COST-EFFECTIVENESS ANALYSIS: EXTENDING DENTAL CARE COVERAGE TO MEDICARE BENEFICIARIES

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ABSTRACT

The continual escalation of healthcare spending combined with the aging population and waste of scarce resources poses a serious challenge to the sustainability of the nation’s healthcare. With waste on activities that produce little if any value accounting for as much as one third of health care expenditures, this paper discusses how cost-effectiveness analysis can be utilized to inform ongoing and future policy discussions relating to coverage decisions, cost control, and allocation of resources, specifically as it relates to Medicare.

Despite the overwhelming evidence linking oral health with systemic health, older adults face significant barriers to obtaining necessary dental care, generally resulting in neglect until a medical crisis develops. Despite evidence that poor oral health leads to nutritional deficiencies, chronic pain, infections, some cancers, and inappropriate use of emergency departments, Medicare has never included coverage for preventive and restorative dental service. Care that is essential for older adults who face greater age-related oral health risks due to physiologic changes, underlying chronic diseases, and increasing use of medications.

With the healthcare debate in this country centering on increasing access, reducing cost, and improving population health, reform efforts should utilize cost effectiveness analysis to weed out wasteful practices in medicine by assessing the added improvement in health outcomes relative to their cost. However, many of the recent changes in preventive care coverage under the Medicare program neglect to consider this analysis. For example, the annual physical has been proven to not be cost effective but is still covered by Medicare. On the other hand, preventive and restorative dental services are shown to reduce incidents of other medical issues, resulting in significant cost savings but are not covered by Medicare. Dental coverage provides an excellent opportunity to reduce health costs while improving the long-term health for older Americans.

Keywords: Cost-Effectiveness Analysis, dental coverage, Medicare

INTRODUCTION

In 2014, U.S. healthcare spending reached $3.0 trillion with projections that it will rise to 20 percent of GDP by the year 2020 (Centers for Medicare & Medicaid Services [CMS], 2015).
With Medicare accounting for 20 percent of the total current healthcare expenditure and nearly ten thousand Americans attaining Medicare eligibility daily, the Congressional Budget Office (CBO) sounded the alarm that 60 percent of the growth in healthcare spending over the next several decades will be attributable to the aging population (CBO, 2014). Furthermore, health policy researchers report that waste on activities that produce little if any value account for as much as one third of health care expenditures. The continual escalation of healthcare spending combined with the aging population and wasting of resources poses a serious challenge to the sustainability of healthcare in this country.

The government responded to both the cost and waste challenges through the enactment of the Patient Protection and Affordable Care Act (ACA). This reform is a major attempt at increasing access to healthcare services and expending preventive health programs primarily for the non-Medicare eligible population. The ACA also includes provisions to address gaps in Medicare preventive and prescription drug benefits, to test new Medicare payment and healthcare delivery models, and to control waste, fraud, and abuse in the Medicare system. Since the enactment of Medicare in 1965, numerous amendments, including the ACA, have attempted to expand benefits and/or control costs. Despite the many payment, quality, and delivery system reforms throughout the years and the important role Medicare plays in providing health and economic security for beneficiaries, policy makers have never formally considered cost-effectiveness analysis (CEA) to address these challenges. (Gold, Sofaer, & Slegelberg, 2007; Neumann, Rosen, & Weinstein, 2005; Pearson & Bach, 2010).

CEA informs health care decision making by assessing the gains in health relative to the costs of different health interventions. The goal is to identify ways to redirect scarce resources to achieve greater value. Despite the clear link between oral health and systemic health, Medicare has never covered preventive and restorative dental services. In this paper we discuss how CEA can be utilized to inform ongoing and future policy discussions related to coverage decisions, cost control costs, and allocation of resources, specifically as it relates to Medicare dental coverage.

THE IMPORTANCE OF ORAL HEALTH

In 2000, the U.S. Surgeon General issued a landmark report entitled “Oral Health in America: A Report of the Surgeon General,” which alerted the American public to the relationship between oral health and systemic health. The report highlights that poor oral health impacts an individual’s psychological and social wellbeing, leads to nutritional deficiencies, chronic pain, microbial infections, the inappropriate use of emergency rooms, and the development of chronic diseases such as cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes (U.S. Department of Health and Human Services, 2000).

Fifteen years after the release of this report, oral health still does not receive the same importance in the establishment of health policy as systemic health and the gap in access to dental care remains. While the enactment of the ACA expands access to insurance coverage for millions of American adults and increases emphasis on preventive services, the list of covered health benefits qualified private health plans are required to offer excludes dental and dental is
not covered under Medicare. Given that many of the signs and symptoms of chronic diseases, certain cancers, and HIV/AIDS may be first detected through oral manifestations and left untreated, oral diseases will not resolve itself, profoundly impact quality of life and increasing the risk of adverse health outcomes (Griffin, Jones, Brunson, Griffin, & Bailey, 2012). Early detection and treatment prevents these problems from developing into more complicated conditions requiring more expensive measures. Studies have demonstrated that the treatment of periodontal disease improved metabolic control among persons with type 2 diabetes patients often present to hospitals and nursing homes, and frequent tooth brushing lowers levels of cardiovascular disease (Griffin, et al., 2012).

FINANCIAL BARRIERS TO DENTAL CARE

Medicare has never included coverage for preventive and restorative dental service and generally any employer-provided dental insurance is lost when an individual retires. Paying for private dental insurance is cost-prohibitive for most retirees as they struggle to meet their basic need. Because not all the costs of healthcare are covered under Medicare, cost sharing is relatively high and there is no annual out of pocket limit on costs. To assist in covering costs Medicare beneficiaries commonly purchase supplemental coverage, but with half of beneficiaries having a 2012 annual income of $22,500 or less, out-of-pocket spending represents a considerable financial burden for many people with Medicare (Kaiser Family Foundation, 2013). Medicare beneficiaries spend roughly 15 percent of their household budgets on health expenses, including premiums, three times the amount that younger households spend on health care costs (Kaiser Family Foundation, 2013). These significant financial barriers to obtaining necessary preventive dental care generally result in neglect until a medical crisis develops (Moeller, Chen & Manski, 2010).

According to Manski et al. (2011) the drive to secure dental care is highly correlated to the individual having dental insurance. In the United States dental coverage is usually available to members of the workforce and benefits usually end when an individual becomes unemployed or retires from the workforce. Unfortunately, Medicare does not currently provide dental coverage for its beneficiaries and less than 20 percent of adults over the age of 65 have any form of private dental insurance. Financing for dental care greatly influences whether many older individuals will seek dental care especially preventive care. For elderly of lower socioeconomic status, the impact of not having dental coverage is much greater than the impact on the more affluent seniors.

In the absence of dental coverage, patients often present to the emergency department (ED) for long-delayed dental care when the condition has escalated to a complicated condition requiring more extensive and expensive measures. ED dental visits doubled from 1.1 million in 2000 to 2.2 million in 2012 and cost more than three times as much as a routine dental visit, averaging $749 if the patient does not require hospitalization (Wall & Vujicic, 2015). In 2011, individuals age 65-85 and 85 and over had 54.2 and 44.8 (per 100,000 population) respectively, ED visits with a principal diagnosis of dental condition (Agency for Healthcare Research and
Quality [AHRQ], 2015). More than 90 percent of these older adults were treated and released. Overall, these visits cost the U.S. healthcare system $1.6 billion annually and the American Dental Association estimates that up to 79 percent of ED dental visits would be better served in a dental office or community setting (Wall & Vujicic, 2015).

**COST-EFFECTIVENESS ANALYSIS**

The goal of publicly funded healthcare should be to concentrate scarce healthcare dollars to the areas of need that will achieve the greatest health gain, generally measured in quality-adjusted life years (Gold, et al., 2007). CEA assists in identifying the wasteful use of scarce healthcare resources while also guiding policy makers about which healthcare procedures should be expanded. Most economists argue that by subjecting various clinical interventions to rigorous economic evaluation will provide the ability to discover medical procedures that provide very little value and are not worth what they cost (Emanuel, 2015). The savings from discontinuing or limiting coverage for these medical tests and procedures can in turn be applied to medical interventions that have a greater positive health outcome.

Emanuel (2014) contends that our healthcare system has to begin paying for value in medical care. His argument is that our healthcare delivery system must focus on the value of what we do in healthcare along with the cost or price of the healthcare service. He offers the example of a new class of drugs designed to lower cholesterol called PCSK9 inhibitors. According to research completed on the drug it claims to reduce bad cholesterol, LDL, 36% more than other drugs. Unfortunately, there is no data showing that this new drug actually reduces heart attacks, strokes, or deaths from heart disease. The retail price for these drugs is approximately $14,000 per year per patient and the drugs may need to be taken for life. Dr. Emanuel argues that the traditional answer to this complicated decision on usage is left to cost effectiveness of the new drug. Is it actually worth $14,000 per year to lower cholesterol when we are uncertain about its effect on the reduction of disease?

Prior research investigating effect on costs of receiving preventative dental care related to more expensive nonpreventative procedures provides that Medicare beneficiaries who used preventive dental care had more dental visits but fewer visits for expensive nonpreventative procedures and lower dental expenses than beneficiaries that only sought out treatment for more severe oral problems (Moeller, et al., 2010). Huang, Chan, and Young (2013) examine the association between health-related quality of life and oral health in older U.S. adults with diabetes mellitus (DM) and find that those with DM were more likely to report permanent tooth loss due to caries or periodontal disease than those without and were less likely to have received dental care in the past year. Furthermore, the authors find that loss of permanent teeth was associated with 1.25 times greater odds of worse self-rated general health. Thirteen percent of adults aged 65-74 and 26 percent of those aged 75 and over are edentulous and 23 percent of adults 65 and over have not seen a dentist in five years. Given the research that provides a clear tie between poor oral health and diabetes, stroke, heart disease, lung disease, and other serious health issues, why has CEA been used more extensively to prioritize Medicare coverage decisions?
While the ACA focuses primarily on access and cost it also encourages health promotion and prevention efforts designed to improve overall health and ultimately reduce costs. The ACA also encourages greater use of preventive services for Medicare beneficiaries including such things as sexually transmitted diseases and high cholesterol (Emanuel, 2014). It would seem that dental care for the elderly would be at least as important as those areas of concern. Unfortunately, entirely too much attention has been focused on the cost and access issues surrounding health care and not enough attention has been placed on CEA. Cost-effectiveness studies have shown that individuals with chronic diseases who receive preventative dental care spend less on their overall health care than individuals with the same conditions who did not receive preventative dental care.

A UnitedHealthcare study examining individuals with chronic conditions who regularly received recommended preventive dental care found that medical claims averaged nearly $1,500 lower per year than those with chronic conditions who received non-preventive dental care or no dental care at all. The study further concluded that chronically ill individuals who are compliant with both medical and dental care had the lowest medical claim costs. However, even when individuals are compliant with dental, but not medical care, the impact on their health care costs is significant. Among a pool of 73,000 diabetics, those who were not medically compliant but received regular dental care their medical claims averaged $1,674 less per year than those not receiving dental care (UnitedHealthcare, 2014). Furthermore, individuals receiving extractions, root canals, restorative treatments and other non-preventive dental care had the highest health care spending (UnitedHealthcare, 2014). Another study estimated that the cost savings from medical screenings for diabetes, hypertension, and hypercholesterolemia in dental offices could save the health care system from $42.4 million ($13.51 per person screened) to $102.6 million ($32.72 per person screened) annually (Nasseh, Greenberg Vujicic, & Glick, 2014).

This research provides cost effectiveness evidence that the lack of a preventive dental care increases overall medical costs, lending support to the inclusion of preventive dental coverage to Medicare. Preventive dental coverage would pay for itself through the reduction of expensive nonpreventative dental care and the early identification of and better management of chronic illness.

DISCUSSION

The cost of healthcare delivery in this country cannot continue to increase for two very important reasons. The first reason is the simple fact that the consumer can no longer afford the escalating costs of healthcare insurance along with the portion he or she pays for healthcare services. The second reason is found in the crowding out effect that occurs when a larger percentage of gross domestic product is allocated to healthcare and taken away for other important government programs like improving infrastructure and education. The overall gaps in coverage are clear: approximately 24 percent of people age 65 years and over have private dental insurance, which is much lower than the insurance rates of children (54 percent) and also of adults of the typical working ages (60 percent) (Manski & Brown, 2007). It is also worth noting that in recent years, many industries have stopped providing retiree health benefits, which
adds to the very low rates of private dental coverage among our seniors (Kaiser Family Foundation, 2012).

As part of cost savings, the Moeller, Chen & Manski (2010) study highlights that Medicare beneficiaries who received preventive dental work had a lower number of dental visits for expensive non-preventive procedures and overall lower dental expenditures. Therefore, not only could coverage improve the oral health of older adults, it could also reduce the costs of non-preventive procedural services – which are often needed on an emergency basis due to pain. It would also alleviate the burden of elderly dental patients turning to busy emergency departments. However, until improved coverage is provided, the emergency department may be the only option for care for seniors who do not have a “regular” dentist because of the current lack of coverage.

Since it is expected that the number of older Americans will rise by 80 percent from 40.2 million in 2010 to 72 million in 2030, the eventual cost savings for this coverage can truly be remarkable. Compared to past generations, the proportion of seniors who are able to keep their natural teeth into their later years is growing, and the rate of complete tooth loss has nearly fallen in half over the past few decades (Vincent & Velkoff, 2010). This increase in the proportion of seniors with a higher number of natural teeth still in place tells us that an increase in preventive dental care is warranted to help these seniors to keep their natural teeth vs seek expensive denture care. However, without proper preventive insurance coverage for these services, the good news of the increased retention of natural teeth at a later age comes with the valid concern for an increased risk of both caries and periodontal disease. By providing the less-expensive preventive care coverage under Medicare for the natural teeth, much cost savings can be realized while allowing seniors to avoid costly extractions, oral surgeries, and/or eventual denture expenses.

Oral health is a public health concern because it affects a significant proportion of the population, and is strongly linked to overall health status. Even though the oral health of Americans is improving, there are still significant differences among demographic subgroups that dental service coverage can address in a positive way. Dye et al. (2012) found that 41 percent of lower-income elderly (with household incomes below 100 percent of the federal poverty level) have untreated dental caries – which is a rate that is almost three times higher than that of elderly persons with incomes over 200 percent of the federal poverty level. More than 70 percent of seniors were found to have periodontal disease, with 64 percent having either moderate or severe periodontal disease (Eke et al. 2012). Sadly, the majority of periodontal disease among older persons is preventable when consistent cleanings and scaling are provided by dentists or registered dental hygienists.

The reduction of disparities caused by oral health problems in the elderly requires wide-ranging approaches that would improve the opportunity for those over 65 on fixed income to be able to utilize preventive dental care. The most effective and least expensive way of accomplishing this objective would be to pass legislation extending dental coverage to Medicare recipients. With increasing numbers of older Americans living longer, retaining their natural teeth, turning to hospital emergency departments, and the limited access to covered dental services available, we strongly advocate for the expansion of publicly funded dental coverage for
all seniors. This would not only improve seniors’ oral health status as one aspect of overall health status, but it would also reduce the costs of expensive non-preventive dental procedures. Future research regarding specific cost savings on individual coverage items is certainly needed.

REFERENCES


