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## **FINDINGS**

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## FINDINGS: About This Research

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### About This Study

This mixed mode survey (regular mail and Internet) of member practices was conducted on behalf of the American Academy of Cosmetic Dentistry (AACD) to better understand the dynamics of the cosmetic dentistry market and support projected estimates of the total size (in terms of both procedures and revenues) of this market. It was conducted by Readex Research, an independent research firm.

The survey was designed jointly by AACD staff and Readex Research. The invitation to participate was emailed to a systematically selected sample of 3,000 practices, representing 5,820 such practices among the AACD domestic membership. Data was collected between September 27 and November 14, 2007.

A total of 626 sample members responded (21% response rate). Because a significant fraction of those invited to participate chose not to do so, the possible effects of nonresponse bias on these results should be considered.

Of the 626 total respondents, 597 indicated their practices generated revenues from cosmetic dentistry procedures in 2006. Based on this reduction, the number of cosmetic dentistry practices represented by these respondents was adjusted to 5,550.<sup>1</sup>

The survey instrument included several questions about revenues and practice characteristics that were critical to the data analysis. Respondents not answering all of these questions were removed from the tabulation. The survey results in this report represent the data from the remaining 357 usable responses.

Percentages based on all 357 responses are subject to a margin of error of  $\pm 5.0\%$  at the 95% confidence level. Percentages calculated on smaller tabulation bases are subject to more statistical variability.

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<sup>1</sup>Calculated as the ratio of respondents confirming their cosmetic dentistry status (597) divided by all respondents (626), multiplied by the number of practices represented in the sample (5,820), rounded down to the nearest integer.

### About This Report

This initial *Findings* section provides a narrative summary of key survey results, with selected comparisons between important segments of the population of interest.

The *Tables* section of the report presents the complete set of survey results.

The *Appendix* provides additional details of survey methodology, as well as a copy of the survey instrument itself.

This report was prepared for AACD by Readex Research in accordance with accepted research standards and practices. This report contains all survey results that were provided to AACD.

## FINDINGS: Practice Profile

The data in this report represent the responses of 357 respondents, answering for a projected 5,550 cosmetic dentistry practices in the United States.

Each of these respondents confirmed their practice's status by indicating they generated revenues from one or more cosmetic dentistry categories in 2006.

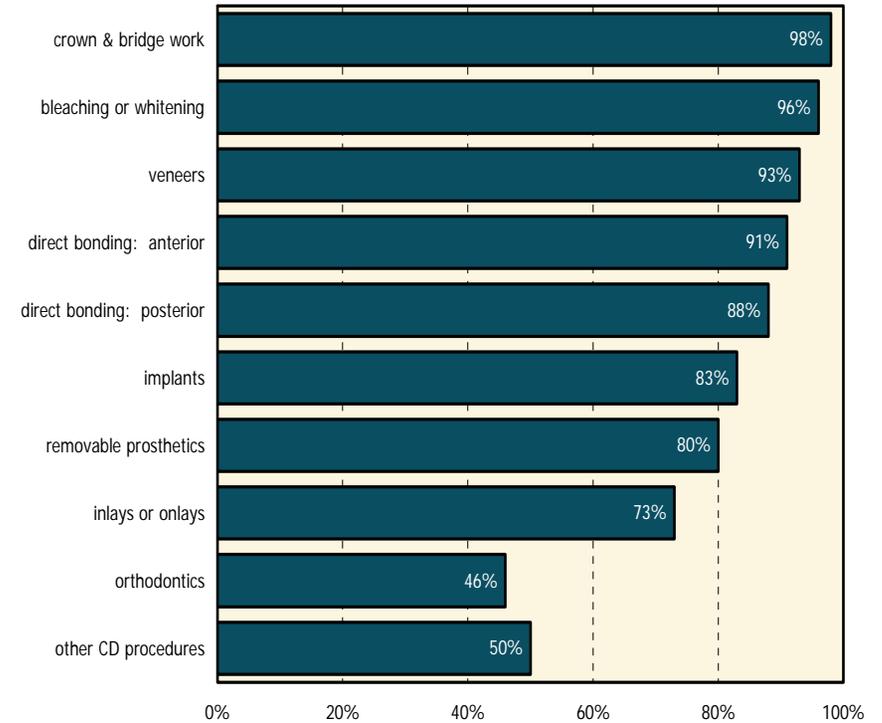
As shown to the right, several offerings are near ubiquitous among practices: crown & bridge work, bleaching or whitening, veneers, direct bonding.

A large majority of practices are also engaged in working with implants, removable prosthetics, and inlays or onlays.

About half of cosmetic dentistry practices generated revenues in 2006 from orthodontics and/or other cosmetic dentistry procedures not explicitly listed on the survey.

Estimates of the number of procedures related to these categories performed and revenue generated will follow later in this report.

**Exhibit 1**  
**Cosmetic Dentistry Categories Generating Revenues in 2006**



base: 357 reporting CD practices

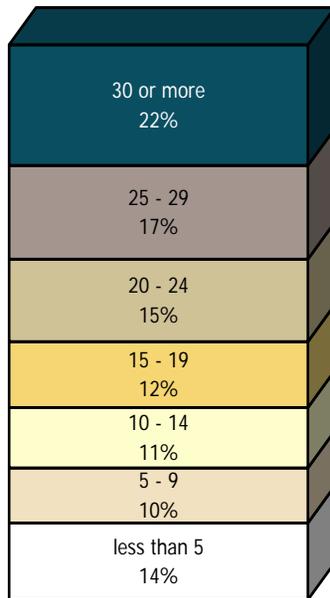
## FINDINGS: Practice Profile

Most cosmetic dentistry practices are well established within their communities. About three-fourths (77%) have been in operation for at least 10 years, including 54% in operation for 20 years or more, and 22% at 30 years or more.

Newer practices (in operation less than 5 years) represent 14% of the total. Only 1% have been in operation for less than 1 year.

The typical (median) practice has been in operation for 21 years.

### Exhibit 2 Number of Years in Operation

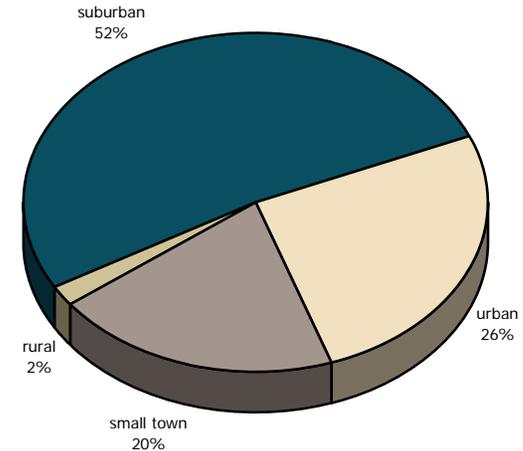


mean: 19.1 years  
median: 21 years

base: 357 reporting CD practices

About half (52%) of cosmetic dentistry practices report the type of community in which they are located as suburban. Most of the remainder are about equally divided between urban settings (25%) and small towns (20%). Only 2% indicated being located in rural communities.

### Exhibit 3 Community Setting

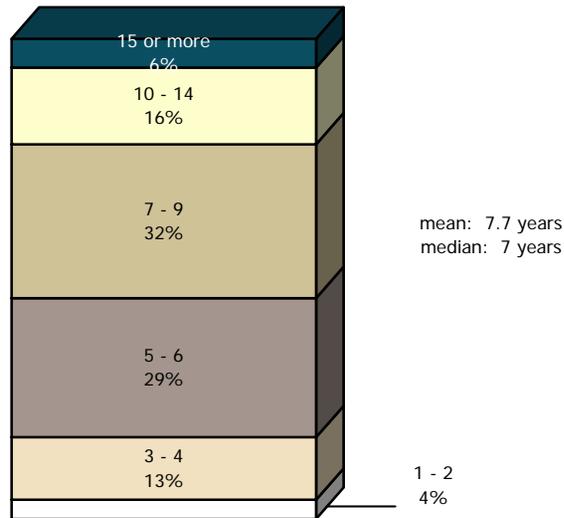


base: 356 reporting CD practices

## FINDINGS: Practice Profile

Respondents were asked to indicate how many people, in total (dentists and others), were employed by their practices, both full- and part-time, in 2006. Smaller practices (less than 5 employees) represent 17% of the total. Those employing 10 or more individuals make up about one in five (22%) practices. Most practices are between 5 and 9 employees, with the average reported at 7.7.

### Exhibit 4 Number of Employees

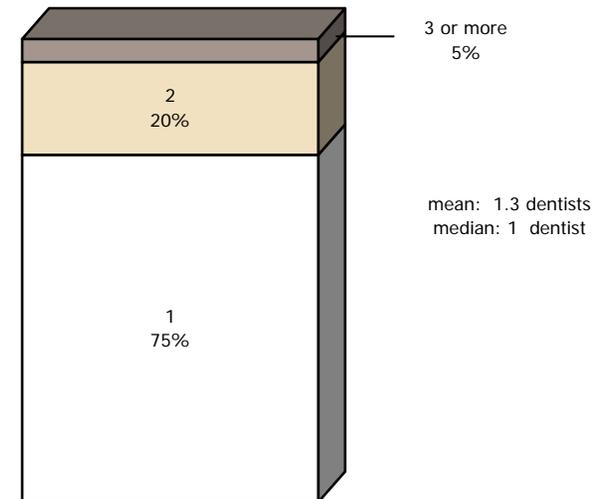


base: 357 reporting CD practices

To calculate a projected number of employees for all cosmetic dentistry practices in the US in 2006, we must make two assumptions: 1) the distribution of responses for the respondent base is the same as for the actual population of practices in the US, and 2) no double counting occurred between practices. Then the average number of employees (7.7) is multiplied by the number of practices represented in the sample (5,550), resulting in a rounded estimate of approximately 42,700.

Respondents were also asked to indicate how many dentists performing cosmetic dentistry procedures were employed in their practices in 2006. The majority of respondents (75%) indicated a single dentist performing these procedures. Most of the remainder (20%) reported two dentists. 5% had three or more dentists performing cosmetic dentistry procedures in their practices. The overall average for practices is 1.3 cosmetic dentists.

### Exhibit 5 Number of Dentists Performing Cosmetic Dentistry Procedures



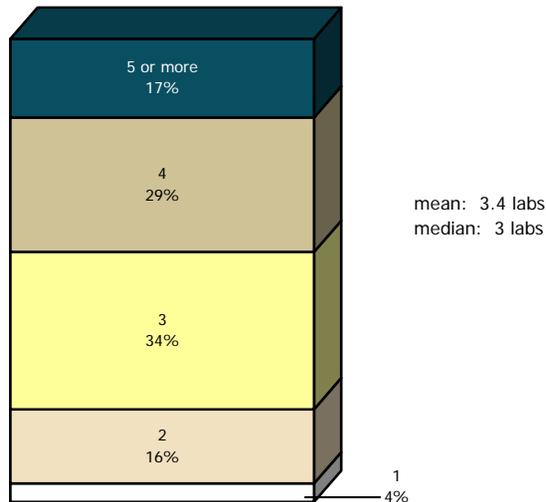
base: 357 reporting CD practices

Employing the previously defined methodology for projection to the entire market, the estimated number of dentists performing cosmetic dentistry procedures in the United States in 2006 was approximately 7,200.

## FINDINGS: Practice Profile

The use of multiple laboratories by cosmetic dentistry practices is common. Only 4% indicated their practices used a single laboratory in 2006. The majority (63%) indicated use of three or four labs. 17% used five or more laboratories. The average number used is 3.4.

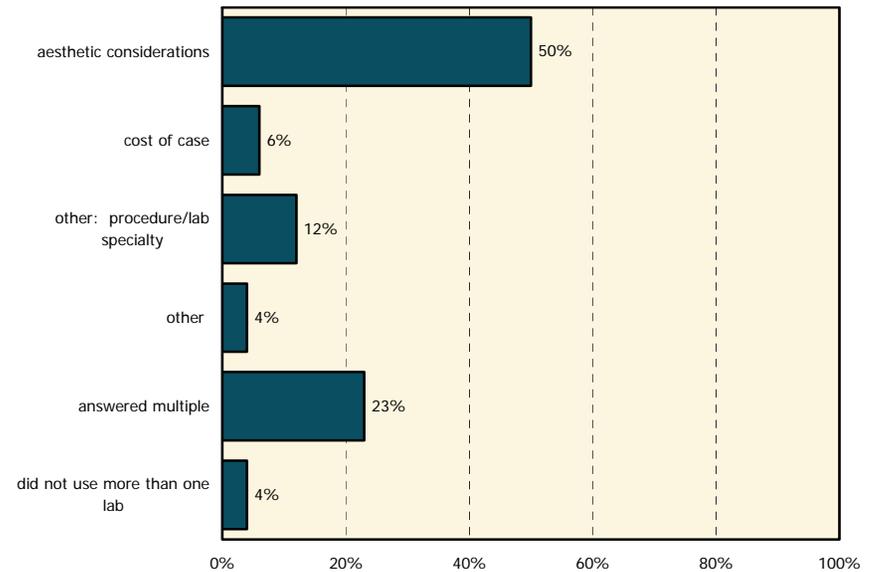
### Exhibit 6 Number of Laboratories Used



base: 356 reporting CD practices

Those using more than one laboratory were asked to indicate their primary consideration in deciding which laboratory will be used for each case. By far, aesthetic considerations was the top mention (50%). Only 6% indicated cost of the case. 17% wrote in "other" considerations besides these two, most commonly (12%) the type of procedure/the lab's specialty as the deciding factor. 23% of respondents indicated multiple responses.

### Exhibit 7 Primary Considerations for Which Laboratory Is Used



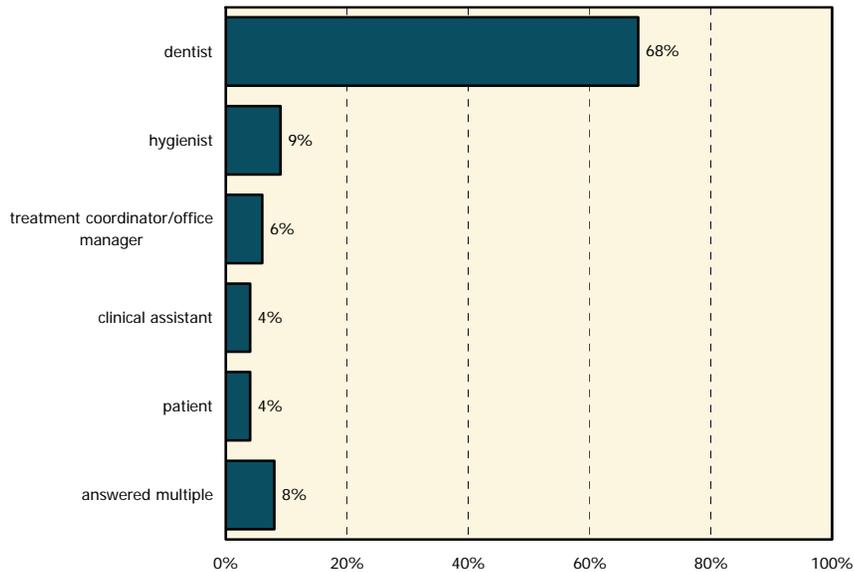
base: 354 reporting CD practices

Most practices appear to be satisfied with the quality of aesthetic work they receive from their laboratories. 70% indicated they do not have trouble obtaining laboratory work of the aesthetic quality they desire. However, a substantial minority (30%) indicated they do have such trouble.

## FINDINGS: Practice Profile

Instigation of new business appears to be driven by practice staff, rather than by the patients. When asked who is the primary individual initiating dialog regarding cosmetic dental procedures in their practices, only 4% of respondents indicated the patients. Instead, more than two-thirds (68%) indicated the dentist. Hygienists (9%) and treatment coordinators/office managers (6%) also play a more prominent role than the patients in starting the dialog on pursuing cosmetic dentistry options.

**Exhibit 8**  
Primary Individual Initiating Dialog about Cosmetic Dental Procedures

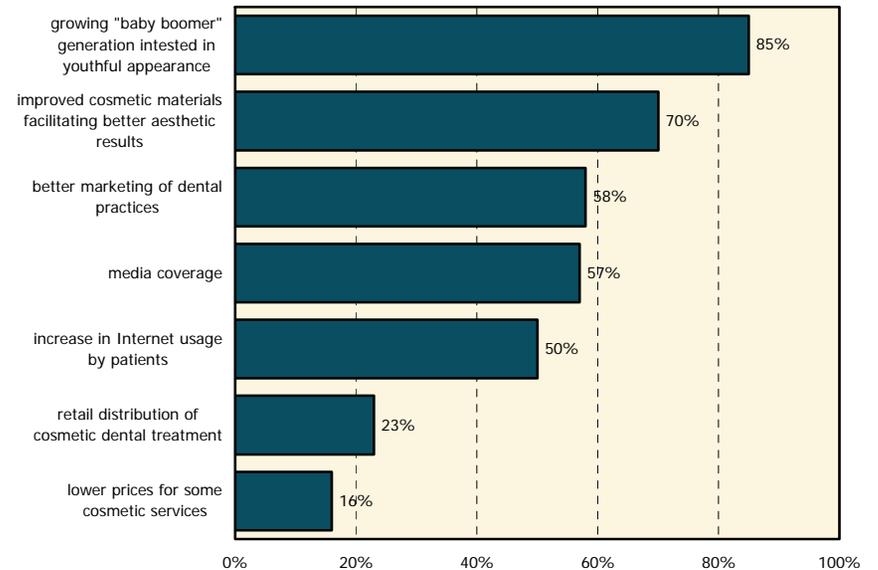


base: 355 reporting CD practices

Respondents believe the continued demand for cosmetic dentistry is primarily driven by patients' aesthetic concerns and preferences, rather than by marketing or lower costs for these procedures alone.

Using a 5-point scale, where 5 = extremely important and 1 = not important, respondents were asked to indicate how important various factors are in driving demand at their practices. Factors such as lower prices and retail distribution of cosmetic dental treatment were deemed important (defined as rating of 4 or 5) by fewer than one in four. In contrast, factors relating to appearance and aesthetics were indicated by 70% or more.

**Exhibit 9**  
Importance of Factors in Driving Cosmetic Dentistry Demands  
(rated 4 or 5 on a 5-point scale where 5 = very important; 1 = not important)



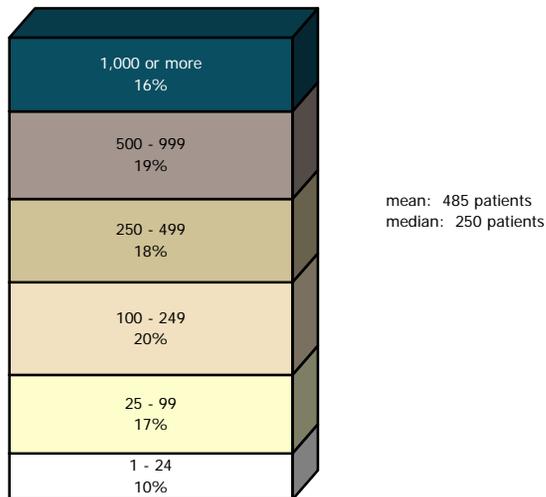
base: those answering each

## FINDINGS: Patient Profile

The next set of results address the characteristics of the patients at respondent practices.

Respondents were asked to indicate the number of patients for cosmetic dentistry procedures their practices had in 2006 (counting multiple visits by the same patients as one visit). The results show the presence of practices of various sizes. At the top end of the distribution, 16% of practices had 1,000 or more patients. At the opposite end of the spectrum, 10% had fewer than 25 patients. The average number of patients per practice in 2006 was 485, the median number was 250.

**Exhibit 10**  
Number of Patients in 2006



base: 324 reporting CD practices

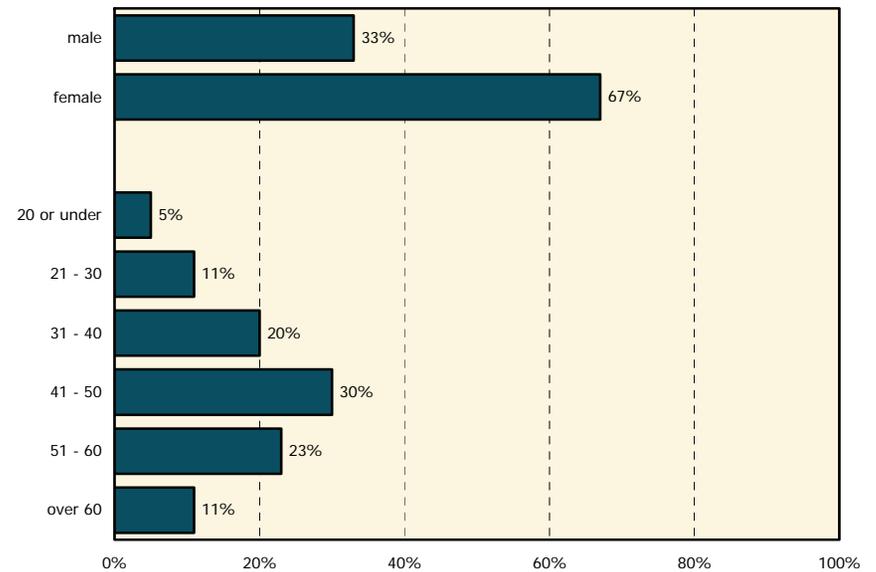
The total number of patients in 2006, projected to all 5,550 practices represented in the survey sample, is approximately 2.69 million. This represents a 12.8% increase over practice reports of patients in 2005. Looking ahead to 2007, based on respondent projections, another increase, of approximately 10.9%, is foreseen.

Respondents were asked to indicate the percentage of their patients in 2006 by gender and by six age categories.

On average, about two-thirds of cosmetic dentistry patients were female (67%), one-third were male (33%).

Regarding distribution by age, the majority of patients (53%), on average, are between the ages of 41 and 60. About one in six (16%) are 30 or younger. And about one in ten (11%) are over 60.

**Exhibit 11**  
Percentage of Patients by Gender and Age (on Average)



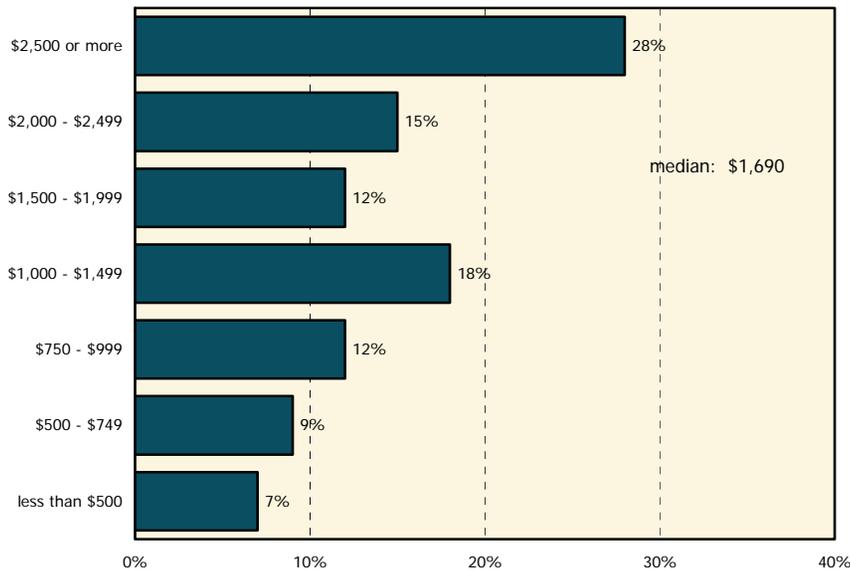
base: those answering each

## FINDINGS: Patient Profile

Respondents were asked to indicate their practice's average production per scheduled cosmetic dentistry patient visit in 2006. About one out of four respondents (28%) indicated the highest category available on the survey, \$2,500 or more. A fairly even distribution of responses was received for the dollar ranges immediately below.

The median production per scheduled visit was \$1,690. (Due to the high proportion of respondents in the top category, the sample mean of \$1,640 likely understates the true population mean.)

**Exhibit 12**  
Average Production Per Scheduled Patient Visit in 2006



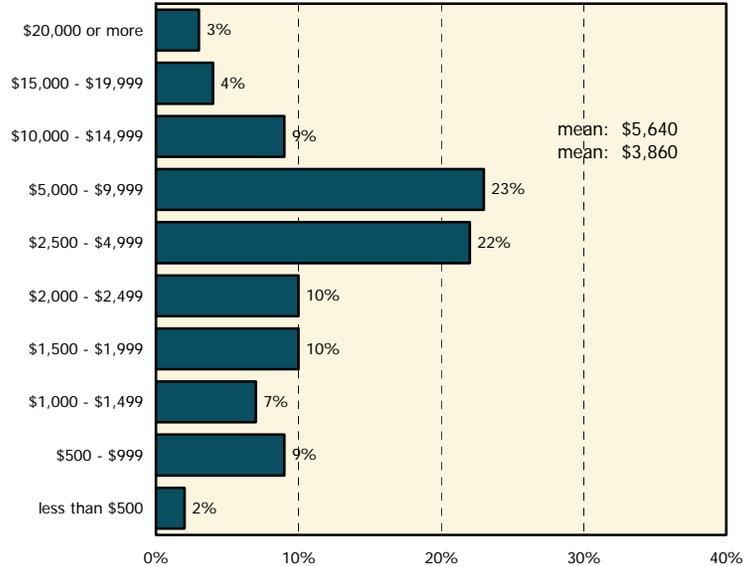
base: 346 reporting CD practices

Respondents were also asked to indicate how much the average cosmetic dentistry patient at their practices spent on these services in 2006.

A wide range of responses were received. At the high end, 3% of practices indicated an average amount spent per patient of \$20,000 or more. At the other extreme, 2% of practices reported average patient costs of less than \$500. The modal (most often indicated) categories were \$5,000 - \$9,999 (23%) and \$2,500 - \$4,999 (22%).

The mean amount spent by the average patient in 2006 was \$5,640 and the median was \$3,860.

**Exhibit 13**  
Amount Spent by Average Patient in 2006



base: 347 reporting CD practices

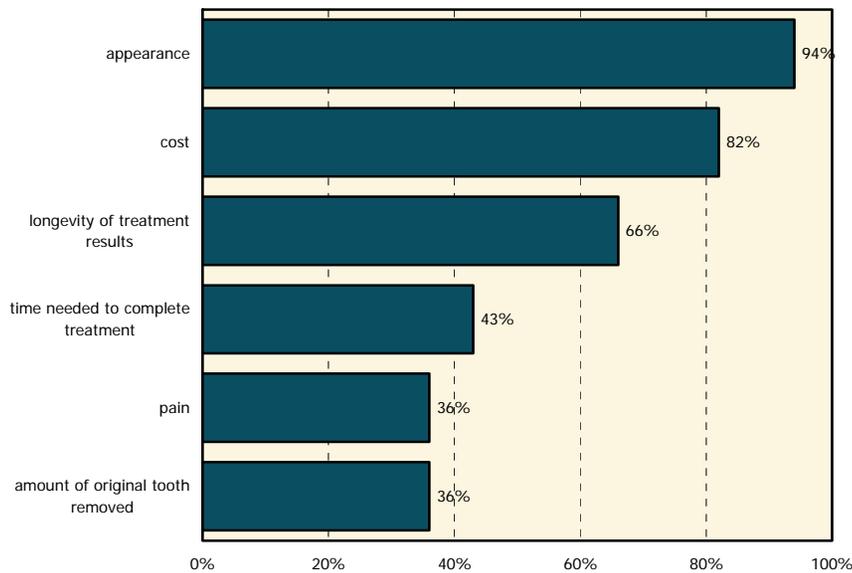
87% of practices indicated they offered their cosmetic dentistry patients third party external financing services in 2006.

## FINDINGS: Patient Profile

Using a 5-point scale, where 5 = great concern and 1 = not a concern, respondents were asked to rate how much of a concern various issues are to patients when they consider a cosmetic dentistry procedure.

Defining ratings of 4 or 5 as a true concern, at the top of the list is appearance, indicated by 94%. Indicated by fewer, but still substantial majorities, are cost (82%) and longevity of treatment results (66%). Other concerns, such as treatment time, pain, and original tooth integrity were mentioned by fewer than half.

**Exhibit 14**  
**Level of Concern for Issues Surrounding Cosmetic Procedures**  
 (rated 4 or 5 on a 5-point scale where 5 = great concern; 1 = not a concern)

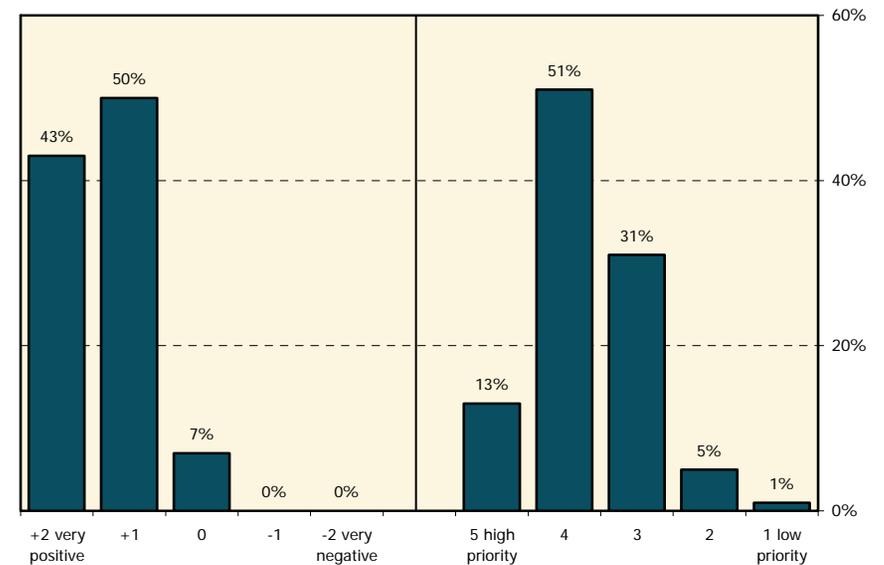


base: those answering each

There is no evidence of a stigma associated with cosmetic dentistry, at least among the patient population. Using a 5-point scale where +2 = very positively and -2 = very negatively, respondents were asked to rate their patients' aggregate perception. 93% indicated positive ratings (+1 or +2) and fewer than one-half of one percent (0%) indicated low ratings (-1 or -2).

Patients are less enthusiastic when it comes to how high they prioritize cosmetic dentistry. Using a 5-point scale, this time where 5 = high priority and 1 = not a priority, 64% indicated high ratings (4 or 5). Only 6% provided low ratings (1 or 2). But there was a substantial percentage (31%) providing the more ambivalent middle rating (3).

**Exhibit 15**  
**Patient Perception and Prioritization of Cosmetic Dentistry**



base: those answering each

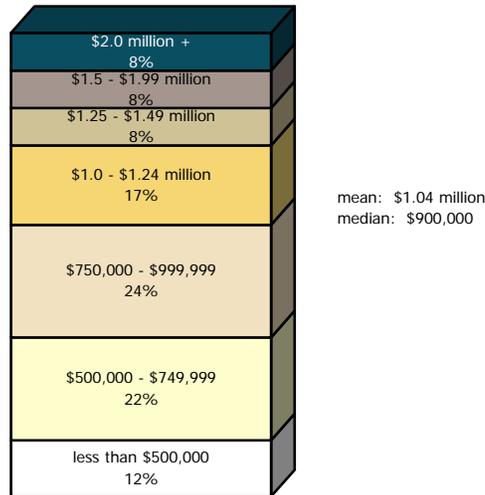
## FINDINGS: Practice Activity

The next set of results address practice activity, specifically revenues and types of procedures performed.

The average practice reported total revenues for all dentistry procedures (both cosmetic and non-cosmetic) in 2006 at \$1.04 million. The median report was \$900,000. The similarity of these two figures indicates few extreme values. Indeed, the distribution of responses is relatively compressed. Two-thirds of practices reported total revenues of between \$500,000 and \$1.49 million. At the extremes, 8% were at \$2 million or more and 12% at less than \$500,000.

### Exhibit 16 2006 Total Revenues

All Procedures (Both Cosmetic and Non-Cosmetic)

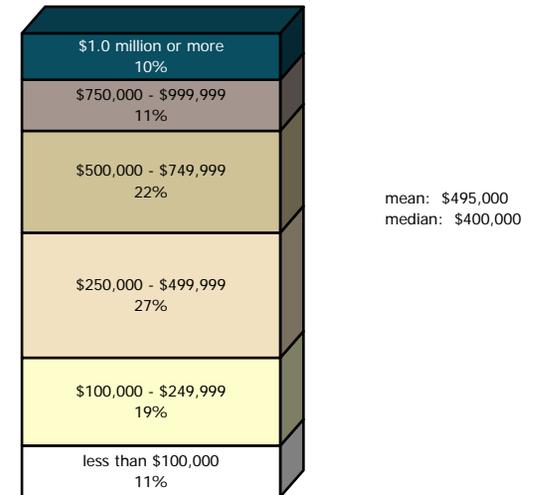


base: 357 reporting CD practices

The total dentistry-related revenues for all 5,550 practices in 2006 projects to \$5.76 billion, based on the average report.

Respondents were also asked to report their practice's total revenues for cosmetic dentistry procedures alone in 2006. On average, these revenues represent just less than half of their practice's total revenues, \$495,000. The median report was \$400,000. At the categorical extremes, one in ten practices had \$1.0 million or more in cosmetic dentistry revenues in 2006, 11% had less than \$100,000.

### Exhibit 17 2006 Cosmetic Dentistry Revenues



base: 357 reporting CD practices

The total cosmetic dentistry revenues for all 5,550 practices represented in the sample projects to \$2.75 billion, based on the average report.

Again, based on average reports, the overall revenues generated from cosmetic dentistry increased since 2005, by approximately 15.0%. Looking ahead to 2007, practices predict another increase, by approximately 11.0%, on average, over 2006 levels.

## FINDINGS: Practice Activity

Respondents were asked to report the number of various cosmetic dentistry procedures their practice performed in 2006. The average report for practices, by procedure, is at right. Details on total number performed in 2006 and relative changes from 2005 to 2007 follow.

**Bleaching/Whitening:** estimated number performed in 2006: 389,000.  
Change from 2005 to 2006<sup>2</sup>: 57% increased, 24% no change, 18% decreased.  
Expected change from 2006 to 2007<sup>3</sup>: 49% increase, 24% no change, 27% decrease.

**Crown & Bridge Work:** estimated number performed in 2006: 1.85 million.  
Change from 2005 to 2006: 69% increased, 20% no change, 11% decreased.  
Expected change from 2006 to 2007: 57% increase, 22% no change, 21% decrease.

**Direct Bonding - Posterior:** estimated number performed in 2006: 2.63 million.  
Change from 2005 to 2006: 53% increased, 27% no change, 16% decreased.  
Expected change from 2006 to 2007: 51% increase, 30% no change, 17% decrease.

**Direct Bonding - Anterior:** estimated number performed in 2006: 1.30 million.  
Change from 2005 to 2006: 50% increased, 29% no change, 20% decreased.  
Expected change from 2006 to 2007: 55% increase, 27% no change, 17% decrease.

**Implants:** estimated number performed in 2006: 149,900.  
Change from 2005 to 2006: 60% increased, 23% no change, 7% decreased.  
Expected change from 2006 to 2007: 64% increase, 14% no change, 13% decrease.

**Inlays or Onlays:** estimated number performed in 2006: 466,200.  
Change from 2005 to 2006: 51% increased, 20% no change, 15% decreased.  
Expected change from 2006 to 2007: 46% increase, 20% no change, 21% decrease.

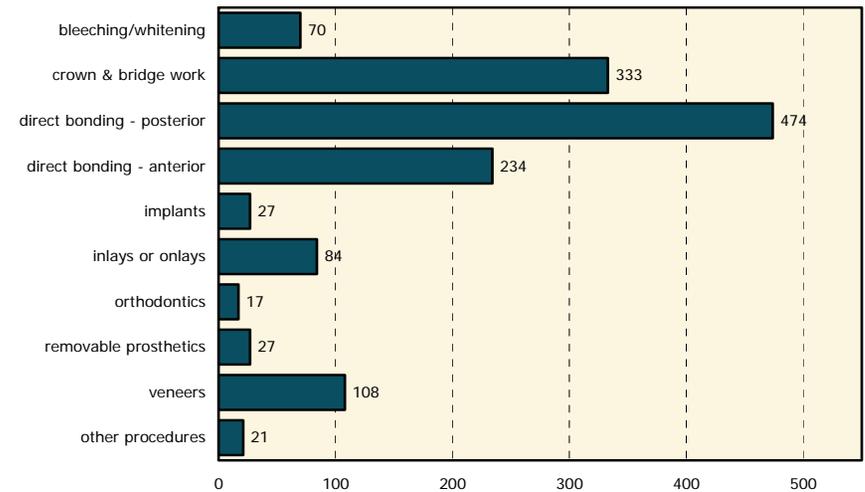
**Orthodontics:** estimated number performed in 2006: 94,400.  
Change from 2005 to 2006: 40% increased, 10% no change, 7% decreased.  
Expected change from 2006 to 2007: 43% increase, 9% no change, 9% decrease.

<sup>2</sup>Percentage of practices indicating they did more, the same amount, or fewer in 2006 compared to 2005. Not shown, the percentage of practices not doing any, in both years. The quality of data collected does not support estimates of overall percentage increase/decrease by procedure between years.

<sup>3</sup>Percentage of practices indicating they expect to do more, the same amount, or fewer in 2007 compared to 2006. Not shown, the percentage of practices not doing any, in both years. The quality of data collected does not support estimates of overall percentage increase/decrease by procedure between years.

## Exhibit 18

**Average Number of Procedures Performed Per Practice in 2006**  
by Procedure



base: 184 reporting CD practices

**Removable Prosthetics:** estimated number performed in 2006: 149,900.  
Change from 2005 to 2006: 42% increased, 32% no change, 19% decreased.  
Expected change from 2006 to 2007: 36% increase, 31% no change, 27% decrease.

**Veneers:** estimated number performed in 2006: 599,400.  
Change from 2005 to 2006: 66% increased, 15% no change, 18% decreased.  
Expected change from 2006 to 2007: 61% increase, 14% no change, 23% decrease.

**Other Procedures:** estimated number performed in 2006: 116,600.  
Change from 2005 to 2006: 15% increased, 14% no change, 1% decreased.  
Expected change from 2006 to 2007: 15% increase, 13% no change, 3% decrease.

## FINDINGS: Practice Activity

Finally, respondents were asked to divide their reported revenues from cosmetic dentistry according to each procedure. The average dollar amount generated per practice for each procedure in 2006 is shown in the chart at right. Details on total dollar amount generated by all practices and relative changes from 2005 to 2007 follow.

**Bleaching/Whitening:** estimated revenue from in 2006: \$138.8 million.  
Change from 2005 to 2006<sup>4</sup>: 76% increased, 4% no change, 17% decreased.  
Expected change from 2006 to 2007<sup>5</sup>: 70% increase, 5% no change, 22% decrease.

**Crown & Bridge Work:** estimated revenue from in 2006: \$1.08 billion.  
Change from 2005 to 2006: 73% increased, 6% no change, 20% decreased.  
Expected change from 2006 to 2007: 71% increase, 6% no change, 22% decrease.

**Direct Bonding - Posterior:** estimated revenue from in 2006: \$383.0 million.  
Change from 2005 to 2006: 66% increased, 7% no change, 16% decreased.  
Expected change from 2006 to 2007: 63% increase, 5% no change, 20% decrease.

**Direct Bonding - Anterior:** estimated revenue from in 2006: \$238.7 million.  
Change from 2005 to 2006: 67% increased, 7% no change, 18% decreased.  
Expected change from 2006 to 2007: 63% increase, 5% no change, 23% decrease.

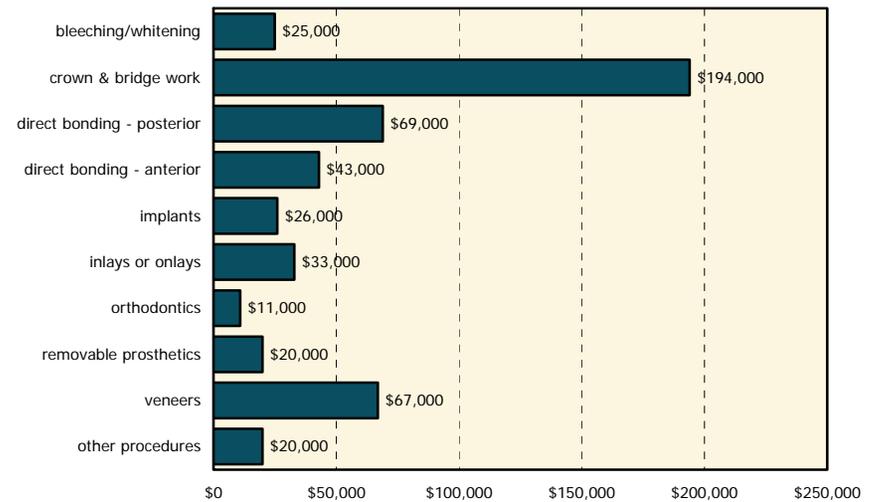
**Implants:** estimated revenue from in 2006: \$144.3 million.  
Change from 2005 to 2006: 70% increased, 6% no change, 5% decreased.  
Expected change from 2006 to 2007: 70% increase, 4% no change, 11% decrease.

**Inlays or Onlays:** estimated revenue from in 2006: \$183.2 million.  
Change from 2005 to 2006: 56% increased, 4% no change, 14% decreased.  
Expected change from 2006 to 2007: 52% increase, 5% no change, 19% decrease.

<sup>4</sup>Percentage of practices indicating they generated more, the same amount, or fewer revenues in 2006 compared to 2005. Not shown, the percentage of practices not doing any, in both years. The quality of data collected does not support estimates of overall percentage increase/decrease by procedure between years.

<sup>5</sup>Percentage of practices indicating they expect to generate more, the same amount, or fewer revenues in 2007 compared to 2006. Not shown, the percentage of practices not doing any, in both years. The quality of data collected does not support estimates of overall percentage increase/decrease by procedure between years.

**Exhibit 19**  
**Average Amount of Revenue Generated Per Practice in 2006**  
by Procedure



base: 275 reporting CD practices

**Orthodontics:** estimated revenue from in 2006: \$61.1 million.  
Change from 2005 to 2006: 32% increased, 2% no change, 6% decreased.  
Expected change from 2006 to 2007: 36% increase, 2% no change, 10% decrease.

**Removable Prosthetics:** estimated revenue from in 2006: \$111.0 million.  
Change from 2005 to 2006: 60% increased, 5% no change, 17% decreased.  
Expected change from 2006 to 2007: 56% increase, 3% no change, 20% decrease.

**Veneers:** estimated revenue from in 2006: \$371.9 million.  
Change from 2005 to 2006: 74% increased, 5% no change, 15% decreased.  
Expected change from 2006 to 2007: 69% increase, 5% no change, 22% decrease.

**Other Procedures:** estimated revenue from in 2006: \$111.0 million.  
Change from 2005 to 2006: 29% increased, 3% no change, 10% decreased.  
Expected change from 2006 to 2007: 27% increase, 2% no change, 14% decrease.

## FINDINGS: Executive Summary

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US cosmetic dentistry practices are typically well-established in their communities (21 years). About half are in suburban areas and the other half are about evenly split between urban areas and small towns.

On average, two-thirds of patients are female, one-third male. The majority of patients are between the ages of 41 and 60. About one in six are 30 or younger. And about one in ten are over 60.

Instigation of new business appears to be primarily driven by practice staff, rather than by the patients. The continued demand for cosmetic dentistry seems to be primarily driven by patients' aesthetic concerns and preferences, rather than by marketing or lower costs for these procedures alone. Appearance and cost are the primary patient concerns, much more so than pain or time needed for the treatment.

There is no evidence of a stigma associated with cosmetic dentistry, at least among the patient population. However, getting such work done is not always the highest of priorities for them.

The survey sample represents individual cosmetic dentistry practices among those in the AACD domestic membership. The estimated count of these practice is 5,550. Following are the average reports per practice and estimates about the overall size of the market in 2006 for various practice characteristics and activities.

- Number of cosmetic dentists 2006: 1.3 per practice, on average; 7,200 total.
- Number of employees (including dentists): 7.7 per practice, on average; 42,700 total.
- Number of cosmetic dentistry patients: 485 on average, 2.69 million total. This average practice number represents a 12.8% increase over 2005. In 2007, respondents predict an additional increase of 10.9%.
- Total dentistry-related revenue: \$1.04 million on average; \$5.76 billion total.
- Cosmetic dentistry related revenue: \$495,000 on average; \$2.75 billion total. This average practice revenue represents a 15.0% increase over 2005. In 2007, respondents predict an additional increase of 11.0%.

Respondents also reported on the number of procedures and revenue produced by each in 2006. Average practice reports and the total market estimates follow:

### **Bleaching/Whitening:**

Number performed in 2006: 70 on average; 389,000 total.  
Revenues in 2006: \$25,000 on average; \$138.8 million total.

### **Crown & Bridge Work:**

Number performed in 2006: 333 on average; 1.85 million total.  
Revenues in 2006: \$194,000 on average; \$1.08 billion total.

### **Direct Bonding - Posterior:**

Number performed in 2006: 474 on average; 2.63 million total.  
Revenues in 2006: \$69,000 on average; \$383.0 million total.

### **Direct Bonding - Anterior:**

Number performed in 2006: 234 on average; 1.30 million total.  
Revenues in 2006: \$43,000 on average; \$238.7 million total.

### **Implants:**

Number performed in 2006: 27 on average; 149,900 total.  
Revenues in 2006: \$26,000 on average; \$144.3 million total.

### **Inlays or Onlays:**

Number performed in 2006: 84 on average; 466,200 total.  
Revenues in 2006: \$33,000 on average; \$183.2 million total.

### **Orthodontics:**

Number performed in 2006: 17 on average; 94,400 total.  
Revenues in 2006: \$11,000 on average; \$61.1 million total.

### **Removable Prosthetics:**

Number performed in 2006: 27 on average; 149,900 total.  
Revenues in 2006: \$20,000 on average; \$111.0 million total.

### **Veneers:**

Number performed in 2006: 108 on average; 599,400 total.  
Revenues in 2006: \$67,000 on average; \$371.9 million total.

### **Other Procedures:**

Number performed in 2006: 21 on average; 116,600 total.  
Revenues in 2006: \$20,000 on average; \$111.0 million total.