



Dental Practice-Based Research Network
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DPBRN 12: Prevalence of Questionable Occlusal Caries Lesions

Results: Overall and by Region

Date prepared: May 18, 2011

Prevalence of the questionable occlusal lesions (QOL) in the study by DPBRN region, from consecutive patient logs.

Table 1: Distribution of patients surveyed and number with a questionable occlusal lesions (QOL) according to DPBRN Region¹

| | AL/MS N | FL/GA ² N | MN/HP N | KP/PDA N | DK N | TOTAL N |
|--|------------|-------------------------|------------|-------------|---------|------------|
| Number of practitioners | 10 | 20 | 13 | 15 | 25 | 83 |
| Number of patients | 890 | 1,526 | 988 | 1,074 | 2,432 | 6,910 |
| Questionable occlusal lesions (QOL) | | | | | | |
| Number of patients ³ with QOL | 368 | 641 | 379 | 169 | 755 | 2,312 |
| % of patients with QOL | 41.3% | 42.0% | 38.4% | 15.7% | 31.0% | 33.5% |

¹AL/MS: Alabama/Mississippi; FL/GA: Florida/Georgia; MN: HealthPartners and private practitioners in Minnesota; PDA: Permanente Dental Associates and Kaiser Permanente's Center for Health Research; and DK: Denmark.

²Consecutive patient log not available for one FL/GA practice. Only patients with an unrestored occlusal surface are included in counts.

³All of these patients did not participate.

Table 2: Distribution of DPBRN practitioner-investigators, participating patients and enrolled lesions according to DPBRN region

| | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | DK ² | | TOTAL | |
|---|-------|----------------|-------|------|-------|------|--------|------|-----------------|------|-------|-----|
| | N | % ¹ | N | % | N | % | N | % | N | % | N | % |
| Dentists | 10 | 12.0 | 20 | 24.0 | 13 | 15.7 | 15 | 18.1 | 25 | 30.1 | 83 | 100 |
| Patients | 296 | 16.7 | 477 | 27.0 | 296 | 16.7 | 106 | 6.0 | 593 | 33.5 | 1,768 | 100 |
| Lesions | 431 | 16.0 | 699 | 26.0 | 439 | 16.3 | 169 | 6.3 | 949 | 35.3 | 2,687 | 100 |
| Excluding 17 lesions, 14 patients, with missing (N=11) or invalid tooth number (N=6) | | | | | | | | | | | | |
| Patients | 292 | 16.5 | 470 | 26.6 | 296 | 16.8 | 106 | 6.0 | 590 | 33.4 | 1,754 | 100 |
| Lesions | 425 | 15.9 | 692 | 25.9 | 438 | 16.4 | 169 | 6.3 | 946 | 35.4 | 2,670 | 100 |

¹Percentages for this table only are within rows for each variable.

²One Denmark practice had a prevalence of zero, thus no enrolled lesions

Data collection for this study began September 10, 2008 and ended December 28, 2010.

Results that follow are of 1,754 participating patients and 2,670 enrolled lesions:

Enrolled lesions are from a total of 82 practitioner-investigators instead of 83 due to one dentist from Denmark having a prevalence of zero.

Questions asked regarding the characteristics of the patients enrolled with questionable occlusal lesions.

1. Patient Gender

a Male

b Female

2. Patient age in years

Table 3A: Characteristics of patients with enrolled lesions by DPBRN region

| | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | DK | | TOTAL | |
|--------------------|--------|------|--------|------|--------|------|--------|------|--------|------|--------|------|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Gender | | | | | | | | | | | | |
| Male | 120 | 41.1 | 237 | 50.4 | 127 | 43.1 | 43 | 40.6 | 300 | 51.0 | 827 | 47.2 |
| Female | 172 | 58.9 | 233 | 49.6 | 168 | 57.0 | 63 | 59.4 | 288 | 49.0 | 924 | 52.8 |
| Age (years) | | | | | | | | | | | | |
| Mean | 29.8 | | 36.6 | | 33.3 | | 29.1 | | 32.2 | | 33.0 | |
| (SD) | (18.4) | | (18.0) | | (17.7) | | (16.1) | | (16.7) | | (17.6) | |
| (min-max) | (7-85) | | (7-83) | | (5-92) | | (6-83) | | (6-82) | | (5-92) | |
| <= 12 years | 56 | 19.2 | 37 | 7.9 | 35 | 11.8 | 12 | 11.3 | 68 | 11.5 | 208 | 11.9 |
| 13 – 18 years | 69 | 23.6 | 60 | 12.8 | 39 | 13.2 | 23 | 21.7 | 74 | 12.5 | 265 | 15.1 |
| 19 – 44 years | 89 | 30.5 | 216 | 46.1 | 134 | 45.3 | 53 | 50.0 | 320 | 54.2 | 812 | 46.3 |
| 45 – 64 years | 68 | 23.3 | 126 | 26.9 | 78 | 26.4 | 15 | 14.2 | 102 | 17.3 | 389 | 22.2 |
| >= 65 years | 10 | 3.4 | 30 | 6.4 | 10 | 3.4 | 3 | 2.8 | 26 | 4.4 | 79 | 4.5 |

- Overall, 53% of enrolled patients were female, lower for FL/GA and DK.
- The average age was 33 years, with AL/MS & KP/PDA being slightly younger and FL/GA, older.

3. Patient ethnicity

a not reported or unknown (I do not wish to provide this information)

b Hispanic or Latino

c Not Hispanic or Latino

Table 3B: Characteristics of patients with enrolled lesions by DPBRN region

| | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | SK | | TOTAL | |
|------------------------|--------|------|-------|------|-------|------|--------|------|-------|------|---------|------|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| | N= 292 | | N=470 | | N=296 | | N=106 | | N=590 | | N=1,754 | |
| Ethnicity | | | | | | | | | | | | |
| Missing | 0 | 0.0 | 19 | 4.0 | 42 | 14.2 | 7 | 6.6 | 104 | 17.6 | 172 | 9.8 |
| Among Available | | | | | | | | | | | | |
| | N=292 | | N=451 | | N=254 | | N=99 | | N=486 | | N=1,582 | |
| Hispanic\Latino | 4 | 1.4 | 69 | 15.3 | 16 | 6.3 | 4 | 4.0 | 8 | 1.6 | 101 | 6.4 |
| Not Hispanic\Latino | 288 | 98.6 | 382 | 84.7 | 238 | 93.7 | 95 | 96.0 | 478 | 98.4 | 1481 | 93.6 |

- 6% of patients whose ethnicity was available were of Hispanic/Latino ethnicity, notably higher in FL/GA.

4. Patient race

- a not reported or unknown (I do not wish to provide this information)
- b White
- c Black or African-American
- d American Indian or Alaska Native
- e Asian
- f Native Hawaiian or Other Pacific Islander
- g Other (please specify) _____

Table 3C: Characteristics of patients with enrolled lesions by DPBRN region

| | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | DK | | TOTAL | |
|------------------------|--------------|------|--------------|------|--------------|------|--------------|------|--------------|------|----------------|------|
| | N= 292 | | N=470 | | N=296 | | N=106 | | N=590 | | N=1,754 | |
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Race | | | | | | | | | | | | |
| Missing | 4 | 1.4 | 19 | 4.0 | 33 | 11.2 | 6 | 5.7 | 39 | 6.6 | 101 | 5.8 |
| Among Available | N=288 | | N=451 | | N=263 | | N=100 | | N=551 | | N=1,653 | |
| White | 212 | 73.6 | 344 | 76.3 | 215 | 81.7 | 86 | 86.0 | 532 | 96.6 | 1389 | 83.5 |
| African-American | 69 | 24.0 | 85 | 18.8 | 36 | 13.7 | 5 | 5.0 | 3 | 0.5 | 198 | 11.9 |
| Am. Indian/Alaska | 2 | 0.7 | 1 | 0.2 | 1 | 0.4 | 2 | 2.0 | 0 | 0.0 | 6 | 0.4 |
| Asian | 1 | 0.3 | 9 | 2.0 | 8 | 3.0 | 4 | 4.0 | 13 | 2.4 | 35 | 2.1 |
| Hawaiian or Islander | 1 | 0.3 | 1 | 0.2 | 0 | 0.0 | 1 | 1.0 | 0 | 0.0 | 3 | 0.2 |
| Other | 3 | 1.0 | 11 | 2.4 | 3 | 1.1 | 2 | 2.0 | 3 | 0.5 | 22 | 1.3 |

- About 84% of patients were White, 12% Black/African-American, with considerable differences by region: DK 97% White, and FL/GA, AL/MS being 19-24% Black/ African-American.

5. Does the patient have any dental insurance or third party coverage?

- a No
- b Yes

Table 3D: Characteristics of patients with enrolled lesions by DPBRN region

| | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | DK | | TOTAL | |
|------------------|-------|------|-------|------|-------|------|--------|------|-----|-------|-------|------|
| | N | | N | | N | | N | | N | | N | |
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Insurance | | | | | | | | | | | | |
| No | 34 | 11.6 | 117 | 25.0 | 27 | 9.1 | 4 | 3.8 | 0 | 0.0 | 182 | 10.4 |
| Yes | 258 | 88.4 | 351 | 75.0 | 269 | 90.9 | 102 | 96.2 | 589 | 100.0 | 1,569 | 89.6 |

- Overall, 90% had some type of dental insurance; all of DK and only 75% of FL/GA.

Table 4: Tooth position* by DPBRN region

| Tooth Position | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | DK | | TOTAL | |
|------------------|-------|------|-------|------|-------|------|--------|------|-------|------|---------|------|
| | N=425 | | N=692 | | N=438 | | N=169 | | N=946 | | N=2,670 | |
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Premolar | | | | | | | | | | | | |
| Premolar | 155 | 36.5 | 247 | 35.7 | 126 | 28.8 | 37 | 21.9 | 267 | 28.2 | 832 | 31.2 |
| Molar | 270 | 63.5 | 445 | 64.3 | 312 | 71.2 | 132 | 78.1 | 679 | 71.8 | 1838 | 68.8 |
| Premolars | | | | | | | | | | | | |
| Maxillary | 62 | 40.0 | 119 | 48.2 | 50 | 39.7 | 20 | 54.1 | 104 | 39.0 | 355 | 42.7 |
| Mandibular | 93 | 60.0 | 128 | 51.8 | 76 | 60.3 | 17 | 46.0 | 163 | 61.1 | 477 | 57.3 |
| First | 63 | 40.7 | 120 | 48.6 | 61 | 48.4 | 18 | 48.7 | 109 | 40.8 | 371 | 44.6 |
| Second | 92 | 59.4 | 127 | 51.4 | 65 | 51.6 | 19 | 51.4 | 158 | 59.2 | 461 | 55.4 |
| Molars | | | | | | | | | | | | |
| Maxillary | 125 | 46.3 | 238 | 53.5 | 157 | 50.3 | 64 | 48.5 | 345 | 50.8 | 929 | 50.5 |
| Mandibular | 145 | 53.7 | 207 | 46.5 | 155 | 49.7 | 68 | 51.5 | 334 | 49.2 | 909 | 49.5 |
| First | 113 | 41.9 | 169 | 38.0 | 129 | 41.4 | 39 | 29.5 | 223 | 32.8 | 673 | 36.6 |
| Second | 136 | 50.4 | 243 | 54.6 | 153 | 49.0 | 87 | 65.9 | 360 | 53.0 | 979 | 53.3 |
| Third | 21 | 7.8 | 33 | 7.4 | 30 | 9.6 | 6 | 4.6 | 96 | 14.1 | 186 | 10.1 |

*Classification according to US Tooth numbers:

Premolar (4, 5, 12, 13, 20, 21, 28, 29), Molar (1-3, 14-16, 17-19, 30-32)

Premolar: maxillary (4-5, 12-13), mandibular (20-21, 28-29), 1st (5, 12, 21, 28), 2nd (4, 13, 20, 29)

Molar: maxillary (1-3, 14-16), mandibular (17-19, 30-32), 1st (3, 14, 19, 30), 2nd (2, 15, 18, 31), 3rd (1, 16, 17, 32)

- 31% of lesions involved premolars, lower in KP/PDA (22%) and higher in AL/MS and FL/GA, 36%.
- Among lesion involving premolars, 43% were maxillary and 45% were 1st premolars, similar across regions.
- Among lesions involving molars
 - equal with regard to maxillary or mandibular, similar across regions, in contrast:
 - 37% were 1st, 53% were 2nd, and 10% were 3rd molars, differing across regions, especially 3rd molars: low of 5% in KP/PDA, high of 14% in DK, with the remaining ranging 7-10%

7. Which **one** best describes the luster of the questionable area?

- a Chalky appearance
 b Shiny appearance

8. Which **one** best describes the color of the questionable area?

- a Opaque
 b White spot
 c Yellow/light brown discoloration
 d Dark brown/black discoloration
 e Other _____

9. Is the questionable area associated with a fissure or pit?

- a No
 b Yes – limited to the pit or fissure
 c Yes – extending beyond the pit or fissure

Table 5: Description of questionable area by DPBRN region

| | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | DK | | TOTAL | |
|---------------------------------------|-------|------|-------|------|-------|------|--------|------|-----|------|-------|------|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Appearance of Luster | | | | | | | | | | | | |
| Chalky | 152 | 36.4 | 218 | 31.7 | 199 | 45.4 | 98 | 58.0 | 639 | 67.6 | 1,306 | 49.1 |
| Shiny | 266 | 63.6 | 470 | 68.3 | 239 | 54.6 | 71 | 42.0 | 307 | 32.5 | 1,353 | 50.9 |
| Color of area | | | | | | | | | | | | |
| Opaque | 66 | 16.4 | 51 | 7.4 | 16 | 3.7 | 20 | 11.9 | 79 | 8.4 | 232 | 8.8 |
| White spot | 23 | 5.7 | 17 | 2.5 | 20 | 4.6 | 16 | 9.5 | 82 | 8.7 | 158 | 6.0 |
| Yellow/light brown | 188 | 46.8 | 304 | 44.2 | 232 | 53.0 | 65 | 38.7 | 450 | 47.9 | 1,239 | 47.0 |
| Dark brown/black | 125 | 31.1 | 298 | 43.3 | 167 | 38.1 | 65 | 38.7 | 328 | 34.9 | 983 | 37.3 |
| Other | 0 | 0.0 | 18 | 2.6 | 3 | 0.7 | 2 | 1.2 | 1 | 0.1 | 24 | 0.9 |
| Associated with fissure or pit | | | | | | | | | | | | |
| No | 5 | 1.2 | 17 | 2.5 | 8 | 1.8 | 1 | 0.6 | 11 | 1.2 | 42 | 1.6 |
| Yes - limited to pit/fissure | 345 | 81.6 | 615 | 89.4 | 416 | 95.4 | 161 | 95.3 | 828 | 87.5 | 2,365 | 88.8 |
| Yes - beyond pit/fissure | 73 | 17.3 | 56 | 8.1 | 12 | 2.8 | 7 | 4.1 | 107 | 11.3 | 255 | 9.6 |

- Overall, about half of the lesions had a chalky and half had a shiny luster; this differed across regions. FL/GA and ALMS had only 32-36% with a chalky luster compared to 67% in DK.
- Most common color of lesion was yellow/light brown, 47%, followed by dark brown/black, 37%, with much fewer being opaque (9%) or white (6%). Though these percents differed across region, the “ranking” varied very little, namely, yellow/light brown was always most common either followed by or tied with dark brown/black.
- Nearly 90% had a limited association with a fissure or pit, ranged from 82% in AL/MS to 95% in MN/HP and KP/PDA.

10. Which aids were used in **making (not confirming)** the diagnosis? (Check all that apply, *thus column percents can sum to over 100%*)

- a Magnification
- b Air drying
- c **Dental explorer**
- d Laser fluorescence such as DIAGNOdent®
- e Caries Detecting Dye
- f Radiographs
- g Transillumination

Table 6(A): Aids used in making the diagnosis by DPBRN region

| | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | DK | | TOTAL | |
|----------------------|-------|------|-------|------|-------|------|--------|------|-----|------|-------|------|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Magnification | 256 | 60.2 | 456 | 66.0 | 370 | 84.5 | 89 | 52.7 | 88 | 9.3 | 1,259 | 47.2 |
| Air drying | 389 | 91.8 | 637 | 92.1 | 381 | 87.0 | 160 | 94.7 | 942 | 99.7 | 2,509 | 94.0 |
| Laser fluorescence | 25 | 6.0 | 42 | 6.1 | 1 | 0.2 | 1 | 0.6 | 0 | 0 | 69 | 2.6 |
| Caries detecting dye | 49 | 11.5 | 3 | 0.4 | 5 | 1.1 | 0 | 0 | 1 | 0.1 | 58 | 2.2 |
| Radiographs | 133 | 31.3 | 208 | 30.1 | 279 | 63.7 | 77 | 45.6 | 436 | 46.1 | 1,133 | 42.5 |
| Transillumination | 4 | 0.9 | 6 | 0.9 | 2 | 0.5 | 2 | 1.2 | 24 | 2.5 | 38 | 1.4 |
| Dental Explorer | 416 | 98.1 | 648 | 93.8 | 430 | 98.2 | 165 | 97.6 | 765 | 80.9 | 2,424 | 90.8 |

- Air drying and dental explorer were by far the most common aids used in diagnosing these lesions. Air drying was used in 94% of lesions (range 87% in KP/PDA to 99.7% in DK) and dental explorer in 91% (range 81% in DK to 98% in AL/MS and MN/HP).
- Radiographs were next most commonly used aid – used in less than half, 42% of lesions.
- Laser fluorescence was used almost solely by AL/MS and FL/GA, and in only 6%, and caries detecting dye was use almost solely in AL/MS, in 11%.

11. **When you used a dental explorer**, did you experience roughness of the enamel surface upon light exploration?

- a No
- b Yes

12. **When you used a dental explorer**, did you experience retention of the explorer in a groove or fissure?

- a No
- b Yes-Slight stick
- c Yes-Resistance to removal

Table 6(B): Experiences using dental explorer by DPBRN region.

| | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | DK | | TOTAL | |
|------------------|-------|------|-------|------|-------|------|--------|------|-----|------|-------|------|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Roughness | | | | | | | | | | | | |
| No | 160 | 38.7 | 376 | 58.0 | 253 | 59.1 | 48 | 29.1 | 370 | 48.4 | 1,207 | 49.9 |
| Yes | 254 | 61.4 | 272 | 42.0 | 175 | 40.9 | 117 | 70.9 | 395 | 51.6 | 1,213 | 50.1 |
| Retention | | | | | | | | | | | | |
| No | 186 | 44.9 | 369 | 57.0 | 286 | 66.7 | 69 | 41.8 | 613 | 80.1 | 1,523 | 62.9 |
| Yes-slight stick | 160 | 38.7 | 230 | 35.6 | 138 | 32.2 | 85 | 51.5 | 142 | 18.6 | 755 | 31.2 |
| Yes-resistance | 68 | 16.4 | 48 | 7.4 | 5 | 1.2 | 11 | 6.7 | 10 | 1.3 | 142 | 5.9 |

- Among lesions diagnosed with aid of dental explorer, half were “rough,” much higher in KP/PDA (71%) than MN/HP or FL/GA (41-42%).
- Among lesions diagnosed with aid of dental explorer, in 63% no retention was noted, 31% slight, and 6% definite resistance. This differed considerably across regions, e.g., in AL/MS, 16% presented definite resistance to removal compared to only 1.2% in MN/HP.

For questions 13 –18, how would you characterize the patient’s dental history in the following areas? (Check one answer per question).

13. Caries

- a No caries lesions treated in the past 2 years
- b 1-2 caries lesions treated in the past 2 years
- c 3 or more lesions treated in the past 2 years

14. Recall

- a Regular recall care intervals
- b Irregular recall care interval

15. Homecare

- a Good oral self-care
- b Fair oral self-care
- c Poor oral self-care

16. Restorations

- a Has restorations
- b Does not have restorations

17. Fluoride

- a Optimal FI level (inc FI toothpaste) or receives FI treatments
- b Suboptimal FI level and does not receive FI treatment

18. Miscellaneous (Check all that apply)

- a Cariogenic Diet
- b Medication/Disease induced xerostomia/hyposalivation
- c Active Orthodontic treatment

Table 7: Patient's dental history by DPBRN region

| | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | DK | | TOTAL | |
|---|-------|------|-------|------|-------|------|--------|------|-----|------|-------|------|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Caries | | | | | | | | | | | | |
| 0 caries past 2 years | 174 | 60.2 | 278 | 59.7 | 129 | 43.7 | 62 | 58.5 | 332 | 56.3 | 975 | 55.8 |
| 1-2 caries past 2 years | 78 | 26.9 | 142 | 30.5 | 103 | 34.9 | 27 | 25.5 | 195 | 33.1 | 545 | 31.2 |
| 3+ caries past 2 years | 37 | 12.8 | 46 | 9.9 | 63 | 21.4 | 17 | 16.0 | 63 | 10.7 | 226 | 12.9 |
| Recall | | | | | | | | | | | | |
| Regular recall intervals | 221 | 76.0 | 382 | 82.0 | 215 | 73.4 | 84 | 80.8 | 536 | 90.9 | 1,438 | 82.5 |
| Irregular recall intervals | 70 | 24.1 | 84 | 18.0 | 78 | 26.6 | 20 | 19.2 | 54 | 9.2 | 306 | 17.6 |
| Homecare | | | | | | | | | | | | |
| Good oral self-care | 169 | 58.3 | 310 | 66.1 | 175 | 59.1 | 60 | 56.6 | 305 | 51.8 | 1,019 | 58.2 |
| Fair oral self-care | 98 | 33.8 | 138 | 29.4 | 97 | 32.8 | 39 | 36.8 | 248 | 42.1 | 620 | 35.4 |
| Poor oral self-care | 23 | 7.9 | 21 | 4.5 | 24 | 8.1 | 7 | 6.6 | 36 | 6.1 | 111 | 6.3 |
| Restorations | | | | | | | | | | | | |
| Has restorations | 256 | 87.7 | 402 | 85.5 | 247 | 83.5 | 82 | 77.4 | 474 | 80.3 | 1,461 | 83.3 |
| No restorations | 36 | 12.3 | 68 | 14.5 | 49 | 16.6 | 24 | 22.6 | 116 | 19.7 | 293 | 16.7 |
| Fluoride | | | | | | | | | | | | |
| Optimal FI level | 246 | 85.1 | 425 | 91.0 | 268 | 91.2 | 89 | 84.0 | 584 | 99.2 | 1,612 | 92.4 |
| Suboptimal FI level | 43 | 14.9 | 42 | 9.0 | 26 | 8.8 | 17 | 16.0 | 5 | 0.9 | 133 | 7.6 |
| Miscellaneous (Check all that apply) | | | | | | | | | | | | |
| Cariogenic Diet | 192 | 65.8 | 64 | 13.6 | 73 | 24.7 | 37 | 34.9 | 74 | 12.5 | 440 | 25.1 |
| Medication* | 8 | 2.7 | 7 | 1.5 | 8 | 2.7 | 3 | 2.8 | 6 | 1.0 | 32 | 1.8 |
| Orthodontic Treatment | 7 | 2.4 | 10 | 2.1 | 0 | 0.0 | 3 | 2.8 | 6 | 1.0 | 26 | 1.5 |

*Medication, xerostomia, or hyposalivation

They all differed across regions.

- Overall, in the prior 2 years, 57% had no caries, 31% had 1-2, and 13% had 3 or more caries. MN/HP had the only 44% with no caries and 22% with 3 or more.
- Nearly 83% had regular recall intervals, highest in DK (91%) and lowest in MN/HP (71%).
- 58% had good oral self care, 35% fair and 6% poor. FL/GA had the best profile for oral self-care.
- 82% had some restorations, ranging from 75% in KP/PDA to 87% in AL/MS.
- 7% had suboptimal FL level, higher in AL/MS and KP/PDA (13-15%) and lowest in DK (<1%).
- 24% ate a cariogenic diet, much higher in AL/MS (62%) and lower in FL/GA and KP/PDA (12-13%).
- Medication and orthodontic treatment were quite rare, <2% overall.

19. I chose to treat the tooth today by: (Please check all that apply)

- a Monitoring
- b Oral hygiene instruction
- c Applying/prescribing fluoride
- d Applying varnish
- e Sealant placement (etch tooth with **no** preparation, with sealant material/composite resin placed over it)

- f Enameloplasty (removing superficial grooves and other defects with or without fluoride/resin material)
- g Preventive Resin Restoration (i.e. minimal tooth preparation, composite resin placed, with sealant material placed over it)
- h Full Restoration

- i Other _____

If you chose a,b,c, d, or e please **STOP**

Table 8: Patient treatment by DPBRN region

| | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | DK | | TOTAL | |
|-------------------|-------|------|-------|------|-------|------|--------|------|-----|------|-------|------|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Monitoring | 274 | 64.5 | 528 | 76.3 | 370 | 84.5 | 24 | 14.2 | 684 | 72.3 | 1,880 | 70.4 |
| Oral hygiene | 173 | 40.7 | 238 | 34.4 | 188 | 42.9 | 11 | 6.5 | 619 | 65.4 | 1,229 | 46.0 |
| Fluoride | 156 | 36.7 | 67 | 9.7 | 76 | 17.4 | 7 | 4.1 | 227 | 24.0 | 533 | 20.0 |
| Applying varnish | 8 | 1.9 | 10 | 1.5 | 51 | 11.6 | 16 | 9.5 | 32 | 3.4 | 117 | 4.4 |
| Sealant placement | 45 | 10.6 | 34 | 4.9 | 58 | 13.2 | 57 | 33.7 | 161 | 17.0 | 355 | 13.3 |
| Enameloplasty | 2 | 0.5 | 56 | 8.1 | 15 | 3.4 | 43 | 25.4 | 0 | 0.0 | 116 | 4.3 |
| Preventive Resin | 4 | 0.9 | 21 | 3.0 | 2 | 0.5 | 19 | 11.2 | 0 | 0.0 | 46 | 1.7 |
| Full restoration | 104 | 24.5 | 67 | 9.7 | 13 | 3.0 | 25 | 14.8 | 7 | 0.7 | 216 | 8.1 |
| Any restorations* | 110 | 25.9 | 140 | 20.2 | 30 | 6.9 | 87 | 0.7 | 7 | 0.7 | 374 | 14.0 |

Among patients receiving some type of restorative treatment

| | | | | | | | | | | | | |
|------------------|-----|------|----|------|----|------|----|------|---|-------|-----|------|
| Enameloplasty | 2 | 1.8 | 56 | 40.0 | 15 | 50.0 | 43 | 49.4 | 0 | 0.0 | 116 | 31.0 |
| Preventive Resin | 4 | 3.6 | 21 | 15.0 | 2 | 6.7 | 19 | 21.8 | 0 | 0.0 | 46 | 12.3 |
| Full restoration | 104 | 94.6 | 67 | 47.9 | 13 | 43.3 | 25 | 28.7 | 7 | 100.0 | 216 | 57.8 |

*Any restorations: enameloplasty, preventive resin restoration, or full restoration

- Monitoring was the most common (70%) treatment option indicated, followed by oral hygiene instruction (46%). Applying varnish was the non-restorative option indicated by fewest practitioners (4%).
- 14% of lesions were treated with some type of restoration, with full-restoration being most common choice of restorative treatment, 8% overall and 58% of restorative treatments.
- There was substantial variation in treatment of these lesions across regions, e.g., monitoring was indicated by 72-76% of practitioners in FL/GA and DK but by only 14% in KP/PDA. Any type of restorative treatment ranged from <1% in DK to 26% in AL/MS.

20. If you chose to restore this tooth, what did you find?

- a No caries
- b Inactive/ re-mineralized caries
- c Active caries (Outer 1/2 of Enamel)
- d Active caries (Inner 1/2 of Enamel)
- e Active caries (Outer 1/3 of Dentin)
- f Active caries (Middle 1/3 of Dentin)
- g Active caries (Inner 1/3 of Dentin)

Table 9: Restoration findings by DPBRN region

| | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | DK | | TOTAL | |
|---------------------|-------|-------|-------|------|-------|-------|--------|------|----|-------|-------|------|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| No caries | 5 | 5.1 | 22 | 15.7 | 4 | 22.2 | 27 | 31.0 | 0 | 0.0 | 58 | 16.6 |
| Inactive | 1 | 1.0 | 12 | 8.6 | 0 | 0.0 | 20 | 23.0 | 0 | 0.0 | 33 | 9.4 |
| Active | 92 | 93.9 | 106 | 75.7 | 14 | 77.8 | 40 | 46.0 | 7 | 100.0 | 259 | 74.0 |
| <u>Among active</u> | | | | | | | | | | | | |
| Enamel | 6 | 6.5 | 41 | 38.7 | 1 | 7.1 | 16 | 40.0 | 6 | 86.7 | 70 | 27.0 |
| Dentin | 86 | 93.5 | 65 | 61.3 | 13 | 92.9 | 24 | 60.0 | 1 | 14.3 | 189 | 73.0 |
| <u>Enamel</u> | | | | | | | | | | | | |
| Outer 1/2 | 0 | 0.0 | 22 | 53.7 | 0 | 0.0 | 7 | 43.8 | 6 | 100.0 | 35 | 50.0 |
| Inner 1/2 | 6 | 100.0 | 19 | 46.3 | 1 | 100.0 | 9 | 56.3 | 0 | 0.0 | 35 | 50.0 |
| <u>Dentin</u> | | | | | | | | | | | | |
| Outer 1/3 | 34 | 39.5 | 41 | 63.1 | 9 | 69.2 | 19 | 79.2 | 1 | 100.0 | 104 | 55.0 |
| Middle 1/3 | 19 | 22.1 | 22 | 33.9 | 4 | 30.8 | 4 | 16.7 | 0 | 0.0 | 49 | 25.9 |
| Inner 1/3 | 33 | 38.4 | 2 | 3.1 | 0 | 0.0 | 1 | 4.2 | 0 | 0.0 | 36 | 19.1 |

- Of lesions which had some type of restorative treatment, 74% had active decay, of these 27% were within the enamel.
- There was substantial variation across region regarding findings, e.g., percent with active decay ranged from 46% in KP/PDA to 94-100% in AL/MS and DK. Similarly, among those with active decay, percent within the enamel ranged from 6.5% in AL/MS to 87% in DK.

21. If you chose to restore this tooth, what type of material did you use?

- a Amalgam
- b Composite
- c Glass ionomer
- d Other _____

Table 10: Type of restoration material used by DPBRN region

| | AL/MS | | FL/GA | | MN/HP | | KP/PDA | | DK | | TOTAL | |
|---------------|-------|------|-------|------|-------|------|--------|------|----|-------|-------|------|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Amalgam | 7 | 6.7 | 7 | 5.2 | 8 | 44.4 | 8 | 9.6 | 0 | 0.0 | 30 | 8.6 |
| Composite | 95 | 91.4 | 123 | 90.4 | 6 | 33.3 | 32 | 38.6 | 7 | 100.0 | 263 | 75.6 |
| Glass ionomer | 2 | 1.9 | 1 | 0.7 | 0 | 0.0 | 10 | 12.1 | 0 | 0.0 | 13 | 3.7 |
| Other | 0 | 0.0 | 5 | 3.7 | 4 | 22.2 | 33 | 39.8 | 0 | 0.0 | 42 | 12.1 |

- Composite was used in 76% of lesions restored; this differed by region in that 3 regions used it almost exclusively, while 2 used it in only 30-39% of lesions.