Dental Survey of Kindergarten-Aged Children attending First Nations Schools in 2006-2007

A Regional and Provincial Analysis

Ministry of Healthy Living and Sport
Healthy Children Women Branch
Population and Public Health
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"Dental health has a significant impact on general health and well-being"1.

In 2006-2007, a provincial kindergarten dental survey was conducted by health authority dental staff to measure dental health of children 5 years of age. A total of 35,602 kindergarten children attending public schools2 and 230 First Nations kindergarten children attending 20 First Nations schools were screened for dental health3. During the screening program, kindergarten children were assessed for:

- evidence of no visible dental decay (caries free),
- evidence of no visible decay but evidence of existing restorations,
- evidence of pain or infection at the time of screening,
- evidence of visible dental decay in one or more teeth, and
- location of decay by quadrant of the mouth.

Of the 20 First Nations Schools surveyed, Northern Health Authority (NHA), Interior Health Authority (IHA) and Vancouver Island Health Authority (VIHA) each surveyed six schools and Vancouver Coastal Health Authority (VCHA) surveyed two schools. No First Nations schools were surveyed in Fraser Health Authority.

This document is a summary of the dental survey results for the First Nations schools.

Limitations of the Data:
There are several limitations that need to be considered when analysing the dental survey data.

1. The First Nations school survey was conducted on a small number of children in a small number of schools. Currently there are 111 First Nations Schools in BC offering classes for kindergarten aged children.4 This equates to an 18% school participation rate for the dental survey. It is not known whether these 20 schools were chosen due to enrolment size, location, history of prior service delivery or other factors. It is not known whether the communities associated to these 20 schools were receiving services through Health Canada Children's Oral Health Initiative.

2. It is difficult to accurately determine the number of First Nations children in 2006-2007. Census information for 2006, indicates that the number of Aboriginal children (aged 5 years), in BC, was 32855. However, this includes Métis, Inuit, and First Nations children. The 2007-2008 Ministry of Education kindergarten enrolment data for public schools indicated that 3291 children self identified as Aboriginal6. First Nations Schools Association indicates that 611 children are enrolled in kindergarten

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1 Model Core Program paper for Dental Public Health, October 2006.
4 Communication 2009-01-19 with Advisor, Education, Intergovernmental Affairs, BC Region, Indian and Northern Affairs Canada.
5 Communication with BC Stats 2009-01-19.
6 Ministry of Education, Number of All Students/Aboriginal Students from Kindergarten to Grade 7, 2007/08.
for the current year. The 230 First Nations kindergarten children would represent 7% of the Aboriginal kindergarten population if 2006 Census data is used, or 38% of the First Nation kindergarten population if current First Nations Schools Association data is used.

3. Direct comparison to the 2006-2007 Provincial Kindergarten Dental Survey is not recommended due to the small number of First Nations children screened. A future comparison to dental survey results for First Nations children in public schools will provide a better indication if these results are representative for First Nations children.

Dental Health Benchmarks:

The following are suggested benchmarks for prevention of dental disease:

- 60% of school-entry children are caries free,
- Less than 20% of school entry children have unmet dental treatment needs.

Survey Findings:

Of the 230 First Nations children screened:

- 17.8% had no visible decay,
- 44.7% had no visible decay present but restorations present, and
- 37.8% had visible decay.

Of the First Nations children with visible decay:

- 34.4% had decay in 1 quadrant of the mouth,
- 34.4% had decay in 2 quadrants of the mouth,
- 12.6% had decay in 3 quadrants of the mouth, and

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7 Model Core Program paper for Dental Public Health, October 2006
8 First Nations Schools 2006-07 dental survey
• 18.3% had decay in 4 quadrants of the mouth.

Of the First Nations children with visible decay:
• 16% had urgent dental health concerns evidenced by visible decay and the presence of pain and/or infection in the mouth at the time of screening.
• Northern Health Authority had the highest percentage of urgent dental needs.

Of the 20 First Nations Schools screened:
First Nations children in Northern Health Authority (48.2%) had highest rate of visible decay compared to First Nations children in Vancouver Coastal Health Authority (38.2%), Vancouver Island Health Authority (32.9%) and Interior Health Authority (34.4%).

First Nations children in Vancouver Coastal Health Authority (58.8%) and Vancouver Island Health Authority (58.5%) had higher rates of no decay and restoration present than First Nations children in Interior Health Authority (31.0%) or Northern Health Authority (30.3%).

9 First Nations Schools 2006-07 dental survey
First Nations children in Interior Health Authority (34.4%) and Northern Health Authority (23.2%) had higher rates of no visible decay than children in Vancouver Coastal Health Authority (2.9%) and Vancouver Island Health Authority (8.5%).

Of the First Nations children with visible decay, Interior Health Authority and Vancouver Island Health Authority had the highest percentage of decay in four quadrants.

Conclusions:

Good dental health has a significant impact on overall health and wellness. The 2006-2007 First Nations kindergarten dental survey provides an indication of the dental health of First Nations children. The results indicated that 17.8% of First Nations children surveyed were

10 First Nations Schools 2006-07 dental survey
11 First Nations Schools 2006-07 dental survey
decay free and 44.7% were decay free but had restorations present. In all, 62.5% of children surveyed were decay free and/or had restorations present.

The First Nations kindergarten dental survey results also identified 37.8% of children as having decay, with 16% of those with decay requiring urgent follow up for pain or infection.

Additional work is needed to address the disparities in early childhood dental health and close the gap between Aboriginal and non-Aboriginal children. This includes increasing the number of Aboriginal children who are caries free and reducing rates of early childhood dental decay. Continued collaboration is needed between Tripartite partners to address early childhood dental health for First Nations children on and off reserve. This includes reducing barriers to accessing dental services, improved coordination of service delivery and program monitoring, and making available culturally appropriate educational resources for Aboriginal families and care providers about prevention of early childhood caries.
<table>
<thead>
<tr>
<th>Health Authority</th>
<th># of First Nations Schools Screened</th>
<th>Number Enrolled</th>
<th>Number Screened</th>
<th>% screened</th>
<th>Number No visible decay</th>
<th>% No visible decay</th>
<th>Number No visible Decay, Restorations present</th>
<th>% No visible Decay, Restorations present</th>
<th>Number Visible Decay</th>
<th>% Visible Decay</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCHA</td>
<td>2</td>
<td>38</td>
<td>34</td>
<td>89.4%</td>
<td>1</td>
<td>2.9%</td>
<td>20</td>
<td>58.8%</td>
<td>13</td>
<td>38.2%</td>
</tr>
<tr>
<td>IHA</td>
<td>6</td>
<td>72</td>
<td>58</td>
<td>80.5%</td>
<td>20</td>
<td>34.4%</td>
<td>18</td>
<td>31.0%</td>
<td>20</td>
<td>34.4%</td>
</tr>
<tr>
<td>VIHA</td>
<td>6</td>
<td>100</td>
<td>82</td>
<td>82%</td>
<td>7</td>
<td>8.5%</td>
<td>48</td>
<td>58.5%</td>
<td>27</td>
<td>32.9%</td>
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<tr>
<td>FHA</td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<td>N/A</td>
</tr>
<tr>
<td>NHA</td>
<td>6</td>
<td>61</td>
<td>56</td>
<td>91.8%</td>
<td>13</td>
<td>23.2%</td>
<td>17</td>
<td>30.3%</td>
<td>27</td>
<td>48.2%</td>
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<tr>
<td>Total</td>
<td>20</td>
<td>271</td>
<td>230</td>
<td>84.8%</td>
<td>41</td>
<td>17.8%</td>
<td>103</td>
<td>44.7%</td>
<td>87</td>
<td>37.8%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Health Authority</th>
<th>Total First Nations Children -Visible Decay</th>
<th>% 1 Quad Decay</th>
<th>% 2 Quad Decay</th>
<th>% 3 Quad Decay</th>
<th>% 4 Quad Decay</th>
<th>% Visible Decay</th>
<th>% of First Nations Children with Urgent Decay</th>
</tr>
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<tbody>
<tr>
<td>VCHA</td>
<td>38.2%</td>
<td>38.4%</td>
<td>46%</td>
<td>15.3%</td>
<td>0%</td>
<td>16.0%</td>
<td>0%</td>
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<tr>
<td>IHA</td>
<td>34.4%</td>
<td>35%</td>
<td>20%</td>
<td>5%</td>
<td>20%</td>
<td>14.8%</td>
<td>20%</td>
</tr>
<tr>
<td>VIHA</td>
<td>32.9%</td>
<td>33.3%</td>
<td>25.9%</td>
<td>14.8%</td>
<td>25.9%</td>
<td>16.0%</td>
<td>14.8%</td>
</tr>
<tr>
<td>FHA</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>NHA</td>
<td>48.2%</td>
<td>33.3%</td>
<td>48.1%</td>
<td>14.8%</td>
<td>3.7%</td>
<td>22.2%</td>
<td>N/A</td>
</tr>
<tr>
<td>Total</td>
<td>37.8%</td>
<td>34.4%</td>
<td>34.4%</td>
<td>12.6%</td>
<td>18.3%</td>
<td>16.0%</td>
<td>16.0%</td>
</tr>
</tbody>
</table>

Data Source: Statistics provided by Health Authority staff and are based on 2006-07 kindergarten dental screening results.
Health Authority First Nations Schools Dental Survey Data 2006-07 received December 18, 2008

<table>
<thead>
<tr>
<th>Health Authority</th>
<th>Number of Aboriginal Children 5 years of age*</th>
<th>Number surveyed for dental health in First Nations schools</th>
<th>% of Aboriginal population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior</td>
<td>740</td>
<td>58</td>
<td>7.8%</td>
</tr>
<tr>
<td>Fraser</td>
<td>640</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Vancouver Coastal</td>
<td>315</td>
<td>34</td>
<td>10.7%</td>
</tr>
<tr>
<td>Vancouver Island</td>
<td>690</td>
<td>82</td>
<td>11.1%</td>
</tr>
<tr>
<td>Northern</td>
<td>890</td>
<td>56</td>
<td>6.2%</td>
</tr>
<tr>
<td>Provincial</td>
<td>3285</td>
<td>230</td>
<td>7%</td>
</tr>
</tbody>
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