

Dental Public Health Activity Descriptive Summary

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Michigan Assessment of Blood Pressure and Diabetes Screening Practices among Oral Health Professionals

There is growing evidence of an association between gum disease and chronic diseases such as heart disease and diabetes. A leading health indicator of Healthy People 2020 is to increase the proportion of children, adolescents, and adults who used the oral health care system in the past year. Almost 70% of Michigan adults reported visiting a dentist or dental clinic in the past year (MiBRFSS 2014). The dental office has such a large population which could make dentists and dental professionals an important source for identification of chronic diseases and referral for further diagnosis and treatment. Michigan was interested in learning what the screening practices in Michigan dental offices are for hypertension and diabetes.

The Oral Health Unit along with the Heart Disease and Stroke Prevention Unit and the Michigan Diabetes Prevention and Control Program at the Michigan Department of Health and Human Services and Delta Dental of Michigan, Ohio and Indiana collaborated on the project. The Michigan Oral Health Unit was recently moved from under the Division of Maternal Child Health to the Division of Chronic Disease. This move along with collaboration agreements already in place made it possible to bring these partners together.

Program staff with expertise in hypertension and diabetes screening protocols were asked to participate, along with oral health staff, in the development of a survey to answer questions related to hypertension and diabetes. (See Attachment A) Questions included: screening methods used, patients screened, current knowledge, follow-up practices, comfort level of performing screenings and preferences on future educational resources.

The survey was disseminated through two different methods. The first was a paper survey mailed to dental offices identified through a Delta Dental mailing list of their providers which included a \$2 bill as an incentive. The second was sent electronically as a Survey Monkey link through the following dental professional associations; the Michigan Dental Association, the Michigan Dental Hygienists Association, the Michigan Dental Assistants Association, and the Michigan Oral Health Coalition.

A total of 1,715 completed surveys were returned through the two dissemination methods, 1,452 from the mailed method and 263 from Survey Monkey. Surveys were returned from 465 different zip codes across the state and 82.1% of the surveys were completed by a dentist, 9.4% by a dental hygienist and 7.5% by a dental assistant.

Results showed: 1. Dental health professionals were more comfortable screening for hypertension than diabetes; 2. The reported comfort level among those who didn't screen for hypertension or diabetes was lower than those who did screen their patients; 3. Knowledge of current hypertension and diabetes guidelines was low.

By understanding the current practices and knowledge among dentists around chronic disease and chronic disease screening, Michigan can use the data to drive educational messages and outreach. Future steps include, developing chairside reference guides that will offer assistance on when to refer a patient and increasing educational and hands on training opportunities for proper hypertension and diabetes screening methods. Utilization of the partnered association's conferences and newsletters will spread educational messages across the state.

The use of dental health professionals as a data source was such a success that the Michigan Oral Health Unit will next be collaborating with the Michigan Cancer Section to follow a similar surveillance activity to survey dental health professionals on their screening practices for oral cancer.

Lessons Learned:

Needed staff with expertise in five areas (oral health, diabetes, heart disease, epidemiology, and evaluation) to develop a survey instrument that provided reliable estimates and appropriate knowledge and screening questions.

A \$2 bill was included in the paper survey mailings. The response rate from this dissemination method yielded a higher number of returned surveys (1,452 returned and 4,646 mailed) than the electronic method (263 returned) which did not include an incentive.

It was beneficial to record the zip code the dental health professional worked in the most to show the distribution of the surveys completed. This ensured the sample was representative of the state.

The same survey monkey link was used for each of the email distributions. Since there was not a unique identifier for each survey it was not possible to determine which association mailing generated the most completed surveys. There also was no way to know if a dental health professional completed a survey by paper and electronically and were double counted.

In the future it would be beneficial to use different links to determine which association obtains the greatest return and to include an identifier or question that would illicit identifying information such as name of respondent or clinic name as to reduce duplication bias.

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Attachment A

Conducted by the Michigan Department of Health & Human Services
2016



You were chosen for this assessment because you are a Dental Professional in Michigan. If you choose to participate in this assessment you will be asked about practices in your dental office regarding hypertension and diabetes screening and knowledge.

The purpose of this assessment is to:

- Assess screening procedures for hypertension and diabetes by oral health professionals.
- Assess the knowledge of oral health professionals to facilitate referrals for diagnosis and care for hypertension and diabetes.
- Quantify the referrals for high blood pressure readings and elevated blood glucose levels by oral health professionals.
- Determine if oral health professionals perform any follow up after making referrals for patients with high blood pressure readings and elevated blood glucose levels.

In addition, results may assist in the development of interventions, pilots, and sharing of best practices. Ultimately the goal is to increase the number of Michigan residents screened and referred to primary care providers by oral health professionals because of elevated blood pressure and/or blood glucose findings.

Taking this assessment is voluntary. Choosing not to fill out all the questions will not harm you in any way. You may skip questions you do not want to answer. All information from this survey will be kept confidential and your identifiable information is not connected to this assessment or your responses in any way.

If you have any questions on how to complete the assessment or would like more information please contact:

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1. Please select your role in your practice.

If you are not one of the professionals listed below please forward this survey to someone in your practice who fits one of these descriptions.

- Dentist
- Hygienist
- Dental Assistant

2. In what type of setting do you practice? (Check the one setting in which you spend the most time)

- General Dental Practice
- Specialty Practice
- Oral Surgery
- Hospital Based Clinic
- Corporate Dentistry
- Academic Institution
- Local Health Department
- FQHC
- Other _____

3. In what zip code do you practice the most time in?

4. How many years have you been practicing?

- 0-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- 21 years or longer

5. On which patients do you take blood pressure readings? (Check all that apply)

- All adults (18 years and older)
- New patients only
- Patients with a history of hypertension

- Patients who request it
- None - please answer question 7
- Other/Comment _____

6. Please rate your comfort level with taking blood pressure. (Mark your response)

Very Comfortable Comfortable Neutral Uncomfortable Very uncomfortable

7. If you selected 'none' to question 5 please answer the question below. (Check all that apply)

- Too little time in appointment
- I don't see the need
- Uncomfortable with skill to do this task
- Equipment not available
- Unable to refer for care
- No reimbursement or incentive to perform procedure
- Other _____

8. Of the choices listed which range would you consider a normal blood pressure reading?

- <120 mmHg systolic and <80 mmHg diastolic
- 120 – 139 mm Hg systolic or 80 – 89 mm Hg diastolic
- 140 – 159 mm Hg systolic or 90 mm Hg – 99 mm Hg diastolic
- ≥160 mm Hg systolic or ≥100 mm Hg diastolic
- Other _____

9. Which patients do you screen for diabetes?

- All adults (18 years and above)
- New patients only
- Patients with a history of diabetes
- Patients who request it
- None – Please answer question 13
- Other/Comment _____

10. Please rate your comfort level with screening for diabetes. (Mark your response)

Very Comfortable Comfortable Neutral Uncomfortable Very uncomfortable

11. Which of the following methods do you use to screen for diabetes? (Check all that apply)

- Periodontal screen (i.e., oral exam for signs)
- Questions on health assessment questionnaire
- Perform a point-of-care finger stick for a random plasma glucose level
- Perform a point-of-care finger stick for an A1c hemoglobin test
- I do not screen for diabetes – Please answer question 13
- Other _____

12. Of the choices below, what oral signs of elevated blood glucose levels do you primarily use when screening for diabetes? (Check all that apply)

- Gingivitis/Bleeding Gums
- Fungal Infections
- Xerostomia/Dry Mouth
- I do not know
- Other _____

13. If you selected 'I do not screen for diabetes' for question 11 please answer why. (Check all that apply)

- I consider it outside my scope of practice
- I treat the dental condition and suggest they contact their primary care provider
- I do not have additional equipment needed for follow-up
- The oral signs can indicate too many other medical conditions
- Unable to refer to care
- No reimbursement or incentive for procedure
- Other _____

14. Check all the options below that you normally would do when a screening reveals a patient with hypertension, high hemoglobin A1c, or risk for prediabetes, in your practice?

Diabetes: A1c: $\geq 6.5\%$, Fasting Plasma Glucose: ≥ 126 mg/dl, * /2 hour OGTT: ≥ 200 mg/dl*, Random Plasma Glucose: ≥ 200 mg/dl with classic symptoms *in the absence of unequivocal hyperglycemia, should be confirmed with repeat testing.

Prediabetes: A1c: 5.7-6.4%, Fasting Plasma Glucose: 100-125 mg/dl, 2 hour OGTT: 140-199 mg/dl

	Provide patient education	I contact the patient's primary care provider	My office contacts the patient's primary care provider	Inform patient to follow up with their primary care provider	Nothing
Hypertension					
High Hemoglobin A1c					
Prediabetes					

15. If you make a referral for a patient with high blood pressure, or elevated risk of diabetes do you also perform a follow up after making the referral?

- Yes
- No
- Sometimes
- Other _____

16. If yes, with whom do you follow up?

- Patient
- Provider
- Both
- Other _____

17. What are your suggestions for receiving educational resources on hypertension and diabetes to oral health professionals? (Check all that apply)

- Online CE course
- Webinars
- Informational pamphlets and fact sheets
- Reference card on hypertension/diabetes guidelines
- Onsite refresher trainings
- None needed
- Comment _____

**Thank you for participating in this survey!
We value your input on this important topic.**