



Community Health Needs Assessment

Ballad Health- Norton Community Hospital

June 29, 2018

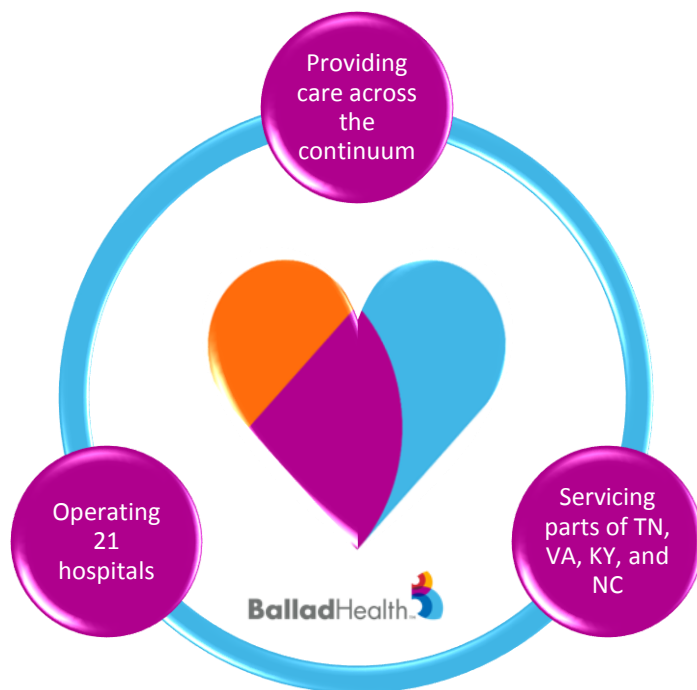
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1 Introduction

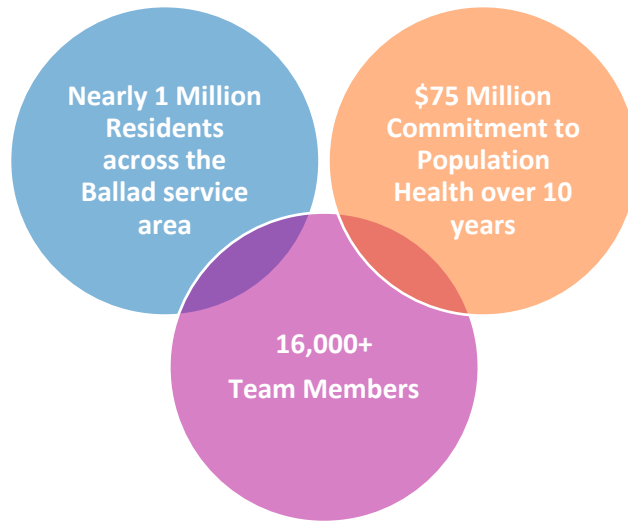
Norton Community Hospital, an acute care hospital in Norton, Virginia is one of the hospitals within the Ballad Health system. Ballad Health is an integrated healthcare system serving 29 counties of Northeast Tennessee, Southwest Virginia, Northwest North Carolina and Southeast Kentucky. Ballad was created upon the merger of two large regional health systems, Mountain States Health Alliance and Wellmont Health System, on February 1, 2018. Through rigorous state oversight, these two competitors have been granted the ability to merge into an integrated healthcare delivery system with a simple and concise mission: to improve the health of the people we serve.

Ballad Health operates a family of 21 hospitals, including three tertiary care facilities, a dedicated children's hospital, community hospitals, three critical access hospitals, a behavioral health hospital, an addiction treatment facility, long-term care facilities, home care and hospice services, retail pharmacies, outpatient services and a comprehensive medical management corporation.



Ballad's hospitals include:

- Bristol Regional Medical Center
- Dickenson Community Hospital
- Franklin Woods Community Hospital
- Hancock County Hospital
- Hawkins County Memorial Hospital
- Holston Valley Medical Center
- Indian Path Medical Center
- Johnson City Medical Center
- Johnson County Community Hospital
- Johnston Memorial Hospital
- Laughlin Memorial Hospital
- Lonesome Pine Hospital
- Mountain View Regional Hospital
- Niswonger Children's Hospital
- Norton Community Hospital
- Russell County Medical Center
- Smyth County Community Hospital
- Sycamore Shoals Hospital
- Takoma Regional Hospital
- Unicoi County Memorial Hospital
- Woodridge Hospital



Ballad Health Mission:

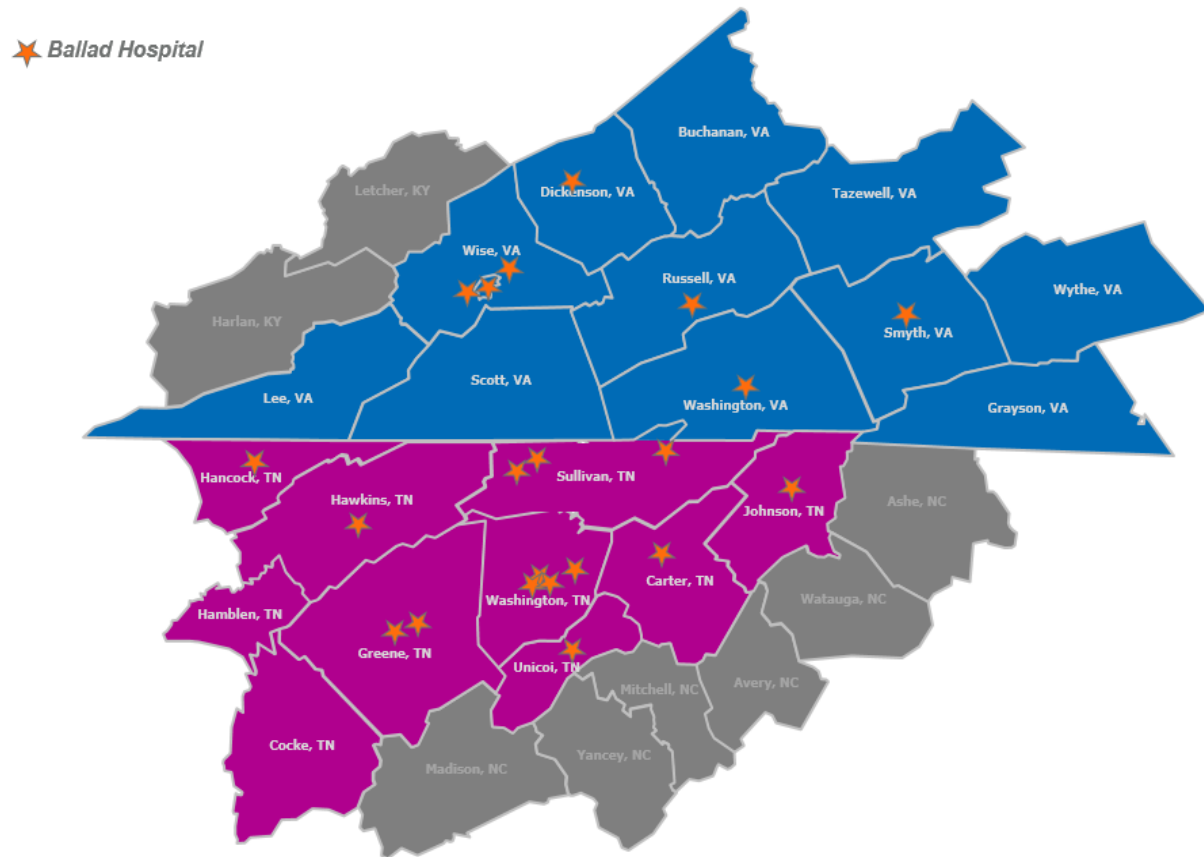
Ballad Health is committed to honoring those we serve by delivering the best possible care.

Ballad Health Vision:

To build a legacy of superior health by listening to and caring for those we serve.

The tagline of Ballad Health - "It's your story. We're listening." - is more than a marketing tool. Through the comprehensive state oversight and merger processes, the newly formed Ballad Health system was created to meet and address local health needs. Realizing that people want to receive care from someone who really listens to them, the organization's name and its tagline speak to the fact that good health is about more than healthcare – it's the story of people's lives. Located in the heart of Appalachia, Ballad pays homage to the traditions and stories that have shaped people's lives; yet, the organization also looks for new ways to partner with individuals and communities to make the region a healthier place to live and work.

With hospitals and services strategically placed throughout the region, Ballad Health is positioned to be the region's largest health care provider. The system's primary service area is comprised of 21 counties across Northeast Tennessee and Southwest Virginia, with a secondary service area encompassing an additional six counties in Western North Carolina and two counties in Southeastern Kentucky.



2 Executive Summary

Ballad Health is heavily invested in the health and well-being of its communities. In addition to its enhanced focus on population health management through the merger of the two legacy health systems, Ballad is also the largest employer in the region and the fourth largest employer in the State of Tennessee. Being such a prominent member of the regional economic community, Ballad has a strong desire to improve the health of the region, as well as its employees and their families. Realizing that health is tied to more than just genetics, Ballad is working towards a deeper understanding of the socioeconomic issues that face the population's ability to improve their overall health status. Social determinants of health related to topics such as access and ability to understand complex health conditions oftentimes go hand in hand with people's capacity to make optimal health decisions. Nevertheless, Ballad views the current health disparities of the Appalachian region as the opportunity to go beyond the walls of the hospital and work hand-in-hand with communities to make sustainable change happens for generations to come.

As part of the state oversight process, Ballad and its hospitals and entities have committed to improving the health status of its service area counties by agreeing to focus on an index of 25 active population health index measures (plus an additional 31 measures for monitoring). The population health index creates a platform for Ballad to further engage the efforts of its hospitals in partnership with the surrounding communities in order to drive change in a region that has a number of health disparities and access challenges. Leveraging the community health needs assessment process has helped Ballad to further educate on the health disparities that appear across the individual communities within its service area and has also helped the organization prioritize those issues that are most important in each hospital's community.

The population health index itself is based on the focus areas outlined in the previous community health needs assessments of both legacy systems (Mountain States and Wellmont), as well as the state health plans of both Tennessee and Virginia. Additionally, the Ballad population health index aligns with national health improvement efforts, such as Healthy People 2020. Although quite comprehensive, the index actually allows Ballad to be proactive with more-defined health improvement focus areas. Also, by encompassing the on-going work of local community and civic organizations, all vested groups can begin to work more so in unison, rather than in silos.

In order for Ballad to serve its region most effectively, it is essential to understand each community's individual needs. As such, Ballad conducted community health needs assessments to profile the health of the residents within its service areas. Activities associated with the development of this assessment have taken place from fall of 2017 through the spring of 2018. Primary data was obtained through individual surveys and focus groups with participants from the local communities, while secondary data was collated from national, state, regional, and county-specific sources.

Throughout this community health needs assessment process, high priority was given to determining the health disparities and available resources within each community. Community members from each county met with Ballard representatives to discuss current health priorities and identify potential solutions. The information gathered from a local perspective, paired with county, state, and national data, helps to communicate the region's health situation in order to begin formulating solutions for improvement.

According to America's Health Rankings, in 2018 Tennessee ranked 45th and Virginia ranked 19th out of 50 states for overall health outcomes. Both states had high rates of obesity, heart disease, addiction, and mental health concerns. Though Virginia's overall ranking is significantly higher than that of Tennessee's ranking, the health outcomes in Southwest Virginia counties, where Ballard facilities are located, resembles those of Tennessee. After compiling the various sources of information and using population health index as a starting point for discussion, the top health priorities were identified for the communities that each of the hospitals serve. This effort has led to the determination of the top health priorities for Wise County to include **obesity, smoking, substance abuse/mental health**. There are certainly a number of other health challenges in this community, but these rise to the top based on the assessment.

For reference, a complete list of the Ballard population health index measures can be found in the accompanying table. A more comprehensive view, with actual county versus state-level data, can also be found in the Appendix section of this report.

| Ballard Health Population Health Index: Measure List |
|--|
| Smoking Rates |
| Smoking Rates During Pregnancy |
| Youth Tobacco Use Rates |
| Physically Active Adults Rates |
| Physically Active Youth Rates |
| Adult Obesity Rates |
| Obesity Levels in Public School Students |
| Average mPINC Score (CDC Hospital-based survey on child/maternal health) |
| Breastfeeding Initiation Rates |
| Infants Breastfed at 6 months Rates |
| Neonatal Abstinence Syndrome (NAS) Births per 1,000 live births |
| Drug Deaths per 100,000 |
| Adults using Prescription Drugs for non-medical reasons |
| Children – On-time Vaccination Rates |
| Vaccination Rates – HPV Females |
| Vaccination Rates – HPV Males |
| Vaccination Rates – Flu Vaccine, Older Adults |
| Teen Pregnancy Rates |
| Third Grade Reading Levels |
| Dental Sealants (ages 6-9; 13-15) |
| Frequent Mental Distress Rates |
| Infant Mortality Rates (per 1,000 live births) |
| Low Birthweight Rates |
| People with Pre-diabetes referred to a prevention program |
| Premature Death Rates (per 100,000) |
| <i>Cancer Screenings (breast, cervical, colorectal)*</i> |
| <i>Diabetes Screenings*</i> |
| <i>Hypertension Screenings*</i> |

**The screening measures in the above table are not included in the official population health index, but are included as access measures to which Ballard will be held also accountable. Because of their relatability to the population health measures, they were also considered in the community focus group discussion.*

3 Norton Community Hospital

i. Facility Description

Norton Community Hospital in Norton, Virginia is a not-for-profit, 129-bed, acute-care facility serving Southwest Virginia and Southeastern Kentucky since 1949. As the largest healthcare facility in the coalfield region, Norton Community Hospital provides a wide array of services through highly trained physicians and support staff. Norton Community Hospital is a member of the Virginia Hospital and Healthcare Association and is accredited by the American Osteopathic Association. Norton Community Hospital offers a full array of primary care and specialty services as well as several additional ancillary services.



ii. Scope of Services

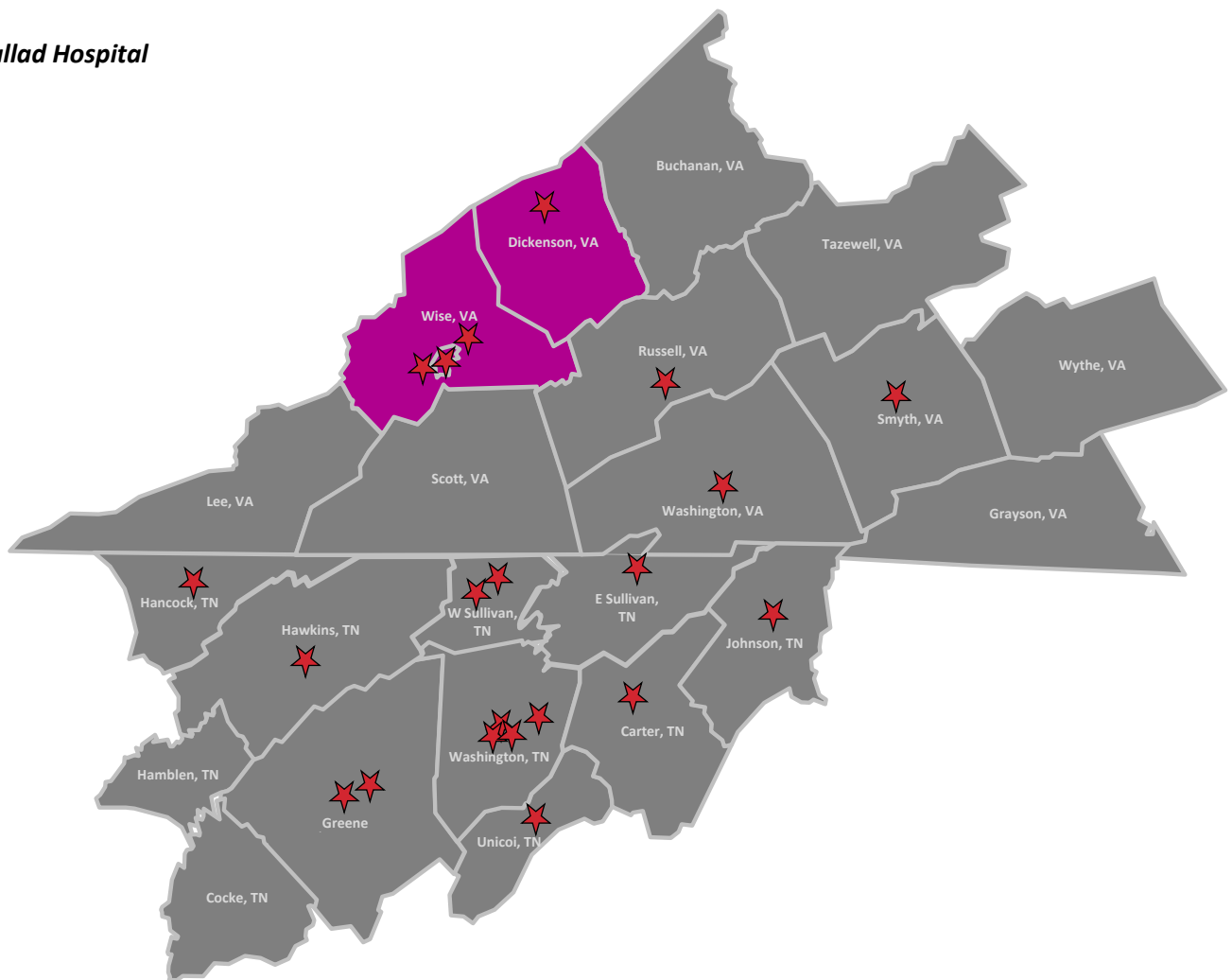
Norton Community Hospital offers the following complement of medical and specialty services:

- General Acute Medical Care
- Surgical Services
- Black Lung Clinic; Pulmonology
- Urology
- Family Birth Center
- 24/7 Emergency services
- Diagnostic Imaging
- Laboratory Services
- Primary Care

iii. Primary Service Area

Norton Community Hospital serves the population of Wise and Dickenson County, Virginia.

★ **Ballad Hospital**



4 Community Assessment Summary

i. Market Overview

Norton Community Hospital in Wise County, Virginia primarily serves the populations of Wise and Dickenson counties in Virginia. In 2018, Wise County, Virginia had a total population of 46,000 people. The population projections for Wise and Dickenson County over the next five years show that the counties will likely experience little to no population growth overall. Of the 46,000 individuals, 90.9% are categorized as white non-Hispanics.

The median household income in Wise County, Virginia ranges \$25K-\$50K, lower than the overall state of Virginia at \$68,114K. Nearly a fifth of the population reports an income below \$15K (19%). Socioeconomic status has direct correlation to the health of the population due to accessibility of services.

Other demographic factors influencing health status in the county also includes education levels. The majority of residents hold a high school diploma, at 31.7%. Higher education levels drop significantly with only 13.5% holding a bachelor's degree or higher in Wise County.

According to the 2018 County Health Rankings, Wise County is ranked 124th in Virginia for health outcomes and 126th for health factors out of 133 counties/cities. Wise County also ranked 114th in health behaviors. When compared to other Virginia counties, Wise County has high rates of physical inactivity, and high overweight/obesity rates. As for social and economic factors, Wise County ranks 126th due to lower rates of high school education, higher unemployment rates, and high rates of children in poverty. A graphical representation of the 2018 County Health Rankings for Wise County components can be found in the appendix.

ii. Methodology

a. Community Interview Summary

As part of the community health needs assessment process, Ballad Health conducted localized community focus groups with organization representatives such as those from local health departments, school systems, health clinics, emergency services, businesses, and philanthropic boards. The individuals in each community were selected for participation by the hospital's CEO. These members were selected due to their involvement in the health of the community and their direct relationship to the population served.

| Focus Groups – Representatives: |
|--|
| Norton Community Internal Medicine Residency Program |
| Mountain Empire Older Citizens |
| Healthy Appalachia Institute |
| City of Norton |
| Norton Community Physicians |
| Norton Community Hospital Foundation Board |
| Norton Community Board of Directors |

b. Collecting Community Input

Along with an introduction to the relationship between socio-economic conditions and overall health status at a national and state level, focus group participants were shown Wise County-specific health indicator as compared to the overall State of Virginia rates. As part of the commitment to population health under the merger, participants were made aware of the 25 measures that make up the Ballard population health index and 3 additional measures related to access to screenings that complemented the community health discussion.

Members of the Ballard Health Strategic Planning Department then asked the community members to complete a 5-question survey relative to what health priorities should be a focus for their specific community over the next three years, what existing resources were already at work in the community, how the hospital can best support identified priorities, what pre-existing barriers are in place, and who else might be good to include in these community-level improvement discussions.

After the survey was completed, the group as a whole discussed their thoughts related to each question to further enhance the level at which the priorities were identified. The same information and process was later presented to the hospital's philanthropic foundation board members to further build awareness of the Ballard commitments made to population health and gain additional insight into community prioritization of specific health conditions/disparities.

| | Survey Questions |
|---|--|
| 1 | Which of the health priorities mentioned can this community work to improve in the short term (3 years)? |
| 2 | What existing resources, such as organized groups or public health initiatives, have been developed and are in place to address these health priorities? |
| 3 | How could resources at this hospital best support your identified priorities? |
| 4 | What pre-existing barriers are in place that may prevent improvement on these identified priorities? |
| 5 | Who else from the community should be involved in these initiatives? |

iii. Key Priorities Identified

After interviews with the various focus groups, the Wise County representatives identified the following priorities as the top focus areas for their community health improvement efforts and subsequent implementation plans:

| Priority Focus Area | Sub-Measure |
|------------------------|---|
| Smoking | <ul style="list-style-type: none"> • <i>Smoking</i> • <i>Smoking during pregnancy</i> |
| Substance Abuse | <ul style="list-style-type: none"> • <i>Drug deaths</i> • <i>NAS births</i> |
| Mental Health | <ul style="list-style-type: none"> • <i>Frequent Mental Distress</i> |
| Obesity | <ul style="list-style-type: none"> • <i>Obesity rates</i> |

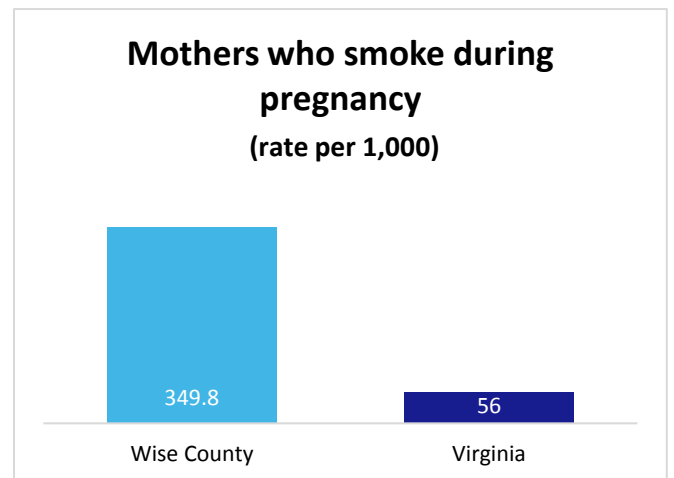
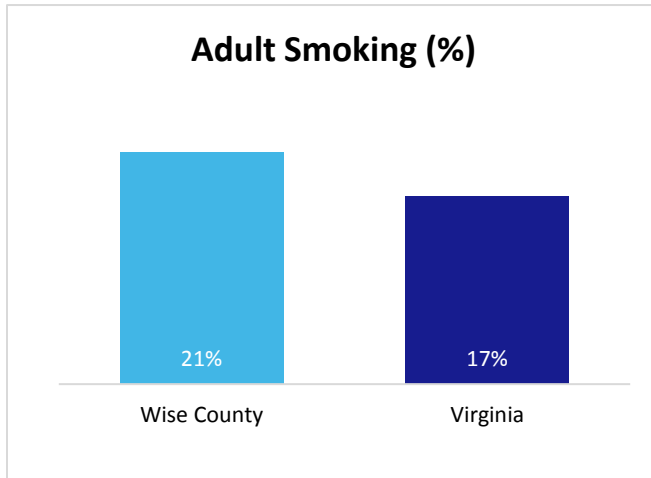
As evidenced by the county-level vs. state-level data represented for each of the priority measure selected by Wise County focus group participants, opportunity for improvement exists to better the results across all priority measures within the local community. Although not all metrics compare unfavorably to the overall state data, opportunity still exists as the Virginia data is not intended as a benchmark, but merely as a comparison.

By identifying these priority areas, Norton Community Hospital, in conjunction with Ballad Health and other local community organizations, can begin to implement targeted programs and efforts to improve the overall health and well-being of citizens of Wise County. Foundational to any population health improvement effort is the identification of actionable priorities and now that has been accomplished, the hospital can begin to

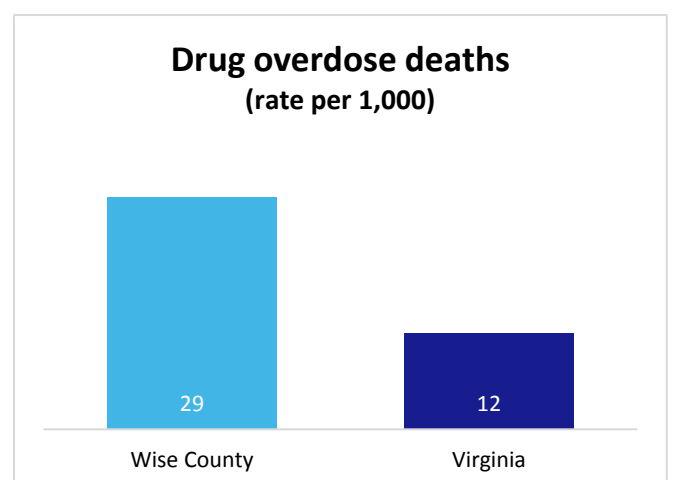
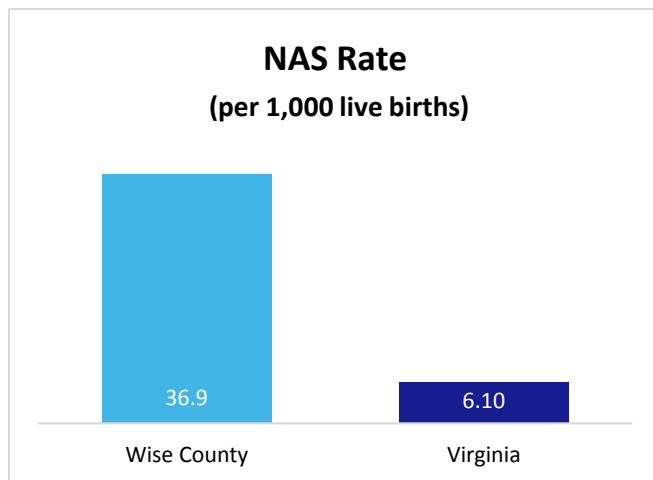
formulate targeted implementation plans to help address the disparities plaguing parts of its population.

Priority Area Measures with County vs. State Comparisons (*where available*):

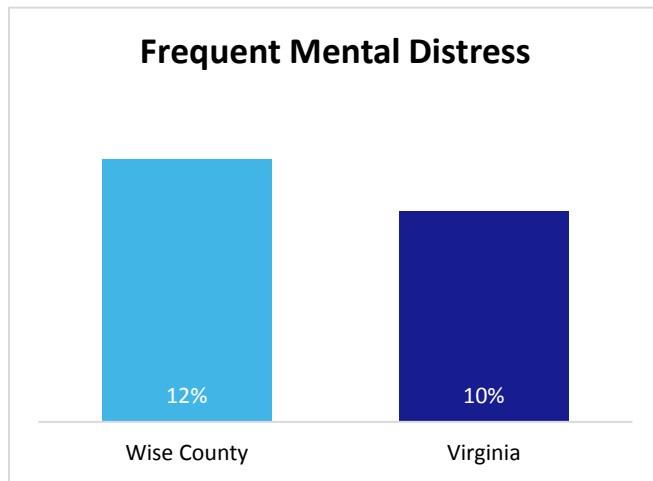
Smoking



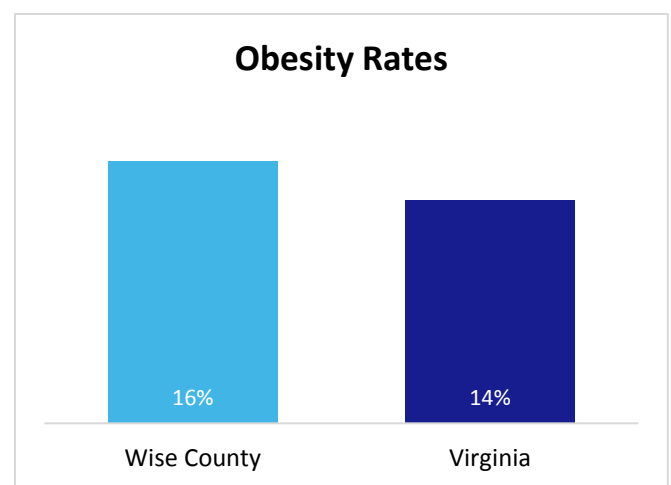
Substance Abuse/Mental Health



Mental Health



Obesity



iv. Barriers and Gaps

Because health is more than just a result of behaviors or individual pre-disposition to disease, Ballad realizes that it must also evaluate social determinants such as the environment and community in which people live, the access to care they have, and the policy issues that exist/are absent in order to be able to make effective strides in improvement.



Behaviors include the everyday activities that affect personal health. They include habits and practices we develop as individuals and families that have an effect on personal health and utilization of health resources. Behaviors are modifiable with effort by the individual supported by community, policy, and clinical interventions.

However, equally important to health behaviors are community and environment factors, health policy, and access to clinical care. Community and environment reflects the reality and daily conditions in which people live. Health policies are indicative of the availability of resources to encourage and maintain health and the extent to which public health programs reach into the general population. Access to clinical care reflects the accessibility, quality, appropriateness, and cost of care received at doctors' offices, clinics, and hospitals. All four areas of health

determinants are intertwined and must work together to be optimally effective in improving health status.

To help understand social determinants of health for the community, participants in the Norton Community Hospital focus groups also identified barriers and gaps that may impact progress in improving the key priority measures. The identified barriers and gaps for Wise County include:

- Legislation (particularly regarding tobacco use, substance abuse)
- Resistance to change; “Everyone does it; that’s how we always did it” mentality
- Education levels on health management
- Lack of community resources for health education, physical activity
- Inability to pay for basics (i.e. food, housing, utilities) vs. medications/medical treatment
- Stigma surrounding substance abuse/mental health issues
- Food insecurity; lack of access/affordability of health food options

v. Community and Hospital Resources

To help improve the identified health priorities for Wise County, Virginia focus group participants were also asked to help identify current programs/organizations/ individuals from the local community that may be of assistance with the population health efforts in their county. Because multiple resources working together for the same cause can help to drive change faster, having the inventory of local resources with whom Ballad can partner with is key. There are many resources currently in existence in Wise County through the both the hospital and local organizations. The resources identified in the focus groups are as follow:

- Mountain Empire Older Citizens
- American Lung Association (local smoking cessation program)
- Virginia Navigator Program
- Healthy Appalachia Institute
- Public school system
- Health Department

In addition to preexisting resources in the community, the focus group participants also discussed possibilities for how the hospital can continue or enhance programs/ services to provide local resources to support the identified priorities. To enhance existing resources, the participants stressed the significance of increasing public awareness of both addressing one’s health needs and the availability of health care options within each community. Additional suggestions as to how Ballad and Norton Community Hospital can improve the previously identified health priorities are listed below:

- Improved community/physician education
- Better access to mental health resources
- Tracking mechanism for community resources inventory
- Navigation programs

To further address health priorities within the community related to social determinants of health, programmatic opportunities were also discussed to assist with areas such as built environment (i.e. playgrounds, creation of safe sidewalks, bike sharing/bike paths, etc...), improved literacy rates and understanding of overall health, and healthy food availability (i.e. community gardens, farmers markets, etc...).

vi. Conclusion

As hospitals and health systems continue to work to make the communities they serve healthier, the identification of prioritized population health issues has become an area of strategic importance. Because Norton Community Hospital is located in a region with many chronic disease challenges, that prioritization becomes even more important so that focused actions can be developed and implemented with strategic purpose. The allocation of hospital resources to the prioritized issues, coupled with partnerships with other community organizations, will continue to build momentum toward the building of a healthier Wise County.

5 Appendix

i. Population Profile

The table below highlights key demographics for Wise County, Virginia.

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Mountain State Health Alliance

Wise County, Virginia

| Population and Gender | Market 2018 Population | Market 2018 % of Total | Market 2023 Population | Market 2023 % of Total | Market Population % Change | National 2018 % of Total |
|-----------------------|------------------------|------------------------|------------------------|------------------------|----------------------------|--------------------------|
| Female Population | 22,270 | 48.3% | 21,901 | 48.4% | (1.7)% | 50.8% |
| Male Population | 23,795 | 51.7% | 23,329 | 51.6% | (2.0)% | 49.2% |
| Total | 46,065 | 100.0% | 45,230 | 100.0% | (1.8)% | 100.0% |

| Age Groups | Market 2018 Population | Market 2018 % of Total | Market 2023 Population | Market 2023 % of Total | Market Population % Change | National 2018 % of Total |
|------------|------------------------|------------------------|------------------------|------------------------|----------------------------|--------------------------|
| 00-17 | 9,239 | 20.1% | 8,930 | 19.7% | (3.3)% | 22.6% |
| 18-44 | 16,319 | 35.4% | 15,653 | 34.6% | (4.1)% | 35.8% |
| 45-64 | 12,443 | 27.0% | 11,652 | 25.8% | (6.4)% | 25.8% |
| 65-UP | 8,064 | 17.5% | 8,995 | 19.9% | 11.6% | 15.9% |
| Total | 46,065 | 100.0% | 45,230 | 100.0% | (1.8)% | 100.0% |

| Ethnicity/Race | Market 2018 Population | Market 2018 % of Total | Market 2023 Population | Market 2023 % of Total | Market Population % Change | National 2018 % of Total |
|----------------------------------|------------------------|------------------------|------------------------|------------------------|----------------------------|--------------------------|
| Asian & Pacific Is. Non-Hispanic | 251 | 0.5% | 282 | 0.6% | 12.4% | 5.8% |
| Black Non-Hispanic | 2,564 | 5.6% | 2,731 | 6.0% | 6.5% | 12.4% |
| Hispanic | 731 | 1.6% | 838 | 1.9% | 14.6% | 18.3% |
| White Non-Hispanic | 41,879 | 90.9% | 40,676 | 89.9% | (2.9)% | 60.4% |
| All Others | 640 | 1.4% | 703 | 1.6% | 9.8% | 3.2% |
| Total | 46,065 | 100.0% | 45,230 | 100.0% | (1.8)% | 100.0% |

| Language* | Market 2018 Population | Market 2018 % of Total | Market 2023 Population | Market 2023 % of Total | Market Population % Change | National 2018 % of Total |
|-----------------------|------------------------|------------------------|------------------------|------------------------|----------------------------|--------------------------|
| French at Home | 162 | 0.4% | 158 | 0.4% | (2.5)% | 0.7% |
| Germanic Lang at Home | 113 | 0.3% | 114 | 0.3% | 0.9% | 0.5% |
| Only English at Home | 42,312 | 97.2% | 41,617 | 97.2% | (1.6)% | 78.6% |
| Spanish at Home | 523 | 1.2% | 504 | 1.2% | (3.6)% | 13.3% |
| Tagalog at Home | 177 | 0.4% | 173 | 0.4% | (2.3)% | 0.6% |

| | | | | | | |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
| All Others | 263 | 0.6% | 250 | 0.6% | (4.9)% | 6.3% |
| Total | 43,550 | 100.0% | 42,816 | 100.0% | (1.7)% | 100.0% |

| Household Income | Market 2018 Households | Market 2018 % of Total | Market 2023 Households | Market 2023 % of Total | Market Households % Change | National 2018 % of Total |
|------------------|------------------------|------------------------|------------------------|------------------------|----------------------------|--------------------------|
| <\$15K | 3,563 | 19.6% | 3,512 | 19.6% | (1.4)% | 10.2% |
| \$15-25K | 2,839 | 15.6% | 2,790 | 15.6% | (1.7)% | 9.3% |
| \$25-50K | 4,677 | 25.7% | 4,630 | 25.8% | (1.0)% | 23.5% |
| \$50-75K | 3,213 | 17.7% | 3,135 | 17.5% | (2.4)% | 16.5% |
| \$75-100K | 1,704 | 9.4% | 1,690 | 9.4% | (0.8)% | 10.5% |
| \$100K-200K | 1,718 | 9.4% | 1,709 | 9.5% | (0.5)% | 19.3% |
| >\$200K | 476 | 2.6% | 478 | 2.7% | 0.4% | 10.7% |
| Total | 18,190 | 100.0% | 17,944 | 100.0% | (1.4)% | 100.0% |

| Education Level** | Market 2018 Population | Market 2018 % of Total | Market 2023 Population | Market 2023 % of Total | Market Population % Change | National 2018 % of Total |
|------------------------------|------------------------|------------------------|------------------------|------------------------|----------------------------|--------------------------|
| Less than High School | 3,493 | 10.8% | 3,463 | 10.8% | (0.9)% | 5.6% |
| Some High School | 4,551 | 14.0% | 4,507 | 14.1% | (1.0)% | 7.4% |
| High School Degree | 10,308 | 31.7% | 10,168 | 31.7% | (1.4)% | 27.6% |
| Some College/Assoc. Degree | 9,747 | 30.0% | 9,613 | 30.0% | (1.4)% | 31.0% |
| Bachelor's Degree or Greater | 4,379 | 13.5% | 4,281 | 13.4% | (2.2)% | 28.4% |
| Total | 32,478 | 100.0% | 32,032 | 100.0% | (1.4)% | 100.0% |

*Excludes population age <5,

**Excludes population age <25

The table below highlights key demographics for Dickenson County, Virginia

Sg2 MARKET SNAPSHOT



Dickenson County, Virginia

| Population and Gender | Market 2018 Population | Market 2018 % of Total | Market 2023 Population | Market 2023 % of Total | Market Population % Change | National 2018 % of Total |
|-----------------------|------------------------|------------------------|------------------------|------------------------|----------------------------|--------------------------|
| Female Population | 6,497 | 49.3% | 6,331 | 49.2% | (2.6)% | 50.8% |
| Male Population | 6,688 | 50.7% | 6,550 | 50.9% | (2.1)% | 49.2% |
| Total | 13,185 | 100.0% | 12,881 | 100.0% | (2.3)% | 100.0% |

| Age Groups | Market 2018 Population | Market 2018 % of Total | Market 2023 Population | Market 2023 % of Total | Market Population % Change | National 2018 % of Total |
|------------|------------------------|------------------------|------------------------|------------------------|----------------------------|--------------------------|
| 00-17 | 2,556 | 19.4% | 2,425 | 18.8% | (5.1)% | 22.6% |
| 18-44 | 4,144 | 31.4% | 3,972 | 30.8% | (4.2)% | 35.8% |
| 45-64 | 3,725 | 28.3% | 3,488 | 27.1% | (6.4)% | 25.8% |
| 65-UP | 2,760 | 20.9% | 2,996 | 23.3% | 8.6% | 15.9% |
| Total | 13,185 | 100.0% | 12,881 | 100.0% | (2.3)% | 100.0% |

| Ethnicity/Race | Market 2018 Population | Market 2018 % of Total | Market 2023 Population | Market 2023 % of Total | Market Population % Change | National 2018 % of Total |
|----------------------------------|------------------------|------------------------|------------------------|------------------------|----------------------------|--------------------------|
| Asian & Pacific Is. Non-Hispanic | 35 | 0.3% | 49 | 0.4% | 40.0% | 5.8% |
| Black Non-Hispanic | 85 | 0.6% | 109 | 0.9% | 28.2% | 12.4% |
| Hispanic | 107 | 0.8% | 126 | 1.0% | 17.8% | 18.3% |
| White Non-Hispanic | 12,846 | 97.4% | 12,465 | 96.8% | (3.0)% | 60.4% |
| All Others | 112 | 0.9% | 132 | 1.0% | 17.9% | 3.2% |
| Total | 13,185 | 100.0% | 12,881 | 100.0% | (2.3)% | 100.0% |

| Language* | Market 2018 Population | Market 2018 % of Total | Market 2023 Population | Market 2023 % of Total | Market Population % Change | National 2018 % of Total |
|-----------------------|------------------------|------------------------|------------------------|------------------------|----------------------------|--------------------------|
| Germanic Lang at Home | 7 | 0.1% | 8 | 0.1% | 14.3% | 0.5% |
| Only English at Home | 12,325 | 98.6% | 12,056 | 98.6% | (2.2)% | 78.6% |

| | | | | | | |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Other Indo-European Lang at Home | 34 | 0.3% | 33 | 0.3% | (2.9)% | 1.8% |
| Slavic Lang at Home | 17 | 0.1% | 16 | 0.1% | (5.9)% | 0.7% |
| Spanish at Home | 113 | 0.9% | 109 | 0.9% | (3.5)% | 13.3% |
| All Others | 7 | 0.1% | 7 | 0.1% | 0.0% | 5.1% |
| Total | 12,503 | 100.0% | 12,229 | 100.0% | (2.2)% | 100.0% |

| Household Income | Market 2018 Households | Market 2018 % of Total | Market 2023 Households | Market 2023 % of Total | Market Households % Change | National 2018 % of Total |
|------------------|------------------------|------------------------|------------------------|------------------------|----------------------------|--------------------------|
| <\$15K | 1,045 | 19.2% | 955 | 17.9% | (8.6)% | 10.2% |
| \$15-25K | 810 | 14.9% | 771 | 14.5% | (4.8)% | 9.3% |
| \$25-50K | 1,580 | 29.0% | 1,553 | 29.1% | (1.7)% | 23.5% |
| \$50-75K | 804 | 14.8% | 770 | 14.4% | (4.2)% | 16.5% |
| \$75-100K | 535 | 9.8% | 537 | 10.1% | 0.4% | 10.5% |
| \$100K-200K | 584 | 10.7% | 646 | 12.1% | 10.6% | 19.3% |
| >\$200K | 82 | 1.5% | 104 | 2.0% | 26.8% | 10.7% |
| Total | 5,440 | 100.0% | 5,336 | 100.0% | (1.9)% | 100.0% |

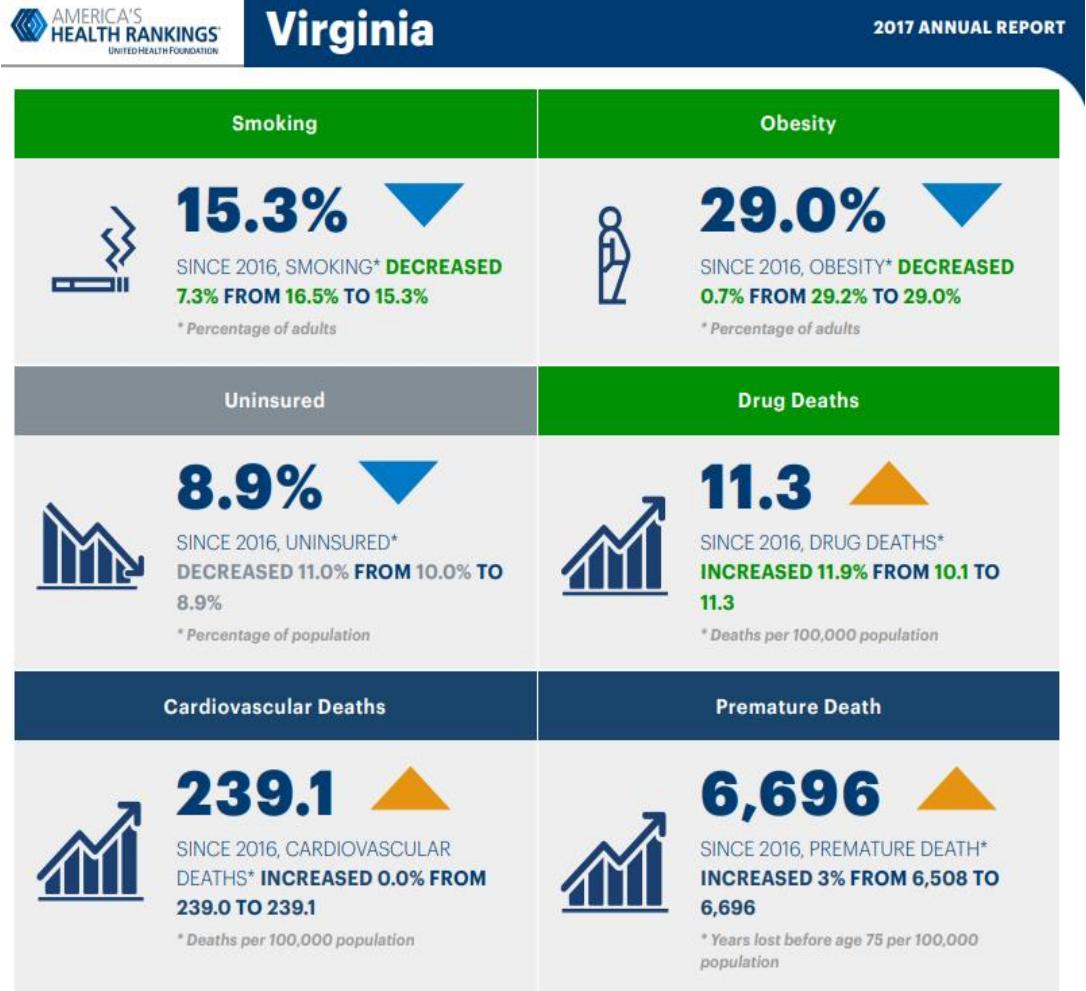
| Education Level** | Market 2018 Population | Market 2018 % of Total | Market 2023 Population | Market 2023 % of Total | Market Population % Change | National 2018 % of Total |
|------------------------------|------------------------|------------------------|------------------------|------------------------|----------------------------|--------------------------|
| Less than High School | 1,150 | 11.9% | 1,129 | 12.0% | (1.8)% | 5.6% |
| Some High School | 1,229 | 12.8% | 1,205 | 12.8% | (2.0)% | 7.4% |
| High School Degree | 3,423 | 35.5% | 3,354 | 35.6% | (2.0)% | 27.6% |
| Some College/Assoc. Degree | 2,855 | 29.6% | 2,788 | 29.6% | (2.4)% | 31.0% |
| Bachelor's Degree or Greater | 983 | 10.2% | 958 | 10.2% | (2.5)% | 28.4% |
| Total | 9,640 | 100.0% | 9,434 | 100.0% | (2.1)% | 100.0% |

*Excludes population age <5,

**Excludes population age <25

ii. Health Status Ranking

Virginia Overall



Virginia Overall



Virginia

2017 ANNUAL REPORT

| Measure | Rating | 2017 Value | 2017 Rank |
|---|-------------|---------------|-----------|
| BEHAVIORS | | | |
| Drug Deaths (Deaths per 100,000 population) | ++++ | 11.3 | 7 |
| Excessive Drinking (Percentage of adults) | ++++ | 17.4% | 15 |
| High School Graduation (Percentage of students) | ++++ | 85.7% | 20 |
| Obesity (Percentage of adults) | +++ | 29.0% | 21 |
| Physical Inactivity (Percentage of adults) | +++ | 23.3% | 26 |
| Smoking (Percentage of adults) | ++++ | 15.3% | 15 |
| Behaviors * (All Behaviors) | ++++ | 0.112 | 8 |
| POLICY | | | |
| Immunizations - Adolescents (Mean z score of HPV, meningococcal and Tdap) | ++ | -0.590 | 40 |
| Immunization HPV Females (Percentage of females aged 13 to 17) | + | 41.1% | 42 |
| Immunization HPV Males (Percentage of males aged 13 to 17) | +++ | 37.4% | 25 |
| Immunization Meningococcal (Percentage of adolescents aged 13 to 17) | + | 71.5% | 41 |
| Immunization Tdap (Percentage of adolescents aged 13 to 17) | ++ | 87.1% | 32 |
| Immunizations - Children (Percentage of children aged 19 to 35 months) | + | 65.9% | 45 |
| Public Health Funding (Dollars per person) | ++ | \$73 | 33 |
| Uninsured (Percentage of population) | +++ | 8.9% | 28 |
| Policy * (All Policy measures) | ++ | -0.042 | 39 |
| CLINICAL CARE | | | |
| Dentists (Number per 100,000 population) | ++++ | 63.6 | 14 |
| Low Birthweight (Percentage of live births) | +++ | 7.9% | 22 |
| Mental Health Providers (Number per 100,000 population) | ++ | 145.2 | 40 |
| Preventable Hospitalizations (Discharges per 1,000 Medicare enrollees) | ++++ | 42.8 | 15 |
| Primary Care Physicians (Number per 100,000 population) | +++ | 141.8 | 24 |
| Clinical Care * (All Clinical Care measures) | +++ | 0.002 | 26 |
| COMMUNITY & ENVIRONMENT | | | |
| Air Pollution (Micrograms of fine particles per cubic meter) | ++++ | 7.5 | 20 |
| Children in Poverty (Percentage of children) | ++++ | 13.0% | 11 |
| Infectious Disease (Mean z score of chlamydia, pertussis and Salmonella) | ++++ | -0.443 | 13 |
| Chlamydia (Cases per 100,000 population) | +++ | 424.5 | 21 |
| Pertussis (Cases per 100,000 population) | +++ | 4.4 | 22 |
| Salmonella (Cases per 100,000 population) | ++++ | 14.1 | 19 |
| Occupational Fatalities (Deaths per 100,000 workers) | ++++ | 4.2 | 20 |
| Violent Crime (Offenses per 100,000 population) | ++++ | 218 | 4 |
| Community & Environment * (All Community & Environment Measures) | ++++ | 0.170 | 6 |
| ALL DETERMINANTS | | | |
| All Determinants * (All Determinants) | ++++ | 0.241 | 19 |
| OUTCOMES | | | |
| Cancer Deaths (Deaths per 100,000 population) | +++ | 190.1 | 24 |
| Cardiovascular Deaths (Deaths per 100,000 population) | +++ | 239.1 | 25 |
| Diabetes (Percentage of adults) | +++ | 10.4% | 23 |
| Disparity in Health Status (Percentage point difference) | +++ | 27.4% | 27 |
| Frequent Mental Distress (Percentage of adults) | ++++ | 10.9% | 19 |
| Frequent Physical Distress (Percentage of adults) | ++++ | 11.0% | 14 |
| Infant Mortality (Deaths per 1,000 live births) | +++ | 5.8 | 23 |
| Premature Death (Years lost before age 75 per 100,000 population) | ++++ | 6,696 | 19 |
| All Outcomes * (All Outcomes) | +++ | 0.062 | 23 |
| OVERALL | | | |
| Overall * (Overall) | ++++ | 0.303 | 19 |

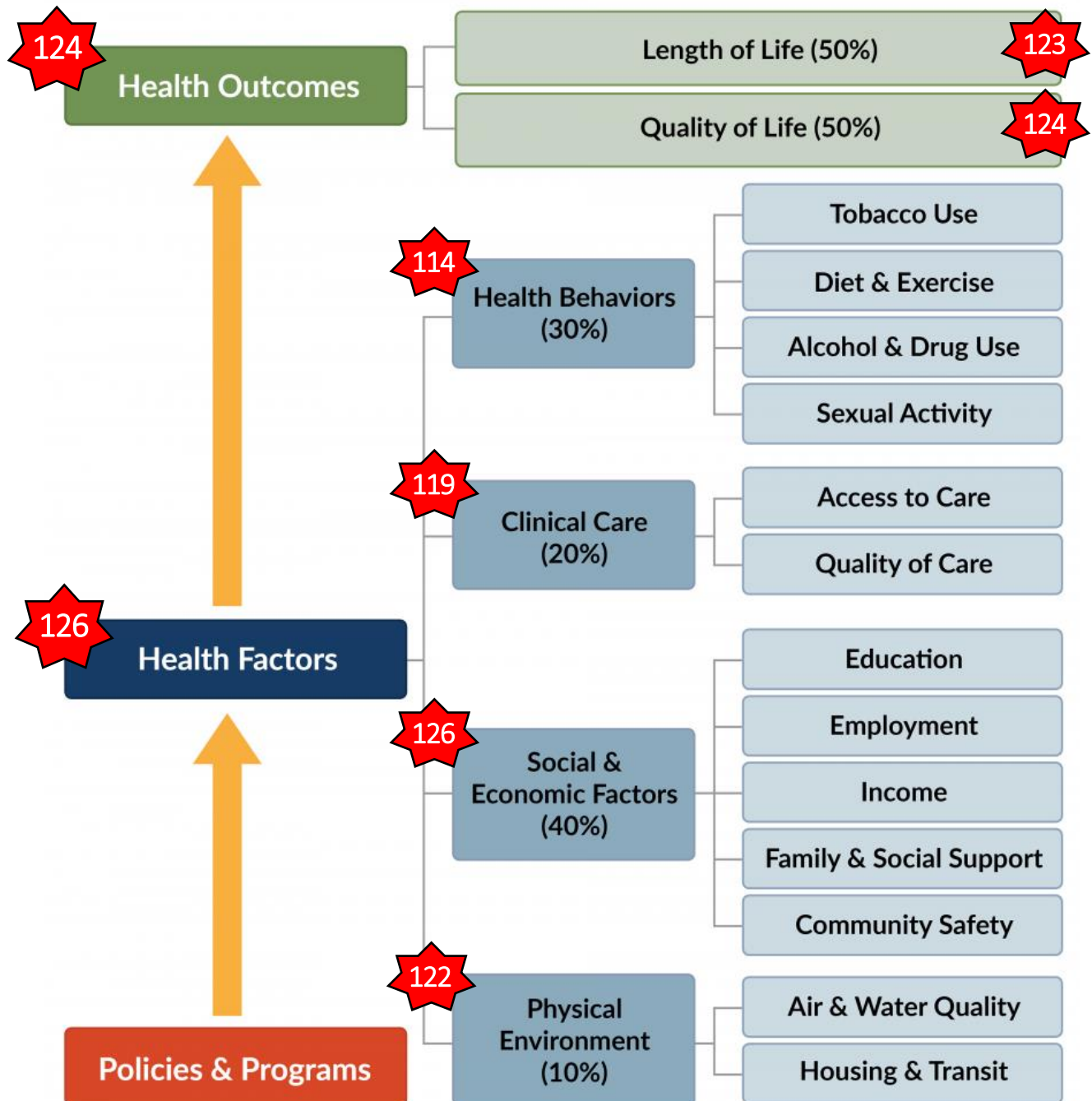
* Value indicates z score. Negative scores are below US value; positive scores are above US value. For complete definitions of measures including data sources and years, see "Appendix: Core Measures".

| RATING | RANK |
|--------|---------|
| ++++ | 1 - 10 |
| +++ | 11 - 20 |
| ++ | 21 - 30 |
| + | 31 - 40 |
| | 41 - 50 |

Wise County, VA

2018 County Health Rankings

www.countyhealthrankings.org



County Health Rankings model © 2014 UWPHI

Wise County, VA

| Health Outcomes | Wise County | Virginia | Desired |
|---|-------------|----------|---------|
| Infant mortality | 10.6 | 5.9 | ↓ |
| Low Birthweight (%) | 9% | 8% | ↓ |
| Children with NAS (rate) | | 6.1 | ↓ |
| Poor or fair health (%) | 18% | 15% | ↓ |
| Cardiovascular Death (per 100,000) | 310.6 | 155.9 | ↓ |
| Cancer deaths (per 100,000) | 141.4 | 161.36 | ↓ |
| Diabetes Mellitus deaths (per 100,000) | n/a | 18 | ↓ |
| Cerebrovascular deaths (per 100,000) | 21.5 | 38.5 | ↓ |
| Suicide Rate (per 100,000) | n/a | 12.2 | ↓ |
| Lung cancer deaths (per 100,000) | 77.2 | 60.4 | ↓ |
| Female breast cancer deaths (per 100,000) | 25.9 | 22.7 | ↓ |
| Prevalence of diabetes (%) | 12% | 10% | ↓ |
| Mammography Screening (%) | 65% | 64% | ↑ |
| Frequent Mental Distress | 12% | 10% | ↓ |
| Premature Deaths (age adjusted) | 590 | 310 | ↓ |

| Health Behaviors | Wise County | Virginia | Desired |
|---|-------------|----------|---------|
| Alcohol-impaired driving deaths (per 100,000) | 22% | 31% | ↓ |
| Excessive Drinking (%) | 15% | 17% | ↓ |
| Adult Smoking (%) | 21% | 17% | ↓ |
| Adult Obesity (%) | 31% | 27% | ↓ |
| Access to exercise opportunities (%) | 76% | 21% | ↓ |
| Teen births (per 1,000) | 57 | 25 | ↓ |
| Drug overdose deaths | 29 | 12 | ↓ |
| Violent crime (per 100,000) | 204 | 194 | ↓ |
| Motor vehicle crash deaths (per 100,000) | 13 | 9 | ↓ |
| Non Marital Births (%) | 45.8% | 35% | ↓ |

| Health Determinants | Wise County | Virginia | Desired |
|--|-------------|----------|---------|
| Uninsured Adults (%) | 18% | 15% | ↓ |
| Uninsured Children (%) | 6% | 6% | ↓ |
| Median Household Income (\$) | 36,100 | 66,300 | ↑ |
| Children eligible for free or reduced lunch (%) | 56% | 40% | ↓ |
| Children in single-parent households (%) | 31% | 30% | ↓ |
| Children in poverty (%) | 31% | 15% | ↓ |
| High school graduation (%) | 86% | 86% | ↑ |
| Unemployment (%) | 8.30% | 4.40% | ↓ |
| Food insecurity (%) | 16% | 12% | ↓ |
| Passage rate for third grade reading subject standards of learning (SOL) (%) | 86% | 75% | ↑ |

| Physical Environment | Wise County | Virginia | Desired |
|---|-------------|----------|---------|
| Severe housing problems (%) | 13% | 15% | ↓ |
| Air pollution - particulate matter (µg/m ³) | 9.30 | 8.70 | ↓ |

| Health Resources | Wise County | Virginia | Desired |
|--|-------------|------------|---------|
| Hospital Staffed Beds (per 1,000) | | | ↑ |
| Licensed Nursing Beds (per 1,000 65+) | | | ↑ |
| # of Primary Care MDs (residents to MD) | 2,100:1 | 1320:01:00 | ↑ |
| # of Mental Health Providers (residents to provider) | 1,240:1 | 730:01:00 | ↑ |
| # of Dentists (residents to dentist) | | | ↑ |
| # of Midlevel PCPs (residents to provider) | | | ↑ |
| % of Medicaid enrollees | | | ↓ |
| Food stamp eligible participants (SNAP) (%) | 8, 708 | | ↓ |
| Children on SNAP (%) | | 4.2% | ↓ |
| Infants and Children on WIC | | | ↓ |

| Maternal Infant Health | Wise County | Virginia | Desired |
|---|-------------|----------|---------|
| Birth rate per 1,000 population | 9.5 | 12.3 | ↑ |
| Prenatal Care beginning in first trimester | 55.9% | 81.6% | ↑ |
| Mothers who smoke during pregnancy | 349.8 | 56 | ↓ |
| Fully Breastfed (WIC Participants in Lenowisco) | 8% | 10.2% | ↑ |
| Partially Breastfed (WIC Participants in Lenowisco) | 3% | 12.4% | ↑ |

Dickenson County, VA

| Health Outcomes | Dickenson County | Virginia | Desired |
|---|------------------|----------|---------|
| Infant mortality | n/a | 5.9 | ↓ |
| Low Birthweight (%) | 8% | 8% | ↓ |
| Children with NAS (rate) | 15.6 | 6.1 | ↓ |
| Poor or fair health (%) | 17% | 15% | ↓ |
| Cardiovascular Death (per 100,000) | 180.6 | 155.9 | ↓ |
| Cancer deaths (per 100,000) | 228.7 | 161.36 | ↓ |
| Diabetes Mellitus deaths (per 100,000) | 28.1 | 18 | ↓ |
| Cerebrovascular deaths (per 100,000) | 54.3 | 38.5 | ↓ |
| Suicide Rate (per 100,000) | 28.6 | 12.2 | ↓ |
| Lung cancer deaths (per 100,000) | 83.1 | 60.4 | ↓ |
| Female breast cancer deaths (per 100,000) | 26.4 | 22.7 | ↓ |
| Prevalence of diabetes (%) | 11% | 10% | ↓ |
| Mammography Screening (%) | 62% | 64% | ↑ |
| Frequent Mental Distress | 12% | 10% | ↓ |
| Premature Deaths (age adjusted) | 630 | 310 | ↓ |

| Health Behaviors | Dickenson County | Virginia | Desired |
|---|------------------|----------|---------|
| Alcohol-impaired driving deaths (per 100,000) | 50% | 31% | ↓ |
| Excessive Drinking (%) | 15% | 17% | ↓ |
| Adult Smoking (%) | 18% | 17% | ↓ |
| Adult Obesity (%) | 35% | 27% | ↓ |
| Physical Inactivity (%) | 26% | 21% | ↓ |
| Teen births (per 1,000) | 51 | 25 | ↓ |
| Drug overdose deaths | 41 | 12 | ↓ |
| Violent crime (per 100,000) | 136 | 194 | ↓ |
| Motor vehicle crash deaths (per 100,000) | 18 | 9 | ↓ |
| Non Marital Births (%) | 33% | 35% | ↓ |

| Health Determinants | Dickenson County | Virginia | Desired |
|--|------------------|----------|---------|
| Uninsured Adults (%) | 17% | 15% | ↓ |
| Uninsured Children (%) | 7% | 6% | ↓ |
| Median Household Income (\$) | 32,600 | 66,300 | ↑ |
| Children eligible for free or reduced lunch (%) | 58% | 40% | ↓ |
| Children in single-parent households (%) | 29% | 30% | ↓ |
| Children in poverty (%) | 33% | 15% | ↓ |
| High school graduation (%) | 78% | 86% | ↑ |
| Unemployment (%) | 10.10% | 4.40% | ↓ |
| Food insecurity (%) | 14% | 12% | ↓ |
| Passage rate for third grade reading subject standards of learning (SOL) (%) | 83% | 75% | ↑ |

| Physical Environment | Dickenson County | Virginia | Desired |
|---|------------------|----------|---------|
| Severe housing problems (%) | 13% | 15% | ↓ |
| Air pollution – particulate matter (µg/m ³) | 9.20 | 8.70 | ↓ |

| Health Resources | Dickenson County | Virginia | Desired |
|--|------------------|------------|---------|
| Hospital Staffed Beds (per 1,000) | | | ↑ |
| Licensed Nursing Beds (per 1,000 65+) | | | ↑ |
| # of Primary Care MDs (residents to MD) | | 1320:01:00 | ↑ |
| # of Mental Health Providers (residents to provider) | | 730:01:00 | ↑ |
| # of Dentists (residents to dentist) | | | ↑ |
| # of Midlevel PCPs (residents to provider) | | | ↑ |
| % of Medicaid enrollees | | | ↓ |
| Food stamp eligible participants (SNAP) (%) | 3,235 | | ↓ |
| Children on SNAP (%) | | 4.2% | ↓ |
| Infants and Children on WIC | | | ↓ |

| Maternal Infant Health | Dickenson County | Virginia | Desired |
|--|------------------|----------|---------|
| Birth rate per 1,000 population | 8.5 | 12.3 | ↑ |
| Prenatal Care beginning in first trimester | 54.7% | 81.6% | ↑ |
| Mothers who smoke during pregnancy | 289.7 | 56 | ↓ |
| Fully Breastfed (WIC Participants in Cumberland Plateau) | 7.1% | 10.2% | ↑ |
| Partially Breastfed (WIC Participants in Cumberland Plateau) | 2.4% | 12.4% | ↑ |

iv. Ballad Health Population Health Index

| Measure | Wise County | Virginia | Better/ Worse than VA |
|--|-------------|----------|-----------------------------|
| Smoking | 21% | 17% | Worse |
| Smoking During Pregnancy (rate per 1,000 births) | 349.8 | 56 | Worse |
| Youth Tobacco Use | | 25.7% | |
| Physically Active Adults | 65% | 79% | Worse |
| Physically Active Youth | n/a | 54.8% | |
| Adult Obesity | 31% | 27% | Worse |
| Obesity in Public School Students | n/a | | |
| Average Maternity Practices in Infant Nutrition & Care (mPINC) Score | 85 | 80 | Better |
| Fully Breastfed | 8% | 10.2% | Worse |
| Partially Breastfed | 3% | 12.4% | Worse |
| NAS Births (rate per 1,000) | 36.9 | 6.10 | Worse |
| Drug Overdose Deaths | 29 | 12 | Worse |
| Adults using Prescription Drugs for non-medical reasons | n/a | n/a | |
| Children – On-time Vaccinations | n/a | 64.4% | |
| Vaccines – HPV Females | n/a | 32.7% | |
| Vaccines – HPV Males | n/a | 33.3% | |
| Vaccines – Flu Vaccine, Older Adults | n/a | 63.0% | |
| Teen Pregnancy | 57 | 25 | Worse |
| Third Grade Reading Level | 86% | 75% | Better |
| Dental Sealants | n/a | | |
| Frequent Mental Distress | 12% | 10% | Worse |
| Infant Mortality | 10.6 | 5.9 | Worse |
| Low Birthweight | 9% | 8% | Worse |
| People with Pre-diabetes referred to a prevention program | n/a | | |
| Premature Deaths | 590 | 310 | Worse |

*mPINC score is for NCH

Note: County level data currently not available for all index measures; Ballad is working with the State of Tennessee to develop baseline and collection/reporting methodologies moving forward

Fully and partially breastfed infant data is from the subset of women who are involved in WIC

v. Key Definitions for Population Health Index

Third grade reading level: Passage rate for third grade reading subject standards of learning (SOL) Kidscount

Frequent Mental Distress: Percentage of adults reporting 14 or more days of poor mental health per month, County Health Rankings, 2017

Obesity: Greater than 30.0 Body Mass Index (BMI), County Health Rankings, 2017

Adult Physical Activity: Percentage of adults over age 20 who participated in leisure time physical activity, County Health Rankings, 2017

Youth Physical Activity: Were Not Physically Active At Least 60 Minutes Per Day On 5 Or More Days, Youth Behavioral Risk Factor Surveillance System, 2016

Smoking: % of adults who are current smokers, County Health Rankings, 2017

Youth Tobacco Use: Ever tried cigarette smoking (even one or two puffs), 2015

Smoking During Pregnancy: Number of births for which the mother indicated she smoked while pregnant, Virginia Department of Health Maternal-Child Health, 2014

Low Birthweight: Percentage of live births with low birth weight (<2500 grams), County Health Rankings, 2017

Infant Mortality: Number of all infant deaths (within 1 year), per 1,000 live births, County Health Rankings, 2017

Prenatal Care Beginning in First Trimester: , Local Agency Report VA Department of Health, 2015

Virginia WIC Participants who either partially breastfed or fully breastfed: , WIC Breastfeeding Data, 2015

Teen Births: Births to mothers aged 15-19, County Health Rankings, 2017

NAS Discharge Rate: NAS diagnosis code was present on the record and the patient was < 1 year of age (VA residents only) rate per 1,000, Virginia Department of Health Opioid-Overdose Data, 2016

Drug Overdose Deaths: Number of drug poisoning deaths per 100,000, County Health Rankings, 2017

Prescriptions Opioid Overdose Mortality Rate: Fatal overdose data are based upon toxicology results and cause of death statements. Data include all manners of death (accident, homicide, suicide, and undetermined) and are based upon the locality of event (overdose). 'Prescription opioids' excludes fentanyl and counts fatal overdoses with one or more prescription opioids causing death, 2016

Combined 7-vaccine series coverage among children 19-35 months, CDC VaxView, 2016

Older adults flu vaccination: Adults aged 65+ who have had a flu shot within the past year, Behavioral Risk Factor Surveillance System, 2016

Colorectal Screenings: Aged 50-75 had a colonoscopy in the past 10 years, Behavioral Risk Factor Surveillance System, 2016

Mammography: Percentage of female Medicare enrollees aged 67-69 who received a mammogram, County Health Rankings, 2017

Cervical Screening: Women aged 21-65 who have had a pap test in the past three years, Behavioral Risk Factor Surveillance System, 2016

Diabetes Prevalence: Percentage of adults aged 20 and over who have been diagnosed with diabetes, County Health Rankings, 2017

Personal Care Provider: Do you have one person you think of as your personal doctor or health care provider?, Behavioral Risk Factor Surveillance System, 2016

Other Deaths: Virginia Department of Health- Health Profile, 2013

vi. Sources

Kids Count Data Center (<http://datacenter.kidscount.org/>)

America's Health Rankings (<https://www.americashealthrankings.org>)

County Health Rankings (<http://www.countyhealthrankings.org/>)

Sg2 Analytics

Virginia Department of Health