9. ORAL HEALTH

Goal

To improve the health and quality of life for individuals and communities by preventing and controlling oral disease and injuries, and to improve access to oral health care for all Kentuckians.

Terminology

Dental Caries: An infectious disease that results in cavitation of the tooth surface if not controlled. The decay can either have been treated (filled) or it can be untreated (unfilled). The sum of the filled and unfilled dental decay, along with any missing teeth due to decay, constitutes the dental caries experience of an individual.

Root Caries: Dental decay that occurs on the root portion or cemental surfaces of the tooth and may be covered by gum tissue.

Edentulism/Edentulous: A condition in which the person has lost all of his or her natural teeth.

Lesion (soft tissue): An oropharyngeal pathology or trauma that reflects an abnormality of the tissues or the oral cavity or pharynx; a soft tissue lesion may be noncancerous or cancerous.

Periodontal disease: A syndrome of conditions caused by bacterial infection and resulting in inflammation and destruction of the supporting structures of the teeth. A broad term encompassing several diseases of the gums and tissues supporting the teeth.

Sealant: A plastic coating applied to the chewing surface of teeth, primarily molars, to protect the surface from collecting food, bacteria, or debris that would promote dental decay.

Overview

Oral disease is a major health problem for Kentuckians. Much of this problem can be prevented through water fluoridation, dental sealants, routine dental care, and education.

In 1987, the Office on Oral Health conducted a statewide oral health survey consisting of an interview component and a clinical screening component. Findings were disturbing. Dental caries were a significant problem, with 26 percent of adult Kentuckians 18 to 64 years of age having untreated decay, compared to 6 percent on a national survey conducted by the National Institute of Dental Research in the same year. Recent screening data, obtained from the University of Kentucky College of Dentistry and the Barren River District Health Department, show that the proportion of Kentucky schoolchildren with visible untreated decay is as high as 56 percent.

Survey data from 1996 reported that endentulism in Kentucky for persons 65 and older was 44 percent; Kentucky is the second highest state in edentulism for this age group in the United States (BRFSS, 1996).

The 1987 Kentucky Oral Health Survey (KOHS) found that 34 percent of Kentuckians had not visited a dentist within the past 12 months; by 1996, the Behavioral Risk Factor Surveillance System (BRFSS) found that 38 percent of Kentuckians reported not visiting a dentist or dental clinic within the past 12 months.

Oral cancer is another highly preventable disease. The 1987 KOHS found that 37 percent of the participants used tobacco products; 83 percent smoked cigarettes, and 13 percent used chewing tobacco or snuff. The 1997 BRFSS showed that 31 percent of adult Kentuckians smoked cigarettes and 6 percent used chewing tobacco or snuff.[9] The 1997 Kentucky Youth Risk Behavior Survey, conducted among public high schools, found that 47 percent had smoked cigarettes on one or more of the previous 30 days. Kentucky has the highest level of adult and youth smokers in the U.S (CDC, 1998 and Ky. Dept. of Education, 1998).

Progress Toward Year 2000 Objectives

One of the six oral health objectives for *Healthy Kentuckians 2000* has been achieved, one has moved toward the target, one has a mixed trend, one has no data and two have no data beyond the baseline. In 1999, Kentucky discontinued its fluoride mouthrinse program (topical fluoride) while continuing its fluoride supplement program (systemic fluoride).

13.1. To increase to at least 90 percent the proportion of Kentuckians served by public water systems that contain optimal levels of fluoride.

The target has been achieved.

13.2. To increase use of professionally or self-administered topical or systemic (dietary) fluorides to at least 60 percent of children ages three months to thirteen years not receiving optimally fluoridated public water.

Some data collected on topical and systemic fluoride use did not separate children on fluoridated water from children not on fluoridated water.

13.3. To ensure that all parents who feed infants and toddlers with bottles will be made knowledgeable through health department programs of the appropriate bottle feeding practice that prevents baby bottle tooth decay.

No data have been collected.

13.4. To increase to at least 90 percent the proportion of people ages six and over who know the primary methods for preventing and controlling dental caries, gingivitis and periodontal disease.

The 1987 KOHS estimated that 64 percent of persons ages 18 and older thought preventive measures were important. No further data are available. No data are available for children ages 6 – 18 years.

13.5. To increase to at least 50 percent the proportion of Kentucky children who have received protective sealants on the occlusal (chewing) surfaces of permanent molar teeth.

No data are available beyond the baseline from the 1987 KOHS which showed that 7 percent of children ages 8 – 14 had sealants.

13.6. To implement a comprehensive and health surveillance system to periodically document the oral health status of the Kentucky population, including oral health needs, dental treatment needs and utilization of dental service.

The Department for Public Health has committed to funding a comprehensive oral health surveillance system beginning in fiscal year 2000/2001.

2010 Objectives

9.1. Reduce dental caries in the primary and permanent teeth so that the proportion of children who have had one or more caries (filled or unfilled) are no more than:

- **15 percent among children ages 2-4** (Baseline: 30 percent of 0-4 year olds had caries)
- **40 percent among children age ranges 6-8** (Baseline: 58 percent decayed filled surface in primary tooth (dfs) and 34 percent decayed filled surface in permanent tooth (DFS) of 5-9 year olds)
- **50 percent among children age 12** (Developmental)
- **55 percent among adolescents aged 15** (Baseline: 84 percent of 14-17 year olds)

Baseline Data Source: 1987 KOHS

Target Setting Method: Based on *Healthy People 2010*; Kentucky objectives set at same percentages as national objectives.

Data Sources:
- Screening data from University of Kentucky and University of Louisville outreach programs
- Screening data from planned statewide survey/surveillance system
- Screening data from other oral health screening efforts (e.g. health departments)
- Screening data from third parties (e.g. Delta Dental, Kentucky Health Select)
- Department for Medicaid Services

Implementation Strategy:

- Develop an oral health component within all school-age health intervention programs that includes surveillance, education and a referral mechanism.
- Develop and incorporate an oral health component in Kentucky's initiatives on children.
- Work with appropriate agencies to increase access to providers.
- Expand current sealant programs and develop new sealant programs.
- Maintain fluoridation program through the Office on Oral Health

9.2. Reduce untreated cavities in the primary and permanent teeth so that the proportion of children with decayed teeth not filled is no more than:
- **12 percent among children aged 2-4** (Baseline: 28 percent of 0-4 year olds had untreated decay)
- **22 percent among children age ranges 6-8** (Baseline: 38 percent ds and 27 percent DS of 5-9 year olds)
- **20 percent among children age 12** (Developmental)
- **15 percent among adolescents aged 15** (Baseline: 67 percent 14-17 year olds)

Baseline Data Source: 1987 KOHS

Target Setting Method: Kentucky objectives set at same percentages as national objectives.

Data Sources:
- Screening data from University of Kentucky outreach programs
- Screening data from planned statewide survey/surveillance system
- Screening data from other oral health screening efforts (e.g. health departments)
- Screening data from third parties (e.g. Delta Dental, Kentucky Health Select)
- Department for Medicaid Services

Implementation Strategy:

- Develop an oral health component within all school-age health intervention programs that includes surveillance, education and a referral mechanism.
- Develop and incorporate an oral health component in Kentucky's initiatives on children.
- Work with appropriate agencies to increase access to providers.

9.3. (Developmental) **Increase to at least 80 percent the number of edentulous or partially edentulous Kentuckians who have adequate replacement of natural dentition.**

Potential Data Sources:

- BRFSS (auxiliary question regarding loss of natural teeth)
- Planned statewide survey/surveillance system

Implementation Strategy:

- Increase awareness of the importance of replacement of natural dentition through oral health education.
- Work with the Kentucky Dental Association and Kentucky Dental Health Coalition to increase options for replacement of natural dentition.

9.4. **Reduce to no more than 23 percent the proportion of Kentuckians who have lost all of their natural teeth (edentulous).**

Baseline:

Age	Proportion of Edentulous Persons
18-24	.3 %
25-34	.3 %
35-44	8.2 %
45-54	18.0 %
55-64	26.7 %
65 and older	42.9 %

Overall, 16 percent of Kentucky residents are edentulous.

Baseline Data Source: 1996 BRFSS

Target Setting Method: Same as national: 40 percent improvement of highest proportion of edentulism.

Data Source: BRFSS

Implementation Strategy:

- Assist county health departments towards partnership and collaboration with commercial dental plans, employer organizations and dental professionals (e.g. Kentucky Dental Association, Kentucky Dental Hygienists Association) on methods to delay the loss of the first tooth.
- Work with health departments and other organizations to provide health education activities in secondary schools, colleges and universities.

9.5. Increase to at least 57 percent the proportion of oropharyngeal cancer lesions detected at Stage I.

Baseline: 40 percent of oropharyngeal cancer lesions diagnosed were Stage I – localized.

Baseline Data Source: 1997 Cancer Incidence Report: Kentucky Cancer Registry

Target Setting Method: 30 percent improvement; same as national target-setting method

Data Source: Kentucky Cancer Registry

Implementation Strategy:

- Through educational efforts, reinforce dental providers to screen high risk populations during their dental visits.
- Work with physicians and other health care providers (e.g. Kentucky Dental Association, Kentucky Dental Hygienists Association) to identify and target high risk populations of snuff users and to develop and integrate oral cancer screenings with other screenings.
- Develop a list of questions for screening and self-assessment for disbursement to high risk populations through health care providers.
- Incorporate oral health information into school health programs.

9.6. Increase to at least 70 percent the proportion of 8 year-olds, 12 year-olds and 15 year-olds (developmental) who have received protective sealants in permanent molar teeth.

Baseline: 10 percent of children aged 5-9 have received sealants, and 7 percent of children aged 14-17 have received sealants.

Baseline Data Source: 1987 KOHS

Target Setting Method: Based on *Healthy People 2010* objectives; Kentucky objectives set at same percentages as national objectives.

Data Sources:

- Screening data from University of Kentucky and University of Louisville outreach programs
- Screening data from planned statewide survey/surveillance system
- Screening data from other planned oral health screening efforts (e.g. health departments)
- Screening data from third parties (e.g. Delta Dental, Kentucky Health Select)
- Department for Medicaid Services

Implementation Strategy:

- Develop partnerships with Kentucky Dental Association, Kentucky Dental Hygienists Association and physicians to improve child oral health care through referrals and sealant placement.
- Expand current sealant programs and develop new sealant programs

9.7. Increase to 95 percent the proportion of the population served by community water systems with optimally fluoridated water.

Baseline: 90 percent of Kentucky's population received optimally fluoridated water in 1996.

Baseline Data Source: Kentucky Office on Oral Health

Target Setting Method: 5 percent improvement

Data Source: Office on Oral Health Fluoridation Census

Implementation Strategy:

- The Department for Public Health will continue to install equipment, provide maintenance, provide upgrades utilizing latest technologies, and supply technical support to community water systems.
- Encourage local governments to expand water lines
- Explore ways to enhance referral from local health departments and WIC for dental screening and consideration of oral supplements when indicated.
- Urge testing of private wells for fluoride content. Provide oral supplements where needed.

9.8. (Developmental) **Increase to at least 70 percent the proportion of children ages 6, 8, 12 and 15 who have received an oral health screening, including adequate referral sources and follow-up.**

Potential Data Sources:

- Planned Survey/Surveillance System

- Questions on dental access in screening programs (e.g. University of Kentucky)

Implementation Strategy:

- Develop and implement a school-based dental case management program initially targeted to Medicaid and KCHIP populations.
- Ultimately expand program to all children in these age groups.
- Explore ways to enhance adequate referral sources and follow-up.

9.9. Increase to at least 70 percent the proportion of adults aged 18 and older using the oral health care system each year.

Baseline: 62 percent of Kentuckians visited a dentist or dental clinic within the past 12 months.

Baseline Data Source: 1996 BRFSS

Target Setting Method: Based on *Healthy People 2010* objectives; Kentucky objectives set at same percentages as national objectives.

Data Sources:

- Department for Medicaid Services
- BRFSS

Implementation Strategy:

- Collaborate with dentists, physicians and health educators to provide information to the public on the importance of keeping their teeth and the necessity of annual visits to an oral health care provider.
- Collaborate with dental organizations to arrange screening opportunities (e.g., "screening days" at State Fair, Bluegrass State Games, etc.)

9.10 Increase to 100 percent the proportion of Family Resource Centers, Youth Services Centers and Family Resource/Youth Services Centers offering oral health education, screening, referral, and follow-up activities.

Baseline: 60 percent of centers offer oral health education, 36 percent offer oral health screening, 44 percent provide referral lists and 5 percent assist with follow-up activities.

Baseline Data Source: 1998 Survey of Resource Centers, Kentucky Office on Oral Health

Target Setting Method: Based on *Healthy People 2010* objectives

Data Source: Activity reports and assessment included with annual reporting by centers.

Implementation Strategy:

- The Department for Public Health will collaborate with the Cabinet for Families and Children to make centers aware of the importance of these oral health activities and will work with centers to identify possible resources for these activities.

9.11. (Developmental**) Increase to 100 percent the proportion of county health departments that have an oral health education component focusing on adults and infants through 5 year olds.**

Potential Data Sources:

- The Department for Public Health will establish a reporting mechanism for oral health education activities provided by county health departments.
- The Speakers Bureau will record the numbers of presentations made to these age groups.

Implementation Strategy:

- Provide health departments with information on evidence-based options for dental education programs and activities.
- Provide technical assistance and train-the-trainer programs to health departments in development and implementation of programs.
- Establish a statewide oral health speakers bureau utilizing health department nurses and health educators in conjunction with dentists, dental hygienists and physicians

9.12. The Department for Public Health will design, implement and fund a statewide oral health survey and on-going surveillance system as a follow up to the 1987 survey.

Data Source: Publication of survey/surveillance outcomes

Implementation Strategy:

- Collaborate with the University of Louisville, University of Kentucky and other health care professionals on the survey/surveillance design.

- A case management and surveillance program linked to schools (Family Resource and Youth Services Centers) and school health programs is planned as a related component with focus on high risk children.

9.13. (Developmental**) Enhance the capability of long term care facilities to provide oral examinations and initiate necessary prevention, education and oral health treatment services no later than ninety days after entry into these facilities.**

Potential Data Sources:
- Health Care Financing Administration
- Joint Commission for the Accreditation of Healthcare Organizations

Implementation Strategy:

- Collaborate with accreditation organizations to assure that facilities provide examinations and services.
- Work with professional dental organizations to enhance dental access.

9.14. Ensure that Kentucky has a viable system for recording and referring all infants and children up to age 5 with cleft lip, cleft palates, and other craniofacial anomalies to craniofacial anomaly teams.

Baseline: 23 states have systems for recording and referring infants and children with cleft lip, palates and other craniofacial anomalies. Kentucky is in the process of refining its Birth Surveillance Registry to develop a database to record this information.

Baseline Data Sources: Survey of State Dental Directors, 1993, Illinois State Health Department; Kentucky Department for Public Health, Division of Adult and Child Health

Data Source: Kentucky Birth Surveillance Registry

Implementation Strategy:

- Collaborate with appropriate agencies within the Cabinet for Health Services to plan and implement a system for the timely referral of infants and children up to age 5 with cleft lip, cleft palates and other craniofacial anomalies to craniofacial anomaly teams

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Contributors

- Jay Hopkins, Health Program Administrator; Kentucky Department for Public Health, Office on Oral Health, Chapter Coordinator
- Judy A White, RDH, MPH Deputy Director, Office on Oral Health. Assistant Professor, Division of Dental Public Health, University of Kentucky College of Dentistry
- Stephen W Wyatt, DMD, MPH Director, Kentucky Office on Oral Health
- Jill Butters, RDH, MPH, Ed.D, Associate Professor: Director of Extramural Programs, University of Louisville School of Dentistry
- Jim Cecil, DMD, MPH, Dental Director Kentucky Health Select Region 5 Medicaid Managed Care Partnership and Kentucky Migrant Health Center; Assistant Professor, Division of Dental Public Health, University of Kentucky College of Dentistry
- Julie Watts McKee, DMD, Public Health Director, Wedco District Health Department
- M. Raynor Mullins, DMD, MPH, Chief, Division of Dental Public Health, Public Service Program, University of Kentucky College of Dentistry
- Mike Porter, Executive Director, Kentucky Dental Association
- Lois Brown Reynolds, President, Kentucky Dental Health Coalition; Health Educator