The idea of a Medicare oral health benefit is attracting attention. Models for care that focus on screening, prevention, and early intervention have been developed. East Carolina University’s Community Service Learning Centers are well-positioned to work with community partners to extend care to older adults in rural areas.

The teeth are tools we have been given to survive. We use them for eating, for speaking, even for defending ourselves. Their mineral beauty is a kind of gift. There is the uncanny way they are part of us. The unsettling ways they leave us.

The teething pains of infancy herald the appearance of the baby teeth, the deciduous teeth. Their shedding and replacement with the permanent teeth are part of our passage from childhood to adolescence. The eruption of the third molars, the wisdom teeth, signals the advent of young adulthood. As time goes on, our aging is reflected in our teeth. They wear and darken. The gums recede and we grow “long in the tooth.” Time and disease take their toll...

...In small ways and large ways the teeth call us back to ourselves. They call us back to suffering, to beauty, to our time on earth.

Teeth: The Story of Beauty, Inequality, and the Struggle for Oral Health in America (2017) [1]

This quote was read by the book’s author, Mary Otto, at a recent meeting sponsored by the North Carolina Oral Health Collaborative in Raleigh. It frames the importance of oral health within the context of health across the lifespan. In this context, oral health can be thought of as part of the aging process. The quote provides a back-drop for consideration of how social determinants impact our lives [2] and how these factors could impact oral health [3] and influence health policy.

Many people are surprised to learn that standard Medicare does not cover routine dental care. In a survey at 2 university dental clinics, 66% of adults surveyed had incorrect conceptions about dental coverage in traditional Medicare plans [4]. Recent activity around the topic of adding a dental benefit to Medicare hopes to change these misperceptions and build support for policy change.

While the idea of a dental benefit for Medicare beneficiaries has been around for decades [5], the momentum has increased lately. In September 2016, a group of dental leaders held a summit in Arlington, Virginia to discuss the issues around the concept of improving access to dental care for seniors. Among the take-aways from that meeting was the need to overcome misperceptions, recruit a broad base of stakeholders, and improve messaging on the topic [6, 7].

In July 2017, a symposium cosponsored by Oral Health America, the DentaQuest Foundation, and the American Dental Association was held in Alexandria, Virginia to continue efforts toward adding a dental benefit to Medicare. A recent paper in the Journal of the American Medical Association outlined a proposal to provide coverage for dental, vision, and hearing services under Medicare [8]. Other policy journals have also had recent papers on the topic, including The Milbank Quarterly [9] and Health Affairs [10].

There have been some very positive changes in the US population of seniors since Medicare was initiated. For example, the poverty rate among US adults aged 65 and older has dropped from nearly 30% in 1966 to 10% today [11]. However, recent data show seniors are not seeking dental care largely due to cost concerns [12]. There is good evidence to support the concept that a financing solution, like a dental benefit in Medicare, would result in increased use of dental services [13].

The case for a dental benefit in Medicare is relatively straightforward in terms of the knowledge base; however, the extent of political will and social strategy for change may benefit from a broadened approach. A fundamental issue is whether to campaign for a stand-alone dental benefit or to place the oral health benefit within a larger context of healthy aging and health care reform.

Integration of oral health in Medicare should be part of a larger effort to offer a range of long-term care services and support options for seniors and their family members. There is a logical inconsistency in an argument that emphasizes the integration of oral health as part of overall health but...
insists on a stand-alone dental benefit structure to fund integration. If we are seeking an integrated health care system, there are available financing options that reflect this [14].

Both dental care and long-term care services and supports (LTSS) are missing pieces in Medicare coverage. Each brings some strengths to the arena of health care reform. The need for LTSS increases as we age. A dental health benefit adds value immediately. The price tag for adding an oral health benefit is not likely to be cost neutral, but it will be relatively modest in comparison to the magnitude of dollars that go into LTSS. For instance, in 2015, North Carolina Medicaid costs for dental care were 3%-4% of all Medicaid expenditures, whereas Fee-For-Service Long-Term Care was 21% of Medicaid expenditures [15, 16].

Donald Taylor from Duke University has outlined policy for adding long-term care to Medicare without increasing overall program expenditures [17]. Others, including the Center for Medicare Advocacy, are expressing support for a multi-pronged approach that curbs spending while providing enhanced services [18]. A good starting point for policy improvement aimed at costs is the sub-group of individuals classified as dual eligibles (i.e., those with both Medicaid and Medicare). The political distaste for adding the cost of expansion of dental benefits, even if socially compelling, must be met with a sober eye toward the value that any expansion will bring. There is evidence that the divisiveness that characterizes the US political system today can come together around shared goals for reducing costs and increasing access [19]. A dental benefit that is part of broad health reform addresses these shared goals.

**Basis for Change**

North Carolina’s population aged 65 and older is predicted to increase from 1.5 million in 2015 to 2.5 million in 2035 [20]. The impact that this will have is difficult to envision because it is beyond our collective experience. The proportion of the United States that is aged 65 and older has been quietly rising like water in a small pond. In 1950, it was 8% and, slowly (over a period of 60 years), has increased so that it reached 13% in 2010. By 2030, it will be 20% and plateau at that level for the next 20 years [21]. While I may have enjoyed watching my pond slowly increase in size and also enjoyed observing the biodiversity that the pond brings to my life, at some point, I have to face the fact that the pond is now the dominant feature of my landscape and, as such, it needs attention and care from me and my neighbors. To take the analogy further, the pond—the portion of the population aged 65 and older—is in a park, representing the entire US population that has been growing as well. When the plan for taking care of the pond (Medicare) was developed in 1965, it served less than 500,000 North Carolinians.

How do we build an integrated care delivery system that aligns with an integrated financial system? This is our challenge. To make system-level improvements, we must address both delivery and financing elements in a complex system [22]. This involves taking a complex systems approach as opposed to a more traditional linear approach.

In a linear approach, the focus would be to "patch up the holes" in Medicare without a lot of thought given to how the system would change. A complex systems approach takes a broad view and understands change and tension in a system as elements that are part of the way the system gets feedback and adapts. In this approach, leveraging tension and incentivizing feedback in the system is used to redesign Medicare.

To illustrate the difference in approach, consider this analogy. Let’s say Medicare is the mode of transportation on the health care bicycle path. In the 1960s, when Medicare was developed, it was a pretty good bike, but now it is a bit outdated.

In the linear approach, adding a dental benefit would be like adding a bell to the old Medicare bicycle. In the complex systems approach, the orientation would be around finding methods to build incentives into the system that seek out ways to better accommodate bicycles. Your new Medicare bicycle will come with a bell and a navigation system to help you plan your route and chart your progress. The new bicycle will be linked with programs that are aimed at supporting community efforts to build more bike paths.

**Guiding Principles**

A key aspect of the complex systems approach to change is to redesign by taking advantage of the qualities and characteristics of the system itself and to support existing avenues toward increased efficiencies and patient-centered care. This approach is data-driven and evidence-based. It seeks out collaborations among stakeholders to achieve high quality care.

The way we frame the questions about the problem is important. If we frame the questions as a complex non-linear problem, we are more likely to avoid questions (and answers) that lead to the conclusion that the problem is intractable. Examples of the sort of questions that are starting points for redesign are: How do we build on current structures and relationships to improve access to oral health care for older adults? Are there small interventions that would be a step forward? Are there ways to foster empowerment for older adults (and their caregivers) with respect to oral health? And how do we recognize and support collaborative efforts to improve access to oral health care services for older adults?

The challenge is to achieve efficiencies in health care delivery that maintain quality and improve health outcomes. Two successful models can serve as examples for advancing care to older adults: Apple Tree Dental and the Virtual Dental Home [23]. Both were described as delivery systems that could be used to meet the needs of adults with developmental disabilities but would also be well-suited for frail elderly or institutionalized older adults that have limited options for transportation to a dental office.
The Apple Tree Dental model makes use of portable equipment in a “hub and spoke” design. The hubs are geographically-centered clinic sites, and the spokes are the community settings that house older adults, such as nursing homes. The regional hub serves as the role of care coordination with the nursing homes. The portable dental equipment is taken to the nursing home, and care is delivered at the site. The Virtual Dental Home model was developed at the University of the Pacific. It makes use of telecommunications to support linkage with the centralized dental record across sites. Both models make use of dental team members operating at the top of their license.

How do we tailor a way forward for North Carolina to ensure a patient-centered approach that improves access to care for older adults? There are many ways that the current oral health care delivery system could apply aspects of these 2 models in North Carolina. East Carolina University’s (ECU) School of Dental Medicine has a strong commitment to improving access to care in rural parts of the state through the establishment of 8 Community Service Learning Centers (CSLCs). The CSLCs are well-situated for a “hub and spoke” approach that builds on the Apple Tree Dental model of care (see Figure 1). Similarly, ECU’s investment into technology would be a good fit with the Virtual Dental Home Model’s use of the electronic health record and telehealth applications.

Steps toward creating this delivery system would emphasize prevention and early intervention and maximize interprofessional care. The CSLCs could serve as regional centers for collaborative relationships between nursing homes, community health centers, hospitals, and private practice dentists to triage care for older adults. For example, screening could be done using portable equipment by dental students in the nursing home setting. Care could be delivered for some patients right at the nursing home, and others may need to be transported to a dental office. A good first step toward testing this concept would be a small-scale demonstration project.

Conclusion

There are compelling reasons to develop better mechanisms to support the delivery of oral health care services to older adults. A good deal of attention is being directed toward expanding Medicare to cover routine preventive and restorative dental care. Approaching the oral health care delivery system for older adults as a complex, non-linear problem can help identify realistic strategies that build on existing strengths and leverage tensions to incentivize health promotion and disease prevention. Policy options need to balance costs and scope of services to optimize health and keep North Carolina smiling as the years of life continue to extend forward.

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