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Original Investigation

Reimbursing Dentists for Smoking Cessation Treatment: Views From Dental Insurers

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Abstract

Introduction: Screening and delivery of evidence-based interventions by dentists is an effective way to reduce tobacco use. However, dental visits remain an underutilized opportunity for the treatment of tobacco dependence. This is, in part, because the current reimbursement structure does not support expansion of dental providers' role in this arena. The purpose of this study was to interview dental insurers to assess attitudes toward tobacco use treatment in dental practice, pros and cons of offering dental provider reimbursement, and barriers to instituting a tobacco use treatment-related payment policy for dental providers.

Methods: Semi-structured interviews were conducted with 11 dental insurance company executives. Participants were identified using a targeted sampling method and represented viewpoints from a significant share of companies within the dental insurance industry.

Results: All insurers believed that screening and intervention for tobacco use was an appropriate part of routine care during a dental visit. Several indicated a need for more evidence of clinical and cost-effectiveness before reimbursement for these services could be actualized. Lack of purchaser demand, questionable returns on investment, and segregation of the medical and dental insurance markets were cited as additional barriers to coverage.

Conclusions: Dissemination of findings on efficacy and additional research on financial returns could help to promote uptake of coverage by insurers. Wider issues of integration between dental and medical care and payment systems must be addressed in order to expand opportunities for preventive services in dental care settings.

Introduction

Smoking remains the leading preventable cause of death in the United States, responsible for 443,000 deaths and $193 billion in health-related economic losses per year (Centers for Disease Control [CDC], 2008). Based on meta-analyses of more than 8,000 tobacco cessation studies published in the past three decades, the 2008 Public Health Service (PHS) Guideline, *Treating Tobacco Use and Dependence*, provides strong evidence that provider delivery of tobacco dependence treatment can produce significant and sustained reductions in tobacco use and should be delivered to all smokers seeking routine health care (Fiore, 2008). Provider adherence to the PHS Guideline recommendations includes asking all patients about tobacco use, advising smokers to quit, assessing readiness to quit, and providing cessation assistance (brief counseling and pharmacotherapy; Fiore, 2008).

In 2006, the National Commission of Prevention Priorities published an update of the 2001 ranking of clinical preventive services (Maciosek et al., 2006). The Commission determined that tobacco use screening with brief clinician counseling was one of the three highest ranking preventive services and that this intervention is cost saving. They estimated that improving adherence to this guideline from 35% to 90% would increase quality-adjusted life years among a cohort of 4 million by 1,300,000 (Maciosek et al., 2006).

Although safe and cost-effective treatments for tobacco dependence exist, only a small proportion of the 40% of smokers who try to quit each year use evidence-based cessation therapies (Cokkinides, Ward, Jemal, & Thun, 2005; Zhu, Sun, Rosbrook, & Pierce, 2000). Unfortunately, of those who attempt to quit on their own, only 3–4% are likely to succeed compared with 22% of those who receive medication and brief counseling (Messer et al., 2007).

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Dental professionals are in a position to improve upon tobacco cessation rates. They have regular access to a broad proportion of the population, with 42.9% of 21- to 64-year olds and more than 50% smokers reporting at least one annual dental visit (Manski & Brown, 2007; Tomar, Husten, & Manley, 1996). There is strong evidence that assistance delivered by dental professionals can increase tobacco cessation rates (Carr & Ebbert, 2006; Fiore, 2008; Gordon, Lichtenstein, Severson, & Andrews, 2006), and the dental care setting offers opportunities to identify and engage individuals who may not be receiving preventive health services (Strauss, Alfano, Shelley, & Fulmer, 2012). Moreover, in view of the oral hazards of tobacco use, dental professionals have an important stake in providing smoking cessation services (U.S. Department of Health and Human Services [USDHHS], 2000). Despite the increased focus on dental care settings as important intervention points, they remain a relatively untapped venue for the treatment of tobacco dependence (Albert et al., 2005; Tong, Strouse, Hall, Kovac, & Schroeder, 2010).

According to a 2003–2004 national survey of a random sample of seven different health professions, including dentists and dental hygienists, only 25% of dental health professionals routinely delivered tobacco use treatment (e.g., brief counseling, prescriptions, and or referral, Tong et al., 2010). Yet low levels of treatment delivery among dental professionals are not a reflection of negative attitudes toward delivering cessation treatment. Rather, the same survey showed that 88.7% of dentists and 96% of dental hygienists reported that treating tobacco use was an important professional responsibility; and over 70% believed that cessation programs including pharmacotherapy and face-to-face advice from clinicians were effective in helping patients quit (Tong et al., 2010).

The barriers to addressing tobacco use are primarily a lack of time, expertise, training, and reimbursement (Albert et al., 2005). Acknowledging the latter, the recent consensus report from the Second European Workshop on Tobacco Use Prevention and Cessation for Oral Health Professionals included a statement emphasizing the importance of appropriate compensation of tobacco use counseling to provide greater incentive to oral health providers to assist their tobacco using patients (Ramseier et al., 2010).

Insurance coverage and provider reimbursement for tobacco use treatment in medical settings have increased significantly in the past decade (McMenamin, Halpin, & Shade, 2008). However, the expansion of insurance coverage and reimbursement opportunities has largely excluded dentists and dental patients. For example, in New York State where medical providers can receive Medicaid reimbursement for smoking cessation counseling, dentists are excluded (New York State Department of Health, 2009).

Recognizing the importance of dentistry in tobacco control efforts, Healthy People 2020 includes as a key objective increased tobacco use screening and counseling in dental settings (USDHHS, 2010). Yet the current reimbursement structure does not support expansion of dental providers' role in this arena. The purpose of this study was to interview dental insurers to assess attitudes toward tobacco use treatment in dental practice, pros and cons of offering dental provider reimbursement, and barriers to instituting a tobacco use treatment-related payment policy for dental providers.

Methods

Study Subjects and Recruitment

A targeted sampling method was used to identify executives of dental insurance programs who had knowledge of both current reimbursement policies related to preventive care and of the factors influencing their organizations' reimbursement policies. Dental insurers and consultants to dental insurers were recruited from the National Association of Dental Plans (NADP) clinical workgroup. The NADP is a large national trade association that represents more than 80% of dental insurance companies. (NADP, 2011). Twelve NADP members of the workgroup, representing dental insurance executives and consultants, were contacted via e-mail and phone to inform them of the study. Those who expressed interest in participating were then contacted by investigators at the University of Chicago, who provided a detailed overview of the study, obtained consent, and conducted the interviews by phone. No monetary compensation was offered. Nine of the 12 workgroup members agreed to participate. Following preliminary analysis of the first nine interviews, we determined that there were themes specific to tobacco cessation that had not yet been fully explored. A purposeful sampling approach was then used to identify and interview three additional participants having greater experience or expertise in preventive health services or tobacco cessation activities in dentistry. In the final analysis, the interview with the dental consultant was excluded because of a lack of specific knowledge about reimbursement policies for preventive services. Therefore, we analyzed 11 interviews with company plan directors or their surrogates, 10 were dentists, and 1 was a dental hygienist by training.

According to 2009 data from 88 companies, Medicaid, and Medicare, approximately 166 million Americans—165,715,478—are covered by some kind of dental benefit. This represents 54% of the U.S. population (a 5.7% decrease in national enrollment from the previous year, National Association of Dental Plans/Delta Dental Plans Association, 2010). Overall, our sample of insurers provide the reimbursements for about 90 million people insured with dental insurance, more than 54% of the total market share for dental insurance allowing for attainment of sufficient saturation of dental insurance carriers.

Data Collection

Semi-structured interviews were conducted by telephone between April and October 2010. The interview guide is available as Supplementary material online. All interviews were conducted by one doctoral-level Research Assistant at the University of Chicago. The interviews were guided by a 31-item questionnaire designed to capture information about current reimbursement policies for preventive health services (i.e., diabetes and cholesterol screening, tobacco use screening and treatment and human immunodeficiency virus [HIV] testing). Insurers were also asked open-ended questions about their general attitudes toward the role of dental providers in delivering preventive services, their current reimbursement policies for screening and prevention, and factors that influence reimbursement policies. This paper reports responses to inquiries about provider reimbursement for tobacco-cessation activities. All of the interviews

were conducted by telephone, lasted approximately 30 min and were digitally recorded and transcribed. Transcribed text was then entered into Atlas.ti qualitative data analysis software http://www.atlasti.com/. The study protocol was reviewed and approved by the Institutional Review Boards of the University of Chicago and the University of Miami.

Analysis

The research team developed, tested, and refined a coding scheme that allowed for systematic identification and conceptual definition of the main themes and subthemes present in the transcripts as well as the relationships among the themes following Strauss's process of content analysis (Strauss, 1987). The multilevel coding process began with a list of 10 generalized codes that were based upon the main domains of the questionnaire. These included: (a) insurance company profiles, (b) collaboration with public health departments related to tobacco use treatment, (c) return on investment (ROI) and cost-effectiveness, (d) insurers' attitudes toward dentists' role in treating tobacco use, (e) gaps in dental provider and staff training and knowledge, (f) barriers to offering provider reimbursement, (g) potential benefits of offering coverage and reimbursement, (h) demand for coverage and reimbursement, (i) reimbursement specifics (e.g., rate estimates), and (j) systems integration. Three members of the analysis team then independently reviewed a sample of the same set of transcripts to develop additional codes and subcodes that represented different components of each major domain. For example, under the main theme of barriers to offering reimbursement, subcodes were created for discrete categories for each recurring barrier (e.g., lack of employer demand for coverage and dental staff lack of knowledge). Through an iterative process, the team agreed on a preliminary coding scheme that was refined and tested on several transcripts for independent verification of the codes. Using the final coding scheme, parallel coding of all transcripts was conducted by two independent research team members (SW and DS) (Strauss, 1987).

Results

The results are organized by main codes or domains (headings) followed by subcodes (subheadings) within those domains where relevant.

Characteristics of Insurance Companies

The study participants offered varied representation in terms of geographical reach, private/public coverage, and size. Three of the insurers were large national companies (>20 million lives), and eight were local, covering dental services in states in the Northeast, Pacific coast, and the Midwest.

Attitudes Toward the Role of Dentists in Treating Tobacco Use

There was agreement among all study participants that addressing tobacco use was relevant to dental practice. They cited the well-documented association between tobacco use and poor oral health outcomes as providing a strong rationale for supporting tobacco use treatment in dental care settings. Insurers also presented a broader view of dental providers' role in promoting patients' overall health and a growing appreciation for the connection between oral and systemic health. This general group opinion was represented by a respondent who said:

> Strictly from a dental perspective we know the impact that use of tobacco has on cavity, on teeth, on tissues and certainly its impact on oral cancer and periodontal disease. So from just a dental perspective we think there could be a significant impact. Then we are very much aligned with the connections between oral health and overall health.

Barriers to Reimbursing Dentists for Treating Tobacco Use

Participants noted several challenges to developing a new reimbursement policy for treating tobacco use in dental practice.

Lack of Data on Intervention Efficacy

Although evidence supports the effectiveness and cost-effectiveness of brief cessation counseling delivered by dental professionals for increasing tobacco use abstinence (Fiore, 2008), half of those interviewed remained skeptical and expressed a desire for more empirical evidence. As described by one insurer:

> I'm not sure dentists doing it are effective at changing behaviors. So to pay for something that doesn't really lead to a reduction in the amount of smoking is no benefit. So that's something an insurance company would want to see. Are there actual studies showing that this is an effective way of reducing smoking? If not, we wouldn't even consider paying for it.

Concern for Competitiveness and Lack of ROI

The expressed need for effectiveness data to justify reimbursement policies to internal leadership as well as other stakeholders (purchasers, shareholders) was matched by the need to show a positive ROI for tobacco use treatment before reimbursement for these services could be considered:

> -they [company leadership] tend to like to see an ROI, so if we could figure that out that would certainly make it attractive.

Study participants noted that financial benefits from such preventive coverage are more likely to accrue to the medical rather than to dental insurers, an equation that may work for integrated (medical and dental) companies but is not relevant to those offering dental benefits only. However, even among the six insurance companies that include both dental and medical insurance products, study participants described the need to demonstrate to the medical side that there was value in engaging dentistry in tobacco use treatment through changes in reimbursement policies:

> So, we have to show the value proposition in dollars of health outcome improvements that save them [medical side] money, and that's the only way health insurance companies will say, Oh, dental is important; I'll reimburse a dentist that gets people to quit.

Lack of Purchaser Demand

Another barrier to changing reimbursement policies that was mentioned by private insurers was a lack of demand from both members (patients) and purchasers (employers) and more specifically, benefits managers. Demand for coverage was described as a key factor in companies' decisions to offer a specific benefit:

> If we had members or employers that were out there saying we want this for our members then we would have to figure out what the reimbursement level would be, where it would fit, a one, two or three and then charge for it. If the members or employers are willing to pay for that for the employees, we would be willing to offer it.

Study participants also pointed out that purchasers who already offer coverage for tobacco use treatment to patients under their medical plans may not value the dental setting as another opportunity to ensure that patients receive treatment for tobacco use:

> We would have to convince the purchaser, actually the real payor, that this is something that should be added as a covered benefit. We'd get a lot of push back from them saying well, I cover this under my medical, this should be part of my medical plan.

Concerns About Overutilization of a Tobacco Cessation Billing Code

Six of those interviewed said they had or were considering reimbursement for tobacco use treatment. Two of these insurers raised concerns that providers might "game" the system by overutilizing the billing code. They noted that dental reimbursement is primarily procedure-based; therefore, there is little experience with covering services such as counseling for smoking cessation:

> The thing that really sort of stopped us cold was fear that dentists were going to abuse this code. Obviously when I say that I mean a small minority who would do that to begin with. It is very easy to bill that code with every visit and to charge it out and we would have a very difficult time tracking that. We really could not figure out a way to avoid overutilization for that code.

Potential Benefits to Insurers Offering Reimbursement for Tobacco Use Treatment

Market Advantage

Insurers noted a few key benefits they would expect from offering reimbursement for tobacco cessation activities. One common theme was the perception that it could offer the company a "market advantage" by distinguishing them from the competition:

> (W)e're saying in our business model in our strategic planning that integrated health care services, we believe will save overall health care costs, and will be valued by patients, and that that's the unique value proposition that our dental group can provide in the marketplace that we serve, and nobody else can do that. And that unique value proposition is what we believe will differentiate us.

Addressing Overall Patient Health

Many participants saw potential benefits to patients in having their dentist offer cessation services and asserted that dentists are an integral part of the overall health care team:

> . . . So we actually have a chance to monitor patients kind of in a different context than physicians do. It's another data point . . . we need to adopt a more patient-centric way of caring for patients. We are treating one person whose general health is connected to oral health and vice versa and so I think systemically, we've done patients a disservice by not treating them as whole people but rather as slices of interest that conform to what we went to school for.

Reimbursement Rate Estimates

Insurers provided a range of responses to a question that asked how much they would formulate a reimbursement rate for about 20 min of time spent providing cessation services including assessment, brief counseling, and referral. More than one-third felt unable to assess a rate at this time and wanted market information to support an estimate. Some of the insurers indicated that these services were already paid for as part of the general "well care" visit and therefore a separate payment may not be necessary. Of those who did respond ($n = 8$), the median estimate was $25 (hygienists) and $170 (dentists), with an average of $42 (hygienists) and $170 (dentists). The total of all estimates, including unspecified ones, ranged from $20 to $250 per intervention. The suggested rates for reimbursing dentists were much higher than Medicare's current reimbursement rate for physician counseling that ranges from $12.94 for 3–10 min of counseling to $27.21 for longer than 10 min of counseling (Centers for Medicare and Medicaid Services [CMS], 2011). Table 1 gives an overview of the projected rate estimates for reimbursement of cessation services by hygienists and dentists.

Dental and Medical Systems Integration

In discussing barriers to changing reimbursement policies to support preventive health care, including tobacco use treatment in dental care settings, every participant mentioned the separation between the dental and medical health care systems. This separation extended beyond reimbursement to encompass information technology, scope of services, and communication and mission. The silos in which the two professions exist, even in companies with both dental and medical products, was viewed as one of the most important barriers to delivering coordinated care, avoiding duplication of services, and taking advantage of potential cost savings and improved patient outcomes associated with integrating oral and systemic health:

> -even though we are a multiline company each of our lines of business is individual. So medical and dental are not under the same roof and we have to-there is a process alignment that has to take place. So that is a bit of a barrier.

> Of course, the problem is this, a physician last week tells his patients, oh, here's how you quit smoking, I also need to know about that and currently I don't unless the physician tells me and so we need to figure out how to transmit information among providers that supports

Table 1. Projected Reimbursement Rate Estimates for Dental Tobacco Cessation Services

	Rate estimates for tobacco cessation reimbursement ($)		
	Median	Mean	Range
Hygienist	25	42	20–100
Dentist	160	170	120–250
All/unspecified	55	82.9	20–250

> me saying, Dr. so and so talked to you about quitting smoking. Do you have any other questions? So I can pick up where my physician colleague left off.

Despite the challenges associated with the current separation of dental and medical services, several participants were optimistic that the culture is changing. As two respondents from integrated companies reported:

> We're going to break down that culture over time, but we can't do that unless we have a business case to them that says this is what it does for you, because they're not receptive to that. But you can see that culture changing, The barrier is getting the audience with a health insurance company that says, Oh, yeah, dentists and oral health care professionals are extenders of a primary care message of prevention. They're good at it, too.

> In our relationship with the medical company, we've been having conversations about what should we be doing in a dental office for people's overall health, not just our dental health because the medical plan's been looking at the research that was done where people who go to the dentist on a regular basis have less expensive outcomes on the medical side.

Discussion

We found consistent support from our sample of insurers for the role of dentists in providing tobacco use treatment as a routine part of care. Support was grounded in a broader appreciation for the connection between oral and systemic health and the belief that dentists have a legitimate role in promoting the overall health of patients. Yet our interviews indicate that there are significant barriers to providing reimbursement for tobacco cessation assistance in dental practices. First, there were gaps in knowledge about the body of evidence supporting the effectiveness of smoking cessation interventions delivered by dental professionals that were mentioned as potential barriers to offering provider reimbursement. This residual skepticism is important to address because of the barrier it poses to policy changes within insurance companies and because it serves as a rationale for state policies that limit dentists' scope of practice. These gaps in knowledge, however, can easily be addressed with outreach and education provided by state dental associations and organized dentistry. The economic, structural, and professional barriers that study participants described are more challenging to address. These include a lack of demand for a tobacco benefit from purchasers, patients, and providers, poor integration between the medical and dental health care delivery systems in general, and the insurance industry specifically, and a need for better data on cost-effectivenss or ROI.

Dental insurers were particularly frustrated by the lack of data available to make the financial case for including tobacco use treatment as a benefit in dental settings. Yet, numerous studies have demonstrated that treating tobacco use compares favorably with the cost of routinely reimbursed prevention and chronic disease interventions (Curry, Grothaus, McAfee, & Pabiniak, 1998; Warner, 1998; Warner, Mendez, & Smith, 2004). Moreover, ROI calculations have demonstrated that tobacco dependence treatment provides a timely ROI for employers through savings in health care, increased productivity, reduced absenteeism, and reduced life insurance payouts (Warner, 1998). Arguably these savings are harder for health plans to predict given member turnover and the absence of economic benefits resulting from productivity gains. However, private and public insurers of medical care are increasingly offering insurance coverage and reimbursement to physicians for cessation assistance (CDC, 2010; McMenamin et al., 2008).

The separate evolution of medicine and dentistry has largely left dentistry out of cost and other policy-related analyses that impact decisions about health benefits, provider reimbursement, and patient care. Thus, despite extensive data supporting the cost-effectiveness of tobacco use treatment, our interviews suggest that dental insurers do not view this data as relevant to the dental care setting (Curry et al., 1998; Warner, 1998; Warner et al., 2004). These findings support the need for well-designed trials to document the cost-effectiveness of these services in dental care settings.

Insurers also believed that the segregation of medical and dental insurance markets itself presents another challenge in demonstrating the ROI for treating tobacco use. This was the case even in companies that offer both dental and medical benefits. Insurers who were with companies that offer dual benefits explained that any gains associated with a tobacco benefit on the "dental side" would accrue to the "medical side." From the dental insurer's perspective, the division between medical and dental insurance product lines has created a disincentive to expand dentists' scope of service to include tobacco use treatment. Viewed in the context of the Patient-Centered Medical Home movement with its emphasis on coordinated and cost-effective care, as well as the growing literature linking oral and systemic health, continued exclusion of oral health professionals in new models of care delivery represents a missed opportunity for improving preventive health care delivery and improved patient outcomes (Glick, 2009).

Insurers also described a lack of integration of clinical information systems, even among the dual insurers, as another barrier to studying the benefits associated with preventive care in dental settings. However, a recent study demonstrated the feasibility of linking dental and medical health care records between a large dental carrier and an integrated health plan to assess the impact of oral disease on overall health (Theis et al., 2010). Additional research is needed to inform policy changes related to tobacco use treatment, and preventive care more generally, in dental settings. It may be possible to use similar large insurance company databases to gain a greater understanding of the intersection of medical and dental services and the potentially bidirectional relationship between dental and medical health treatment and cost and outcomes (Theis et al., 2010).

Statewide Medicaid programs have started to break down disciplinary and scope of practice-related barriers to improving health outcomes. For example, Medicaid programs are reimbursing pediatricians and family physicians to provide preventive dental services (Rozier et al., 2003).

There are a few pioneer programs serving Medicaid patients that offer reimbursement to dental for tobacco cessation counseling services. In Pennsylvania, dentists are reimbursed $15 for each 15-min counseling sessions they provide and can

provide up to 70 sessions per person each year (Pennsylvania Department of Public Welfare, 2008). In Oregon, contracted dental care organizations are required to offer cessation services in line with the 2As and an R model (Ask, Advise, and Refer); however, reimbursement for this service is included in capitated fee. Both programs affirm the importance of dental visits as an opportunity for preventive care (Oregon Dental Service, 2011). There is a need to study impact of these novel preventive care and reimbursement models in dental settings, as well as the effect of interdisciplinary care processes and integrated clinical information technology systems to improve health outcomes (Glick, 2009).

There were several limitations. First, the small sample and qualitative approach did not allow for adequate descriptions of how stand-alone dental insurers differed from integrated companies. Second, only private insurers were included in these interviews. We might expect public programs (Medicaid, Medicare) to offer a different view of reimbursement. Third, to ensure confidentiality, we also did not obtain a large amount of information about characteristics of the companies interviewed that might influence decisions about benefits and provider reimbursement. Given the opportunities for studying novel reimbursement models and enhanced referral patterns among the dual insurers, this is an important area for further study.

Fourth, when asking insurers to suggest a reimbursement rate for screening and counseling, we used the following question: "Suppose that smoking cessation services required, on average, 20 minutes of dentists' time for every tested patient. What would you regard as a reasonable reimbursement rate for this service?" The 20-min time frame was used to maintain comparability with the time frame tested for the main research question that assessed potential reimbursement for HIV testing in dental offices. However, 20 min is significantly longer than the brief intervention recommended by the PHS Guidelines (~5 min, Fiore, 2008). This may have resulted in higher rate estimates than if we had used the time frame suggested in the Guideline.

Finally, although we attempted to interview the Chief Dental Officer at each of these companies, the study participants had a wide range of roles. However, the attitudes toward dentist's role in treating tobacco use and the challenges to implementing a tobacco benefit in dental settings were similar across the interviews. Most companies have not seriously considered offering reimbursement for tobacco cessation services. Their views of the barriers could change as they further investigate issues of implementation.

While dental insurers acknowledged the important role dentists have in providing cessation activities as part of routine oral health care, these interviews exposed significant barriers to capitalizing on dental visits as preventive care opportunities. That this was true even in the case of tobacco use treatment was surprising given that smoking and the use of smokeless tobacco clearly effects oral health, and treatment of this high risk behavior is well within the scope of dental practice. However, there also was evidence that medical and dental insurers are starting to have conversations that may lead to greater integration of oral and systemic health care and opportunities for leveraging the dental visit to identify people in need of primary prevention strategies (Pollack, Metsch, & Abel, 2010). As public and private insurers increasingly expand tobacco benefits to ensure that smokers have access to evidence based treatment options, the dental visit should be viewed as a vital opportunity for reaching smokers.

Supplementary Material

Supplementary material can be found online at http://www.ntr.oxfordjournals.org/.

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Declaration of Interests

None declared.

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