

Dental Practice-Based Research Network
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DPBRN 22: Assessing the impact of participation in dental practice-based research networks on patient care (Condor PIRG)

Results: Overall and by Region

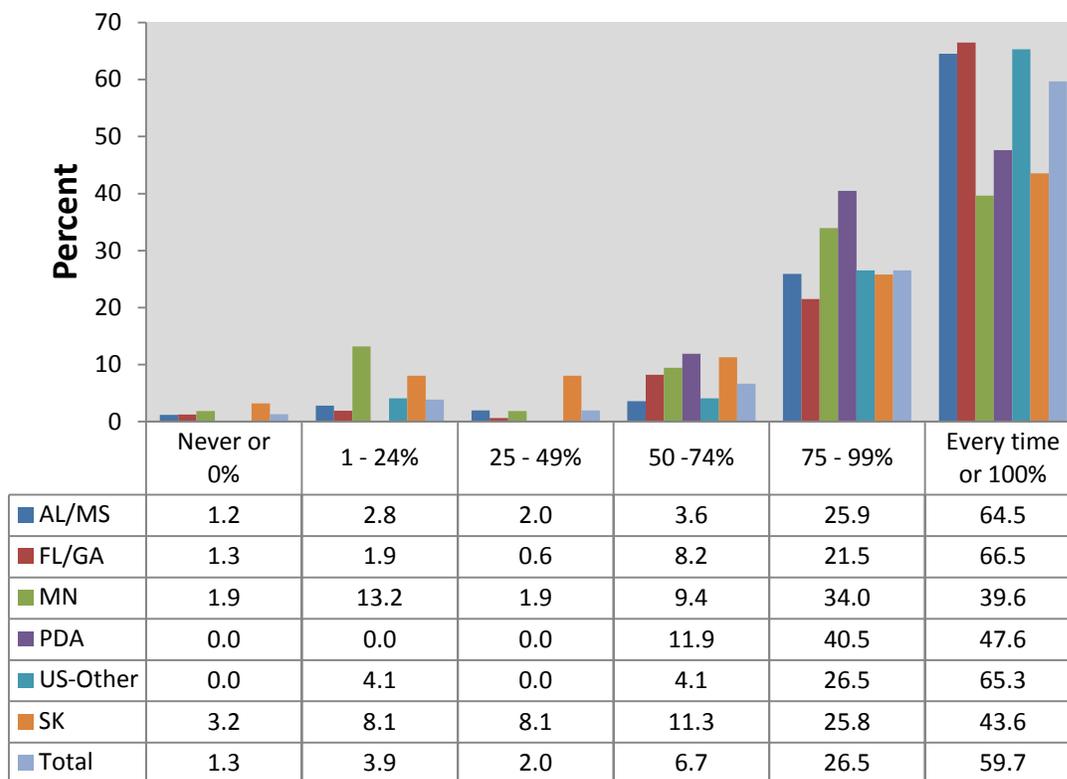
Date prepared: March 26, 2012

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?

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

Question 1: Dental Explorer

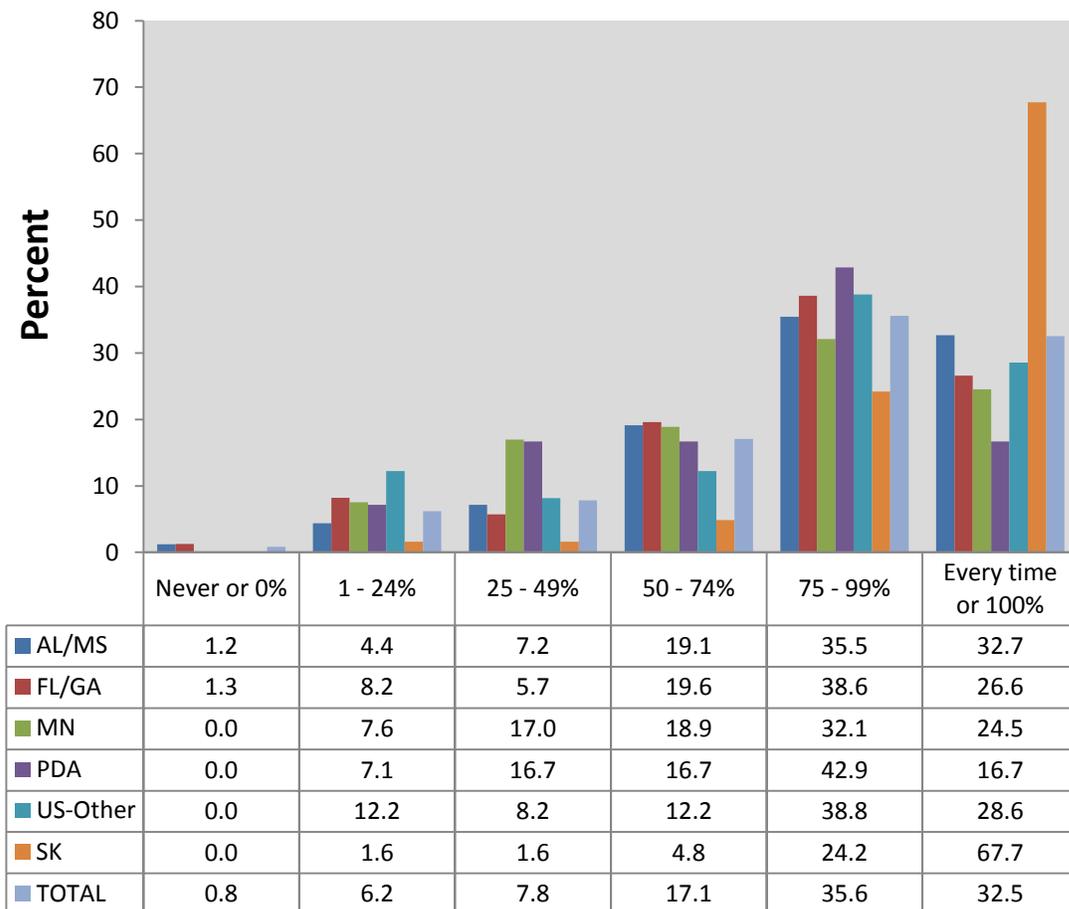


- Overall, approximately 60% used a dental explorer “every time” and about 27% used one 75-99%.

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?

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

Question 2: Air-drying

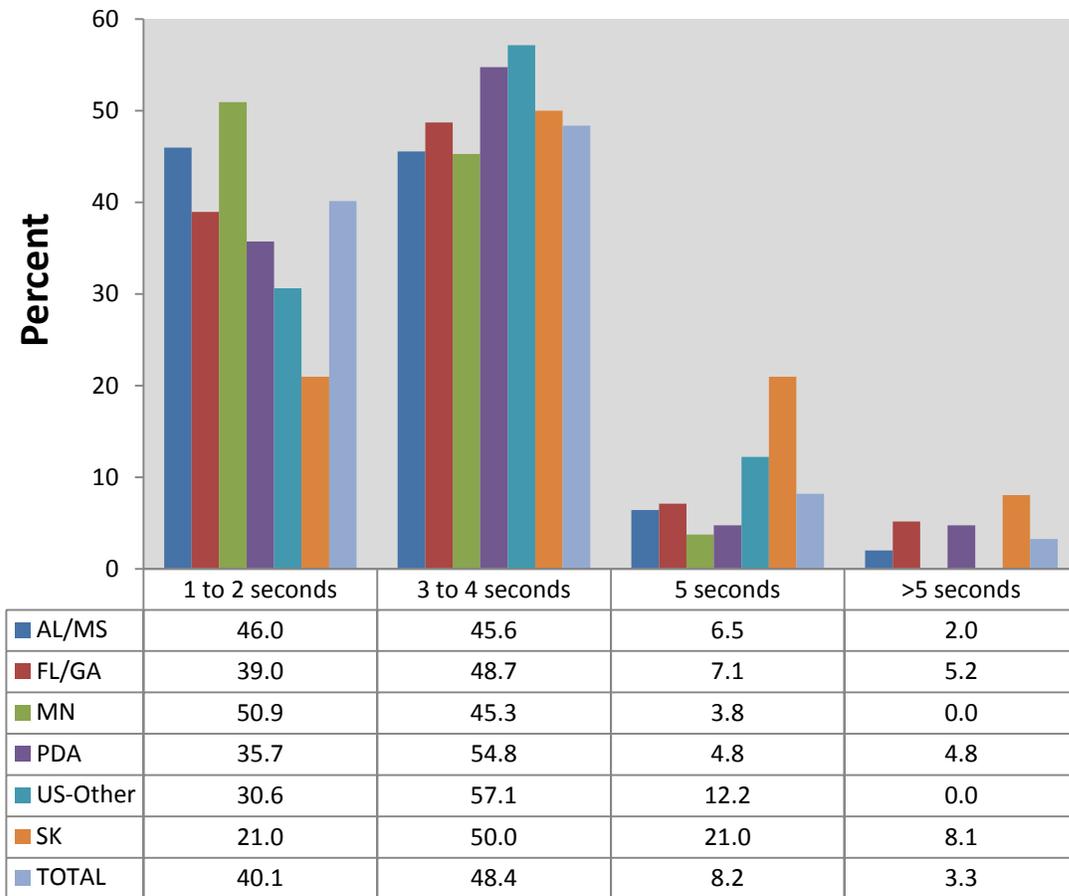


- Almost 33% of respondents used air drying every time and nearly 36% used it for 75 – 99% of these caries.

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

- ₁ 1 to 2 seconds
- ₂ 3 to 4 seconds
- ₃ 5 seconds
- ₄ 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 40% for 1 to 2 seconds.

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

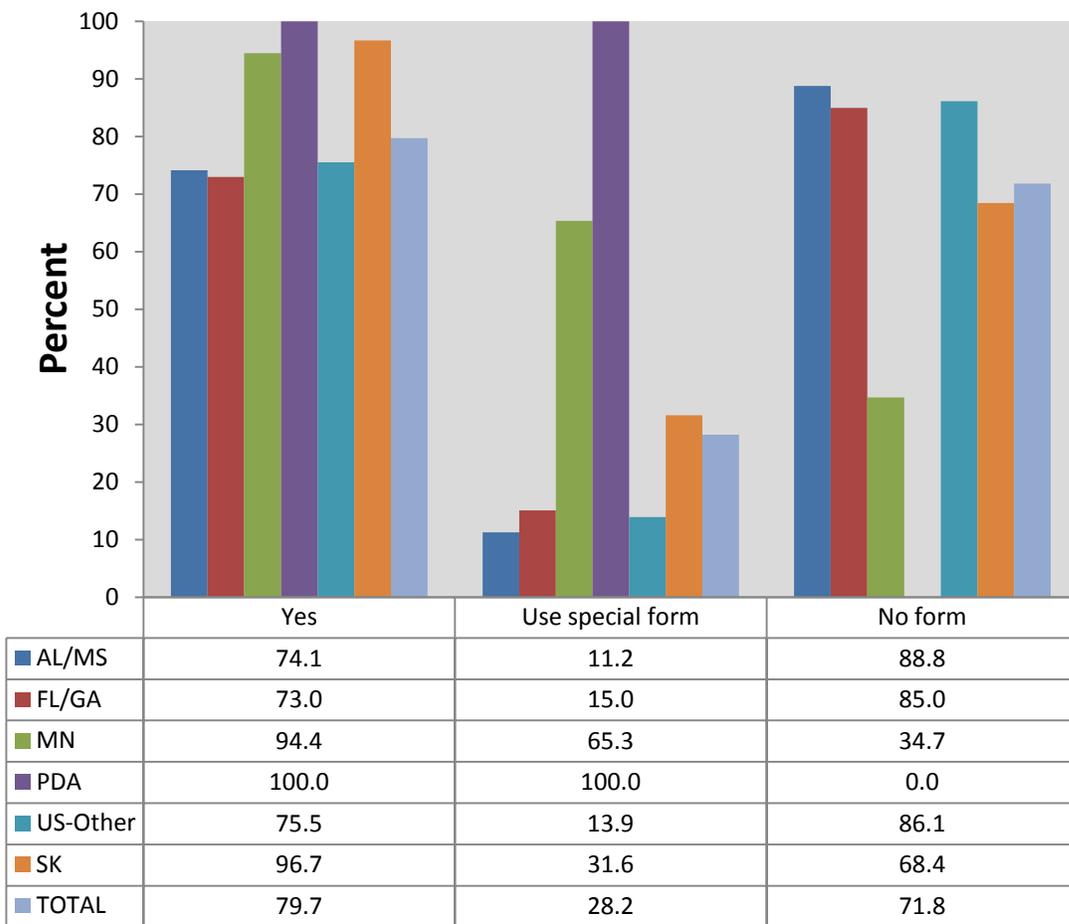
₁ Yes

_A I record the assessment on a special form that is kept in the patient chart.

_B I do not use a special form to make the assessment.

₂ No

Question 3: Assess Caries Risk



- Overall, approximately 80% of respondents assess caries risk for patients, ranging from 73% (FL/GA) to 100% (PDA)..
- Of respondents who indicated they assessed caries risk, 28% use a special form to make the assessment, but this differed substantially across regions, from 11% in AL/MS to 100% 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

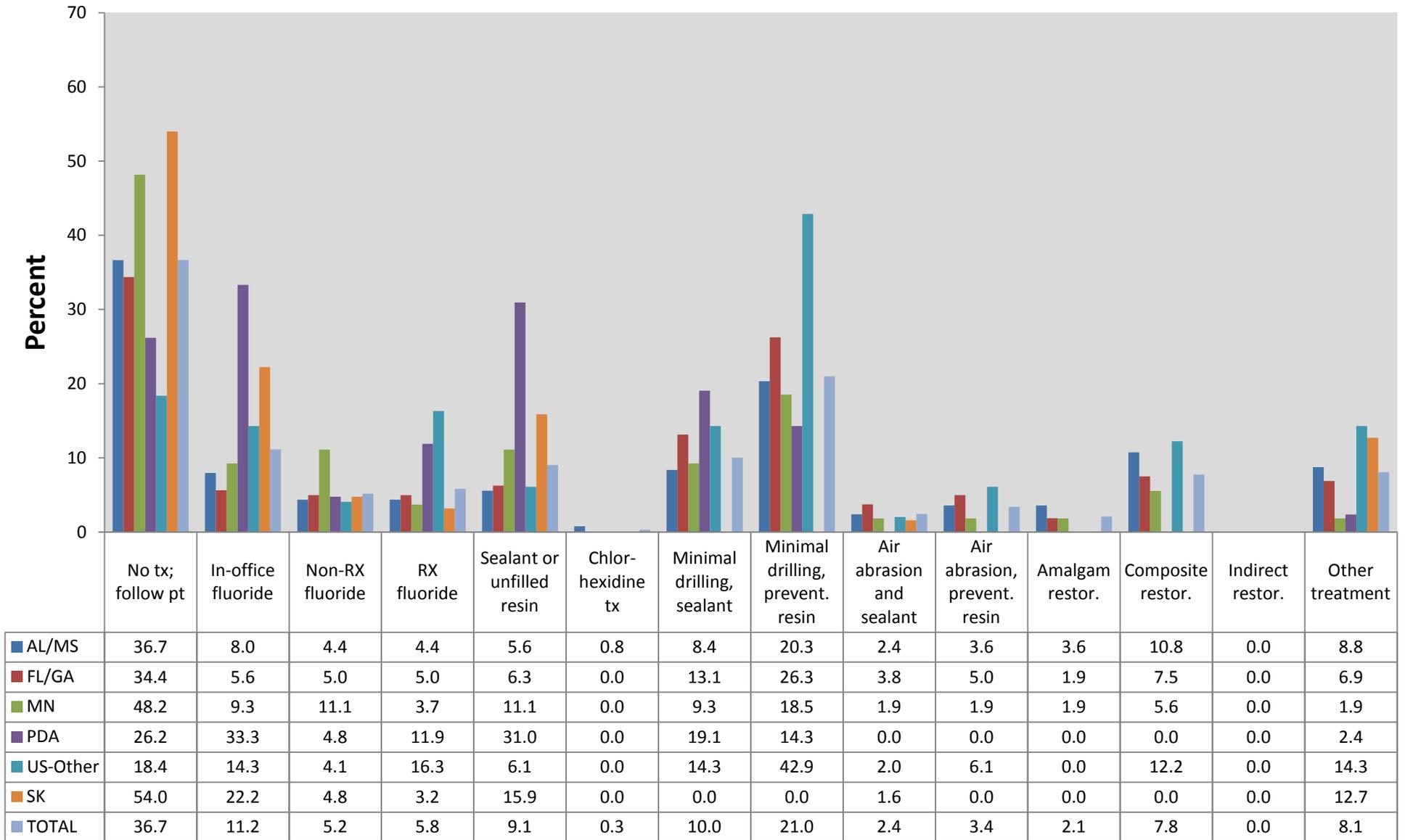


5. How would you treat the tooth shown at the left?

- 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

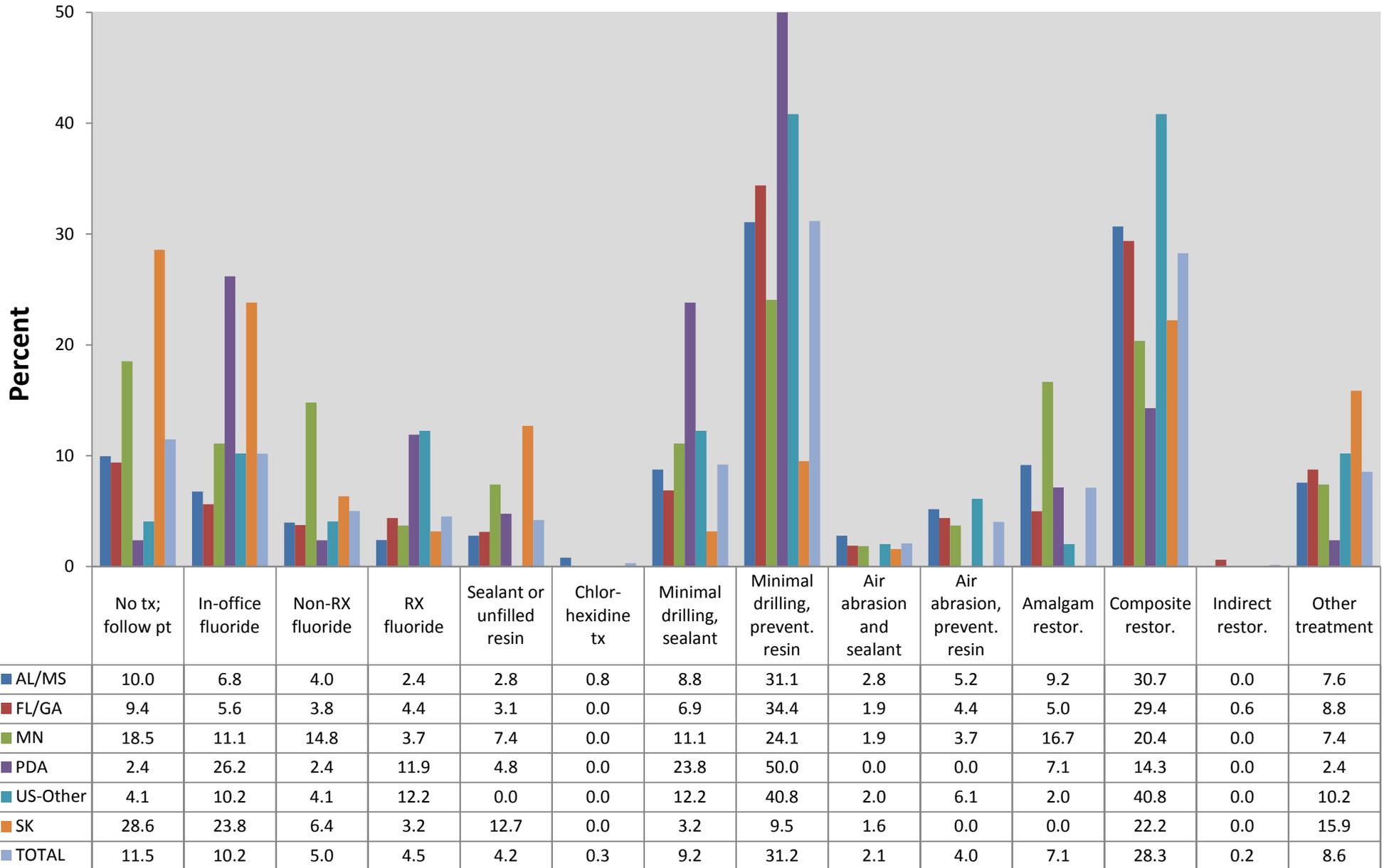
- Minimal drilling and preventive resin restoration
- Air abrasion and a sealant
- Air abrasion and preventive resin restoration
- Amalgam restoration
- Composite restoration
- Indirect restoration
- Other treatment

Question 4: Treatment for tooth in picture



- Almost 37% of respondents indicated “no treatment.” The most common specified treatment was minimal drilling and preventive resin restoration at 21% overall.

Question 5: Treatment for tooth in picture



- The most common indicated treatments were “minimal drilling and preventive resin restoration” at 31% and “composite restoration” at 28%.
- Least common were “chlorhexidine treatment” and “indirect restoration” each at <1%.

Deep Caries Treatment and Diagnosis

6. In a patient with deep caries (occlusal) and a possible mild pulpitis on a posterior tooth where the caries radiographically appears to extend to the pulp, what percentage of the time do you:

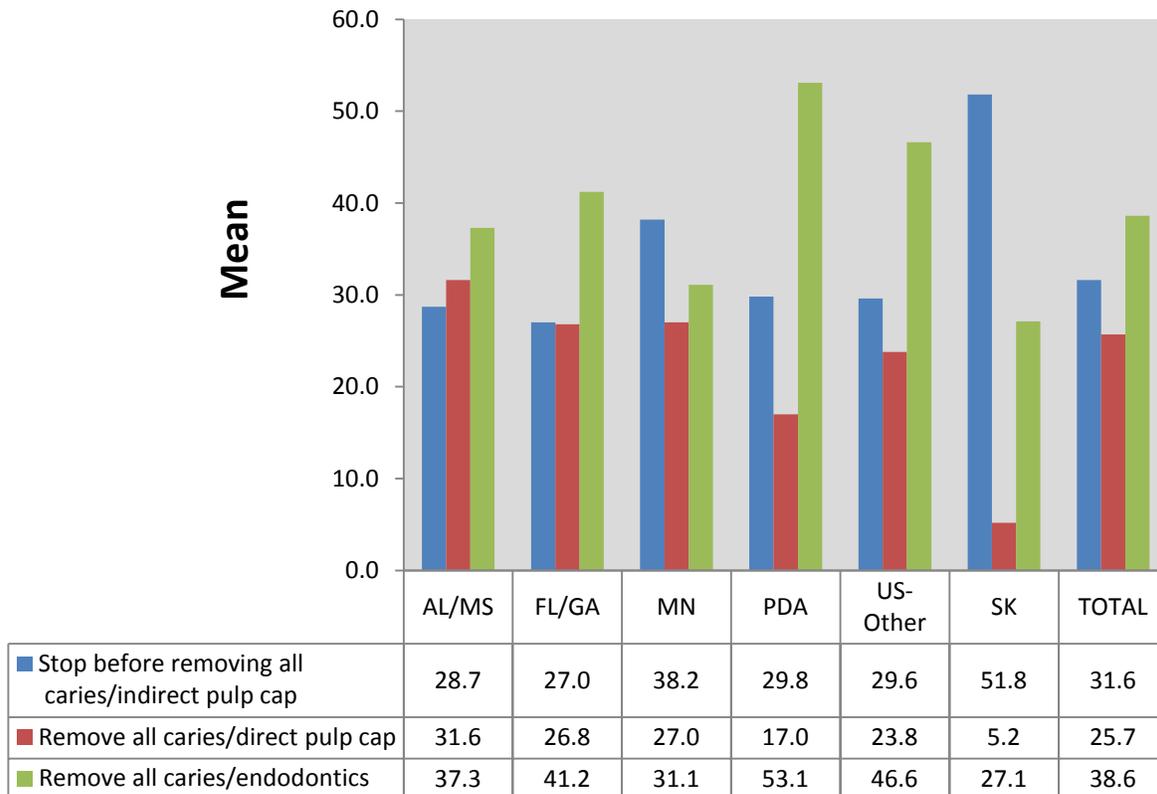
Stop before removing all caries and perform an indirect pulp cap: _____

Remove all caries and proceed with a direct pulp cap: _____

Remove all caries and proceed with endodontic related procedures: _____

(Percentages should add to 100%)

Question 6: Deep caries treatment scenario



- Overall, at a mean of about 39%, slightly more removed all caries and proceeded with endodontic related procedures, this was followed by 32% stopping before removing all caries and performed indirect pulp cap, and 26% removing all caries and proceeding with a direct pulp cap.
- This pattern varied considerably by region.

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.

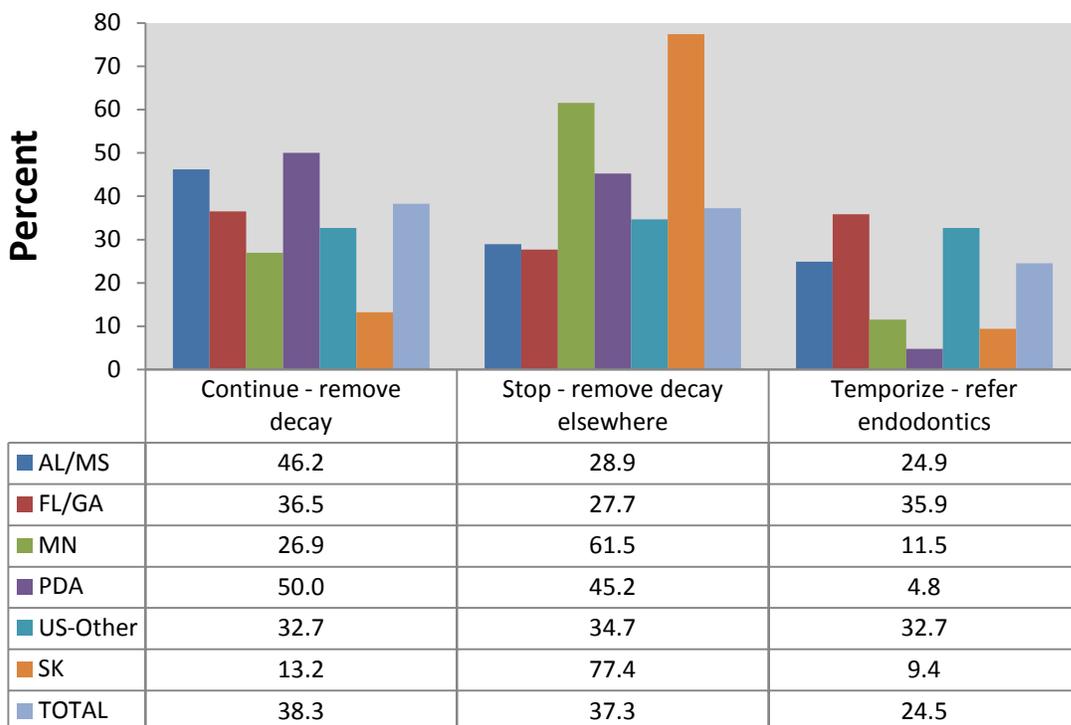
Bitewing radiograph of patient Edward's tooth #30:



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



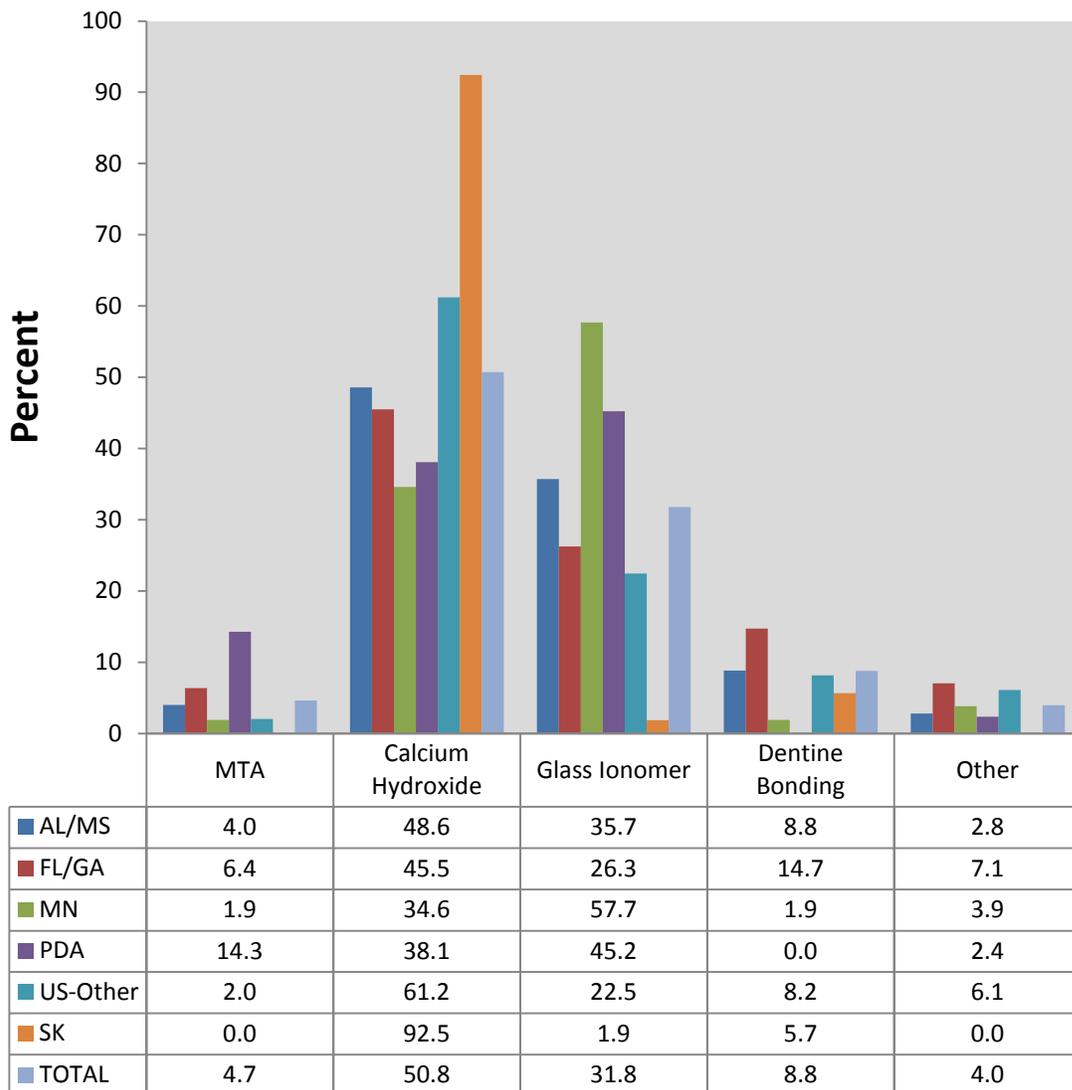
- Overall, about the same percent 37-38% of practitioners either “continue and remove all the decay” or “stop removing decay near pulp horn and remove elsewhere,” fewer (24%) “temporize and refer or treat for endodontics.”
- This pattern varied considerably across region.

Pulp Capping

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

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

Question 8: Pulp Capping Materials



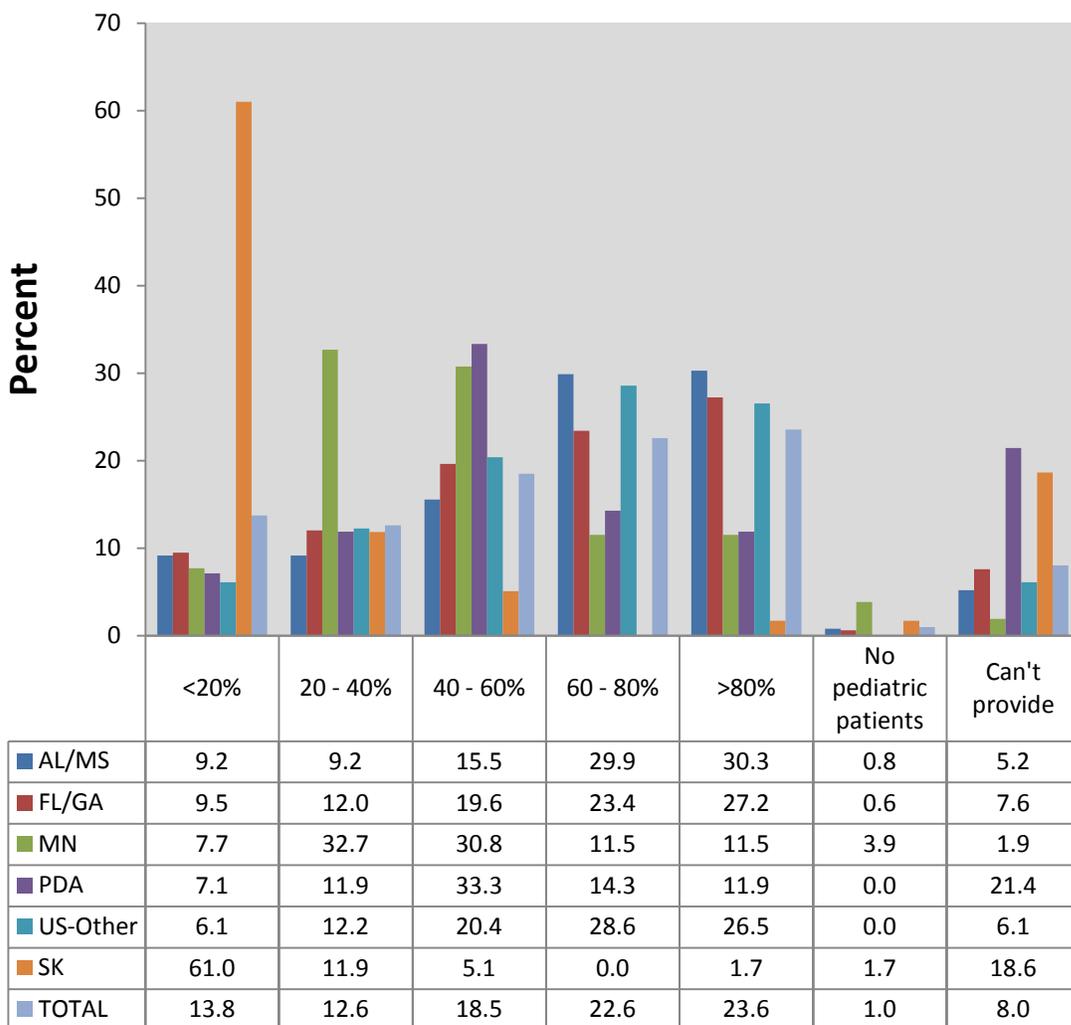
- Calcium hydroxide and glass ionomer were the two most common pulp capping materials used, at about 51% and 32%, respectively. There was considerable variation across regions, e.g., SK, at 92%, used CaOH almost exclusively, and in MN, a slight majority, about 58%, used glass ionomer.

Third Molar Extraction

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

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

Question 9: Third Year Molar Extraction

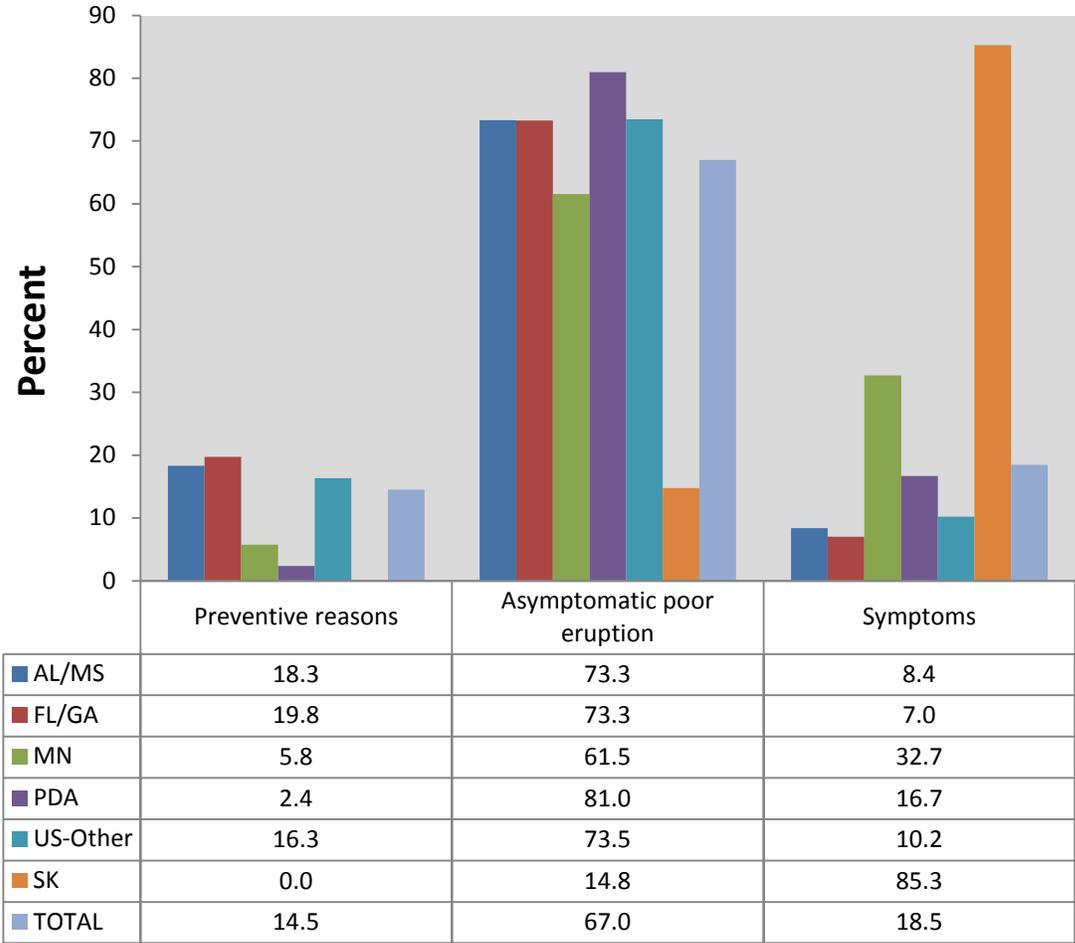


- Between 12-14% of practitioners referred <20% and 20-40% of their patients for third molar extraction by age of 20; slightly increasing proportions, from about 19% to 24% referred each increasing incremental proportion of their patients (40-60%, 60-80%, and >80%).
- This pattern varied considerably by region with SK referring fewest (nearly 63% referred less than 40% of their patients), MN and PDA intermediate, and AL/MS, FL/GA, US-other referring more frequently, specifically, over 50% of practitioners referred over 60% of their patients.

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

- ₁ I recommend removal of most third molars for preventive reasons.
- ₂ 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.
- ₃ 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



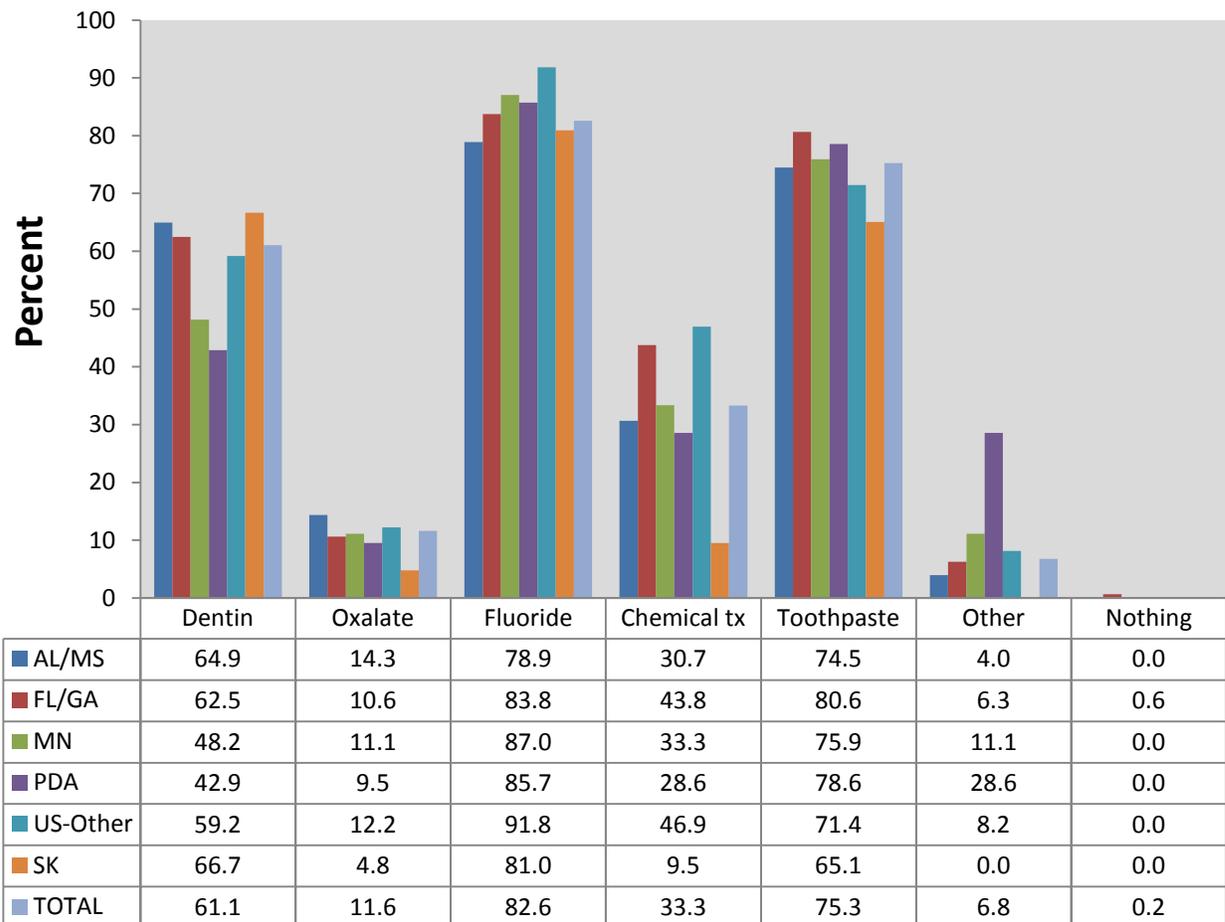
- The philosophy of majority of practitioners, 67%, was to recommend removal of third molars if asymptomatic but have a poor eruption path or not sufficient space for eruption. This was true for all regions except SK for which 85% recommended removal of third molars **only if** symptomatic.

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

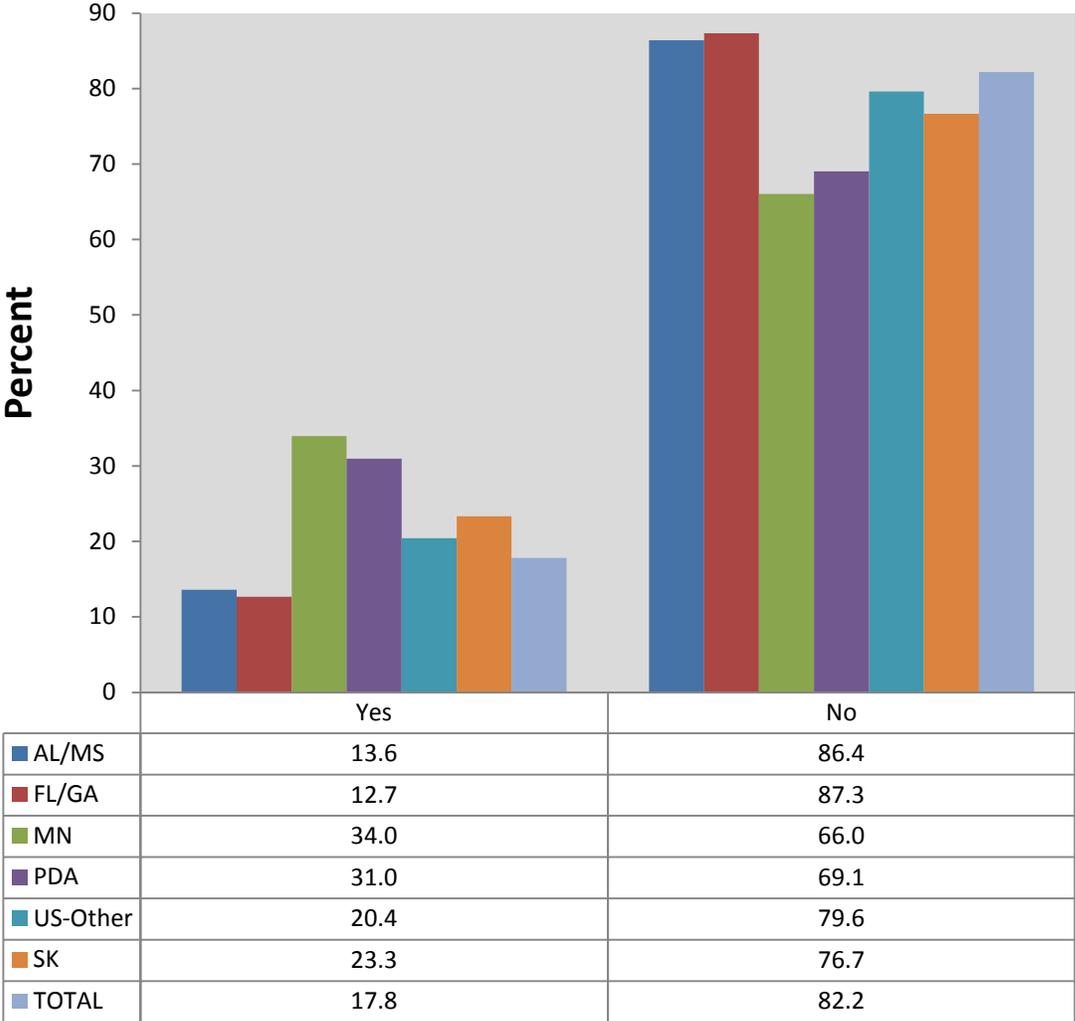


- The most common hypersensitivity treatment recommended for patients was use of fluoride at about 83%, followed by toothpaste/rinse at 75% and then use of dentin bonding agents at 61%.
- This pattern was consistent across regions.

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

- ₁ Yes
- ₂ No

Question 12: In-office Tests for Caries Risk Assessment



- Overall, about 18% respondents used an in-office test to assess caries risk, higher in MN (34%) and PDA (31%).

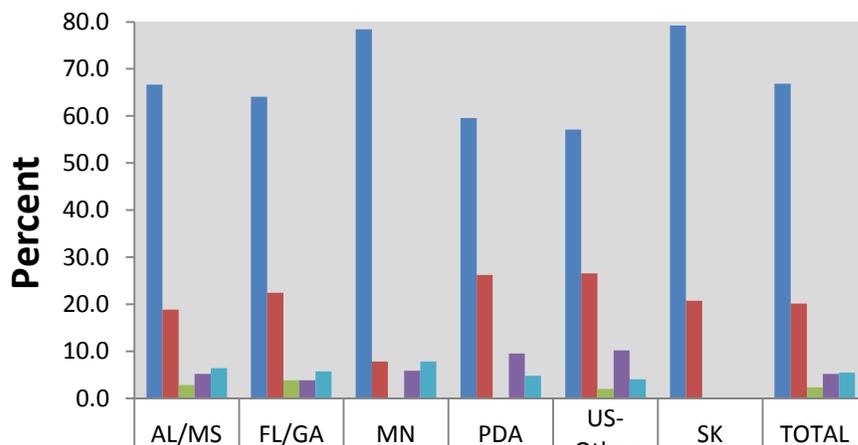
Endodontic Treatment and Restoration Outcome

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**:

- ₁ Initiate endodontic treatment leading to placement of a post and core followed by a full crown.
- ₂ Extirpate the pulp, temporize and **refer** for endodontic treatment and later you would place a post and core followed by a full crown.
- ₃ Extract the tooth and place an immediate implant fixture that you would later restore with an implant crown.
- ₄ 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.
- ₅ 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	66.7	64.1	78.4	59.5	57.1	79.3	66.8
Extirpate - refer for endo. tx with crown	18.9	22.4	7.8	26.2	26.5	20.8	20.2
Extract - implant - crown	2.8	3.9	0.0	0.0	2.0	0.0	2.3
Extirpate - refer to surgeon	5.2	3.9	5.9	9.5	10.2	0.0	5.2
Extract - refer to surgeon - crown	6.4	5.8	7.8	4.8	4.1	0.0	5.5

- A majority of practitioners, about 67%, would recommend endodontic treatment leading to placement of a post and core followed by a full crown.
- 20% of the practitioners would recommend extirpating the pulp, temporize and refer endodontic treatment and later you would place a post and core followed by a full crown.
- Each of the other procedures was recommended by fewer than 6% of respondents.

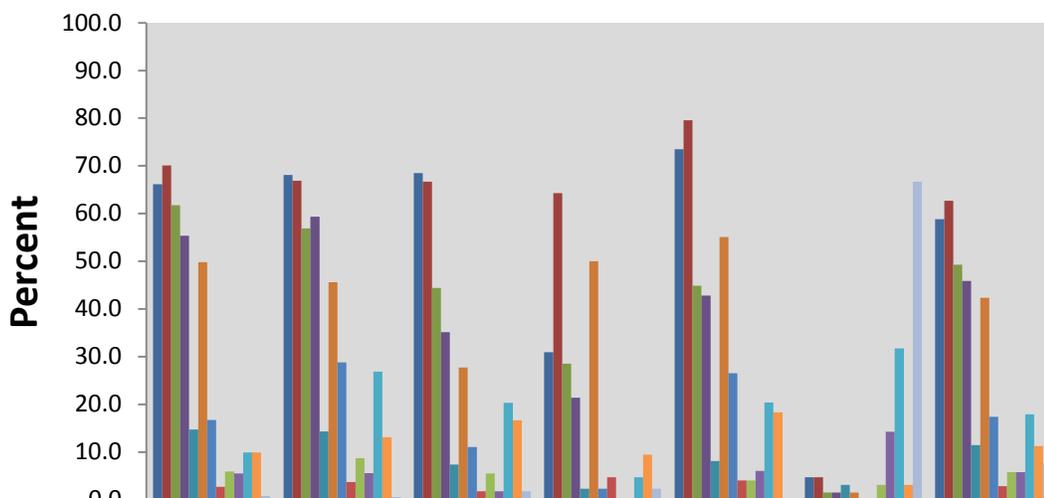
Where do you get information?

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



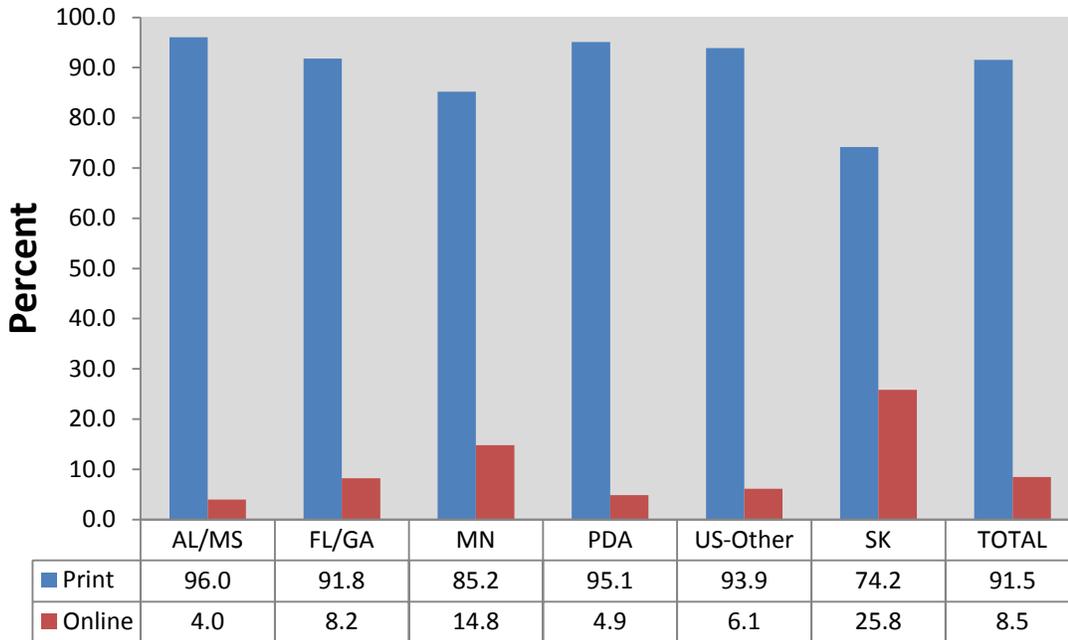
	AL/MS	FL/MS	MN	PDA	US-Other	SK	TOTAL
Am Dental Assoc (ADA)	66.1	68.1	68.5	31.0	73.5	4.8	58.8
J Am Dent Assoc (JADA)	70.1	66.9	66.7	64.3	79.6	4.8	62.7
Compendium	61.8	56.9	44.4	28.6	44.9	1.6	49.3
Dentistry Today	55.4	59.4	35.2	21.4	42.9	1.6	45.9
J Esthetic & Rest Dent	14.7	14.4	7.4	2.4	8.2	3.2	11.5
General Dentistry	49.8	45.6	27.8	50.0	55.1	1.6	42.3
Inside Dentistry	16.7	28.8	11.1	2.4	26.5	0.0	17.5
Operative Dentistry	2.8	3.8	1.9	4.8	4.1	0.0	2.9
J Prosthetic Dentistry	6.0	8.8	5.6	0.0	4.1	3.2	5.8
Quintessence	5.6	5.6	1.9	0.0	6.1	14.3	5.8
Other state/local pubs	10.0	26.9	20.4	4.8	20.4	31.8	17.9
Other US or Canadian pubs	10.0	13.1	16.7	9.5	18.4	3.2	11.3
Other European pubs	0.8	0.6	1.9	2.4	0.0	66.7	7.6

- JADA was the most popular choice at about 63%, followed by American Dental Association News at about 59%, Compendium at 49%, all less common in SK where the category “other European” was read by approximately 67% of respondents.

15. Where do you most frequently read journals?

- ₁ Print
- ₂ Online

Question 15: Print vs. Online Journals

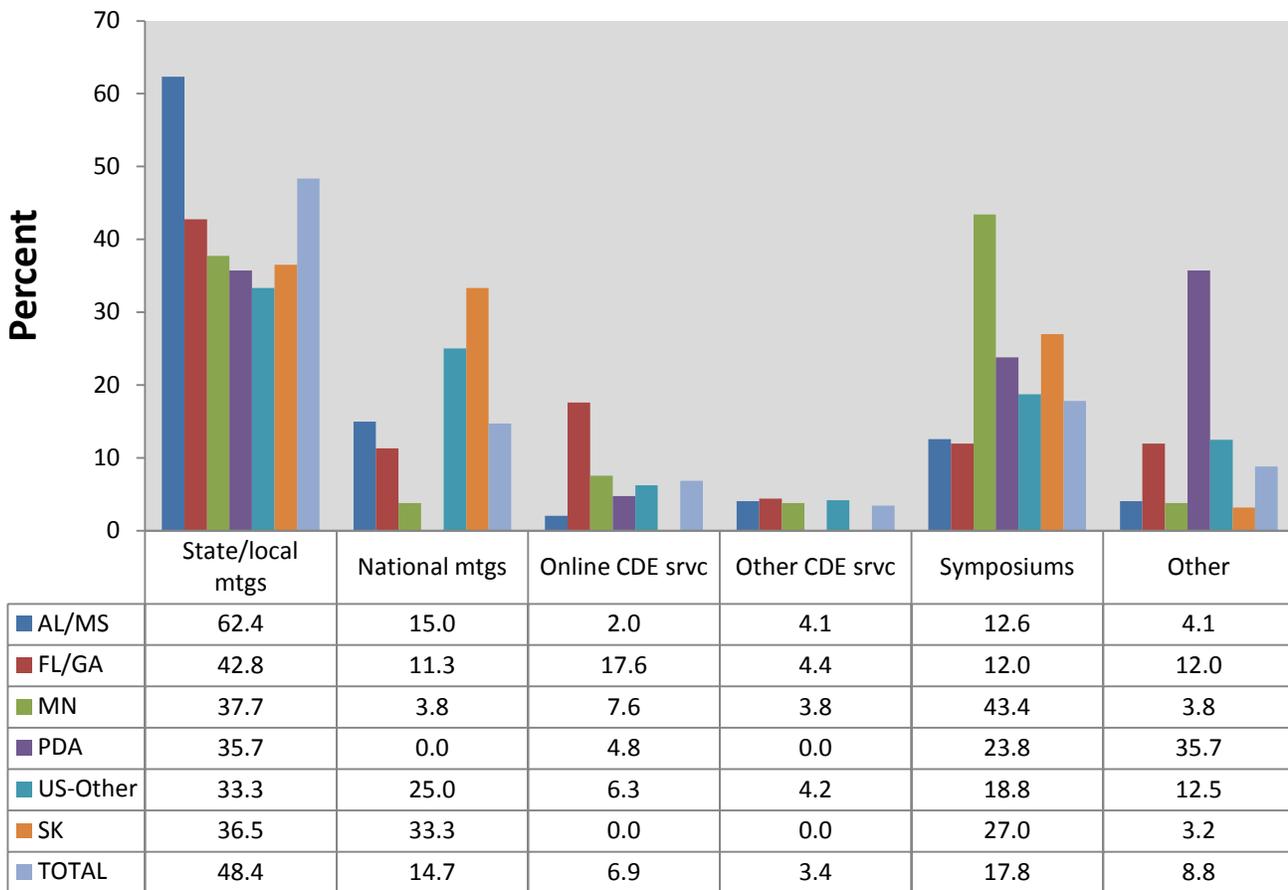


- Less than 9% of respondents frequently read journals online, notably higher at about 26% in SK.

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

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

Question 16: CDE Credits

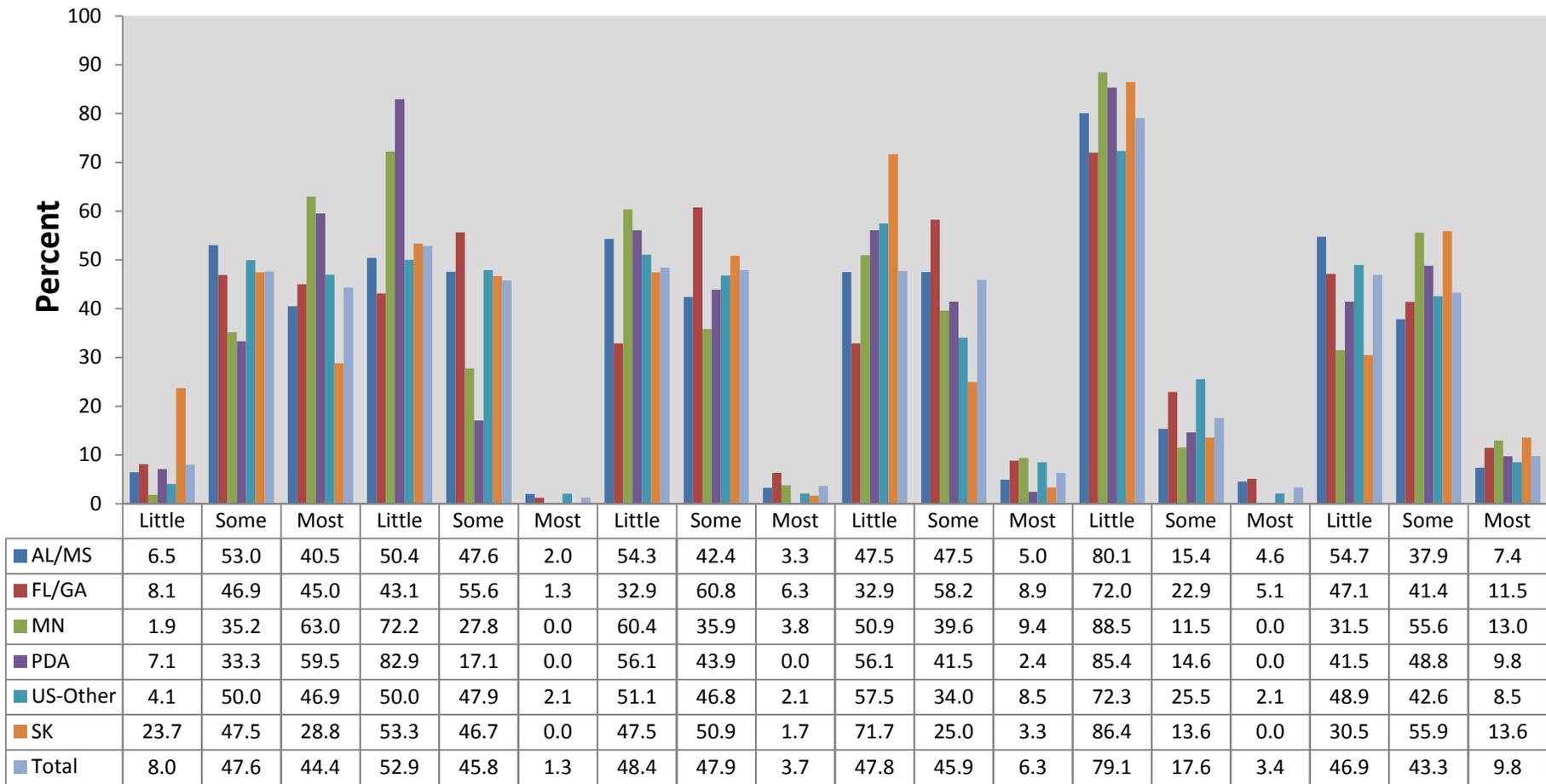


- Overall, 48% of respondents obtained CDE at state or local dental meetings, followed by symposiums at about 18% and national meetings, approximately 15%.
- Almost 7% obtained CDE through online services.

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

	Little Influence	Some Influence	Most Influence
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

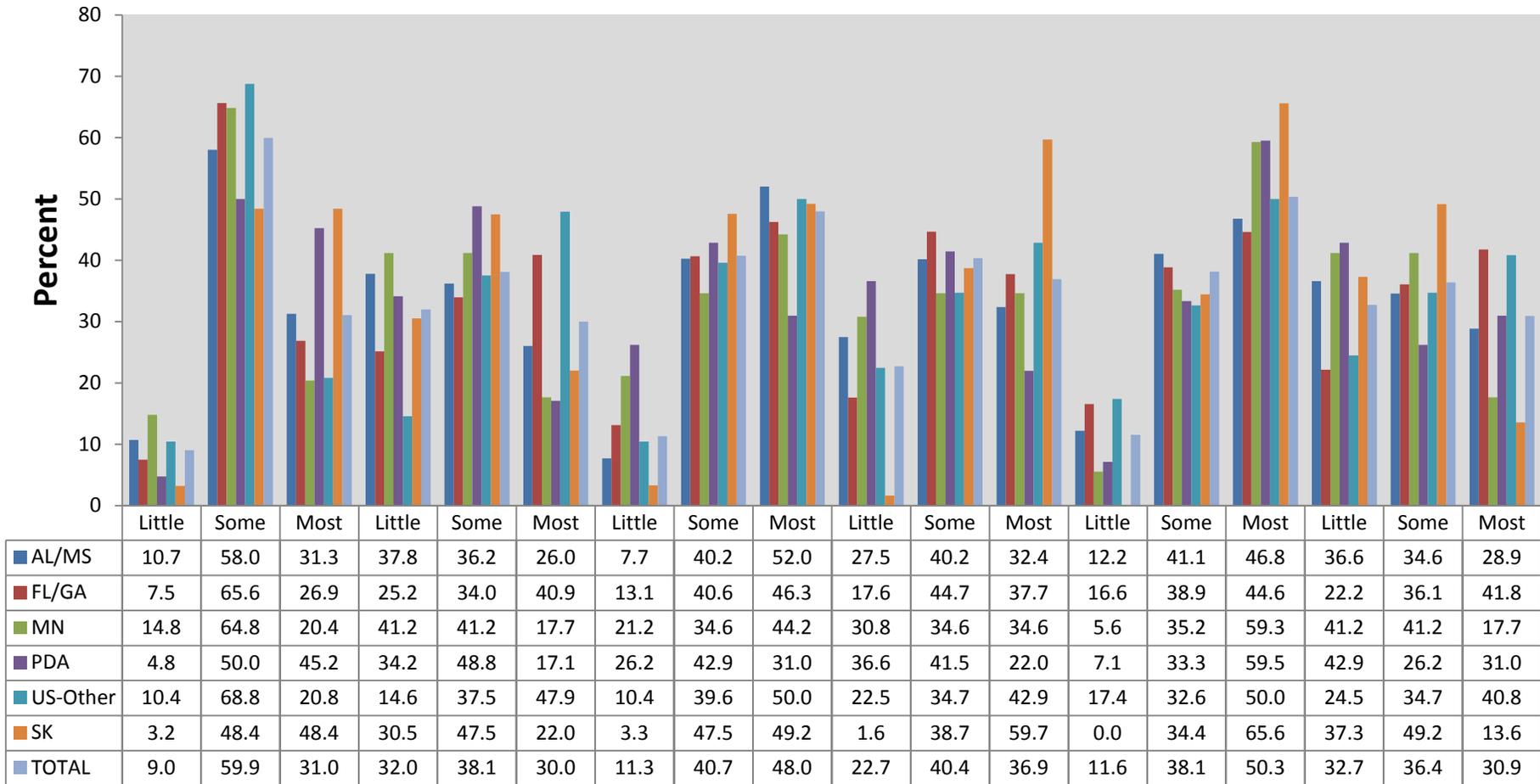
Online CDEs

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 44%.
- For least influence, 79% 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 dentistrv)	Symposiums (private institute)
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- 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 48-50%, followed by national dental meetings at about 37%, and printed peer-reviewed journals in Table Q17A, also at 44%.
- As stated earlier, for least influence, 79% of respondents indicated the category “online chat rooms or other interactive online services” was of little influence, these were followed by non-peer reviewed journals at almost 53% and other online sources of information, CDE, online journals and web searches, each less than 50%.

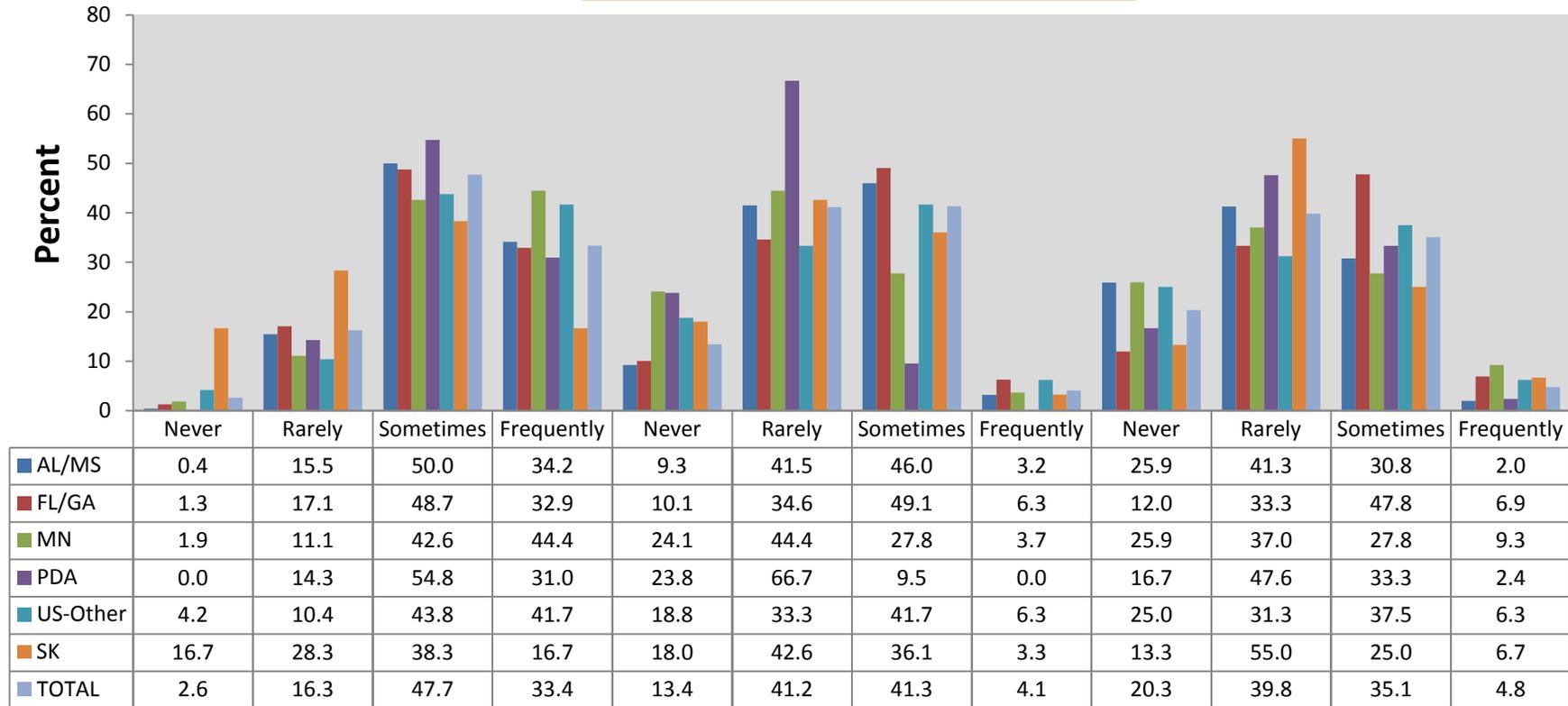
18. How frequently do you make use of the following resources for practice guidance?

“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



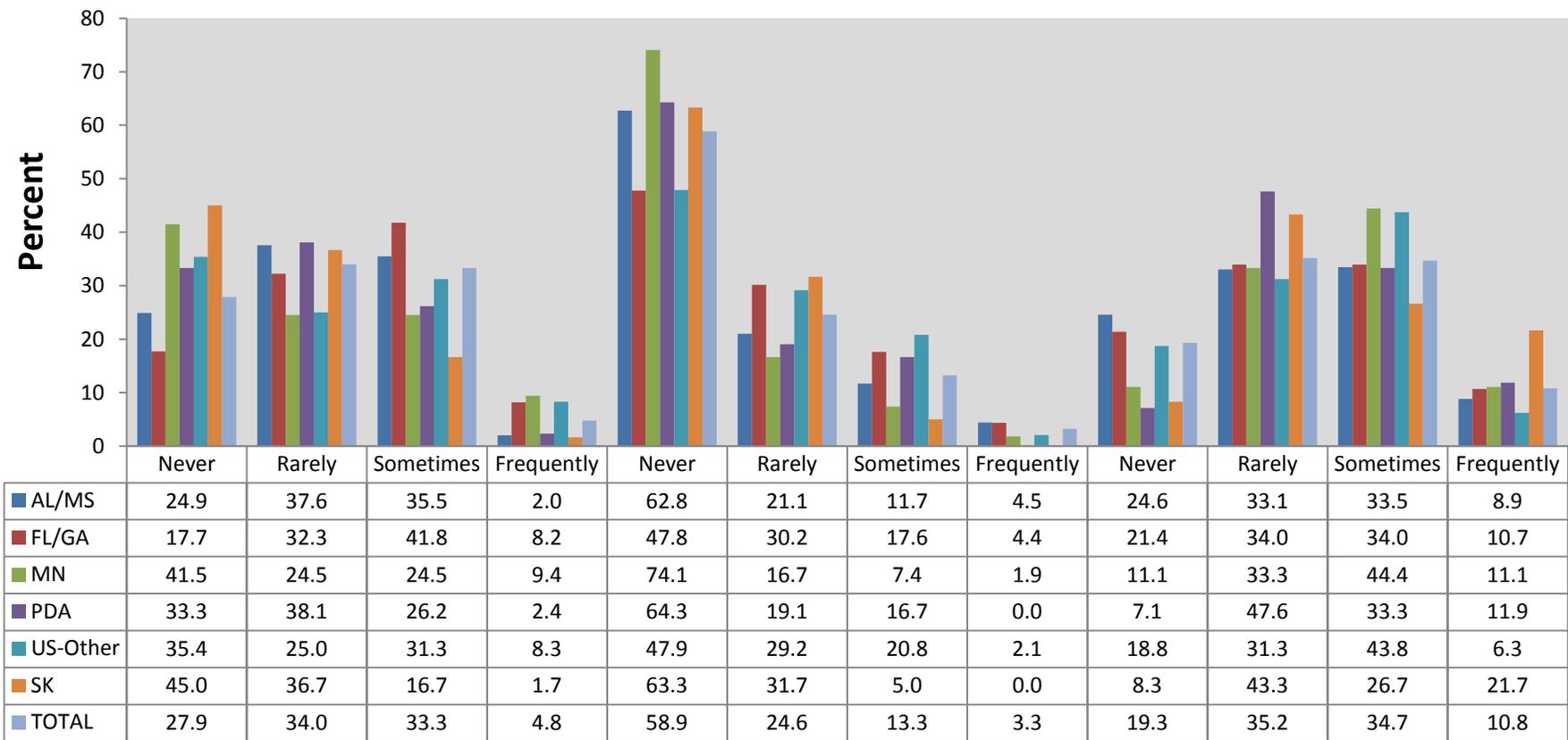
Printed peer-reviewed journals

Printed Non-peer-reviewed journals

Online journals or newsletters

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

Question 18 (A-2): Resources



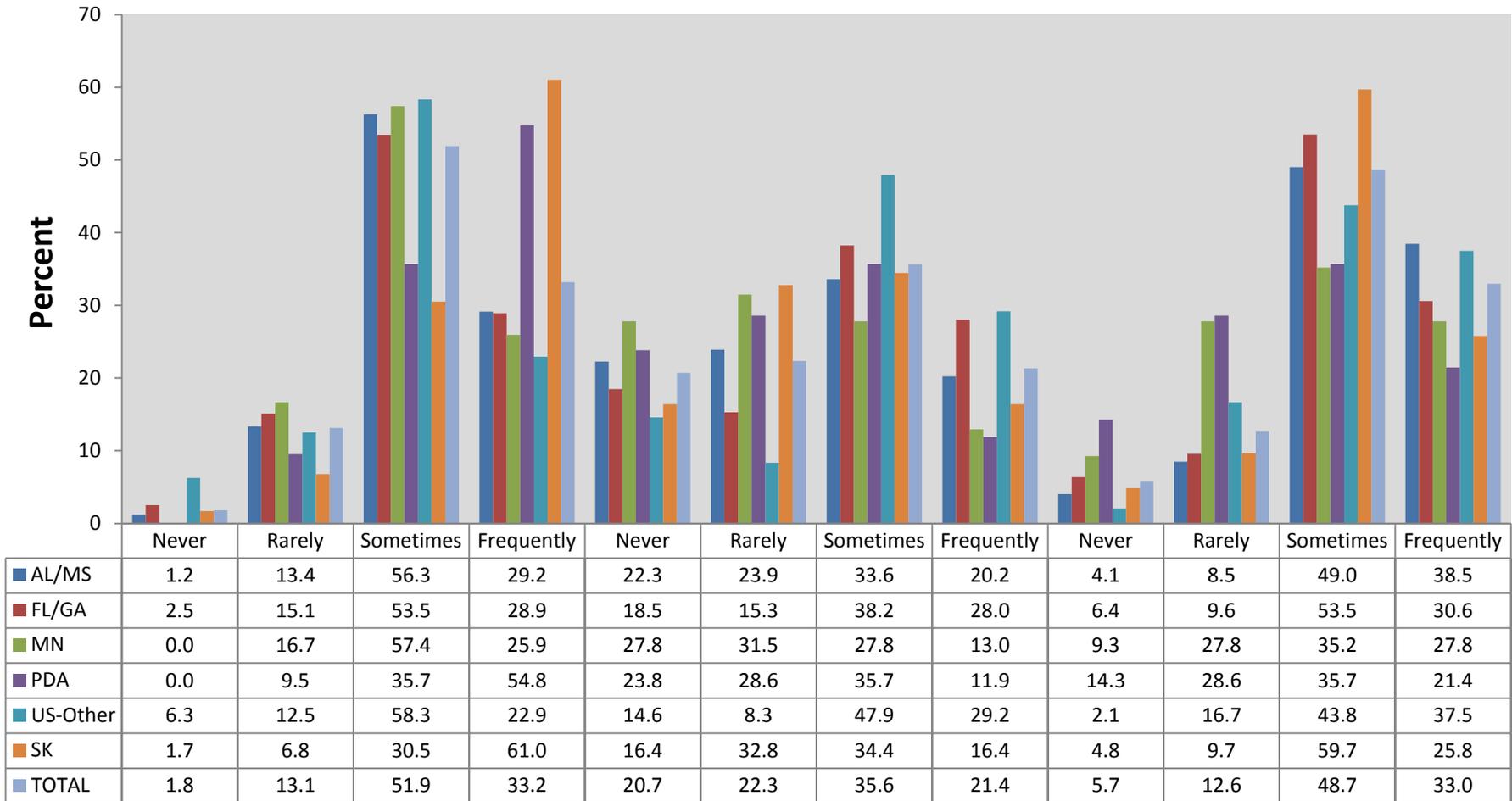
Online CDEs

Online chat rooms

Web searches (e.g. Google, PubMed)

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

Question 18 (B-1): Resources



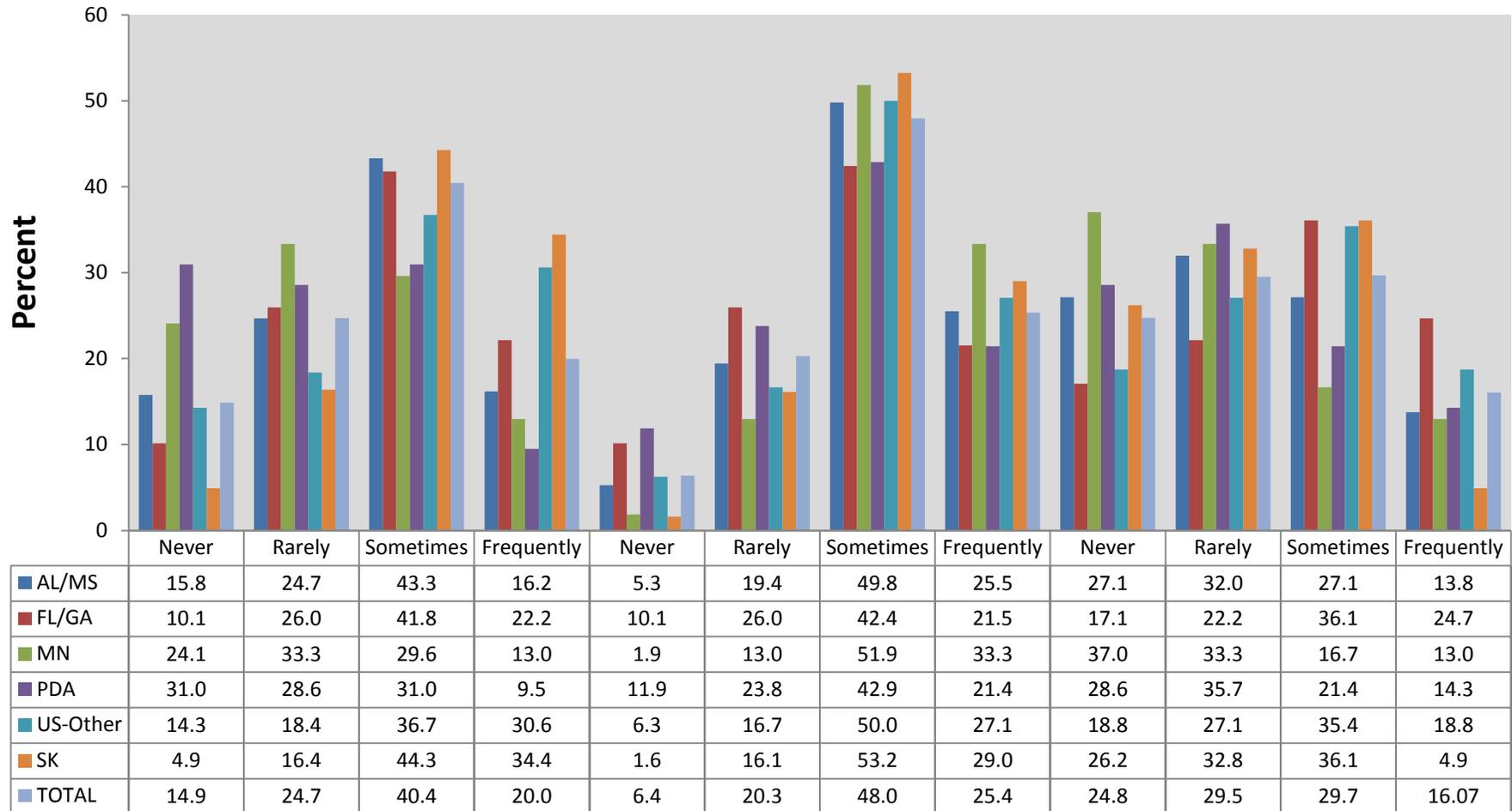
Informal conversation

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)

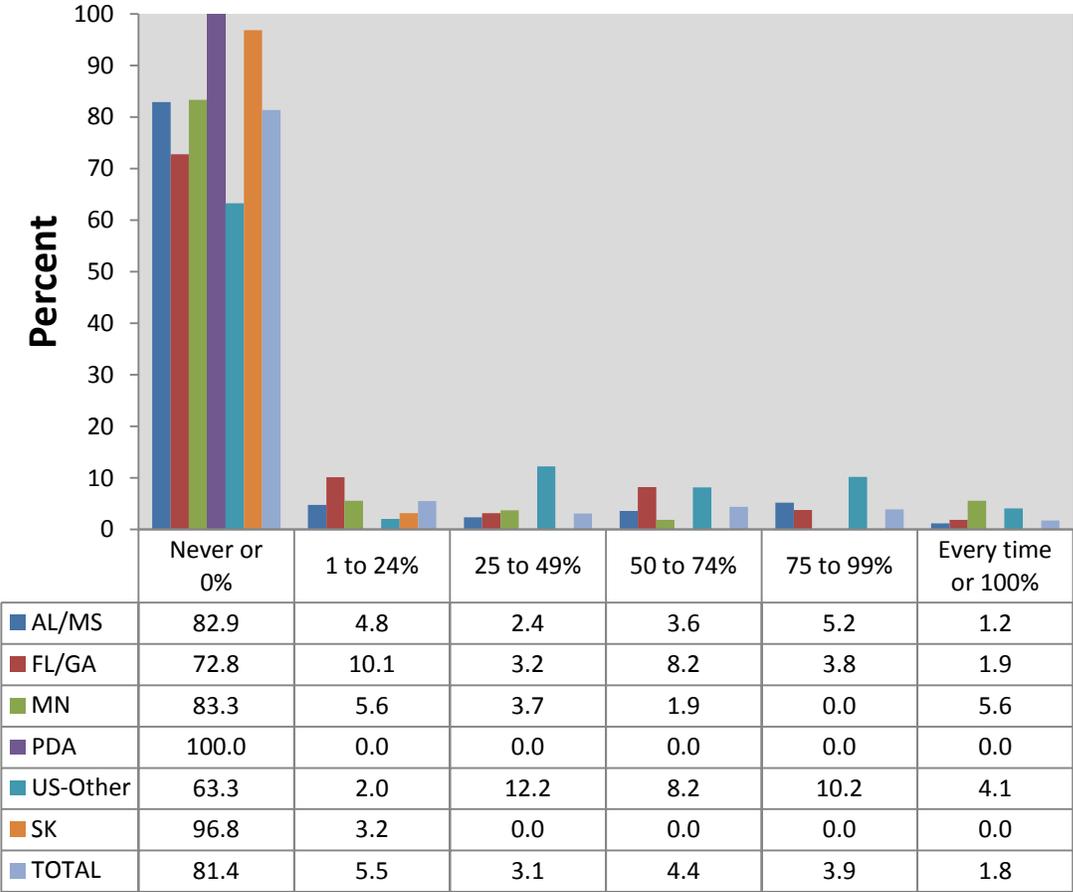
Symposiums (private institute)

- Resources used frequently by most respondents were state or local meetings, informal conversation with colleague and printed peer-reviewed journal each at 33%.
- Resources used least frequently based on respondents selecting the “never” category were online sources - chat rooms (almost 59%), CDEs (almost 28%), online journals (20%), web searches (19%), followed by printed non-peer-reviewed journals (13%).

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%

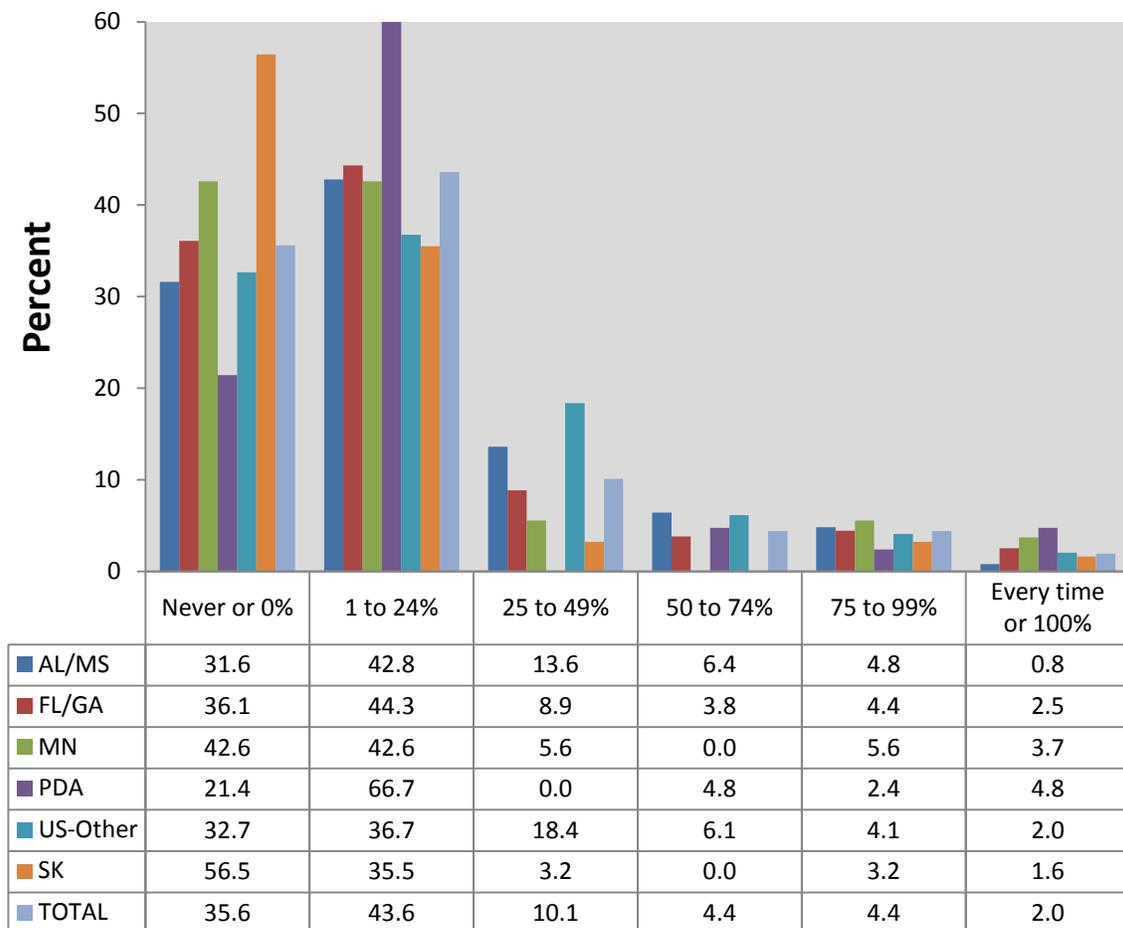
Question 19: Laser Fluorescence



- 81% 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%

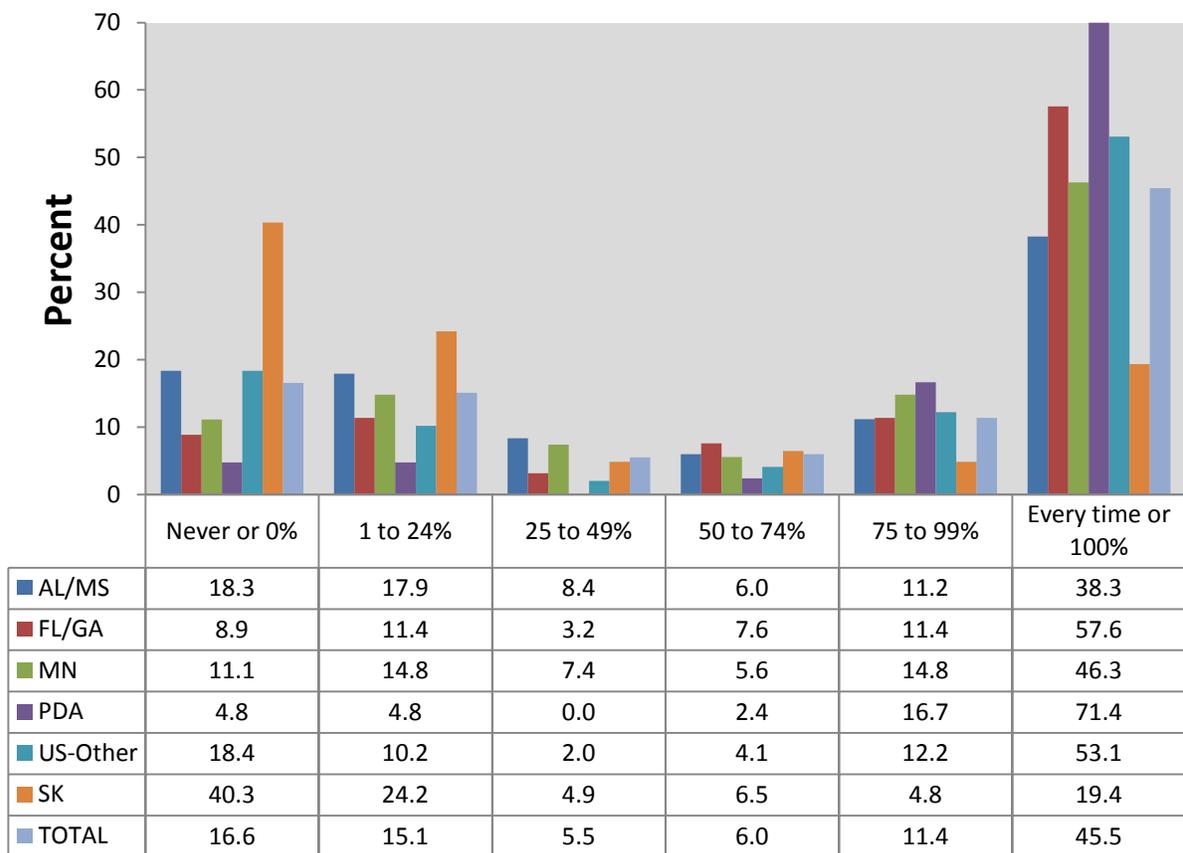
Question 20: Fiber Optic Transillumination



- Approximately 36% of respondents never used fiber optic transillumination, and about 44% 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 about 46% of respondents, with fewer in SK, 19%, using it on all patients. Overall, 15 to about 17% of respondents either never used magnification or used it on less than 25% of their patients; a high proportion of SK respondents (40%) never use 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.

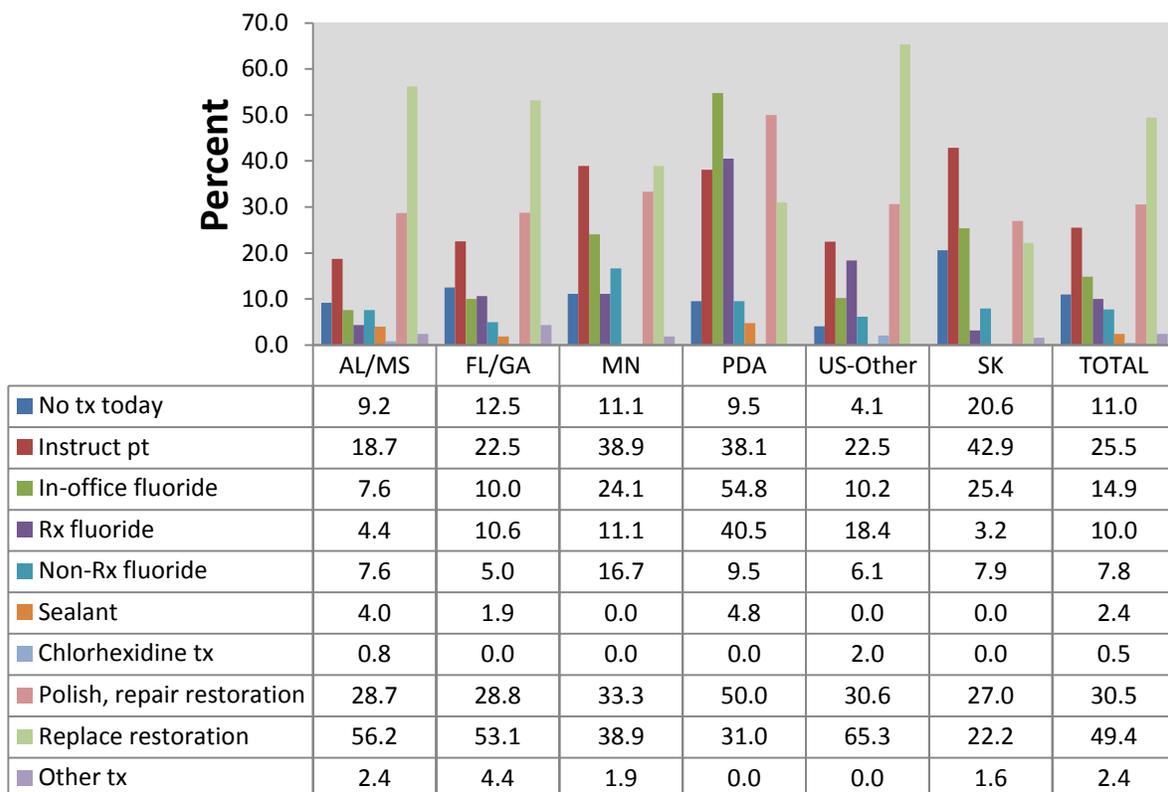
22. The patient has 5 existing restorations and is not missing any teeth. Indicate what treatment you would provide to the restoration shown by the arrow in the first picture on the left.



- 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

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Question 22: Treatment Type



- 49% would treat by replacing entire restoration, approximately 26% would instruct patient on plaque removal, and about 31% would polish, resurface or repair, but not replace restoration.

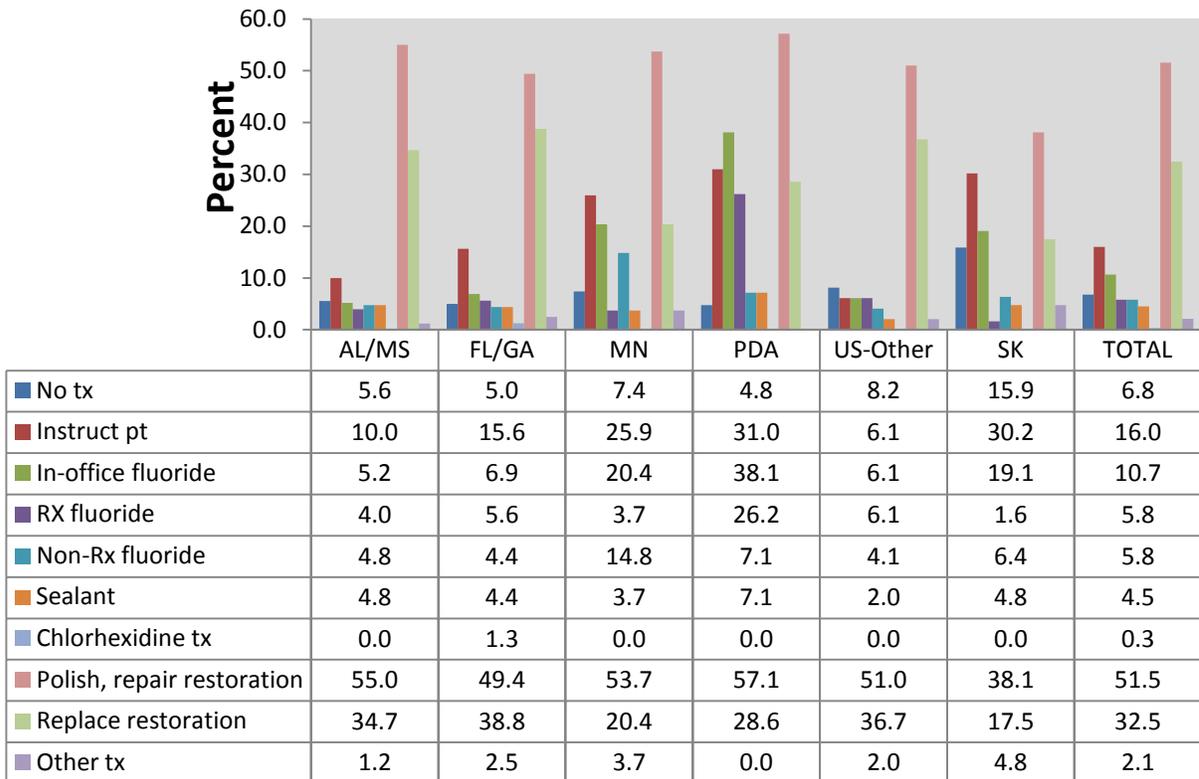
23. Now imagine the patient has no other dental restorations than the one shown, no dental caries, and is not missing any teeth. Indicate what treatment you would provide to the restoration in the second picture on the left.



- 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

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Question 23: Treatment Type



- Overall, approximately 52% would polish, re-surface, or repair, but not replace, restoration; nearly 33% would replace entire restoration.

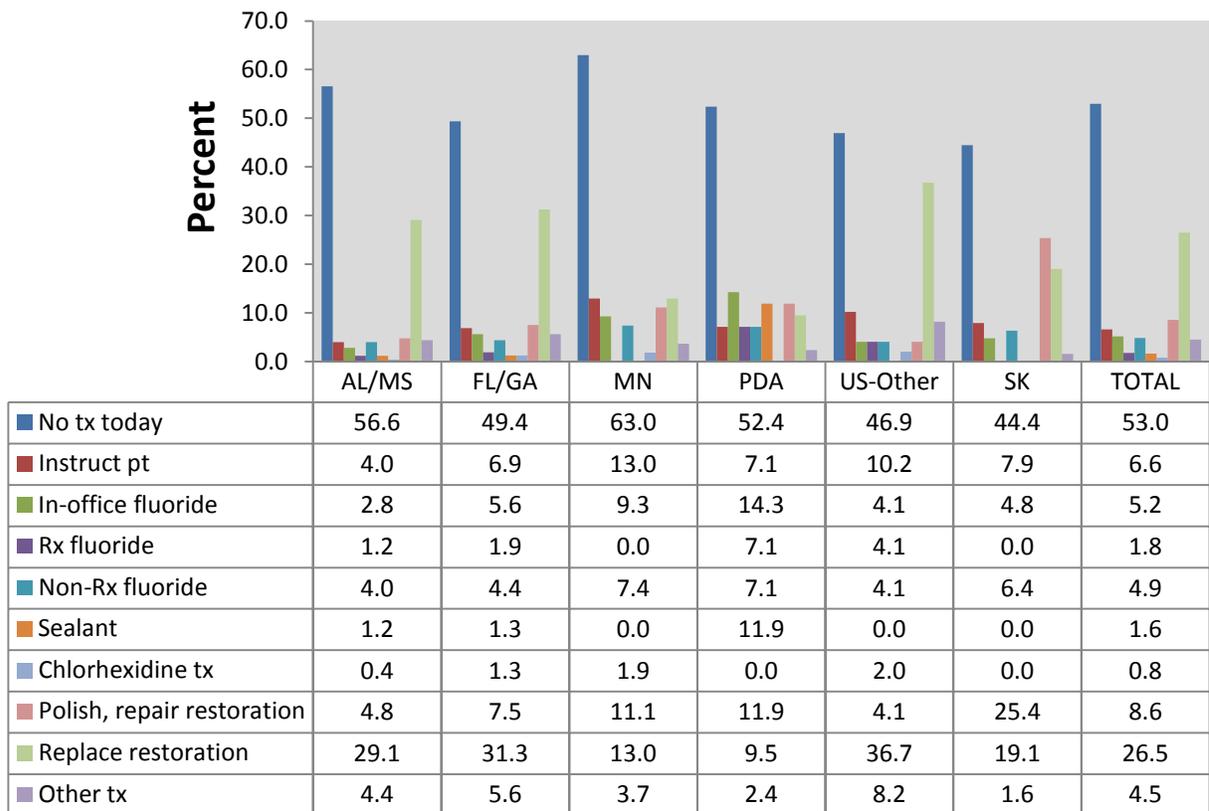
24. The same patient has no other dental restorations than the one shown, no dental caries, and is not missing any teeth. Indicate what treatment you would provide to the restoration in the third picture on the left.



Courtesy of Dr. Ivar Mjör

- No treatment today, follow the patient regularly
- Instruct patient in plaque removal for the affected area
- In-office fluoride
- Prescription for fluoride
- Recommend non-prescription fluoride
- Use sealant or unfilled resin over tooth
- Chlorhexidine treatment
- Polish, re-surface, or repair restoration, but not replace
- Replace entire restoration
- Other treatment

Question 24: Treatment Type

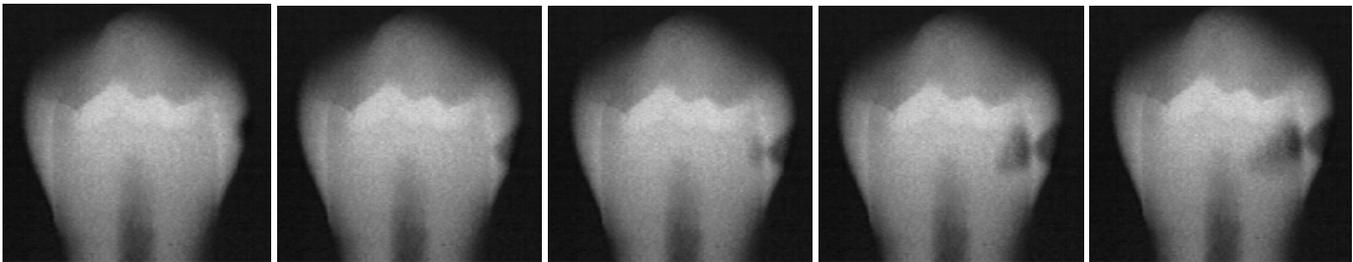


- 53% of respondents indicated that they would not treat the restoration that day but would follow patient regularly, while about 27% would replace the entire restoration.

For question 25: 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.

For question 25, please circle the one number that corresponds to the lesion depth at which you think it is best to do a permanent restoration (composite, amalgam, etc.) instead of only doing preventive therapy.

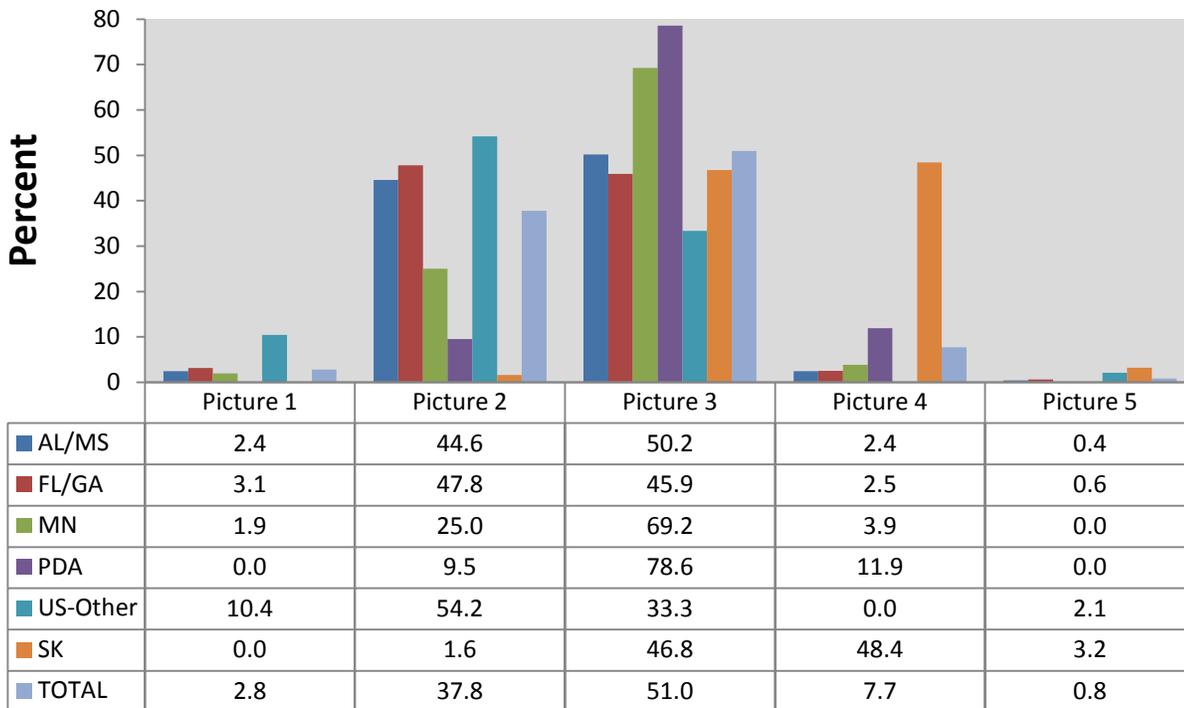
25. The patient has no dental restorations, no dental caries, and is not missing any teeth.



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1 2 3 4 5

Question 25: Timing for Restoration



- 51% of respondents selected picture 3, and nearly 38% selected picture 2.