

Tidbit 17: June 2004
Estimating Lifetime Costs of a Cavity
DENTAL DATA & ANALYSIS CENTER

Introduction:

Using data from the DAC warehouse, we modeled restorative, endodontic and extraction costs on a per-tooth basis to estimate the average lifetime costs (using allowed amounts) of caries. We limited these estimates to the cumulative costs incurred by age 79. For simplicity, we did not estimate cost related to prevention and diagnosis.

We asked:

- What are the lifetime treatment costs related to caries?

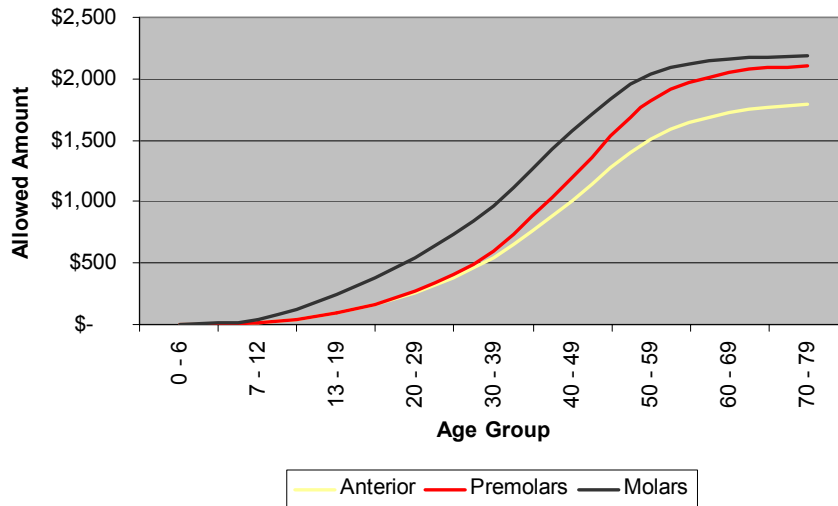
Methods:

Since we do not have enough history in our database to follow teeth for 79 years, we estimated the lifetime costs by looking at the incidence of the specified treatments among tooth and age groups over specific time increments. We grouped outcomes and costs by tooth group (anterior, molars, premolars) and age groups (0-6, 7-12, 13-19, 20-29...70-79). Next, we calculated the 5 year incidence of outcomes by tooth and age group and multiplied this by the number of years in each age group and the costs for calendar year 2003. These costs were summed for each age and tooth group. We did not limit this analysis to continuously eligible subscribers.

Conclusions:

The lifetime costs in 2003 dollars for anterior teeth, premolars and molars were \$1,788, \$2,108, and \$2,187 respectively. The lifetime costs compare favorably to a study published by Simonsen et. al. (JADA 1992). where the authors derived an estimate of \$1,811. To our knowledge, this is the first analysis that estimates costs for premolars and anterior teeth.

Cumulative Lifetime Costs 2003 Dollars



Business Relevance:

These data can assist purchasers and Plans to project long-term treatment costs for individuals and groups. These data can be combined with preventive and diagnostic costs to better estimate the overall cost burden associated with a particular subscriber population.

If you would like a more complete copy of the analysis and results, or if you have any feedback or suggestions for refinement of this Tidbit, please send them to Gene Felber, Ph.D., Director of Research, Dental Data and Analysis Center GFelber@DentalDAC.com.