

**EXECUTIVE SUMMARY  
2002 KENTUCKY ADULT ORAL HEALTH SURVEY  
JULY 2003**

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# INTRODUCTION

The 2002 Kentucky Adult Oral Health Survey (KAOHS) was conducted by the University of Louisville School of Dentistry, in conjunction with the Office of Oral Health of the Department for Public Health, Commonwealth of Kentucky, to meet the following specific aims:

- To provide a point-in-time benchmark of the oral health status of adult Kentuckians
- To serve as a starting point for an ongoing surveillance system of adult Kentuckians' oral health status
- To provide information for the assessment of Healthy Kentuckians 2010 objectives
- To develop a comparison to the 1987 Kentucky Oral Health Survey
- To identify the distribution of oral diseases among adult Kentuckians regarding age, sex, income level, and other demographic factors
- To identify problems of access to dental care among adult Kentuckians
- To identify social and personal characteristics that affect the oral health of adult Kentuckians
- To compare the oral health status of adult Kentuckians to other populations

KAOHS was conducted by means of a telephone survey of a random sample of adults (N = 2,066) in each of five regions of the Commonwealth: Western Kentucky, Central Kentucky, Eastern Kentucky, the Louisville Metro area, and Northern Kentucky. The survey was conducted by the University of Louisville Urban Studies Institute during the summer and fall of 2002. The sample size was calculated in a manner similar to that used in the Behavioral Risk Factor Surveillance System (BRFSS), and allows generalizability of the data to the regional level.

Five basic components were included in the survey instrument: demographic information; general health questions; information regarding the utilization of dental services, including reasons for non-utilization; self-reported oral health status using a number of disease and outcome indicators; and knowledge and beliefs concerning the causes of oral cancer. In many cases, questions were used from other surveys to facilitate comparison of results.

A clinical validation component was conducted prior to the final telephone survey in which participant self-reports of oral health status were compared to professional clinical assessments conducted on 250 subjects. These data were used to calculate "correction factors" to account for differences between self and professional reports of oral health status, if needed.

The data presented in this report provide a summary of the survey findings. The first section reflects key findings for the state as a whole, for each individual region, and for location of residence of the respondent (Metropolitan Statistical Area [MSA], small city, or rural). An MSA, as defined in the Census 2000 Geographic Terms and Concepts, is an area that has a large population nucleus, with adjacent communities that have a high degree of economic and social integration with that nucleus. Counties included in Kentucky MSAs are identified in the 1999 Population Estimates of the Kentucky State Data Center. For the purposes of this study, a "small city" is defined as a county in which the largest city is at least 5,000 but which is not included in an MSA. "Rural" is defined as a county in which the largest city is less than 5,000 people. The second section of this document provides a comparison of selected findings by region, location, or other demographic variable of interest.

A detailed description of the methodology and complete report of the findings is available from the Office of Oral Health in the document entitled [Report of Findings: 2002 Kentucky Adult Oral Health Survey](#).

## **Adult Oral Health in the Commonwealth of Kentucky Fact Sheet**

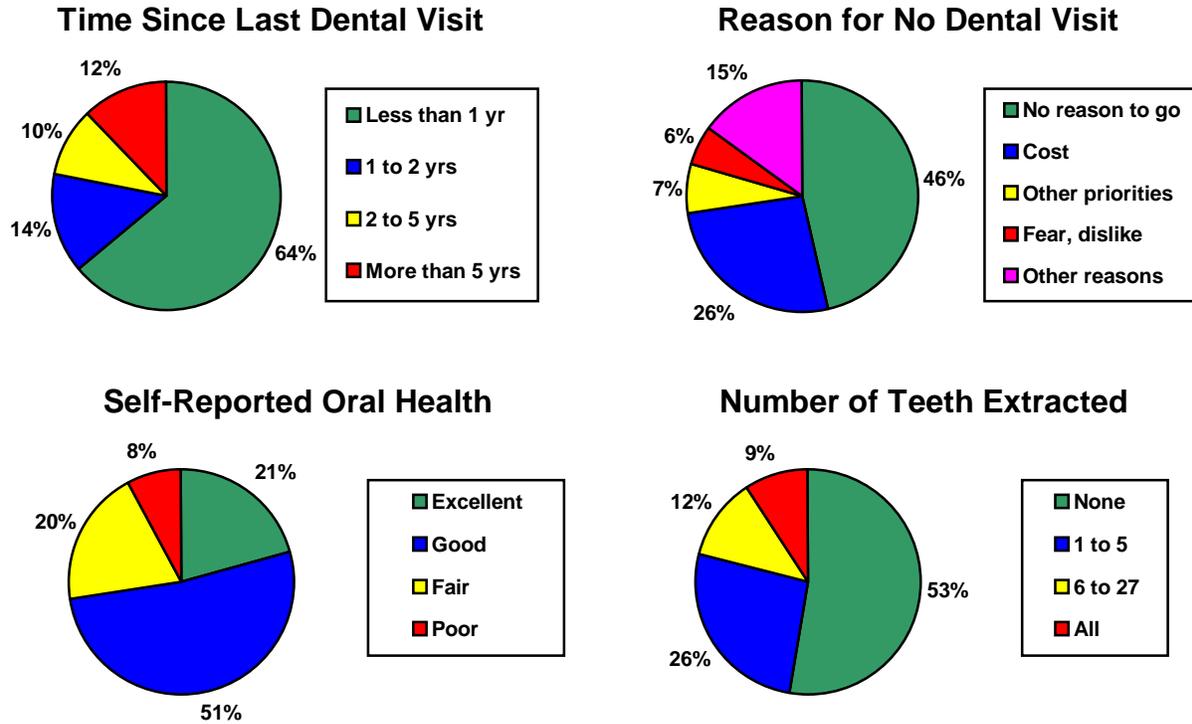
- An estimated 1,497,098 adults in Kentucky have NO dental insurance of any kind. Lack of insurance is one of the largest barriers to dental care.
- An estimated 814,012 adult Kentuckians smoke cigarettes every day. Besides the well known general health problems, smoking is one of the primary contributors to periodontal disease.
- 757,041 adults in Kentucky (24.9%) report having had oral pain within the past three months. This problem falls disproportionately on the underclass. 41.3% of Kentucky's adults who receive Medicaid reported oral pain. The effects of pain on the daily functioning of adults includes problems with nutrition, speech, self-esteem, missed work, and out-of-pocket expense for treatment.
- 21.2% (1 in 5) of Kentucky's adults report having had 6 or more teeth extracted.
- An estimated 649,825 (21.4%) adults in Kentucky have open, active dental caries.
- Over 1 million adults (36.1%) in Kentucky have NOT made a visit to the dentist, for any reason, in the past year. This problem falls disproportionately on the poor. 31.7% of the lowest income group have not even made a dental visit in more than 5 years, compared to 2.0% of the highest income group. Professional and public health recommendations call for at least one visit per year for every adult.
- Cost was cited as the reason for not making a dental visit by 26.0% of the adults in Kentucky (approximately 274,547 adults) who reported no visit within the past year. Among those without insurance, cost was cited by 33.0% of adult Kentuckians as the reason they did not make a dental visit.
- 27.6% of Kentucky's adults report that their oral health is either "fair" or "poor." Poor oral health again falls disproportionately on the poor. 44.8% of Kentucky's poorest group report poor or fair oral health, compared to only 14.7% of the wealthiest group.
- 324,595 (10.7%) of Kentucky's adults report problems chewing their food as a result of their teeth or dentures. The effect on their diet, nutritional status and resulting health can only be surmised.
- 613,563 (20.2%) of Kentucky's adults are dissatisfied with the appearance of their teeth or dentures. This has an obvious impact on employability and economic development.

*This information was obtained from the 2002 Kentucky Adult Oral Health Survey, conducted by the University of Louisville School of Dentistry, under a contract from the Office of Oral Health, Kentucky Department for Public Health.*

# **SUMMARY OF SURVEY FINDINGS**

# Kentucky (Statewide)

Percent of adults (weighted) 18 years old and above, as reported by telephone interview



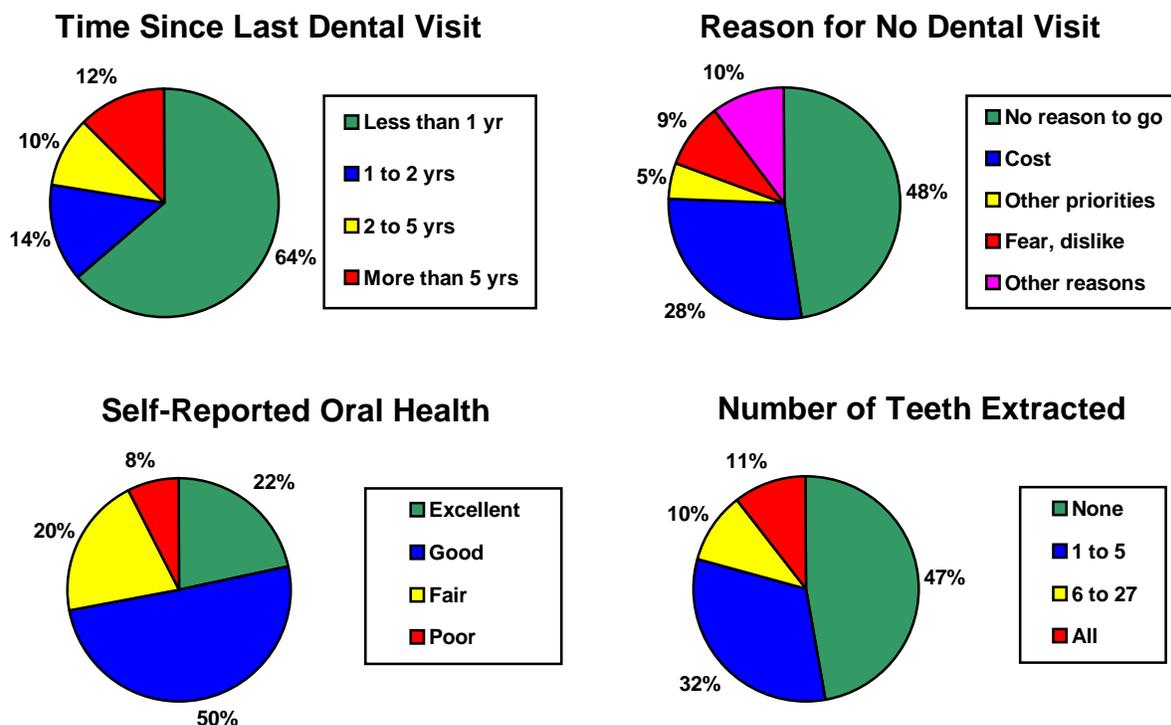
Percent of adults (weighted) 18 years old and above, as reported by telephone interview

- Having no dental insurance 49.6%
- Oral pain in last 3 months 24.9%
- Dissatisfaction with ability to speak 3.1%
- Dissatisfaction with ability to chew 10.7%
- Dissatisfaction with appearance of teeth 20.2%
- Untreated decay\* 21.4%
- At least one filling, crown, or bridge 71.3%
- Bleeding gums\* 15.4%
- Red, swollen, or tender gums\* 25.3%
- Gingival recession\* 28.9%
- At least one loose tooth\* 7.9%
- Calculus on their teeth\* 20.0%
- Bad breath due to teeth or gums 8.8%
- Replacements for 6 or more missing teeth
- All missing teeth replaced 65.6%
  - Some missing teeth replaced 16.5%
  - No missing teeth replaced 17.9%
- Adequate replacements for all missing teeth 57.3%

\* Percentage includes professional adjustment for self-report

# Region 1: Western Kentucky

Percent of adults (weighted) 18 years old and above, as reported by telephone interview



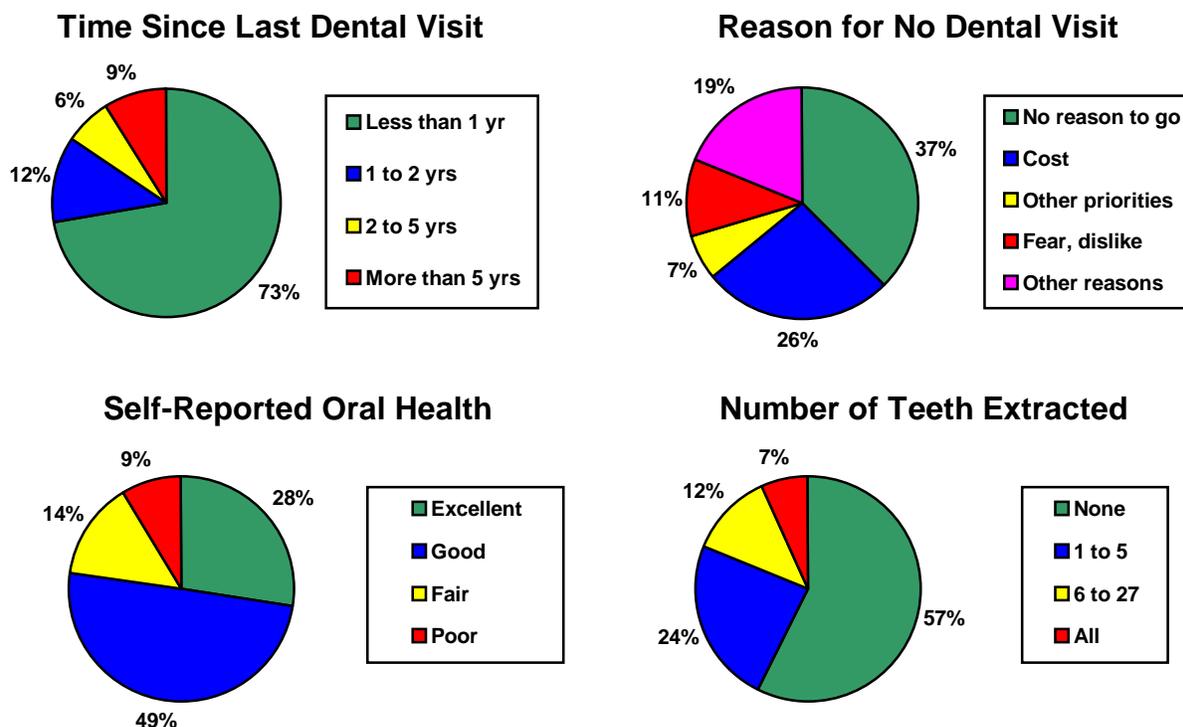
Percent of adults (weighted) 18 years old and above, as reported by telephone interview

- Having no dental insurance 51.2%
- Oral pain in last 3 months 26.1%
- Dissatisfaction with ability to speak 3.4%
- Dissatisfaction with ability to chew 9.1%
- Dissatisfaction with appearance of teeth 19.5%
- Untreated decay\* 18.6%
- At least one filling, crown, or bridge 77.6%
- Bleeding gums\* 18.6%
- Red, swollen, or tender gums\* 24.4%
- Gingival recession\* 28.7%
- At least one loose tooth\* 8.9%
- Calculus on their teeth\* 20.0%
- Bad breath due to teeth or gums 6.6%
- Replacements for 6 or more missing teeth
  - All missing teeth replaced 70.7%
  - Some missing teeth replaced 12.8%
  - No missing teeth replaced 16.5%
- Adequate replacements for all missing teeth 65.9%

\* Percentage includes professional adjustment for self-report

# Region 2: Central Kentucky

Percent of adults (weighted) 18 years old and above, as reported by telephone interview



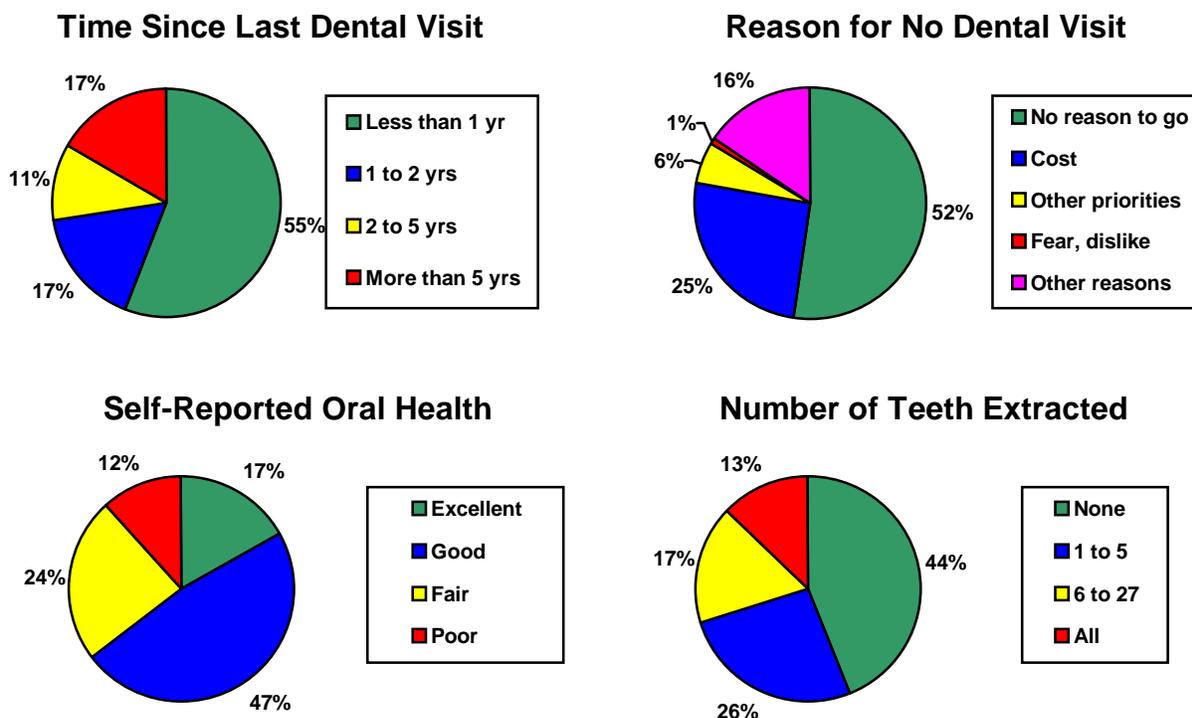
Percent of adults (weighted) 18 years old and above, as reported by telephone interview

- Having no dental insurance 45.6%
- Oral pain in last 3 months 21.9%
- Dissatisfaction with ability to speak 2.8%
- Dissatisfaction with ability to chew 9.4%
- Dissatisfaction with appearance of teeth 19.4%
- Untreated decay\* 18.9%
- At least one filling, crown, or bridge 74.3%
- Bleeding gums\* 10.6%
- Red, swollen, or tender gums\* 21.1%
- Gingival recession\* 27.5%
- At least one loose tooth\* 6.5%
- Calculus on their teeth\* 18.2%
- Bad breath due to teeth or gums 7.7%
- Replacements for 6 or more missing teeth
  - All missing teeth replaced 72.3%
  - Some missing teeth replaced 11.2%
  - No missing teeth replaced 16.6%
- Adequate replacements for all missing teeth 64.0%

\* Percentage includes professional adjustment for self-report

# Region 3: Appalachia

Percent of adults (weighted) 18 years old and above, as reported by telephone interview



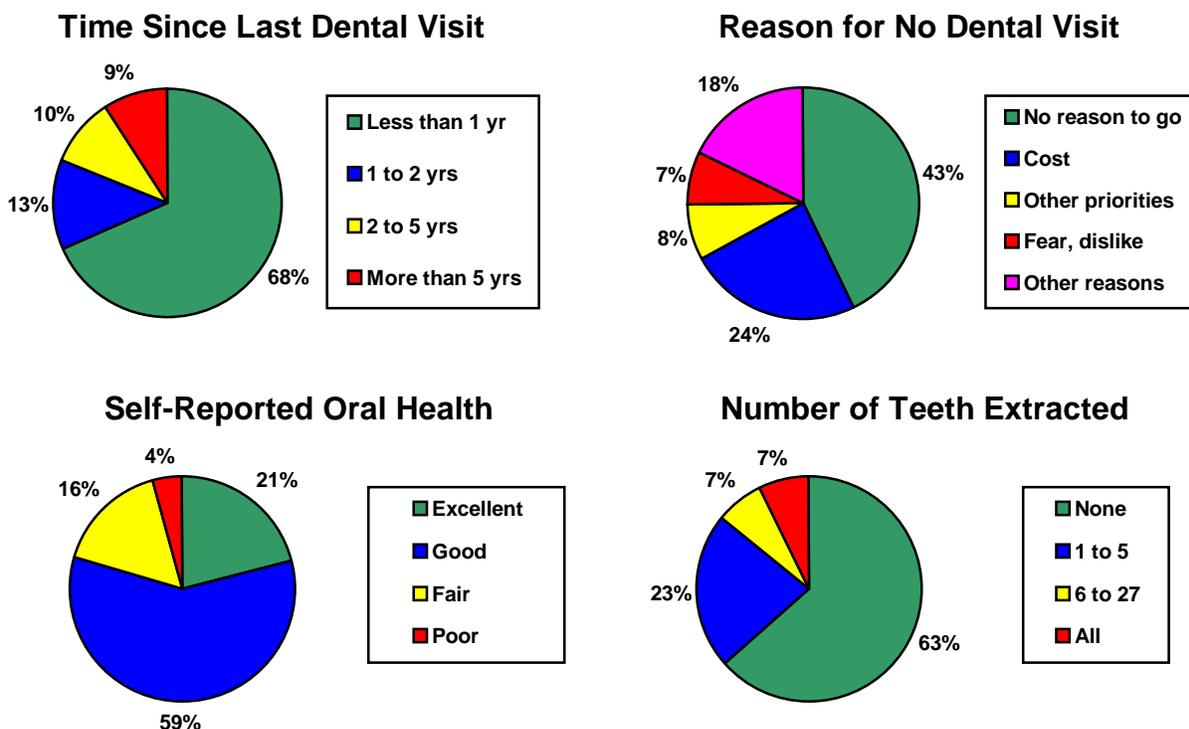
Percent of adults (weighted) 18 years old and above, as reported by telephone interview

- Having no dental insurance 58.1%
- Oral pain in last 3 months 28.5%
- Dissatisfaction with ability to speak 3.7%
- Dissatisfaction with ability to chew 15.2%
- Dissatisfaction with appearance of teeth 25.0%
- Untreated decay\* 31.1%
- At least one filling, crown, or bridge 61.0%
- Bleeding gums\* 17.9%
- Red, swollen, or tender gums\* 34.9%
- Gingival recession\* 32.2%
- At least one loose tooth\* 9.6%
- Calculus on their teeth\* 22.6%
- Bad breath due to teeth or gums 15.0%
- Replacements for 6 or more missing teeth
  - All missing teeth replaced 59.5%
  - Some missing teeth replaced 16.8%
  - No missing teeth replaced 23.7%
- Adequate replacements for all missing teeth 49.8%

\* Percentage includes professional adjustment for self-report

# Region 4: Louisville Metro

Percent of adults (weighted) 18 years old and above, as reported by telephone interview



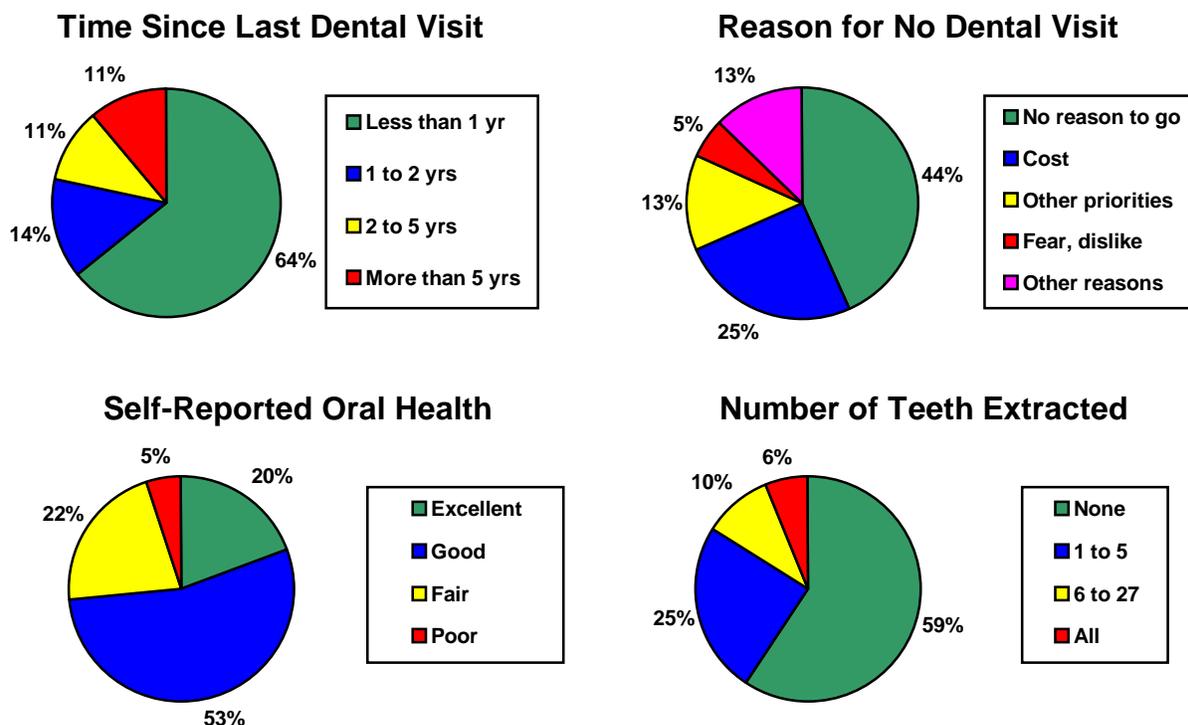
Percent of adults (weighted) 18 years old and above, as reported by telephone interview

- Having no dental insurance 43.0%
- Oral pain in last 3 months 23.0%
- Dissatisfaction with ability to speak 2.0%
- Dissatisfaction with ability to chew 8.6%
- Dissatisfaction with appearance of teeth 8.6%
- Untreated decay\* 15.5%
- At least one filling, crown, or bridge 74.2%
- Bleeding gums\* 13.5%
- Red, swollen, or tender gums\* 19.8%
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  - Some missing teeth replaced 23.4%
  - No missing teeth replaced 6.2%
- Adequate replacements for all missing teeth 59.7%

\* Percentage includes professional adjustment for self-report

# Region 5: Northern Kentucky

Percent of adults (weighted) 18 years old and above, as reported by telephone interview



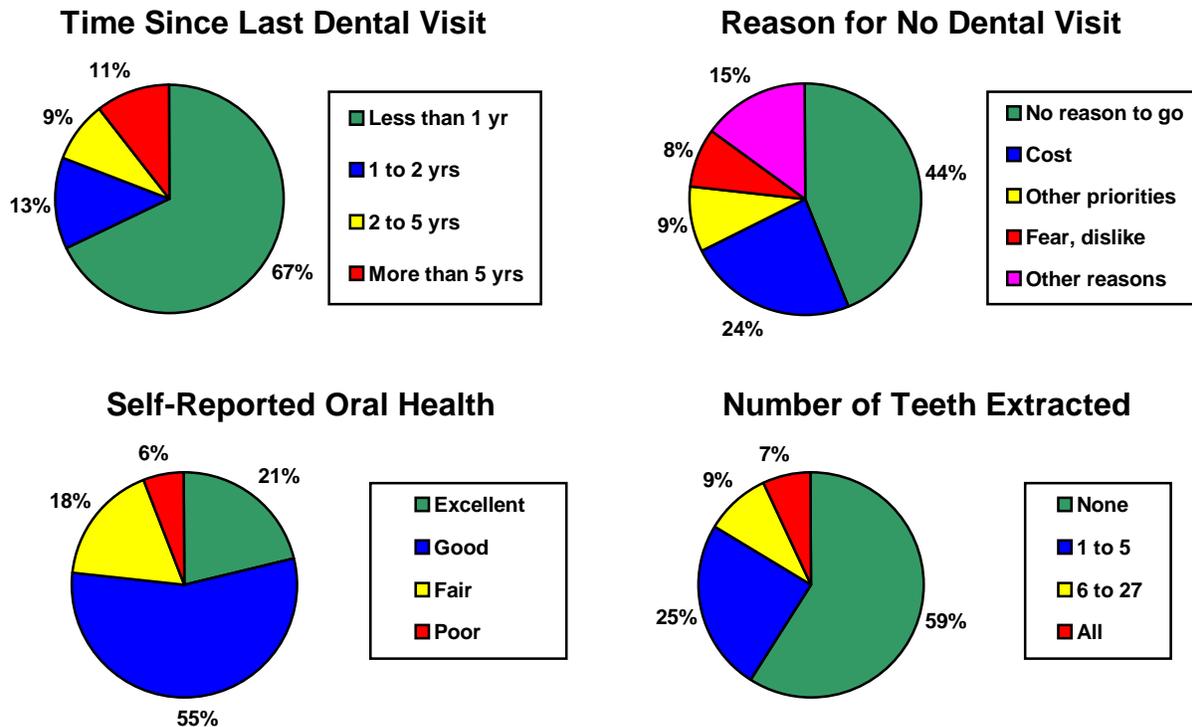
Percent of adults (weighted) 18 years old and above, as reported by telephone interview

- Having no dental insurance 43.1%
- Oral pain in last 3 months 20.8%
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- At least one filling, crown, or bridge 72.7%
- Bleeding gums\* 13.9%
- Red, swollen, or tender gums\* 21.3%
- Gingival recession\* 27.5%
- At least one loose tooth\* 6.3%
- Calculus on their teeth\* 21.3%
- Bad breath due to teeth or gums 4.5%
- Replacements for 6 or more missing teeth
  - All missing teeth replaced 60.4%
  - Some missing teeth replaced 23.3%
  - No missing teeth replaced 16.3%
- Adequate replacements for all missing teeth 54.2%

\* Percentage includes professional adjustment for self-report

# Location 1: MSA's in Kentucky

Percent of adults (weighted) 18 years old and above, as reported by telephone interview



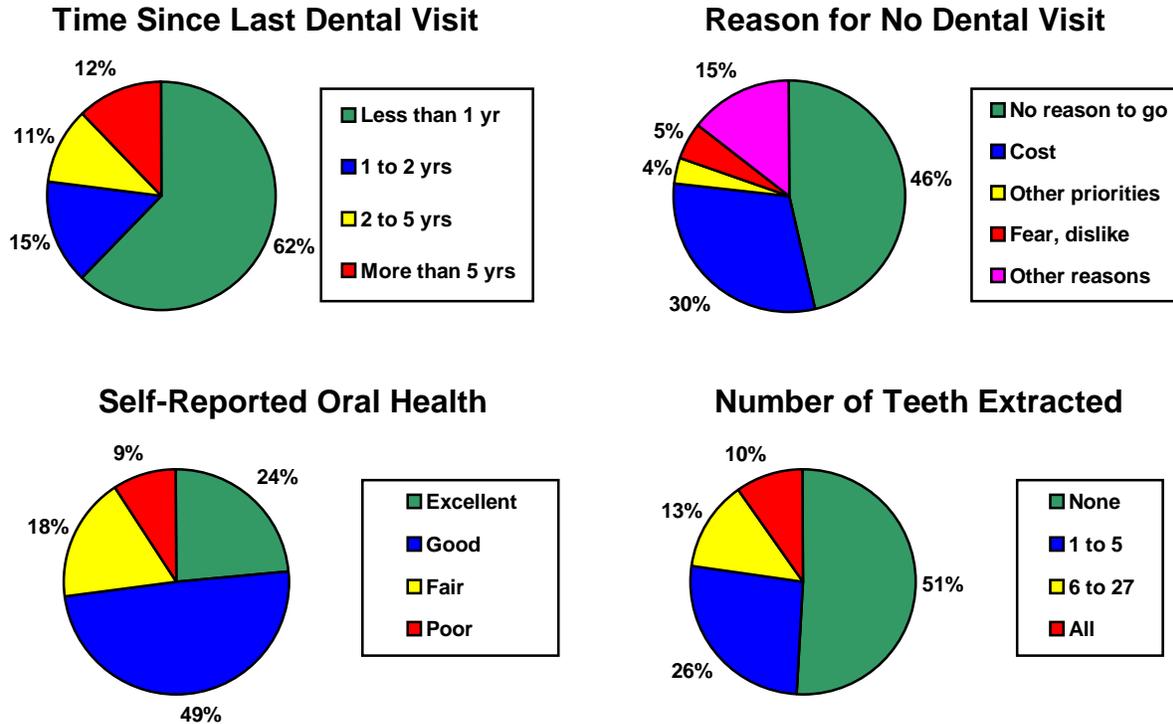
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  - All missing teeth replaced 64.8%
  - Some missing teeth replaced 23.4%
  - No missing teeth replaced 11.8%
- Adequate replacements for all missing teeth 57.8%

\* Percentage includes professional adjustment for self-report

# Location 2: Small Towns in Kentucky

Percent of adults (weighted) 18 years old and above, as reported by telephone interview



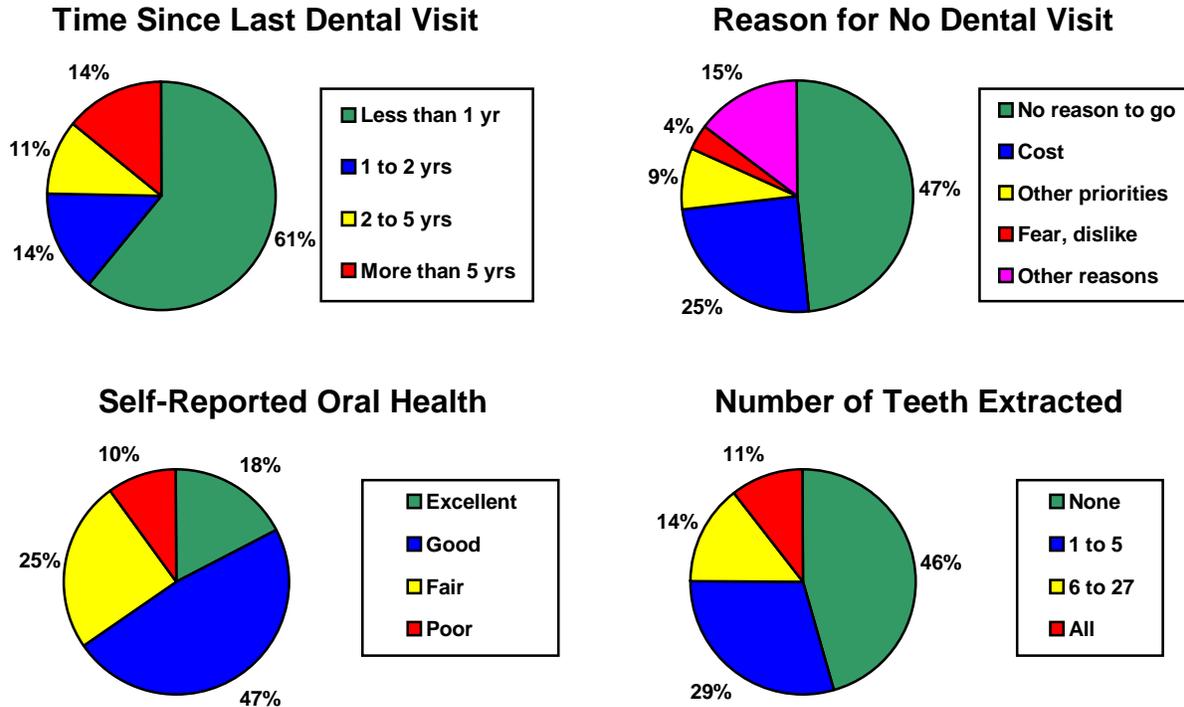
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- At least one loose tooth\* 9.3%
- Calculus on their teeth\* 19.0%
- Bad breath due to teeth or gums 9.0%
- Replacements for 6 or more missing teeth
  - All missing teeth replaced 66.4%
  - Some missing teeth replaced 14.4%
  - No missing teeth replaced 19.2%
- Adequate replacements for all missing teeth 58.8%

\* Percentage includes professional adjustment for self-report

# Location 3: Rural Areas in Kentucky

Percent of adults (weighted) 18 years old and above, as reported by telephone interview



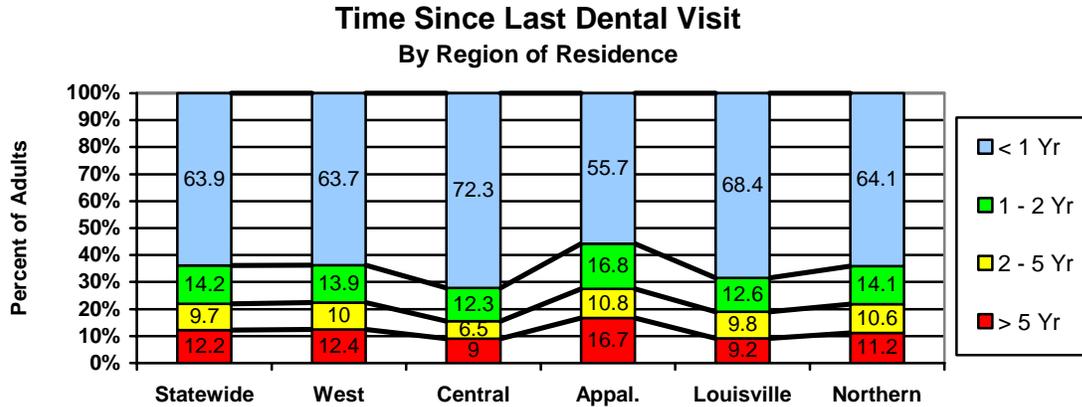
Percent of adults (weighted) 18 years old and above, as reported by telephone interview

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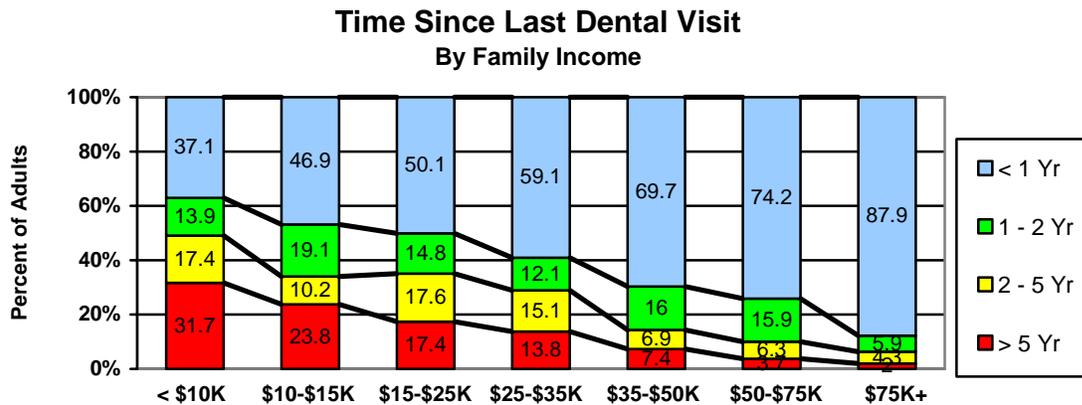
\* Percentage includes professional adjustment for self-report

# **COMPARISONS OF SELECTED FINDINGS**

## Comparison of Selected Findings: Time Since Last Dental Visit

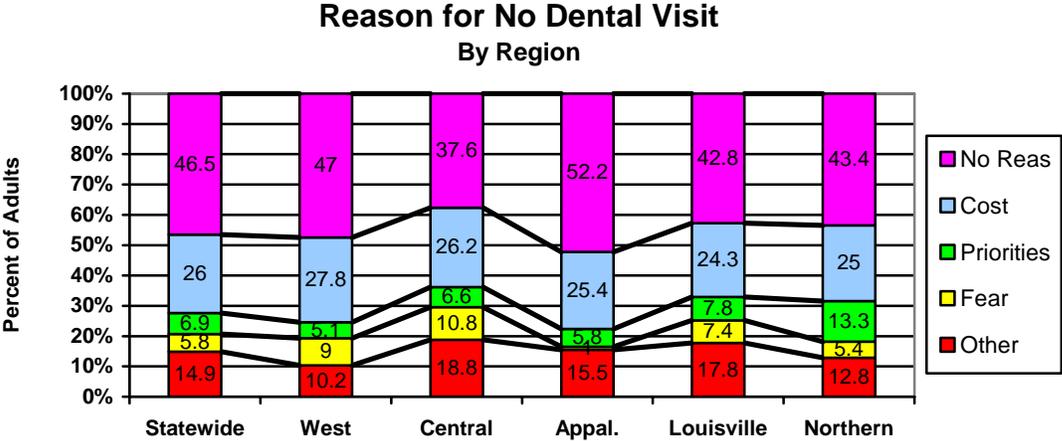


Residents of Appalachia have the lowest rate of utilization of dental services within the last year. Those in the Central Kentucky region have the highest.

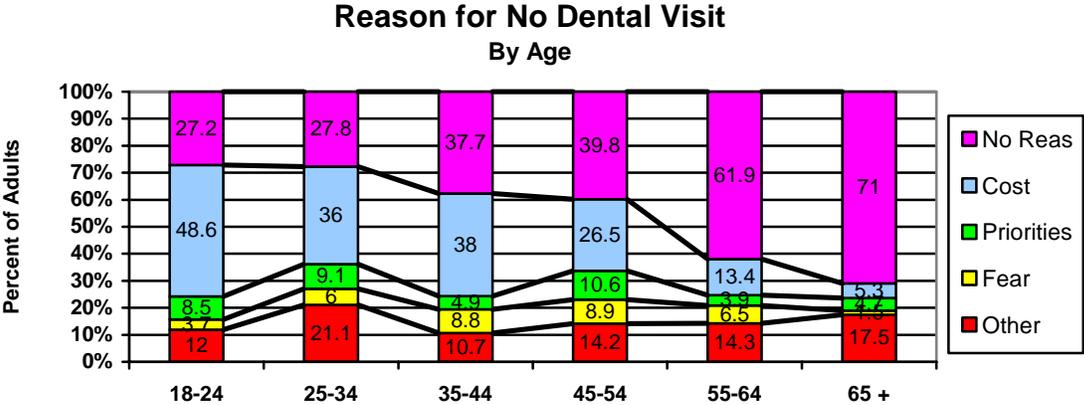


There are large disparities in time since last dental visit based on family income. Wealthy Kentuckians visit the dentist much more often than poorer Kentuckians.

# Comparison of Selected Findings: Reason for No Dental Visit

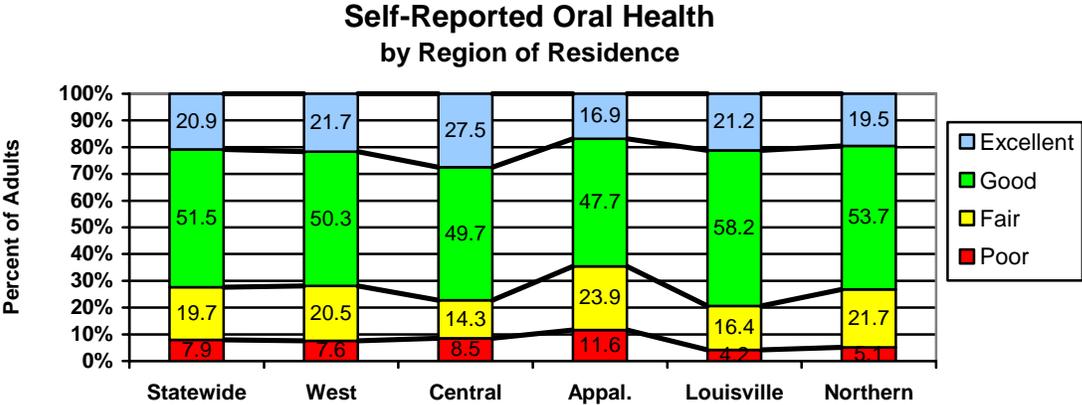


Of the Kentuckians who did not visit a dentist last year, over ¼ cited cost as the primary reason for not going. Almost ½ simply saw no reason to seek dental care.

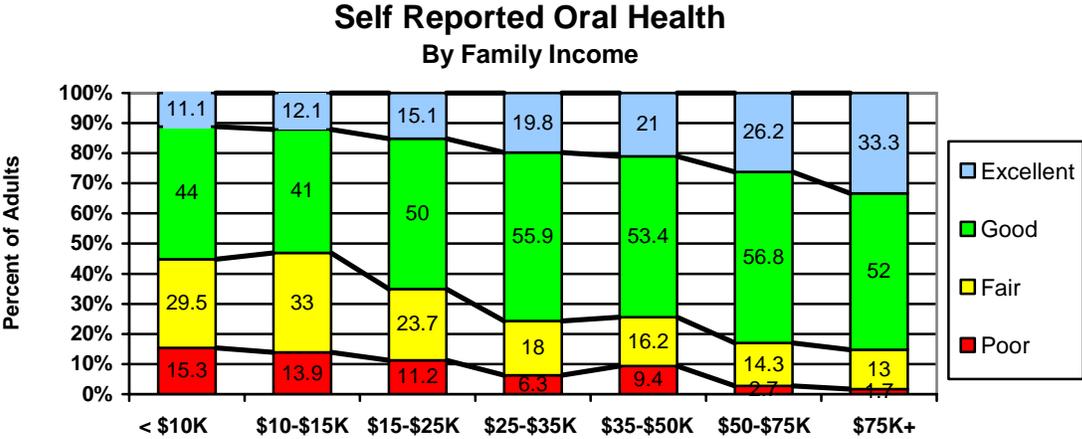


Cost of services was an especially important reason for not visiting a dentist among younger adult Kentuckians.

# Comparison of Selected Findings: Self-Reported Oral Health

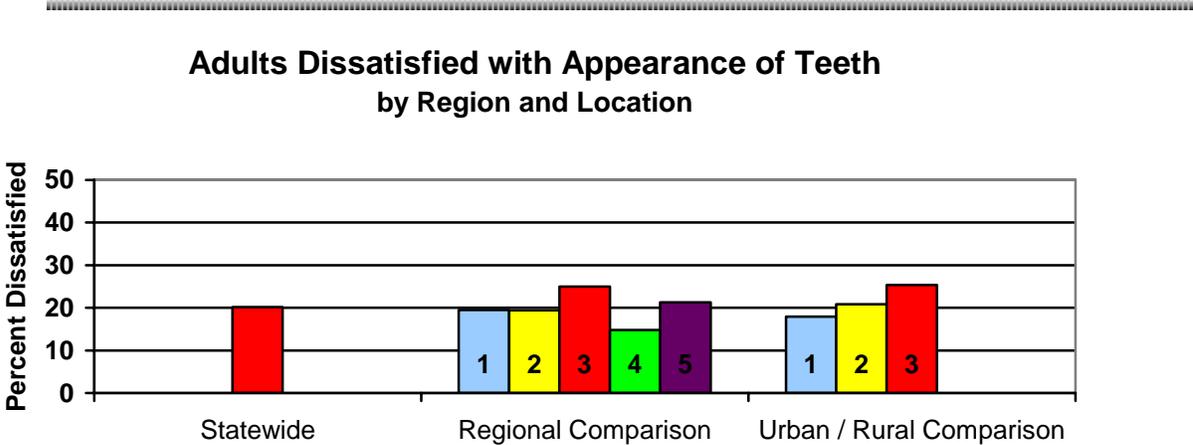


Residents of Appalachia have the largest self-reported “Fair” and “Poor” oral health. Those in the Central Kentucky and Louisville metro regions have the smallest.

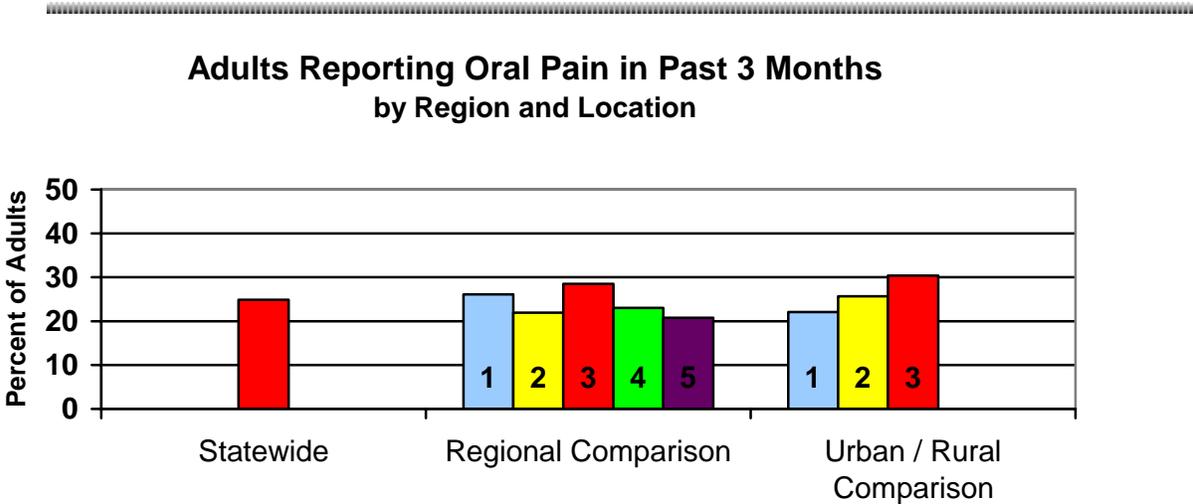


There are large disparities in self-reported oral health based on family income. Wealthy Kentuckians perceive themselves to be healthier than do poorer Kentuckians.

*Comparison of Selected Findings: Satisfaction with Dental Outcomes*



Statewide, over 20% of adult Kentuckians are dissatisfied with the appearance of their teeth or dentures. This is highest in the rural areas of the state, especially in the Appalachian region.

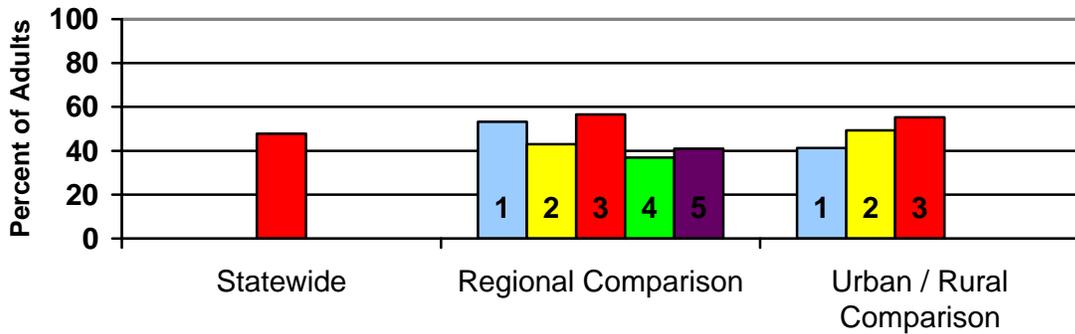


Statewide, over 26% of adult Kentuckians report having had oral pain in the past three months. This is highest in the rural areas of the state, especially in the Appalachian and Western regions.

Regions	Locations
1 = Western Ky	1 = MSA's
2 = Central KY	2 = Small Cities
3 = Appalachia	3 = Rural Areas
4 = Louisville Metro	
5 = Northern KY	

## Comparison of Selected Findings: Teeth Extracted

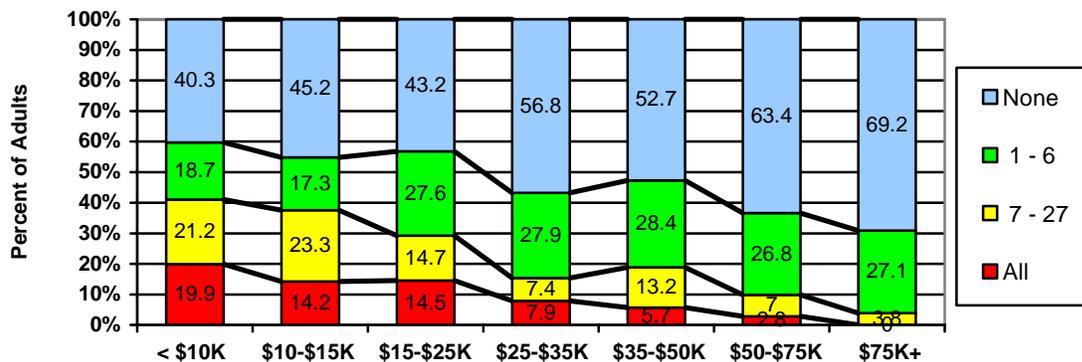
**Adults Who Have Had Teeth Extracted  
by Region and Urban/Rural Location**



Statewide, nearly 50% of adult Kentuckians report having had teeth extracted, due to caries or gum problems. This is highest in the rural areas of the state, especially in the Appalachian and Western regions.

Regions	Locations
1 = Western Ky	1 = MSA's
2 = Central KY	2 = Small Cities
3 = Appalachia	3 = Rural Areas
4 = Louisville Metro	
5 = Northern KY	

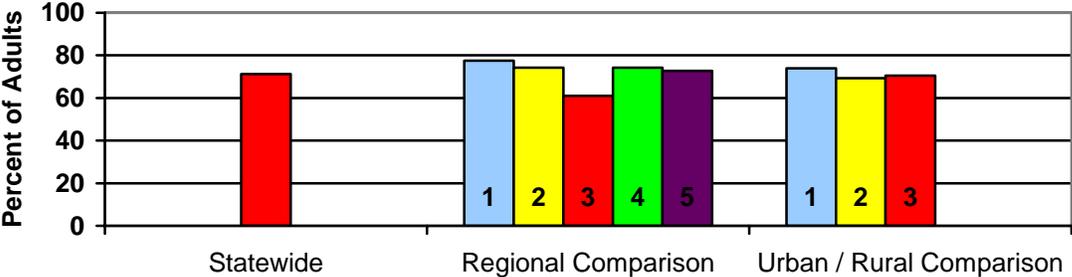
**Number of Teeth Extracted  
By Family Income**



There are large disparities in the number of teeth extracted based on family income. Poorer Kentuckians have had more teeth extracted than wealthy Kentuckians.

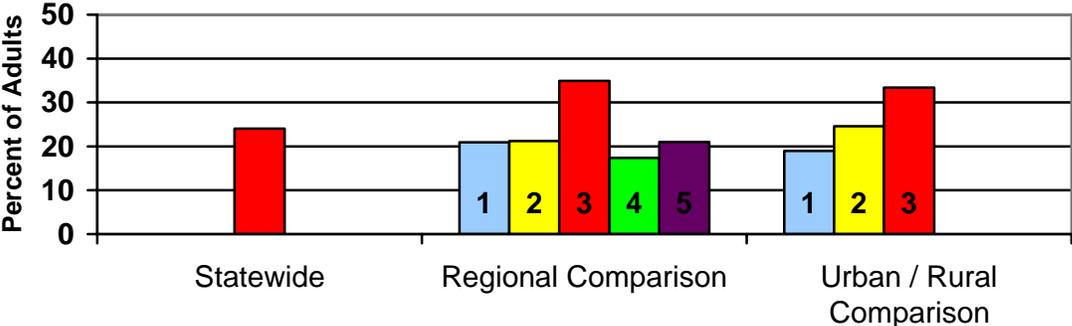
*Comparison of Selected Findings: Caries Experience*

**Adults with Restorations  
by Region and Location**



Statewide, nearly 70% of adult Kentuckians report having had restorations to treat dental caries. The percentage reporting the presence of restorations was noticeably lower in Appalachia than in the other regions of the state.

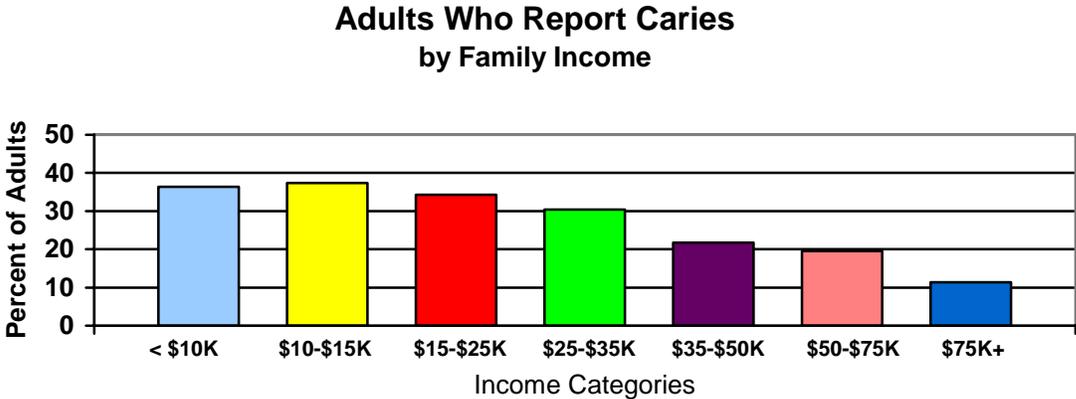
**Adults Who Report Caries  
by Region and Location**



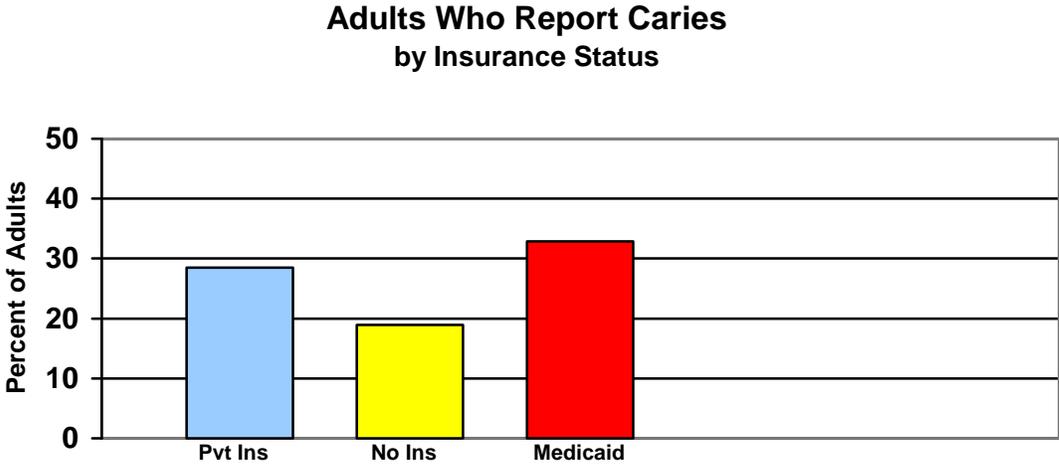
Statewide, nearly 25% of adult Kentuckians report having dental caries. This is highest in the rural areas of the state, especially in the Appalachian region.

Regions	Locations
1 = Western Ky	1 = MSA's
2 = Central KY	2 = Small Cities
3 = Appalachia	3 = Rural Areas
4 = Louisville Metro	
5 = Northern KY	

*Comparison of Selected Findings: Caries Factors*

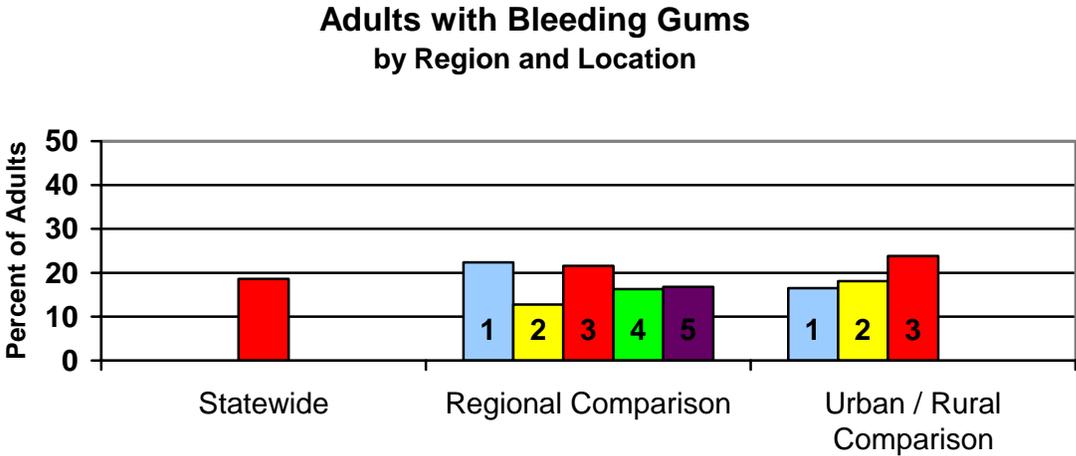


There are large variations in the rate of caries among adult Kentuckians, based on family income. Poorer Kentuckians are much more likely to report having current, active decay than are wealthier Kentuckians.

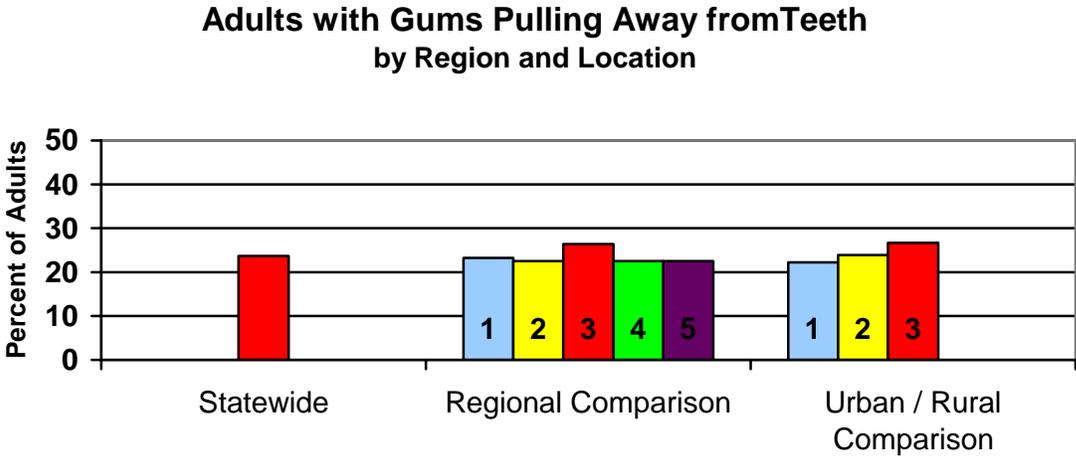


There are large disparities in caries rates based on dental insurance status. Medicaid recipients have much higher rates than those without insurance or those with private dental insurance.

*Comparison of Selected Findings: Periodontal Indicators*



Statewide, nearly 19% of adult Kentuckians report having bleeding gums, one of the most important indicators of periodontal disease. This is highest in the rural areas of the state, especially in the Appalachian and Western regions.



Statewide, nearly 25% of adult Kentuckians report gingival recession (“gums pulling away from their teeth”), one of the important indicators of periodontal disease. This is highest in the rural areas of the state, especially in the Appalachian region.

Regions	Locations
1 = Western Ky	1 = MSA's
2 = Central KY	2 = Small Cities
3 = Appalachia	3 = Rural Areas
4 = Louisville Metro	
5 = Northern KY	

# ACKNOWLEDGEMENTS

## Project Director

David O. Willis, DMD, MBA

## Project Co-Director

Janice M. Butters, RDH, MPH, EdD

We would like to thank the following people for their many invaluable contributions to the 2002 Kentucky Adult Oral Health Survey:

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Director of the Office of Oral Health  
Commonwealth of Kentucky

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University of Louisville

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Project Director, 2001 Kentucky Children's  
Oral Health Survey  
University of Kentucky

Ms. Lisa Durham  
Project Co-Director  
Kentucky Elder Oral Health Survey

Dr. Bob Henry  
Project Director  
Kentucky Elder Oral Health Survey

Dr. Raynor Mullins  
University of Kentucky  
College of Dentistry

Dr. Jim Scheetz  
Statistical Consultant  
University of Louisville  
School of Dentistry

Ms. Sharlee Shirley  
Office of Oral Health  
Commonwealth of Kentucky

Ms. Judy A. White  
Office of Oral Health  
Arizona Department of Health Services

Dr. John N. Williams  
Dean, School of Dentistry  
University of Louisville

Dr. Steve Wyatt  
Markey Cancer Center  
University of Kentucky

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Dr. Carol Braun  
Ms. Lois Brown  
Dr. Gerald Ferretti  
Dr. D.L. Gambrell  
Dr. Carlton A. Hornung  
Dr. Fred Howard

Dr. W. Paul McKinney  
Mr. Gary Munsie  
Mr. Mike Porter  
Dr. Christine Ritchie  
Dr. Judy Skelton  
Dr. F. Douglas Scutchfield

