

# Guiding Innovations to Improve the Oral Health of Adult Medicaid Beneficiaries

By Stacey Chazin, Center for Health Care Strategies

## IN BRIEF

Advancing the oral health of Medicaid-enrolled adults – who, in most states, lack comprehensive dental benefits – is a complex challenge and remains elusive for many state agencies and contractors. Improvement strategies that may be effective with child and youth populations, for whom Medicaid dental benefits are guaranteed, are hard to translate to address the unique barriers to oral health care access faced by adults. This brief describes five areas of opportunity for innovation in adult oral health, including: (1) the Medicaid oral health business model; (2) return on investment models for oral health coverage and care; (3) consumer outreach and engagement; (4) workforce and training; and (5) oral health care access and delivery.

**D**espite growing recognition of the importance of oral health to overall health, many low-income adults face systemic barriers to oral health care – key among them, inadequate dental coverage and access. While states are federally mandated to provide comprehensive dental coverage for Medicaid-enrolled children, they are not required to provide dental coverage for adults. To date, 46 states plus the District of Columbia offer *some* dental benefits to Medicaid-enrolled adults, but only 15 provide comprehensive coverage.<sup>1</sup> This presents a significant barrier to access for these individuals, who often cannot afford to pay out-of-pocket and have no other viable options for oral health care.

Even for those with dental benefits, care is hampered by a wide range of factors, including insufficient access to Medicaid-contracted dentists;<sup>2</sup> gaps in oral health literacy; low perceived value of oral health among beneficiaries and primary care providers (PCPs); and logistical challenges such as taking time off from work or finding transportation to appointments.<sup>3</sup> As a result, low-income adults are disproportionately affected by oral disease, with higher risks for chronic conditions such as diabetes and heart disease;<sup>4</sup> reduced employability; and expensive hospital emergency department (ED) visits for preventable problems such as dental abscesses.<sup>5</sup>

As the Medicaid population expands through the Affordable Care Act (ACA),<sup>6</sup> state Medicaid agencies, plans, and other stakeholders have an opportunity to improve oral health access and outcomes for millions of Americans. The barriers to achieving this change, such as state fiscal constraints, competing health priorities, limited provider capacity, and churn in publicly financed care, are daunting. Furthermore, there is a lack of evidence-based approaches to convince policymakers of the merits of investing in this arena.

Through support from the DentaQuest Foundation and the Robert Wood Johnson Foundation, the Center for Health Care Strategies (CHCS) explored key opportunities for oral health innovation in Medicaid. In the spring of 2015, CHCS surveyed Medicaid oral health stakeholders to assess needs and promising practices<sup>7</sup> and held a small group consultation with thought leaders in the oral health field in August 2015. This brief presents opportunities identified through these activities.

## The Innovation Imperative

---

The accessibility, quality, and impact of oral health care for low-income adults are influenced by an interconnected array of factors. Findings of this inquiry suggest that innovative approaches<sup>8</sup> are needed in the following areas:

1. The Medicaid oral health business model;
2. Return on investment models for oral health coverage and care;
3. Consumer outreach and engagement;
4. Workforce and training; and
5. Oral health care access and delivery.

### 1. The Medicaid Oral Health Business Model

In the Medicaid dental arena, the term “business model” refers to financial relationships among: (a) the state Medicaid agency; (b) contracted health/dental plans; and (c) oral health care providers, PCPs, or other individuals who deliver care or oral health guidance to beneficiaries. Formal, valid evaluations of health plan and provider contracting mechanisms have largely been limited to assessing medical care. While some lessons for dental service delivery for Medicaid-enrolled adults might be extrapolated from these evaluations, the results are often not directly applicable.

#### *Innovations for Oral Health Business Models*

Medicaid oral health business models may benefit from changes to the ways that state Medicaid agencies reimburse providers. Potential strategies include:

- Allowing reimbursement for oral health care services delivered in non-traditional settings (e.g., schools and community centers) by non-traditional providers (e.g., school nurses);
- Rewarding outcomes and value over procedures and volume – in short, paying for *value*. This could entail giving payment incentives to providers for meeting basic oral health benchmarks or integrating oral health into accountable care organizations, which use value-based payment to hold providers financially accountable (to varying degrees) for the health of a patient population;
- Reimbursing medical providers for dental evaluations;

- Enhancing payments to Medicaid dental professionals for having a certain percentage of Medicaid beneficiaries on their patient panels;
- Making dental practice licensure renewal contingent upon serving a minimum number of beneficiaries; and
- Establishing a new code to reimburse for dental case management, as recommended by the American Academy of Pediatric Dentistry.<sup>9</sup>

## 2. Return on Investment Models for Oral Health Coverage and Care

Calculating and communicating the return on investment (ROI) of oral health coverage and care could help inform states' resource-allocation decisions. Traditional approaches to calculating health care ROI focus on direct financial savings. Recently, some stakeholders have built upon these models to include a wider range of clinical and socioeconomic costs.

### *Innovations for Improving ROI Analyses*

There are a number of opportunities to incorporate this more holistic understanding of ROI from oral health investments. These include:

- Incorporating the savings from reducing avoidable use of the ED or operating room to treat dental disease, estimated to be close to \$1 billion a year nationally.<sup>10</sup>
- Developing new approaches to reporting and analyzing claims data to capture the extent of underlying dental causes for visits to the ED for pain or infection.
- Capturing data on lower rates of premature birth among women receiving dental care, or earlier use of preventive dental care among children born to women with Medicaid dental coverage.
- Extending ROI analyses to include the costs of missed workdays, lost productivity, and reduced employability resulting from dental disease – findings that may be powerful with employers and legislators.<sup>11</sup>
- Measuring the ROI of utilizing alternative workforce models (see “Workforce Models and Training” below).
- Considering the financial costs of racial and ethnic disparities in health and health care, which may include: direct medical costs of health inequalities, costs of premature death, and indirect costs associated with illness and premature death.<sup>12</sup>

## 3. Consumer Outreach and Engagement

Encouraging Medicaid beneficiaries to use appropriate, timely oral health care is a challenge. Effective oral health outreach and education for Medicaid beneficiaries is typically a multi-channel, multi-message undertaking. Though the rise in culturally and linguistically appropriate messages has added to more effective engagement with diverse populations, there is more to be done.

### *Innovations for Improving Consumer Outreach and Engagement*

Three areas related to oral health consumer outreach and engagement that need particular attention are: (1) helping low-income adults to feel more respected by the dental delivery system; (2) getting parents to value preventive oral health care for themselves as well as for their children; and (3) addressing the needs of high-risk populations. Potential strategies include:

- Creating consumer incentives for dental service use, including treatment completion.
- Offering an earned benefit model, through which an individual’s set of covered dental services is expanded (e.g., to include higher-cost restorative services) based on demonstrated healthy behaviors, such as compliance with treatment plans.
- Launching a public service ad campaign that communicates the connection between oral health and overall health.
- Recruiting other agencies or organizations (e.g., employment-assistance offices) that work with high-need populations such as adults with disabilities.<sup>13</sup>
- Using the group visit model, which includes group education and interaction, as well as elements of an individual patient visit, for oral health.<sup>14</sup>
- Developing mobile applications (apps) or text-messaging interventions, which have strong potential to improve outreach and engagement, particularly when the apps enable non-clinicians to better reach beneficiaries.

#### **Innovations Delivered via Mobile Devices**

Tools and interventions delivered through devices such as cellphones, smartphones, and tablets show promise in delivering easily accessible, user-friendly guidance.

- ✓ **My Smile Buddy** is a bilingual app used to guide community health workers (CHWs) without previous dental training to engage low-income, racially/ethnically diverse, and low-literate parents of young children. The tool enables CHWs to perform a risk assessment for early childhood caries, provide oral health education, and develop individual goals.<sup>15</sup> A pilot assessment found that parents thought the participating CHWs were more credible sources of information than dentists.<sup>16</sup>
- ✓ **Text2Floss**, a two-way text-messaging program, delivers tailored messages around oral health self-care.<sup>17</sup> Users register by texting their phone number and sharing some basic personal information. The program then texts them every evening with oral care tips; in response, users text back with whether or not they flossed that day. After seven days, they receive a text with a coupon for an oral health item. The program, used by more than 20,000 individuals in the U.S. and approximately 1,500 abroad, was shown to increase the frequency of flossing by mothers of young children; improve their oral health knowledge; and increase the likelihood that they would try to improve their child’s oral health behaviors.<sup>18</sup>
- ✓ **The Smiles for Life Oral Health App**, an offering of the nationally renowned, *Smiles for Life* online oral health curriculum for PCPs, is a reference tool for oral conditions designed to assist PCPs in formulating diagnoses in real-time. It allows the clinician to select an algorithm based on the patient’s concern or the finding of a physical exam, then presents a series of questions to help inform diagnosis, triage, and treatment recommendations.<sup>19</sup>
- ✓ **Toothsavers** is a mobile gaming app (also accessible online) designed to inspire children to brush their teeth for two minutes twice a day, “enlisting them in rescuing friendly fairy tale characters from an evil, cavity-creating sorceress.” It also allows parents to monitor their child’s brushing progress and provides morning and nighttime brushing reminders.<sup>20</sup>

## 4. Workforce Models and Training

An inadequate oral health care workforce in Medicaid is a key barrier to access for low-income populations in most states and especially among states that have expanded Medicaid dental benefits. This is typically the result of factors such as low reimbursement rates, perceived administrative burdens of the Medicaid system, frustrations with patient no-show rates or lack of follow through on treatment, and, in some cases, a perceived stigma around serving Medicaid beneficiaries. Approaches that engage and expand the roles of mid-level dental providers may prove to be valuable strategies for broadening the workforce.

### *Innovations for Improving Workforce Models*

While “medical-dental integration” is often touted as a priority vehicle for oral health workforce expansion, the focus of identified workforce opportunities center on expanding the roles of mid-level dental providers. Strategies to build the oral health workforce include:

- Establishing or expanding use of “alternative” oral health providers such as: dental health aide therapists;<sup>21</sup> advanced dental therapists and dental hygiene practitioners;<sup>22</sup> community dental health coordinators;<sup>23</sup> and dental hygienists practicing with public health supervision, in “unsupervised practice,” or in “independent practice.”<sup>24,25</sup> This calls for increasing the number of services that dental hygienists can perform without prior authorization, so they can receive direct reimbursement from a plan or Medicaid agency.<sup>26</sup>
- Creating teledental teams through which a dentist oversees remote hygienists, potentially along with bilingual navigators, dental assistants, or CHWs, and ensuring reimbursement for oral health care services delivered via telehealth.
- Training and utilizing non-dental practitioners such as CHWs, social workers, and navigators to provide oral health education, connect individuals to oral health care services, and deliver simple, preventive services such as fluoride varnish. Notably, CMS recognizes CHWs as reimbursable providers of health care, but not of *oral* health care.<sup>27</sup>
- Employing dental treatment coordinators on-site at dental clinics to advise patients of recommended treatment plans, covered benefits, available child care, transportation assistance, and referrals to social service agencies.<sup>28</sup>
- Allowing mid-level dental providers to visit home day-care settings to provide oral health education to day-care providers, parents, and children.
- Conducting state demonstration projects around alternative workforce models to produce findings that could inform efforts to take these models to scale.
- Calculating the ROI of workforce models, strengthening the evidence base for their continuation or expansion.
- Building coalitions or teams that include dentists – who are often opposed to alternative workforce models – to advocate with legislators for expanded scope of practice laws.

### *Innovations for Improving Dental Workforce Training*

Discussions of workforce innovation also emphasized new opportunities in provider education and training settings, such as dental schools. Strategies focused on changing the mindset and practices of oral health care providers include:

- Educating dental students and practitioners about the social determinants of oral health, such as childhood experiences, work conditions, and access to social support,<sup>29</sup> which they can then address in practice.
- Engaging dental schools to prepare students for practicing with medical providers and being part of an integrated care team.

## 5. Oral Health Care Access and Delivery

Establishing non-traditional venues for providing oral health care is one of the common suggestions for improving access and delivery of oral health care. However, concrete strategies for encouraging use of alternative care sites have proven elusive, suggesting a need for new, innovative ideas.

### *Innovations for Improving Oral Health Care Access and Delivery*

Identifying and establishing alternative oral health care locations may be bolstered by:

- Using the health commons model (see sidebar), which co-locates medical, behavioral, dental, and social services into a seamless, single operation (e.g., a community health center), and provides advanced case management and links to community resources through CHWs. These models are typically funded by pooled public and private resources to address health issues in a community that cannot be solved by one entity alone.<sup>30</sup>
- Delivering oral health care in nursing homes, other residential facilities, or intermittent mobile clinic sites.
- Expanding safety net clinics that include oral health care services (a particular need in states with Medicaid-expansion adult dental benefits) and/or incorporating oral health into the Patient-Centered Medical Home.<sup>31</sup>
- Rerouting individuals with non-emergent dental complaints from the emergency room to dental offices for care.
- Requiring hospitals to dedicate space for dental care when they expand or build new facilities.

### Using the Health Commons Model to Improve Oral Health

The innovative health commons model may be a particularly sound option for addressing health issues, including oral health, in sparsely populated, rural states – where challenges to access are often amplified given inadequate numbers and unequal geographic distributions of providers.<sup>32</sup> As well, such states often lack a single entity with the reach or resources to effect needed change, calling for the collaboration and pooled support of diverse entities.

New Mexico’s dental health commons model, launched in the early 2000s, was launched by a coalition of motivated stakeholders including community leaders, safety net providers, legislators, insurers, academics, public health officials, and medical, dental and public health providers. The model created community partnerships to provide integrated services – including primary medical care, dental care, public health, behavioral health, and social work services – at neighborhood care sites.<sup>33</sup> It addressed many of the factors underlying inadequate oral health care access through a five-pronged approach:<sup>34</sup>

1. **Enhancing dental service capacity** – The University of New Mexico Department of Surgery created a Division of Dental Services, which formed contractual partnerships with local community health centers, Indian Health Service sites, and the state department of health to address oral health challenges in specific communities.
2. **Broadening the scope of dental skills of locally available health providers** – The Division of Dental Services began educating physicians, including family practice and emergency room residents, in an expanded rotation that included newly opened university dental clinics. Graduates can perform procedures in rural EDs and medical practices.
3. **Expanding the pool of dental providers serving indigent and uninsured populations** – The coalition convinced the state Medicaid agency and legislature to support an increase in the Medicaid fee schedule to be based on a percentage of usual and customary charges. This resulted in many more providers participating in the Medicaid program, and corresponding improvements in access to services.
4. **Creating new interdisciplinary teams in accessible, community-based sites** – These models include mid-level dental hygienists who work in more independent practice alongside PCPs – a role permitted through state legislation that allows hygienists to work under the supervision of a medical director at a primary care site.
5. **Developing new oral health policy** – Addressing long delays in the Medicaid credentialing process for providers, the state declared an Oral Health Emergency. This approach allows for a temporary licensure program to recruit new and young providers to practice in designated health profession shortage areas.

Medical-dental collaboration is another option for increasing access to oral health care. Integrated electronic health records (EHRs) that support both medical and oral health care, including prompts for medical staff to make referrals to dental care may enhance care coordination. Entities such as the Indian Health Service and the Department of Veterans Affairs have implemented EHRs with oral health modules. However, more widespread use of an integrated platform has not happened, possibly because organizations potentially interested in implementing EHRs would have to calculate the cost-benefit of an integrated system, redesign workflows, and create a standardized diagnosis coding and billing system.<sup>35</sup>

Approaches to medical-dental integration or collaboration extend beyond trying to convince primary care providers to refer their patients to oral health care. They include establishing reciprocity among medical and dental providers so that screenings and referrals are multi-directional. For example, an oral health provider could perform an HIV test via saliva or provide nutrition counseling. Medical providers, in turn, could emphasize to patients where more frequent dental care may be needed in association with certain medical conditions such as cardiovascular diseases, chronic respiratory diseases, and diabetes.<sup>36</sup>

## Moving Ahead: Changing How Oral Health Stakeholders Think

What emerged from this inquiry – perhaps more meaningful than suggestions for specific innovations – was the overarching need to shift the way oral health stakeholders think about and approach oral health delivery system challenges. This entails reconsidering how the oral health “system” is defined – and determining how and whether to extend its boundaries. Changes in the mindset of oral health professionals are needed regarding:

- Reimbursing and rewarding value instead of the volume of oral health care services.
- Changing the sole focus from ensuring access to dental care services to improving overall health, including oral health.
- Meeting individuals where they are – social service offices, community centers, residential facilities, schools, medical providers’ offices, and even their phones and tablets – rather than focusing solely on getting them into a dentist’s office and recognizing the role that non-dentists can play in care delivery.
- Advancing integration of oral health in “whole-person” coverage, accountable/global payment models, care, and health messaging. This includes making stronger and wider connections among care delivery, payment systems, public health entities, social service agencies, and education systems.
- Recognizing the many social determinants of oral health and the need for equity across racial/ethnic groups, and addressing those factors at every stage of the delivery system.

As state Medicaid agencies, policymakers, state coalitions, health and dental plans, and other stakeholders consider strategies for improving the oral health of low-income adults, evidence-based programs are a logical place to start. Given the relative dearth of proven approaches and the significant deficiencies in oral health access and outcomes for this population, the innovative ways of thinking, engaging, and intervening and testing discussed in this brief are critical for achieving meaningful gains in oral health.

### SMALL GROUP CONSULTATION PARTICIPANTS

*Thank you to the following individuals who provided guidance and expertise to inform this brief:*

**Marcia Brand**, National Interprofessional Initiative on Oral Health; **Joseph E. Carlisle**, Renew Our Community, Inc.; **Jack Dillenberg**, Arizona School of Dentistry and Oral Health, A. T. Still University; **Fred DiOrio**, Horizon NJ Health; **Burton Edelstein**, Columbia University; **Steven Geiermann**, American Dental Association; **Paul Glassman**, University of the Pacific School of Dentistry; **William Heller**, Colorado Department of Health Care Policy and Financing; **Sarah Bedard Holland**, Virginia Oral Health Coalition; **Robert Isman**, Dental Consultant; **Greg Nycz**, Family Health Center of Marshfield, Inc.; and **Cathleen Taylor-Osborne**, Kansas Department of Health and Environment.

### **ABOUT THE CENTER FOR HEALTH CARE STRATEGIES**

The Center for Health Care Strategies (CHCS) is a nonprofit policy center dedicated to improving the health of low-income Americans. It works with state and federal agencies, health plans, providers, and consumer groups to develop innovative programs that better serve people with complex and high-cost health care needs. For more information, visit [www.chcs.org](http://www.chcs.org).

## ENDNOTES

- <sup>1</sup> Center for Health Care Strategies (updated October 2015). *Medicaid Adult Dental Benefits*. Available at: <http://www.chcs.org/resource/medicaid-adult-dental-benefits-overview/>.
- <sup>2</sup> Medicaid-contracted dentists may not be available or have the capacity to see Medicaid beneficiaries. For example, a contracted provider may only accept a small number of patients with Medicaid coverage at his/her practice.
- <sup>3</sup> Kaiser Commission on Medicaid and the Uninsured (2012). “Oral Health and Low-Income Nonelderly Adults: A Review of Coverage and Access.” Available at: <http://kff.org/private-insurance/issue-brief/oral-health-and-low-income-nonelderly-adults-a-review-of-coverage-and-access/>.
- <sup>4</sup> National Center for Health Statistics, Centers for Disease Control and Prevention (2011). “Selected Oral Health Indicators in the United States, 2005-2008.” Available at: <http://www.cdc.gov/nchs/data/databriefs/db96.htm>.
- <sup>5</sup> American Dental Association, Health Policy Institute (2013). “Dental-Related Emergency Department Visits on the Increase in the United States.” Available at: [http://www.ada.org/~media/ADA/Science%20and%20Research/HPI/Files/HPIBrief\\_0513\\_1.pdf](http://www.ada.org/~media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_0513_1.pdf).
- <sup>6</sup> Congressional Budget Office. *Updated Estimates of the Effects of the Insurance Coverage Provisions of the Affordable Care Act, April 2014*. Available at: [https://cbo.gov/sites/default/files/cbofiles/attachments/45231-ACA\\_Estimates.pdf](https://cbo.gov/sites/default/files/cbofiles/attachments/45231-ACA_Estimates.pdf).
- <sup>7</sup> CHCS posted the survey on the DentaQuest Foundation’s online platform, Basecamp. Subscribers include foundation grantees and a wide range of other oral health stakeholders supporting improvements in oral health over the lifespan. Thirty-seven individuals, representing state agencies, professional organizations, non-profits, and academia, as well as providers, responded.
- <sup>8</sup> CHCS has not assessed the potential effectiveness of these innovations, but included those perceived by survey respondents and the literature as notable.
- <sup>9</sup> American Academy of Pediatric Dentistry, Pediatric Oral Health & Research Policy Center (June 2013). “The Use of Case Management to Improve Dental Health in High Risk Populations.” Available at: <http://www.aapd.org/assets/1/7/POHRPC-TR3-2013-Final.1.pdf>.
- <sup>10</sup> V. Allareddy, S. Rampa, M. Lee, V. Allareddy, and R. Nalliah. “Hospital-based Emergency Department Visits Involving Dental Conditions: Profile and Predictors of Poor Outcomes and Resource Utilization.” *Journal of the American Dental Association*, 145, no.4 (2014): 331-337.
- <sup>11</sup> With guidance from the Medicaid-CHIP State Dental Association, the Heller School for Social Policy and Management at Brandeis University is developing and testing an ROI model for Medicaid adult dental benefits that includes the costs of reduced employability; oral pain; and the potential misuse of analgesics. That study is funded by the DentaQuest Foundation, a co-funder of this CHCS inquiry and issue brief. M. Dellapenna. “The Return on Investment - Funding a Medicaid Adult Dental Benefit.” Presentation at DentaQuest Foundation Oral Health 2020 National Grantee Gathering, Oct. 21, 2015, New Orleans, La.
- <sup>12</sup> T.A. LaVeist, D.J. Gaskin, and P. Richard. “The Economic Burden of Health Inequalities in the United States.” Joint Center for Political and Economic Studies, Sept. 7, 2011. Available at: <http://jointcenter.org/research/fact-sheet-economic-burden-health-inequalities-united-states>.
- <sup>13</sup> The Family Health Center of Marshfield, a Wisconsin-based clinic, provides agencies that offer employment assistance to low-income adults with oral health information to share with clients – given the negative impact that an unhealthy-looking mouth can have on employability. For more information about The Family Health Center at Marshfield, see: <https://www.marshfieldclinic.org/community-resources/family-health-center>.
- <sup>14</sup> For more information on the group visit model, see: <http://www.aafp.org/fpm/2006/0100/p37.html>.
- <sup>15</sup> For more information on mySmileBuddy, see: [http://ccnmtl.columbia.edu/portfolio/medicine\\_and\\_health/mysmilebuddy.html](http://ccnmtl.columbia.edu/portfolio/medicine_and_health/mysmilebuddy.html).
- <sup>16</sup> C.H. Chinn. “Bio-Behavioral Chronic Disease Management by Families of Young Minority Children: mySmileBuddy.” Presentation delivered Oct. 28, 2011.
- <sup>17</sup> For more information on Text2Floss, see: <https://text2floss.com/go/about>.
- <sup>18</sup> T.S. Hashemian, D. Kritz-Silverstein, and R. Baker. “Text2Floss: the feasibility and acceptability of a text messaging intervention to improve oral health behavior and knowledge.” *Journal of Public Health Dentistry*, winter 2015; 75(1). Available at: <http://www.ncbi.nlm.nih.gov/pubmed/25091471>.
- <sup>19</sup> *Smiles for Life* is produced and offered by the Society of Teachers of Family Medicine. For more information about the curriculum and the mobile app, visit: <http://smilesforlifeoralealth.org/buildcontent.aspx?pagekey=62947&lastpagekey=62948&userkey=12203713&sessionkey=2717528&tut=555&customerkey=84&custsitegroupkey=0>.
- <sup>20</sup> *Toothsavers* was developed by the Ad Council for the Kids’ *Healthy Mouths* campaign of the Partnership for Healthy Mouths, Healthy Lives coalition. For more information, see: <http://2min2x.adcouncil.org/toothsavers>.
- <sup>21</sup> Dental health aide therapists are mid-level dental providers, akin to physician assistants in the medical profession, who can provide oral health education, prevention, and basic restorative services.
- <sup>22</sup> Advanced dental hygiene practitioners are mid-level providers that deliver oral health education, dental hygiene preventive services, radiographs, nonsurgical periodontal therapy, and simple restorative services directly to the public.
- <sup>23</sup> Community dental health coordinators are akin to community health workers that focus on oral health. They work under a dentist’s supervision to provide oral health education, prevention, and navigation support to dental care.
- <sup>24</sup> Under “public health supervision,” a dentist with an active license authorizes procedures to be carried out by a dental hygienist practicing in a school, hospital, or institution without the dentist on-site; the dentist must review patient records once a year. In “unsupervised practice,” dental hygienists can assess a patient’s oral health and initiate

treatment without a dentist's order. Dental hygienists in "independent practice" have complete autonomy to provide preventive and prophylactic services to patients.

<sup>25</sup> The Center for Health and Workforce Studies (November 2012). *New or Expanded Oral Health Workforce Models in the U.S.* Available at: <http://www.mcph.org/docs%5CNew%20or%20Expanded%20Oral%20Health%20Workforce%20Models%20-CHWS.pdf>.

<sup>26</sup> The Center for Health and Workforce Studies, *op cit*.

<sup>27</sup> For example, the state of Virginia is exploring creating a CHW certification based on a curriculum that includes oral health (e.g., referrals to care, oral hygiene, the dental home concept, etc.) and could allow managed care organizations to reimburse CHWs for delivery of these types of oral health care services.

<sup>28</sup> For more information on the Northern Dental Access Center, see: <http://www.northerndentalaccess.org/about-us.html>.

<sup>29</sup> A.E. Sanders. "Social determinants of oral health: conditions linked to socioeconomic inequalities in oral health in the Australian population." Australian Research Center for Population Oral Health, 2007. Available at: <http://onlinelibrary.wiley.com/doi/10.1111/j.16000528.2004.00190.x/abstract;jsessionid=9648C2AA562DB6BA54C5DB6D0C5C3155.f03t02>.

<sup>30</sup> S. Beestra, D. Derksen, and M. Ro et al. "A 'Health Commons Approach to Oral Health for Low-Income Populations in a Rural State." *American Journal of Public Health*, Jan. 2002, Vol 92, No. 1, pp 12-13. Available at: <http://www.careinnovations.org/knowledge-center/a-health-commons-approach-to-oral-health-for-low-income-populations-in-a-ru>.

<sup>31</sup> For more information on the Patient-Centered Medical Home, see: <http://www.ncqa.org/Programs/Recognition/Practices/PatientCenteredMedicalHomePCMH.aspx>.

<sup>32</sup> S. Beestra, *op cit*.

<sup>33</sup> X. Quan, A. Joseph, and A. Keller, et al. *Designing Safety-Net Clinics for Innovative Care Delivery Models*. California HealthCare Foundation, March 2011. Available at: <http://www.chcf.org/~media/MEDIA%20LIBRARY%20Files/PDF/PDF%20D/PDF%20DesigningClinicsInnovativeCareDeliveryModels.pdf>.

<sup>34</sup> S. Beestra, *op cit*.

<sup>35</sup> Health Resources and Services Administration (accessed Nov. 4, 2015). "How Can Oral Health Records be Integrated with Medical EHRs?" Available at: <http://www.hrsa.gov/healthit/toolbox/oralhealthittoolbox/healthitandoralhealth/ehrs.html>.