

Dental Practice-Based Research Network
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DPBRN 15: Blood Sugar Testing in Dental Practice

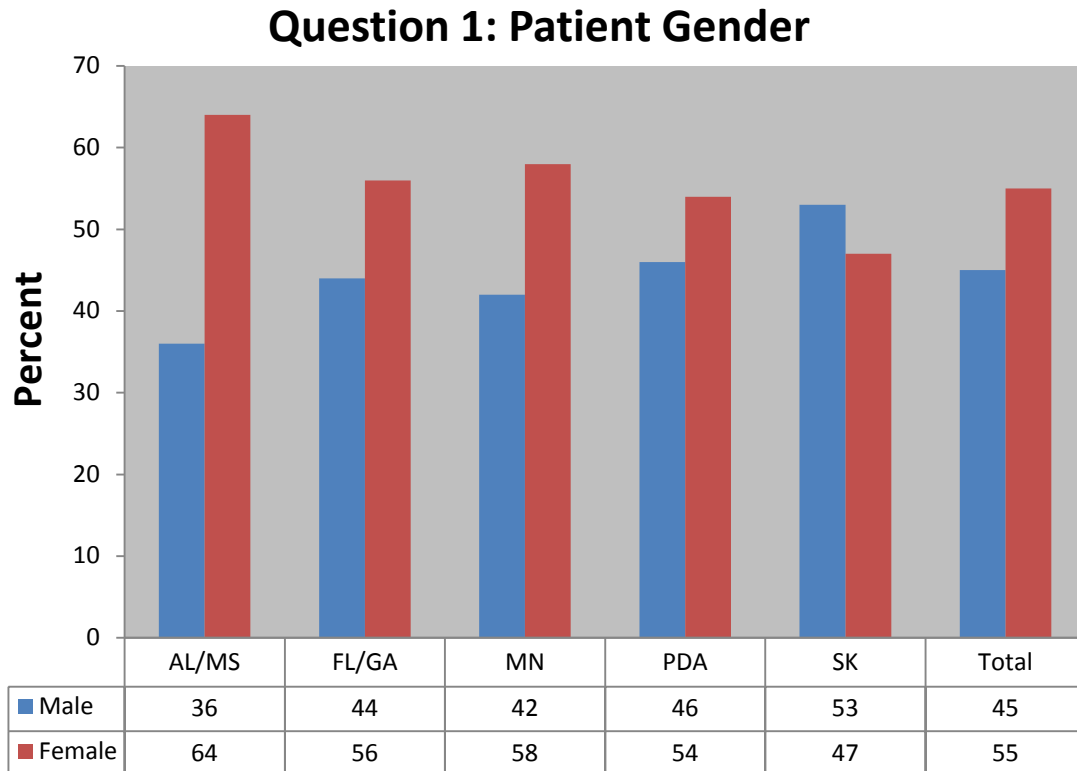
Summary of Overall Results

Date Prepared: July 11, 2011

A. Patient Screening Questionnaire

1. Patient Gender

1. Male
2. Female

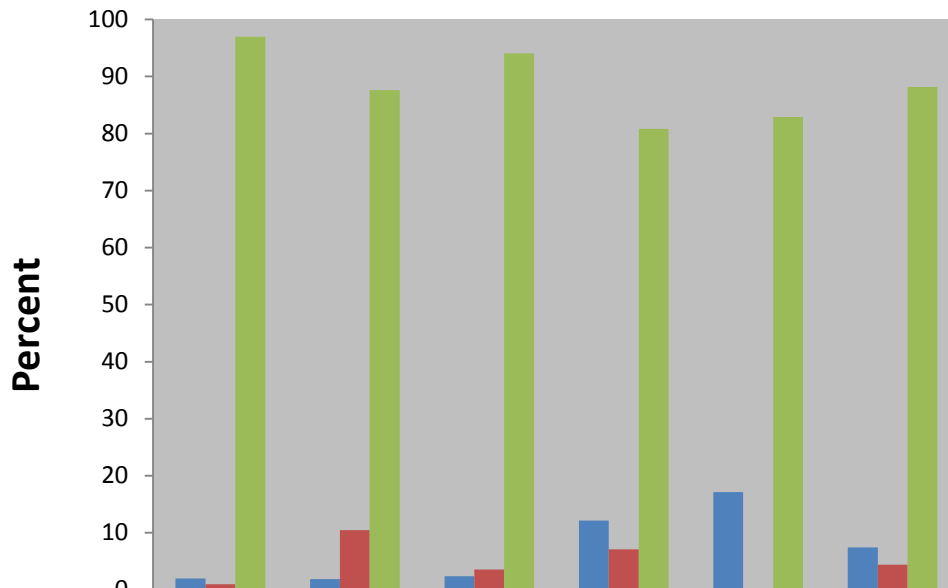


- Overall, 55% of patients were female.

3. Patient ethnicity

1. Not reported or unknown (I do not wish to provide this information)
2. Hispanic or Latino
3. Not Hispanic or Latino

Question 3: Patient Ethnicity



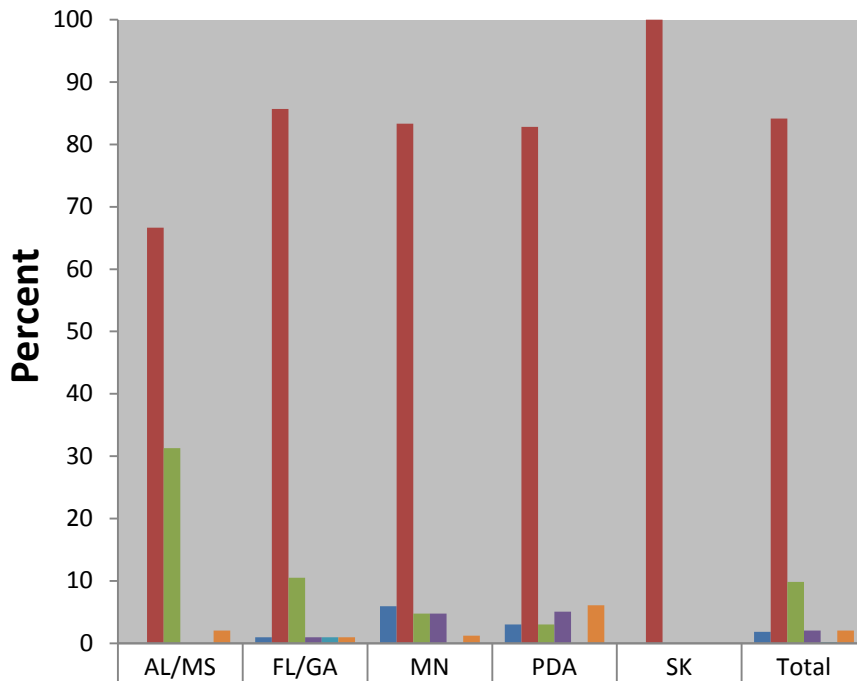
	AL/MS	FL/GA	MN	PDA	SK	Total
■ Not reported	2	2	2	12	17	7
■ Hispanic/Latino	1	10	4	7	0	4
■ Not Hispanic/Latino	97	88	94	81	83	88

- 4% of patients whose ethnicity was available were of Hispanic/Latino ethnicity, notably higher in FL/GA at about 11%.

4. Patient race

1. Not reported or unknown (I do not wish to provide this information)
2. White
3. Black or African-American
4. American Indian or Alaska Native
5. Asian
6. Native Hawaiian or Other Pacific Islander
7. Other

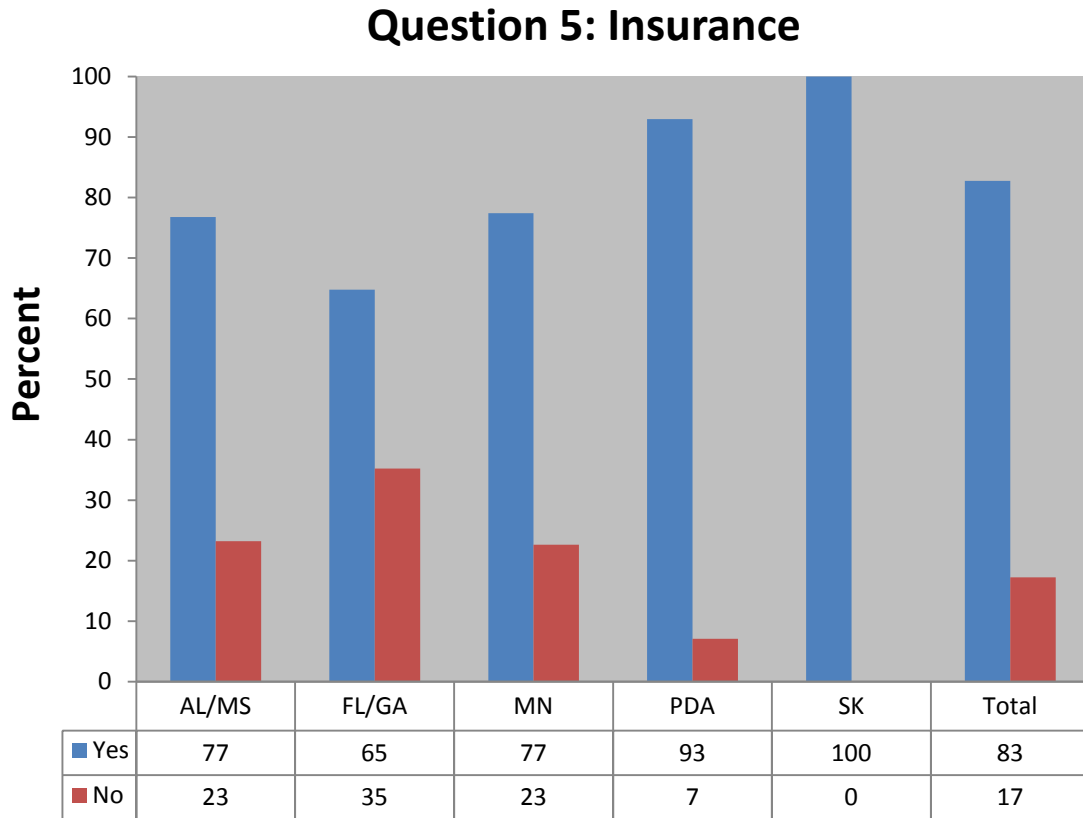
Question 4: Patient Race



	AL/MS	FL/GA	MN	PDA	SK	Total
■ Not Reported	0	1	6	3	0	2
■ White	67	86	83	83	100	84
■ African-American	31	10	5	3	0	10
■ Asian	0	1	5	5	0	2
■ HA/Pac. Islander	0	1	0	0	0	0
■ Other	2	1	1	6	0	2

- 84% of patients were White, about 10% Black/African-American, with considerable differences by region: SK 100% White and AL/MS being 31% Black/African-American.

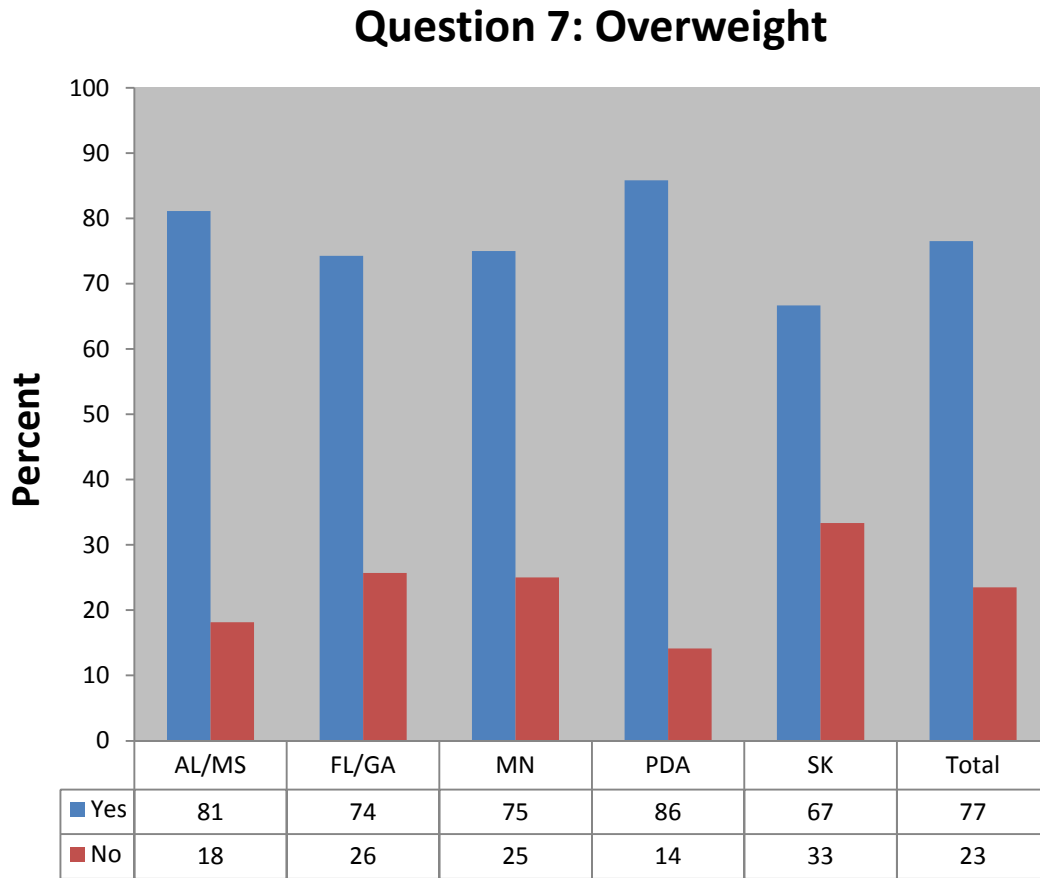
5. Does the patient have any dental insurance or third party coverage?
1. Yes
 2. No



- Overall, about 83% had some type of dental insurance, all of SK and only about 65% in FL/GA.

7. If the patient is in the overweight range, check below:

1. Overweight (refer to chart)

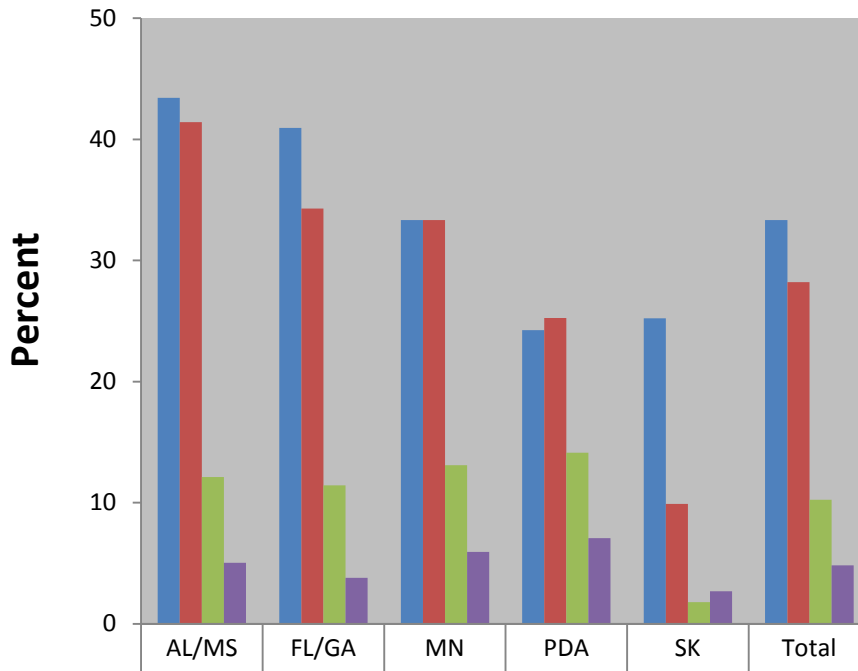


- Approximately 77% of the patients were classified as overweight, ranged from 67% (SK) to about 86% (PDA).

8. ASK: Has a doctor every told you that you have (check all that apply):

1. High blood pressure
2. High cholesterol
3. Diabetes
4. Pre-diabetes

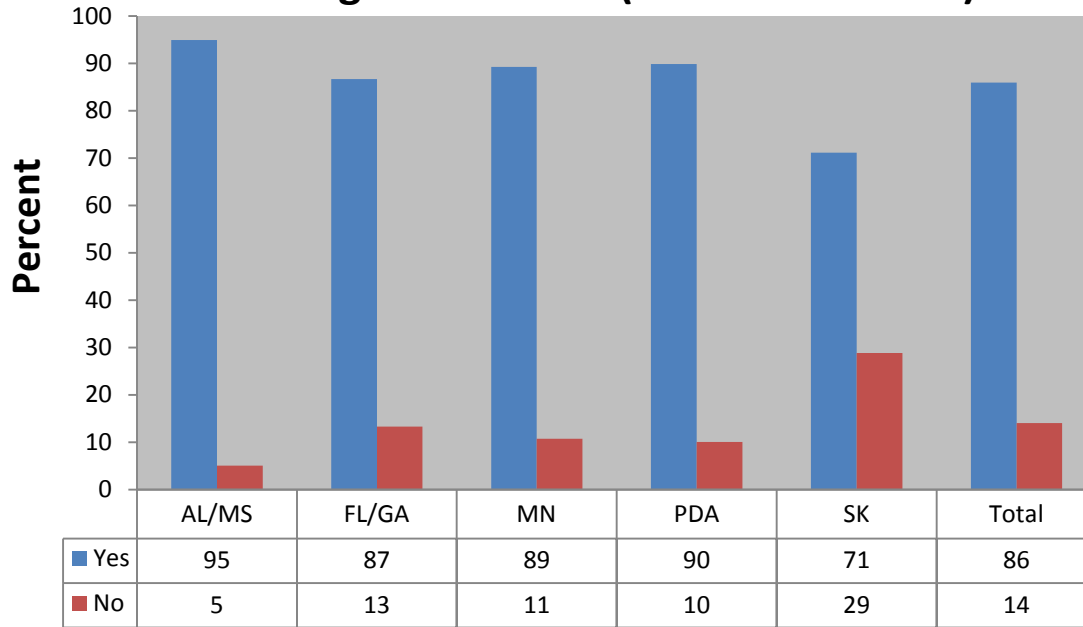
Question 8: Patient History



	AL/MS	FL/GA	MN	PDA	SK	Total
High Blood Pressure	43	41	33	24	25	33
High Cholesterol	41	34	33	25	10	28
Diabetes	12	11	13	14	2	10
Pre-Diabetes	5	4	6	7	3	5

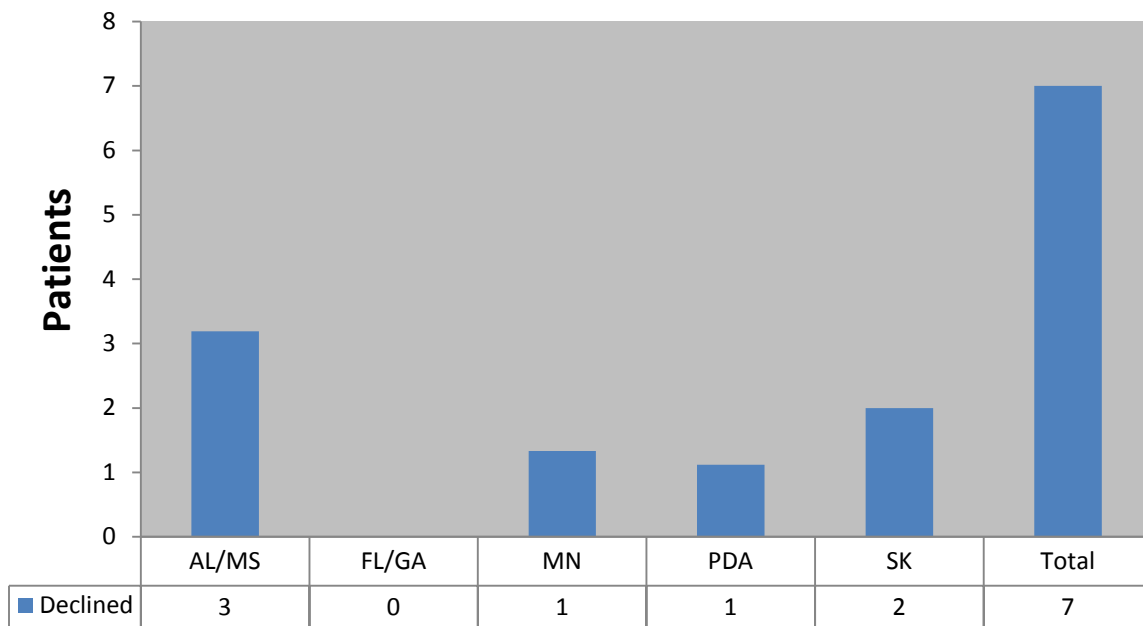
- 33% of patients reported high blood pressure, ranged from 24-25% (PDA and SK) to 43% (AL/MS).
- 28% of patients reported having high cholesterol, lowest in SK at 10% and highest in AL/MS at 41%.
- 15% of patients reported having diabetes or a pre-diabetic condition/status.

Eligible Patients (has a Risk Factor)



- Nearly 86% of patients were considered at increased high risk for diabetes, or had diabetes, and thus eligible for glucose screening.

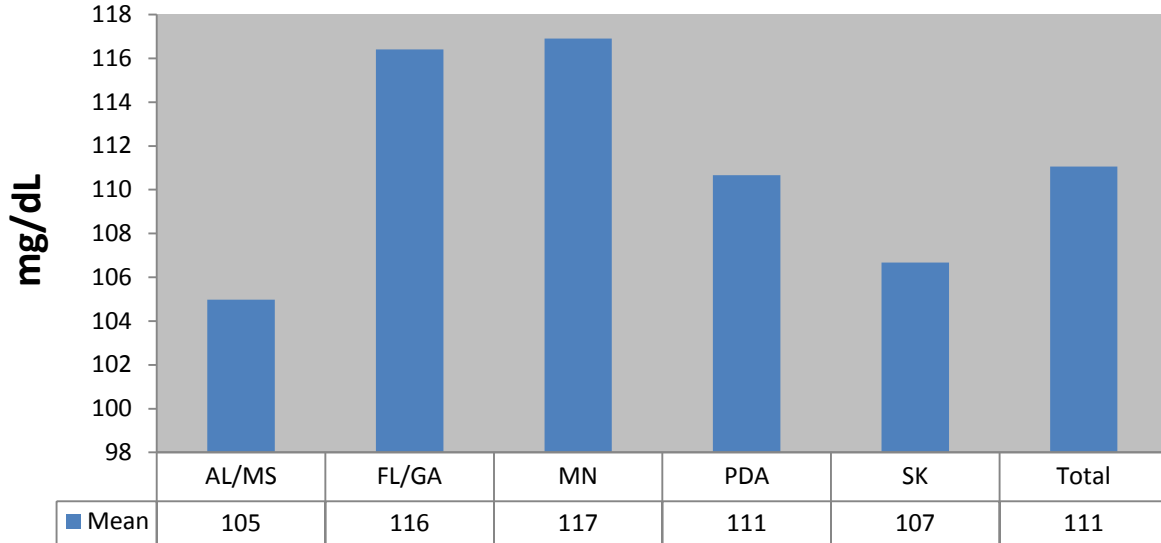
Among Eligible, Patients who Declined



- 1.6% of eligible patients declined the opportunity to participate.

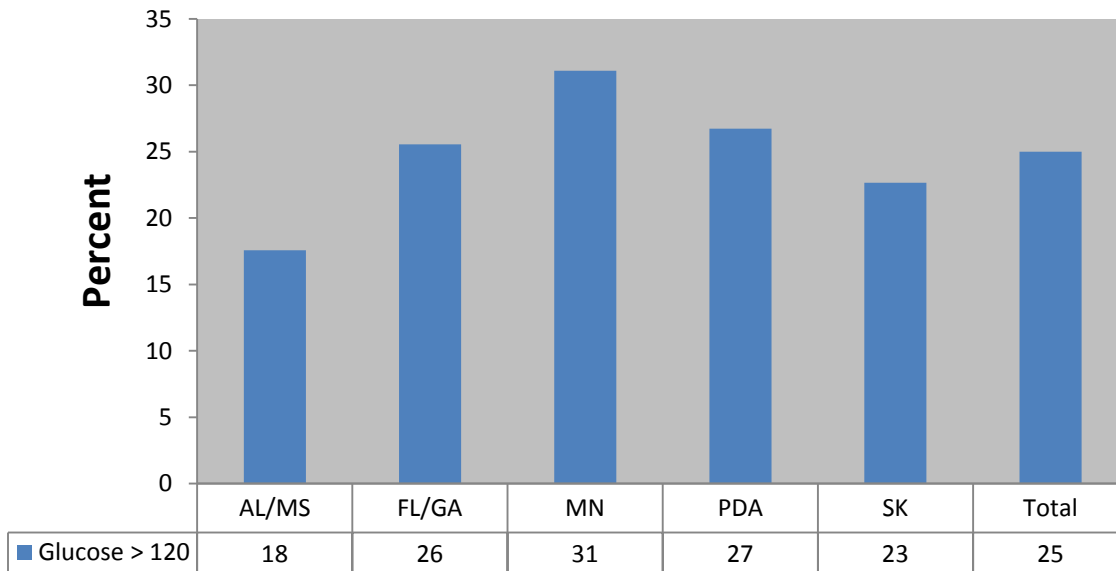
12. Test Reading: mg/ dL

Glucose Reading: Mean



- The overall average blood glucose level reading was 111 mg/dL, ranged from 50 to 465.

Glucose Reading ≥ 120

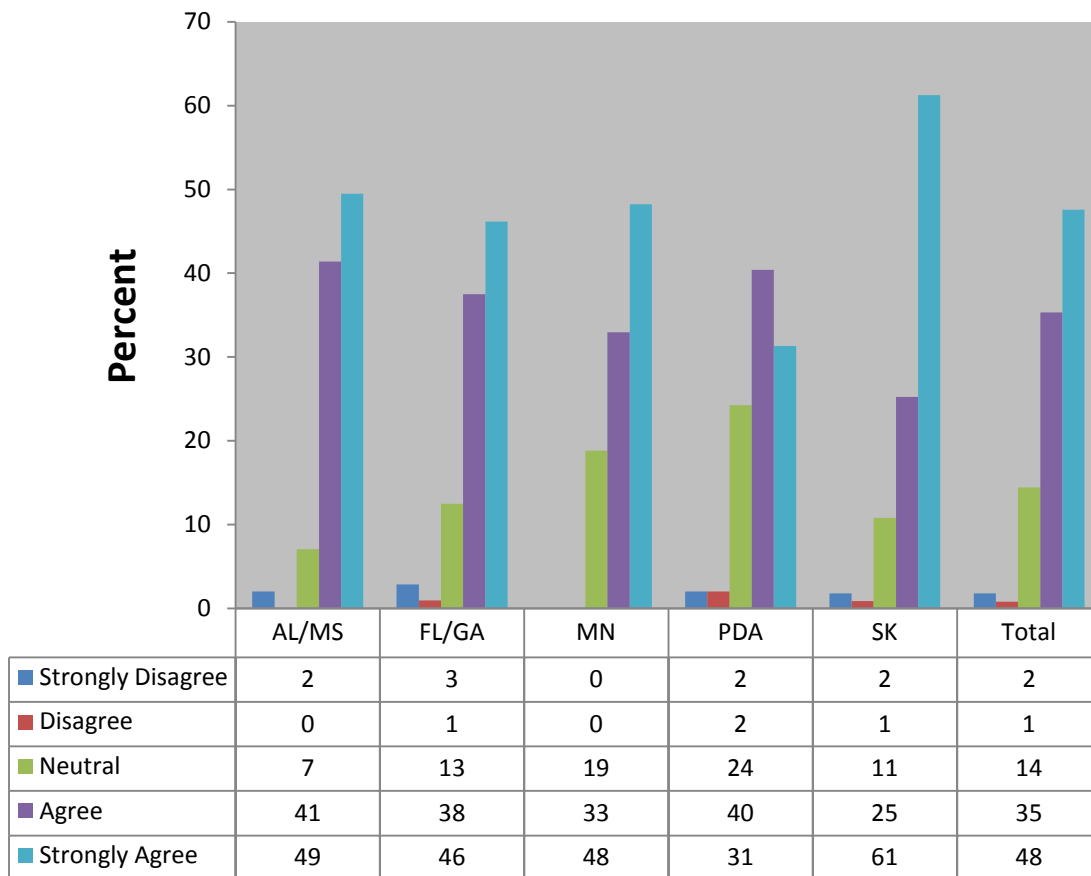


- Overall, about 25% of patients had blood glucose levels greater than or equal to 120 mg/dL.

B. Patient Survey

1. Overall, I think blood sugar testing in the Dental Office is a good idea.
 1. Strongly Disagree
 2. Disagree
 3. Neutral
 4. Agree
 5. Strongly Agree

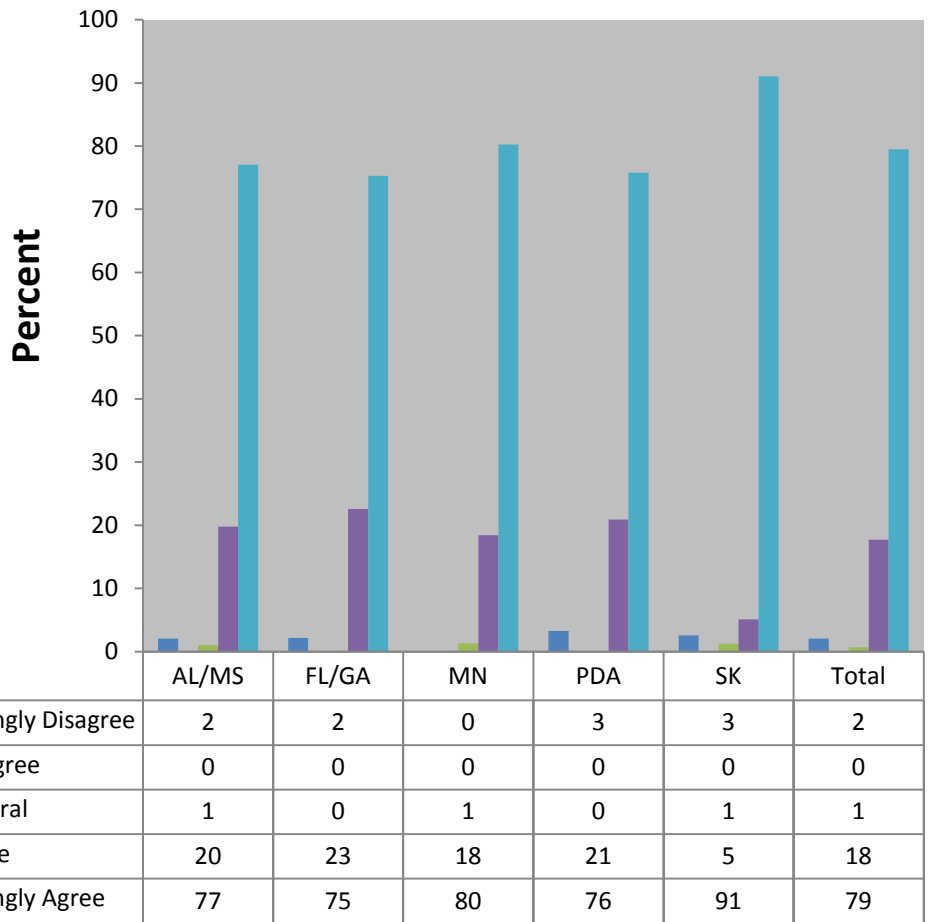
Question 1: Testing is a Good Idea



- Almost 83% of patients felt blood sugar testing in the dental office was a good idea by selecting either the “agree” or “strongly agree” categories.

2. Having my blood sugar tested today was easy.
 1. Strongly Disagree
 2. Disagree
 3. Neutral
 4. Agree
 5. Strongly Agree

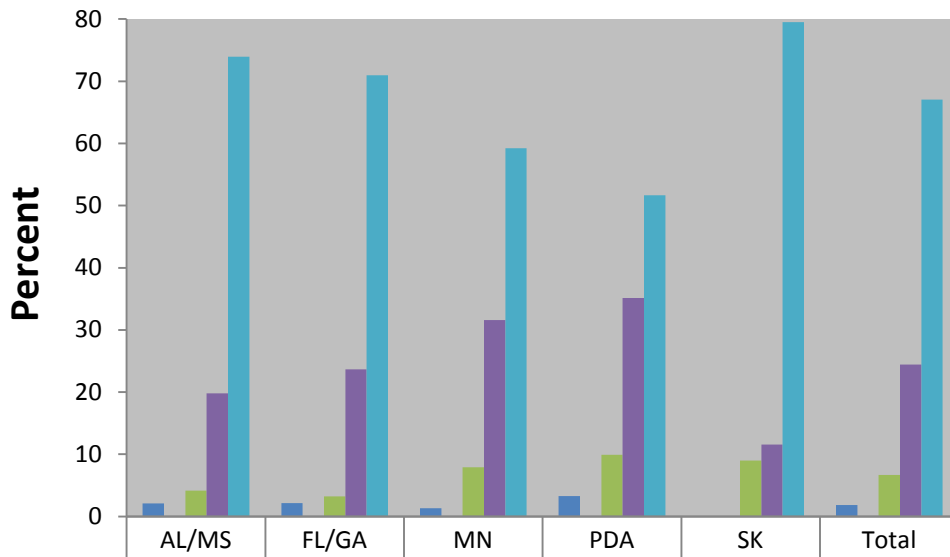
Question 2: Testing was Easy



- 97% of patients agreed/strongly agreed that the blood sugar test was easy.

3. This test gave me useful information.
 1. Strongly Disagree
 2. Disagree
 3. Neutral
 4. Agree
 5. Strongly Agree

Question 3: Provided Useful Information



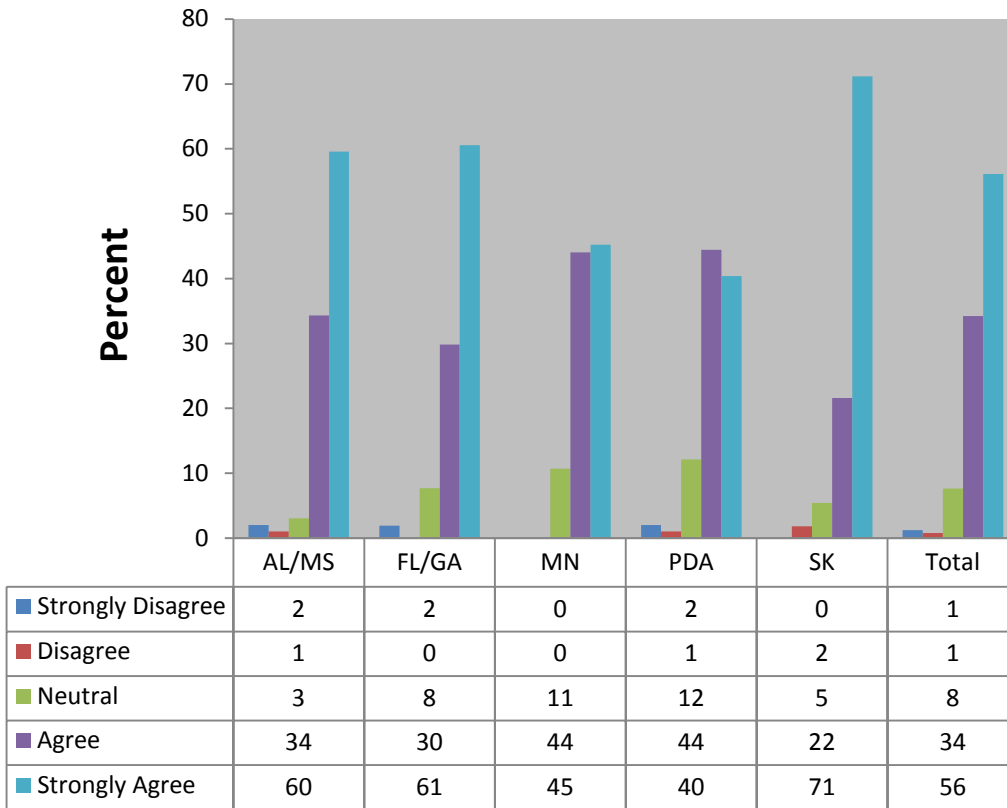
	AL/MS	FL/GA	MN	PDA	SK	Total
Strongly Disagree	2	2	1	3	0	2
Disagree	0	0	0	0	0	0
Neutral	4	3	8	10	9	7
Agree	20	24	32	35	12	24
Strongly Agree	74	71	59	52	79	67

- 91% of responding patients agreed the test provided useful information.

4. Testing for glucose shows a high level of care in this office.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Question 4: High Care Level

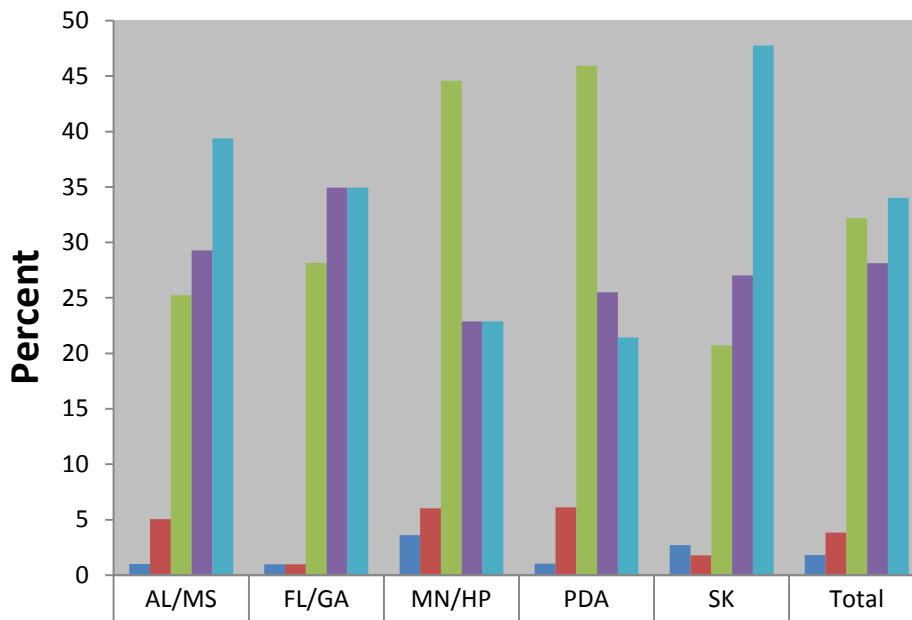


- 90% of patients agreed testing for glucose showed a high level of care, ranged from 85% PDA to 93% AL/MS and SK.

5. I am more likely to refer friends and family to this practice because blood sugar testing is offered here.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Question 5: Refer other Patients



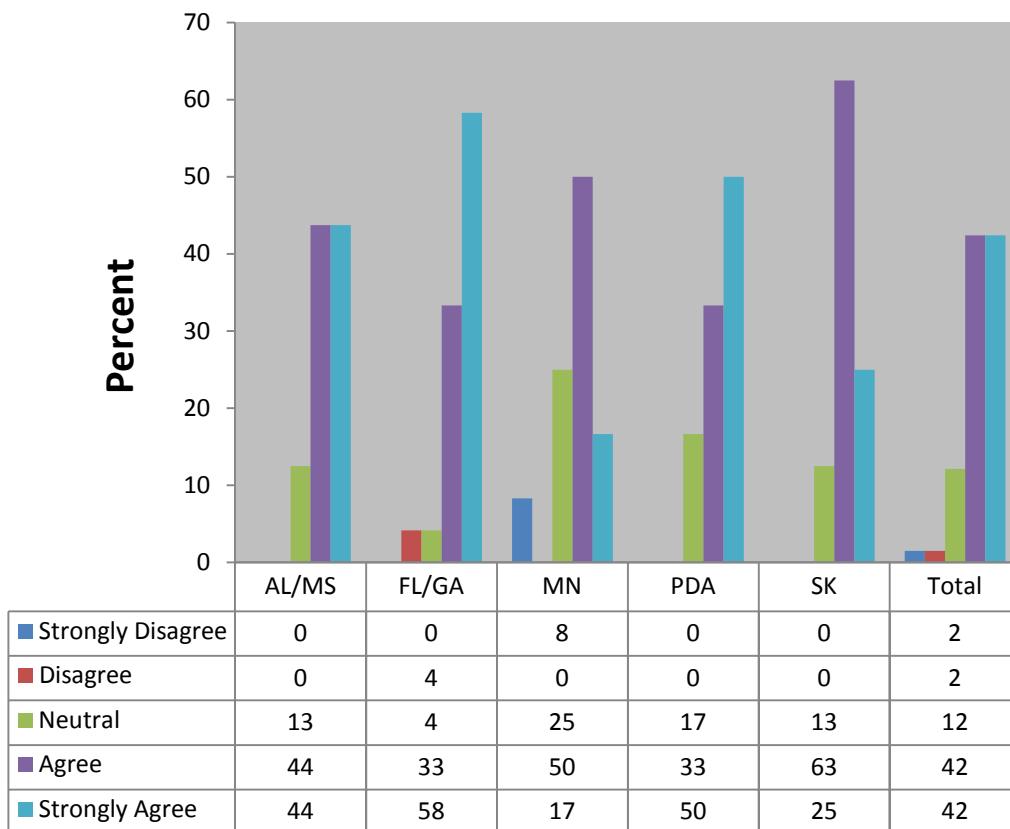
	AL/MS	FL/GA	MN/HP	PDA	SK	Total
Strongly Disagree	1	1	4	1	3	2
Disagree	5	1	6	6	2	4
Neutral	25	28	45	46	21	32
Agree	29	35	23	26	27	28
Strongly Agree	39	35	23	21	48	34

- 62% of patients were more likely to refer patients, with considerable differences by region: SK at 75% and MN and PDA at 46% and 47% consecutively.

C. Dentist/Staff Questionnaire

1. Patients with no diabetes but high glucose will benefit from testing in the dental office.
 1. Strongly Disagree
 2. Disagree
 3. Neutral
 4. Agree
 5. Strongly Agree

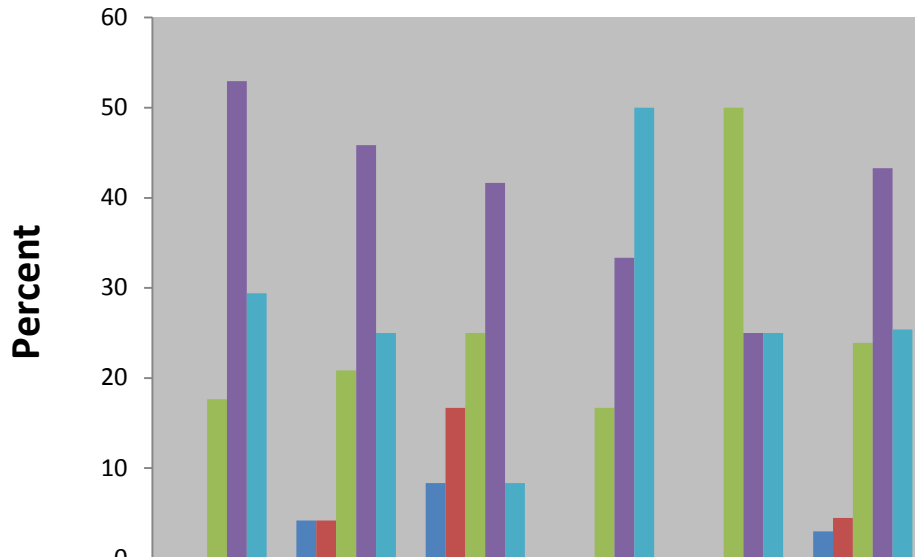
Question 1: Patients would Benefit



- Overall, about 85% of respondents agreed/strongly agreed that blood sugar testing was beneficial to patients with high glucose levels.

2. Patients with diabetes may get better glucose control if tested in the dental office.
 1. Strongly Disagree
 2. Disagree
 3. Neutral
 4. Agree
 5. Strongly Agree

Question 2: Better Glucose Control

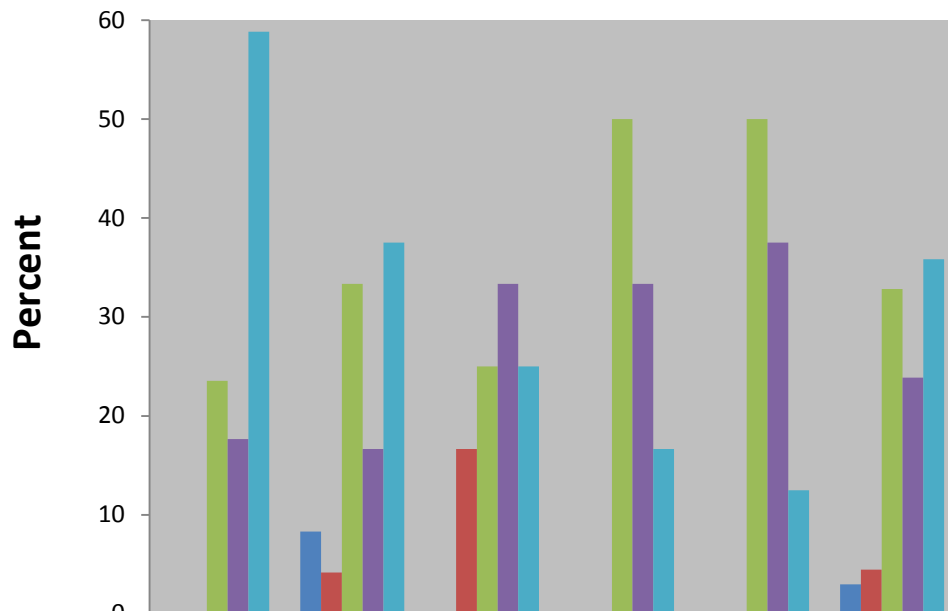


	AL/MS	FL/GA	MN	PDA	SK	Total
Strongly Disagree	0	4	8	0	0	3
Disagree	0	4	17	0	0	4
Neutral	18	21	25	17	50	24
Agree	53	46	42	33	25	43
Strongly Agree	29	25	8	50	25	25

- Over 69% of respondents agreed patients could get better glucose control by testing in the dental office.

3. Glucose reading will help determine the timing of invasive dental procedures.
 1. Strongly Disagree
 2. Disagree
 3. Neutral
 4. Agree
 5. Strongly Agree

Question 3: Testing Relevant to Timing

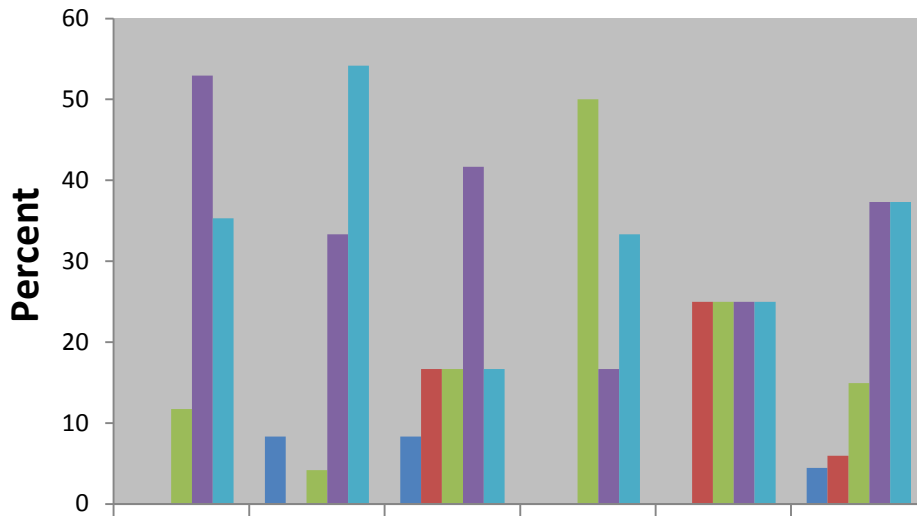


	AL/MS	FL/GA	MN	PDA	SK	Total
Strongly Disagree	0	8	0	0	0	3
Disagree	0	4	17	0	0	4
Neutral	24	33	25	50	50	33
Agree	18	17	33	33	38	24
Strongly Agree	59	38	25	17	13	36

- About 60% of respondents agreed glucose reading was relevant to the timing of dental procedures.

4. Glucose testing will identify patients at high risk for periodontal disease.
 1. Strongly Disagree
 2. Disagree
 3. Neutral
 4. Agree
 5. Strongly Agree

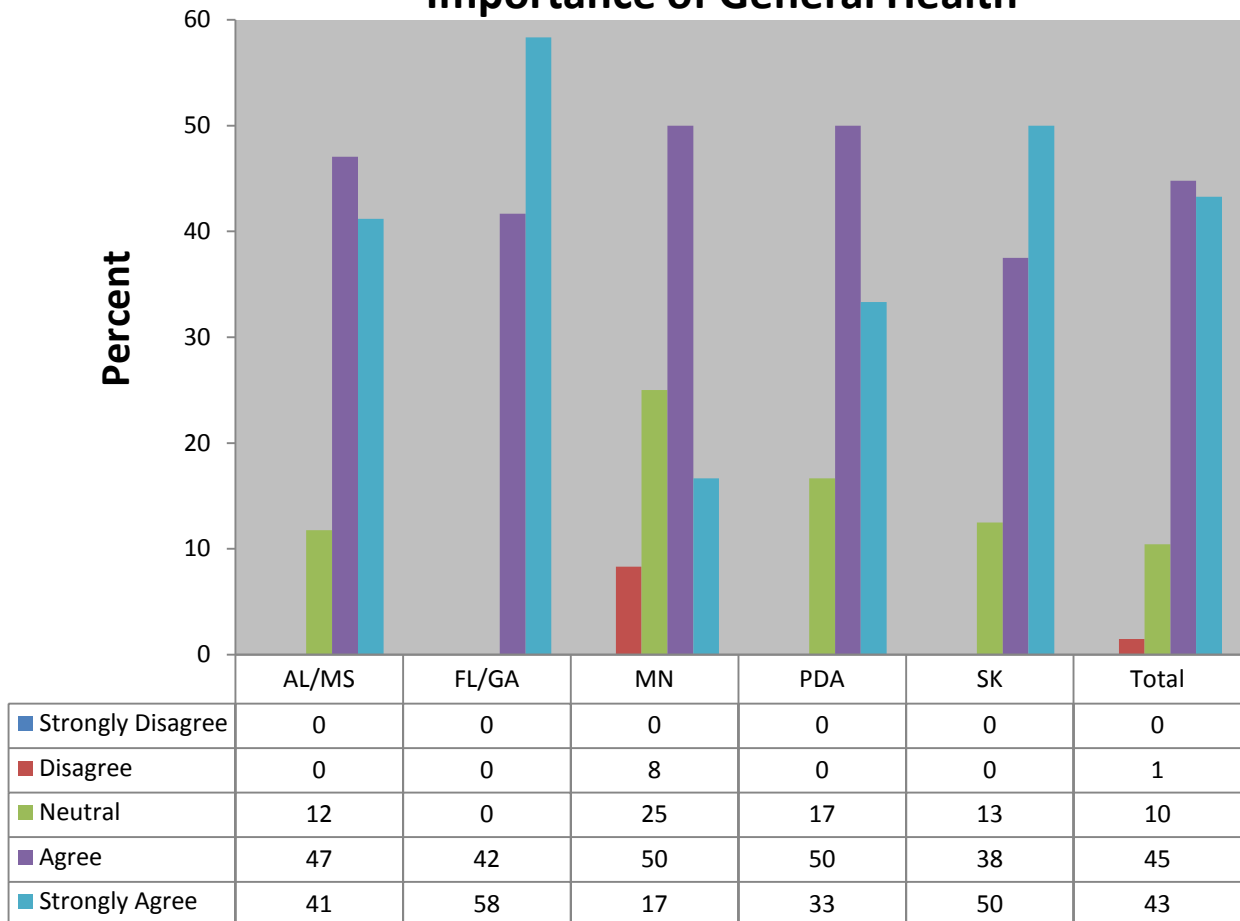
Question 4: Identify at-risk Patients



- Overall, about 75% of respondents agreed/strongly agreed glucose testing will identify patients at high risk for periodontal disease.

5. Tested patients develop increased confidence in the practice and perceived an increased importance of their general health to their dental treatment.
 1. Strongly Disagree
 2. Disagree
 3. Neutral
 4. Agree
 5. Strongly Agree

Question 5: Increased Confidence and Importance of General Health



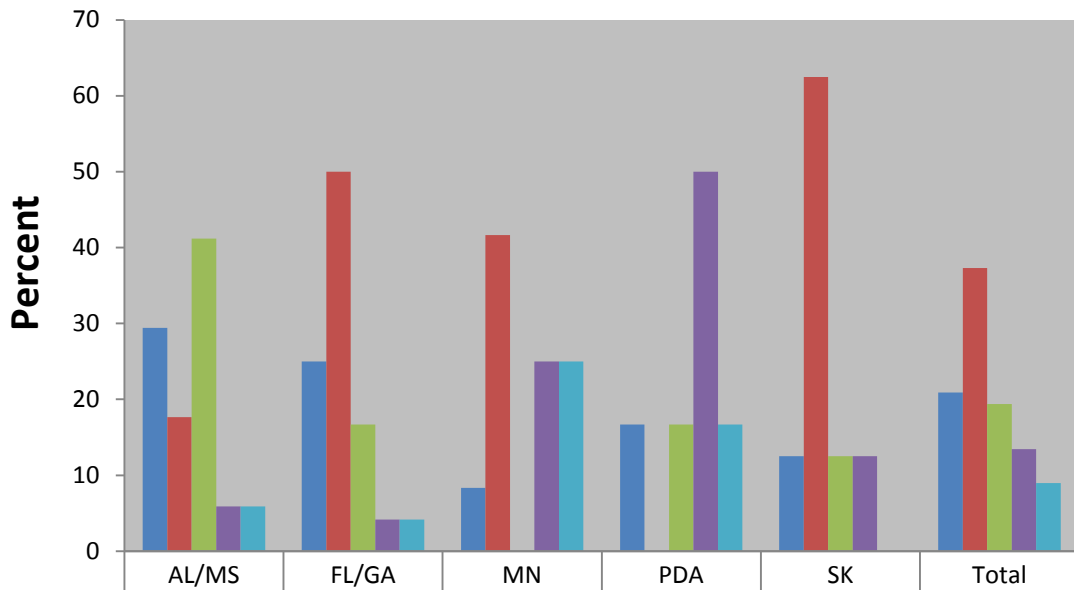
- 88% of respondents agreed testing patients increased both confidence and the importance of their general health to their dental treatment.

Potential negative aspects

6. Glucose testing is time-consuming

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Question 6: Testing is Time-Consuming

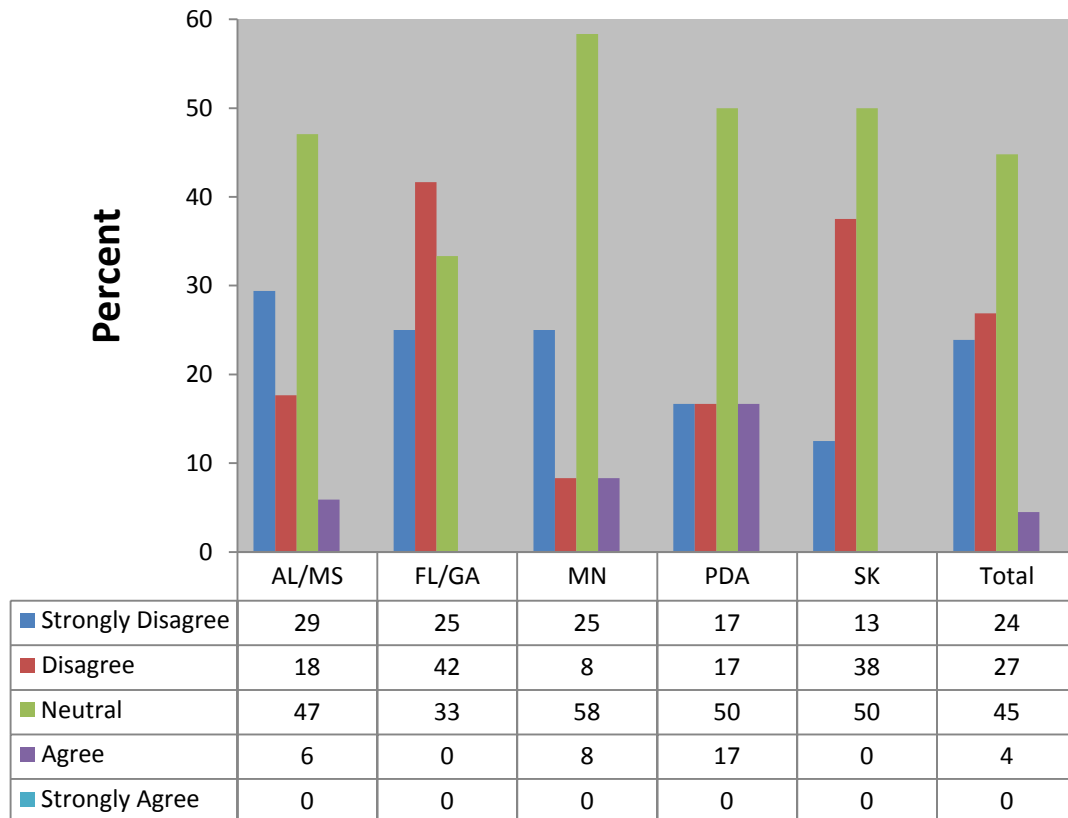


	AL/MS	FL/GA	MN	PDA	SK	Total
Strongly Disagree	29	25	8	17	13	21
Disagree	18	50	42	0	63	37
Neutral	41	17	0	17	13	19
Agree	6	4	25	50	13	13
Strongly Agree	6	4	25	17	0	9

- 22% of respondents agreed testing was time consuming.

7. Glucose testing is too expensive to do in dental practice.
 1. Strongly Disagree
 2. Disagree
 3. Neutral
 4. Agree
 5. Strongly Agree

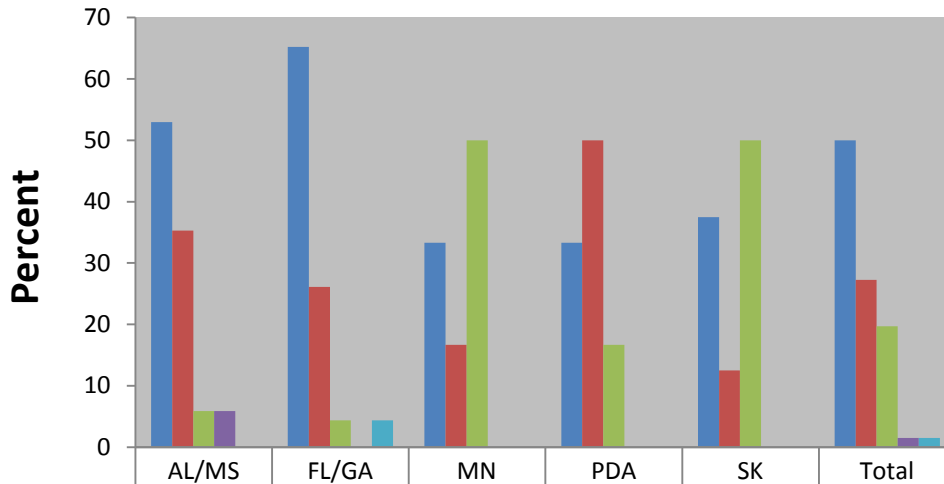
Question 7: Testing Too Expensive



- Only 4% of respondents agreed glucose testing was too expensive.

8. Glucose levels are not relevant to dental practice
 1. Strongly Disagree
 2. Disagree
 3. Neutral
 4. Agree
 5. Strongly Agree

Question 8: Irrelevant to Dental Practice



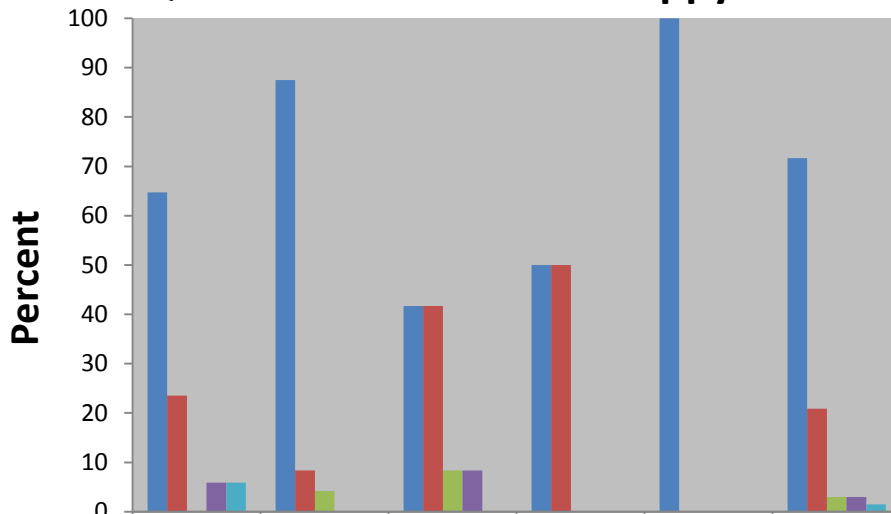
	AL/MS	FL/GA	MN	PDA	SK	Total
Strongly Disagree	53	65	33	33	38	50
Disagree	35	26	17	50	13	27
Neutral	6	4	50	17	50	20
Agree	6	0	0	0	0	2
Strongly Agree	0	4	0	0	0	2

- Only 3%* of respondents agreed glucose testing was not relevant to dental practice.

*The table indicates 4% due to rounding errors. Technically 1.5% agreed and 1.5% strongly agreed totaling 3%.

9. Patients were unhappy that my practice did glucose screening.
 1. Strongly Disagree
 2. Disagree
 3. Neutral
 4. Agree
 5. Strongly Agree

Question 9: Patients Unhappy



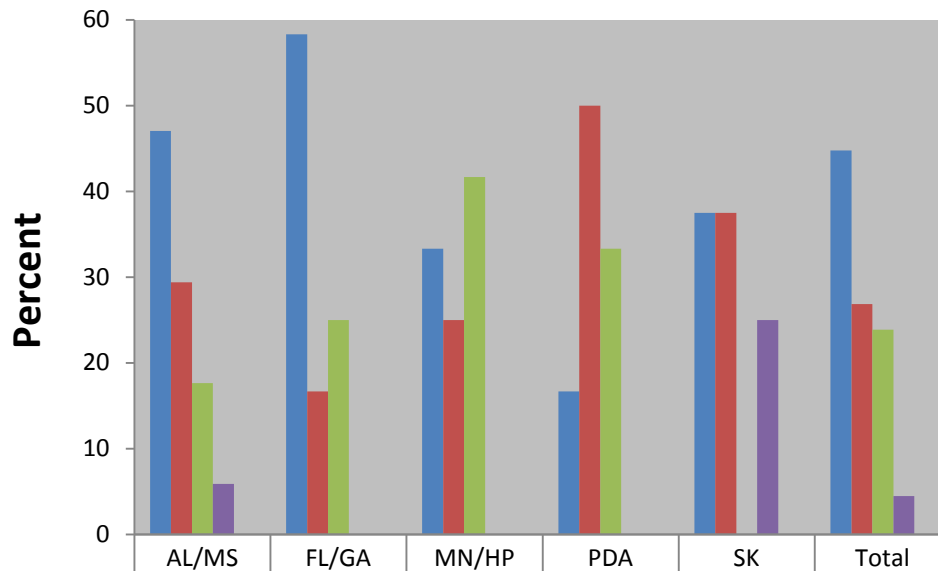
	AL/MS	FL/GA	MN	PDA	SK	Total
Strongly Disagree	65	88	42	50	100	72
Disagree	24	8	42	50	0	21
Neutral	0	4	8	0	0	3
Agree	6	0	8	0	0	3
Strongly Agree	6	0	0	0	0	1

- Over 4% of respondents agreed patients were unhappy about the glucose screening.

10. Glucose testing opens the practice to liability suits.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Question 10: Possible Liability Suits



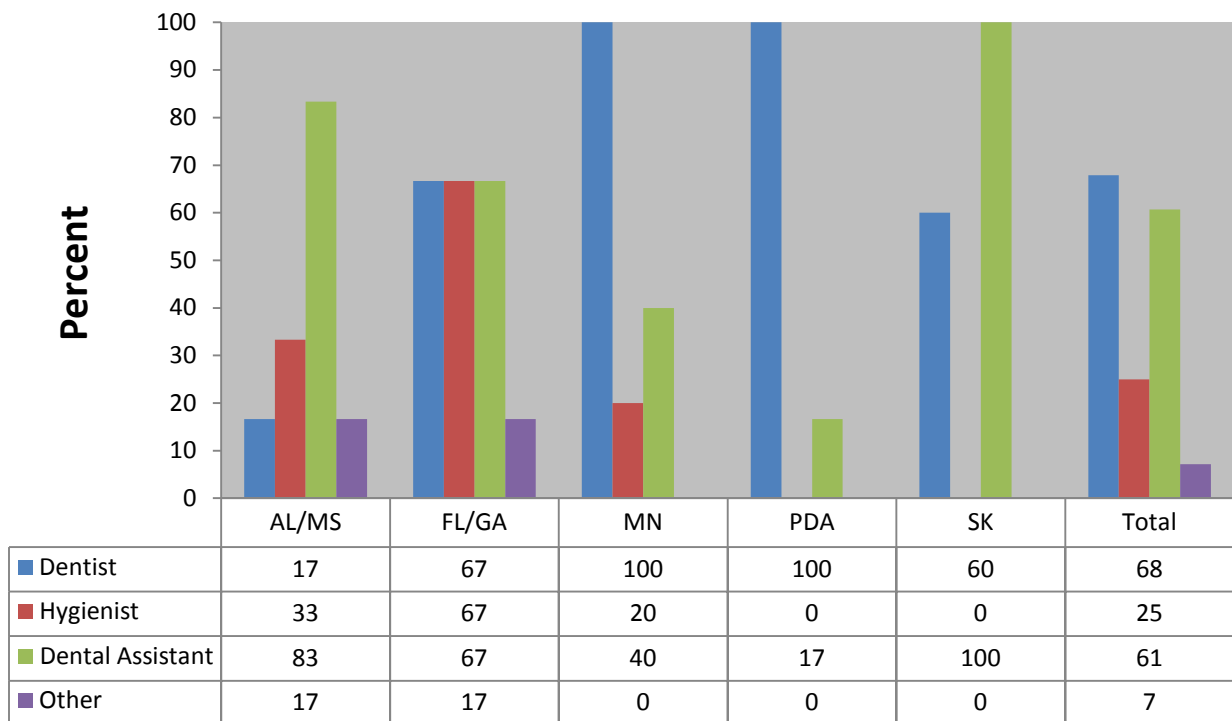
- Overall, about 4% of respondents agreed glucose testing opened the practice to liability suits.

D. End of Study Practice Survey of Practitioner-Investigator

1. Who performed the blood sugar testing in your practice? (Check all that apply).

1. Dentist
2. Hygienist
3. Dental Assistant
4. Other

Question 1: Who Performed Glucose Testing¹



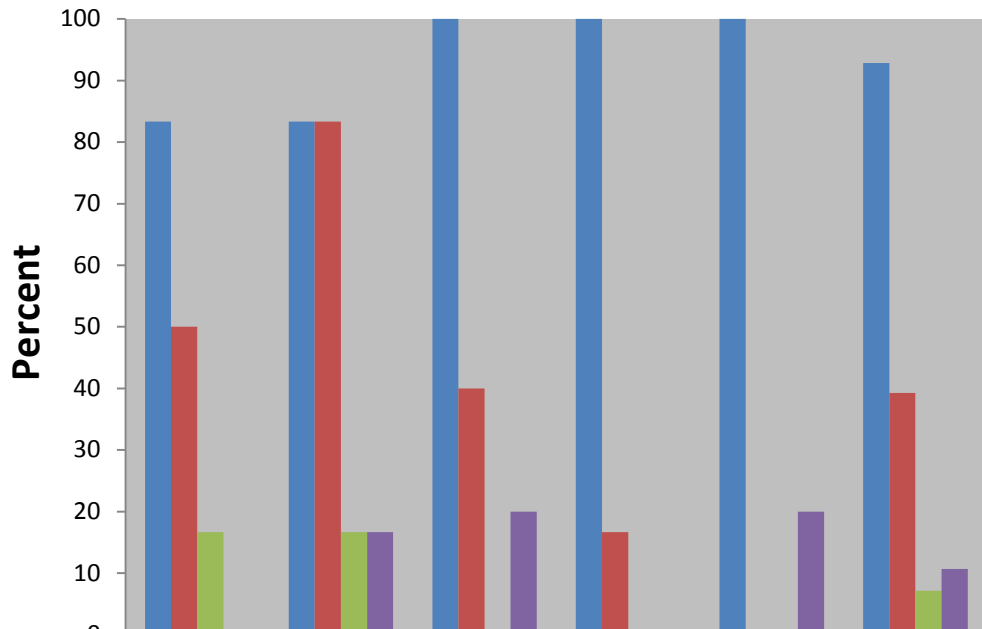
¹Percents will total more than 100 due to multiple answer choices.

- In the 28 practices, the blood glucose testing was performed by 68% of the dentists, 25% of hygienists, about 61% dental assistants, and 7% categorized as “other”.

2. Where was the testing performed? (Check all that apply)

1. Regular dental operator
2. Hygienist's operator
3. Exam only operator
4. Other location

Question 2: Location of Testing¹



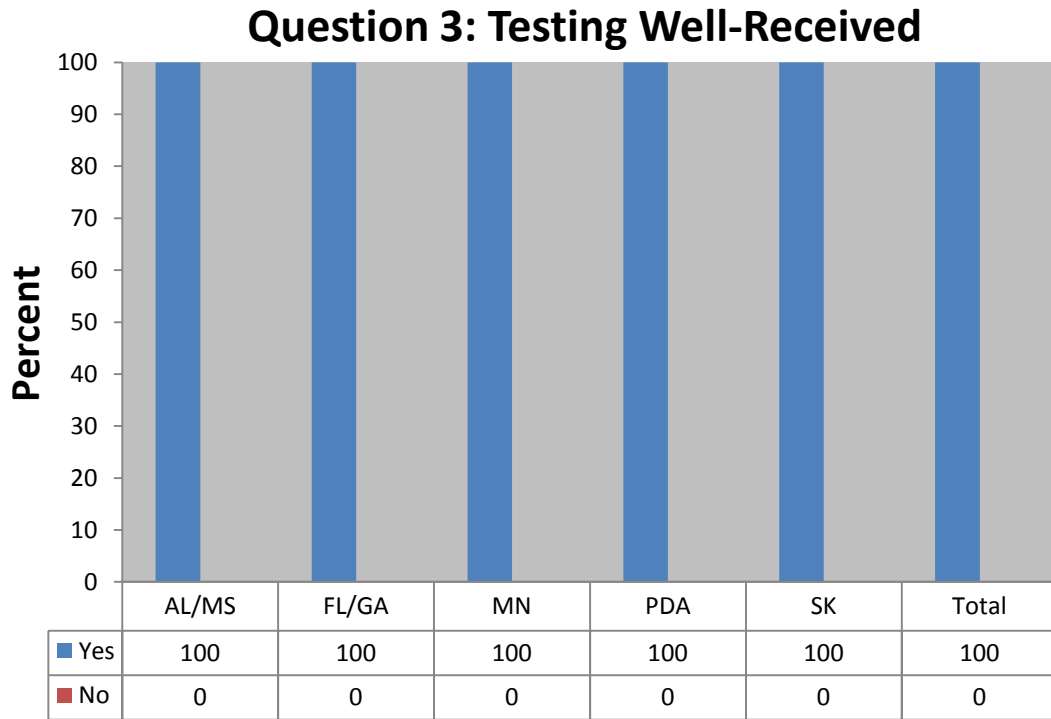
	AL/MS	FL/GA	MN	PDA	SK	Total
Regular dental operator	83	83	100	100	100	93
Hygienist's operator	50	83	40	17	0	39
Exam only operator	17	17	0	0	0	7
Other location	0	17	20	0	20	11

¹Percents will total more than 100 due to multiple answer choices.

- Overall, about 93% of the blood sugar testing was performed in a regular dental operator.
- 39% of the blood sugar testing was done in a hygienist's operator.
- AL/MS and FL/GA were the only regions to perform the testing in an exam only operator at about 17% each, yielding an overall total of 7%.
- The testing was performed at a location considered as "other" about 11% overall.

3. Was the testing well-received by patients?

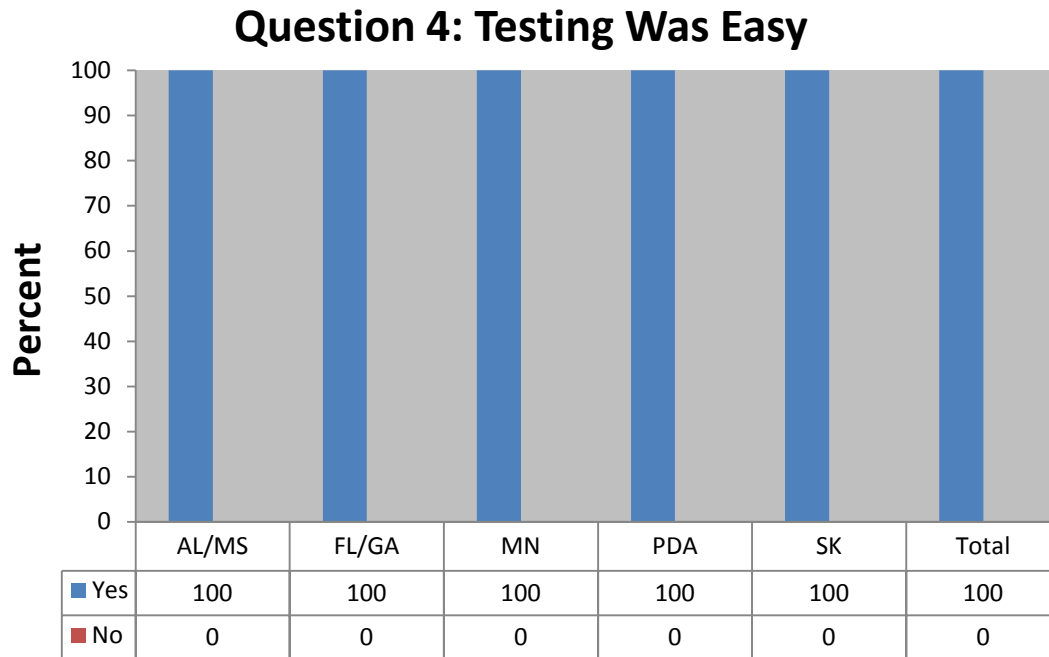
- 1. Yes
- 2. No



- All respondents agreed the testing was well-received by patients.

4. Was testing easy to perform by the end of the study?

1. Yes
2. No

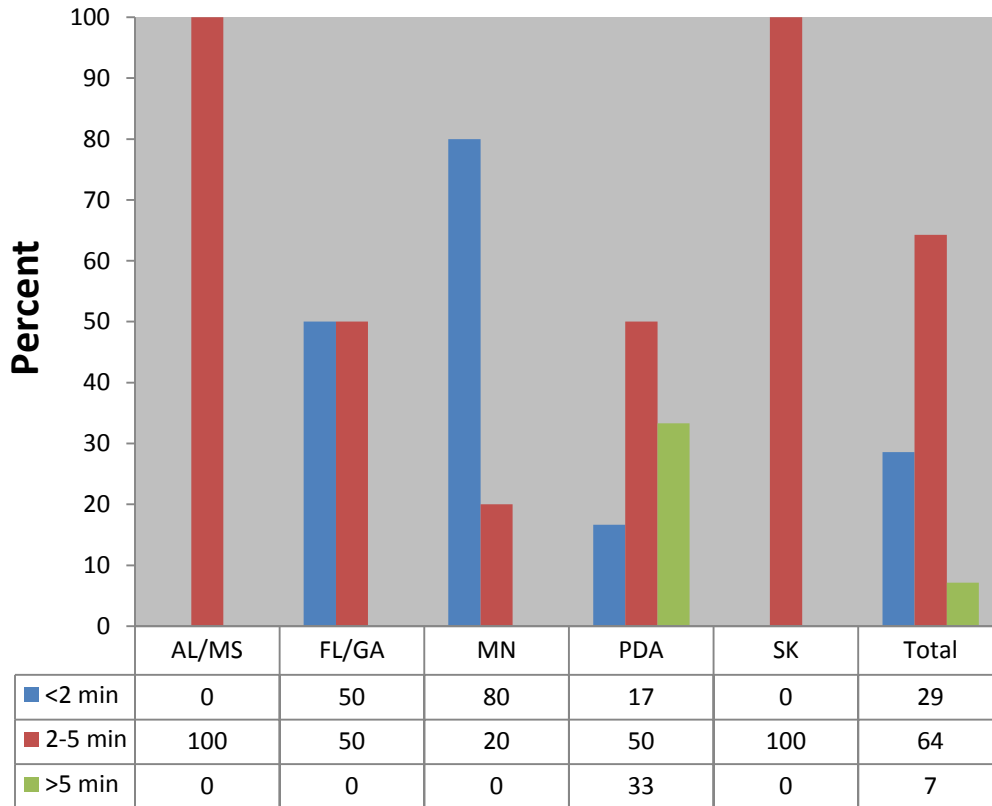


- All respondents agreed the testing was easy to perform by the end of the study.

5. How long did the testing for each patient last on average by the end of the study?

1. <2 min
2. 2-5 min
3. >5 min

Question 5: Average Time for Testing

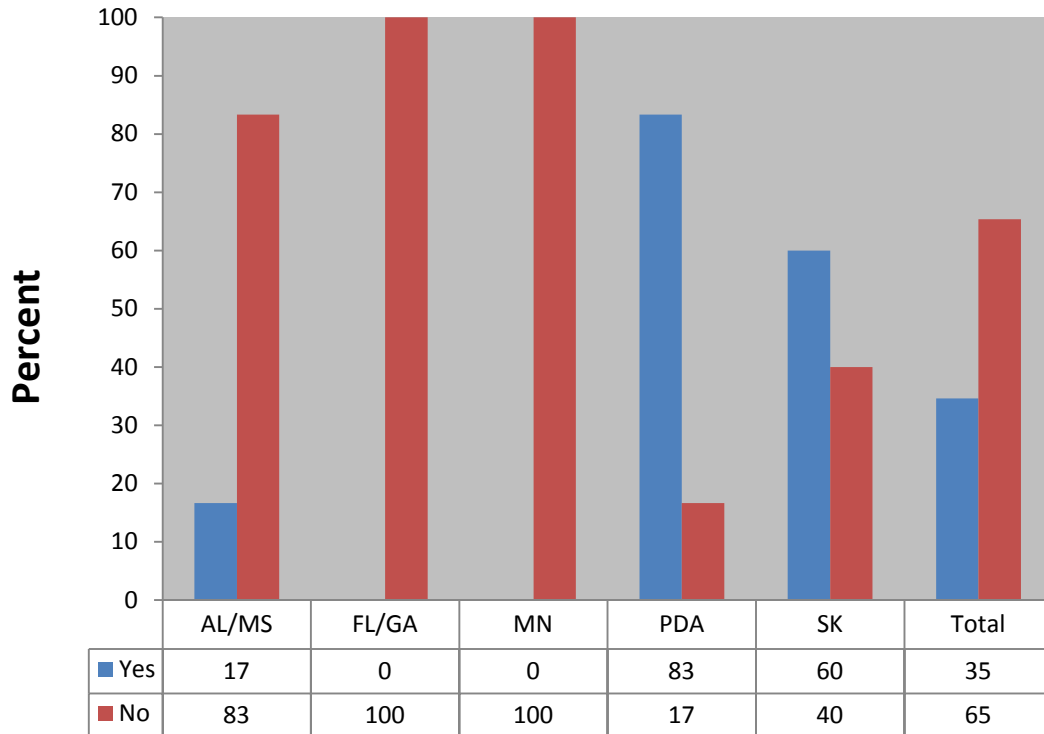


- 64% of testing required 2 – 5 minutes.

6. Was testing disruptive to the regular run of the practice by the end of the study?

1. Yes
2. No

Question 6: Testing Was Disruptive



- Over one-third of respondents agreed the testing was disruptive.

7. Do you now feel that routine blood glucose testing is:

1. Beneficial to the practice
2. Detrimental to the practice
3. Indifferent

Question 7: Testing is Beneficial/Detrimental

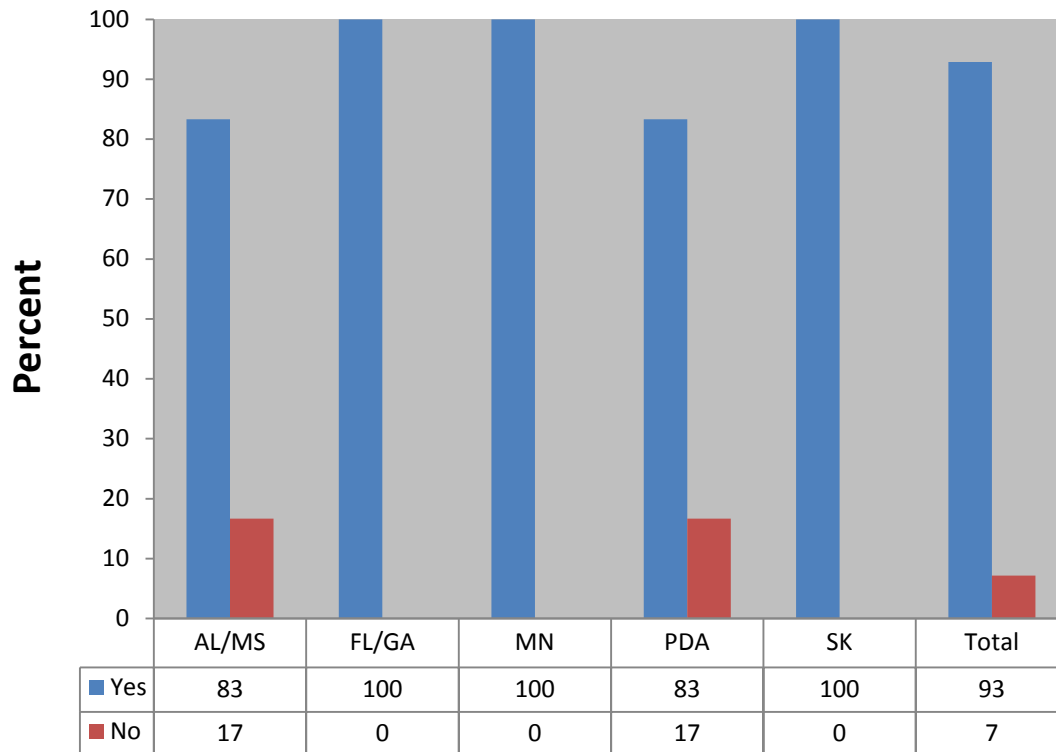


- Overall, 82% of respondents agreed glucose testing is beneficial.

8. Do you think routine blood glucose testing for patients at risk for or diagnosed with diabetes should be implemented in dental practice?

1. Yes
2. No

Question 8: Implement Testing

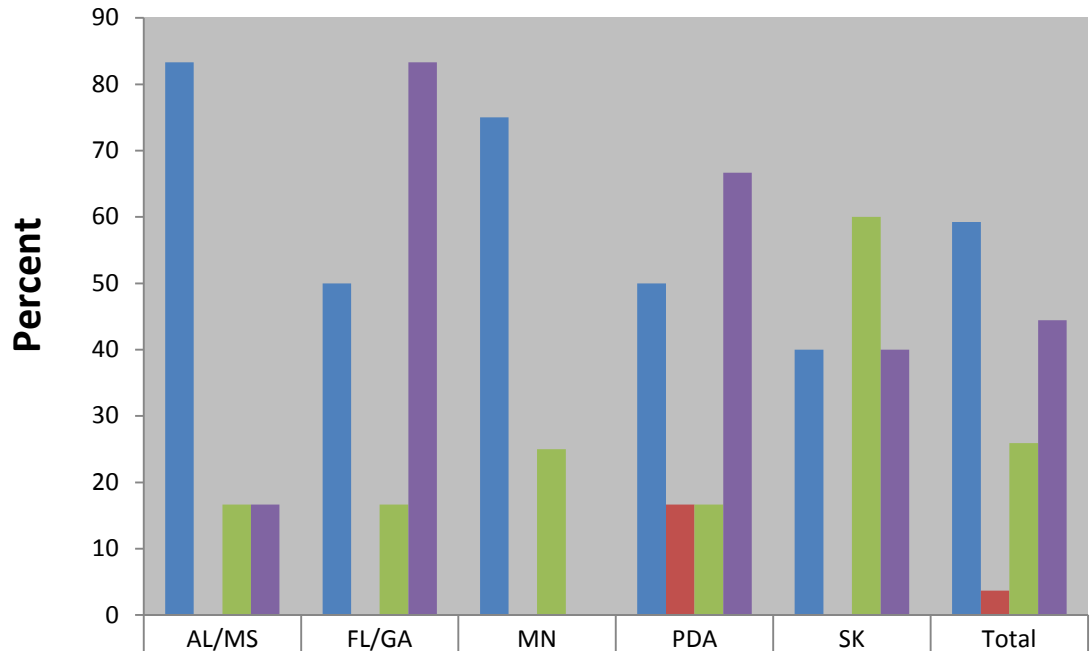


- About 93% of respondents agreed glucose testing should be implemented in dental practice for patients diagnosed with or at risk for diabetes.

9. What barriers **MUST** be overcome before you would do routine blood glucose testing in your practice in the future? (Check all that apply)

1. Insurance companies must provide reimbursement for testing
2. The testing procedure would have to be easier
3. Patients would have to be more demanding of it
4. Other

Question 9: Barriers to Overcome



	AL/MS	FL/GA	MN	PDA	SK	Total
Insurance reimbursement	83	50	75	50	40	59
Testing made easier	0	0	0	17	0	4
Patients more demanding	17	17	25	17	60	26
Other	17	83	0	67	40	44

- The most common barrier to overcome in order to allow testing is insurance reimbursement at 59%.