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Introduction

**Oral Health Is Health.** Good oral health is an essential part of overall health and well-being. This connection is important for everyone across the lifespan. Research repeatedly demonstrates that poor oral health is linked to diabetes, heart disease, readiness to learn and work – even premature birth.

Virginia’s health care leaders share a collective vision for the commonwealth to become the **healthiest state in the nation** – a vision that cannot be achieved without addressing oral health problems. The good news is that dental diseases are preventable with inexpensive interventions. Poor oral health in the commonwealth is a solvable problem. Yet, Virginia earns a “C+” when graded against the nation’s performance on the critical oral health indicators included in the *Virginia Oral Health Report Card*. The overall grade calls positive attention to our strengths and identifies opportunities for collective action.

We can do better. Dental disease is preventable. The *Report Card* is a tool to renew our focus, investment, and innovation, and to support collaboration around oral health issues as we seek to become the healthiest state in the nation.

**About The Virginia Oral Health Report Card**

The *Virginia Oral Health Report Card* is the first stakeholder-driven state oral health report card in the nation. Stakeholders worked collectively to identify critical oral health indicators to track progress over time and determine a grading scale to score the state’s performance relative to the nation. The *Report Card* and this accompanying narrative highlight successes, inequities, and opportunities for improvement in key areas known to impact oral health, and subsequently overall health.

The measures were chosen through consensus and rely on available data in strategic areas deemed to have a high return on investment; the measures also complement existing statewide efforts. The grading scale was determined through consensus as well. Technical notes are available in Appendix A. Each individual and organization involved in *Report Card* development recognizes the importance of oral health as part of overall wellness and shares a commitment to making all Virginians healthier.

**Developing the Report Card**

To develop the *Report Card*, the Virginia Oral Health Coalition (VaOHC) convened a multi-stakeholder work group which assisted in a comprehensive data review, refinement of the list of indicators, and regional outreach over a seven-month period (see Appendix B for list of involved organizations). VaOHC also ensured a transparent development process by sharing work group proceedings and materials via external communications. The components of the *Report Card* development are outlined in Figure 1, on the following page.
The Report Card development process involved compromise and consensus to arrive at a core set of salient, actionable oral health indicators that are available from existing data and encompass several domains and populations. Work group members also identified additional indicators that may be useful for programmatic and policy efforts, but for which there are insufficient data at this time (see Next Steps – Improving Data Resources). Overall, Virginia’s oral health data resources are more comprehensive than many other states. Partnerships with state agencies proved invaluable; the level of cooperation to bring attention to oral health indicators in Virginia is unprecedented.

This is the inaugural Report Card and should be considered a starting point; the Report Card will be published at regular intervals to track progress. As additional data become available and new research and best practices emerge, the Report Card will evolve so that it can continue to serve as a guide to improve the oral health and, ultimately, overall health of Virginians.

**Advancing Equity in Oral Health**

Each individual should have an equal opportunity to achieve his or her health potential. Unfortunately, in Virginia, data show inequities by race, income, education, and geography in the occurrence of tooth decay, extractions, and utilization of oral health services. These disparities should be considered when reviewing and responding to any of the measures in the Report Card; to that end, this narrative highlights inequity by demographic factors in call-out boxes, wherever possible given the available data.

Health inequities exist when there are differences in access, treatment, and outcomes between individuals and across populations that are systemic, avoidable, predictable, and unjust.ii
Indicators

The Report Card indicators measure prevention, coverage, collaboration, and health status. All of the indicators tie back to the Virginia Oral Health Plan, a roadmap for oral health prevention, awareness, collaboration, coverage, and workforce improvements. Though the Report Card indicators were chosen by work group members through careful agreement during the development process, the correlation with the Virginia Oral Health Plan goals was intentional to ensure the Report Card activities support system-wide improvements and existing statewide initiatives. What follows is a description of each of the Report Card indicators as well as additional, relevant information that reflects the oral health of Virginians.

Oral Health of Virginia’s Children

Many serious oral health problems can be avoided or mitigated with effective prevention, early diagnosis, and treatment, especially in childhood. Accordingly, the Report Card includes several measures aimed at promoting early actions for oral health improvement.

Early Prevention for Children Age 1-2 in Medicaid

Virginia earns a “C” grade for children age 1-2 in Medicaid, with only 24% of this young age group receiving preventive oral health care. Although utilization of preventive services has been improving for children enrolled in Medicaid as a whole, the 1-2 age group lags behind this progress.

The American Dental Association (ADA) and the American Academy of Pediatrics (AAP) recommend that children should receive their first dental visit within six months of their first tooth or no later than 12 months of age. Early childhood is a critical period for establishing a dental home and lifelong oral health; early dental care can also reduce care costs throughout childhood. Older teens (ages 15-18 and 19-20) also exhibit low utilization of preventive dental services in Medicaid, as shown in Figure 2. Although utilization among these older age groups is not the main indicator for the Report Card, this is not to suggest that preventive care is less important for these older age groups. Rather, there is significant activity to be leveraged in Virginia to target the youngest children (ages 1-2), and doing so can have long-term health benefits. Focused efforts to improve utilization for the 1-2 age group could provide a foundation for prevention that continues through childhood and raises overall rates for children 1-20 over time.

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Figure 2: Utilization of Preventive Dental Services in Medicaid Smiles for Children Program by Age Group, 2014-2015

Claims data not weighted to be representative of the population. Based on claims for children with 90-day continuous enrollment in Medicaid and FAMIS during the state fiscal year (7/1/2014-6/30/2015). Differences among age groups not tested for statistical significance.\(^5\)

Prevention for Children Age 1-20 in Medicaid

Virginia earns a “B” grade for 53% of children age 1-20 enrolled in Medicaid utilizing preventive dental services.\(^1\) Over the last ten years the overall utilization rate has moved from one of the lowest in the nation to above the national average. However, significant opportunity for improvement remains; almost half of children enrolled in Medicaid still do not utilize preventive services available to them through the benefit. In addition, there are inequities in overall utilization of any dental service (including preventive services): of note, African American children have the lowest utilization of dental services compared to other racial/ethnic groups ages 1-20.\(^1,5\)

While many of Virginia’s most vulnerable children and teens are enrolled in Medicaid, utilization of preventive oral health services is necessary for all children. This Report Card measure is specific to children enrolled in Medicaid, in part because of data limitations. Adequate statewide data do not exist which measures utilization of preventive dental services for all children. National data do offer glimpses of utilization among all children: the 2011-2012 National Survey of Children’s Health found that 77% of children ages 1-17 (including privately insured and children enrolled in Medicaid) received one or more preventive dental checkups.\(^6\)

\(^{5}\) VaOHC could not obtain stratifications of preventive service utilization specifically at the time of the Report Card production due to the time required to process the information; only utilization of any dental services was available by race/ethnicity. In future iterations, demographic stratifications of this indicator will be requested from the Virginia Department of Medical Assistance if possible.

Tooth Decay among Third Graders

Virginia earns a “C” grade for 47% of third grade children having some tooth decay experience (treated decay, untreated decay, or both). Tooth decay is the most common chronic disease among children; untreated tooth decay can lead to pain and infection, causing problems in speech, nutrition, and ability to learn. Virginia’s performance on this measure has remained the same since 2009, and the underlying data indicates significant inequities by race/ethnicity and income. A recent study by the Centers for Disease Control and Prevention (CDC) found similar inequities present at national level as well.

Dental Sealants among Third Graders

Virginia earns an “A” grade for 52% of third grade children with dental sealants. A sealant is a thin, protective coating that adheres to the chewing surface of the molars and prevents cavities. A recent national report from the Centers for Disease Control (CDC) shows that sealants for children can prevent 50% of cavities for up to four years; sealants are also recommended by the ADA.

Some groups of third grade children disproportionately experience tooth decay:
- 52% of African American children – significantly more often than other racial/ethnic groups; and,
- 59% of children who participate in the free and reduced lunch program – significantly more often than children who do not receive free and reduced lunch.

Some groups of third graders have lower percentages with dental sealants than others:
- 48% of African American children had dental sealants – lower than other racial/ethnic groups;
- 50% of children receiving free and reduced lunch had dental sealants – lower than children who do not receive free and reduced lunch.

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Strengthening Medical-Dental Collaboration

Coordinated efforts between medical and dental providers across disciplines will bolster and accelerate improvements in the health of all Virginians. Routinely asking patients about oral or primary care issues creates awareness of the interconnected relationship between oral health and general health. Patient referrals to address dental or general health concerns will improve utilization of services and reinforce the connection between oral health and overall health.

Pediatric Medical Providers Applying Fluoride Varnish in Medicaid

One practical place to improve medical-dental collaboration is application of fluoride varnish. In Virginia, certain medical providers can be reimbursed through Medicaid and private insurance for the application of fluoride varnish on young children.\(^\text{10}\) As of October 2016, only 5% of pediatric medical providers are billing Medicaid for fluoride varnish.\(^\text{11}\) Research shows that children who receive at least four applications of fluoride varnish before age four have lower rates of tooth decay, and the use of fluoride varnish is endorsed by the US Preventive Services Task Force as well as multiple dental and medical provider groups.\(^\text{12,13}\) Increasing application of fluoride varnish by medical providers could be a focal point for collaboration among Virginia’s medical and dental communities. Because no similar national measure exists, the fluoride measure is included in the Report Card without a grade. The work group members feel that the low proportion of eligible Medicaid providers applying fluoride varnish speaks for itself by revealing an area ripe for improvement. While this indicator measures Medicaid providers, collaboration and fluoride varnish application are important for all. Data measuring fluoride varnish application by all provider types and payors were not accessible, necessitating the measurement of only Medicaid pediatric providers. These providers serve Virginia’s most vulnerable.

Fluoride varnish application is just one example of how collaborative medical and dental care can improve health. Medical and dental professionals have the potential to transform health care delivery to make health care more comprehensive and improve the total health of Virginians across the lifespan. This work could result in implementation of integrated care models that are patient-centered, evidence-based and informed by the knowledge and principles of each professional discipline.

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\(^\text{10}\) This includes physicians, physician’s assistants, pediatric and family nurse practitioners, registered nurses, and licensed practical nurses.
\(^\text{11}\) Virginia Department of Medical Assistance Services and DentaQuest, 2016.
**Dental Visits During Pregnancy**

Virginia earns a “D” grade for 44% of women with live births who had at least one dental visit during pregnancy. Dental care is essential during pregnancy for multiple reasons, including elevated risk of preterm or low-weight infants among mothers with periodontal disease. Accordingly, the ADA, the American Congress of Obstetricians and Gynecologists (ACOG) and the AAP all encourage women to get dental care while pregnant. This indicator comes from data collected prior to March 2015, before Virginia added a comprehensive Medicaid dental benefit for pregnant enrollees. The addition of this benefit and growth of existing provider and patient education should improve the state’s performance on this measure.

**Tooth Loss among Adults**

Virginia earns a “C” grade for 50% of adults aged 45-64 with at least one tooth lost to decay or gum disease. Missing teeth due to dental disease are a widely recognized marker of poor oral health. This measure tends to increase with age and is affected by multiple factors, including: access to dental coverage; access to services; nutrition; use of alcohol, drugs, or tobacco; and, socioeconomic factors. Missing teeth are associated with poor nutrition, digestion, and speech problems, while poor chewing ability can lower the intake of fiber.

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17 Women who meet certain income requirements are eligible to receive Medicaid for their medical and dental services. The dental benefit is time-limited; coverage ends 60 days after a woman gives birth.
Health equity is also a concern; statistically significant disparities by race/ethnicity, income, and education exist related to adult tooth loss.\textsuperscript{18}

Some groups of adults disproportionately experience tooth loss:

- 69\% of African Americans—significantly more often than other racial/ethnic groups;
- 74\% of adults making less than $25,000 per year—more often than adults with higher incomes; and,
- 83\% of adults with less than a high school education—more often than adults with higher educational attainment.\textsuperscript{19}

### Lack of Dental Coverage among Adults

Virginia earns a “C” for the 38\% of Virginia adults aged 18 and older who report lacking any form of dental coverage.\textsuperscript{20} Access to dental insurance coverage is fundamental for sustaining good oral health, because individuals without health coverage are more likely to forego or delay care due to concerns about cost.\textsuperscript{21}

Because dental coverage and medical insurance are typically separate, it is not unusual for adults to have medical coverage but no dental coverage. In a recent survey, 31\% of Virginia adults with medical coverage reported not having a dental benefit.\textsuperscript{22}

Significant inequities in dental coverage exist by race/ethnicity, income, and education level.\textsuperscript{20} In addition, national studies report that a larger proportion of adults over age 65 lack dental coverage compared to younger adults (19-64).\textsuperscript{23} The trend in Virginia mirrors the national age disparity; in 2013, 63\% of adults aged 65 and older reported not having dental coverage—significantly higher than the 32\% of adults aged 18-64 without dental coverage.\textsuperscript{24}

Some groups of adults disproportionately lack dental coverage:

- 60\% of Hispanic adults—significantly more often than other racial/ethnic groups;
- 72\% of adults making less than $25,000 per year—more often than adults with higher incomes; and,
- 68\% of adults with less than a high school degree.\textsuperscript{18}

## Sustaining Public Health Prevention

**Fluoridated Water**

“Virginia earns an “A” for” having 96% of our population on fluoridated water systems. This proportion is well above the national average and has been gradually increasing year by year. Fluoridated community water has been a successful public health intervention in Virginia since 1951. According to the ADA, fluoride in community water systems can reduce tooth decay by as much as 25% in children and adults, even in an era with widespread availability of fluoride from other sources, such as fluoride toothpaste. It is necessary to be vigilant to ensure Virginia retains this grade. As equipment ages, some localities choose to forgo upgrades due to cost, even though every $1 invested in community water fluoridation saves $38 in unnecessary dental treatment costs. Localities throughout the nation have been embroiled in anti-fluoridation campaigns which rely on misinformation and advocate the removal of fluoride from the public water supply.

## Summary of Results

The 2016 *Virginia Oral Health Report Card* awards Virginia a “C+” for overall performance on a set of nine statewide performance measures for oral health. The grades include:

- An “A” on two important measures of prevention: the proportion of the population on fluoridated water systems, and proportion of third graders who have received dental sealants.
- A “B” on use of preventive dental services by children ages 1-20 in Medicaid and FAMIS.
- A “C” on two measures involving children: the proportion of third graders with tooth decay and use of preventive dental services by children enrolled in Medicaid and FAMIS ages 1-2.
- A “C” on two measures involving adults: the proportion of adults ages 45-64 with tooth loss due to tooth decay and gum disease and lack of dental coverage among adults age 18 and older.
- A “D” on dental visits during pregnancy for mothers with live births.
- No grade is assigned for the measure of the proportion of Medicaid pediatric medical providers applying fluoride varnish; this measure is included because it is important to gauge our progress toward medical-dental collaboration moving forward.

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27 Centers for Disease Control and Prevention. 70th Anniversary of Community Water Fluoridation. Available at: http://www.cdc.gov/fluoridation/basics/70-years.htm. Accessed on October 28, 2016. Note: The recommended level of optimal water fluoridation is 0.7 milligrams/liter (mg/L).


29 Note that data pre-dates Medicaid dental benefit for pregnant women, instituted in 2015.
Next Steps

There are opportunities to affect each of the Report Card indicators, either to improve or maintain existing progress. An approach which incorporates a health equity lens is needed to shape the health delivery system and models of care, and change outcomes for all Virginians. Together we can make Virginia the healthiest state in the nation, building upon existing work at the regional and state levels, growing stakeholder participation, and allocating human and financial resources. Table 2 below offers immediate next steps you can take to join in this process. Continue reading to learn more about the roles of regional and statewide work groups, and specific opportunities to improve Virginia’s oral health data sources.

Table 2: Next Steps

<table>
<thead>
<tr>
<th>Read and Respond</th>
<th>Share</th>
<th>Take Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer the questions:</td>
<td>• Promote oral health as integral to overall health,</td>
<td>Join a work group, where members will work collectively either at the state or regional level to:</td>
</tr>
<tr>
<td>• What’s missing?</td>
<td>• Seek support, and</td>
<td>• Identify and leverage existing efforts;</td>
</tr>
<tr>
<td>• How does this fit with your work and experience?</td>
<td>• Grow the network of stakeholders and advocates.</td>
<td>• Create and implement new initiatives; and,</td>
</tr>
<tr>
<td>You’ll find a feedback form on the Virginia Oral Health Coalition website. 30 Please share your thoughts.</td>
<td>You’ll find tools such as sample newsletter articles, social media help and talking points on the Coalition website. 30</td>
<td>• Advocate for necessary policy change.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>You’ll find more information about our work groups on the Virginia Oral Health Coalition website 31 and in the sections below.</td>
</tr>
</tbody>
</table>

Regional-Level Work Groups

While statewide efforts are necessary to improve each of the measures, targeted regional approaches are equally vital. In partnership with local foundations and stakeholders, VaOHC staff will convene regional work groups which will:

• Review and analyze relevant sources of existing regional data to address inequities;
• Identify additional data gaps;
• Leverage existing projects and programs to address needs identified through data;
• Create innovative new initiatives to address oral health issues and support statewide policy change; and,
• Facilitate ongoing, stakeholder-driven oral health quality improvement and public awareness efforts.

31 http://www.vaoralhealth.org/WHATWEDO/Workgroups.aspx
State-Level Work Groups

Several statewide work groups already exist and are working to improve oral health in the Commonwealth. Table 3 contains descriptions of the statewide work groups.

Table 3: Virginia Oral Health Coalition State-Level Work Groups

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor nine high level indicators</td>
<td>Identify and advocate for policy strategies to improve access to dental services for low-income adults. Current focus is an adult dental benefit in an expanded Medicaid.</td>
<td>Identify and implement programmatic efforts and policy strategies to increase utilization of dental services for pregnant women and young children</td>
<td>Identify and implement programmatic efforts and policy strategies that ensure readiness to learn is not hindered by poor oral health</td>
</tr>
<tr>
<td>Work to expand data collection and serve as a connector among regional efforts</td>
<td>Increase medical provider and social support services involvement in oral health care</td>
<td>Increase utilization of dental services and specifically sealants for school age children</td>
<td>Members also serve as an advisory council to the Virginia Department of Health’s Perinatal Oral Health Quality Improvement Grant</td>
</tr>
</tbody>
</table>

*Formerly “Kindergarten Dental Policy Work Group."

Improving Data Resources

Virginia will benefit from maintaining and improving its data resources to better track progress. While Virginia collects a robust set of measurements relevant to oral health—many of which ultimately could not be included in the 2016 Report Card—work group members identified data gaps and limitations that could broaden the picture of oral health in the commonwealth if addressed. Appendix C contains descriptions of some measurement areas and indicators that the work group considered for inclusion in the Report Card, as well as gaps that the work group identified. This list represents opportunities to work collaboratively with state agencies, policymakers, and academic institutions to advance and improve data collection on oral health indicators at the state level. VaOHC intends for the list to evolve and will continuously update it. 32

32 Links to Virginia oral health and health equity data sources, as well as a more comprehensive Report Card methodology, are available on the VaOHC website: http://www.vaoralhealth.org/ORALHEALTHINVIRGINIA/VirginiaOralHealthReportCard.aspx
About the Virginia Oral Health Coalition

Since 2010, VaOHC has worked with a broad network of stakeholders to affect policies and implement programs that support oral health integration and access to care, so that oral health is a part of overall health care and wellness. This effort has produced important results in the form of an updated Virginia Oral Health Plan and improvements in awareness, policies, and practices that enable better oral health. The Report Card provides an opportunity to build upon this foundation and push Virginia to become the healthiest state in the nation.

References

**Narrative health equity call-out boxes**


vi Virginia Department of Health, Office of Family Health Services, Pregnancy Risk Assessment and Monitoring System, 2007-2011. Note: Data weighted for population estimates. The demographic differences in dental visits during pregnancy were not tested for statistical significance; reported in aggregate (2007-2011) rather than the year of the overall percentage (2010-2011) due to sample size. Estimates not reported due small sample size, which produced confidence intervals greater than 20 percentage points.


**Infographic contextual facts, in order of appearance**


Appendix A: Technical Notes

The Report Card grade is determined using a two-step process. The first step is to assign a score for each indicator based on how Virginia performs compared to a national benchmark. Letter grades are awarded for each indicator depending on how far above or below Virginia’s percentage is relative to the national benchmark.* The letter grades have certain point values associated with them, as described in the table below.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
<td>≥20% better than national</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>10 to 20% better than national</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>0 to 10% change from national</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>10 to 20% worse than national</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
<td>≥20% worse than national</td>
</tr>
<tr>
<td>I</td>
<td>--</td>
<td>Incomplete; not graded, will monitor progress going forward</td>
</tr>
</tbody>
</table>

The second step is to calculate the overall grade for Virginia by averaging the points for all nine indicators. The measure of Medicaid pediatric medical providers applying fluoride varnish is incomplete because it does not have a national benchmark for comparison; however, it is highlighted in the Report Card in order to track Virginia’s future progress. For each measure, the table below identifies: desired trend; current Virginia and national percentages; the percent difference between the Virginia and national percentages; number of points awarded; and grade.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Desired Trend</th>
<th>VA %</th>
<th>US %</th>
<th>% Difference</th>
<th>Points</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Children aged 1-2 who had a preventive dental visit through Medicaid</td>
<td>↑</td>
<td>23.7</td>
<td>22.2</td>
<td>6.8</td>
<td>2</td>
<td>C</td>
</tr>
<tr>
<td>2) Children aged 1-20 who had a preventive dental visit through Medicaid</td>
<td>↑</td>
<td>53.2</td>
<td>45.4</td>
<td>17.2</td>
<td>3</td>
<td>B</td>
</tr>
<tr>
<td>3) Third graders who have experienced tooth decay</td>
<td>↓</td>
<td>47.4</td>
<td>49.0</td>
<td>-3.3</td>
<td>2</td>
<td>C</td>
</tr>
<tr>
<td>4) Third graders who have dental sealants on permanent molars</td>
<td>↑</td>
<td>52.0</td>
<td>37.6</td>
<td>38.3</td>
<td>4</td>
<td>A</td>
</tr>
<tr>
<td>5) Medicaid pediatric medical providers applying fluoride varnish</td>
<td>↑</td>
<td>4.5</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>I</td>
</tr>
<tr>
<td>6) Pregnant women who visited a dentist during pregnancy*</td>
<td>↑</td>
<td>43.6</td>
<td>49.0</td>
<td>-11.0</td>
<td>1</td>
<td>D</td>
</tr>
<tr>
<td>7) Adults aged 45-64 who have lost at least one tooth because of tooth decay or gum disease</td>
<td>↓</td>
<td>49.6</td>
<td>54.4</td>
<td>-8.8</td>
<td>2</td>
<td>C</td>
</tr>
<tr>
<td>8) Population served by fluoridated water systems</td>
<td>→</td>
<td>96.3</td>
<td>79.6</td>
<td>21.0</td>
<td>4</td>
<td>A</td>
</tr>
<tr>
<td>9) Adults aged 18 and older who do not have dental coverage</td>
<td>↓</td>
<td>37.7</td>
<td>38.9</td>
<td>-3.1</td>
<td>2</td>
<td>C</td>
</tr>
</tbody>
</table>

| AVERAGE | 2.5  | C+  |

Visit the Virginia Oral Health Coalition website for a detailed description of the Report Card methodology, narrative, and other materials:

*The following formula is used to calculate the relative difference between Virginia’s percentages and national percentages:

\[
\frac{(\text{Current Virginia percentage} - \text{National percentage})}{\text{National percentage}} \times 100 = \text{Percentage difference of VA from national}
\]
## Appendix B: Organizations Involved in *Report Card* Development

<table>
<thead>
<tr>
<th>Alexandria City Public Schools</th>
<th>United Way of Roanoke Valley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Health Solutions</td>
<td>Virginia Association of Free and Charitable Clinics</td>
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<tr>
<td>The Commonwealth Institute</td>
<td>Virginia Center for Health Innovation</td>
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<tr>
<td>The Daily Planet</td>
<td>Virginia Commonwealth University School of Dentistry</td>
</tr>
<tr>
<td>DentaQuest, LLC</td>
<td>Virginia Community Healthcare Association</td>
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<tr>
<td>Fairfax County Health Department</td>
<td>Virginia Dental Association</td>
</tr>
<tr>
<td>Medical Society of Virginia</td>
<td>Virginia Dental Association Foundation</td>
</tr>
<tr>
<td>Northern Virginia Health Foundation</td>
<td>Virginia Dental Hygienist Association</td>
</tr>
<tr>
<td>Old Dominion University School of Dental Hygiene</td>
<td>Virginia Department of Behavioral Health and Developmental Services</td>
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<tr>
<td>Private Practice Clinical Providers</td>
<td>Virginia Department of Health</td>
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<td>PWF Consulting</td>
<td>Virginia Department of Medical Assistance Services</td>
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<tr>
<td>Richmond Memorial Health Foundation</td>
<td>Virginia Head Start Association, Inc.</td>
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<tr>
<td>Smart Beginnings Greater Richmond</td>
<td>Virginia Health Care Foundation</td>
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<tr>
<td>Smart Beginnings Virginia Peninsula</td>
<td>Virginia Hospital and Healthcare Association</td>
</tr>
<tr>
<td>Smile Programs Mobile Dentists</td>
<td>Virginia Poverty Law Center</td>
</tr>
<tr>
<td>Tri-Area Community Health</td>
<td>Williams Mullen</td>
</tr>
<tr>
<td>United Way of South Hampton Roads</td>
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</tbody>
</table>
### Appendix C: Opportunities to Improve Virginia’s Oral Health Data

<table>
<thead>
<tr>
<th>Measurement Area</th>
<th>Why Measure?</th>
<th>Available Data</th>
<th>Limitations &amp; Reasons for Omission from Report Card</th>
<th>Recommendation</th>
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<tr>
<td>Distribution of dental providers</td>
<td>Having dental coverage does not ensure that a provider will be available in your area; the geographic distribution of dental providers is also important.</td>
<td><strong>Dental Health Professional Shortage Areas (DHPSAs):</strong> localities that are federally-designated as having a shortage of dental providers. (^{33})</td>
<td>The federal government is currently changing the DHPSA designation process in conjunction with the Virginia Department of Health, which will increase the future utility of this data. However, the current data is not representative of the distribution of Virginia’s dental workforce.</td>
<td>Revisit this indicator in subsequent Report Card iterations.</td>
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<td>Capacity of the dental safety net system</td>
<td>Virginia has a large number of dental providers that offer services to low-income Virginians, although there is a limited capacity to meet the demand for services.</td>
<td>Safety net organizations involved in the Report Card development shared data on the magnitude of need, including the volume and cost of services provided.</td>
<td>Data is not collected uniformly across safety net sites. The data that is collected is often difficult to interpret over time; e.g., it is unclear whether an increase in the number of people who obtain a dental visit at a safety net clinic or charity event represents a positive or a negative trend.</td>
<td>Address data limitations and revisit potential indicator(s) in subsequent Report Card iterations.</td>
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<td>Barriers to care for adults</td>
<td>Adults with the extraction-only dental benefit in Medicaid or who uninsured face significant challenges to accessing dental care in Virginia, especially routine, preventive services. Even adults with dental coverage may be underinsured and face prohibitively high out-of-pocket costs. Information about the quality and type of services is also inconsistent.</td>
<td><strong>Virginia Adult Oral Health Access Survey:</strong> Virginia Department of Health conducted this survey in 2014 to assess various factors related to access to dental care for adults. <strong>Virginia Behavioral Risk Factor Surveillance System (BRFSS):</strong> Virginia Department of Health included an optional question as part of this survey to gauge how many Virginia adults had dental coverage in 2013. <strong>Virginia Adult Oral Health Access Survey:</strong> this survey was conducted only once and definite plans are not in place to repeat the survey. <strong>Virginia BRFSS:</strong> the optional question on adult dental coverage is not part of the core survey questionnaire, and thus is not repeated at regular intervals.</td>
<td>Assure funding to repeat the Virginia Adult Oral Health Access Survey and incorporate the dental coverage question in BRFSS as often as possible.</td>
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<td>Emergency department use for dental-related conditions</td>
<td>Virginians without access to timely, preventive services may use the emergency department (ED) inappropriately as a source of dental care. Having more complete ED data could provide more accurate projections of cost savings if Virginia were to add a dental benefit to Medicaid; identify hot spots of opioid prescribing; and improve diversion programs.</td>
<td><strong>Virginia All-Payer Claims Database (APCD):</strong> This database includes nearly all claims paid by Medicaid and 55-65% of commercially insured claims. The APCD tracks ED claims and medical diagnosis codes for dental issues, providing an approximate estimate of ED utilization for dental-related conditions. Dental claims are not included.</td>
<td>Data for certain health plans are not included, nor is data about claims for hospital charity care or self-pay. Since most ED utilization for dental care occurs among the uninsured, the absence of charity care and self-pay data in the APCD results in underestimates of ED utilization for dental care.</td>
<td>Work with hospitals and provider associations to collect relevant data.</td>
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<td>Oral health equity</td>
<td>As highlighted throughout this narrative, inequities exist in oral health outcomes and utilization patterns by race/ethnicity, socioeconomic status, and other demographic characteristics. Calling attention to and identifying root causes of these disparities is essential to inform programs and policies to improve the oral health of all Virginians.</td>
<td>Most of the survey and claims data used for the Report Card, as well as other data resources in the Commonwealth, include information about demographics. In fact, the Virginia Department of Health Office of Health Equity recently released an online data mapping tool called the <strong>Virginia Health Opportunity Index (HOI).</strong> Although this tool does not map oral health indicators, it maps several indicators which affect oral health status and access to care.</td>
<td>The narrative highlights statistically significant disparities present for each of the Report Card indicators, where applicable. However, more complex analyses of the findings contained in this document and community involvement are needed to determine how to address these inequities.</td>
<td>State agencies collecting and analyzing health data should consistently report demographic inequities, and stakeholders must come together to understand and interpret disparities revealed by data analyses.</td>
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34 Virginia Health Information, 2016.