Overview of the oral health of Missouri citizens, highlight specific areas of need
Surveillance data on oral health in Missouri
The effect of Medicaid Adult Dental Benefits
The State Oral Health Plan 2020-25
The results of the Basic Screening Survey for Children
Access to care issues and disparity
EARLY CHILDHOOD TOOTH DECAY (CARIES)
Poor oral health is linked to diabetes, heart disease and stroke.

Children or adults with poor dentition can’t eat a healthy diet due to their problems chewing.

Abscessed teeth can be the problem that can lead to death.

Poor oral health limits your ability to successfully get a job; dental pain makes it hard to work.
DENTAL CARIES - MOST COMMON CHRONIC DISEASE AMONG CHILDREN

Consequences of poor oral health:

- Declined overall health - ability to learn, eat and speak.

- Nationally, children miss 51 million school-hours annually due to dental-related issues.

- Poor self-esteem.
OFFICE OF DENTAL HEALTH (ODH)

- Small office with 5 full-time employees and 7 part-time contractors
- Programs and Contracts under ODH scope
  - Preventive Services Program
  - Elks Mobile Dental Program
  - Donated Dental Services Program
  - Community Water Fluoridation training (PHHS)
    - University of Missouri online training
    - Missouri Coalition for Oral Health
  - HRSA (competitive 4-year grant)
    - Tele-dentistry
    - WIC Varnish
  - CDC (competitive 5-year contract)
    - Sealant Program
    - Community Water Fluoridation
Missouri Oral Health Plan 2020-2025

A Five-Year Plan for the Missouri Department of Health and Senior Services.

Created in Partnership with the Oral Health State Plan Workgroup and Missouri Coalition for Oral Health.
THE SOHP WORKGROUP

- 33 members
- 8 goals with multiple action plans under each
ORAL HEALTH SURVEILLANCE DATA
A randomized, standardized survey of the oral health of third grade students in Missouri (2019)

- Third graders have a mixture of permanent and deciduous (baby) teeth
- They are old enough to cooperate to be seen by most dentists
- They are old enough to perform their oral care independently
2,354 children screened in 53 representative schools
55% of children have had dental decay in Missouri (US average, 62%)
29% of children have untreated tooth decay in Missouri (US average, 22%)
30% of children have dental sealants in Missouri (US average, 42%)
1. Overall dental decay rates of school children are higher among children from rural counties 63-49%
2. Need for urgent dental care is slightly higher in children from rural counties 3.4 -2.4%
3. Rates of untreated decay are higher, 34-25%
4. In rural counties, 2% fewer children have rampant decay
5. Dental sealant rates are higher in rural areas 36-27%
6. Oral hygiene is better among rural children, 19-24% poor OH
7. 29 counties in Missouri don’t have any fluoridated water systems. All of them are rural.
   - Children from non-fluoridated areas have a 4% higher cavity rate.
8. Nine rural counties don’t have a dentist licensed registered in the county.
9. 54% of Missouri Medicaid participants reside in rural counties.
Oral health disparities

Figure 3. Prevalence of decay experience, untreated tooth decay and dental sealants among Missouri’s third grade children by race/ethnicity, percent of children in a school eligible for the national school lunch program (NSLP) and urbanicity, 2018-2019
BASIC SCREENING SURVEY FOR OLDER ADULTS IS COMING IN 2020

- Last completed in 2009
- Working through the process of organizing this screening
- Plan to screen at least 400 people over the age of 60
- ASTDD has identified 30 randomly selected nursing homes and 30 randomly selected congregate meal centers in the state
NURSING FACILITIES AND SENIOR CENTER LOCATIONS IN MISSOURI
ACCESS TO CARE
<table>
<thead>
<tr>
<th>Year</th>
<th>Number per 100,000</th>
<th>Ranking</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>45.8</td>
<td>41</td>
<td>Rank #1</td>
</tr>
<tr>
<td>2019</td>
<td>49.4</td>
<td>40</td>
<td>82/100,000</td>
</tr>
</tbody>
</table>
### MISSOURI LICENSURE STATISTICS: WE ARE GETTING BETTER

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Dentists</th>
<th>Specialists</th>
<th>Hygienists</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>3,029</td>
<td>592</td>
<td>2,419</td>
</tr>
<tr>
<td>2019</td>
<td>3,529</td>
<td>760</td>
<td>4,382</td>
</tr>
</tbody>
</table>

**Percent Increase**

- Dentists: 16.5%
- Specialists: 27%
- Hygienists: 81%

MISSOURI DENTAL BOARD 2018
## WHERE NEW DENTISTS COME FROM

<table>
<thead>
<tr>
<th>New Dentist Applications</th>
<th>By Examination</th>
<th>By Credentials</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>158</td>
<td>39</td>
<td>197</td>
</tr>
<tr>
<td>2017</td>
<td>176</td>
<td>76</td>
<td>252</td>
</tr>
<tr>
<td>2019</td>
<td>169</td>
<td>55</td>
<td>224</td>
</tr>
</tbody>
</table>
ADULT DENTAL BENEFITS STARTED ON JANUARY 4, 2016
<table>
<thead>
<tr>
<th>Description</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Eligibles receiving any dental services</td>
<td>250,664</td>
<td>32.9%</td>
</tr>
<tr>
<td>Total Eligibles receiving preventive dental services</td>
<td>222,300</td>
<td>29.2%</td>
</tr>
<tr>
<td>Total Eligibles receiving dental treatment services</td>
<td>104,784</td>
<td>13.7%</td>
</tr>
<tr>
<td>Total Eligibles receiving a sealant on a permanent molar tooth</td>
<td>36,920</td>
<td>4.9%</td>
</tr>
<tr>
<td>Total Eligibles receiving dental diagnostic services</td>
<td>236,213</td>
<td>31.1%</td>
</tr>
<tr>
<td>Total Eligibles receiving oral health services provided by a non-dental provider</td>
<td>4,541</td>
<td>0.5%</td>
</tr>
<tr>
<td>Total Eligibles receiving any dental or oral health service</td>
<td>251,765</td>
<td>33.1%</td>
</tr>
</tbody>
</table>
Missouri Medicaid participants don’t use service

- MO HealthNet provides comprehensive dental care for pregnant women and 6 weeks post-partum!

- Unique women MO HealthNet Participants - becoming pregnant during (07/01/2016 – 06/30/2017): 56,830

- Number of those pregnant women having at least one dental procedure from 07/01/2016 to 06/30/2018: 9,242

- Percent of pregnant women having at least one dental procedure: 16.3%
MHD QUALITY EFFORT TO IMPROVE UTILIZATION BY PREGNANT WOMEN

- Raising awareness of providers – poster to providers that treat pregnant women about oral care for pregnant women
  - “Secret shopper” survey of dentists about access to care for pregnant women
  - Plan to survey MDA members about treating pregnant women in practice
  - Article in Missouri Dental Journal “Focus” on dental care for Pregnant Women
- Raising awareness of pregnant women
  - Pilot program to send mailings to pregnant women in Cole County advising them of their eligibility for dental services while pregnant
  - Adding dental visit to the “checklist” information that is given to pregnant women
MO HEALTHNET PROVIDES COMPREHENSIVE DENTAL CARE FOR NURSING HOME RESIDENTS

- (CY) 2016, 101,000 individuals 65 years of age and older (seniors) were enrolled in MHD.
- During CY2016, only 5,735* (or 6%) of MHD seniors received dental services.
- The BSS for older adults will help us understand this problem better.
TELE-DENTISTRY
Teledentistry is a reality in Missouri – 6 projects started or in process

Teledentistry allows a dentist to supervise a dental hygienist in a remote location, using synchronous and asynchronous methods

Allows the hygienist to work to the limit of his/her license

The Missouri Dental Practice Act was modified in 2017 to allow teledentistry

Potential to expand access to care by allowing hygienists to work in nursing homes and schools
HRSA Workforce Grant – 4 year
6 contracts to provide dental services via teledentistry
Teledentistry Workshop – November 2019, May 2020 planned
Teledentistry Webinars – 3 in 2019
Preventative Service Program (PSP)
PREVENTIVE SERVICES PROGRAM

- Started in 2009 with Missouri Smiles Program
- Provides dental screenings to students age 4-18
- Education and dental home care supplies
- Fluoride varnish provided at time of screening and 6 months later
Total PSP Participants by School Year

- 2018-2019: 91,384
- 2016-2017: 92,692
- 2015-2016: 83,139
- 2014-2015: 83,258
- 2013-2014: 78,992
- 2012-2013: 63,949
- 2011-2012: 64,657
- 2010-2011: 54,187
- 2009-2010: 35,949
- 2008-2009: 18,976
- 2007-2008: 7,362
- 2006-2007: 4,377
- 2005-2006: 3,000
A 1.75% DECREASE IN DECAY RATE AMONG PSP CHILDREN SCREENED

<table>
<thead>
<tr>
<th>School Year</th>
<th>Decay Experience</th>
<th>Total Screened</th>
<th>Percent Decay Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-2014</td>
<td>6710</td>
<td>9978</td>
<td>67.25%</td>
</tr>
<tr>
<td>2014-2015</td>
<td>7292</td>
<td>11170</td>
<td>65.28%</td>
</tr>
<tr>
<td>2015-2016</td>
<td>7129</td>
<td>11328</td>
<td>62.93%</td>
</tr>
<tr>
<td>2016-2017</td>
<td>8374</td>
<td>13192</td>
<td>63.48%</td>
</tr>
<tr>
<td>2017-2018</td>
<td>7902</td>
<td>12122</td>
<td>65.20%</td>
</tr>
<tr>
<td>2018-2019</td>
<td>8638</td>
<td>13193</td>
<td>65.50%</td>
</tr>
</tbody>
</table>
- Total estimated value of fluoride varnishes in 2018 delivered at Medicaid Rate $1,001,243 (not submitted for reimbursement)
- Estimated reduction of dental decay of Medicaid patients 7%
- Identification of schools and areas that are having problems accessing dental care by the untreated decay rate.
<table>
<thead>
<tr>
<th>School</th>
<th>City</th>
<th># of Untreated Decay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gladstone Elementary</td>
<td>Kansas City, MO</td>
<td>179</td>
</tr>
<tr>
<td>South Elementary</td>
<td>Kennett, MO</td>
<td>165</td>
</tr>
<tr>
<td>Alton R-IV Elementary</td>
<td>Alton, MO</td>
<td>130</td>
</tr>
<tr>
<td>Gracemore Elementary</td>
<td>Kansas City, MO</td>
<td>126</td>
</tr>
<tr>
<td>Truman Elementary</td>
<td>Nevada, MO</td>
<td>125</td>
</tr>
<tr>
<td>Van-Far R-I Elementary</td>
<td>Vandalia, MO</td>
<td>119</td>
</tr>
<tr>
<td>Southern Boone County R1</td>
<td>Ashland, MO</td>
<td>118</td>
</tr>
</tbody>
</table>
OPIOIDS IN DENTAL PRACTICE
BIGGEST PROBLEM FOR DENTISTS - MISUSED OPIOID PRESCRIPTIONS

- NSDUH survey definition of misuse - use without a personal prescription or simply for the experience of feeling the drugs caused.

**Most Common Sources**

- Free from friend or family member
- Bought from friend or family member
- Leftover from Rx from legitimate problem
- Took from friend or family without asking
- Obtained from drug dealer or stranger
EFFORTS TO CHANGE OPIOID PRACTICES RELATED TO DENTAL PRACTICE

- Reduction of ED visits for non-traumatic dental complaints results in fewer pose visit opioid prescriptions
- Changes in Dental Practice Act to limit prescribing of opioids by dentists along with educational campaign has resulted in fewer opioid prescriptions
- Raising the awareness of diversion problems when prescribing opioids
- DEA/BNDD diversion education sessions
OPIOID PRESCRIPTIONS FOLLOWING ED VISITS FOR NTDC

Percent ER Visits with Opioids

January  | February | March | April | May | June | July | August | September | October | November | December

2013    | 2014    | 2015  | 2016  | 2017 | 2018 |
DENTAL PRESCRIPTION QUANTITY OF OPIOID DOSES PER DAY

2016: 5.74
2017: 5.27
2018: 5.19
2019: 5.04

MO HEALTHNET CLAIMS DATA PROVIDED BY CONDUIT
DENTAL PRESCRIPTION DAYS OF PRESCRIBED OPIOIDS

MO HEALTHNET CLAIMS DATA PROVIDED BY CONDUIT
Nationally, 2.7% of all cancer diagnoses are oral and pharyngeal cancer - about 55,000 per year.

Smoking, tobacco use and alcohol use are the most common risk factors. HPV is a new risk factor.

Human Papilloma Virus is responsible for a recent surge in oral pharyngeal cancer patients.

The American Dental Association and the CDC have recommended HPV vaccine for prevention of HPV infection that may lead to head and neck cancer.

ODH is partnering with the Office of Immunizations to promote HPV vaccinations.
- Adult dental services started January 2016
- January 2018 shows a 44% decrease compared to January 2015
- This is not because we have fewer Medicaid participants; those levels have stayed the same.
- The rates per 100,000 are 38% lower.
Delta Dental of Missouri provide 3 years $600,000

Goal to provide sealants to students in High Risk schools

- Schools that had more than 50% of children on Free or Reduced Lunch Program (FRLP) participants –

- 268 schools in 85 counties were eligible (2016).

- Four contractors: TMC, Jefferson County, Lincoln County and Jordan Valley HC.
Number of Sealants Placed
36,847

- Jordan Valley Community Health Center: 31,898
- Jefferson County Health Department (1 Year): 1,527
- Lafayette County Health Department (2 Years): 142
- Truman Medical Center: 2,199
- Lincoln County Health Department: 1,081
Number of Children Seen
14,183

- Jordan Valley Community Health Center: 11,518
- Jefferson County Health Department (1 Year): 1,620
- Lafayette County Health Department (2 Years): 283
- Lincoln County Health Department: 34
- Truman Medical Center: 728
OUTCOMES

- Missouri Dental Sealant rate*
  - 2014-15 - 25.4%
  - 2015-16 - 24.8%
  - 2016-17 - 26.2%
  - 2017-18 - 26.65%
  - 2018-19 – 30%**

* PSP DATA  ** 2019 BSS CHILDREN
DENTAL SEALANT WEBPAGE

- ODH Dental Sealant Webpage is:
  https://health.mo.gov/living/families/oralhealth/dsp.php
COMMUNITY WATER FLUORIDATION
Fluoride in Missouri Public Water Supplies

Public Water Systems that Serve Water with Fluoride Concentrations equal to or greater than 0.6 mg/L

Only primary public water systems shown. All public water systems shown here have naturally-occurring levels of Fluoride in source water greater than or equal to 0.6 mg/L, or chemically add Fluoride to water to achieve this concentration.

Data shown based on monitoring records from 2014, 2015, and 2016.

6/2017
Total # of Community Water Systems (CWS) - 1,452
Total Population on CWS – 5,126,532

Total Number of fluoridated systems – 467
Total Population on fluoridated systems – 3,876,786

Total % of CWS that are fluoridated – 75.61%
A group of 22 volunteers that provides input and evaluation for ODH programs through monthly teleconferences.

This group work with staff to produce:

1. CWF work plan and communication plan
2. Sealant work plan and communication plan
3. Advocated for SB619
4. Provide advice for education and response activities
COMMUNITY WATER FLUORIDATION WEBPAGE

- ODH Fluoridation webpage
- https://health.mo.gov/living/families/oralhealth/waterfluoridation.php
CWF MEDIA CAMPAIGN 2019

- Funded by MCH one time funds
- Radio spots and newspaper inserts in 9 counties and Independence, MO
  - Radio spots aired over 9,000 times
  - Newspaper inserts in 14 newspapers once a month for 3 months to approximately 58,000 homes
- Plans for new campaign in Eastern MO to run next summer using CDC grant funds.
How Community Water Fluoridation Prevents Tooth Decay

For children

When children are young, fluoride that is swallowed enters the bloodstream.

It combines with calcium and phosphate as the tooth is formed under the gums.

These teeth are more resistant to decay throughout childhood and the teenage years.

For people of all ages

Fluoride in beverages and foods mixes with the saliva.

Saliva neutralizes acid produced by bacteria on teeth.

The fluoride heals the teeth and protects them from further decay.
John Dane, DDS FAAHD, DABSCD, FACD
Dental Director
MO Department of Health and Senior Services
912 Wildwood Dr.
Jefferson City, MO 65109

John.dane@health.mo.gov
573.526.3838