2018 Annual Report on the Virginia's Plan for Well Being

Together with its partners, the Virginia Department of Health (VDH) aims to make Virginia the healthiest state in the nation. Using Virginia's Plan for Well Being (The Plan) as a guidance document, VDH monitors its shared progress for population health improvement as measured by multiple health indicators outlined in the 2018 Annual Progress Report. Using data to evaluate progress helps VDH to assess whether its strategies and systems are effective, and to make adjustments when needed.

As part of this continual improvement process, VDH is committed to the ongoing assessment and mitigation of health inequities that exist across the Commonwealth. The measures presented in the Annual Progress Report are at a state level; different communities may have different population health concerns. Health disparities and health inequities analyzed at lower geographic levels (e.g., county, health district, etc.), or within subpopulations, are more meaningful to guide action. This work is inculcated at the local level through community health assessment and community health improvement planning processes, which is driven by collective impact.

Progress on Metrics

The Plan outlines a path for improving the health and well-being of Virginians through four aims, 13 goals, and 29 measures. The table attached indicates the updated figure for each measure in The Plan, with the most current data available. The accompanying technical document provides more detail on values, data sources, and descriptions of each measure.

Of the 26 measures for which there is available data at the time of this report, 11 are showing marked improvement, although at different degrees. Of these, one measure (pregnancies per 1000 females ages 15-19 years old) has exceeded the goal that was originally set forth in The Plan. The remaining 15 measures persist as areas of focus, in that they have evidenced little to no change, or in some cases, have decreased further away from the intended goal. The measure regarding mental health and substance use hospitalization rate, marked with an asterisk, is one that is markedly worsening.

Improving Measures

- Ongoing collaborative community health planning process
- Pregnancies per 1,000 females ages 15-19 years
- Percent of third graders who pass the Standards of Learning Third Grade reading assessment
- HPV vaccine-girls
- HPV vaccines- boys
- Healthcare providers with a certified electronic health record
- Entities connected through the Health Information Exchange
- Hospitals meeting state goal for prevention of C Diff infections
- Avoidable deaths from heart disease, stroke, or HTN
- Adults using tobacco
- Infant mortality of black infants

Areas of Focus

- Percent of high school graduates enrolled in higher education within 16 months of graduation
- Percent of cost burdened households
- Percent of adults not participating in any physical activity
- Percent of adults overweight/obese
- Percent of adults receiving an annual influenza vaccine
- Percent of adults who receive colorectal cancer screening
- Percent of adults with a regular healthcare provider
- Percent of adults reporting 1+ days of poor health that kept them from doing usual activities
- Local health departments with an electronic health record
- Children not meeting the PALS-K Benchmark
- Percent of adults reporting at least one (1) adverse childhood experience
- Mental health/substance use hospitalization rate*

Further investigation into the drivers behind this lack of improvement in many areas is warranted. Many factors play into these measures and improvement will require a more holistic, cross-sector approach to observe positive change in these areas of focus.

Inventory of Local Community/Population Health Initiatives and Strategies

In 2018, VDH completed a project to inventory community-based collaborative activities and population health initiatives, plans, and coalitions that local health districts (LHDs) participate in or lead throughout the Commonwealth. VDH is identifying initiatives with common goals, objectives, and metrics. A comparison of the activities and projects in the inventory to metrics within The Plan will allow for alignment and intentionality of effort and shared results. Of the 492 efforts collected from LHDs, Aims 1 (70%) and 3 (67%) were more widely represented across the efforts than Aims 2 (36%) and 4 (32%). The majority of efforts seek to benefit these community sectors: health, parents and families, youth and children, education, human services, and government.

Next Steps:

Partnership for a Healthy Virginia

The Partnering for a Healthy Virginia Initiative is a new collaboration between the Virginia Department of Health and the Virginia Hospital and Healthcare Association. This partnership is aimed at improving Virginia's performance on population health metrics through building a broad-based, multi-sector coalition. The initiative is founded on the shared goal of making Virginia the healthiest state in the nation and is designed to build upon the existing strong partnership between these two organizations. The work will have a focus on coordinating the implementation of programs and services to improve population health across the Commonwealth with community health assessments serving as the primary driver of these efforts.

Virginia's not-for-profit hospitals complete community health needs assessments every three years as required by the Patient Protection and Affordable Care Act. Through this process, hospitals assess the health needs of the communities they serve and obtain data necessary to develop implementation strategies for priority areas. At the same time, other agencies, coalitions, and organizations also prepare local and statewide health improvement plans, which all address prioritized community health needs. Although these plans often overlap and share common goals, they can be better aligned and coordinated to achieve optimal performance on improving the population's health. The Partnership Advisory Committee, which already involves many of these local and state-level organizations, has convened twice, and the partnership is working to establish a shared agenda, performance metrics, and select potential demonstration projects.

State Health Assessment:
The next State Health Assessment is underway with an estimated completion date in December 2019. VDH staff are collecting and analyzing quantitative data as part of the Title V Needs Assessment. The State Health Assessment will build upon the Title V assessment (which has a focus on Maternal and Child Health populations) with other data sources to ensure a comprehensive assessment of health and well-being in Virginia. After the quantitative data is organized into population domain briefs, key populations of interest will be asked to consider the data and offer feedback and input into what they need to live healthy lives in Virginia. Stakeholders, including the Board of Health, will help review the data and consider the final development of the assessment recommendations and report.

The State Health Assessment will prioritize population health focal areas. In turn, VDH will lead the development of a new State Health Improvement Plan, using data to decide where to focus collective efforts and resources for the following five years. This improvement plan will include agreement on measures for monitoring and evaluation and will provide recommended strategies, systems level changes, and policy priorities to address needed areas of health improvement. Ownership of the identified strategies will fall on all collaborators involved in the process, as this work requires team effort. The state health assessment and improvement process will include a reinvigorated focus on health equity, and will address upstream drivers including the social determinants of health.

Virginia's Plan for Well-Being

2016-2020

Annual Report, 2018

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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 first year 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).

2018 Update 66.8% (2017)

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).

2018 Update 72.0% (2015)

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).

2018 Update 29.9% (2016)

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

Measure Consumer Opportunity Index score in Virginia; Baseline: 81.8 (2009-2013).

2018 Update 86.1 (2011-2015)

2020 Goal 83.7

Data Source The Virginia Department of Health created the Consumer Opportunity Index utilizing the following data sources: Affordability, Education, Townsend Profile from the U.S. Census American Consumer Survey and 5-Year Food Accessibility Index from the U.S. Department of Agriculture.

Description The Consumer Opportunity Index is an indicator of consumer access to resources that support long and healthy lives, with 100% representing perfect access and 0% representing no access. The metric is a multivariate index comprised of four indicators:

1. Affordability (housing and transportation cost as a percent of income),
2. Education (average years of schooling),
3. Food Accessibility (percent of population that is both low income and has low access to food), and
4. Townsend Material Deprivation Profile (unemployment, home ownership, overcrowded homes and homes without an automobile).

The Consumer Opportunity Index is one of four multivariate profiles that make up the Health Opportunity Index (HOI). The Virginia Department of Health convened stakeholders to identify 13 indicators to include in the HOI. From these indicators, four separate profiles were created using principal component analysis. Data for the indicators are taken from different sources using different methodologies, and are updated on differing schedules. Indicators in each

profile are combined using the geometric mean. Each indicator is given equal weight in the profile. The Consumer Opportunity Index indicators are established at the census-tract level. County-level profiles are determined for each indicator using a population-weighted average of each tract in the county. The state score represents the median county score.

1.1 D Economic Opportunity Index Score

Measure Economic Opportunity Index score in Virginia; Baseline: 70.7 (2009-2013).

2018 Update 75.0 (2011-2015)

2020 Goal 73.7

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

Description The Economic Opportunity Index is an indicator of access to the economic resources that support long and healthy lives, with 100% representing perfect access and 0% representing no access. The metric is a multivariate profile comprised of three indicators:

1. Employment (jobs per worker weighted by distance to job),
2. Income Inequality (Gini Coefficient), and
3. Job Participation (percent of working age population in the labor force).

The Economic Opportunity Index is one of four multivariate profiles that make up the Health Opportunity Index (HOI). The Virginia Department of Health convened stakeholders to identify 13 indicators to include in the HOI. From these indicators, four separate profiles were created using principal component analysis. Indicators in each profile are combined using the geometric mean. Data for the indicators are taken from different sources using different methodologies, and are updated on differing schedules. Each indicator is given equal weight in the profile. The Economic Opportunity Index indicators are established at the census-tract level. County-level profiles are determined for each indicator using a population-weighted average of each tract in the county. The state score represents the median county score.

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).

2018 Update 88.0% (2017)

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).

2018 Update 20.9 (2016)

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).

2018 Update 15.9% (2017-2018)

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).

2018 Update 74.6% (2016-2017)

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).

2018 Update 10.7 (2016)

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**

3.1 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).

2018 Update 23.3% (2016)

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).

2018 Update 65.5% (2016)

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).
2018 Update	10.6% (2016)
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).
2018 Update	17.9% (2017)
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).
2018 Update	47.9% (2016-2017)
2020 Goal	70%

Data Source Behavioral Risk Factor Surveillance System, and the 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%

2018 Update Girls (UTD): 68% (2016), Boys (UTD): 50.4% (2016)

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).

2018 Update 70.3% (2016)

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), 66.0 (2014).

2018 Update *measure calculation in process*

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).

2018 Update 61.2% (2017)

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).

2018 Update 71.7% (2016)

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).

2018 Update 1,151 (2014)

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: 49.9 (2013).

2018 Update 42.4 (2016)

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).

2018 Update 803.4 (2016)

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).

2018 Update 20.9% (2017)

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).

2018 Update 82.0% (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).

2018 Update 6,289 (2017)

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).

2018 Update 0 (2017)

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).

2018 Update 82.1% (2017)

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.

Virginia's Plan For Well-Being Measures*		2020 GOAL	2016 Baseline	2017 Update	2018 Update
Well-Being: Percent of Adults in Virginia Who Report Positive Well-Being		70%	--	68% (2016)	66.80% (2017)
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)
	Percent of Cost-Burdened Households (More Than 30% of Monthly Income Spent on Housing Costs)	29.0%	31.4% (2013)	31.0% (2015)	29.9% (2016)
	Consumer Opportunity Profile (Health Opporunity Index)	83.7	81.8 (2013)	86.1 (2015)	--
	Economic Opportunity Profile (Health Opportunity Index)	73.7	70.7 (2013)	75 (2015)	--
	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)
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)
	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)
	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)
	Black Infant Deaths Per 1,000 Black Live Births	5.2	12.2 (2013)	11.1 (2015)	10.7 (2016)

	Virginia's Plan For Well-Being Measures*	2020 GOAL	2016 Baseline	2017 Update	2018 Update
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)
	Percent of Adults Who Are Overweight or Obese	63.0%	64.7% (2014)	64.1% (2015)	65.5% (2016)
	Percent of Households That Are Food Insecure For Some Part of the Year	10.0%	11.9% (2013)	11.2% (2015)	10.6% (2016)
	Percent of Adults Who Currently Use Tobacco	12.0%	21.9% (2014)	16.5% (2016)	17.9% (2017)
	Percent of Adults Who Receive an Annual Influenza Vaccine	70.0%	48.2% (2014-2015)	46.0% (2015-2016)	47.9% (2016-2017)
	Percent of Adolescent Girls (13-17 Years Old) Who Receive Two Doses of HPV Vaccine	80.0%	--	41.1% (2016)	68.0% (2017)
	Percent of Adolescent Boys (13-17 Years Old) Who Receive Two Doses of HPV Vaccine	80.0%	--	37.4% (2016)	50.4% (2017)
	Percent of Adults Ages 50-75 Years Old Who Receive Colorectal Cancer Screening	85.0%	69.1% (2014)	70.3% (2016)	70.3% (2016)
	Average Years of Disability-Free Life Expectancy	67.3	66.1 (2013)	66.0 (2014)	--
	Percent of Adults Who Report at least One (1) Adverse Childhood Experience (ACEs)	45.0%	--	60.4% (2016)	61.2% (2017)
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)
	Avoidable Hospital Stays for Ambulatory Care Sensitive Conditions Per 100,000 Persons	1,100	1,294 (2013)	1,151 (2014)	--
	Avoidable Deaths from Heart Disease, Stroke or Hypertensive Disease Per 100,000 Persons	40.0	49.9 (2013)	41.7 (2015)	42.4 (2016)
	Mental Health and Substance Use Disorder Hospitalizations Per 100,000 Adults	635.1	668.5 (2013)	760.4 (2015)	803.4 (2016)
	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)
	Percent of Heath-care Providers Who Have Implemented a Certified Electronic Health Record	90.0%	70.6% (2014)	73.4% (2015)	82.0% (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)
	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)
	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)

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