DPBRN12: Prevalence of Questionable Occlusal Caries Lesions

Summary of Overall Results – Graphs

Date Prepared: May 19, 2011
Questions asked regarding the characteristics of the patients receiving restorative treatment

1. Patient Gender
   a  Male
   b  Female

   Overall, 53% of enrolled patients were female, lower for FL/GA and DK.

   ![Bar Chart: Question 1: Gender]
   - Male: 41.1, 50.4, 43.1, 40.6, 51.0, 47.2
   - Female: 58.9, 49.6, 57.0, 59.4, 49.0, 52.8

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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

• 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) ___________________

• 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.

• Race-specific percents were calculated based on available data, specifically, the missing were excluded when calculating other percents.
5. Does the patient have any dental insurance or third party coverage?

a  [ ] No
b  [ ] Yes

- Overall, 90% had some type of dental insurance; all of DK and only 75% of FL/GA.
• 31% of lesions involved premolars, lower in KP/PDA (22%) and higher in AL/MS and FL/GA, 36%.

• Among lesions involving premolars, 43% were maxillary and 45% were 1st premolars, similar across regions.

• Among lesions involving molars
  o equal with regard to maxillary or mandibular, similar across regions, in contrast:
  o 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

- 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 68% in DK.
8. Which one best describes the color of the questionable area?

- □ Opacity
- □ White spot
- □ Yellow/light brown discoloration
- □ Dark brown/black discoloration
- □ Other _______________________

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.
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

- 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)

- Magnification (please indicate power_ __)
- Air drying
- Dental explorer
- Laser fluorescence such as DIAGNOdent® (measurement______)
- Caries Detecting Dye
- Radiographs
- Transillumination
- Other ______________

**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 100% 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 used 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

**Question 11: Dental Explorer - Roughness**

- 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%).
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

- Among lesions diagnosed with aid of dental explorer, in 63% no resistance was noted, 31% slight, and 6% definite resistance. This differed considerably across regions, e.g., in AL/MS, 16% definite resistance and in DK, 80% no resistance at all.
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

Patient dental history was completed separately for each lesion, for the most part, though not always, responses were identical.

Overall, in the prior 2 years, 57% had no caries, 31% had 1-2, and 13% had 3 or more caries. MN/HP had 44% with no caries and 22% with 3 or more.
14. **Recall**
   a. Regular recall care intervals
   b. Irregular recall care interval

- Nearly 83% had regular recall intervals, highest in DK (91%) and lowest in MN/HP (71%).

15. **Homecare**
   a. Good oral self-care
   b. Fair oral self-care
   c. Poor oral self-care

- 58% had good oral self care, 35% fair and 6% poor. FL/GA had the best profile for oral self-care.
16. Restorations
   a  □  Has restorations
   b  □  Does not have restorations

   Question 16: History - Restorations

- 82% had some restorations, ranging from 75% in KP/PDA to 87% in AL/MS.

17. Fluoride
   a  □  Optimal Fl level (inc Fl toothpaste) or receives Fl treatments
   b  □  Suboptimal Fl level and does not receive Fl treatment

   Question 17: History - Fluoride

- 7% had suboptimal Fl level, higher in AL/MS and KP/PDA (13-15%) and lowest in DK (<1%).
18. **Miscellaneous** (Check all that apply)
   a  □ Cariogenic Diet
   b  □ Medication/Disease induced xerostomia/hyposalivation
   c  □ Active Orthodontic treatment

**Question 18: History - Miscellaneous**

- 24% ate a cariogenic diet, much higher in AL/MS (62%) and lower in FL/GA and DK (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

### Question 19: Treatment

- 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, 8.1% 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 ½ of Enamel)
- d  Active caries (Inner ½ of Enamel)
- e  Active caries (Outer ⅓ of Dentin)
- f  Active caries (Middle ⅓ of Dentin)
- g  Active caries (Inner ⅓ of Dentin)

**Question 20: Restoration Findings**

- 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% 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 ________________________________

- 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.