Board of Health Annual Report: Virginia's Plan for Well-Being, 2019

Introduction

The Plan for Well-Being outlines a path for improving the health and well-being of Virginians through four aims, 13 goals, and 29 measures. The 2019 Annual Report indicates the updated figure for each measure in The Plan, with the most current data available. In some instances, this year's report also includes additional analysis of metrics, to better understand any disparities or trends in subpopulations. This year, the Annual Report also includes a "Health Equity Brief" that highlights examples of efforts to improve health equity throughout the Commonwealth. Lastly, the enclosed technical document provides more detail on values, data sources, and descriptions of each measure.

Of the 29 measures, when compared to baseline measures reported in 2016, 16 show improvement, although at different degrees. Of these, four measures (Percent of Adults Who Report Positive Well-Being, Disability-Free Life Expectancy, Percent of High School Graduates Enrolled in an Institution of Higher Learning, and Teen Pregnancy Rates) have exceeded the goal that was originally set forth in The Plan. The remaining 13 measures persist as areas of needed focus, in that they have evidenced little to no change, or in some cases, have decreased further away from the intended goal.

It is important to recognize the measures in The Plan provide high level, statewide data. Therefore, in some instances these statewide data will obscure racial, geographic or other disparities. For example, although the black infant mortality rate in and of itself is improving, the disparity between black infant mortality and white infant mortality persists. Similarly, the consumer opportunity measure differs when comparing rural vs. urban communities. There is also disparity in that measure by race. These are examples that much work remains, even in areas where metrics are improving.

Improving Measures:

- Percent of Adults Who Report Positive Well Being
- Percent of High School Graduates Enrolled in an Institution of Higher Education within 16 months after graduation
- Percent of Cost Burdened Households
- Consumer Opportunity: Townsend Material Deprivation Index
- Percent of Health Districts that Have Established a Collaborative Community Health Planning Process
- Pregnancies Per 1,000 Females Ages 15-19 years old
- Black Infant Deaths Per 1,000 Black Live Births
- Percent of Households That Are Food Insecure For Some Part of the Year
- Percent of Adults Who Currently Use Tobacco
- Percent of Adolescent Girls Who Receive Two Doses of HPV Vaccine
- Percent of Adolescent Boys Who Receive Two Doses of HPV Vaccine
- Average Years of Disability Free Life Expectancy
- Percent of Healthcare Providers Who Have Implemented a Certified Electronic Health Record

- Number of Entities Connected through Connect Virginia, HIE, and The Electronic HIE and the National e-Health exchange
- Percent of hospitals that meet the State Goal for Prevention of Hospital-Onset *Clostridium difficile* Infections

Areas of Needed Improvement (Little to no change or moving away from the goal):

- Economic Opportunity Index: Gini Income Inequality Index
- Percent of Children who do not meet the PALS-K Benchmark
- Percent of Third-Graders who pass the Standards of Learning Reading Assessment
- Percent of Adults Who Did Not Participate in Any Physical Activity During the Past 30 days
- Percent of Adults who are Overweight or Obese
- Percent of Adults Who Receive an Annual Influenza Vaccine
- Percent of Adults Who Receive a Colorectal Cancer Screening
- Percent of Adults who Report at least one Adverse Childhood Experience (ACE)
- Percent of Adults who have a regular health care provider
- Rate of Avoidable Hospital Stays for Ambulatory Care Sensitive Conditions
- Rate of Avoidable Deaths from Heart Disease, Stroke or Hypertensive Disease
- Rate of Mental Health and Substance Use Disorder Hospitalizations
- Percent of Adults Who Report Having 1+ Days of Poor Health
- Number of local health districts that have an electronic health record (EHR)

Well-Being

Well-being in Virginia is improving; over 73% of adults report positive well-being in 2018 compared to 68% in 2016. Well-being is an indicator of life satisfaction, defined as living an ideal life in excellent conditions and having the important things desired in life. This measure gives us a general context to the areas of improvement and focus within the four aims of the Plan for Well-Being.

AIM 1 — Healthy, Connected Communities

Goal 1.1: Virginia's Families Maintain Economic Stability

Economic stability for families is a critical aspect of health and well-being as individuals and in communities. Social conditions that promote equitable economic stability include education, affordable housing, employment, transportation, and adequate income. In many ways, Virginia families and communities are improving yet inequalities exist and should remain areas of focus.

- The percentage of high school graduates enrolled in an institution of higher education within 16 months after graduation has increased to 77.7%, above the 2020 goal of 75%.
- The percentage of cost-burdened households (more than 30% of monthly income spent on housing costs) has decreased to 28.5%, below the 2020 goal of 29%.
- The Townsend Material Deprivation Index score decreased from 4.06 in 2014 to 3.94 in 2017, indicating that unemployment, overcrowding, non-car ownership, and non-home ownership has marginally improved.
- The Gini Income Inequality Index trend indicates a stagnant mean from 39.20 in 2014 to 39.91 in 2017.

"Cost-burdened households" are those that spend more than 30% of their monthly income on housing costs. Table 1 indicates that of those households making less than $20,000 per year, 82% are considered cost-burdened, compared to only 8% of households that earn $75,000 or more. The majority (67%) of these higher earning households spend less than 20% on housing costs as a percent of their household income. The overall statewide percentage of cost-burdened households may be generally decreasing, but these data by income level indicate there is significant disparity and inequity when it comes to affordable housing in Virginia.

Table 1: Monthly Housing Cost as a Percent of Household Income, Virginia, 2017
Source: U.S. Census, American Community Survey

Monthly Housing Cost as a Percent of Household Income (2017)			
Income Level	Less than 20 percent	20 to 29 percent	30 percent or more
Less than $20,000	7.3	11.2	81.5
$20,000 to $34,999	20.3	16.3	63.4
$35,000 to $49,999	29.4	25.4	45.2
$50,000 to $74,999	38.9	32.0	29.1
$75,000 or more	66.6	25.4	8.0

Affordable and equitable housing is a primary driver of economic stability for Virginia families, and there is significantly more to be done. As part of this effort, VDH partners with the Virginia Department of Housing and Community Development (VDHCD) by participating in its Permanent Supportive Housing Steering Committee, the Housing People with Serious Mental Illness Strategy Group, and its Interagency Leadership Team. In 2019, the Virginia Department of Health (VDH) successfully competed for a Pew Charitable Trusts grant to improve maternal and infant outcomes with a focus on health equity. Through this grant, and together with DMAS and DCHD, VDH will develop a project will be developed to address the intersection of maternal health and housing.

Goal 1.2: Virginia's Communities Collaborate to Improve the Population's Health

All local health districts have completed or participated in some form of a community health assessment or improvement/strategic planning process since 2016. This has enabled better understanding of the capacity and resources needed to address priority health issues and populations. Issues identified across many community health assessments include obesity, smoking, behavioral health, chronic diseases, as well as integrated healthcare, continuum of care and strategies to address cultural, economic, geographic and racial health disparities.

Partnering for a Healthy Virginia
To complement the community health assessment and improvement planning processes at the local level, statewide planning and improvement activities provide guidance and alignment where it makes sense. Founded by VDH and the Virginia Hospital and Healthcare Association (VHHA) in April 2018, Partnering for a Healthy Virginia (PHV) is Virginia's state-level population health improvement collaborative. PHV has grown to include over 25 partner organizations, including stakeholders from local health districts, hospitals, community health coalitions, businesses, and foundations. The goal of PHV is to ensure that every Virginian has a fair and equitable opportunity to achieve optimal health,

making Virginia the healthiest state in the nation. In 2019, PHV continued its work towards population health improvement and established three strategic focal areas:

- Encourage collaborative, evidence based investments to improve population health
- Foster multi-sector collaboration to help connect patients with the social supports needed to optimize their health
- Use and share enhanced data to help clearly define root causes and their effect on health

Population Health Assessment and Improvement Learning Collaborative

Under PHV, a Population Health Assessment and Improvement Learning Collaborative has taken shape. The Collaborative initiated on October 2, 2019 and will focus on eight aims over the course of the next year through webinars and in-person meetings to bridge local health departments and hospitals together on assessing and improving the health and well-being with their communities.

1. A vision for strategic collaboration
2. An internal team strategy
3. Efficient pathways for data development
4. Efficient methods for obtaining community input
5. Efficient formats for reporting
6. Effective strategies for action planning
7. Evidence-informed intervention models
8. Effective strategies for evaluation

State Health Assessment and Improvement Plan (SHAIP)

The State Health Assessment and Improvement Plan process kicked off with a meeting of the Advisory Council on November 20, 2019. Using a framework grounded in health equity, the Advisory Council will undertake assessing the Commonwealth's primary health problems and identify strategies to address the root causes. This work is also supported by PHV. The goal is to introduce the next version of the Plan for Well-Being in January 2021.

AIM 2 — Strong Start for Children

Goal 2.1: Virginians Plan Their Pregnancies

Teen pregnancy continues to decline, reaching an all-time low at 19.7 per 1,000 females ages 15 to 19 years old (2017). VDH attributes this to many influences, including education and contraception.

VDH supports or administers several programs aimed at reducing unintended pregnancy, some examples include:

- VDH's Adolescent Health Program offers evidence-based, positive youth development programs designed to promote healthy outcomes among teens. Some examples include Project AIM (Adult Identity Mentoring), Teen Outreach Program (TOP), and Resource Mothers, a program for pregnant and parenting teens.
- The Virginia Long Acting Reversible Contraception (LARC) Initiative is a two-year pilot program designed to increase access to hormonal LARCs to uninsured, low-income women, with the goal

of reducing unintended pregnancies and improving birth outcomes. Funded through federal TANF funds allocated by the Virginia General Assembly, the LARC Initiative reimburses eighteen health providers for offering LARC insertions and removals to eligible patients. During the first year, the LARC Initiative has served over 1,000 women. VDH coordinates the LARC Workgroup, a network of agencies working towards reducing unintended pregnancies among women of childbearing age and increasing access to quality, comprehensive family planning services.

- Through Title V funding, VDH's text program provides an opportunity for youth to obtain accurate, objective information about sex, sexuality, relationships, pregnancy, sexually transmitted infections, and other sensitive topics. VDH partners with the American Sexual Health Association (ASHA) to provide this service to Virginia teens. In the upcoming year, VDH's Adolescent Health program will include youth advisory councils and comprehensive sex education initiatives.
- VDH's Title X Family Planning program provides comprehensive family planning services at approximately 140 clinical sites across the Commonwealth, including 34 local health districts and three federally qualified health centers. As the nation's only federally funded family planning program, Title X provides structure, funding, and technical support to funded sites so patients receive quality family planning services according to CDC guidelines. VDH is Virginia's sole Title X grantee. VDH's Title X program serves approximately 38,000 patients each year.

Goal 2.2: Virginia's Children Are Prepared to Succeed in Kindergarten

Children not meeting the PALS-K benchmarks in the fall of Kindergarten has increased. In 2014-2015, 12.7% of students needed literacy interventions, which rose to 17.0% in 2018-2019. This measure is also an indicator of Kindergarten readiness, placing an emphasis on preschool enrollment and participation during the early childhood years. Healthy children are more ready to learn. To support the connection between health and education, VDH serves on many cross agency committees, including the Leadership Council for Home Visiting, and the School Readiness Committee of the Governor's Children's Cabinet; these groups address the myriad of drivers that impact children's health, including school readiness and food security.

The Plan also monitors the percentage of third-graders who pass the Standards of Learning (SOL) reading assessment. This measure has shown minimal improvement, from 69% (2014-2015) to 71% (2018-2019). The downward trend in the kindergarten measure and the stagnant nature of the third-grade metric are consistent with the national decline in reading proficiency. The National Center for Education Statistics released the 2019 Nation's Report Card, which noted that two out of three fourth- and eighth-graders do not meet the standards for reading proficiency. Pass rates on SOL reading assessment are lowest among Black third graders at 56.5% and highest among Asian third graders at 92.9%. There are cultural, social and economic factors that contribute to this disparity, and VDH will continue to collaborate with the Virginia Department of Education and other partners.

Table 2: Third-Grade Standards of Learning (SOL) Pass Rate, Virginia, 2018-19 School Year
Source: Virginia Department of Education

School Year	Subject	Race	Test Level	Test Source	Pass Rate
2018-2019	Reading	Asian	Grade 3	SOL	92.9
2018-2019	Reading	Hispanic	Grade 3	SOL	76.0
2018-2019	Reading	White, not of Hispanic origin	Grade 3	SOL	74.4
2018-2019	Reading	Native Hawaiian or Pacific Islander	Grade 3	SOL	65.2
2018-2019	Reading	American Indian or Alaska Native	Grade 3	SOL	59.7
2018-2019	Reading	Black, not of Hispanic origin	Grade 3	SOL	56.5

Goal 2.3: The Racial Disparity in Virginia's Infant Mortality Rate is Eliminated

The infant mortality rate among Black infants has improved from 12.2 in 2013 to 9.6 deaths per 1,000 Black live births in 2017. This decrease is an encouraging trend; however, there is still disparity in comparison to the infant mortality rate among White infants. In 2017, there were 4.4 deaths per 1,000 White live births, thus perpetuating the disparity.

In the Tidewater and Petersburg communities, the Healthy Start home visiting program is a resource available to families at risk for poor birth outcomes. Healthy Start specifically focuses on reducing infant mortality and perinatal health disparities by providing high quality prevention strategies to individuals, families and communities. Additionally, quality improvement efforts are underway in health systems across the Commonwealth through the work of the Virginia Neonatal Perinatal Collaborative (VNPC) to ensure every baby has the best start to life. Current efforts focus on providing evidence based care to infants with neonatal abstinence syndrome and advancing antibiotic stewardship. The slow but steady improvement evidenced in infant mortality validates these efforts but there is much work to be done to keep moms and babies healthy through pregnancy and postpartum, and to achieve equity in these health outcomes.

Maternal health indicators are equally of concern, in that women in the US die within a year of childbirth more than women in any other advanced economic nation. In the US, the maternal mortality rate is 20.7 deaths per 100,000 live births. In Virginia, the rate is 15.6. Further, there is racial disparity in this statistic; white women in Virginia have a rate of 11 deaths per 100,000, and black women have a rate of 36.6.

Maternal Health continues to be a priority for Governor Northam. On June 5, 2019, Governor Northam announced a goal to eliminate the racial disparity in the maternal mortality rate in Virginia by 2025. This has led to regional listening sessions on maternal health, development of training for healthcare providers on implicit bias, and improved data collection through VDH. VDH is partnering with the Virginia Hospital and Healthcare Association to improve equity in maternal health outcomes by undertaking quality improvement in targeted hospitals through the development of hospital-community partnerships.

AIM 3 — Preventive Actions

Goal 3.1: Virginians Follow a Healthy Diet and Live Actively

Prevention and health promotion are key disciplines in public health. Reducing the burden of chronic diseases and conditions requires living an active, healthy lifestyle. Health behaviors can be positively influenced by policy, system and environmental change strategies when funding and capacity align. Trends include:

- The percentage of adults who did not participate in any physical activity during the past 30 days has decreased from 23.5% in 2014 to 22% in 2018.
- Overweight and obesity among adults continues to slightly increase; from 64.7% in 2014 to 66.3% in 2018.
- Food insecurity is improving as 10.2% of households in 2017 report scarcity for some part of the year, compared to 11.9% in 2013.

When looking at the data on adults who did not participate in any physical activity during the past 30 days, those with less than a high school diploma were more at risk (40.4%) than those with a college degree (11.2%). This is an important health behavior that is a factor pertaining to chronic disease development and management(Table 3). Analyzing overweight/obesity data by race (Table 4) indicates that there is racial disparity in adults who are overweight or obese, with 75% of Black/Non Hispanic Adults who are overweight/obese as compared to 65% of White Non-Hispanic Adults.

Table 3: Adults Who did Not Participate in any Physical Activity, by Education Level, 2017.
Source: Behavioral Risk Factor Surveillance System, VDH

	Sample Size	Weighted Counts	**Weighted Percent (%)**	LowerCL	UpperCL
Virginia	2,514	1,463,864	**22.0**	20.9	23.0
< H.S.	357	299,450	**40.4**	35.9	44.9
H.S. or G.E.D.	878	494,801	**29.4**	27.1	31.8
Some College	646	411,340	**21.0**	19.0	23.0
College Graduate	622	253,522	**11.2**	10.0	12.4

Table 4: Adults Who are Overweight or Obese, by Race Virginia, 2017.
Source: Behavioral Risk Factor Surveillance System, VDH

	Sample Size	Weighted Counts	**Weighted Percent (%)**	LowerCL	UpperCL
Virginia	6,481	4,024,306	**66.3**	64.9	67.7
Black/Non-Hispanic	1,147	852,871	**75.1**	71.9	78.3
White/Non-Hispanic	4,570	2,571,561	**65.2**	63.6	66.8
Hispanic	299	253,059	**63.0**	56.8	69.2
Other/Non-Hispanic	346	282,958	**58.4**	51.2	65.5

To promote consumption of a healthy diet, VDH has implemented strategies across the lifespan through strategic partnerships with Child Care Aware of Virginia, Virginia Early Childhood Foundation, and Virginia Breastfeeding Coalition:

- VDH has established the Virginia Breastfeeding Friendly Recognition Program, and recognized 23 early care and education (ECE) settings and 24 workplaces for their effort in providing breastfeeding friendly environments for families so that they may continue breastfeeding after returning to work.
- To increase the consumption of water, fruits, vegetables, and other healthy foods VDH partnered with Child Care Aware of Virginia by offering focused training and technical assistance to expand healthy eating best practices to Child and Adult Care Feeding Programs (CACFP), including subsidy/religious-exempt, ECE programs. Through these efforts, nearly 60 childcare environments improved wellness standards impacting more than 1,600 children in 2019.

Additional notable efforts in 2019 include:

- The expansion of the Chief Movement Officer (CMO) Cadre, a cohort of trained health and physical activity teachers who provide onsite training/technical assistance to teachers on how to incorporate physical activity through movement breaks and reduced screen time, provided training across 15 local education agencies (LEAs) throughout the state. Efforts focused on LEAs with high rates of childhood obesity that then received technical assistance and training on how to improve school wellness policies that result in increase physical activity and improve health outcomes.

- Virginia Walkability Action Institute (VWAI): The 2019 VWAI funded five local/regional multi-sector teams to pursue policy, systems, and environmental changes and interventions to improve population health and reduce chronic disease risk and burden through increased access to physical activity, with a primary focus on walking and walkability. The following local health districts participated: Central Shenandoah, Chesapeake, Eastern Shore, Hampton, and Richmond City.

Goal 3.2: Virginia Prevents Nicotine Dependency

Tobacco use rates have declined from 21.9% in 2014 to 17.3% in 2018. This is a notable improvement; however, uptake of vaping and electronic nicotine delivery systems (ENDS) continue to rise. Almost 20% of all Virginians have used ENDS, including 35.4% of young adults (ages 18–25 years). A large majority of adults who used ENDS (84.4%), including 94.6% of young adults, use flavored ENDS products.

Regional differences in smoking exist: southwest (18.1%), central (17.6%), northwest (15.5%), eastern (14.7%), and northern (7.7%). Opinions on tobacco use and smoking strongly favor banning smoking at hospital and healthcare facilities (92.3%), private home daycares (92.2%), indoor work areas (89.2%), private areas of restaurants (80.6%), outdoor recreation areas (70.9%), and on school grounds (84.3%). In March 2019, Governor Northam signed the Tobacco-Free Schools Legislation (HB2384/SB1295) that expanded the current law to ban tobacco and vaping products on school property.

Tobacco use is higher among those with less than a high school diploma, and lowest among those who are college graduates (Table 5). This indicates that increased educational attainment may facilitate less association with poor health behaviors like tobacco use.

Table 5: Adults who use tobacco, by level of education, Virginia, 2017
Source: Behavioral Risk Factor Surveillance System, VDH

	Sample Size	Weighted Counts	**Weighted Percent (%)**	LowerCL	UpperCL
Virginia	1,673	1,119,728	**17.3**	16.3	18.4
< H.S.	211	191,613	**26.8**	22.8	30.7
H.S. or G.E.D.	598	387,693	**23.9**	21.6	26.1
Some College	523	384,163	**20.2**	18.1	22.3
College Graduate	341	156,259	**7.1**	6.0	8.2

2019 Outbreak of E-Cigarette Product Use Associated Lung Injury (EVALI)
In late 2019, VDH joined the CDC and partners in a multi-state investigation of an outbreak of lung injury associated with e-cigarette product use. As of November 13, 2019, there have been 2,172 cases of e-cigarette, or vaping, product use associated lung injury (EVALI) reported to the CDC from 49 states, the District of Columbia, and 2 U.S. territories; 42 deaths have been confirmed in 24 states (including Virginia) and the District of Columbia.. The majority of cases are male (70%) with a median age of 24 years. As of fall 2017, 11.8% of Virginia high school students were using ENDS, almost twice as many as the number of kids smoking traditional cigarettes.

As of November 15, there have been 81 cases, including one reported death, associated with the electronic vaping-associated lung injury outbreak in Virginia. All patients have reported a history of e-cigarette product use, or vaping. Vitamin E acetate has been identified as a chemical of concern among these patients, and most patients report a history of using THC-containing e-cigarette, or vaping, products. Evidence is not yet sufficient to rule out contributions of other chemicals of concern to EVALI. Many different substances and product sources are still under investigation, and it may be that there is more than one cause of this outbreak.

Goal 3.3: Virginians Are Protected Against Vaccine-Preventable Diseases

Adults who receive their annual influenza vaccine increased slightly to 50.6% (2018-19). Increasing vaccination coverage across the Commonwealth is an ongoing focus of VDH. Each year, local health districts conduct flu vaccine clinics to ensure that members of the community can receive their flu vaccine. VDH partners with medical providers to raise awareness of the importance of flu vaccine.

The percentage of youth (ages 13-17 years old) receiving vaccination against Human Papilloma Virus (HPV), the virus that contributes to cancer, has increased since 2016—59.1% of girls and 50.8% of boys were vaccinated in 2018, up from 41.1% and 37.4% (2016), respectively. To continue the upward trend of HPV vaccination coverage for boys and girls, VDH partners with the Cancer Action Coalition of Virginia (CACV) to coordinate the Virginia HPV Immunization Task Force (VHIT). Task force action has included two education summits for providers, community screening and discussion of "Lady Ganga," (a film chronicling one woman's journey with cervical cancer) and enhanced partnerships with schools and parent-teacher associations to facilitate access to HPV immunizations in the school setting. A media campaign about the importance of HPV vaccination was developed and deployed to target areas of the Commonwealth with low HPV immunizations rates.

Goal 3.4: Cancers Are Prevented or Diagnosed at the Earliest Stage Possible

Colorectal cancer screening among adults aged 50-75 years old has remained at 69-70% the past four years. Through the Virginia Colorectal Cancer Screening Project and the Virginia Comprehensive Cancer Control Program, VDH has partnered with health systems to implement evidence based interventions aimed at increasing colorectal cancer screening rates among patient populations. Partners have included eight Federally Qualified Health Centers (Blue Ridge Medical Center, Clinch River Health Services, Central Virginia Health Services, Eastern Shore Rural Health Systems, Greater Prince William Community Health Center, Johnson Health Center, New Horizons Healthcare and Southwest Virginia Community Health Services) and a non-profit health system (Bon Secours Hampton Roads). All partner health systems have experienced increased screening rates among their patient population since initiation of the project in 2015.

In addition, the Cancer Action Coalition of Virginia's Colorectal Cancer Taskforce, in collaboration with VDH, hosted six Colorectal Cancer Roundtables throughout Virginia in 2016 – 2017 to align with the National Colorectal Cancer Roundtable's (NCCRT) 80% by 2018 campaign. The taskforce is being reconvened in 2020 in alignment of NCCRT's new 80% in Every Community initiative that emphasizes the use of evidence-based colorectal cancer screening activities that respond to individualized needs, barriers, and motivations within individual communities.

Goal 3.5: Virginians Have Life-Long Wellness

The opportunity to live well into old age is dependent on many factors. Developing a disability is natural and the average point at which an individual may expect to live a life free from disability has slightly increased from 66.1 years in 2013 to 67.9 years in 2017. Disability is defined as hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, or independent living difficulty.

Adverse childhood experiences (ACEs) are associated with many chronic diseases, mental and behavioral disorders, violence and victimization, and other significant social risks. Roughly 60% of adults in Virginia reported at least one ACE in 2018, which is unchanged since 2016. This means that three out of five adults lived, prior to 18 years old, with someone who was depressed or mentally ill, was a problem drinker or alcoholic, used illegal drugs or abused prescription medicine, was incarcerated or served time, had parents who separated or divorced, or witnessed abuse or neglect in the home (including sexually and emotionally). When compared by income level, there are higher reports of ACEs among those making less than $25,000 per year, when compared to those making more than $50,000 per year (Table

6). This is indicative of the chronic stress and trauma that many families face, especially among those who do not have economic stability.

During 2019, VDH contributed to the efforts to address ACEs in many ways:

- In May 2019, VDH participated in ASTHO's leadership summit on ACEs to promote engagement and cross-sector partnerships in state health leadership.
- In August 2019, VDH participated in the "Beyond ACEs, Building Community Resilience Summit", in Petersburg, an event aimed to give providers and laypersons the opportunity to understand the basic language of ACEs and to learn more about Trauma Informed Care.
- VDH serves on the Governor's Trauma-Informed Leadership Team (TILT); the TILT focuses on developing a statewide dashboard of short and long-term children and family resiliency metrics, recommending agency legislation and budget requests, and fulfilling the work of the "Linking Systems of Care" project .

Table 6: Adults who have experienced 1+ ACE, by income level, Virginia, 2017
Source: Behavioral Risk Factor Surveillance System, VDH

	Sample Size	Weighted Counts	**Weighted Percent (%)**	LowerCL	UpperCL
Virginia	5,267	3,432,680	**60.7**	59.3	62.2
$15,000 or less	383	250,632	**67.8**	62.4	73.2
$15,000 to less than $25,000	694	433,612	**66.3**	62.7	70.0
$25,000 to less than $35,000	434	270,729	**61.3**	56.1	66.5
$35,000 to less than $50,000	545	357,857	**62.1**	57.6	66.6
$50,000 or more	2,565	1,682,797	**60.7**	58.6	62.8

AIM 4 — System of Health Care

Goal 4.1: Virginia Has a Strong Primary Care System

Strengthening health systems is an effective way to manage the population's health. Connecting people to adequate and available healthcare is important for managing chronic diseases, mental health and substance use disorders. Many of these data points below pre-date Virginia's more recent expansion of Medicaid; as this significant policy change has more time to take root, one would expect many of these metrics to improve with an increased access to health care for more Virginians.

- The percent of adults who have a regular primary care provider remains at 71%.
- Avoidable hospital stays for ambulatory care sensitive conditions (per 100,000 adults) increased from 1,294 in 2013 to 1,330 in 2017.
- Hospitalizations due to mental health and substance use disorders (per 100,000 adults) showed a slight decrease to 795.3 in 2017 from 803.4 in 2016.
- Avoidable deaths from heart disease, stroke or hypertensive disease (per 100,000 adults) increased to 47.07 in 2018 from 45.99 in 2015.

- The percent of adults whose poor health kept them from doing their usual activities for one or more days in the past months continued to increase, from 19.5% in 2014 to 23.3% in 2018.

Goal 4.2: Virginia's Health IT System Connects People, Services and Information to Support Optimal Health Outcomes

Health technology and informatics advance integration and interoperability of data and care, which can be leveraged to ensure Virginia prevents hospital readmissions and premature death.

- Implementing a certified electronic health record system among healthcare providers increased to 86% in 2017 from 70.6% in 2014.
- Entities connected through the state health information exchange (HIE) decreased in 2018 to 5,107, which is down from 6,289 in 2017.
- While still a goal of VDH, no local health district has yet implemented an electronic health record system to be able to connect with local healthcare providers or transfer information via the HIE.

In 2018, VDH submitted a budget amendment request in support of its goal of implementing an electronic health record system. More recently, the Commonwealth began a focus on a plan to implement an EHR among selected agencies within the SHHR. This effort would allow for a common platform that ensures interoperability with and between VDH and other SHHR agencies, as well as other healthcare partners. VDH's inclusion in this much larger SHHR study will provide a broader and more efficient system with increased data sharing across all needs.

Emergency Department Care Coordination (EDCC)
The 2017 Virginia General Assembly established the EDCC in VDH to provide a single, statewide technology solution that connects all hospital EDs in the Commonwealth. This program uses the HIE for data exchange between healthcare providers, health plans, and care teams for patients receiving emergency services. The EDCC also integrates directly with Virginia's Prescription Monitoring Program; using prescription data, the tool provides real-time alerts to clinicians about their patients when they show up in the ED. VDH serves on the EDCC Clinical Consensus Group and its Advisory Council. The functionality of EDCC continues to expand, now including Opioid Overdose alerts and sending data to VDH's syndromic surveillance system. The EDCC Program continues to increase the number of downstream providers using the Program's information. The expansion includes CSBs, FQHCs, Accountable Care Organizations, medical staffs and others who benefit from real time information on their patient's use of health care services to better coordinate care, reduce readmissions and duplicative tests.

Virginia Stroke Systems Task Force (VSSTF)
The 2018 General Assembly passed legislation, to require the VDH to implement systems for data collection and information sharing, apply evidence-based guidelines for community-based follow-up care, and implement quality improvement initiatives to improve the quality of stroke care. Under this legislation, through the VSSTF, VDH has convened the Virginia Stroke Care Quality Improvement Advisory Group to provide recommendations for quality improvement across the Commonwealth related to establishing stroke metrics and improving data collection for the prevention and management of strokes.

Clinical Community Linkages
Through a partnership with the Virginia Hospital and Healthcare Association (VHHA), VDH has used an EHR and social determinants of health data-driven approach to identify high burden areas of with

disparities in diabetes, chronic kidney disease, and cardiovascular disease hospitalizations. VDH is working with multi-sectoral partners to create sustainable interventions and supports that reduce the development of chronic disease and disease-related complications of Virginians by linking them to social supportive services and clinical care.

Goal 4.3: Health Care-Associated Infections Are Prevented and Controlled in Virginia

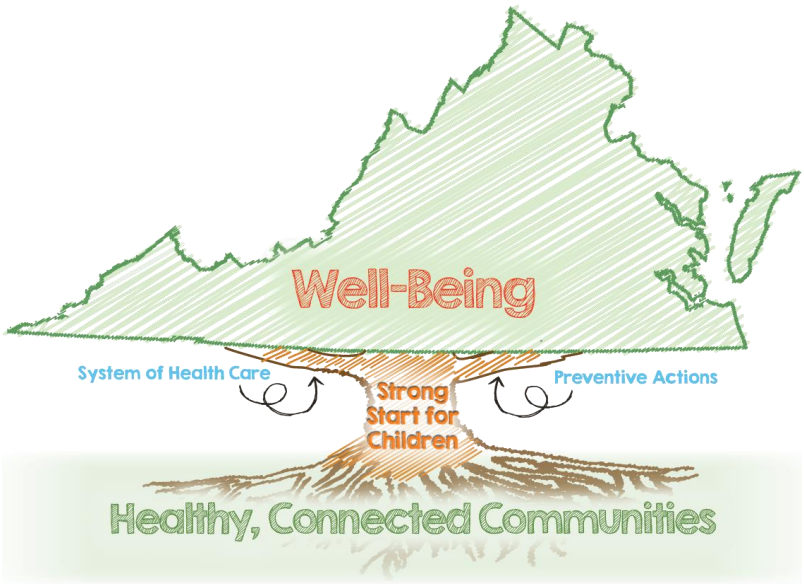
Preventing healthcare-associated infections (HAI) is a priority across the entire healthcare system in Virginia. There has been a marked increase in the percentage of hospitals that are meeting the state goal for the prevention of hospital-onset *Clostridioides difficile* infections, from 64.9% in 2015 to 87.2% in 2018.

In 2015, Virginia reporting regulations were revised to expand the amount of data acute care hospitals share with VDH; this led to a greater focus on the prevention of *C. difficile* infections. *C. difficile* prevention was adopted as a priority by VDH, the Virginia HAI Advisory Group, and VHHA. VDH shares data quarterly with VHHA to track statewide progress, and annually with the HAI Advisory Group to set reduction goals. VDH sends Targeted Assessment for Prevention reports to hospitals quarterly to help identify facilities and units where additional infection prevention and control resources may be needed to reduce HAIs, including *C. difficile*. VDH partnered with Virginia Health Information to create a two-page *C. difficile* educational flyer using all available statewide data; it was shared with providers and consumers via social media and the websites of both organizations. Statewide efforts have also focused on antibiotic stewardship; decreased antibiotic use leads to reductions in *C. difficile*.

As of 2018, 98% of Virginia hospitals had met all seven core elements of hospital antibiotic stewardship programs. Collectively, Virginia acute care hospitals have surpassed the Health and Human Services 2020 National HAI Action Plan goal of achieving a 30% reduction in hospital-onset *C. difficile* infections. However, there is still work to be done. The 100% goal has not been met, and *C. difficile* still causes significant morbidity and mortality for Virginians. In 2018, 1,446 hospital-onset *C. difficile* infections were reported statewide.

Appendix A

Office of Health Equity Report



Virginia's Plan for Well-Being

2016-2020

Annual Report, 2019

Virginia Department of Health
109 Governor Street
Richmond, VA 23219
www.vdh.virginia.gov

Background

This information below serves as an annual report to *Virginia's Plan for Well-Being*, the Commonwealth of Virginia's state health improvement plan for 2016-2020. The plan has four aims:

1. Healthy, Connected Communities
2. Strong Start for Children
3. Preventive Actions
4. System of Health Care

Within this framework, the plan lays out 13 goals and 29 measures of success. This document describes the measures and status of indicators for review.

Vision: Well-Being for All Virginians

Well-Being

Measure Percent of adults in Virginia who report positive well-being; Baseline: 68% (2016).

2019 Update 73.3% (2018)

2020 Goal 70%

Data Source Virginia Behavioral Risk Factor Surveillance System. Virginia Department of Health.

Description The four-item Satisfaction with Life Scale (SWLS) asks respondents to indicate how much they agree with the four following statements on a scale from 1 (strongly agree) to 5 (strongly disagree): (1) "In most ways my life is close to ideal," (2) "The conditions of my life are excellent," (3) "I am satisfied with my life," and (4) "So far I have gotten the important things I want in life." Responses to the four SWLS questions are dichotomized into those indicating positive well-being (e.g., agree/strongly agree) and those indicating negative well-being (e.g., disagree/ strongly disagree). For overall SWLS, adults responding agree or strongly agree to all four questions (score = 4), are considered positive. Data collection for the SWLS scale began in 2016 as part of Virginia's Behavioral Risk Factor Surveillance System.

The Behavioral Risk Factor Surveillance System is an ongoing, annual survey of adults who are randomly called via landline or cell phone. The survey is coordinated by the Centers for Disease Control and Prevention and conducted in all 50 states. The Virginia Department of Health conducts the survey in Virginia. Responses of don't know/not sure, refused, or missing are removed from the numerator and denominator in all estimates.

AIM 1 — Healthy, Connected Communities

Goal 1.1 Virginia's Families Maintain Economic Stability

1.1 A High School Graduates Enrolled in Higher Education

Measure Percent of Virginia high school graduates enrolled in an institute of higher education within 16 months after graduation; Baseline: 70.9% (2013).

2019 Update 77.7% (2018)

2020 Goal 75%

Data Source Virginia Postsecondary Enrollment Reports. Virginia Department of Education.

Description The percent of Virginia high school graduates who:

1. Graduated within five years of entering high school,
2. Earned a standard or advanced studies diploma, and
3. Were enrolled in an institute of higher education within 16 months of graduation.

This measure follows a cohort of students who entered ninth grade in the same year.

1.1 B Cost-Burdened Households

Measure Percent of cost-burdened households in Virginia (more than 30% of monthly income spent on housing costs); Baseline: 31.4% (2013).

2019 Update 28.5% (2017)

2020 Goal 29.0%

Data Source American Community Survey. U.S. Census Bureau.

Description This measure is calculated by dividing the number of Virginians that spent more than 30% of their monthly income on rent, mortgage, or housing without a mortgage by the number of occupied housing units in Virginia. The numerator is housing cost as a proportion of total income in a given year. The data are from the American Community Survey 1-Year Estimates. This is a point-in-time annual survey.

1.1 C Consumer Opportunity Index Score

The Health Opportunity Index (HOI) is being recalculated. In lieu of the consumer opportunity index score, we calculated the Townsend Material Deprivation Index Score as a measure of economic stability.

1.1 Townsend Material Deprivation Index Score

Measure Townsend Material Deprivation Index score in Virginia; Baseline: 3.98 (2009-2013).

2019 Update 3.94 (2013-2017)

2020 Goal 3.93

Data Source The Virginia Department of Health created the Townsend Index utilizing the following data sources**:** U.S. Census, American Community Survey, and 5-Year Estimates.

Description The Townsend deprivation index is a measure of material deprivation, which is one of the indices of the Virginia Health Opportunity Index. Townsend Index is calculated using a combination of four census variables at census tract level:

1. **Unemployment**: Percentage of all people who are economically active who are unemployed.
2. **Overcrowding**: Percentage of households that are overcrowded, Persons per room is a measure of how many people are in the house per room, any number over 1 is classed as overcrowded as that would mean there is more than one person per room.
3. **Non-car Ownership**: Percentage of households that do not own a car or van.
4. **Non-home Ownership:** Percentage of households that are not owner-occupied

The value represents the geometric mean of all the above listed four variables. This is necessary because poor performance in any dimension is directly reflected in the geometric mean. In other words, a high unemployment in one dimension is not linearly compensated for anymore by low percentage in another dimension. The geometric mean reduces the level of substitutability between dimensions and at the same time ensures that a 1 percent increase in the percent of, say, unemployment has the same impact on the final value as a 1 percent increase in the Overcrowding. Thus, as a basis for comparisons of best indicators, this method is also more respectful of the intrinsic differences across the dimensions than a simple average. The state score represents the median county score.

1.2 D Economic Opportunity Index Score

The Health Opportunity Index (HOI) is being recalculated. In lieu of the economic opportunity index score, we calculated the Gini Income Inequality Index Score as a measure of economic stability.

1.2 Gini Income Inequality Index Score

Measure	Gini Income Inequality Index score in Virginia; Baseline: 38.9 (2009-2013).
2019 Update	39.9 (2013-2017)
2020 Goal	38.9
Data Source	The Virginia Department of Health utilizes the U.S. Census American Community Survey Data on income dispersion
Description	The Gini Index is a summary measure of income inequality. The Gini coefficient incorporates the detailed shares data into a single statistic, which summarizes the dispersion of income across the entire income distribution. The Gini coefficient ranges from zero, indicating perfect equality (where everyone receives an equal share), to 100, perfect inequality (where only one recipient or group of recipients receives all the income). The Gini Index indicator is calculated at the census-tract level and the median is selected.

Goal 1.2 Virginia's Communities Collaborate to Improve the Population's Health

1.2 Districts with Collaborative Community Health Improvement Processes

Measure	Percent of Virginia health planning districts that have established an on-going collaborative community health improvement process; Baseline: 43.0% (2015).
2019 Update	97% (2018)
2020 Goal	100%
Data Source	Virginia Department of Health.
Description	The measure is calculated by dividing the number of health districts in Virginia that report that a collaborative community health improvement process is established in their health planning district divided by 35 (total number of health planning districts).

AIM 2 — Strong Start for Children

Goal 2.1 Virginians Plan Their Pregnancies

2.1 Teen Pregnancy Rate

Measure Teen pregnancy rate per 1,000 females, ages 15 to 19 years, in Virginia; Baseline: 27.9 (2013).

2019 Update 19.7 (2017)

2020 Goal 25.1

Data Source Virginia Vital Records and Health Statistics Electronic Birth Certificates, Fetal Death Certificates, Induced Termination of Pregnancy Certificates. Virginia Department of Health.

Description This metric is created using live birth data from the electronic birth certificate as reported by birth facilities, Induced Termination of Pregnancy (ITOP) data as reported by ITOP facilities, fetal death data as reported by medical providers and the number of female teens (15-19 years of age) from the National Center for Health Statistics population estimates.

Goal 2.2 Virginia's Children Are Prepared to Succeed in Kindergarten

2.2 A Kindergartens Not Meeting Phonological Awareness Literacy (PALS-K) Benchmark

Measure Percent of children in Virginia who do not meet the PALS-K benchmarks in the fall of kindergarten and require literacy intervention; Baseline: 12.7% (2014-2015).

2019 Update 17% (2018-2019)

2020 Goal 12.2%

Data Source Phonological Awareness Literacy Screening – Kindergarten Results. Virginia Department of Education.

Description The Phonological Awareness Literacy Screening – Kindergarten (PALS-K) is conducted in the fall of each school year and identifies kindergarten students who are at risk for reading difficulties. The tool measures children's knowledge of several literacy fundamentals: phonological awareness, alphabet recognition, concept of word, knowledge of letter sounds, and spelling. The PALS-K is an assessment of literacy readiness and is not a comprehensive measure of school readiness. PALS-K is the state-provided screening tool for Virginia's Early Intervention Reading Initiative (EIRI) and is used by 99% of school divisions in the state on a voluntary basis.

2.2 B Third Graders Passing Reading Standards of Learning (SOL) Assessment

Measure Percent of third graders in Virginia who pass the Standards of Learning third grade reading assessment; Baseline: 69.0% (2014-2015).

2019 Update 71% (2018-2019)

2020 Goal 80.%

Data Source Virginia Standards of Learning Results. Virginia Department of Education.

Description The Standards of Learning (SOL) for Virginia Public Schools establish minimum expectations for what students should know and be able to do at the end of each grade. All items on SOL tests are reviewed by Virginia classroom teachers for accuracy and fairness, and teachers also assist the state Board of Education in setting proficiency standards for the tests.

Goal 2.3 The Racial Disparity in Virginia's Infant Mortality Rate is Eliminated

2.3 Infant Mortality Rate by Race

Measure Black infant mortality rate in Virginia per 1,000 live births by race; Baseline: 12.2 (2013).

2019 Update 9.6 (2018)

2020 Goal 5.2

Data Source Virginia Vital Records and Health Statistics Electronic Birth Certificates and Electronic Death Certificates. Virginia Department of Health.

Description Virginia's infant mortality rate is calculated by dividing the number of deaths of children under one year of age by the number of live births to mothers living in the state. The resulting number is multiplied by 1,000 to compute the rate.

AIM 3 — Preventive Actions

Goal 3.1 Virginians Follow a Healthy Diet and Live Actively

1.1 A Adults Not Participating in Physical Activity

Measure Percent of Virginia adults 18 years and older who do not participate in any physical activity during the past 30 days; Baseline: 23.5% (2014).

2019 Update 22% (2018)

2020 Goal 20.0%

Data Source Virginia Behavioral Risk Factor Surveillance System. Virginia Department of Health.

Description The percent of Virginia adults 18 years and older who reported that they did not participate in any physical activity other than their regular job during the past 30 days. The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing, annual survey of adults who are randomly called via landline or cell phone. The survey is coordinated by the Centers for Disease Control and Prevention (CDC) and conducted in all 50 states. The Virginia Department of Health conducts the survey in Virginia. The information is self-reported and not observed or measured. Responses of don't know/not sure, refused, or missing were removed from the numerator and denominator in all estimates.

3.1 B Adults Who Are Overweight or Obese

Measure Percent of Virginia adults 18 years and older who are overweight or obese; Baseline: 64.7% (2014).

2019 Update 66.3% (2018)

2020 Goal 63.0%

Data Source Virginia Behavioral Risk Factor Surveillance System. Virginia Department of Health.

Description The percent of Virginia adults 18 years and older who reported a body mass index (BMI) greater than 25. The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing, annual survey of adults who are randomly called via landline or cell phone. The survey asks respondents what their height and weight are. BMI is then calculated based on reported height and weight. The

survey is coordinated by the Centers for Disease Control and Prevention (CDC) and conducted in all 50 states. The Virginia Department of Health conducts the survey in Virginia. Responses of don't know/not sure, refused, or missing were removed from the numerator and denominator in all estimates.

3.1 C Households That Are Food Insecure

Measure Percent of Virginia households that are food insecure for some part of the year. Baseline: 11.9% (2013).

2019 Update 10.2% (2017)

2020 Goal 10.0%

Data Source *Map the Meal Gap* utilized the Current Population Survey, and American Community Survey from the U.S. Census Bureau.

Description Feeding America's *Map the Meal Gap* analyzes the relationship between food insecurity and indicators of food insecurity, and child food insecurity (poverty, unemployment, median income, etc.) at the state level.

Goal 3.2 Virginia Prevents Nicotine Dependency

3.2 Adults Using Tobacco

Measure Percent of Virginia adults aged 18 years and older who report using tobacco. Baseline: 21.9% (2014).

2019 Update 17.3% (2018)

2020 Goal 12.0%

Data Source Virginia Behavioral Risk Factor Surveillance System. Virginia Department of Health.

Description The percent of Virginia adults 18 years and older who report that they have smoked at least 100 cigarettes in their lifetime and currently smoke tobacco on at least some days, use chewing tobacco, use snuff and/or use snus. The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing, annual survey of adults who are randomly called via landline or cell phone. The survey is coordinated by the Centers for Disease Control and Prevention (CDC) and conducted in all 50 states. The Virginia Department of Health conducts the survey in Virginia. The information is self-reported and not observed or measured. Responses of don't know/not sure, refused, or missing were removed from the numerator and denominator in all estimates.

Goal 3.3 Virginians Are Protected Against Vaccine-Preventable Diseases

3.3 A Adults Vaccinated Against Influenza

Measure Percent of Virginia adults 18 years and older who received an annual influenza vaccine. Baseline: 48.2% (2014-2015).

2019 Update 50.6% (2018-2019)

2020 Goal 70%

Data Source National Immunization Survey. Centers for Disease Control and Prevention.

Description The percent of Virginians 18 years of age and older who received an annual influenza vaccine. The Centers for Disease Control and Prevention analyzed the National Immunization Survey-Flu

and the Behavioral Risk Factor Surveillance System to estimate national and state level flu vaccination coverage. Influenza vaccination status is based on self-reported data and not validated with medical records.

3.3 B Adolescents Vaccinated Against HPV

Measure Percent of girls aged 13-17 in Virginia who receives three doses of HPV vaccine and percent of boys aged 13-17 in Virginia who receive three doses of HPV vaccine. Girls Baseline: 35.9% (2014), Boys Baseline: 22.5% (2014).

This measure has been updated for the 2018 Annual Report to reflect changes in CDC methodology. The above measure is no longer used. The updated measure is below:

Percent of girls ages 13-17/Percent of boys age 13-17 in Virginia who are "up to date" (UTD) in the HPV vaccine series. This can be met with two or three doses, depending on the age of initiation of the vaccine series. Girls UTD baseline (2016): 41.1%; Boys UTD Baseline (2016): 37.4%

2019 Update Girls (UTD): 59.1%% (2018), Boys (UTD): 50.8% (2018)

2020 Goal Girls and Boys: 80.0%

Data Source National Immunization Survey-Teen. Centers for Disease Control and Prevention.

Description The percent of Virginia adolescents aged 13-17 (girls and boys reported separately) who received three doses of human papillomavirus (HPV) vaccine (two doses are recommended as of 2016). The National Immunization Survey-Teen (NIS-Teen) is an ongoing, annual survey of children, whose parents/guardians are randomly called via landline or cell phone. The survey is coordinated by the Centers for Disease Control and Prevention and conducted in all 50 states. Doses of vaccines administered are verified by providers through a mailed survey to the girls' immunization providers.

Goal 3.4 Cancers Are Prevented or Diagnosed at the Earliest Stage Possible

3.4 Adults Screened for Colorectal Cancer

Measure Percent of Virginia adults aged 50 to 75 years who receive colorectal cancer screening. Baseline: 69.1% (2014).

2019 Update 70.1% (2018)

2020 Goal 85.0%

Data Source Virginia Behavioral Risk Factor Surveillance System. Virginia Department of Health.

Description The percent of Virginia adults, ages 50 to 75 years, who report receiving a colorectal cancer screening test based on the most recent guidelines (fecal occult blood test, proctoscopy, colonoscopy, or sigmoidoscopy). The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing, annual survey of adults who are randomly called via landline or cell phone. The survey

is coordinated by the Centers for Disease Control and Prevention (CDC) and conducted in all 50 states. The Virginia Department of Health conducts the survey in Virginia. The information is self-reported and not observed or measured. Responses of don't know/not sure, refused, or missing were removed from the numerator and denominator in all estimates. Data collected in even years: 2014, 2016, 2018, etc.

Goal 3.5 Virginians Have Life-Long Wellness

3.5 A Disability-Free Life Expectancy

Measure Average years of disability-free life expectancy for Virginians; Baseline: 66.1 (2013).

2019 Update 67.9 (2017)

2020 Goal 67.3

Data Source U.S. Census Intercensal Population File Vintage 2014, Virginia Vital Records and Health Statistics Electronic Death Certificates, and the American Community Survey. Virginia Department of Health.

Description Disability-free life expectancy (DFLE) was calculated for Virginia census tracts by adding the estimates of the proportion of individuals with disabilities by tract and age group to the abridged life table estimates of mortality and population used for creating life expectancy (LE) estimates. The life table with the proportion of disabled individuals was the input for the analysis using the Chiang II methodology with Silcock's adjustment for calculation of LE and Sullivan's methods for DFLE. The disabled population proportion was defined for this study as answering yes to any one of the six disability questions (2009-2013 aggregate) in the American Community Survey. Significant consideration was given to disability chosen, small area analysis problems, and how to share the analysis for best impact. At the tract level, data censorship was considered when unusual population distributions were encountered. Minimum population size requirements were met to reduce large standard errors. DFLE estimates were added to a multiple linear regression model with social determinants of health as the explanatory variables.

3.5 B Adults with Adverse Childhood Experiences

Measure Percent of adults in Virginia who report at least one (1) adverse childhood experience; Baseline: 60.4% (2016).

2019 Update 60.7% (2018)

2020 Goal 45%

Data Source Virginia Behavioral Risk Factor Surveillance System. Virginia Department of Health.

Description Adverse childhood experiences (ACEs) include verbal, physical, or sexual abuse, as well as family dysfunction (e.g., an incarcerated, mentally ill, or substance-abusing family member; domestic violence; or absence of a parent because of divorce or separation). The ACE score is a measure of cumulative exposure to particular adverse childhood conditions. Exposure to any single ACE condition is counted as one point. If an adult experienced none of the conditions in childhood, the ACE score is zero. Points are totaled for a final ACE score. The Behavioral Risk Factor Surveillance System is an ongoing, annual survey of adults who are randomly called via landline or cell phone. The survey is coordinated by the Centers for Disease Control and Prevention

(CDC) and conducted in all 50 states. The Virginia Department of Health conducts the survey in Virginia. Responses of don't know/not sure, refused, or missing were removed from the numerator and denominator in all estimates.

AIM 4 — System of Health Care

Goal 4.1 Virginia Has a Strong Primary Care System Linked to Behavioral Health Care, Oral Health Care, and Community Support Systems

4.1 A Adults with a Regular Health Care Provider

Measure Percent of adults 18 years and older who have a regular health care provider; Baseline: 69.3% (2014).

2019 Update 71.0% (2018)

2020 Goal 85.0%

Data Source Virginia Behavioral Risk Factor Surveillance System. Virginia Department of Health.

Description The percent of Virginia adults who report that they have at least one personal healthcare provider for ongoing care. The Behavioral Risk Factor Surveillance System is an ongoing, annual survey of adults who are randomly called via landline or cell phone. The survey is coordinated by the Centers for Disease Control and Prevention and conducted in all 50 states. The Virginia Department of Health conducts the survey in Virginia. The information is self-reported and not observed or measured. Responses of don't know/not sure, refused, or missing were removed from the numerator and denominator in all estimates.

4.1 B Avoidable Hospital Stays

Measure Rate of avoidable hospital stays for ambulatory care sensitive conditions in Virginia per 100,000 persons; Baseline: 1,294 (2013).

2019 Update 1,330 (2017)

2020 Goal 1,100

Data Source Virginia Inpatient Hospitalization. Virginia Health Information.

Description The measure is the Agency for Healthcare Research and Quality's Prevention Quality Overall Composite (PQI #90) in Virginia. It includes hospitalizations that could have been prevented through high quality outpatient care, including uncontrolled diabetes, short-term diabetes complications, long-term diabetes complications (including amputated limbs), chronic obstructive pulmonary disease, high blood pressure, heart failure, chest pain, adult asthma, dehydration, pneumonia, and urinary tract infections. The number of hospital stays is provided for every 100,000 people who reside in that area.

4.1 C Avoidable Cardiovascular Disease Deaths

Measure Rate of avoidable deaths from heart disease, stroke, or hypertensive disease in Virginia per 100,000 persons; Baseline: 59.97 (2013).

2019 Update 47.07 (2018)

2020 Goal 40.0

Data Source Virginia Vital Records and Health Statistics Electronic Death Certificates. Virginia Department of Health.

Description Deaths included were those caused by cardiovascular disease, including chronic rheumatic heart disease (ICD 10 codes I05-I09), hypertension (ICD codes I10, I12, I15), ischemic heart disease (ICD 10 codes I20-I25), and cerebrovascular disease (ICD 10 codes I60-I69). An age-adjusted formula for population was used, truncating the years over 75, and then reformatting to the new million population for those age ranges.

4.1 D Adult Mental Health and Substance Abuse Hospitalizations

Measure Rate of adult mental health and substance abuse hospitalizations in Virginia per 100,000 adults; Baseline: 668.50 (2013).

2019 Update 795.3 (2017)

2020 Goal 635.1

Data Source Virginia Inpatient Hospitalization. Virginia Health Information.

Description Diagnosis codes to include for mental health and substance abuse hospitalizations were selected based on criteria developed by the Healthcare Cost and Utilization Project. The case definition used excluded discharges related to maternity stays and individuals under the age of 18. Population denominators were derived from midyear Census estimates provided by the National Center for Health Statistics.

4.1 E Adults Whose Poor Health Kept Them from Usual Activities

Measure Percent of adults 18 years and older in Virginia who reported having one or more days of poor health that kept them from doing their usual activities; Baseline: 19.5% (2014).

2019 Update 23.3% (2018)

2020 Goal 18.0%

Data Source Virginia Behavioral Risk Factor Surveillance System. Virginia Department of Health.

Description Percent of Virginia adults who reported having one or more days of poor health (physical health or mental health) and reported that poor health kept them from doing usual activities. The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing, annual survey of adults, who are randomly called via landline or cell phone. The survey is coordinated by the Centers for Disease Control and Prevention (CDC) and conducted in all 50 states. The Virginia Department of Health conducts the survey in Virginia. The information is self-reported and not observed or measured. Responses of don't know/not sure, refused, or missing were removed from the numerator and denominator in all estimates.

Goal 4.2 Virginia's Health IT System Connects People, Services and Information to Support Optimal Health Outcomes

4.2 A Providers with Electronic Health Records

Measure Percent of health care providers in Virginia who have implemented a certified electronic health record; Baseline: 70.6% (2014).

2019 Update 86.0% (2017)

2020 Goal 90.0%

Data Source National Electronic Health Records Survey. Centers for Disease Control and Prevention.

Description Data are from the National Electronic Health Records Survey (NEHRS). NEHRS, which is conducted by the National Center for Health Statistics and sponsored by the Office of the National Coordinator for Health Information Technology, is a nationally representative mixed mode survey of office-based physicians that collects information on physician and practice characteristics, including the adoption and use of EHR systems. Using a physician database, email addresses of sampled physicians were identified. Sampled physicians that did not have an email match were asked to complete the survey by mail or phone. Among those with email addresses, respondents were randomly assigned to one of four groups: an invitation to take the web survey through email, US mail, both, or no web survey option. Nonresponse to the web survey resulted in 3 mailings of the questionnaire followed by phone contacts.

4.2 B Entities Connected to Health Information Exchange

Measure Number of entities in Virginia connected through Connect Virginia HIE Inc., the electronic health information exchange, and the national e-Health Exchange; Baseline: 3,800 (2015).

2019 Update 5,107 (2018)

2020 Goal 7,600

Data Source Connect Virginia HIE, Inc.

Description Connect Virginia HIE, Inc. is the statewide health information exchange (HIE) for the Commonwealth of Virginia. The HIE uses secure, electronic, internet-based technology to allow medical information to be exchanged by participating entities. Connect Virginia reports the number of entities in Virginia connected on a quarterly basis.

4.2 C Health Districts with Electronic Health Records

Measure Number of Virginia's local public health districts that have electronic health records and connect to Connect Virginia, Virginia's Health Information Exchange; Baseline: 0 (2015).

2019 Update 0 (2018)

2020 Goal 35

Data Source Virginia Department of Health.

Description Count of Virginia's local public health districts (total of 35) that have electronic health records and connect to Connect Virginia, Virginia's Health Information Exchange.

Goal 4.3 Health Care-Associated Infections Are Prevented and Controlled in Virginia

4.3 Hospitals Meeting State Goal for Prevention of *C. difficile* Infections

Measure Percent of hospitals in Virginia meeting the state goal for prevention of hospital-onset *Clostridium difficile* infections; Baseline: 64.9% (2015).

2019 Update 87.2% (2018)

2020 Goal 100.0%

Data Source National Healthcare Safety Network. Centers for Disease Control and Prevention.

Description The percent of Virginia hospitals that meet the state goal for prevention of hospital-onset *C. difficile* laboratory-identified events. The state goal is a standardized infection ratio ≤ 0.7, which aligns with the goal of the Department of Health and Human Services National Healthcare-Associated Infections Action Plan.

COMMUNITY INTEGRATION

The Virginia State Office of Rural Health (SORH) provides funds to local agencies who need experience applying for grants or have projects that are not large enough to attract other funders.

- SORH was the recipient of a Rural Communities Opioids Response Planning grant which worked with the **Appalachian Substance Abuse Coalition** to apply for a 501c3 in order to receive future funding. SORH worked with the **St. Mary's Health Wagon** who was awarded $1 Million to continue the work in southwest VA.

- SORH provided funds to the United Way of Southwest Virginia to hold a 1-day **Rural Childhood Summit** in May 2019. Over 600 people attended the Summit with Keynote addresses by First Lady Pamela Northam and author Jeanette Walls. The purpose of the summit was to bring together all agencies who work with children to begin to address those who are adversely affected by adverse childhood experiences (ACES) and the opioid crisis.

- SORH has provided seed funding to the **Healthy Harvest South Boston Community Garden** to educate high school and middle school students about nutrition, business and how to grow food.

SOWING THE SEEDS OF HEALTH EQUITY

GROWING HEALTHY, CONNECTED COMMUNITIES

HEALTH EQUITY CONFERENCE & THINK TANK, OCTOBER 2018

The OHE's inaugural conference and think tank featured a dynamic roster of multi-sector speakers, presenters and panelists focused on tackling issues in health disparities and inequities in VA. Attendees also participated in VA's first ever statewide health equity think tank—to collectively brainstorm practical, community-rooted solutions to health inequities. In addition, the health equity work of graduate and professional degree students was highlighted in an evening poster presentation and reception.

TARGETING RESOURCES

Bringing *Visability* to the most vulnerable populations

TO ADDRESS HEALTH INEQUITIES

DIVISION OF SOCIAL EPIDEMIOLOGY

Health inequities often persist because they go unseen. The Division of Social Epidemiology (DSE) uncovers the harsh reality of health disparities in VA, ensuring they are not ignored. Once identified, we work to help decision-makers target the right resources to the right people, to address the right problems.

COST-BENEFIT ANALYSIS

Finding the most effective solution while using the least amount of resources allows us to help more people. The DSE's Health Economist specializes in cost-benefit analysis, outcomes-based financing and economic impact analysis. Our economics capability will allow more robust analysis of the cost and benefits of solutions, resulting in better use of our health dollars.

HEALTH OPPORTUNITY INDEX (HOI)

Identifying disparities comes first but solutions are necessary to end them. When residents of the Norfolk City Health District identified low birth weight as a barrier to well-being, they turned to the OHE's HOI to point them in the right direction. The HOI is a 13-factor index, built at the neighborhood level, to help communities understand how social and economic disparities affect health in their communities.

Innovation begins in

RURAL COMMUNITIES

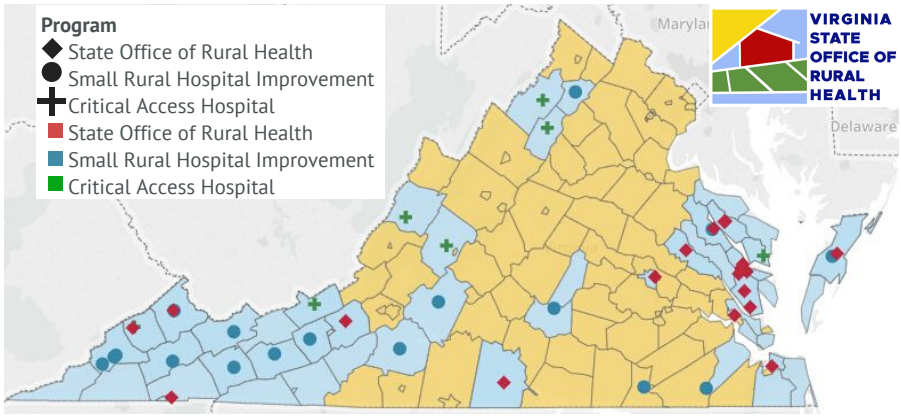
STATE OFFICE OF RURAL HEALTH

Virginia's SORH distributed over $200,000 in funds to 11 local agencies to implement programs in these focus areas:

Workforce Development
Telehealth Services
Substance Misuse & Recovery
Behavioral and Mental Health
Community Paramedicine/Mobile Integrated Healthcare

HEALTH PROFESSIONAL SHORTAGE AREAS (HPSAS)

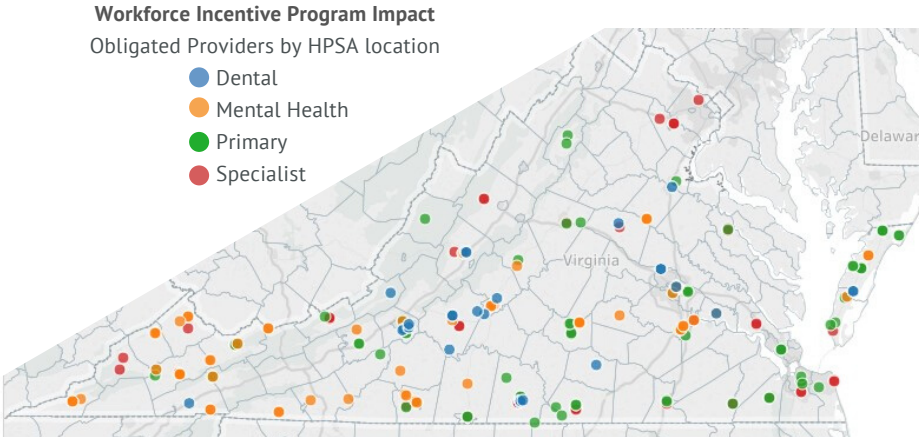
Too often, policy-makers depend on state or county averages. These metrics hide vulnerable populations and mask disparities. The DSE uses **Health Professional Shortage Area** (HPSA) designations to make vulnerable populations visible. The DSE uses granular data to create neighborhood sized HPSAs, such as the dental HPSA they created in Arlandia, a low-income neighborhood straddling Arlington and Alexandria in Northern Virginia. This designation allows the Community Health Center there to attract and retain dentists using OHE's recruitment and retention programs.



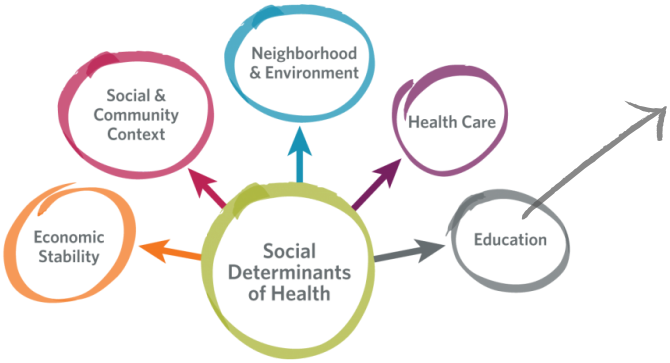
PRIMARY CARE OFFICE (PCO)

PCO's goal is to reduce health disparities by assuring the availability of quality healthcare services to low income, uninsured, isolated, vulnerable and special needs populations by fostering collaboration with similar organizations and identifying communities with the greatest unmet health care needs.

- HPSAs are eligible for certain programs and recruitment opportunities including: The State Loan Repayment Program, J-1 (Conrad 30) Waiver, National Health Service Corps promotion and support, Mary Marshall Nursing Scholarship.
- The PCO also provides administrative support to the Emergency Medical Services Scholarship fund and the Virginia Tobacco Commission State Loan Repayment program.
- **In 2019, The Virginia PCO distributed over $900,000 in scholarships or loan repayment funds.**



UNCHARTED TERRITORY



DANVILLE YOUTH HEALTH EQUITY LEADERSHIP INSTITUTE (YHELI)

YHELI is an after-school program dedicated to empowering students to graduate high school on time, with an action plan for the future! The program provides students with knowledge and skills to have successful and fulfilling education and career plans, overcome barriers to education, and decrease health inequities by providing leadership development, life skills, critical thinking skills, mentoring opportunities, college trips/preparation, career planning, financial planning/management skills, and resume building.

- YHELI students perform significantly better academically compared to their peers.
- YHELI is a safe space where students can always feel heard and appreciated, which is a critical component of mental health.

UNCHARTED TERRITORY

Leveraging the strengths of our faith-based and academic networks to respond with *Urgency*

Since 2013, fatal drug overdose has been the leading method of unnatural death in VA, surpassing all other forms of unnatural death including homicide, suicide, motor vehicles accidents, and undetermined deaths.

OPIOID RESPONSE OUTREACH COORDINATOR (OROC) REVIVE! TRAININGS

REVIVE! is the Opioid Overdose and Naloxone Education (OONE) program for the Commonwealth. The VDH-OHE's Partners in Prayer and Prevention (P3) program facilitate the REVIVE! trainings to teach community members to recognize and respond to an opioid overdose emergency with the administration of naloxone (Narcan®).

In the past 5 months, P3's response efforts have reached

8,400 persons

through training and community engagement events.

EMPOWERED COMMUNITIES OPIOID PROJECT

ECOP is a regional partnership implemented through the collaborative efforts the VDH-OHE and George Mason University. The ECOP seeks to improve public health by developing and implementing an innovative model of health promotion and management that provides needed medical and social services components to inmates who were found to be drug dependent during incarceration at the Adult Detention Center (ADC) upon their release.

HENRIETTA LACKS COMMISSION

On July 1, 2018, Virginia Governor Ralph Northam signed into law the creation of the Henrietta Lacks Commission and proclaimed September 23-29, 2018 as Henrietta Lacks Legacy Week—to coincide with the inaugural meeting of the Henrietta Lacks Commission. Some additional activities included:

- A worship service at Henrietta Lacks' church home
  - St. Matthew Baptist Church of Clover
- Lacks Legacy Lunch: A VDH lunch & learn to honor Henrietta Lacks' contributions to public health
- An evening panel about Henrietta Lacks and the Henrietta Lacks Commission
- Signing of the Henrietta Lacks Legacy Week Proclamation by State Officials

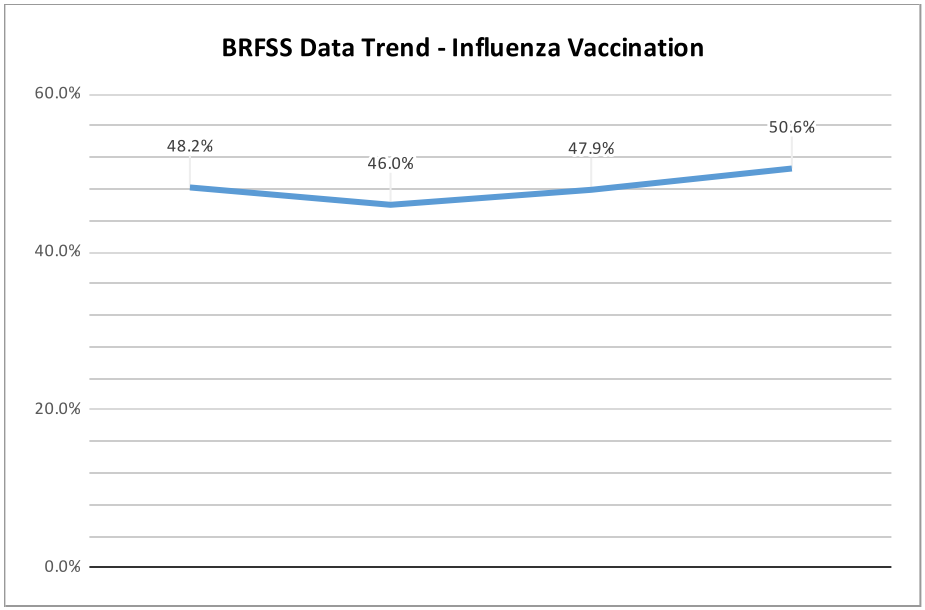
Highlighting *Resiliency*
Honoring *Legacy*

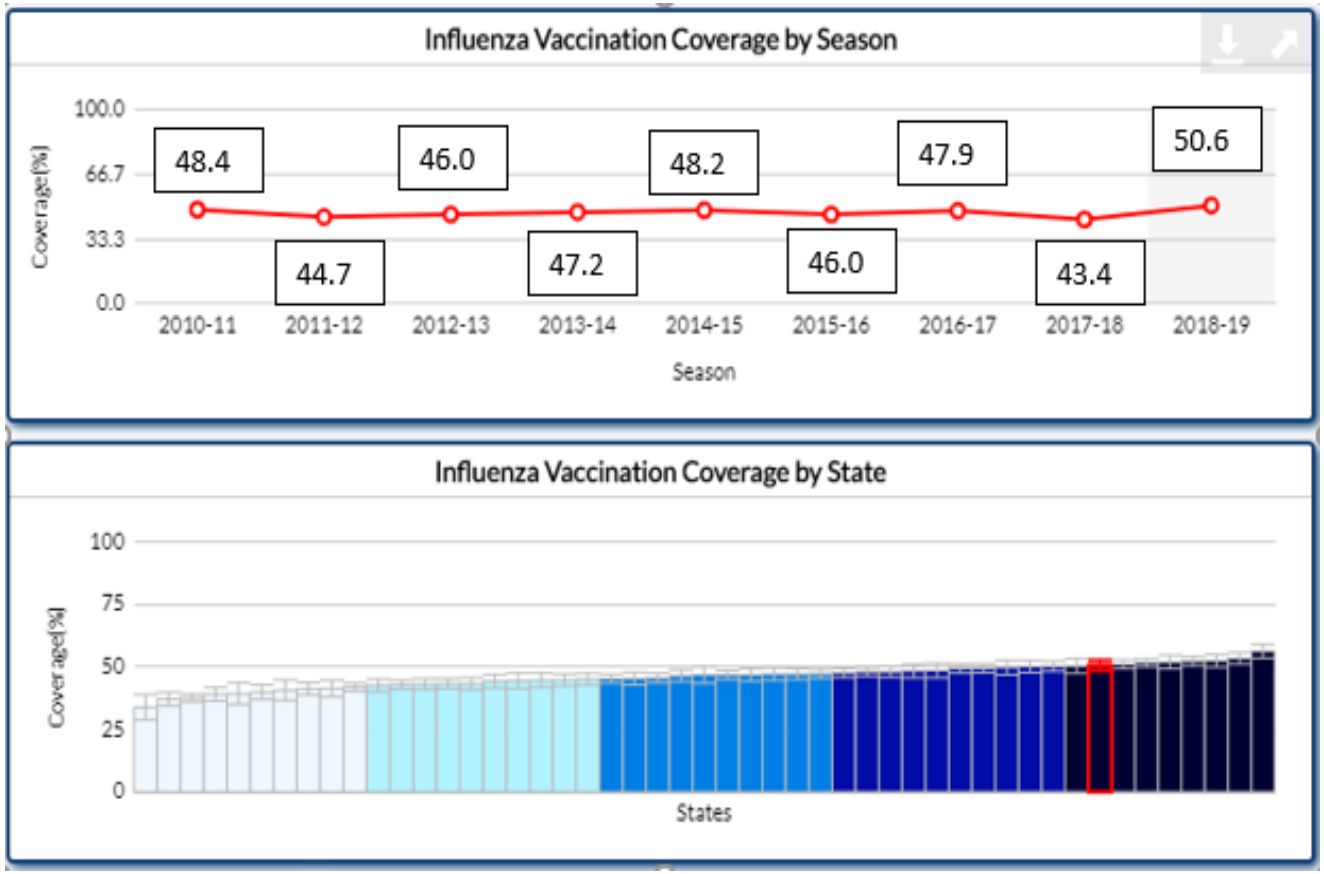
LGBTQ+ HEALTH EQUITY SYMPOSIUM

On June 27, 2019, the VDH-OHE hosted "The Fierce Urgency of NOW!: Virginia's first LGBTQ+ Health Equity Symposium". This day-long event coinciding with Pride Month was held at VCU's James Branch Cabell Library and aimed to highlight the resiliency of the LGBTQ+ community, while also taking an honest look at who has been left behind in the strides that have been made forward. Focusing on health equity, this gathering proved to be valuable for the 235 healthcare providers, public health professionals, community members, legislators, and allies who attended.

	Virginia's Plan For Well-Being Measures*	2020 GOAL	2016 Baseline	2017 Update	2018 Update	2019 Update
	Well-Being: Percent of Adults in Virginia Who Report Positive Well-Being	70%	68% (2016)	68% (2016)	66.80% (2017)	73.30% (2018)
AIM 1 » Healthy, Connected Communities	Percent of High School Graduates Enrolled in an Institution of Higher Education Within 16 Months After Graduation	75.0%	70.9% (2013)	72.0% (2014)	72.0% (2015)	77.7% (2018)
	Percent of Cost-Burdened Households (More Than 30% of Monthly Income Spent on Housing Costs)	29.0%	31.4% (2013)	31.0% (2015)	30.0% (2016)	28.5% (2017)
	Consumer - Health Opportunity (Townsend Material Deprivation Index)	3.93	4.06 (2014)	4.08 (2015)	4.03 (2016)	3.94 (2017)
	Economic - Health Opportunity (Gini Income Inequality Index)	38.90	39.20 (2014)	39.56 (2015)	39.81 (2016)	39.91 (2017)
	Percent of Health Planning Districts That Have Established an On-going Collaborative Community Health Planning Process	100.0%	43.0% (2015)	82.8% (2016)	88.0% (2017)	97.0% (2018)
AIM 2 » Strong Start for Children	Pregnancies Per 1,000 Females Ages 15 to 19 Years Old	25.1	27.9 (2013)	24.9 (2014)	20.9 (2016)	19.7 (2017)
	Percent of Children Who Do Not Meet the PALS-K Benchmarks in the Fall of Kindergarten and Require Literacy Interventions	12.2%	12.7% (2014-2015)	13.8% (2015-2016)	15.9% (2017-2018)	17.0% (2018-2019)
	Percent of Third Graders Who Pass the Standards of Learning Third Grade Reading Assessment	80.0%	69.0% (2014-2015)	75.4% (2015-2016)	74.6% (2016-2017)	71.0% (2018-2019)
	Black Infant Deaths Per 1,000 Black Live Births	5.2	12.2 (2013)	11.1 (2015)	10.7 (2016)	9.6 (2017)
AIM 3 » Preventive Actions	Percent of Adults Who Did Not Participate In Any Physical Activity During the Past 30 Days	20.0%	23.5% (2014)	25.1% (2015)	23.3% (2016)	22.0% (2018)
	Percent of Adults Who Are Overweight or Obese	63.0%	64.7% (2014)	64.1% (2015)	65.5% (2016)	66.3% (2018)
	Percent of Households That Are Food Insecure For Some Part of the Year	10.0%	11.9% (2013)	11.2% (2015)	10.6% (2016)	10.2% (2017)
	Percent of Adults Who Currently Use Tobacco	12.0%	21.9% (2014)	16.5% (2016)	17.9% (2017)	17.3% (2018)
	Percent of Adults Who Receive an Annual Influenza Vaccine	70.0%	48.2% (2014-2015)	46.0% (2015-2016)	47.9% (2016-2017)	50.6% (2018-2019)
	Percent of Adolescent Girls (13-17 Years Old) Who Receive Two Doses of HPV Vaccine	80.0%	--	41.1% (2016)	68.0% (2017)	59.1% (2018)
	Percent of Adolescent Boys (13-17 Years Old) Who Receive Two Doses of HPV Vaccine	80.0%	--	37.4% (2016)	50.4% (2017)	50.8% (2018)
	Percent of Adults Ages 50-75 Years Old Who Receive Colorectal Cancer Screening	85.0%	69.1% (2014)	70.3% (2016)	70.3% (2016)	70.1% (2018)
	Average Years of Disability-Free Life Expectancy	67.3	66.1 (2013)	66.0 (2014)	68.0 (2016)	67.9 (2017)
	Percent of Adults Who Report at least One (1) Adverse Childhood Experience (ACEs)	45.0%	--	60.4% (2016)	61.2% (2017)	60.7% (2018)
AIM 4 » System of Health Care	Percent of Adults Who Have a Regular Health-care Provider	85.0%	69.3% (2014)	71.1% (2015)	71.7% (2016)	71.0% (2018)
	Avoidable Hospital Stays for Ambulatory Care Sensitive Conditions Per 100,000 Persons	1,100	1,294 (2013)	1,151 (2014)	1,277 (2016)	1,330 (2017)
	Avoidable Deaths from Heart Disease, Stroke or Hypertensive Disease Per 100,000 Persons	40.0	59.97 (2013)	45.99 (2015)	45.94 (2016)	47.07 (2018)
	Mental Health and Substance Use Disorder Hospitalizations Per 100,000 Adults	635.1	668.5 (2013)	760.4 (2015)	803.4 (2016)	795.3 (2017)
	Percent of Adults Who Report Having One or More Days of Poor Health That Kept Them From Doing Their Usual Activities During the Past 30 Days	18.0%	19.5% (2014)	19.0% (2015)	20.9% (2017)	23.3% (2018)
	Percent of Heath-care Providers Who Have Implemented a Certified Electronic Health Record	90.0%	70.6% (2014)	73.4% (2015)	82.0% (2016)	86.0% (2017)
	Number of Entities Connected Through Connect Virginia HIE Inc., and the Electronic Health Information Exchange, and the National e-Health Exchange	7,600	3,800 (2015)	4,832 (2016)	6,289 (2017)	5,107 (2018)
	Number of Local Health Districts That Have Electronic Health Records and Connect to Community Providers Through Connect Virginia	35	0 (2015)	0 (2016)	0 (2017)	0 (2018)
	Percent of Hospitals That Meet the State Goal for Prevention of Hospital-onset *Clostridium difficile* Infections	100%	64.9% (2015)	65.4% (2016)	82.1% (2017)	87.2% (2018)

Virginia's Plan for Well-Being 2016–2020 and Technical Report can be found online at **http://virginiawellbeing.com under Measures.*


BRFSS Data Trend - Influenza Vaccination
60.0%
40.0%
20.0%
0.0%
48.2%
46.0%
47.9%
50.6%


Influenza Vaccination Coverage by Season
100.0
66.7
33.3
0.0
Coverage(%)
48.4
44.7
46.0
47.2
48.2
46.0
47.9
43.4
50.6
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
2017-18
2018-19
Season
Influenza Vaccination Coverage by State
100
75
50
25
0
Coverage(%)
States