

**Dental Practice-Based Research Network**  
[www.DentalPBRN.org](http://www.DentalPBRN.org)

**DPBRN 16: Assessing the impact of participation in dental practice-based research networks on patient care (Condor PIRG)**

**Results: Overall and by Region**

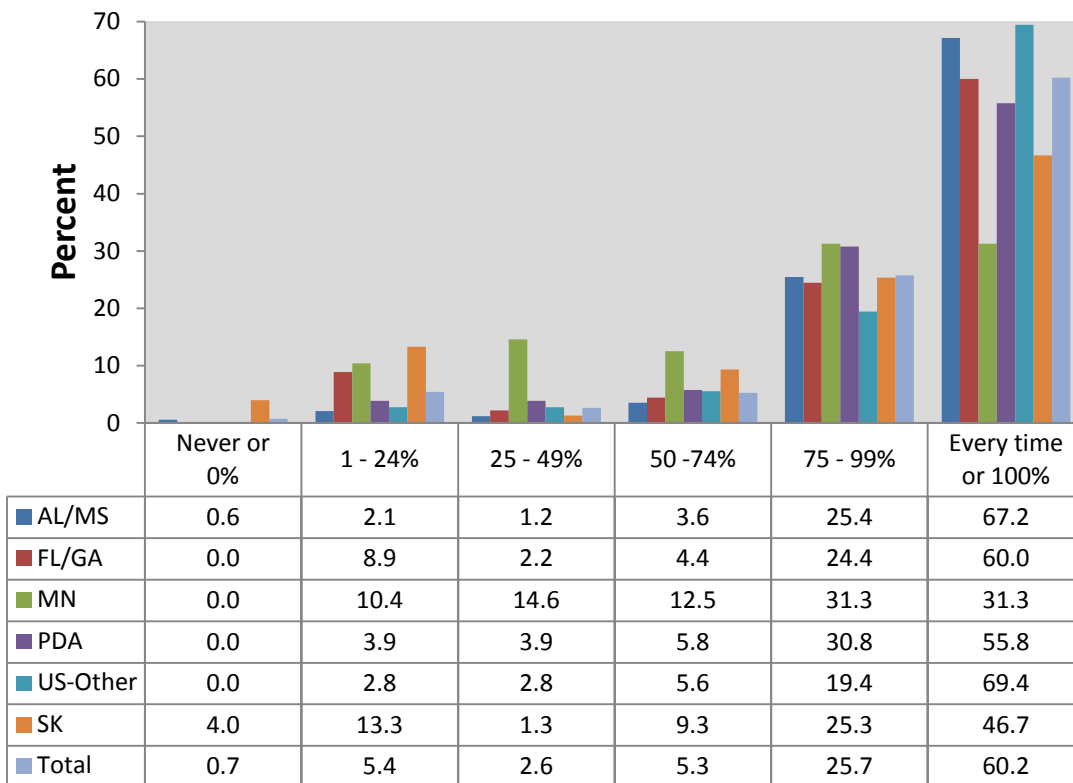
**Date prepared: August 18, 2011**

## Caries Diagnosis and Treatment

- When you examine patients to determine if they have a **primary occlusal caries** lesion, on what percent of these patients do you use a **dental explorer** to help diagnose the lesion?

- <sub>0</sub> Never or 0%
- <sub>1</sub> 1 – 24%
- <sub>2</sub> 25 – 49%
- <sub>3</sub> 50 – 74%
- <sub>4</sub> 75 – 99%
- <sub>5</sub> Every time or 100%

### Question 1: Dental Explorer

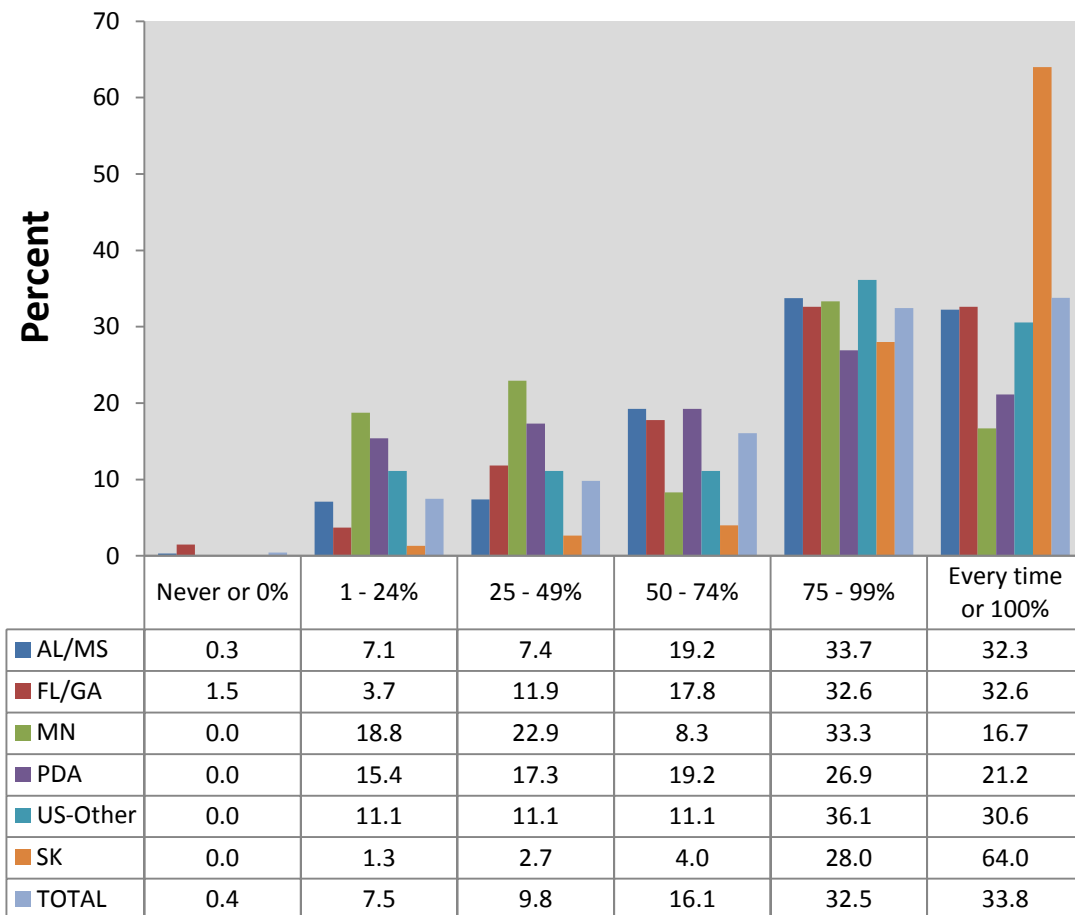


- 60% used a dental explorer “every time” and about 26% used one 75-99%.

2. When you examine patients to determine if they have a **primary caries** lesion, on what percent of these patients do you use **air-drying** to help diagnose the lesion?

- <sub>0</sub> Never or 0%
- <sub>1</sub> 1 – 24%
- <sub>2</sub> 25 – 49%
- <sub>3</sub> 50 – 74%
- <sub>4</sub> 75 – 99%
- <sub>5</sub> Every time or 100%

### Question 2: Air-drying

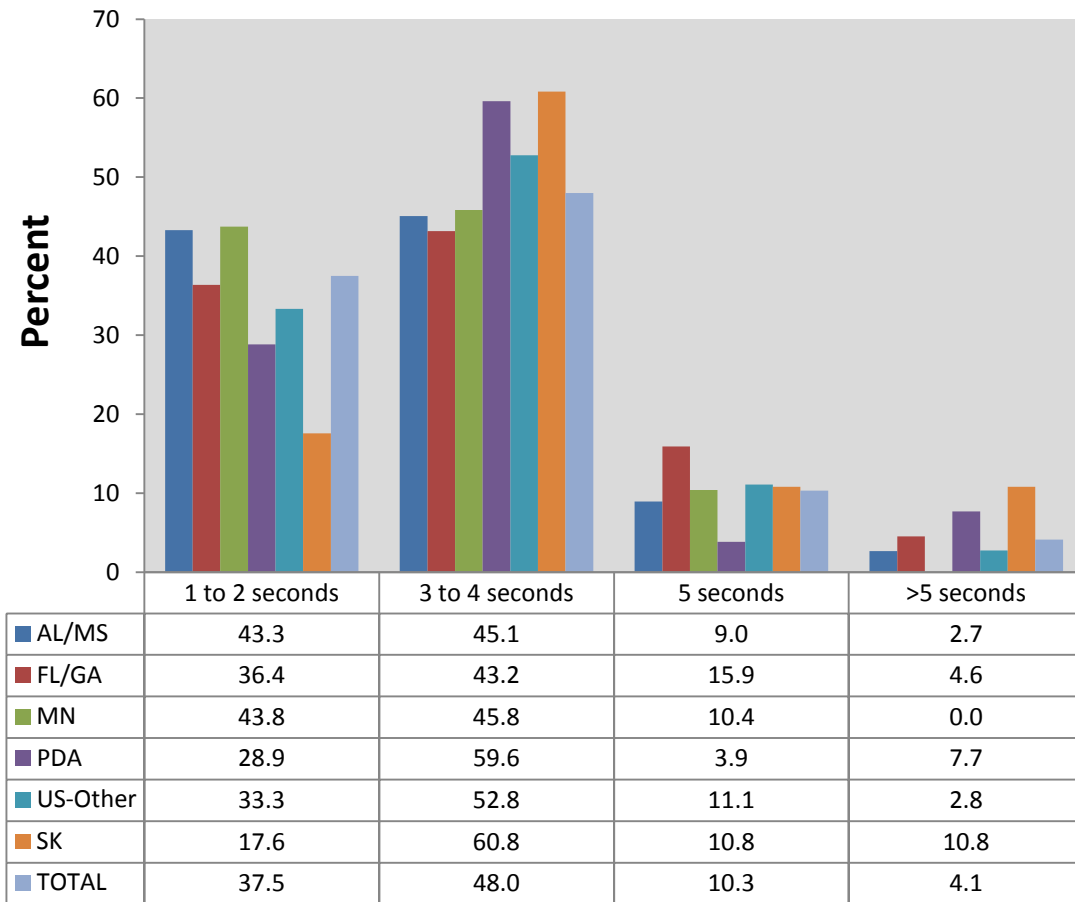


- 34% of respondents used air drying every time and nearly 33% used it for 75 – 99% of these caries.

2.1 If you air-dry at least some, approximately how long do you dry the tooth surface?

- <sub>1</sub> 1 to 2 seconds
- <sub>2</sub> 3 to 4 seconds
- <sub>3</sub> 5 seconds
- <sub>4</sub> More than 5 seconds

### Question 2.1: Time Involved in Air-drying



- 48% of respondents let the tooth air-dry for 3 to 4 seconds, and about 40% for 1 to 2 seconds.

3. Do you assess caries risk for individual patients in any way?

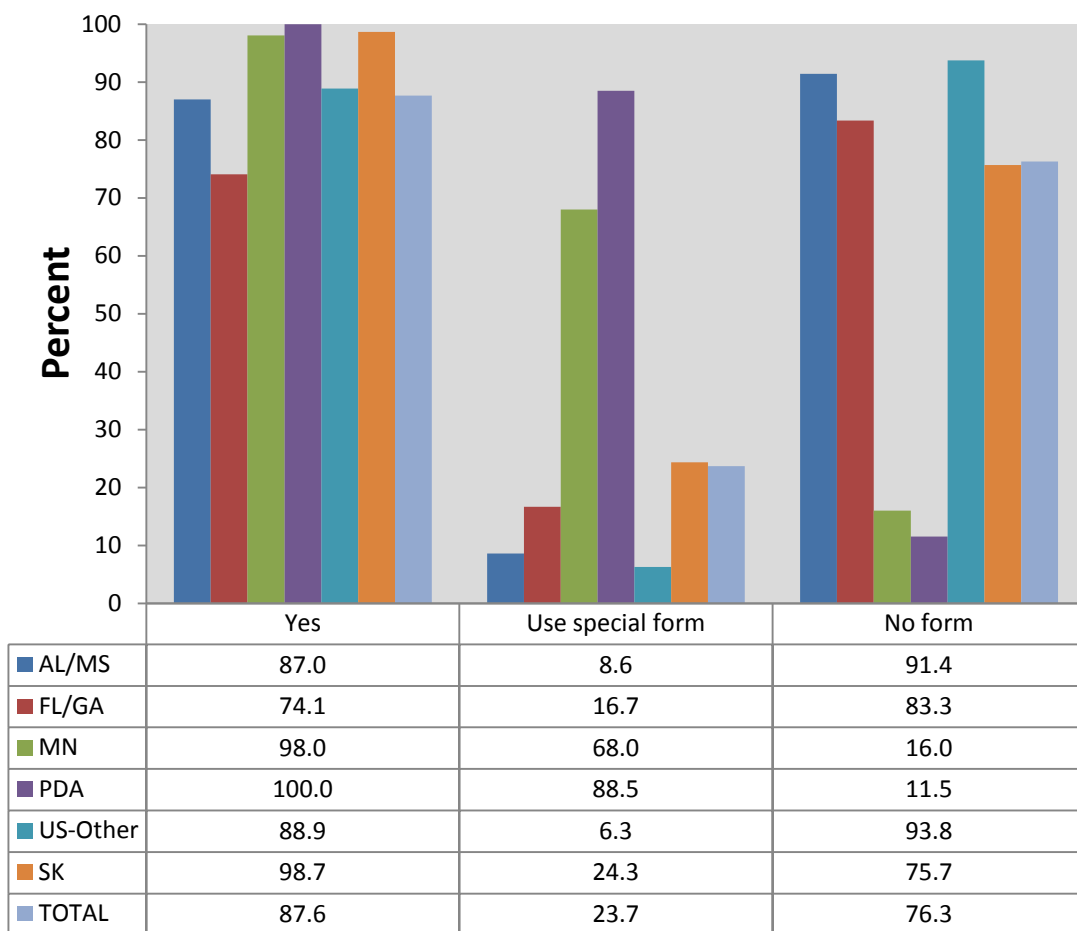
<sub>1</sub> Yes

<sub>A</sub> I record the assessment on a special form that is kept in the patient chart.

<sub>B</sub> I do not use a special form to make the assessment.

<sub>2</sub> No

### Question 3: Assess Caries Risk



- 88% of respondents assess caries risk for patients, which was similar across region.
- Of respondents who indicated they assessed caries risk, about 24% use a special form to make the assessment, but this differed substantially across regions, from <10% in AL/MS & US-Other to 68% in MN and 88% in PDA.

**For the following questions (4 and 5):** We are interested in your opinion on the following case:

The patient is a 30-year old female with no relevant medical history. She has no complaints and is in your office today for a routine visit. She has been attending your practice on a regular basis for the past 6 years.

Indicate how you would treat the tooth shown if the patient has no other teeth with dental restorations or dental caries and is not missing any teeth.

**If treatment code “other” is used, please specify. You may check more than one treatment code per case.**



4. How would you treat the tooth shown at the left?

- No treatment today, follow the patient regularly
- In-office fluoride
- Recommend non-prescription fluoride
- Prescription for fluoride
- Use sealant or unfilled resin over tooth
- Chlorhexidine treatment
- Minimal drilling and sealant

- Minimal drilling and preventive resin restoration
- Air abrasion and a sealant
- Air abrasion and preventive resin restoration
- Amalgam restoration
- Composite restoration
- Indirect restoration
- Other treatment

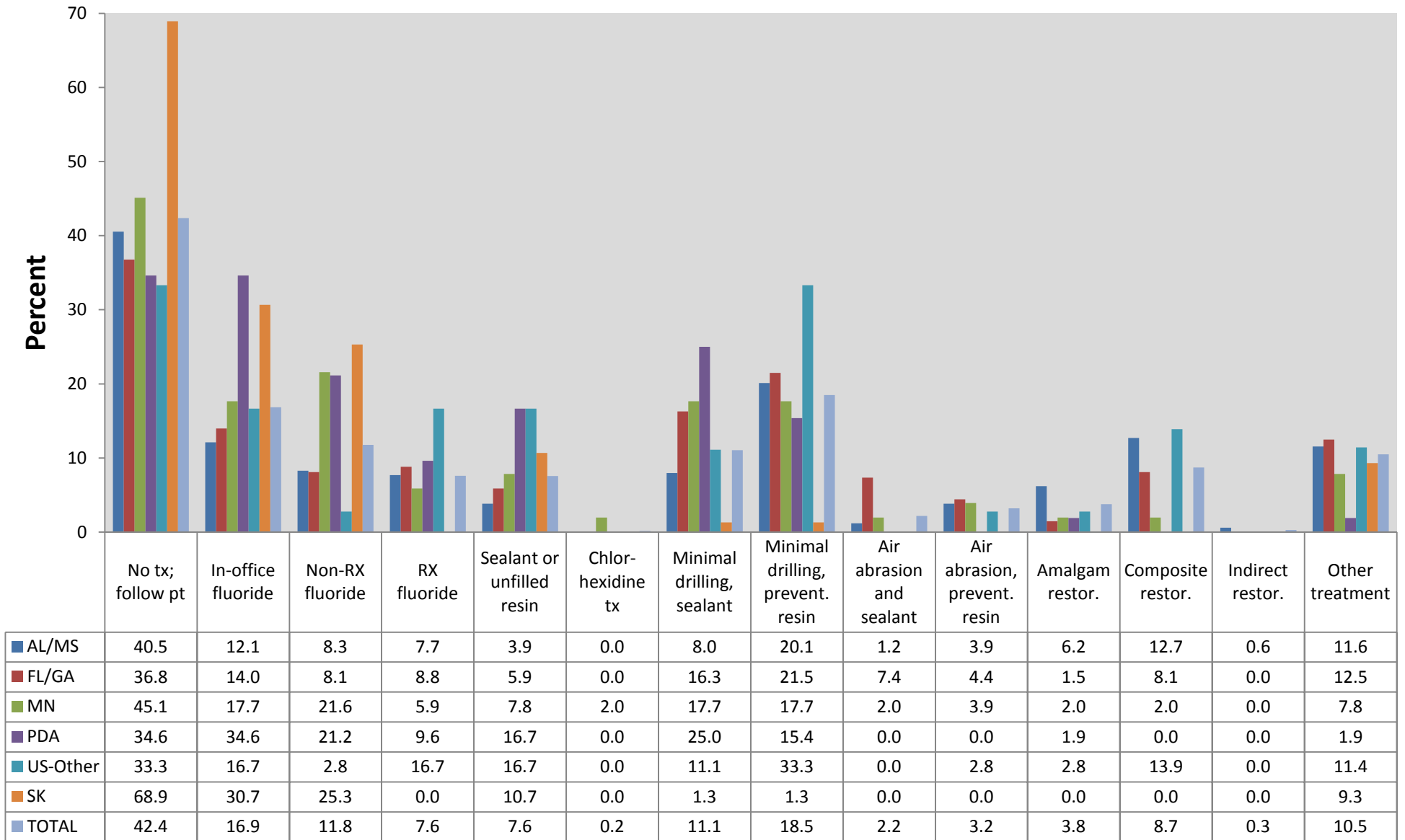


5. How would you treat the tooth shown at the left?

- No treatment today, follow the patient regularly
- In-office fluoride
- Recommend non-prescription fluoride
- Prescription for fluoride
- Use sealant or unfilled resin over tooth
- Chlorhexidine treatment
- Minimal drilling and sealant

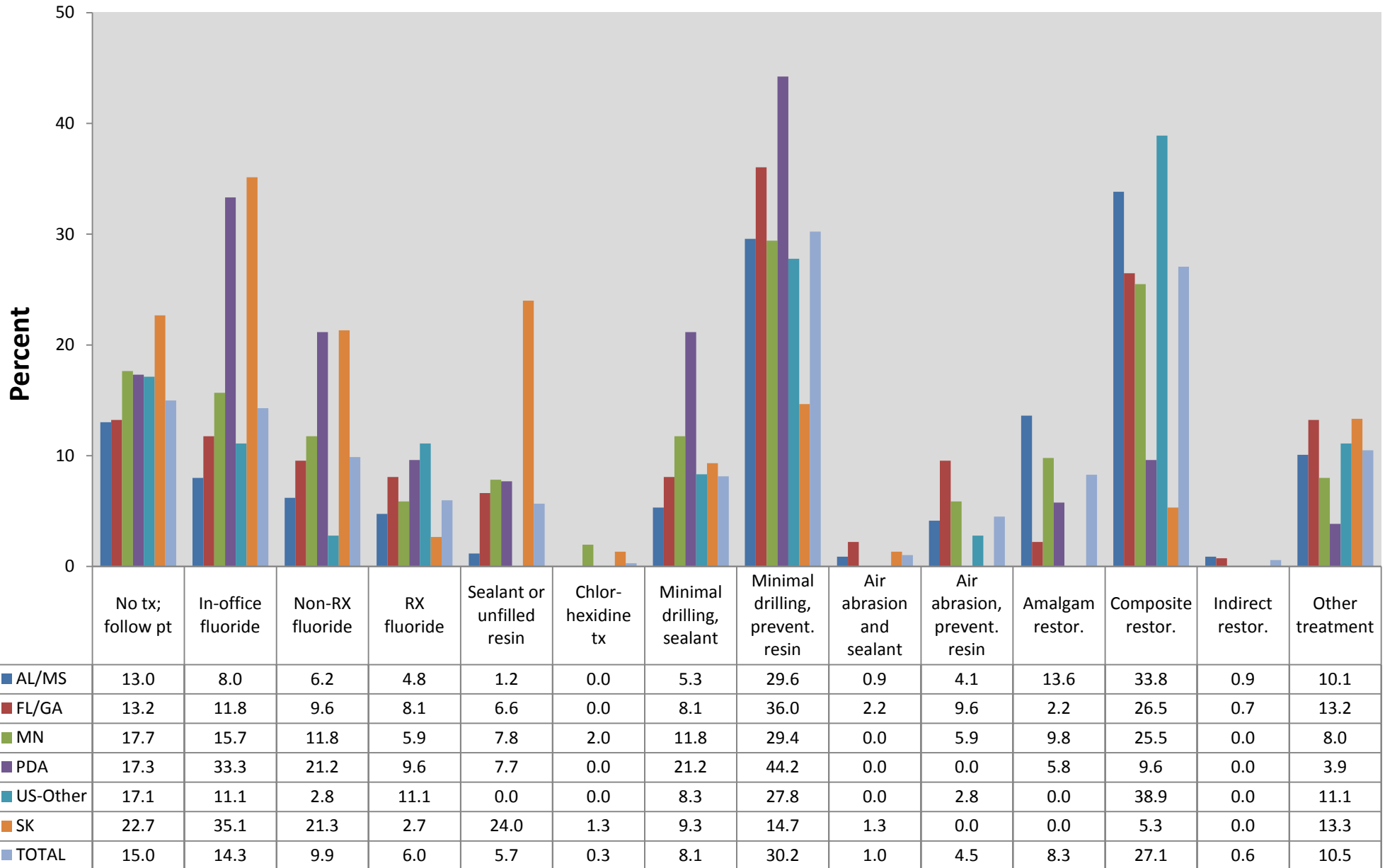
- Minimal drilling and preventive resin restoration
- Air abrasion and a sealant
- Air abrasion and preventive resin restoration
- Amalgam restoration
- Composite restoration
- Indirect restoration
- Other treatment

## Question 4: Treatment for tooth in picture



- 42% of respondents indicated “no treatment.” The most common specified treatments were minimal drilling and preventive resin restoration at 18% and in-office fluoride at 17%.

## Question 5: Treatment for tooth in picture



- The most common indicated treatment were “minimal drilling and preventive resin restoration” at 30% and “composite restoration” at 27%.
- Least common were “chlorhexidine treatment” and “indirect restoration” at .3% and .6%, respectively.

## Deep Caries Patient Scenario

Patient Edwards is a 25 year-old male with a visible cavitation into the dentin in the central fossa of tooth #30 (right mandibular first molar according to the ADA coding system). Overall patient Edwards has just two enamel lesions on smooth surfaces, in addition to the lesion on #30, which the bitewing radiograph indicates is deep. The tooth responds to cold and the pain lasts < 3 seconds.

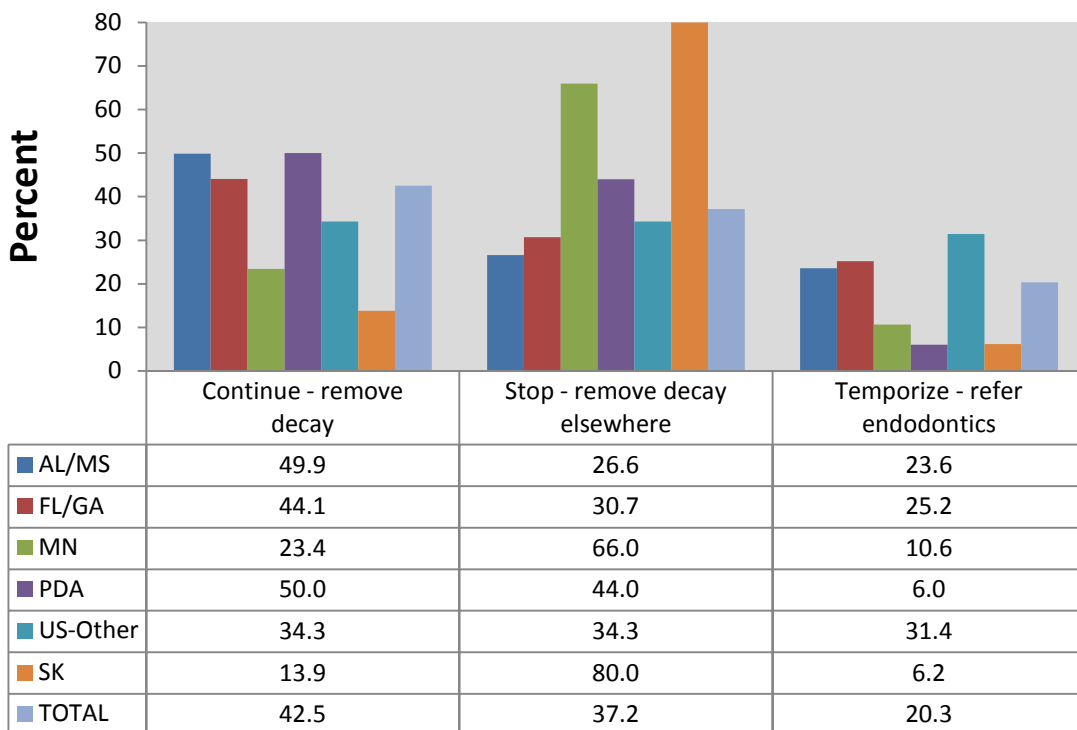
Bitewing radiograph of patient Edward's tooth #30:



7. Upon opening the tooth and during excavation of the caries you realize that the lesion is deeper than anticipated and may involve the mesial buccal pulp horn. You would usually:

- A Continue and remove all the decay
- B Stop removing decay near the pulp horn and remove it elsewhere
- C Temporize and treat or refer the tooth for endodontics

## Question 7: Caries Treatment Scenario



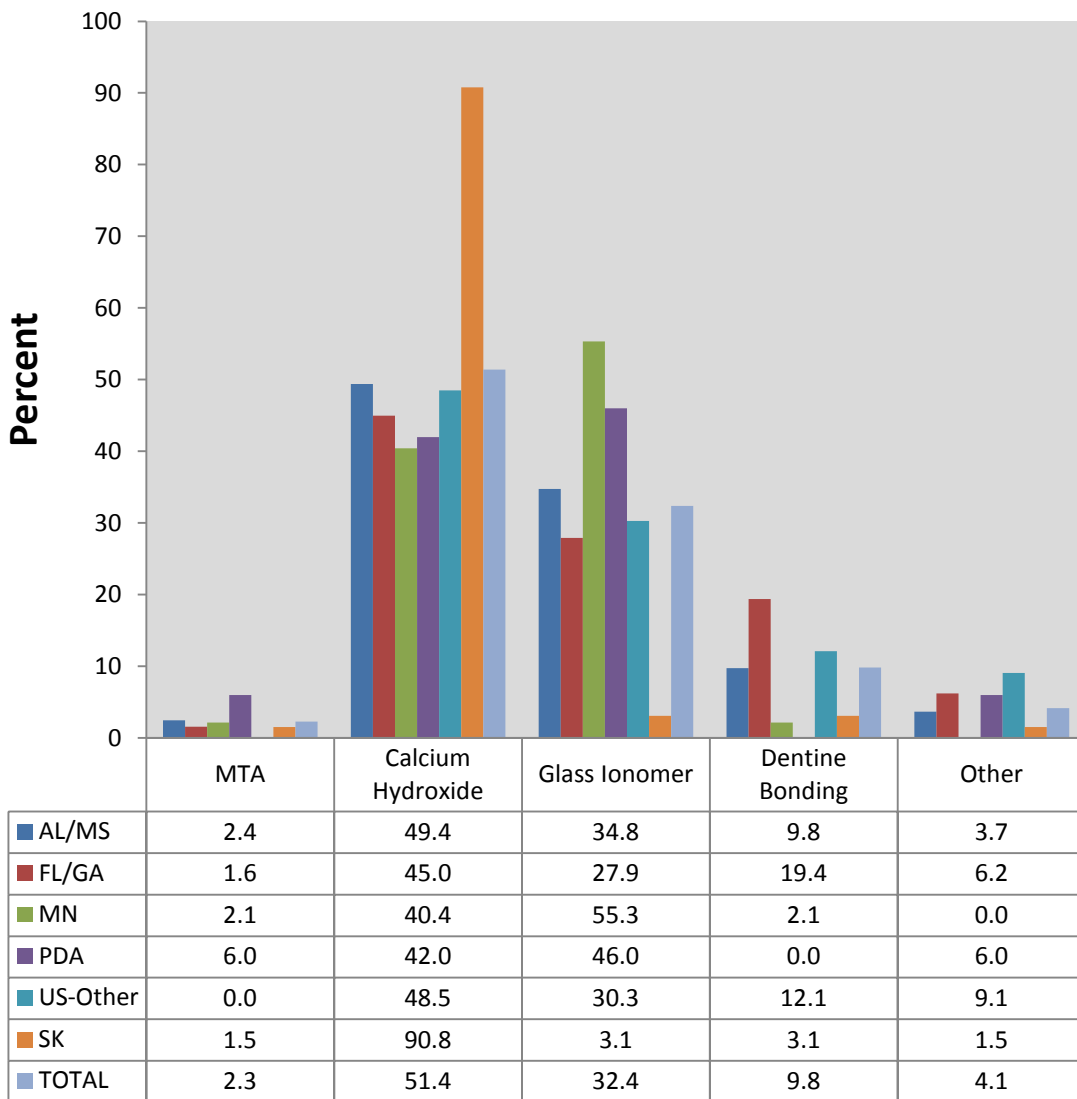
- The most common treatment scenario was “continue and remove all the decay” at about 43%.

## Pulp Capping

8. Which of the following pulp capping materials do you use **most often** in your practice (choose one)?

- <sub>1</sub> Mineral Trioxide Aggregate (MTA)
- <sub>2</sub> Calcium Hydroxide
- <sub>3</sub> Glass Ionomer
- <sub>4</sub> Dentine Bonding System
- <sub>5</sub> Other

### Question 8: Pulp Capping Materials



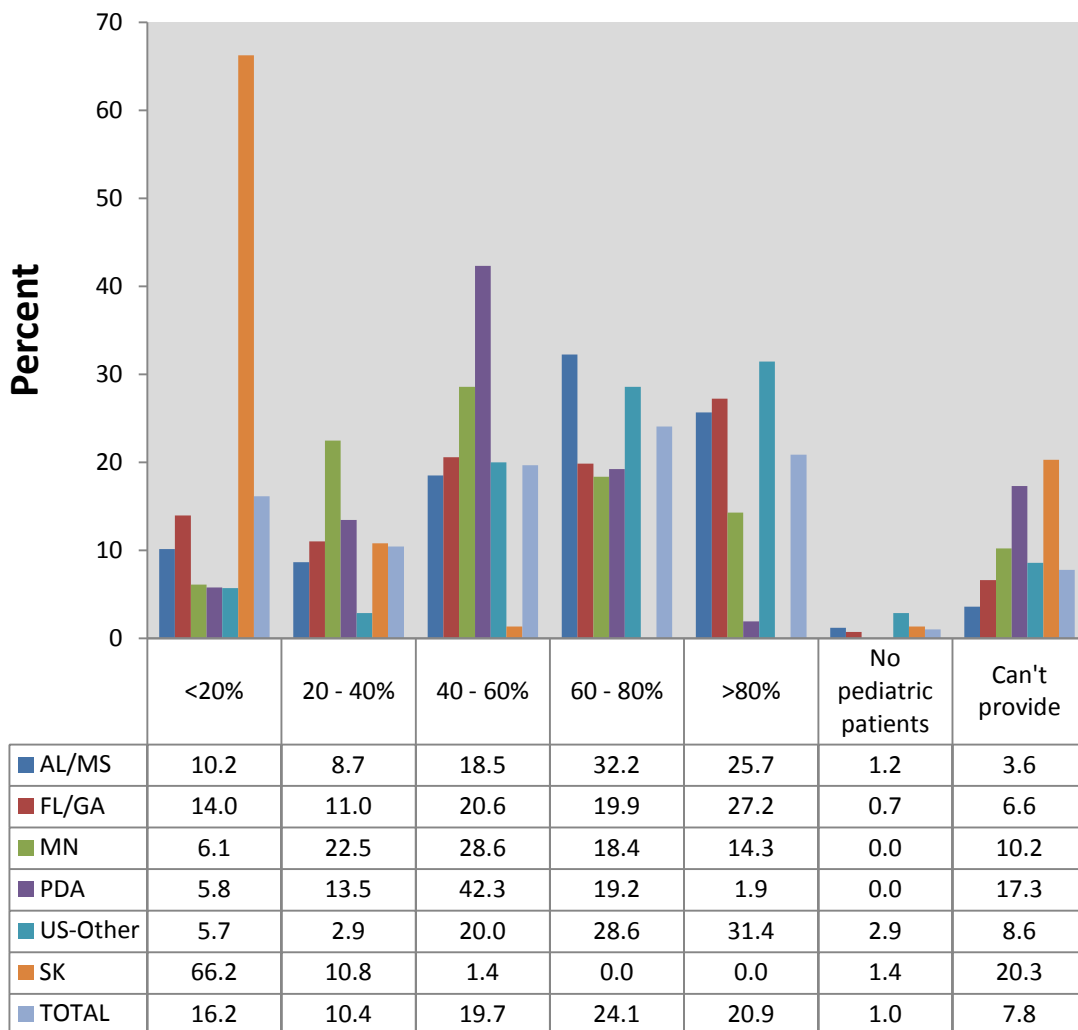
- The pulp capping material used most often was “calcium hydroxide” at 51% with “mineral trioxide aggregate” being the material used least often at 2.3%.

## Third Molar Extraction

9. What percentage of your patients do you refer for third molar extraction *by the age of 20*?

- <sub>1</sub> < 20%
- <sub>2</sub> 20 – 40%
- <sub>3</sub> 40 – 60%
- <sub>4</sub> 60 – 80%
- <sub>5</sub> > 80%
- <sub>8</sub> No pediatric patients
- <sub>9</sub> Cannot provide a meaningful estimate

### Question 9: Third Year Molar Extraction

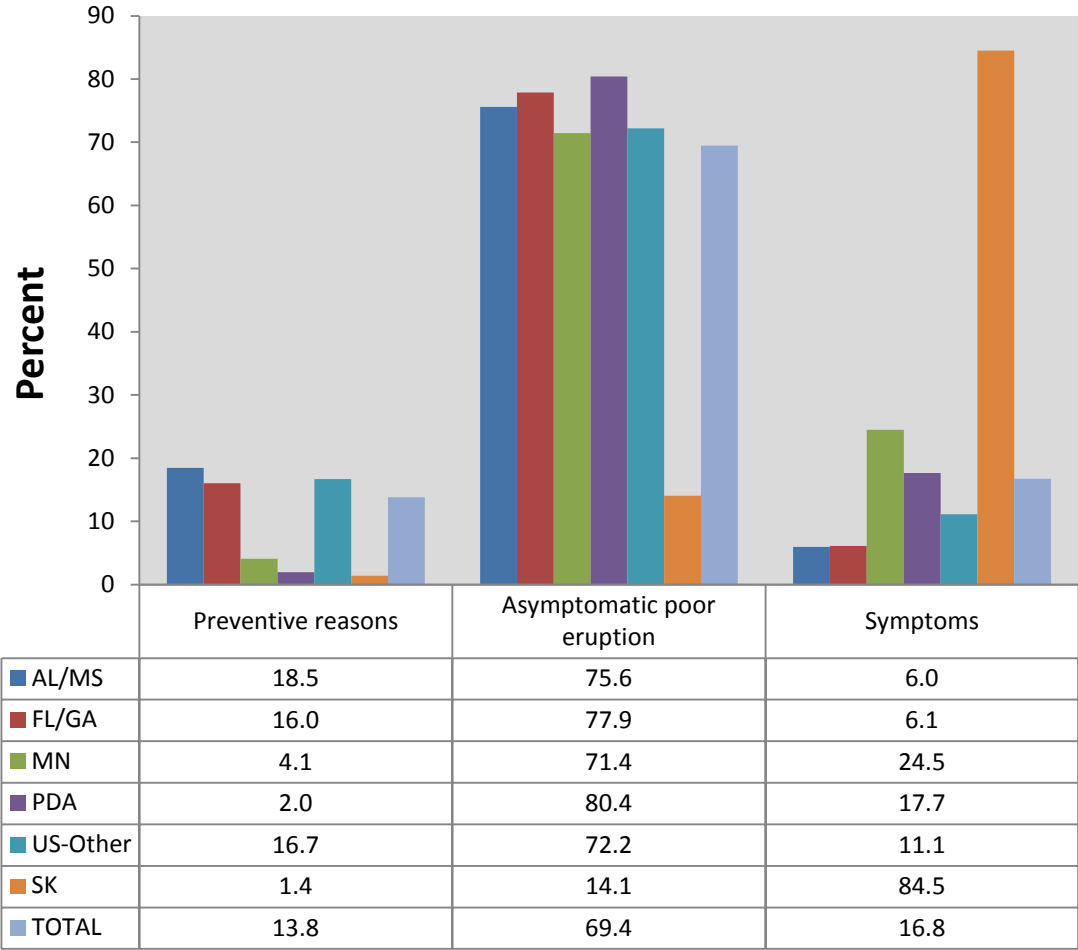


- 24% of respondents referred “60 to 80%” of their patients for third molar extraction by age of 20; about 20% referred slightly fewer (40-60%) and 21% referred more (>80%) of their patients.

10. Which statement best describes your philosophy on third molar referrals?

- <sub>1</sub> I recommend removal of most third molars for preventive reasons.
- <sub>2</sub> I recommend removal of third molars if they are asymptomatic but have a poor eruption path (e.g., full/partial impaction), or do not appear to have sufficient space for eruption.
- <sub>3</sub> I recommend removal of third molars only if a patient presents with symptoms or pathology associated with third molars.

**Question 10: Philosophy on Third Year Molar Referrals**



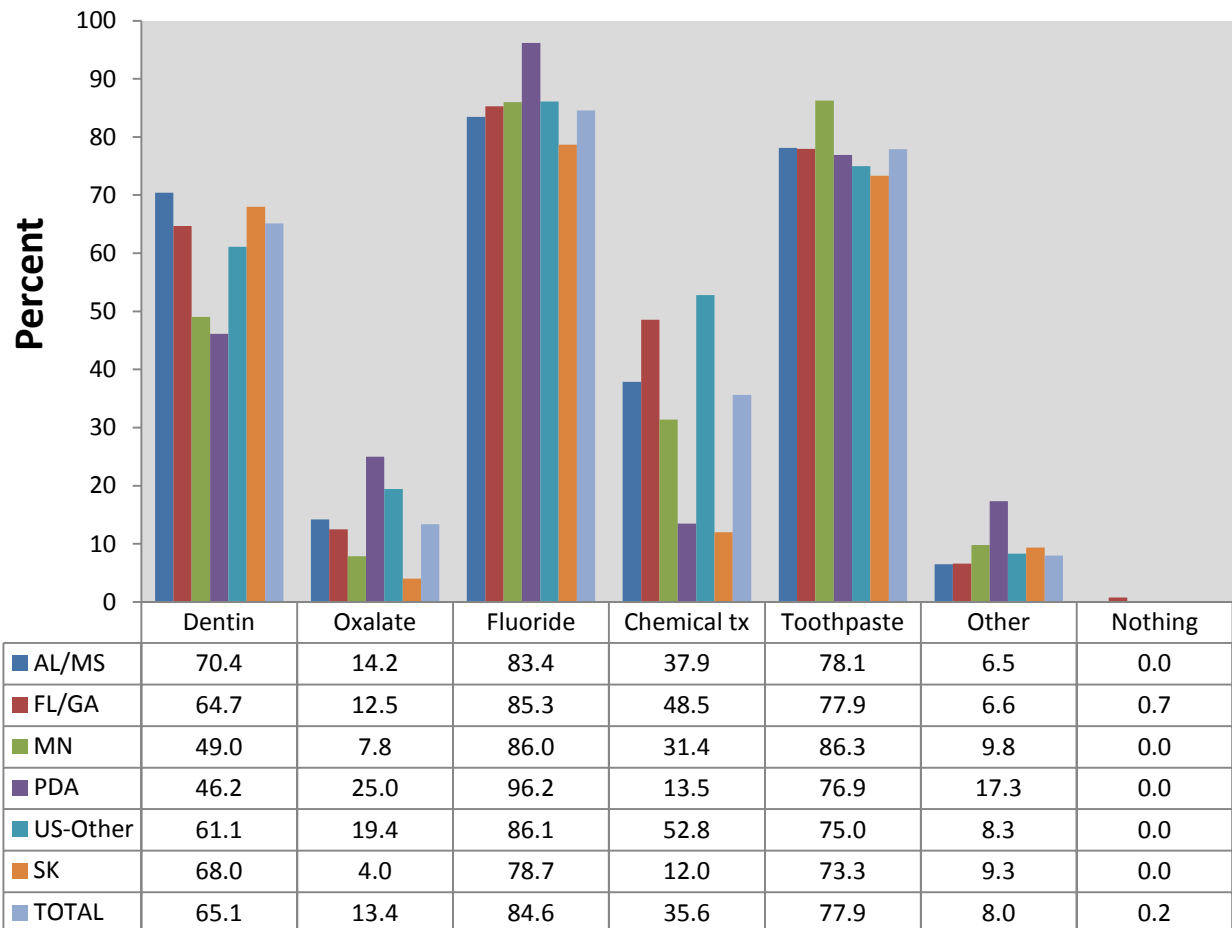
- The most common response, at 69%, was “I recommend removal of third molars if they are asymptomatic but have a poor eruption (e.g., full/partial impaction), or do not appear to have sufficient space for eruption.

## Hypersensitivity

11. What types of dentin hypersensitivity treatments do you routinely use or recommend for your patients? (check all that you use)

- Dentin bonding agents
- Oxalate or bioglass containing material
- Fluoride containing material
- Chemical treatment (e.g. potassium nitrate)
- Toothpaste or rinse
- Other
- Nothing

### Question 11: Dentin Hypersensitivity Treatments

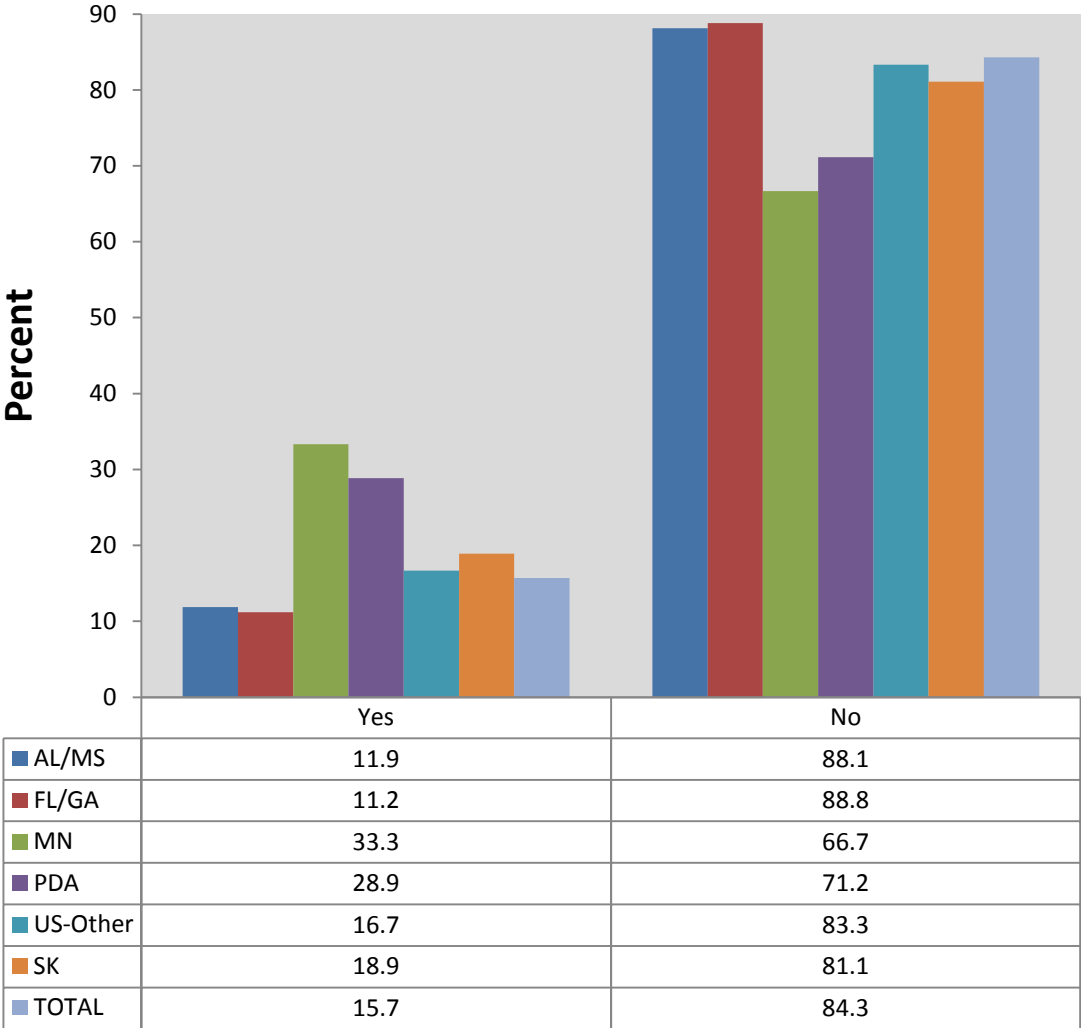


- The most common hypersensitivity treatment recommended for patients was “use of fluoride containing material” at about 85%, followed by toothpaste/rinse at 78% and then use of dentin bonding agents at 65%.

12. Do you use any in-office tests to assess caries risk?

- <sub>1</sub> Yes
- <sub>2</sub> No

**Question 12: In-office Tests for Caries Risk Assessment**



- Overall, about 16% respondents used an in-office test to assess caries risk, higher in MN (33%) and PDA (29%).

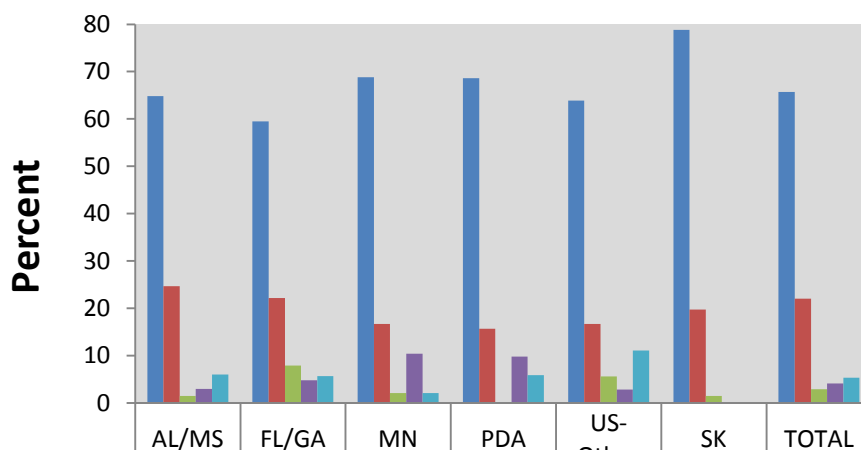
### Endodontic Treatment and Restoration Outcome

13. One of your regular patients presents with pain in tooth #13. Upon clinical inspection the lingual cusp has fractured to just below the gingival margin and there is extensive decay beneath the large MOD composite restoration. You are able to diagnose a condition of irreversible pulpitis but there is no radiographic evidence of periapical pathosis.

You would at this point recommend to your patient that **you**:

- <sub>1</sub> Initiate endodontic treatment leading to placement of a post and core followed by a full crown.
- <sub>2</sub> Extirpate the pulp, temporize and **refer** for endodontic treatment and later you would place a post and core followed by a full crown.
- <sub>3</sub> Extract the tooth and place an immediate implant fixture that you would later restore with an implant crown.
- <sub>4</sub> Extirpate the pulp, temporize and **refer** the patient to an oral surgeon or periodontist for extraction and placement of an implant fixture that you would later restore with an implant crown.
- <sub>5</sub> Extract the tooth and **refer** the patient to an oral surgeon or periodontist for placement of an implant fixture that you would later restore with an implant crown.

### Question 13: Endodontic Treatment



	AL/MS	FL/GA	MN	PDA	US-Other	SK	TOTAL
Endodontic tx with crown	64.8	59.5	68.8	68.6	63.9	78.8	65.7
Extirpate - refer for endo. tx with crown	24.7	22.2	16.7	15.7	16.7	19.7	22
Extract - implant - crown	1.5	7.9	2.1	0	5.6	1.5	2.9
Extirpate - refer to surgeon	3	4.8	10.4	9.8	2.8	0	4.1
Extract - refer to surgeon - crown	6	5.69	2.1	5.9	11.1	0	5.3

- The most common procedure was “endodontic treatment leading to placement of a post and core followed by a full crown” at about 66%.
- 22% of the practitioners chose “extirpate the pulp, temporize and refer endodontic treatment and later you would place a post and core followed by a full crown”.
- All other procedures were relatively uncommon, namely, each indicated by <6% of respondents.

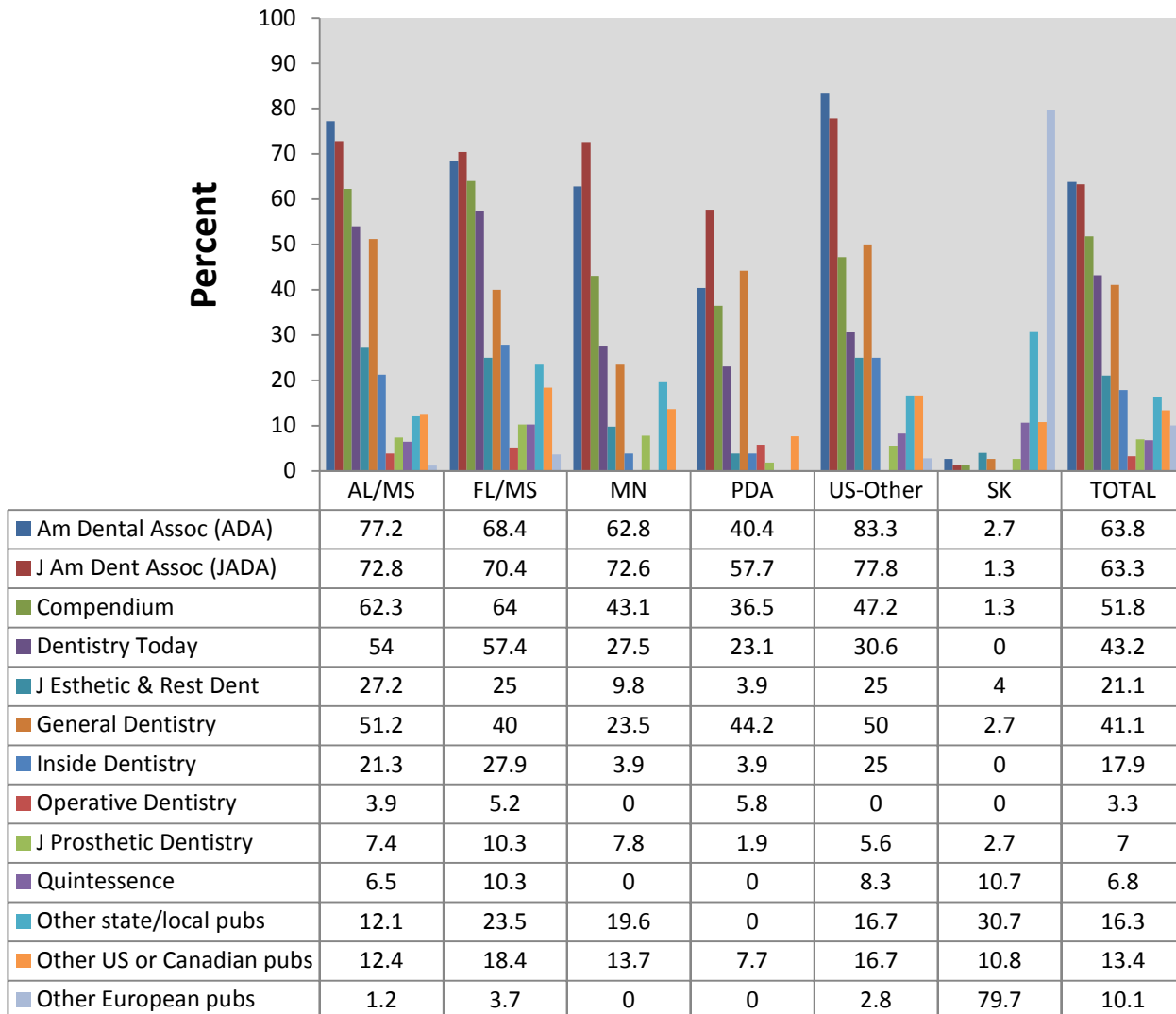
## Where do you get information?

In the next series of questions, we would like to assess where you look for information and updates on dentistry.

14. Which of the following dental journals do you regularly read (check all that you regularly read)?

- American Dental Association (ADA) News
- J American Dental Association (JADA)
- Compendium
- Dentistry Today
- J Esthetic & Restorative Dentistry
- General Dentistry
- Inside Dentistry
- Operative Dentistry
- J Prosthetic Dentistry
- Quintessence
- Other state or local publication (US, Canadian or European):
- Other US or Canadian publication:
- Other European publication:

### Question 14: Source of Information

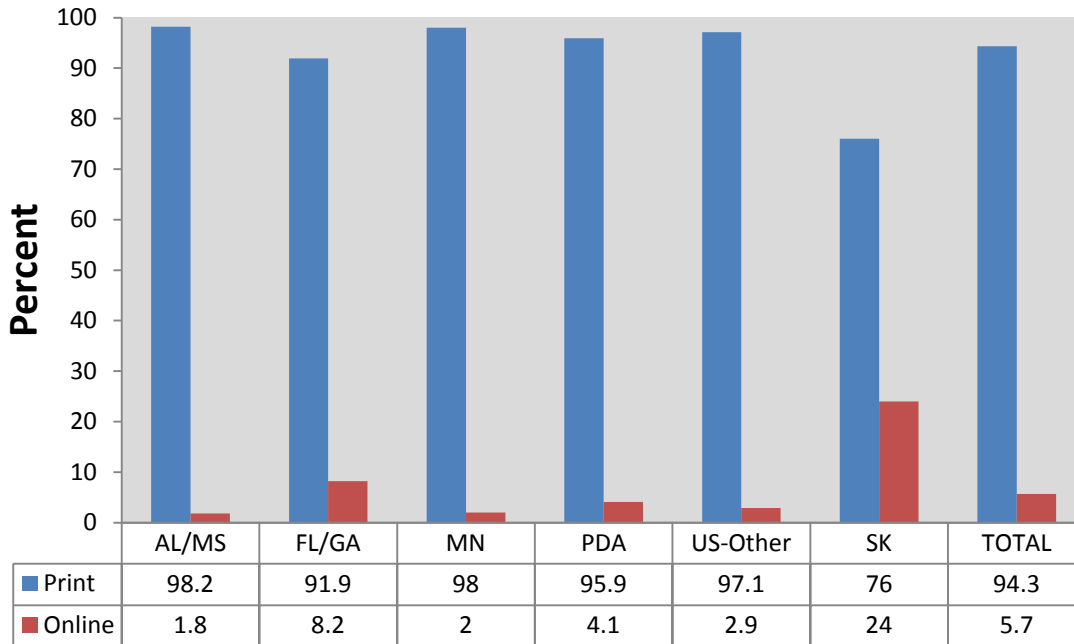


- American Dental Association News and JADA were the most popular choices at about 64% each, followed by Compendium at 52%, all less common in SK where “other European” were read by 80% of respondents.

15. Where do you most frequently read journals?

- <sub>1</sub> Print
- <sub>2</sub> Online

### Question 15: Print vs. Online Journals

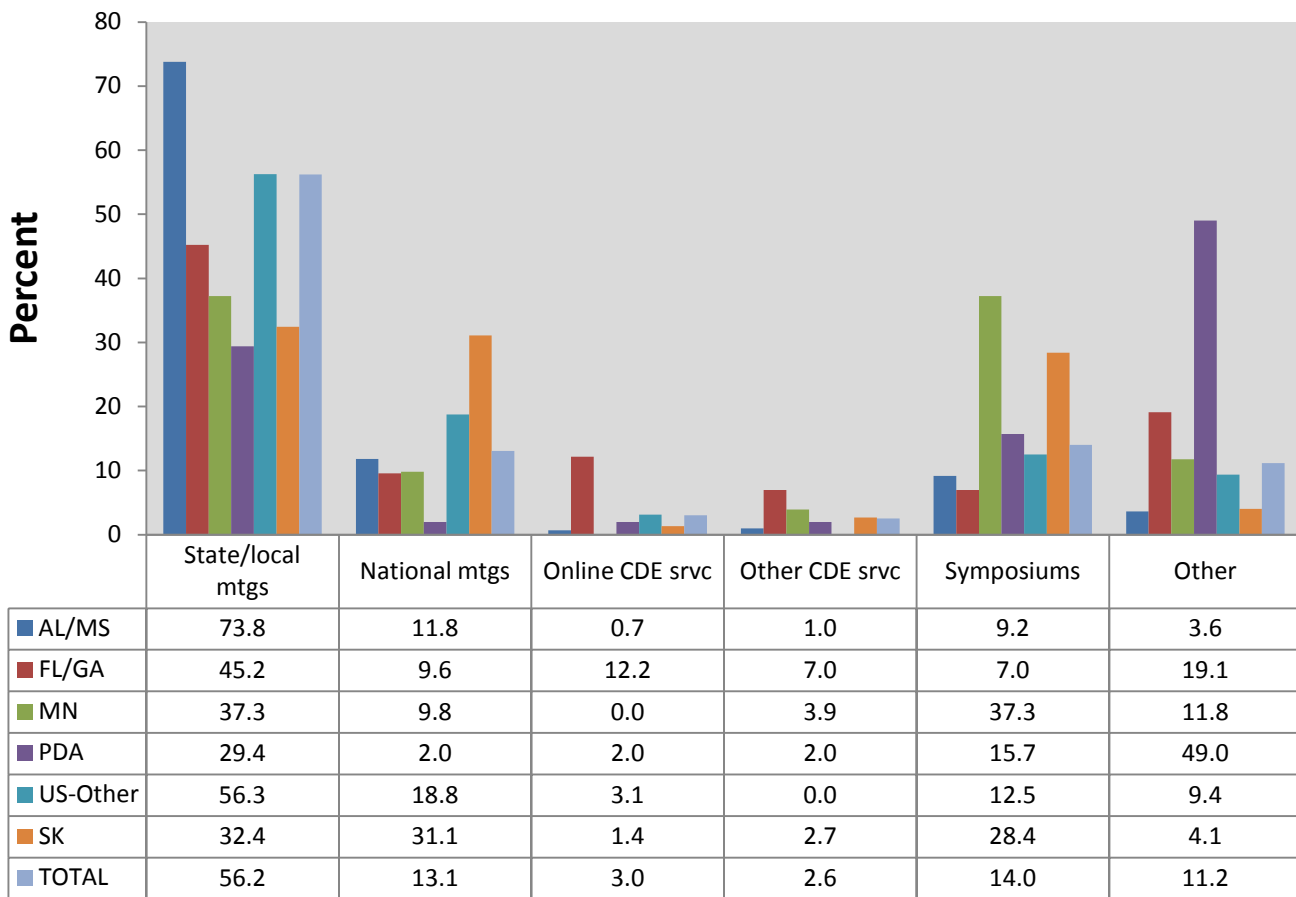


- Less than 6% of respondents frequently read journals online, notably higher at 24% in SK.

16. Where do you get most of your Continuing Dental Education (CDE) credits? (Please choose one)

- <sub>1</sub> State or local dental meetings
- <sub>2</sub> National dental meetings
- <sub>3</sub> Online CDE services
- <sub>4</sub> Other CDE services (e.g., tapes, journal articles)
- <sub>5</sub> Symposiums or other offerings by a school of dentistry
- <sub>6</sub> Other:

### Question 16: CDE Credits

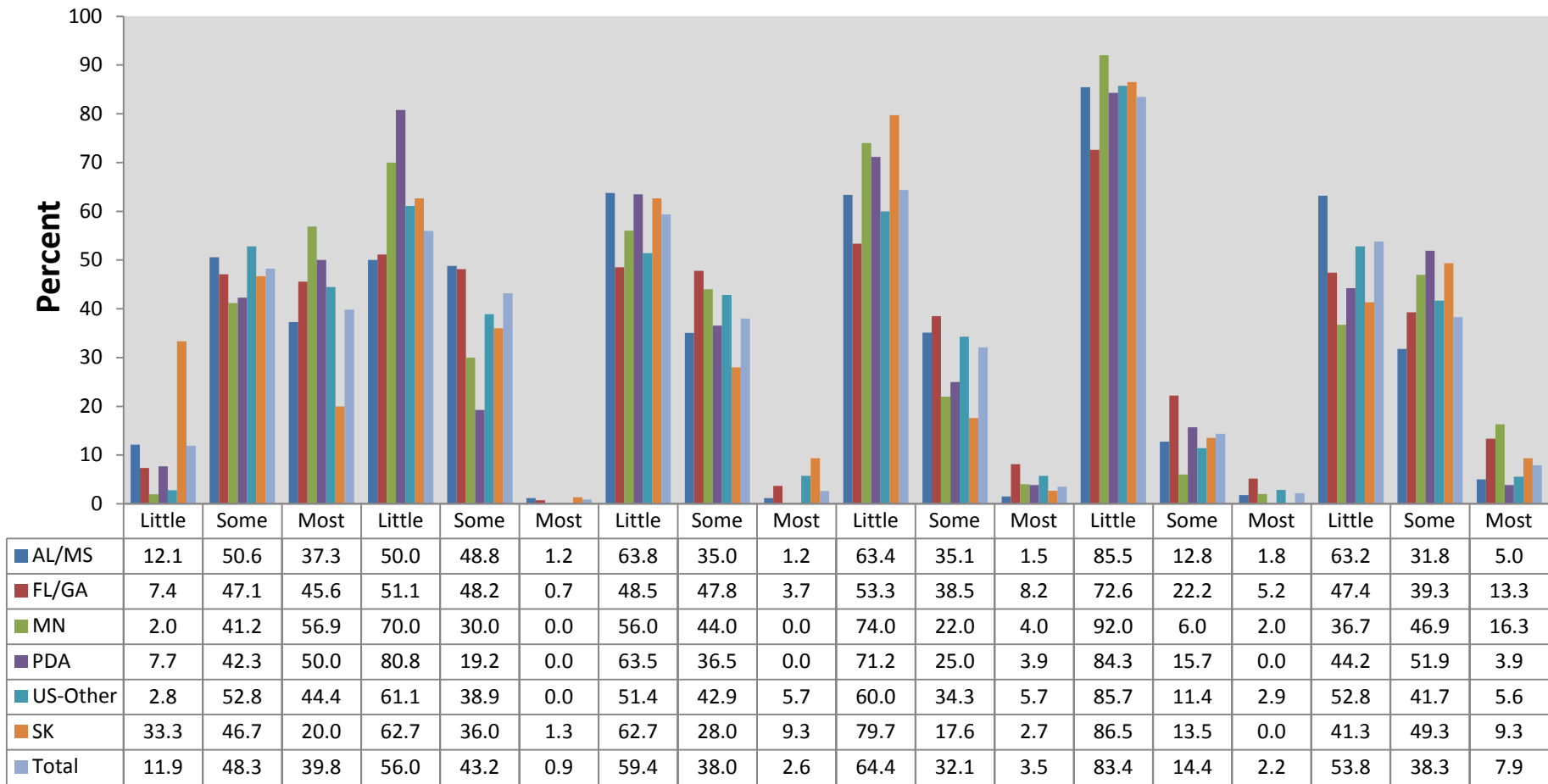


- 56% of respondents obtained CDE at state or local dental meetings, followed by symposiums (14%) and national meetings (13%).
- Only 3% obtained CDE through online services.

17. Please rank each of the following with regard to **which have the greatest influence on how you practice.**

	<b>Little Influence</b>	<b>Some Influence</b>	<b>Most Influence</b>
a. Printed peer-reviewed journals (e.g. J American Dental Association, Operative Dentistry)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Printed non-peer-reviewed journals (e.g. Dental Products Report)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Online journals or newsletters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Online CDEs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Online chatrooms or other interactive online services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Web searches (e.g. Google, PubMed)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Informal conversation with colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Study or journal clubs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. State or local dental meetings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. National dental meetings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Symposiums or other offerings by a school of dentistry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Symposiums or other offerings by a private institute or organization (e.g. Kois Center)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

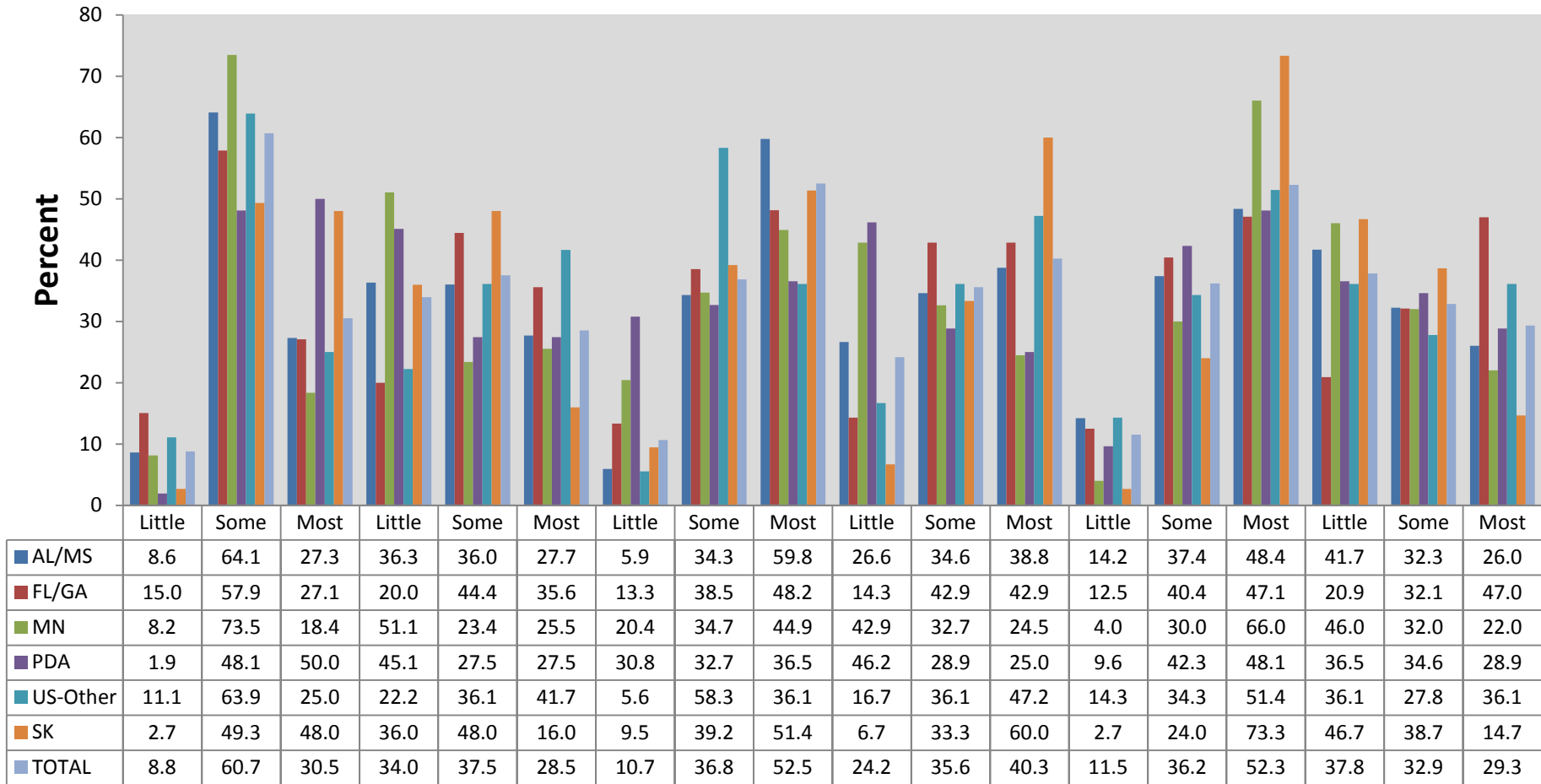
## Question 17 (A): Influences



Printed peer-reviewed journals	Printed non-peer-reviewed journals	Online journals	Online CDEs	Online chat rooms	Web searches (e.g. Google, PubMed)
--------------------------------	------------------------------------	-----------------	-------------	-------------------	------------------------------------

- For most influence, of above, peer-reviewed journals were notably higher than all other categories at about 40%.
- For least influence, 83% of respondents indicated that “online chat rooms or other interactive online services” were of little influence.

## Question 17 (B): Influences



Informal conversation

Study or journal clubs

State or local dental meetings

National dental meetings

Symposiums (sch. of dentistry)

Symposiums (private institute)

- For most influence, “state or local dental meetings” and “symposiums or other offerings by a school of dentistry” were indicated by the most respondents at 52-53%, followed by national dental meetings at 40%, and printed peer-reviewed journals in Table Q17A, also at 40%.
- As stated earlier, for least influence, 83% of respondents indicated that “online chat rooms or other interactive online services” were of little influence, these were followed by other online sources of information, CDE, online journals and web searches.

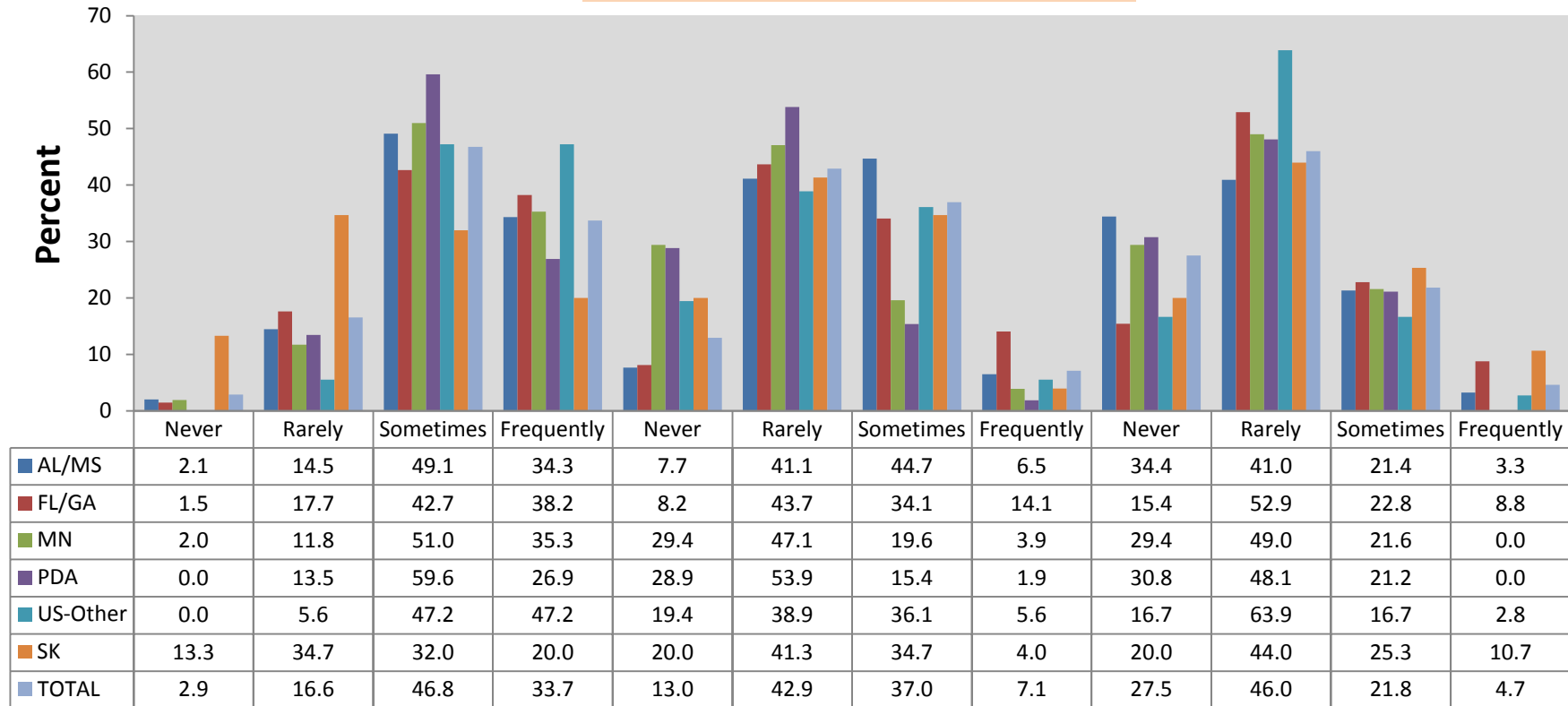
18. How frequently do you make use of the following resources for practice guidance?

“Rarely” means < 10% of when available or once per year

“Sometimes” means 10 – 50% of when available or 1 – 6 times per year

“Frequently” means > 50% of when available or > 6 times per year

**Question 18 (A-1): Resources**



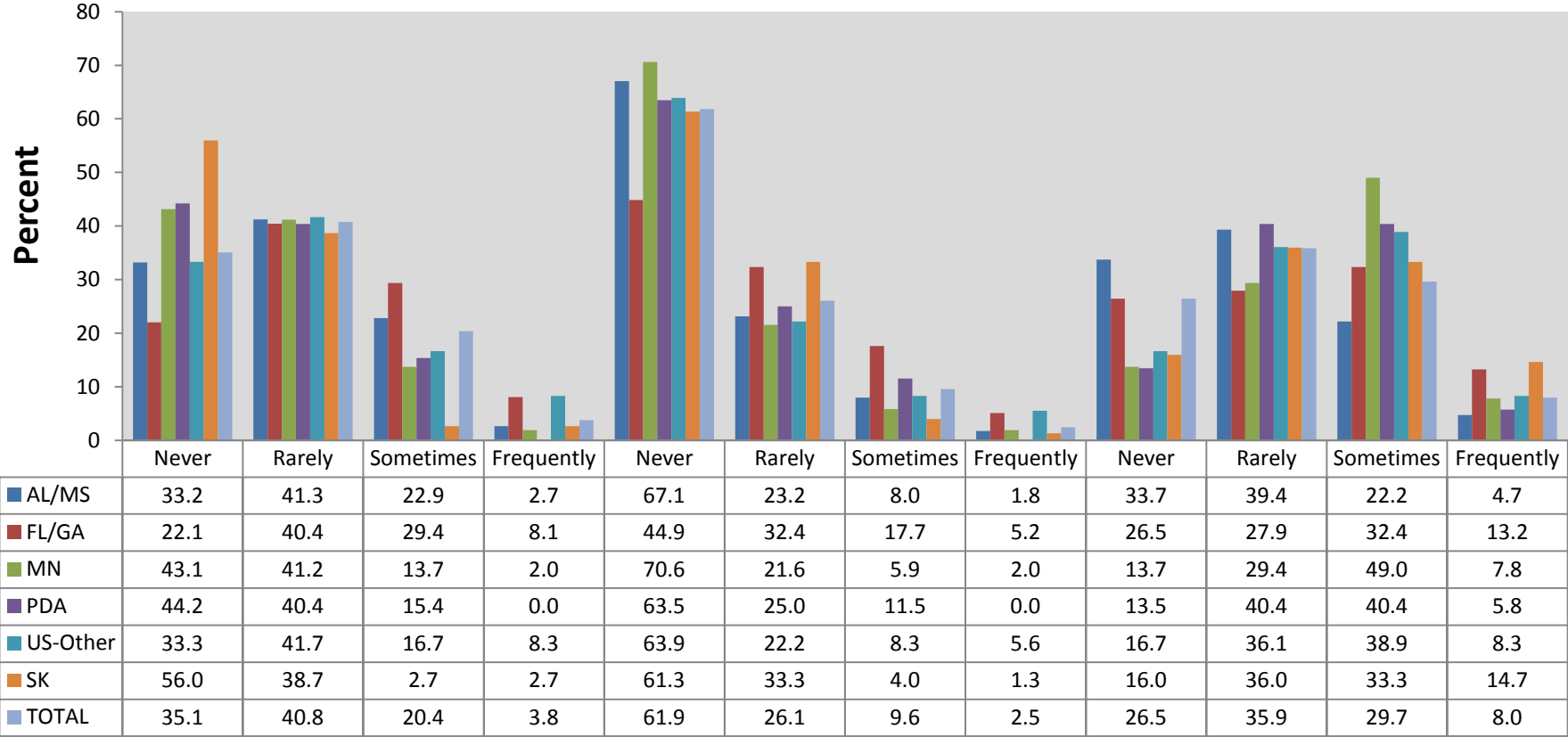
Printed peer-reviewed journals

Printed Non-peer-reviewed journals

Online journals or newsletters

- Summary at the end of question 18 B-2.

## Question 18 (A-2): Resources



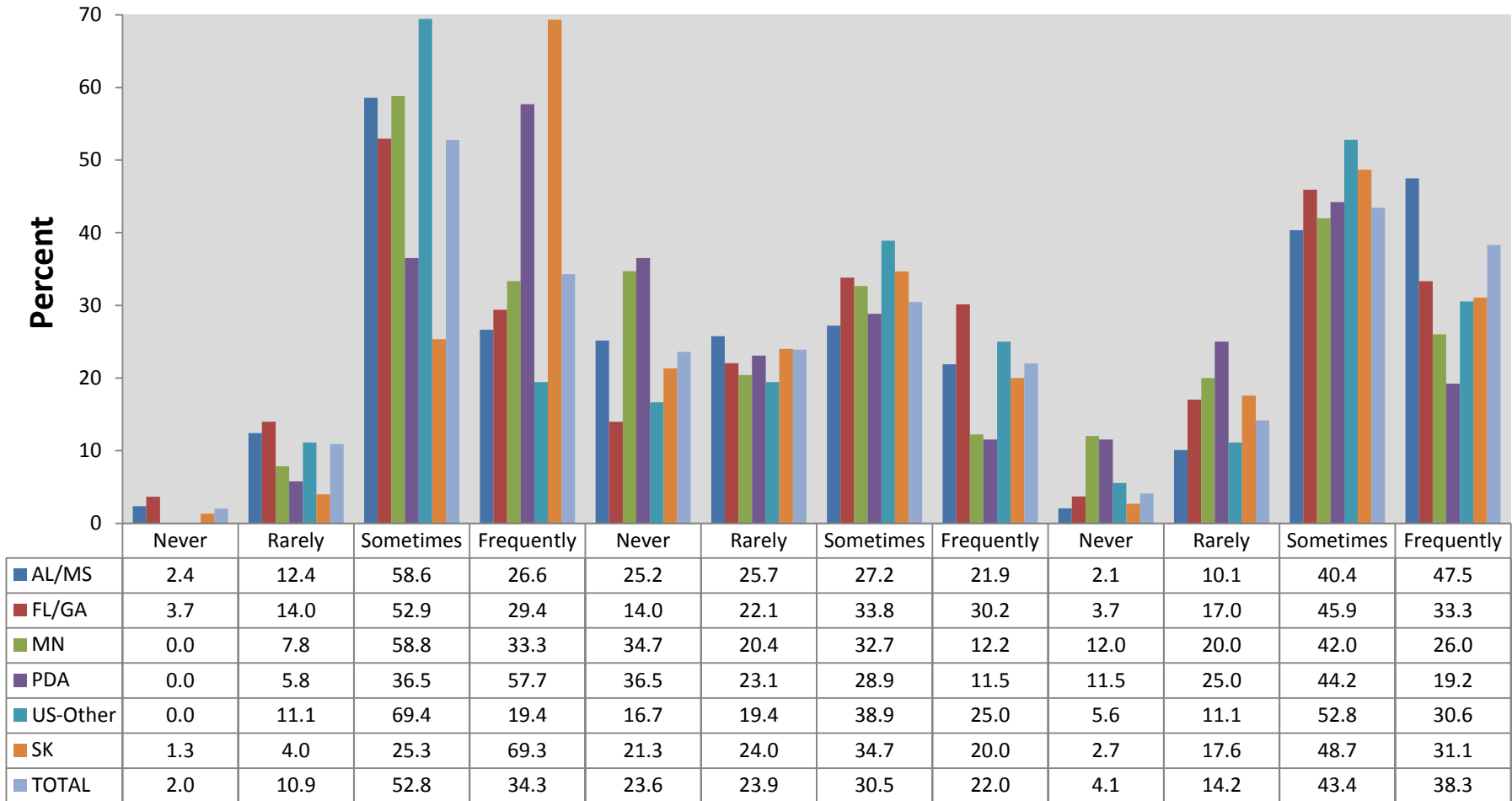
Online CDEs

Online chat rooms

Web searches (e.g. Google, PubMed)

- Summary at the end of question 18 B-2.

## Question 18 (B-1): Resources



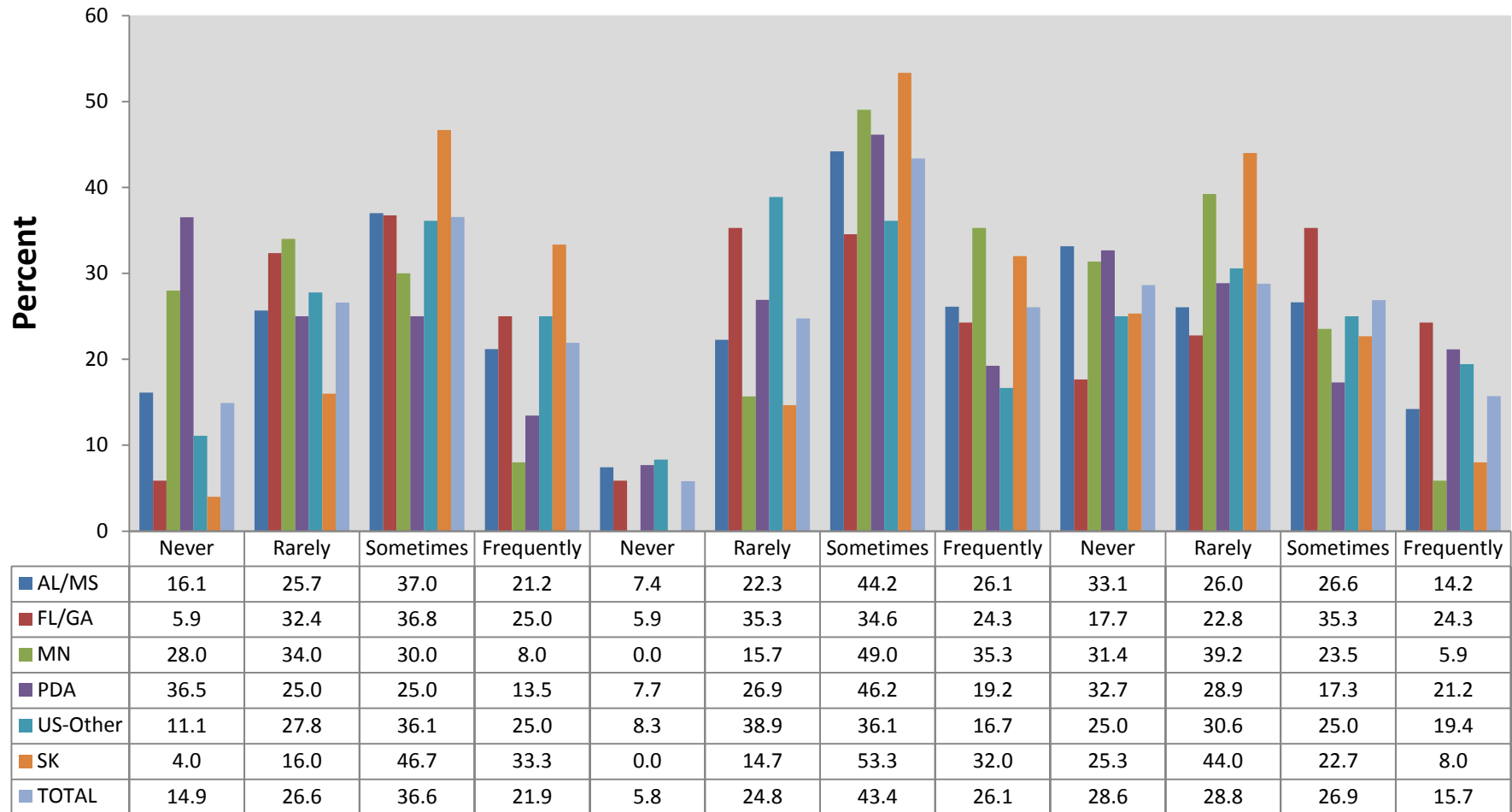
Informal conversation

Study or journal clubs

State or local dental meetings

- Summary at the end of question 18 B-2.

## Question 18 (B-2): Resources



National dental meetings

Symposiums (School of Dentistry)

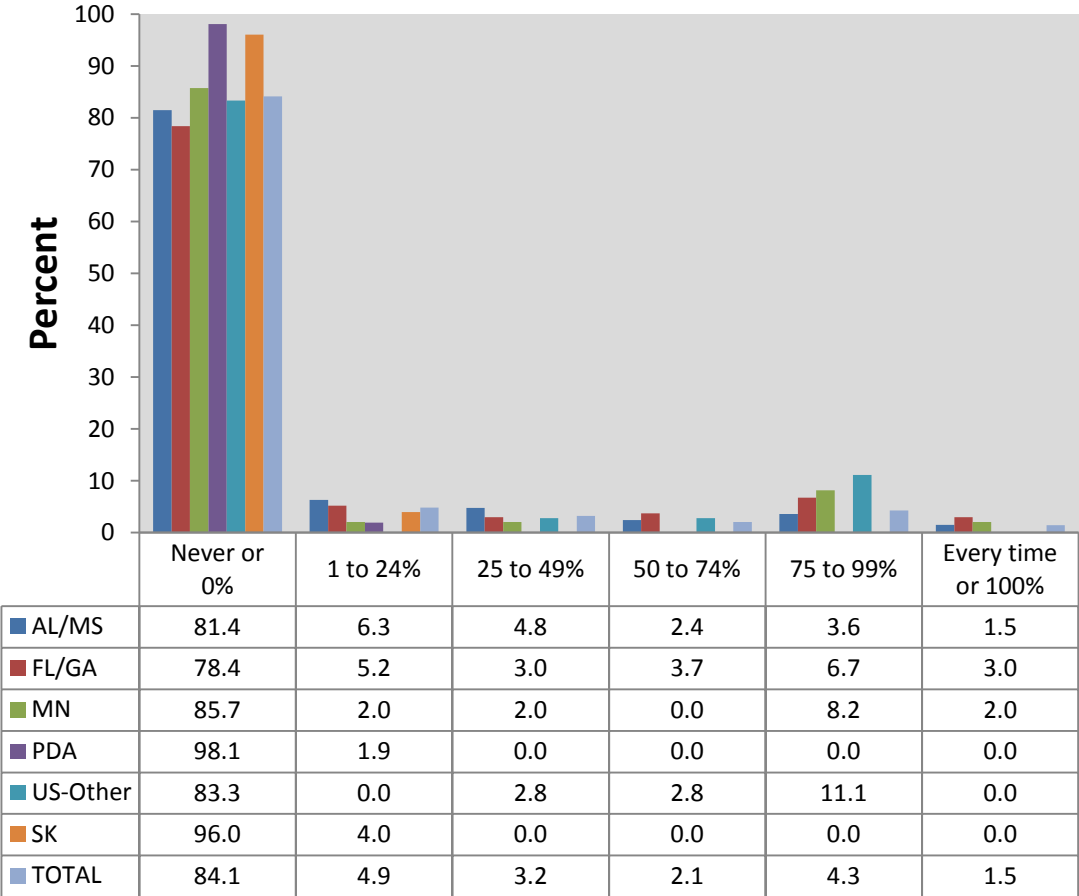
Symposiums (private institute)

- Resources used frequently by most respondents were state or local meetings (38%), informal conversation with colleague (34%) and printed peer-reviewed journal (34%).
- Resources used least frequently were online sources - chat rooms, CDE, online journals, 2-5%.

19. When you examine patients to determine if they have a **primary caries** lesion on the **occlusal** surface, on what percent of these patients do you use **laser fluorescence** (for example, Diagnodent®)?

- 1 – Never or 0%
- 2 – 1 to 24%
- 3 – 25 to 49%
- 4 – 50 to 74%
- 5 – 75 to 99%
- 6 – Every time or 100%

### Question 19: Laser Fluorescence

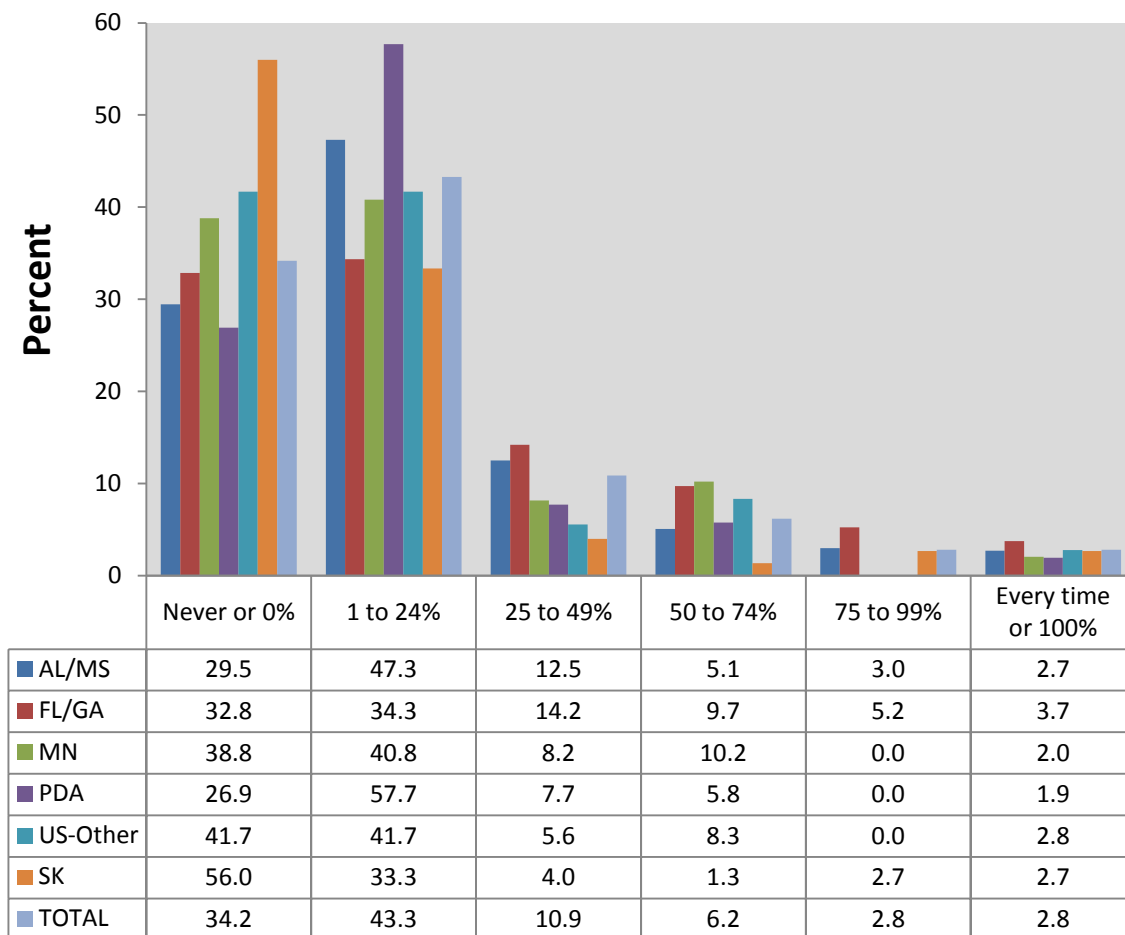


- 84% of respondents never used laser fluorescence.

20. When you examine patients to determine if they have a **caries** lesion on a **proximal** (mesial or distal) surface of an anterior tooth, on what percent of these patients do you use **fiber optic** transillumination to help diagnose the lesion?

- 1 – Never or 0%
- 2 – 1 to 24%
- 3 – 25 to 49%
- 4 – 50 to 74%
- 5 – 75 to 99%
- 6 – Every time or 100%

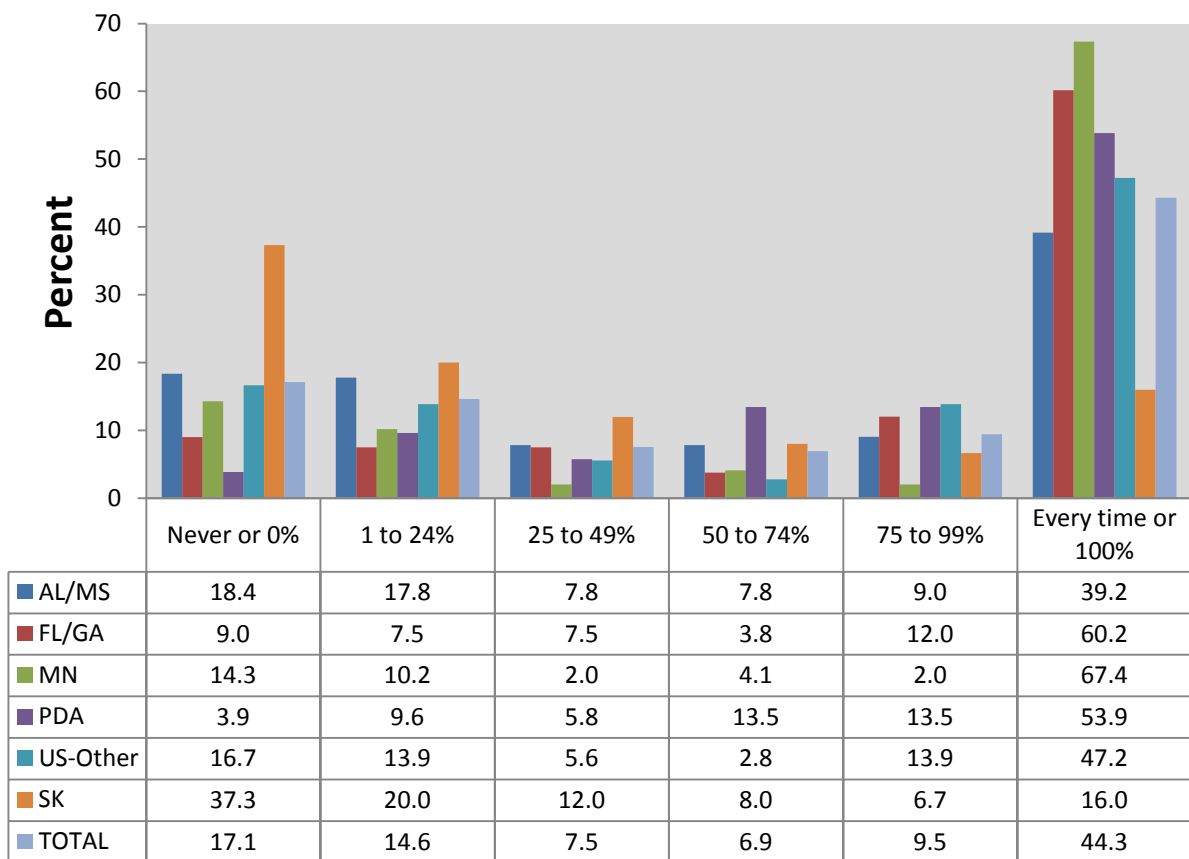
### Question 20: Fiber Optic Transillumination



- 34% of respondents never used fiber optic transillumination, and 43% used it on only “1 to 24%” of their patients. Few respondents used it on the majority of their patients (<11% in any category of >50% of their patients).

21. When you examine patients to determine if they have a **caries** lesion, on what percent of these patients do you use some sort of **magnification** to help diagnose the lesion?
- 1 – Never or 0%
  - 2 – 1 to 24%
  - 3 – 25 to 49%
  - 4 – 50 to 74%
  - 5 – 75 to 99%
  - 6 – Every time or 100%

### Question 21: Magnification



- Magnification was used “every time or 100%” by 44% of respondents, with fewer in SK, 16%, using it on all patients. 15-17% of respondents either never used magnification or used it on only 1-24% of their patients; a high proportion of SK respondents (37%) never used magnification.

For Questions 22-24: The patient is a 30-year old female with no relevant medical history. She has no complaints and is in your office today for a routine visit. She has been attending your practice on a regular basis for the past 6 years.

Questions 22-24: For each question, circle the letters which correspond to the treatment codes you would recommend for scenarios described. If treatment code “j” (other) is used, please specify. You may circle more than one treatment code per question.

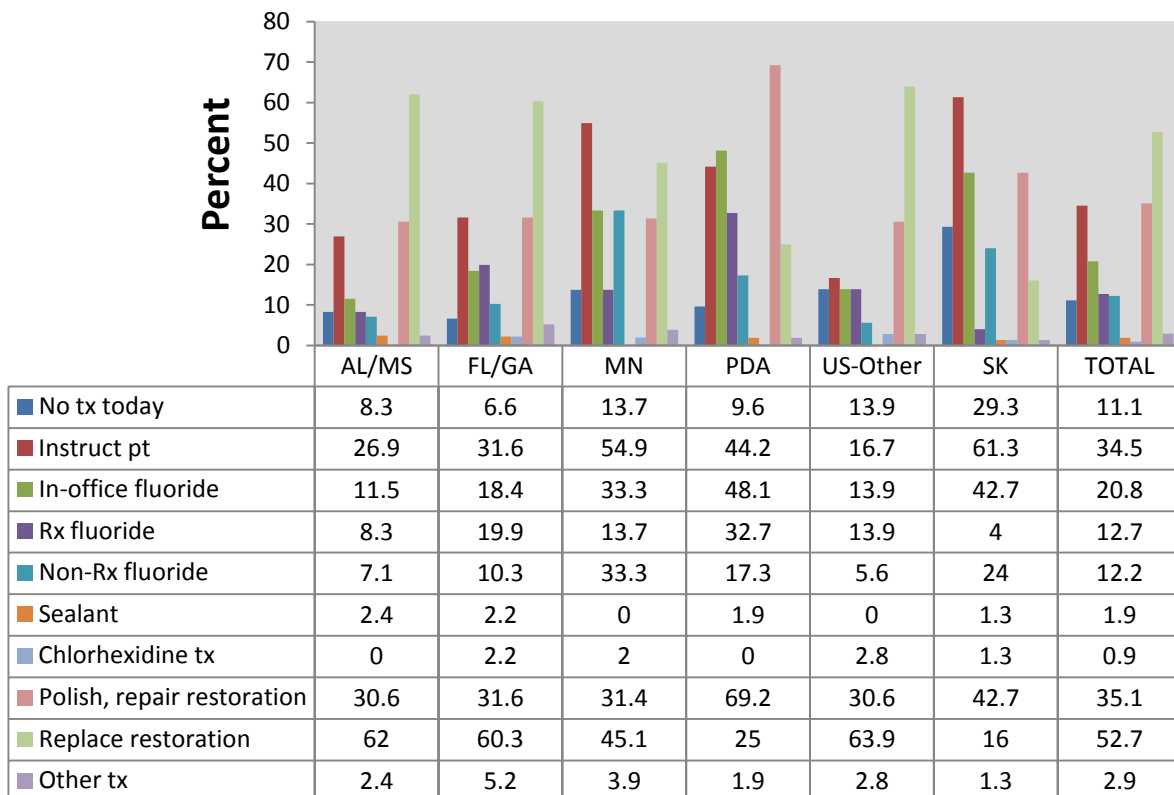
22. The patient has 5 existing restorations and is not missing any teeth. Indicate what treatment you would provide to the restoration shown by the arrow in the first picture on the left.



- a. No treatment today, follow the patient regularly
- b. Instruct patient in plaque removal for the affected area
- c. In-office fluoride
- d. Prescription for fluoride
- e. Recommend non-prescription fluoride
- f. Use sealant or unfilled resin over tooth
- g. Chlorhexidine treatment
- h. Polish, re-surface, or repair restoration, but not replace
- i. Replace entire restoration
- j. Other treatment

Reprinted from Mjör 2005 with permission

## Question 22: Treatment Type



- 53% would treat by replacing entire restoration, 34% would instruct patient on plaque removal, and 35% would polish, resurface or repair, but not replace restoration.

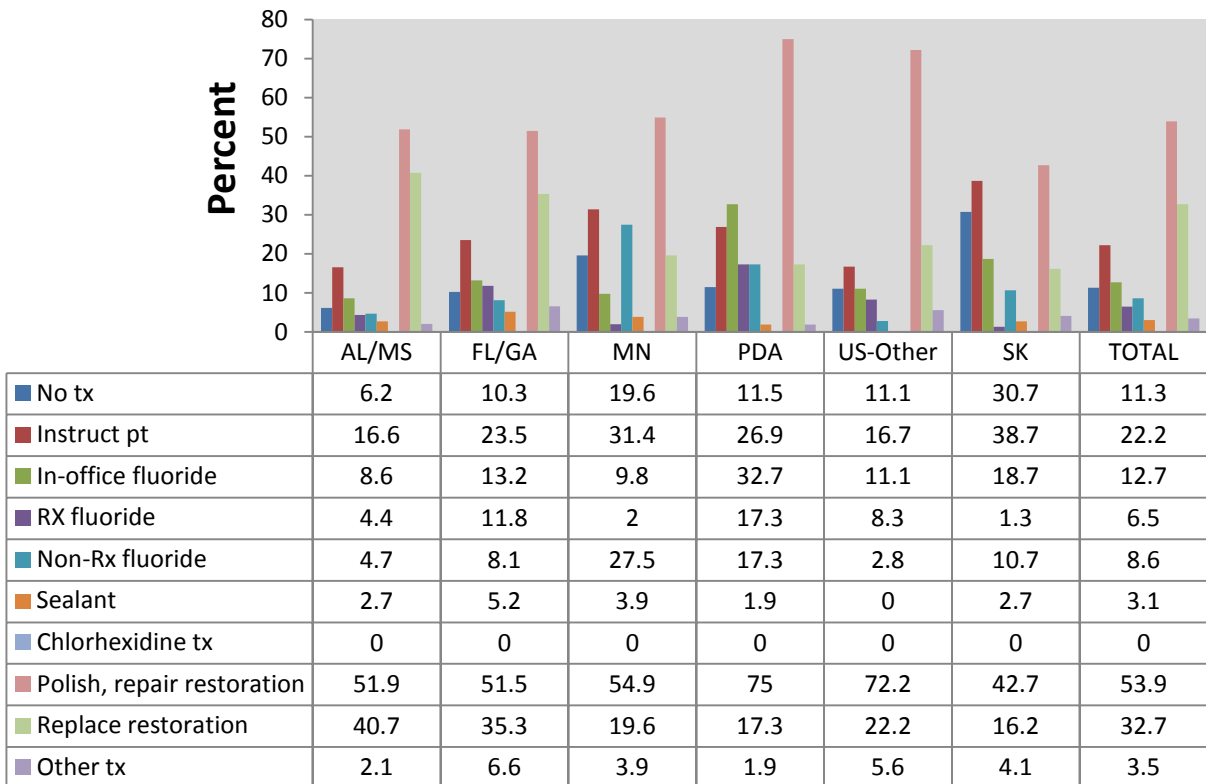
23. Now imagine the patient has no other dental restorations than the one shown, no dental caries, and is not missing any teeth. Indicate what treatment you would provide to the restoration in the second picture on the left.



- a. No treatment today, follow the patient regularly
- b. Instruct patient in plaque removal for the affected area
- c. In-office fluoride
- d. Prescription for fluoride
- e. Recommend non-prescription fluoride
- f. Use sealant or unfilled resin over tooth
- g. Chlorhexidine treatment
- h. Polish, re-surface, or repair restoration, but not replace
- i. Replace entire restoration
- j. Other treatment

Reprinted from Mjör 2005 with permission

### Question 23: Treatment Type



- 54% would polish, re-surface, or repair, but not replace, restoration; nearly 33% would replace entire restoration.

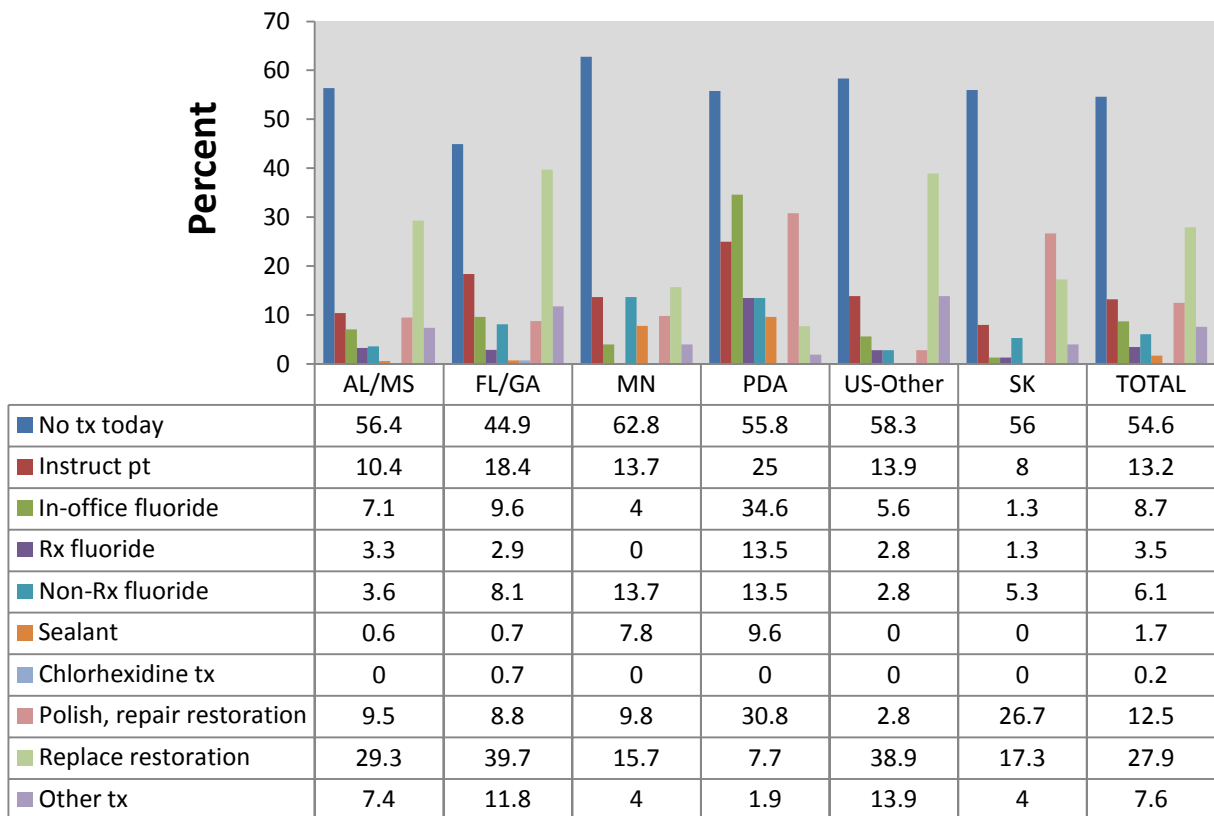
24. The same patient has no other dental restorations than the one shown, no dental caries, and is not missing any teeth. Indicate what treatment you would provide to the restoration in the third picture on the left.



Courtesy of Dr. Ivar Mjör

- a. No treatment today, follow the patient regularly
- b. Instruct patient in plaque removal for the affected area
- c. In-office fluoride
- d. Prescription for fluoride
- e. Recommend non-prescription fluoride
- f. Use sealant or unfilled resin over tooth
- g. Chlorhexidine treatment
- h. Polish, re-surface, or repair restoration, but not replace
- i. Replace entire restoration
- j. Other treatment

### Question 24: Treatment Type



- Nearly 55% of respondents indicated that they would not treat the restoration that day but would follow patient regularly, while about 28% would replace the entire restoration.

