

The medical necessity of periodontal care

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Introduction and definition

The historic separation of medicine and dentistry back in 1840 with the founding of the world's first dental school in Baltimore set in motion a number of conditions that today distinguish medicine and dentistry as separate professions. Part of the impetus to establish dentistry as a separate profession occurred because dentistry and the treatment of oral disease was a discipline essentially represented by poorly trained barber surgeons. These barber surgeons gained the unseemly reputation of unscrupulous practices as they traveled the countryside professing to heal all pain and suffering (21). However, the separation of dentistry from medicine actually elevated the profession to a legitimate art and science equal in its healing practices to those of medicine.

The training of dental practitioners historically has placed a significant emphasis on surgical interventions. Even to this day, curricula primarily focus on technique-sensitive procedures that consume a majority of time for dentists in training as well as those in practice. In my opinion, one of the potential drawbacks of the historical distinction between medicine and dentistry was and is a clear de-emphasis on the impact of systemic disease on the oral cavity and, more importantly, the impact of oral disease on systemic health. With the exception of Hunter's theory of focal infection in the early twentieth century (10), the oral cavity has essentially evolved as an isolated organ system without a significant focus and impact on systemic health.

The last decade has witnessed a resurgent research emphasis on the significance of oral disease related to systemic health (11). The historical public health advances that dentistry has witnessed with promotion of preventive measures such as fluoridation has allowed for society's greater appreciation of good oral health and retention of one's dentition.

The medical profession, because of significant ad-

vances, now allows individuals to live longer with previously unmanageable conditions (8). Chronic and disabling illnesses such as diabetes, arthritis and heart disease now are successfully managed in many cases (8, 11, 24). While decreasing edentulism in elderly people highlights advances in oral health care delivery, managing a compromised patient and the attendant dental problems is increasingly challenging, complex and population-based. Oral cancer screening, antibiotic prophylaxis for patients at high risk for bacterial endocarditis and smoking cessation programs are but a few successful examples of dentists managing dental public health problems impacting systemic health.

Today's increasingly significant role the dentist is playing in the multidisciplinary approach to patient care has stimulated a focus on the "necessity" of care. Additionally, because of changes in reimbursement for health services, the buzzword today is "medically necessary". The term "medical necessity" has become the essential underpinning driving the provision as well as reimbursement of health care services in the United States. Given this fact, the last decade has seen a growing interest by a segment of the dental community to focus on the concept of medically necessary oral care services.

The evolution of "medically necessary oral health care" began in the early to mid-1980s, when those practicing at the interface of medicine and dentistry realized that reimbursement for services as they related to treating or reducing the morbidity of an underlying medical condition were conveniently considered neither medical nor dental (6). For example, dental extractions provided to eliminate an acute odontogenic infection prior to replacing a diseased heart valve were clinically indicated but in some cases were conveniently denied by medical carriers as services not covered under the medical plan, and conversely denied by dental plans suggesting that those services are not dental. This confusion resulted in a flurry of activity at the American

Association of Hospital Dentists and American Dental Association that, in turn, led to the American Dental Association clarifying its position on coverage of “medically necessary adjunctive care” in 1988. Resolution 474, which passed, stated (1):

Resolved that the American Dental Association make every effort on behalf of patients to see that the language specifying treatment coverage and health insurance plans be clarified so that medically necessary adjunctive care, essential to the successful treatment of a medical condition being treated by a multidisciplinary health care team, is available to the patient, and be it further resolved, that when the ADA is notified of a situation in which a patient’s treatment is jeopardized by a narrow interpretation of language contained in a medical benefit policy, the Association, with the assistance of its legal advisor, shall contact the plan purchaser directly in an effort to see that the employer’s intentions regarding the benefit purchased for the employee are conveyed to the third party.

Additionally, Resolution 475, entitled “Legislative Clarification for Medically Necessary Adjunctive Care”, was passed. This resolution read (1):

Resolved that the constituent dental societies be encouraged to pursue legislation or regulation at the state level to have the language in health benefit plans clarified so that medically necessary adjunctive care is a required extension of covered medical procedures, and be it further resolved, that the appropriate Association agencies seek federal legislative or regulatory actions to have the language in health benefit programs clarified so that medically necessary adjunctive care is a required extension of covered medical procedures.

Although these two adopted resolutions clarified organized dentistry’s position on coverage of this service, a definition had not been approved until Resolution 537 in 1990. The definition of medically necessary care read (1):

Resolved that the following definition of “medically necessary care” be adopted: Medically necessary care

means the reasonable and appropriate diagnosis, treatment, and follow-up care including supplies, appliances, and devices as determined and prescribed by qualified appropriate health care providers in treating any condition, illness, disease, injury, or birth developmental malformations. Care is medically necessary for the purpose of: controlling or eliminating infection, pain, and disease; and restoring facial disfiguration or function necessary for speech, swallowing, or chewing and be it further resolved, that the appropriate agencies of the Association distribute this definition of “medically necessary care” to third party payers, plan purchasers, professional health organizations, and state and federal regulatory agencies.

Activity on medically necessary oral care remained relatively quiet until 1994 when the Clinton Administration attempted to overhaul the health care system. In May of 1994, the ADA Washington Office was directed by a Congressional committee to provide them quantitative information on medically necessary oral health services for its potential inclusion under a future health reform proposal.

Because no such data were available at the time, the American Dental Association in turn contacted the Federation of Special Care Organizations in Dentistry, which includes the American Association of Hospital Dentists, the Academy of Dentistry for Persons with Disabilities and the American Society for Geriatric Dentistry, to provide input and advice. The definition provided to the committee included a modified version of the original ADA definition and read (5):

Medically necessary oral health care is a direct result of, or has a direct impact on an underlying medical condition. It includes care directed toward control and/or elimination of pain, infection, and reestablishment of function.

This revised definition was a simpler version of the original text and also fell in line with language which is consistent under Medicare as it defines oral health services in those extremely limited, coverable cases. The services identified as essential under this proposal included preventive care such as oral health assessments and diagnosis, regular oral prophylaxis and fluoride treatment for adults at high risk of dental caries. Additionally, emergency dental services were to be included to eliminate acute infection, control bleeding, relieve pain and treat injuries to the maxillofacial region. Finally, primary care services were to be provided and defined as basic restorative services as well as ongoing periodontal maintenance services. The list and recommended services can be found in Table 1.

The next significant event occurred in 1995 when

Table 1. Medically necessary dental care services defined in 1994

Initial workup and treatment

- Examination
- Radiographs
- Periodontal scaling to reduce inflammation
- Elimination of infection (extractions)

Primary care maintenance

- Periodic examination
- Radiographs (bitewings)
- Periodontal prophylaxis
- Basic restorative (coronal and root caries)

Table 2. Medically necessary oral health care consensus list of conditions in 1995 (nonexclusive)

- Anesthesia for uncooperative children and other patients
- Chemotherapy
- Developmental and acquired maxillofacial defects
- Diabetes
- Head and neck radiation
- Heart defects
- Hemophilia
- HIV infection
- Orphaned diseases
- Patients affected by therapeutic drugs
- Renal dialysis
- Stroke patients
- Transplantation

the Federation of Special Care Organizations in Dentistry, the National Alliance for Oral Health, the American Association of Dental Schools and the American Academy of Pediatric Dentistry co-sponsored a Consensus Conference on Medically Necessary Oral Health Care. Three respective background white papers were commissioned on the costs and consequences of medically necessary care, the availability of current services and legal issues, respectively. The primary objective of the consensus conference was to develop a number of recommendations for future strategies of studying, and more importantly, promoting the concept of medically necessary oral health care.

The first recommendation included a further refinement of the definition. The consensus definition concluded that (19):

Medically necessary oral health care is that care that is a direct result of, or has a direct impact on, an underlying medical condition and/or its resulting therapy. Medically necessary oral health care is integral to comprehensive treatment to insure optimum health care outcomes. Medically necessary oral health care can potentially reduce the care expenditures for treatment of costly complications.

This definition of medically necessary oral health care has laid the groundwork for all subsequent and current activity.

Paradigms of oral disease and systemic health

Under Recommendation 4 of the Consensus Conference (Table 2), the attendees defined a nonexclusive

list of procedures and conditions for which medical necessity could be applied (19). The list was based on available literature connecting oral disease and those respective conditions.

There currently exist two converse paradigms between oral disease and systemic health (Fig. 1). As this relates to periodontal disease, the available literature suggests a relationship between periodontal disease and cardiovascular disorders, prosthetic joint replacement, diabetes mellitus, bleeding disorders, kidney and liver diseases, organ transplantation, cancer, disorders associated with early periodontal destruction, pregnancy and oral contraceptives, human immunodeficiency virus, medications associated with gingival overgrowth and systemic corticosteroid therapy (13). The periodontal literature to date has a research bias on the impact of systemic disease on periodontal disease (paradigm I of Fig. 1). The diabetes literature for example has identified numerous risk factors and related diabetic sequelae affecting periodontal status and disease (9, 12, 20, 27, 28). The literature on HIV disease as well has focused to a large degree on the disease's progression and its impact and manifestations on the oral cavity (2, 14, 22, 23).

What became clear during the 1994 health reform debate and in subsequent activities discussed in a later section is that there is relatively little literature on the impact of oral disease on systemic illness. Paradigm II of Fig. 1 poses significantly more public policy implications and interest.

Few state and federally funded dental programs are available for adults. This, in turn, rarely necessitates a public policy response based on the relatively limited dollars spent for these services. On the other hand, there is a significant interest in the impact of oral disease on systemic health because there is a public policy concern for overall health care outcomes and expenditures. The fact that there may be cost implications for existing acute or chronic oral infections such as periodontal disease make this

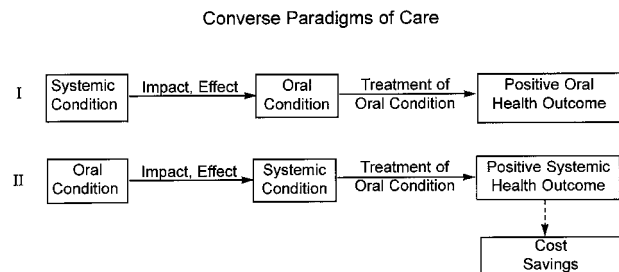


Fig. 1. Converse paradigms of care

paradigm a much more critical public policy issue. Using the previously cited examples of diabetes and HIV disease, a much more compelling case could be made that oral care for people affected by diabetes and HIV disease is medically necessary if literature existed to support both their effects and qualitative impact on managing glucose modulation and progression to AIDS, respectively.

Rationale for periodontal treatment of high-risk patients – is periodontal care medically necessary?

As stated earlier, the dental literature and, more specifically, the periodontal literature have recently documented a significant relationship between oral disease and systemic health. The articles that have cited the effects of periodontal infection on low birth weight, as a risk factor for cardiovascular disease and the control of acute and chronic oral infections in patients who are immunocompromised are making a compelling argument for routine periodontal screening and treatment of patients at risk for these diseases (3, 15, 18, 25, 26).

There are essentially two conditions by definition that must be met for periodontal disease to be considered medically necessary. First, treatment of periodontal disease must be a direct result of, or have direct impact on, an underlying medical condition. Secondly, treating periodontal disease in high-risk patients must positively affect long-term health outcomes. Lastly but not necessarily as a condition of “medically necessity”, the cost benefit may not only be reflected in health outcomes but may also be measurable in money saved by reducing morbidity. The literature has clearly supported and met both conditions for “medical necessity”.

Periodontitis is defined as an infectious disease caused by a small group of predominantly anaerobic gram-negative bacteria. In individuals susceptible to the development of periodontitis, bacteria extend into the gingival sulcus and subsequent pocket formation easily allowing for bacterial access to blood vessels. Page calculated that patients with moderate to severe periodontitis had a total pocket epithelium exposed to subgingival microbes equaling the size of the palm of the human hand (16)!

It is clear that poor dental hygiene and periodontal infections can produce bacteremia in the absence of dental procedures (4, 17). The incidence

and magnitude of these cases of bacteremia is proportional to the degree of the infection and inflammation present (4, 17). Because there is very little proof that periodontal therapies have directly caused conditions such as bacterial endocarditis, the benefit of periodontal therapy with antibiotic prophylaxis strongly outweighs the risk for patients at high risk, potentially improving health outcomes. As with any soft tissue lesion, it is quite clear that treating such lesions should be considered medically necessary given the potential for bacteremia, particularly in high-risk patients.

Legal issues

The legal issues relating to the concept of medically necessary oral health care can be viewed from two perspectives. First of all, it is clear that, as this concept gains further acceptance, that best practice guidelines will be developed with these issues in mind (5). It must be understood that many health centers today that treat patients with underlying medical conditions already have institutionally accepted indicators for the management of dental problems in high-risk patients. For example, a number of the tertiary care centers that treat significant numbers of heart valve patients have developed a screening protocol for dentally related problems. In these cases, surgeons will not intervene until patients have been cleared of their oral health status examination. It is therefore not an unreasonable assumption, as we have with the AHA antibiotic prophylaxis recommendations for patients at high risk, that similarly those at high risk for other medical conditions such as cancers, HIV disease, organ transplantation, etc., have best practice guidelines for these conditions.

Another legal issue and possibly a more important consideration is the concept of challenging current insurers' refusal to pay for medically necessary oral health care services. If the profession indeed accepts best practice guidelines for reducing potential infectious problems in high-risk patients, these best practice guidelines could then be used to compel insurance companies to pay for these previously uncovered services. The paradigm of medically necessary oral health care services being excluded from both medical and dental plans respectively by the nature of the condition should place the burden of coverage on the medical plan. Clearly, the services would be provided as the definition suggests to reduce problems related to an underlying medical

condition. In the end, our analysis has shown that coverage of these oral health services could save the insurance plans significant money in the short and long term.

Public policy and legislation

As previously mentioned in this chapter, there is growing public policy interest in and concern about the impact of oral diseases on systemic health. Conklin, Rutkauskas and others have quantified the cost impact of oral disease on a number of high-risk patients and disease categories defined in this chapter. They have calculated that intervening with basic preventive services such as periodontal treatment and maintenance in patients with valvular heart disease, leukemia and lymphoma, head and neck cancer and organ transplantation could reduce Medicare expenditures by more than US \$90 million per year. Additional work must be conducted, both prospectively and retrospectively, to identify and quantify the cost impact of other disease categories such as diabetes.

The studies by Conklin, Rutkauskas and others have effectively been reviewed by a number of government agencies in the United States including the Health Care Financing Administration as well as representatives of Congress. The data presented in light of the identified cost savings to Medicare for treating patients with leukemia, lymphoma, organ transplantation, valvular heart disease and head and neck cancer led to the introduction of Bill HR 1288, entitled the Medicare Medically Necessary Dental Care Act of 1997. The bill proposed to expand Medicare benefits for medically necessary dental services to the above-cited high-risk patients. Because Medicare is precluded from broad coverage of dental services based on historical precedent and regulation, these would be provided under the title of “medical necessity” and would include periodontal maintenance and therapies for such patients. Additionally, the bill proposed potentially expanding to additional disease categories if quantitative evidence supported further cost savings. The 106th Congress was to reintroduce the bill in late 1999 or early 2000.

An additional positive development occurred with the passage of the 1997 Budget Bill, as a study was commissioned by Congress to evaluate the cost benefit of expanding Medicare services to medically necessary oral health care. This study was scheduled to be completed by the National Academy of Sciences at the end of 1999. Between this study and

the reintroduction of Bill HR 1288, there is a great deal of optimism that patients at high risk will be provided medically necessary oral care services under the Medicare system.

There is no question that political will is driven by the ability to save health care money while improving outcomes. Periodontal therapy as defined here clearly falls under the category of “medically necessary” by meeting both the currently stated criteria as well as potentially contributing to reductions in health care expenditures. In the future, periodontal therapy will increasingly be delivered to patients living longer, with more teeth and with more chronic and disabling conditions. These factors alone should emphasize the growing impact of periodontal disease and its effect on health outcomes of an aging population.

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