Ambulatory Sensitive Discharges: Chronic Conditions | % | 5.8 | 6.2 | | | 6.8 | | | | | 5.9 | 6.3 | 6.8 | | 5.9 | | 5.7 |
| | Mammography Screening - Medicare | % | 61.5 | | 61.4 | | 54.7 | | | | 57.6 | | 59.7 | 56.3 | | | | 62.0 |
| | Diabetic Screening - Medicare | % | | | | | | | | | | 82.9 | 85.0 | | | | | 85.3 |
| | Price-Adjusted Medicare Reimbursements per Enrollee | dollars | | 10173 | 9845 | | 10031 | | | | 9710 | 9966 | | 10307 | | | | 9582 |
| Chronic Conditions | Physical Inactivity | % | 24.7 | | | | 33.2 | 26.1 | | 31.0 | | 26.0 | 28.3 | 27.0 | 29.0 | 26.7 | 24.9 | 24.1 |
| | Access to Exercise Opportunities | % | 52.6 | | | | 70.0 | 72.3 | | 74.6 | | | | | | | | 76.7 |
| | Diabetes Deaths | rate per 100k | 28.2 | 30.3 | | | | | | | | 27.2 | | | | | | 21.5 |

| Health Need | Health Indicator | Indicator Type | County Values | | | | | | | | | | | | | | | State Benchmark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Diabetes Diagnoses - Adults Age 20+ | % | 12.0 | 12.5 | 11.7 | | | | | | | 11.5 | 14.7 | 12.3 | 13.1 | 16.0 | 12.7 | 11.3 |
| | Heart Disease Death Rate | rate per 100k | | | | | | | | | | 134.8 | | | | | | 75.6 |
| | Chronic Condition: Heart Disease - Percent of FFS Medicare | % | | | 26.8 | | | | | | | 25.7 | | | | | | 25.2 |
| Septicemia | Blood Poisoning (Septicemia) - Discharge Rate | rate per 100k | | | | | | 529.7 | 814.3 | | | | | 626.3 | 553.8 | | 779.3 | 514.5 |

Note: Blank county values indicate that the indicator was either not available for that geography or was not a need when compared to the state benchmark. Appendix A contains additional information on health indicator sources.

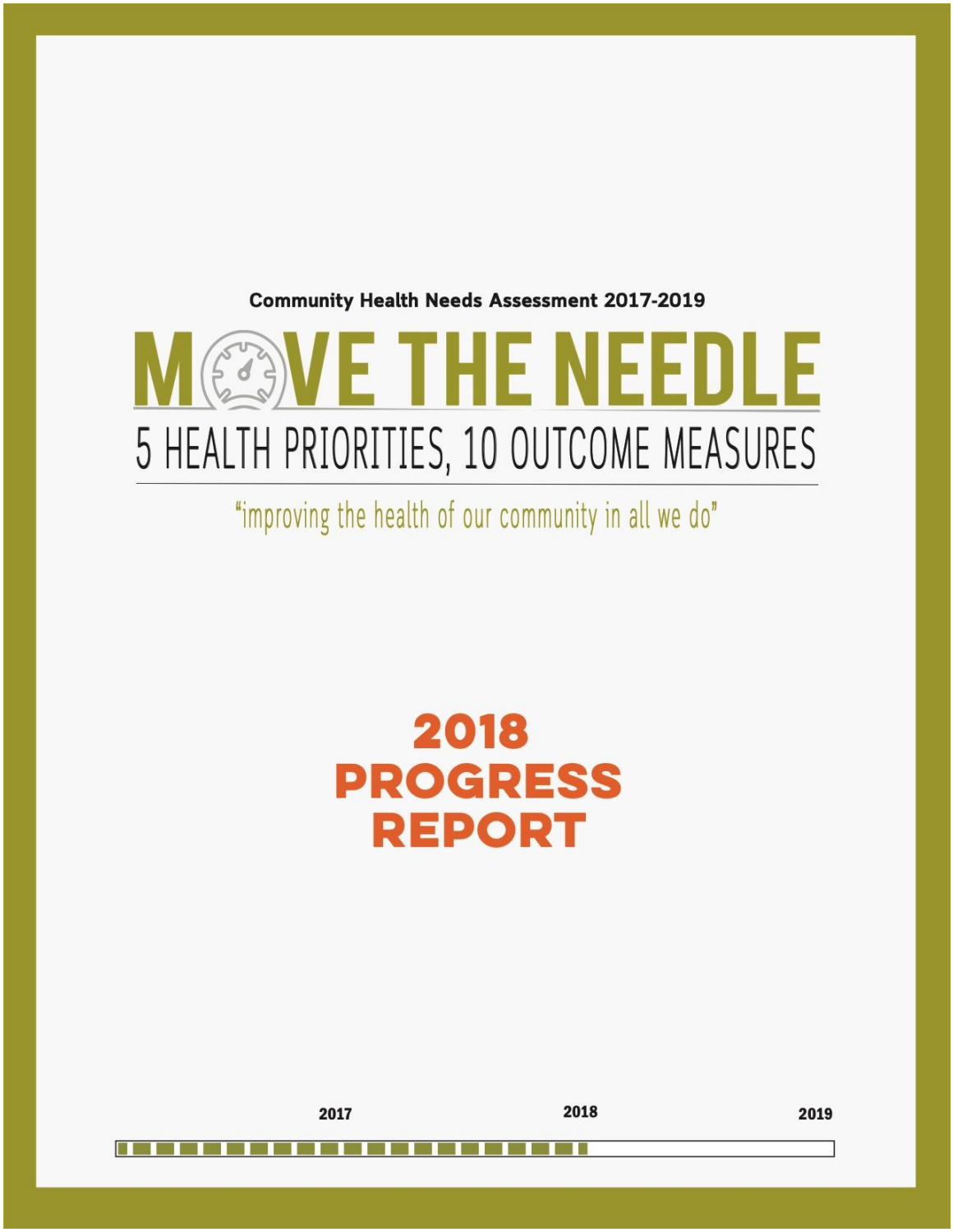
## Appendix I: Evaluation of Prior Implementation Strategy Impact

*Habersham Medical Center Evaluation of 2016 Implementation Strategy*

1. Substance Abuse
    - Worked with Avita CSB to help facilitate faster transfer of our 1013 patients who were abusing drugs and alcohol out of our Emergency Department and into more appropriate treatment areas
    - Opened a medical stabilization service line to provide inpatient detoxification to individuals suffering from drug and alcohol addiction
    - Joined NGHS and other facilities in a grant application to help develop ways to combat the opioid epidemic
    - Joined in the class-action lawsuit against pharmaceutical companies for the hand in causing the opioid epidemic
2. Obesity/Lack of Physical Activity
    - Hosted multiple wellness seminars on the campus of Habersham Medical Center with a focus on improving overall health by increasing physical activity
    - Began the process of planning for a new “Wellness Center” for the community
    - Changed the food vendor at the hospital to provide healthier options with dishes created in a “farm-to-table” manner
    - Hired two surgeons with experience in bariatrics procedures and an interest in starting that service line in Habersham County
3. Infant Mortality Rate
    - Worked with local Obstetrician and Nursing Midwives to improve policies, practices, and procedures related to our Obstetrical Department
    - Invested in new equipment for our nursery
    - Provided education to community residents in both English and Spanish on the importance of prenatal care and the effects of smoking, drugs, and alcohol on infant mortality rate
4. Hospital Enhancement
    - Recruited 2 orthopedic surgeons, 2 general surgeons, and 2 internal medicine physicians to the area
    - Began conversations to join Habersham Medical Center to Northeast Georgia Health System. At the time of submission, the two parties are currently under an LOI and working toward a Definitive Agreement.
    - Improved Patient Satisfaction scores by 43% in respect to overall “rate the hospital”

Completely redesigned the hospital’s billing statement so that individuals could better understand what they were being charged for and who to call if they needed assistance.

*NGHS 2018 Progress Report*

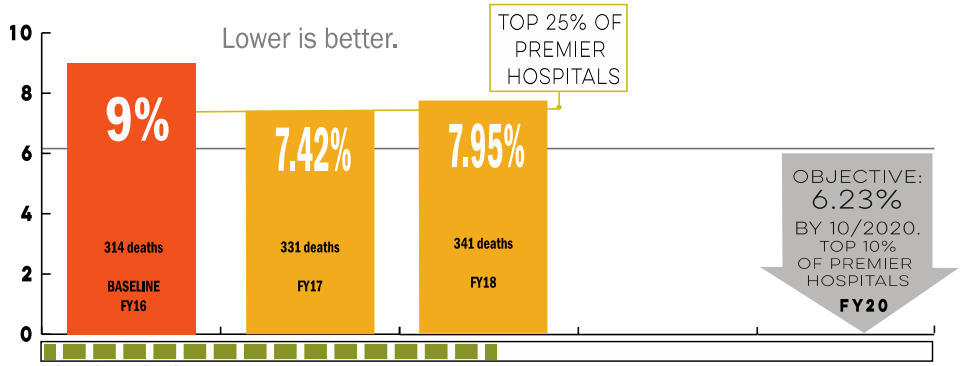


Based on a comprehensive community health needs assessment conducted in 2016, Northeast Georgia Health System identified five important health priorities and ten outcome measures to assess the health system's progress in reaching ambitious goals for addressing specific health concerns for our community. If you want to learn more about each priority, click on the "Move The Needle" icon  in this 2018 update report.

# SEPSIS

REDUCE OVERALL MORTALITY RATE FOR SEPSIS

**PERCENT OF PATIENTS WITH SEVERE SEPSIS/SEPTIC SHOCK WHO LOST THEIR LIVES AT NGHS**




SOURCE: NGMC data

## 2018 ACTIONS:

**Standard work was developed** for the NGMC emergency departments with EPIC electronic medical record support. Screenings are now conducted as part of standard workflow at admission, as part of each shift assessment of inpatients and at discharge.

**One hundred forty Georgia healthcare providers attended the 2019 Northeast Georgia Regional Infection Prevention Symposium.** This free conference, offered by NGMC's Infection Prevention & Control department, educated providers in the region about methods to improve patient outcomes related to infections and antibiotic resistant organisms.

**Sepsis education classes** were provided to five Intro to Healthcare classes and one Advanced Healthcare class at Johnson High School to increase sepsis awareness among the next generation of healthcare workers. Of the 131 high school students in these classes, only five students knew the word sepsis before the class.

Two sepsis videos were developed and began running on social media September 2018.

CDC patient education materials are being provided to discharged sepsis patients, pneumonia patients, and UTI patients through the EPIC medical record.

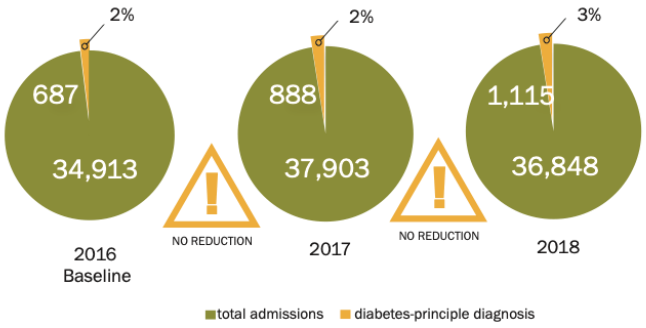
A Signs and Symptoms Handout is being developed to be given to patients in the ambulatory setting to ensure they have actionable activities based on their signs and symptoms related to healthcare associated infections and antibiotic resistant organisms.

The Sepsis Coordinator led one-to-one sepsis education at the Barrow Community Fall Festival.

# DIABETES

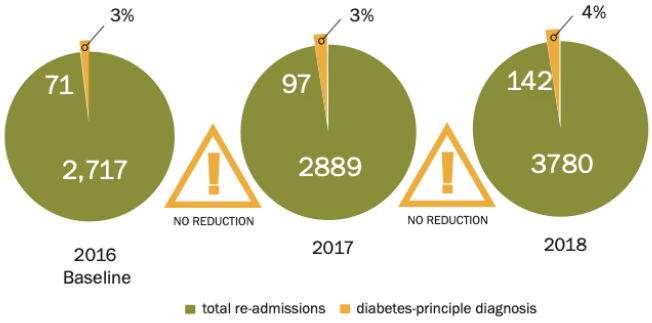
REDUCE HOSPITAL ADMISSIONS
& READMISSIONS FOR DIABETES AND ITS
RELATED COMPLICATIONS

**ADMISSIONS**
**WITH DIABETES**
**AS PRINCIPLE DIAGNOSIS**




Source: NGMC Data

**RE-ADMISSIONS**
**WITH DIABETES**
**AS PRINCIPLE DIAGNOSIS**




Source: NGMC Data

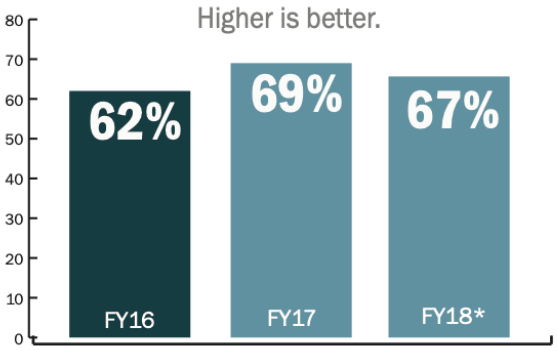
## 2018 ACTIONS:

Though no significant improvements in admissions or readmissions have yet been realized, in 2018, NGHS continued work to standardize diabetic care across the system. Using Epic optimizations, insulin infusion order set auditing and optimizations, glucometric baseline data, standardization for meal delivery/glucose/insulin administration and other enhancements, NGHS has strengthened the foundations for improving diabetic care.

# DIABETES

## IMPROVE OUTPATIENT DIABETES CONTROL RATE

**PERCENT OF OUTPATIENTS WITH DIABETES WITH AN A1-C OF LESS THAN 8 AT PARTICIPATING MEDICAL PRACTICES:**




Source: Phytel

Northeast Georgia PHYSICIANS GROUP

LONGSTREETCLINIC
Your Health. Our Specialty.

*data from before 2018 included Northeast Georgia Diagnostic Clinic which is not included in 2018 totals

## 2018 ACTIONS:

The Diabetes Education Program was expanded to offer individual and group classes at **NGMC Barrow.**

PREVENTT2
A PROVEN PROGRAM TO PREVENT OR DELAY TYPE 2 DIABETES

NGMC achieved **"full recognition status" for the Prevent T2 Program,** which offers group support and encouragement to prevent diabetes in at-risk populations. The program was offered in FY18 through partnerships with YMCA Gainesville, YMCA in Winder and Good News Clinics.

With 26 total participants in FY18, the **average weight loss of T2 participants was 9.3 pounds.** According to the CDC, losing 5%-7% of weight by reducing calories and increasing physical activity will reduce the risk of developing type 2 diabetes by 58%.

# CANCER

## IMPROVE THE STAGE OF DIAGNOSIS OF LUNG CANCER IN HIGH RISK COUNTIES

NGMC improved the stage of diagnosis of lung cancer in five of the eight high-risk counties when compared to baseline data. When it comes to cancer, the earlier you can diagnose it, the greater your chance of survival. The goal is to reduce percentage of newly diagnosed late stage (stage 3 & 4) lung cancers, thereby raising newly diagnosed early stage diagnosis (stage 1 & 2). See page 6.

## REDUCE INITIATION OF TOBACCO USE AMONG MIDDLE SCHOOLERS IN BARROW COUNTY

According to NGMC's Community Health Needs Assessment, Barrow County had a lung cancer indicator value of 87.9, compared to 54.1 in neighboring Gwinnett County.

## 2018 ACTIONS:

A **Multidisciplinary Cancer Team** approach has been implemented, including a Lung Cancer Conference in Braselton. The NGMC Nurse Navigator for lung cancer ensures patient follow-ups are conducted with the team's recommendations with further imaging studies.

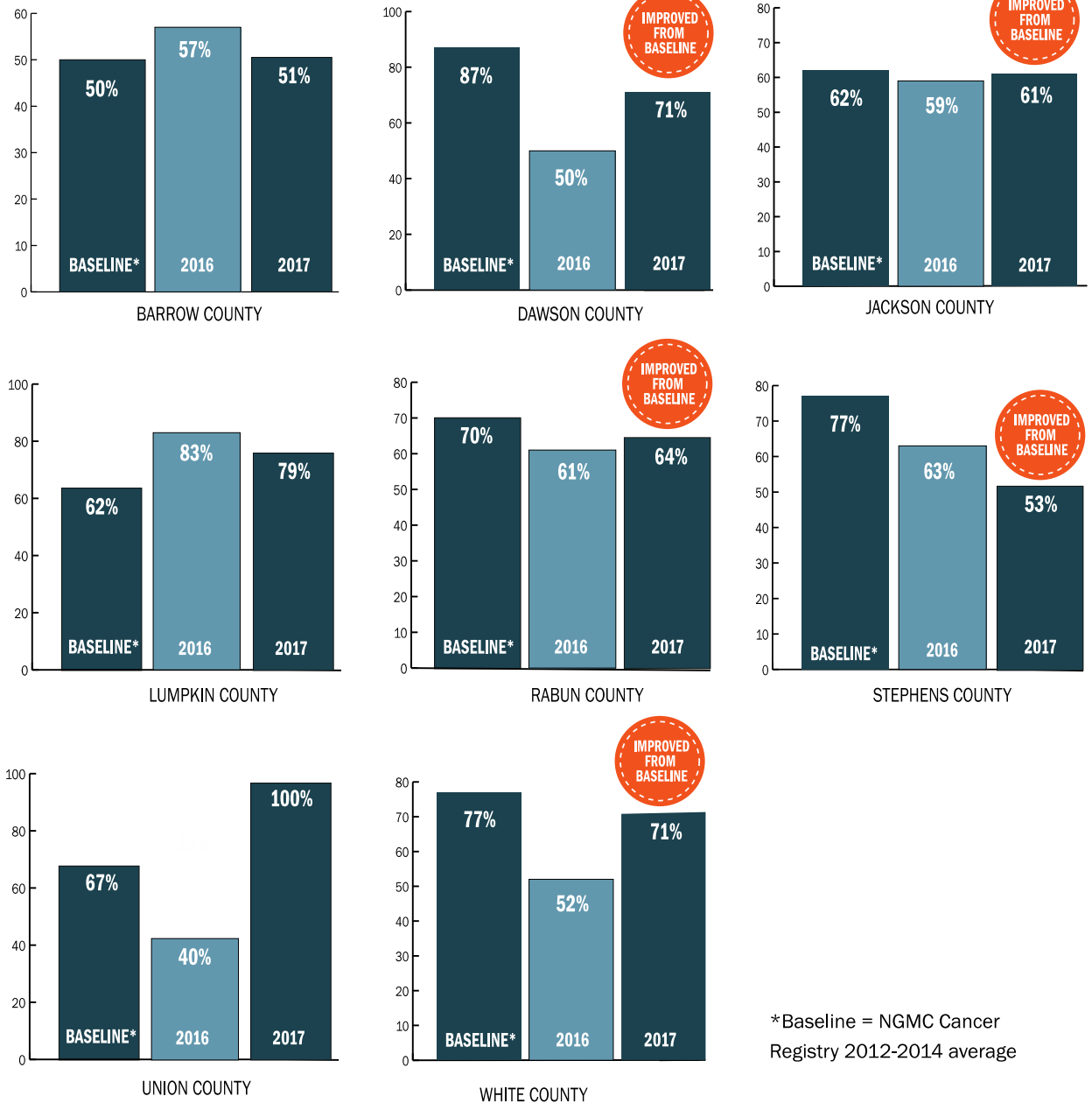
NGMC received a grant from the Georgia Healthy Family Alliance to **promote awareness and access to low dose CT scans for lung cancer screening for indigent patients in Barrow County.** This program will increase access and assist those without insurance coverage so they can receive proactive screening.

Oncology Services also provided education to the community in Barrow County at local health fairs, as well as, **three lung cancer support groups** that will continue into FY19.

**NGMC partnered with Barrow County Schools to implement "Tar Wars" to 2,258 elementary school students.** Total average learning gain for students was 21%. The greatest misconception among students was that "vapes are safer than regular cigarettes". When asked, "do you plan to use tobacco when you are an adult," 98.8% of students reported "no" in the pre-test and also in the post-test. "Tar Wars" is a tobacco-free education program for fourth and fifth grade students developed by the American Academy of Family Physicians to teach kids about the dangers of tobacco use, the cost associated with using tobacco products, and the advertising techniques used by the tobacco industry to market their products to youth.

# Diagnosis at Stage 3 or 4 (late stage)

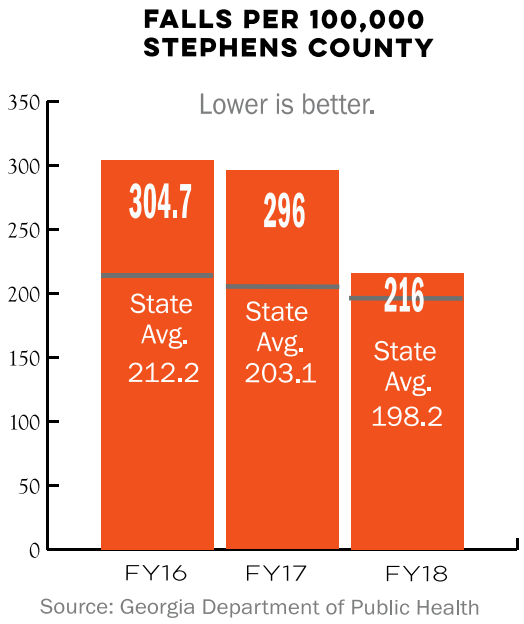
Lower is better.




*Baseline = NGMC Cancer Registry 2012-2014 average

# INJURY

## REDUCE FALL RATES IN STEPHENS COUNTY




Source: Georgia Department of Public Health

According to the CDC, more than 95% of hip fractures are caused by falling, and falls are the most common cause of traumatic brain injuries.

In FY16, Stephens County had the highest indicator value for falls within our service area at 304.7 with 92 more falls per 100,000 people than the state average. In FY18, the falls rate declined to 216, a decrease of 29% from FY16.

## 2018 ACTIONS:

While no single intervention is responsible for the decrease in falls in Stephens County for FY18, NGMC contributed to improvement through education, awareness, and enhanced care planning.

**Fall Prevention displays** using the CDC's STEADI *(Stopping Elderly Accidents, Deaths & Injuries)* self-awareness tools were placed for use at Stephens County pharmacies and other public locations.

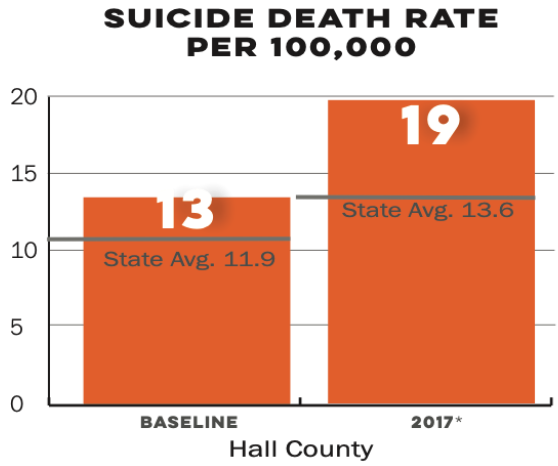
NGMC partnered with organizations such as Legacy Link Area Agency on Aging and the Stephens County Senior Center to provide **fall prevention education** classes.

NGMC Trauma Outreach Coordinator traveled with Meals on Wheels to provide falls prevention education and resources to individuals around Stephens County.

NGMC and Northeast Georgia Physicians Group Toccoa Clinic providers began to develop a **shared decision making process** whereby patients screened at high risk for falls decide jointly with their provider on the best path for improvement, such as home exercise, physical therapy, local exercise programs, or other appropriate options.

# INJURY

## REDUCE SUICIDE RATE TO ZERO IN HALL COUNTY




Source: Centers for Disease Control and Prevention/ National Center for Health Statistics
*2014-2017

The zero suicide rate outcome measure for Hall County is meant to be an audacious goal: a rallying cry around which the community will come together to intervene upstream on the issues and conditions which after lead to suicide.

## 2018 ACTIONS:

ONE HALL

NGMC conducted listening sessions with over 60 stakeholder participants to identify top priorities for community-based solutions for mental health concerns. Stakeholders ranged from representatives from AVITA Community Partners to school systems and local businesses. Out of those sessions, a steering committee emerged that is being housed under **United Way's One Hall.** Within the One Hall framework, the steering committee is working to better **coordinate mental health services** in northeast Georgia via various new forms of connectivity including a to-be-developed shared data platform and navigation system, providing Mental Health First Aid training to targeted audiences, and collaboration.

**Proceeds from the 2019 Medical Center Open will go toward a Student Success Center located on the campus of Gainesville High School and will be available to students and families throughout Hall County.** Components of the center include addressing academic and workforce development while also increasing access, collaboration and education regarding mental and behavioral health supports that are in great demand.

NGMC and the Georgia Council on Substance Abuse provide the state's first program to connect people surviving overdoses to **Certified Addiction Recovery Empowerment Specialists (CARES) in its EDs**. In 2018, the Peer Support Program was **expanded to the Neonatal Intensive Care Unit (NICU)**. This program connects mothers who deliver babies with symptoms of Neonatal Abstinence Syndrome (NAS) to people in recovery who have been in similar circumstances. This attention on how opioids impact babies born to addicted moms in the NICU helped introduce best practices which have reduced the length of NICU stays from an average 31 days to 16 days.

NGHS is an active leader in the **Partnership for a Drug Free Hall**, which is a partnership of agencies and community members dedicated to providing Hall County with information, resources and actions to address the drug problems of Hall County. The group holds regular community forums, workshops and training sessions and workwith Center Point to conduct prevention programs in local middle schools, high schools and colleges. NGHS recently helped the organization apply for and receive a $250,000 grant to open *J's Place: The Jeffrey Dallas Gay, Jr. Recovery Center* which will provide resources and connections of support to people in recovery in our community. The need for this service became evident through the Peer Program in the ED and NICU.

Northeast Georgia Physicians Group (NGPG) has embedded **behavioral health specialists** who are Licensed Clinical Social Workers who provide counseling and guidance to patients who are dealing with challenges like addiction and mental illness.

Northeast Georgia Medical Center had early successes beginning in 2012 when new Emergency Department prescribing policies took effect limiting the number of opioids prescribed for Emergency Department patients. **NGMC physicians also participate in the state's drug monitoring programs to reduce overprescribing.**

NGHS supported the effort to pass Senate Bill 121, the Jeffrey Dallas Gay, Jr. Act, in 2017 which allows pharmacists to dispense Naloxone/Narcan without an individual prescription. Legislation was also passed which provides amnesty to prosecution for people who report a drug overdose.

# ACCESS TO CARE

DEVELOP PARTNERSHIP WITH INDIGENT CLINICS BASED ON BEST PRACTICE TARGETING POPULATIONS ALONG THE 400 CORRIDOR

PARTNER WITH AREA CLINICS DEDICATED TO SERVING INDIGENT AND UNDER- SERVED POPULATION TO MONITOR AND IMPROVE CLINICAL EXCELLENCE IN CHRONIC DISEASE MANAGEMENT

GRADUATE MEDICAL EDUCATION: FILL ALL GME SLOTS IN 2019

## 2018 ACTIONS:

NGMC continues to partner with **Good Shepherd Clinic in Dawsonville** and provides the clinic with office space. Jo Brewer, Administrator of Medical Plaza 400, serves on the clinic's board.

NGMC continues to partner with the Longstreet Clinic and Hall County Health Department to serve low income mothers and by helping them to receive much-needed **prenatal care.** Over 200 patients are seen per month. The clinic serves uninsured and underinsured expectant moms living in the 13-county Public Health District 2 for the entire nine months of pregnancy through delivery.

NGMC continued its **partnership with Good News Clinics** (GNC) in Hall County, providing $560,000 in FY18 to support free medical and dental care to uninsured residents of Hall County who cannot afford health care services. The Medical Center Foundation will fund a **$1 million investment in Epic –** NGMC's electronic medical records system – at the clinic, projected to be implemented in 2019.

Northeast Georgia Medical Center's **Graduate Medical Education (GME)** program continues to progress. The System will train specialists in the fields of internal medicine, family medicine, general surgery, OB/GYN, psychiatry and emergency medicine to grow our physician workforce in Georgia. Inaugural residents for General Surgery and Internal Medicine start in July 2019.

Dr. **Antonio Rios,** Chief Physician Executive for NGPG, continues as **Chairman of The Georgia Board for Physician Workforce** to identify the physician workforce needs of Georgia communities and to meet those needs through the support and development of medical education programs. He was also awarded the 2018 Sam Poole Volunteer of the Year Award from Good News Clinics where he is a longtime volunteer and member of the Board of Directors.

Northeast Georgia Medical Center

Questions?
Contact: Christy Moore, Manager, Community Health Improvement
770-219-8097 | christy.moore@nghs.com

*Stephens County Hospital Evaluation of 2016 Implementation Strategy*

1. Obesity & Lifestyle
    - Improved and increased our numbers of attendance in our Community Diabetes Education Course (added educational hours at the Wound Care Center)
    - Implemented a Community Weight Loss Education Course for free
    - Partnered with local gyms to offer employee discounted memberships
2. Mental Health and Substance Abuse
    - Used a grant to build the Stephens County Mental Health Collaborative
    - Implemented tele-psych evaluations for ED patients and Inpatients for Crisis stabilization related to mental health
3. Chronic Disease
    - Added WorkWell Occupational Health Clinic with FNPs
    - Added an Urgent Care to bridge PCP gap (extended hours to come)
    - Extended our Wellness Education Classes (stress management, diabetes Management, weight management)
    - Cardiac Rehab program that continues to grow and expand with many thanks from community donors
4. Access to Care
    - Addition of WorkWell with FNPs (expanded hours coming 2019)
    - Added an FNP to Internal Medicine Practice
    - Added an OB/GYN- adding a CNM in October 2019
    - Added a General Surgeon
    - Added a Pediatrician in August 2019
    - Adding a PA to our Orthopedics practice September 2019

## Appendix J: CHNA Partner Meetings

As part of a Health Department's Accreditation CHNA requirement, Health Departments are required to provide documentation of at least two meetings about the CHNA process. Below is a summary of CHNA partner meetings that took place starting in November 2018.

### CHNA PARTNER MEETING KICKOFF

November 15, 2018 3:00 PM - 4:30 PM
Location: Ramsay Conference Room, Outpatient Services Building on the campus of NGMC

Invitees:

- Pamela Logan – District 2 PH
- Tracy Vardeman – Northeast Georgia Health System
- Tyler Williams – Habersham Medical Center
- Jeff Laird – Stephens County Hospital
- Samantha Rickman – Stephens County Hospital
- Rani Yau – IBM Watson Health
- Francine Poel – IBM Watson Health

Agenda:

- Introductions of Steering Committee
- Overview of Watson Health CHNA process
- Collaborative approach for communities of northeast Georgia
- Deliverables
- Timing and Milestones
- Steering Committee Role
- Questions/Discussion

### PARTNER MEETING

December 13, 2018 3:30 PM - 4:30 PM

Invitees:

- Jeff Laird – Stephens County Hospital
- Samantha Rickman – Stephens County Hospital
- Tyler Williams – Habersham Medical Center
- Alex Nolley – Habersham Medical Center
- Tracy Vardeman – Northeast Georgia Health System
- Christy Moore – Northeast Georgia Health System
- Rani Yau – IBM Watson Health
- Francine Poel – IBM Watson Health

Agenda:

- Introduction of additional Watson Health team member (5 min)
- Update on CHNA Partnership (10 minutes)
- Demonstration of Box usage for shared/collaborative items (15 min)

- Focus Group Planning
- Review Focus Group format
- Confirm location of January in person partner meeting; 1/24/19, 9-11AM

**PARTNER MEETING**
January 24, 2019 9:00 AM - 11:00 Am
Location: Habersham Medical Center

Invitees:
- Christy Moore – Northeast Georgia Health System
- Sabrina Lane – Northeast Georgia Health System
- Tracy Vardeman – Northeast Georgia Health System
- Samantha Rickman – Stephens County Hospital
- Tyler Williams – Habersham Medical Center
- Alex Nolley – Habersham Medical Center
- Rani Yau – IBM Watson Health
- Francine Poel – IBM Watson Health

Agenda:
- Review preliminary indicator data - 45 mins
- Review focus group guide and interview questions - 30 mins
- Discuss focus group logistics and schedule week of Mar. 4 - 30 mins

**PARTNERS MEETING - Prioritization Planning**
May 14, 2019

Invitees:
- Alex Nolley – Habersham Medical Center
- Christy Moore – Northeast Georgia Health System
- Jeff Laird – Stephens County Hospital
- Pamela Logan – District 2 Health Department
- Erika Lopez-Gil – District 2 Health Department
- Tonya Chitwood – Stephens County Hospital
- Tyler Williams – Habersham Medical Center
- Rani Yau – IBM Watson Health
- Francine Poel – IBM Watson Health

Agenda:
- Overview of Prioritization Meeting
- Prioritization Participants – Advisors Invited by Each Partner
- Finalize Prioritization Criteria
- Questions/Discussion

**PRIORITIZATION MEETING**
June 19, 2019 12:00 PM - 4:30 PM
Location: Civic Center, Sydney Lanier Room (upstairs)

Invitees:

- CHNA Partners
- Community Advisors see **Appendix E**
- Rani Yau – IBM Watson Health
- Francine Poel – IBM Watson Health
- Nancy Ying – IBM Watson Health
- Betsy Block – IBM Watson Health

Agenda:

- Welcome and Introductions
- Overview of CHNA Process
- Purpose of Today's Meeting
- Assessment Findings by Community
- Determine Significant Health Needs
- Prioritization Working Session
- Review Findings by Community/Assess Synergies

## Appendix K: Northeast Georgia Medical Center Patient Origin

For the purpose of this community needs assessment, the geographic boundaries encompass the counties where 90% of NGMC hospital admissions originate. Forsyth County was excluded from analysis because NGMC serves a relatively small proportion of the county population as compared to other counties served.

*Northeast Georgia Medical Center Inpatient Discharges*

*Gainesville, Braselton, and Barrow Facilities Combined*

| County | 2018 | % of Total | % Included in Communities Served |
|---|---|---|---|
| Hall | 16,061 | 38.6% | 38.6% |
| Jackson | 3,793 | 9.1% | 47.7% |
| Barrow | 3,348 | 8.1% | 55.8% |
| White | 2,625 | 6.3% | 62.1% |
| Gwinnett | 2,617 | 6.3% | 68.4% |
| Habersham | 2,228 | 5.4% | 73.8% |
| Lumpkin | 1,737 | 4.2% | 77.9% |
| Banks | 1,492 | 3.6% | 81.5% |
| Stephens | 1,081 | 2.6% | 84.1% |
| Dawson | 944 | 2.3% | 86.4% |
| Rabun | 890 | 2.1% | 88.5% |
| Union | 557 | 1.3% | 89.9% |
| Forsyth | 420 | 1.0% | - |
| Towns | 398 | 1.0% | 90.8% |
| **Sub Total** | **38,191** | **91.8%** | **n/a** |
| All Others | 3,392 | 8.2% | n/a |
| **Grand Total** | **41,583** | **100.0%** | **90.4%** |

*Source: Georgia Hospital Association, CY2018, excludes Normal Newborns*