Virginia Health Catalyst
The Intersection of Overall Health and Oral Health

HEALTH INTEGRATION TO ADVANCE WHOLE-PATIENT CARE

An issue brief prepared by
Virginia Health Catalyst

August 2019
vahealthcatalyst.org

Why Should Integration Be a Priority

Building healthy communities requires an integrated system, not just an integration of providers.

Both tooth decay and periodontal (gum) disease are preventable conditions. Yet tooth decay is the most common chronic disease of U.S. children and teens.[1] And more than 64 million Americans (ages 30 and older) have an advanced form of periodontal disease, which can cause tooth loss and also has been linked to heart disease, diabetes and other diseases.[2] Perhaps more startling is the science that points to the association between poor oral health and a myriad conditions such as diabetes, heart disease, poor birth outcomes, and Alzheimer's disease.[3] So why is a preventable condition that is linked to deadly and costly chronic conditions rampant?

One reason is that our health system generally operates in silos. Dental providers and medical providers work in separate sectors and do not regularly communicate with each other. Behavioral health specialists and pharmacists typically work in their own silos too. This lack of coordinated clinical care is coupled with the fact that 80% of a person's health is tied to environmental and social factors outside of a clinician's care[4]. Most community health workers (CHWs) and health extenders carry out their outreach activities with little or no connection to clinicians. Even when services are collocated, true integration hasn't occurred until providers and teams work across silos.

Poor oral health is linked with conditions such as diabetes, heart disease, poor birth outcomes, and Alzheimer's disease

Each year, about 108 million Americans see a physician but do not visit a dentist. Primary care providers routinely ask patients about their overall health, but may not inquire about oral health issues.[5] This is a missed opportunity because what happens in a human's mouth affects both their oral health and overall health.[6] An integrated approach to care could help to prevent dental diseases and treat problems before they become even more serious infections.

However, building healthy communities requires an integrated system, not just an integration of providers. Our health system must do more to recognize, learn from, and address the social and cultural factors that affect people's health—such as unsafe housing or homelessness, lack of transportation, and living in a food desert. Medical care is estimated to account for no more than 20 percent of the modifiable factors that determine whether people are healthy. Social determinants of health are the primary dynamics that shape someone's health.[7]

Because of this, clinical health providers have an opportunity to improve patient health by coordinating their efforts with one another and also by supporting and facilitating the work of community health workers (CHWs) and others who play critical roles in patient and community health. CHWs and other health extenders often come from the communities in which they work, giving them a cultural grounding and humility that helps them understand, educate and counsel local residents. Our health system should encourage clinicians and community-level advocates to work collaboratively, recognizing the complementary hats they wear.

Virginia Health Catalyst has worked with stakeholders across the Commonwealth to help them integrate clinical and/or social services. Our mission seeks to ensure that all Virginians have equitable access to comprehensive health care that includes oral health. In this white paper, we explore why Virginia needs a system that is truly integrated.

What is Integration?

Integration is achieved when all of the people who provide clinical care, health education or health-related social services are doing so in a coordinated, complementary way. Integration means that every piece of the health care experience—from clinical team members to the scheduling desk to the electronic records system—are working together to streamline the care process and improve patient health.

Integration is achieved when all of the people who provide clinical care, health education or health-related social services are doing so in a coordinated, complementary way. Integration means that every piece of the health care experience—from clinical team members to the scheduling desk to the electronic records system—are working together to streamline the care process and improve patient health.

Integration requires that health providers, community health workers and others receive appropriate training aligned for their different roles. And quality metrics are collected to enable them to assess their impact in improving health. Truly integrated care also requires payment systems to reflect an integrated approach by promoting prevention, addressing social determinants of health, and coordinating inter-professional care.

Integration also means the people who perform these clinical or community roles do so with cultural humility. They seek to fully understand their patient population's needs and challenges, recognizing the ways in which race, ethnicity, language and other factors have historically marginalized many Virginians, compromising their health and well-being.

How Does Integration Improve Care?

Dental and medical providers are often confronted by diseases with overlapping risk factors. Tooth decay, periodontal disease and diabetes are chronic diseases—each can be caused or worsened by dietary habits, tobacco use or other risk factors. Because periodontal disease is closely linked to the presence or severity of diabetes, improving oral health for people with diabetes can enhance their ability to manage diabetes.[8]

Research shows that patients with diabetes whose periodontal disease is successfully treated experience significant reductions in their A1C levels.[9] And for preschool age children, when pediatricians integrate oral health care, costs for their care go down, and their health outcomes improve.

At VCU Health, obstetricians and gynecologists have incorporated oral health into their conversations with women, stressing that dental care is safe and important during pregnancy. VCU Health also has identified a network of dentists to whom it can refer women for care. This is critical because pregnancy is a time when many changes occur in a woman's oral cavity that can precipitate periodontal disease. In turn, periodontal disease during pregnancy has been linked to adverse birth outcomes.[10] By promoting oral health during pregnancy it also increases the likelihood of early preventive care for the child, because the mother understands the important role of oral health.

Integration should not be a one-way process in which medical staff offer oral health education or services. Dental practices and clinics can advance whole-patient care in various ways, such as conducting blood pressure screenings or referring patients to a tobacco quit line.An estimated 27 million people have a dental visit each year but no medical visit.[12] Dental providers can adopt integration strategies that improve overall health.

A recent pilot program in Maryland reveals the positive impact that dental providers can have by incorporating services that address systemic health. This program recruited and trained 47 Maryland dental clinics to provide patients with blood pressure screenings over a nine-month period.

At these clinics, nearly 37,000 patients were screened. Almost 2,700 patients were referred to physicians for follow-up care because their blood pressure reading was high enough to trigger the need for medication and lifestyle changes.[13] Without these screenings, many of these patients might have waited months or even years to learn they had high blood pressure.

Integration strategies should look beyond medical-dental collaboration. Pharmacists, for example, can play meaningful roles in oral health improvement. Periodontal disease and xerostomia (dry mouth) are common conditions among older adults and are often caused or worsened by their medications. Through integration, pharmacists can help patients and providers monitor potential side effects.

Another way to advance integration is by deploying dental or medical providers in nontraditional settings. For example, school-based dental programs have operated for decades, using dental hygienists as their primary workforce.

Long-term care integration reduces costs, improves outcomes:

In Salem, Virginia, a long-term care center serving military veterans once averaged four cases each month of pneumonia—a costly and dangerous condition. The health care team recognized the role of oral bacteria in pneumonia, and nurses were trained to carry out a twice-daily, toothbrushing program. Later, research showed the long-term care center saved more than $1.9 million dollars over 13 months as the average monthly number of pneumonia cases fell to zero. Shannon Munro, a nurse and researcher at the Salem facility, called the outcome of this integration strategy "amazing."[11]

How Does Integration Save Money

When medical and dental providers operate in an integrated manner, they are much more likely to identify symptoms that reveal underlying disease in their patients and take steps to manage these conditions.[i] This creates the potential for significant cost savings, both for patients and the system.

Much of the potential savings would flow from medical conditions that are caused or worsened by oral disease. Dr. Lisa Simon, a fellow in oral health and medicine integration at the Harvard School of Dental Medicine, has observed how poor oral health leads to serious systemic health conditions. "In the intensive care unit, I have seen patients receive thousands of dollars of medical interventions a day and hover near death from sepsis caused by untreated dental disease," she noted.[15]

Diabetes is another example of how the health system could save money through greater integration. Dental professionals could be the first clinicians who observe symptoms revealing that a patient may have diabetes.[16] A dental practice that diagnoses periodontal disease could update the patient's primary care physician, who could refer this patient to an endocrinologist for appropriate treatment. A referral from primary care to a dental office for periodontal treatment can also save money by keeping a patient with diabetes from suffering nerve damage, vision problems or other severe complications.[17]

$14,999

Average annual cost of care for a person with diabetes in Virginia

The potential savings are significant considering that the average annual cost of care for a person with diabetes in Virginia is $14,999.[18] Moreover, diabetes now accounts for roughly 1 in 4 health care dollars that are spent in the United States.[19]

Cigna tracked the medical and dental claims of 30,000 insurance customers with periodontal disease. After a three-year period, customers with diabetes who received appropriate periodontal care had annual medical costs that were an average of $1,292 less than those who did not receive such care. Patients with heart disease who obtained appropriate periodontal treatment had annual medical costs that were $2,183 lower than heart patients who did not receive such care.[20]

3,000

Medicaid-enrolled children in Virginia treated for dental issues in an operating room annually.

What are the potential savings from screening patients for these kinds of conditions in dental settings? A study by the American Dental Association's Health Policy Resources Center found that dental screenings for high blood pressure, diabetes and high cholesterol could save the U.S. health system nearly $103 million annually.[21]

Aside from periodontal care, a significant share of the treatment costs for tooth decay could be averted or reduced through more integrated strategies. The potential savings rapidly add up. Consider preschool-age children with tooth decay who require hospital-based treatment under general anesthesia in Virginia. In one year alone, more than 3,000 Medicaid-enrolled children were treated for dental issues in the operating room for dental issues. The cost for the dental anesthesia alone was over $9 million dollars.[22]

Why Should Social Supports Be Integrated?

Even the best clinical care is insufficient to keep children with respiratory problems healthy if their family's apartment is afflicted with persistent mold. Dentists can encourage a patient to eat healthier, but that will be difficult if the patient lives in a "food desert" where fresh fruits and vegetables are not available. Social determinants like these are a driver of poor oral health in Virginia and the rest of the nation. A recent editorial in The Lancet issued this call to action:

"Dental health conditions and access to care are shown to be so starkly inequitable between the rich and the poor that a social determinants of health approach is the only way to improve outcomes."

This heightens the importance of community-level strategies and social supports, making them an essential complement to clinical care.[23] These crucial roles are performed by community health workers (CHWs), home health visitors and others. These lay health workers often come from the same high-need communities they serve, and this strengthens their ability to communicate with cultural sensitivity and help people navigate the health system.[24]

Dental care is safe and important during pregnancy, and CHWs and other health extenders are ideal people to raise women's awareness and encourage them to seek care. As the Virginia Oral Health Report Card found, only 44 percent of women had at least one dental visit during pregnancy.[25]

How Can Virginia Health Catalyst Help?

Our health system has traditionally told medical and dental providers to "stay in their lane." Virginia Health Catalyst is working to change this mindset, providing medical providers, pharmacists, mental health providers, home visitors and community health workers with the tools and resources to find meaningful opportunities to educate patients about oral health, encourage good oral health habits at home and/or make referrals for dental care. Catalyst provides a spectrum of integration support, from simple fluoride varnish billing instructions to year-long collaborative learning opportunities for safety net providers that enable clinics to create and implement an enduring integration initiative based on individual clinic, patient and community needs.

Referrals from medical to dental providers (or vice versa) are another step to total integration Many providers are open to making referrals or exploring other forms of integration, but they may hesitate because they fear the process will be time-consuming. Catalyst has helped to map out a plan enabling providers to make referrals in a time-efficient manner.

Different people enter the health system through different doors. Whatever door Virginians enter, they should encounter a system that offers the care they need or connects them with the other clinical services or social supports they might need. This philosophy lies at the core of Virginia Health Catalyst's mission—and it's why Catalyst is promoting integration and assisting those who want to pursue this objective.

Tailored approaches to integration

Virginia Health Catalyst has established learning collaboratives in multiple regions of the Commonwealth, helping providers and clinics pursue integration strategies that are compatible with their circumstances. In central Virginia, an administrator whose clinic has participated in one of these collaboratives said the experience showed that integration is "doable" and added that "we learned that co-location does not equal integration and that our medical and dental teams are more alike than they are different."[26]

Strategies for Promoting Integration - Policy

Provide comprehensive dental benefits to adults enrolled in Medicaid. In 2018, the Commonwealth expanded Medicaid to include 400,000 newly eligible residents, but these newly eligible adults—and adults already enrolled in Medicaid—do not receive a comprehensive dental benefit. We should make the case to state leaders that both children and adults deserve robust dental benefits.

Health providers and stakeholders work together to encourage more women to seek dental care during pregnancy. In 2015, Virginia Health Catalyst worked with diverse partners to secure a comprehensive dental benefit for pregnant women enrolled in Virginia Medicaid. The benefit extends for 60 days after a woman gives birth. The most recent data shows that fewer than half of all women get dental care during pregnancy. Dental and medical providers, CHWs and others must work together to ensure more women know that oral health services are safe and important during pregnancy, and that dentists are comfortable treating pregnant patients.

Payment policies incentivize integration. What our system pays for is a key factor driving the services that are provided and the degree to which medical and dental integration occurs. Virginia's Medicaid program reimburses pediatricians for applying fluoride varnish on the teeth of young children. It's time to build on that by identifying other educational or clinical services for which it would be cost-effective for Medicaid to provide cross-disciplinary reimbursement. Health stakeholders should also encourage insurance companies and managed care organizations to reimburse care in ways that advance integration.

Medical and dental providers are able to practice to the fullest extent of their education and training. State scope-of-practice policies are an area that can encourage or limit integration. For example, Virginia law permits a dental hygienist provide education and preventive dental care under the remote supervision of a dentist in community-based settings.[27] Policies like this can make it easier for Virginians to get the care and services they need.

Policy advocates benefit from interdisciplinary collaboration. Dental providers aren't the only people who can lend their voices to support community water fluoridation. In recent years, confusion and misinformation have encouraged several Virginia communities to consider ceasing the fluoridation of their local water systems. To address this challenge, Virginia Health Catalyst has launched a Rapid Response Team, a network of people including dental providers, medical providers and community advocates. Diverse people have different perspectives that can maximize impact.

Medicaid reimbursement rates are regularly reviewed and improved. Medicaid rates can affect integration by influencing whether medical or dental providers perform screenings or deliver services that have traditionally been considered outside of their field. When Medicaid or private insurance provides little or no reimbursement, clinicians may be less inclined to adopt integration-related practices. [28]

Strategies for Promoting Integration - Care Team

There is no "one size fits all" approach to integration. Integration can take a variety of forms. Successful approaches should reflect the existing health infrastructure, the demographics of the local patient population and other relevant factors. Through Virginia Health Catalyst's past integration learning collaboratives, clinics increased dental visits among diabetic patients through tailored approaches to achieve this goal.

Communication is a hurdle that collaboration and planning can overcome. Cross-sector communication is improved when providers can share electronic health records (EHRs). These records are not easily shared because EHR software varies. The hurdle can be big when crossing from one health system or network to another. Virginia Health Catalyst has worked with various providers in Virginia to help identify solutions that make this information shareable or non-EHR techniques to share information.

Enhancing health providers' knowledge of social determinants can help advance the integration of social supports. The American Academy of Pediatrics has taken a leading role in educating its members about how social environments trigger the adverse childhood experiences (ACEs) that undermine health and wellness.[29] Conferences, CE courses and other activities should be used as opportunities to raise providers' awareness of social determinants of health, as well as identifying resources to which providers could refer patients in these circumstances.

Health promotion campaigns should be integrated. Each year, a variety of health systems and stakeholders in Virginia launch health campaigns aimed at changing knowledge or behavior. Discouraging consumption of sugary drinks is one example of a campaign that can and should involve both medical and dental communities. Moreover, these campaigns need to engage CHWs and other community-based voices across Virginia.

A free toolkit can help put health providers and administrators on the path toward integration. Virginia Health Catalyst's Oral Health Integration Toolkit provides stakeholders with frameworks for integrating care across five models: pregnancy, early childhood, general adult well visits, chronic care, and behavioral health. A link to Catalyst's toolkit is provided near the end of this white paper.

Virginia Health Catalyst's learning collaboratives can help. These collaboratives have assisted health systems and clinics in identifying and implementing integration strategies. Catalyst facilitates an interdisciplinary learning environment with technical assistance allowing whole teams to plan, learn, connect, and enact integration strategies.

More evaluation is needed to identify promising integration models. A national report on medical-dental integration in public health settings cited a "lack of robust evaluation and effectiveness data" concerning most integration initiatives.[30] Virginia Health Catalyst encourages evaluation of integration efforts by collecting metrics and sharing insights. Catalyst can also help stakeholders find Quality Improvement (QI) measures to assess their impact.

Strategies for Promoting Integration - Education

Continuing education (CE) courses reinforce a culture of integration. CE is an important tool for changing providers' understanding and behavior to advance whole patient health. More interdisciplinary CE courses could introduce providers and lay health workers to new integration strategies. CE credit is offered through most of Virginia Health Catalyst's clinical trainings, and Catalyst's annual Oral Health Summit offers CE credit for four disciplines: dental providers, family physicians, nurses and social workers.

Medical, dental and allied health professional program curricula encourage health integration. Innovative approaches to curriculum or clinical work in medical and dental schools, and all health-related programs can reinforce the value of providing care in a more integrated manner. Some medical and dental schools in Virginia have taken positive steps in this area. One example is the oral health curriculum that Virginia Tech Carilion School of Medicine has incorporated into its instruction.

For more information about integration, visit the following resources:

Oral Health Integration Toolkit Virginia Health Catalyst
https://www.vahealthcatalyst.org/provider-resources/integration-toolkit/

Organized, Evidence-Based Care: Oral Health Integration Qualis Health
http://www.safetynetmedicalhome.org/sites/default/files/Guide-Oral-Health-Integration.pdf

Integrating Community Health Workers into Health Care Teams without Coopting Them Health Affairs
https://www.healthaffairs.org/do/10.1377/hblog20190507.746358/full/

Oral Health-Primary Care Integration Model Rural Health Information Hub U.S. Health Resources and Services Administration
https://www.ruralhealthinfo.org/toolkits/oral-health/2/primary-care-integration-model

Virginia Health Catalyst
The Intersection of Overall Health and Oral Health

End notes

[1] Hygiene-related Diseases: Dental Caries (Tooth Decay). Centers for Disease Control and Prevention. Sep 22, 2016. Accessed in Aug 2019 at https://www.cdc.gov/healthywater/hygiene/disease/dental_caries.html.
[2] Periodontal Disease Fact Sheet. American Academy of Periodontology. Accessed in Aug 2019 at https://www.perio.org/newsroom/periodontal-disease-fact-sheet.
[3] "Oral health: A window to your overall health." Mayo Clinic. June 4, 2019 Accessed August 2019 at https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/dental/art-20047475
[4] Magnan S. Social Determinants of Health 101 for Health Care: Five Plus Five. National Academy of Medicine. Oct 9, 2017. Accessed at https://nam.edu/social-determinants-of-health-101-for-health-care-five-plus-five/.
[5] Atchison KA, Rozier RG, Weintraub JA. "Integration of Oral Health and Primary Care: Communication, Coordination, and Referral." Perspectives: Expert Voices in Health & Health Care. National Academy of Medicine, Oct 8, 2018. Accessed at https://nam.edu/wp-content/uploads/2018/10/Integration-of-Oral-Health-and-Primary-Care.pdf.
[6]"Oral health: A window to your overall health." Mayo Clinic. June 4, 2019 Accessed August 2019 at https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/dental/art-20047475
[7]Magnan S. Social Determinants of Health 101 for Health Care: Five Plus Five. National Academy of Medicine. Oct 9, 2017. Accessed at https://nam.edu/social-determinants-of-health-101-for-health-care-five-plus-five/.
[8] Williams Q. "Innovation, Integration and Celebration – Takeaways from NNOHA Annual Conference." Virginia Oral Health Coalition. Nov 29, 2018. Accessed in July 2019 at https://www.vaoralhealth.org/innovation-integration-and-celebration-takeaways-from-nnoha-annual-conference/.
[9] Simpson TC, Weldon JC, Worthington HV, Needleman I, Wild SH, Moles DR, Stevenson B, Furness S, Iheozor-Ejiofor Z. Treatment of periodontal disease for glycaemic control in people with diabetes mellitus. Cochrane Database of Systemic Reviews. 2015, Issue 11 https://doi.org/10.1002/14651858.CD004714.pub3).
[10] Hartnett E, Haber J, Krainovich-Miller B, Bella A, Vasilyeva A, Kessler JL. "Oral Health in Pregnancy." Journal of Obstetric, Gynecologic & Neonatal Nursing. Jul-Aug 2016, 45:4.
[11] Rife L. Salem VA leads national research: Tooth brushing each day keeps pneumonia at bay. Roanoke Times. Jan 7, 2018. Accessed in Aug 2019 at https://www.roanoke.com/news/local/salem-va-leads-national-research-tooth-brushing-each-day-keeps/article_8a959bde-f3c4-11e7-a933-7b5029467621.html.
[12] Atchison KA, Rozier RG, Weintraub JA. "Integration of Oral Health and Primary Care: Communication, Coordination, and Referral." Perspectives: Expert Voices in Health & Health Care. National Academy of Medicine, Oct 8, 2018. Accessed at https://nam.edu/wp-content/uploads/2018/10/Integration-of-Oral-Health-and-Primary-Care.pdf.
[13] Hughes DR. "Hypertension Screening in Dental Settings." Decisions in Dentistry. Mar 1, 2019. Accessed in July 2019 at https://decisionsindentistry.com/article/hypertension-screening-dental-settings/.
[14] Returning the Mouth to the Body: Integrating Oral Health & Primary Care. Grantmakers In Health. Sep 2012. Issue Brief No. 40. Accessed in Jul 2019 at https://www.gih.org/files/FileDownloads/Returning_the_Mouth_to_the_Body_no40_September_2012.pdf.
[15] Simon L, "Medical-Dental Integration," letter, Journal of the American Dental Association, 2018, 149:6, 409, https://doi.org/10.1016/j.adaj.2018.04.017.
[16] Williams Q. "Innovation, Integration and Celebration – Takeaways from NNOHA Annual Conference." Virginia Oral Health Coalition. Nov 29, 2018. Accessed in July 2019 at https://www.vaoralhealth.org/innovation-integration-and-celebration-takeaways-from-nnoha-annual-conference/.
[17] Mayo Clinic. "Diabetes: Overview." Aug 8, 2018. Accessed in July 2019 at https://www.mayoclinic.org/diseases-conditions/diabetes/symptoms-causes/syc-20371444.
[18] Diabetes Burden in Virginia http://www.vdh.virginia.gov/content/uploads/sites/25/2016/05/Diabetes-in-Virginia-2017_final_7_17.pdf
[19] Riddle MC, Herman WH. "The Cost of Diabetes Care – An Elephant in the Room." Diabetes Care. 2018, 41:5 (https://doi.org/10.2337/dci18-0012).
[20] Hall M. "Integrated care: healthy mouth, healthy body." Dentistry IQ. Aug 29, 2014. Accessed at https://www.dentistryiq.com/clinical/oral-systemic-health/article/16359570/integrated-care-healthy-mouth-healthy-body.
[21] "Chairside medical screenings could save $102 million a year." ADA News. Mar 3, 2014. Accessed in July 2019 at http://www.ada.org/sitecore/content/home-ada/publications/ada-news/2014-archive/march/chairside-medical-screenings-could-save-$102-milli.
[22] Department of Medicaid and Medical Assistance Data, accessed August 13, 2019.
[23] "Oral health at a tipping point." The Lancet. Jul 20, 2019, 394:10194, P188 (https://doi.org/10.1016/S0140-6736(19)31639-3).
[24] McKernan SC, Kuthy RA, Reynolds JC, Tuggle L, Garcia DT. Medical-Dental Integration in Public Health Settings: An Environmental Scan. University of Iowa Public Policy Center. 2018. Accessed in Jul 2019 at http://ppc.uiowa.edu/sites/default/files/ced_environmental_scan.pdf.
[25] Virginia Data & Oral Health Report Card. Virginia Oral Health Coalition. 2016. Accessed in July 2019 at https://www.vaoralhealth.org/provider-resources/oral-health-report-virginia-specific-data/.
[26] This quote is from a 2019 conference call conducted by Virginia Health Catalyst to debrief with health administrators and providers who participated in the learning collaboratives.
[27] Virginia Law: Administrative Code, 18VAC60-25-40. Scope of Practice. Division of Legislative Automated Systems. Accessed in Aug 2019 at https://law.lis.virginia.gov/admincode/title18/agency60/chapter25/section40/.
[28] Interdisciplinary Approaches for Improved Oral Health: Building the Field through Integrated and Community-Based Health Practices. American Association of Public Health Dentistry, Council on Practice. 2018. Accessed in July 2019 at https://aaphd.memberclicks.net/assets/Webinars/Council%20on%20Practice%20White%20Paper_6.10.19.pdf.
[29] "ACEs and Toxic Stress." American Academy of Pediatrics. Accessed in July 2019 at https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/resilience/Pages/ACEs-and-Toxic-Stress.aspx.
[30] McKernan SC, Kuthy RA, Reynolds JC, Tuggle L, Garcia DT. Medical-Dental Integration in Public Health Settings: An Environmental Scan. University of Iowa Public Policy Center. 2018. Accessed in Jul 2019 at http://ppc.uiowa.edu/sites/default/files/ced_environmental_scan.pdf.

vahealthcatalyst.org
804.269.8720
Follow us on Twitter and Facebook
(@vahealthcatalyst)