Oral Health in Maine, 2011 – 2012
A Series of Maps Describing Professional and Prevention Resources: Explanatory Notes

These maps were constructed by Santosh Nazare, MBBS, MPH, CPH, Epidemiologist/Research Associate I, University of Southern Maine Department of Applied Medical Sciences, for the Oral Health Program in the Maine Center for Disease Control and Prevention’s Division of Population Health, and by David Pied, Policy, Systems and Environmental Change Program Manager in the Division, using data available in 2011 and 2012. It is expected that they will be updated after new data becomes available by the end of 2013. Specific data sources and dates are noted on each map. Certain terms and other details are defined and discussed below.

1. Dentists and dental hygienists (maps # 1 – 6):
   a. The term “active” is used to describe dentists and registered dental hygienists who have up-to-date, active licenses from the State Board of Dental Examiners.
   b. Because a dental professional holds an active license does not necessarily mean that the individual is actively practicing.
   c. There is no practical way to indicate the number of hours an individual dentist or dental hygienist practices and whether that is full-time, part-time, or some other basis.
   d. Dental hygienist location is based upon county of residence, which may or may not be the county of practice.

2. Total population maps (maps # 1, 5, 6) indicate the numbers of active license holders per county and the total county population.

3. Population density maps (maps #2, 3, 4) denote the approximate location of each licensed dental professional.
   a. Dentists are located by practice address. If several practice addresses are located in close proximity to each other, the map may not show more than one “dot,” or “dots” may be overlaid on top of each other, due to the scale of the map. Dentists practicing at “safety net” dental clinics may not be shown, due to how they reported information. See map #7 for clinic locations.
   b. Dental hygienists provide home addresses and so were not mapped by population density due to privacy concerns.

4. “Safety net dental clinics” (#7) include any dental clinic or dental center that operates as, or is operated by, a private non-profit organization, including Federally Qualified Health Centers (FQHC) and FQHC-lookalikes; other private non-profit organizations; state-operated clinics; tribal clinics; and one volunteer program. The Institute of Medicine’s report, America’s Health Care Safety Net (2000), defines safety net providers as those who “organize and deliver a significant level of health care and other health-related services to uninsured, Medicaid, and other vulnerable patients.” Although private practitioners may provide such services, only non-profit safety net sites are included on this map. A map of federally designated dental health professional shortage areas may be found at: http://www.maine.gov/dhhs/mecd/index.html.

5. The maps showing the locations of schools funded by the Maine CDC to provide fluoride mouthrinse and dental sealants (#8, 9) also indicate counties in which more than 50% of children are eligible for the federal Free and Reduced Lunch (FRL) Program at school. The School Oral Health Program, an initiative of the Maine CDC’s Oral Health Program, provides these resources to schools that meet a combination of community-based risk factors, within the limits of available funds. Generally speaking, a threshold level of 40% FRL eligibility will qualify a school for the state-funded program. In 2013, fewer schools use the fluoride mouthrinse.

6. In 2011, 66 public water systems provided optimally fluoridated water to 133 communities in Maine (#10), comprising 80 percent of people who are served by public water systems. (Since then, two systems combined corporately, and small one system discontinued fluoridating [on Mt. Desert Island, adjacent to the Bar Harbor on the map] resulting in 64 systems serving 132 communities.) Because just over half of the state’s population uses wells or small private systems, this translates to 40 percent of the total population of the state. Not all people in a community where public water is provided have access to that water.

7. Map #11 represents Independent Practice Dental Hygienist (IPDH) practice locations in Maine as reported in September 2012. An IPDH is licensed by the Maine Board of Dental Examiners to practice without supervision by a dentist in Maine within a scope of practice that includes many but not all of the duties described under general supervision of Registered Dental Hygienists.

8. Map #12, Public Health Dental Hygienists Providing School Linked Services in Maine schools, 2012, represents the school districts, grouped by zip codes, where hygienists practicing in Public Health Supervision status are providing preventive oral health services in schools. A Public Health Supervision Dental Hygienist is a registered dental hygienist who practices in settings other than a traditional dental practice, providing preventive services, under the general supervision of a dentist.
1. Dental Workforce:
Active Dentists* by County, Maine 2011

Legend

Active* Dentists  Total Population

- 6 - 17 17,535
- 18 - 41 17,536 - 39,736
- 42 - 82 39,737 - 71,870
- 83 - 231 71,871 - 153,923
- 153,924 - 281,674

*See explanatory notes
Note 1. Numbers in parentheses indicate total number of active
dentists in that county
2. Dental workforce data current as of January 2011

Data Sources:
State of Maine, Board of Dental Examiners 2011
Summary File 1, U.S. Census Bureau 2010

Maps constructed by: Santosh Nazare, Research Associate I/Epidemiologist, University of Southern Maine for Maine CDC Oral Health Program, December 2011
2. Dental Workforce: Active Dentists*, Maine 2011

Legend
- City/Town
- General Dentist (practice location)

Population Density per square mile
- 4.0 - 12.8
- 12.9 - 26.6
- 26.7 - 49.3
- 49.4 - 155.3
- 155.4 - 231.4

*See explanatory notes
Note 1: Dental specialists are excluded in this map
Note 2: Dental workforce data current as of January 2011

Maps constructed by: Santosh Nazare, Research Associate I/Epidemiologist, University of Southern Maine for Maine CDC Oral Health Program, December 2011
4. Dental Workforce: Active Pediatric Dentists*, Maine 2011

Legend
- Pediatric dentist
- City/Town

Population Density
per square mile
- 4.0 - 12.8
- 12.9 - 26.6
- 26.7 - 49.3
- 49.4 - 155.3
- 155.4 - 231.4

*See explanatory notes
Note: Dental specialist data current as of January 2011

Data Sources:
State of Maine, Board of Dental Examiners 2011
Summary File 1, U.S. Census Bureau 2010

Maps constructed by: Santosh Nazare, Research Associate I/Epidemiologist, University of Southern Maine for Maine CDC Oral Health Program, December 2011
5. Dental Workforce:
Active Dentist* to Population Ratio, Maine 2011

<table>
<thead>
<tr>
<th>County</th>
<th>Total Population</th>
<th>No. of people per Dentist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Androscoggin</td>
<td>107,702</td>
<td>2,627</td>
</tr>
<tr>
<td>Aroostook</td>
<td>71,870</td>
<td>3,125</td>
</tr>
<tr>
<td>Cumberland</td>
<td>281,674</td>
<td>1,219</td>
</tr>
<tr>
<td>Franklin</td>
<td>30,768</td>
<td>2,797</td>
</tr>
<tr>
<td>Hancock</td>
<td>54,418</td>
<td>2,177</td>
</tr>
<tr>
<td>Kennebec</td>
<td>122,151</td>
<td>1,770</td>
</tr>
<tr>
<td>Knox</td>
<td>39,736</td>
<td>1,589</td>
</tr>
<tr>
<td>Lincoln</td>
<td>34,457</td>
<td>2,027</td>
</tr>
<tr>
<td>Oxford</td>
<td>57,833</td>
<td>3,402</td>
</tr>
<tr>
<td>Penobscot</td>
<td>153,923</td>
<td>1,877</td>
</tr>
<tr>
<td>Piscataquis</td>
<td>17,535</td>
<td>2,923</td>
</tr>
<tr>
<td>Sagadahoc</td>
<td>35,293</td>
<td>2,521</td>
</tr>
<tr>
<td>Somerset</td>
<td>52,228</td>
<td>4,352</td>
</tr>
<tr>
<td>Waldo</td>
<td>38,786</td>
<td>3,232</td>
</tr>
<tr>
<td>Washington</td>
<td>32,856</td>
<td>2,738</td>
</tr>
<tr>
<td>York</td>
<td>197,131</td>
<td>2,857</td>
</tr>
</tbody>
</table>

Statewide dentist to population ratio = 1:1994

Legend
- Active Dentist* (Practice location)

Dentist to population ratio:
- 1:1,219 - 1:1,589
- 1:1,590 - 1:2,177
- 1:2,178 - 1:2,923
- 1:2,924 - 1:3,402
- 1:3,403 - 1:4,352

*Dentists include both general practice and specialists; See explanatory notes
Note 1. Numbers in parentheses indicate total number of active dentists in that county
2. Dental workforce data current as of January 2011
Data Sources:
State of Maine, Board of Dental Examiners 2011
Summary File 1, U.S. Census Bureau 2010

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6. Dental Workforce: Active Dental Hygienists* by County, Maine 2011

Legend

Active* Dental Hygienists
- 16 - 20
- 21 - 48
- 49 - 167
- 168 - 335

Total Population
- 17,535
- 17,536 - 39,736
- 39,737 - 71,870
- 71,871 - 153,923
- 153,924 - 281,674

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*See explanatory notes
Note 1. Numbers in parentheses indicate total number of active dental hygienists in that county
2. Dental workforce data current as of January 2011

Data Sources:
State of Maine, Board of Dental Examiners 2011
Summary File 1, U.S. Census Bureau 2010

² 0 15 30 60 60 Miles
7. Safety Net* Dental Clinics, Maine 2011

Legend

Safety Net* Dental Clinics (35)
- FQHC† (15)
- Private Non-profit (11)
- State Clinic (3)
- Tribal (5)
- Volunteer (1)

Total Population
- 17,535
- 17,536 - 39,736
- 39,737 - 71,870
- 71,871 - 153,923
- 153,924 - 281,674

*See explanatory notes
†FQHC: Federally Qualified Health Center

Note: Number in parentheses after type of clinic in legend shows the total number of each type of clinic; number in parentheses after county name shows the total county population.

Data Sources:
- Oral Health Division, Maine CDC 2011
- Summary File 1, U. S. Census Bureau 2010

Maps constructed by: Santosh Nazare, Research Associate I/Epidemiologist, University of Southern Maine for Maine CDC Oral Health Program, December 2011
8. Schools with State-Funded Fluoride Mouth Rinse Program, Maine 2011
Maine CDC Oral Health Program

Maps constructed by: Santosh Nazare, Research Associate I/Epidemiologist, University of Southern Maine for Maine CDC Oral Health Program, December 2011

*See explanatory notes
Data source:
School fluoride mouth rinse data: Maine Oral Health Program, Maine CDC, 2011-12 school year
Child population: U.S. Census Bureau, 2010
Free and reduced lunch report, Maine Department of Education, 2010

Legend
\[ \text{Using fluoride mouthrinse} \quad \text{Not using fluoride mouthrinse} \]

Total population K - 4th grade (5-10 yrs) children
- 1,099
- 1,100 - 2,650
- 2,651 - 4,593
- 4,594 - 9,967
- 9,968 - 19,572

Counties with more than 50% children eligible for free or reduced lunch (FRL) at school*
Percentage of school children eligible for FRL ranges from 36.5% to 61.5% across Maine counties

*See explanatory notes

Maps constructed by: Santosh Nazare, Research Associate I/Epidemiologist, University of Southern Maine for Maine CDC Oral Health Program, December 2011

*See explanatory notes
Data source:
School fluoride mouth rinse data: Maine Oral Health Program, Maine CDC, 2011-12 school year
Child population: U.S. Census Bureau, 2010
Free and reduced lunch report, Maine Department of Education, 2010
9. Schools with State-Funded Sealant Program, Maine 2011
Maine CDC Oral Health Program

Legend
Schools in School Oral Health Program
• With sealant program
• Without sealant program

Total Population of 2nd grade (7-8 yrs old) children
- 362 - 690
- 691 - 1,054
- 1,055 - 1,491
- 1,492 - 4,480
- 4,481 - 6,494

Counties with more than 50% children eligible for free or reduced lunch (FRL) at school*

Percentage of school children eligible for FRL ranges from 36.5% to 61.5% across Maine counties

*See explanatory notes
Data source:
School sealant program data: Maine Oral Health Program, Maine CDC, 2011-12 school year
Child population: U.S. Census Bureau, 2010
Free and reduced lunch report, Maine Department of Education, 2010

Maps constructed by: Santosh Nazare, Research Associate I/Epidemiologist, University of Southern Maine for Maine CDC Oral Health Program, December 2011
10. Communities with Fluoridated Water Supply*, Maine 2011

Legend

- City/Town
- Fluoridated Water Supply*

*See explanatory notes
Note: Only public water systems are shown in this map

Data Sources:
Water fluoridation data: Oral Health Program, Maine CDC
Maine Office of GIS, Office of Information Technology, Maine
ESRI Street Map Data

Maps constructed by: Santosh Nazare, Research Associate I/Epidemiologist, University of Southern Maine for Maine CDC Oral Health Program, December 2011
11. Independent Practice Dental Hygienist Practices In Maine - 2012

Independent Practice Dental Hygienists (IPDH)

- Towns with an IPDH Office
- County names in purple

Map Created by D. Pied February 2013

Map Created by D. Pied February 2013

PHS Dental Hygienists providing school linked services

- Zip codes with schools offering Dental Hygienist Services
- Counties with more than 50% children eligible for free or reduced lunch at school