

**Oral Health Knowledgeability, Attitudes, and Practice Behaviors of Medical Providers at
Womack Army Medical Center: An Opportunity for Inter-professional Collaboration.**

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Submitted in partial fulfillment of the requirements for the degree of Master of Science in the
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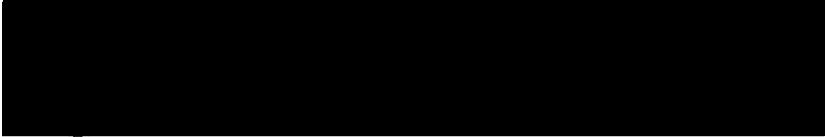
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ABSTRACT

Purpose: Medical healthcare providers have the ability to contribute to oral health prevention and overall improved oral health care. The aim of this study was to investigate medical provider's knowledge, attitudes, and practice behaviors toward oral health care at Womack Army Medical Center (WAMC). **Methods:** A link to a 20-question web-based survey was emailed to Womack Army Medical Center medical providers including medical doctors (MD), doctors of osteopathic medicine (DO), physician assistants (PA), and nurses at WAMC about knowledgeable, attitudes, and practice behaviors regarding oral health care.

Results: In total, 103 providers took part in the survey with only 95 completing it. The uncompleted surveys were not analyzed. The responses were analyzed based on provider role. The majority of providers (48.3%) reported less than two hours of oral health care education in their training programs and 85.3% of providers expressed a desire for more training preferably given by dentists (68.4%).

Conclusions: The WAMC medical providers lack training and knowledge in oral health care which may inhibit their confidence with early intervention in their practice. However, the majority has a positive attitude and willingness for continued education on the topic to improve early detection, prevention and quality of life for their patients. With the integration of the Army Medical and Dental Commands into the Defense Health Agency, inter-professional patient care should be strongly considered.

Keywords: attitudes, behaviors, knowledge, medicine, dentistry, oral screening, oral health, survey

Introduction

There has been a longstanding perception that the oral cavity is not in the scope of practice of medical providers and is solely the responsibility of a dentist. However in 2000, the Surgeon General released 'Oral Health in America: A Report of the Surgeon General', which drew attention to the connection between oral and systemic health, the importance of prevention and the lack of communication between medical and dental providers. [1] In the military, all active duty service members are required to see a dentist at least once a year. However, military

dependents, veterans, and retirees do not have the same benefits and must purchase separate dental insurance for private dental providers. In 2016, 74 million Americans had no dental coverage.[2] Those without dental insurance visit the dentist less frequently, missing the opportunity for prevention and early treatment. Many individuals who lack access to a private dental practice may be forced to use physician offices, or hospital emergency departments (ED). Between 1997 and 2000, “there was an average of 738,000 visits annually to EDs for complaints of tooth pain or injury. [3] Dental diseases are generally not self-limiting and medical providers do not provide definitive treatment in emergency room settings. These ED visits not only put a financial strain on our hospitals but may not provide definitive treatment to the patients.

Our children and geriatric population are the most vulnerable for dental disease. Only “63 percent of children have had a dental visit before starting school.” [1] In contrast, children see their medical clinicians up to eight times by age two due to better access to medical care. Dental caries is a “preventable disease; yet, it occurs five times more frequently than asthma and is the most common chronic disease of childhood.” [4] The consequences of untreated dental decay can result in pain, impaired chewing and nutrition, school absences, problems sleeping, and poor self-esteem, decreasing a child’s quality of life.

Up to 50% of adults in the United States have some form of periodontal disease. [5] In addition, 53,000 oral cavity and oropharyngeal cancers are diagnosed annually, resulting in 10,860 deaths. [6] Early detection of oral cancer is paramount in the success of treatment. Research has shown that poor oral health may be associated with cardiovascular disease, respiratory disease, diabetes and undesirable pregnancy outcomes such as low term birth weight. [7] More training on the oral systemic link will improve how oral health care is delivered in the medical system. Our medical providers are at the front lines for detecting oral health problems, especially in our non-

active duty patient population. Unfortunately, most medical training programs provide inadequate training on oral health care, leaving our medical colleagues at a disadvantage. All medical professionals have an important role in early detection of oral cancer, early childhood caries, preventative oral health services and dental care for all patients young and old.

Oral Health Training to Non-Dental Providers

In 2009, the Association of American Medical Colleges published “Report IX: Contemporary Issues in Medicine: Oral Health Education for Medical and Dental Students” to encourage medical schools to increase training in areas of dental public health, caries, periodontal disease, oral cancer, and oral-systemic health interactions [8]. While 59% of medical schools have incorporated oral health education into their curriculums, the amount of training is deficient [8]. National surveys have reported that “almost 70% of medical schools and most physician assistant (PA) programs provided less than 5 hours of oral health instruction and in some cases none at all”, 28.4% of medical schools offered either one or two hours over four years and 30.7% offered three to four hours. [8] Most of their limited training focused on oral cancer (81.7%), and oral anatomy followed by oral health and overall health. [8] The perception that there is a lack of oral training is a systemic problem in medical schools. In contrast, dental students are required to medical courses in their first year of dental school.

Oral health training has been incorporated into the curriculums at New York University Nursing Program, Boston University Physicians Assistants Training Program and others. At Boston University School of Medicine PA School, an inter-professional curriculum with approximately twelve hours of didactics and hands on training at the dental school, showed that a “significant amount of knowledge acquisition and long-term retention can occur after a short and focused

amount of instructional time in oral health. The students felt well prepared and willing to incorporate oral health concepts into their clinical practice.” [9]

The Army has its own training programs for medical residents, nurses, and physician’s assistants. According to the Inter-service Physician Assistant Program (IPAP) website, their curriculum includes a two-credit course about dental health that is taught in conjunction with public health. [10] The family medicine program at Womack Army Medical Center currently does not teach oral health education to their residents. In addition to increasing oral health education in the military medical training programs, a relationship between the medical and dental communities at each duty station should be created. Creating a better relationship between medical and dental, both on and off post, can improve the overall quality of care for the patient population.

Army Medical Care System

The National Defense Authorization Act for Fiscal Year 2017 has mandated organizational change for Military Medicine with the creation of the Defense Health Agency that will eventually manage over 400 military hospitals and clinics in all three branches of the military by 2020. While still in its early phases, this centralization of military health care may be beneficial in bringing our medical and dental communities with the standardization of training.

While civilian training programs may have several barriers to introducing oral health into their curriculum, such as lack of funding or no nearby dental schools [8], the United States Army has dental resources on every installation. There are 18 dental training programs including 1 and 2-year Advanced Education in General Dentistry, Oral and Maxillofacial Surgery, Prosthodontics, Endodontics, and Periodontics. The Dental Corps also has providers trained in Oral Pathology, Orthodontics, Pediatrics and Public Health.

WAMC serves more than 199,000 eligible beneficiaries in the region, the largest beneficiary population in the United States Army. [11] Unlike medical care, dependents and veterans do not receive dental care by military; they must purchase private dental insurance or pay out of pocket. WAMC's medical providers have the opportunity to educate their patients and intervene early for those who may otherwise be unaware of potential dental problems.

The centralization of the Army Medical Care System can have an exceptional impact on collaborative education. But before we can establish training and inter-professional collaboration, we must assess the basic knowledge, attitudes, and current practice behaviors of the WAMC medical providers. This will set a baseline to build a patient-centered treatment plan that includes oral health interventions in the medical facility. The capabilities for inter-professional collaboration and training in the military is being under-utilized and we have a responsibility to our patients to provide the best possible comprehensive care.

Methods

A link to a 20-question web-based survey (See Appendix) was posted on the WAMC Bulletin or emailed to medical providers including medical doctors (MD), doctors of osteopathic medicine (DO), physician assistants (PA), and nurses at Womack Army Medical Center at Fort Bragg, North Carolina. Data collection began in November 2018 and ended in January of 2019. The survey included simple participant characteristics such as profession and experience, as well as questions designed to elucidate providers' knowledge, views, and behaviors with regard to oral health care.

Summary statistics are provided for categorical variables and include the number of participants as well as the prevalence within each group. Chi-square tests of independence were used for

pairwise comparisons of categorical data. Multiple comparisons were accomplished using the Kruskal-Wallis test. Significance was declared at $P < 0.05$ for all tests. All data were analyzed by using SPSS version 25.0 (SPSS, Chicago, IL).

Results

A total of 103 participants initiated surveys via the online link. However, only 95 respondents (92.2%) completed the survey. The median time to complete the survey was 152 seconds (IQR 127-196). The eight incomplete surveys were excluded from the analyses. Among those included in the analysis, 57.9% (n=55) described themselves as nurses (RN or LPN). Physicians (either MD or DO) constituted 26.3% (n=25) of the sample while PAs and NPs comprised the remaining 15.8% (n=15).

Table 1 (See Appendix) shows the experience and educational characteristics of the sample. No differences were noted between the professions with regard to experience, training status, or education in oral health (all $P > 0.05$). The majority of respondents indicated that they had been in practice for more than five years (n=55, 58.5%). Only 31.9% (n=30) endorsed having had education or training in oral health care during their respective training programs. Overall, the majority of individuals reported having had five hours or less of oral health care education (n=20, 69.0%).

Despite these reports, 70 respondents (73.7%) stated that they received oral health care education while in the military. The PAs and NPs held similar views to nurses with regard to their opinion of the oral health care training received. However, physicians had a significantly more dissatisfied view of their oral health care training ($P=0.04$).

Table 2 (See Appendix) shows providers' behaviors and familiarity regarding oral health care. The majority of nurses as well as PAs and NPs indicated that they do not typically perform oral exams on patients. In contrast, nearly half of physicians reported performing oral exams (n=12, 48.0%). Unsurprisingly, a greater proportion of physicians (n=11, 44.0%) indicated that they would often suggest that patients follow up with a dentist or seek dental care, $P<0.001$.

Regarding knowledge of oral health care, most providers (n=71, 74.7%) indicated that they were not familiar with the term "Oral-Systemic link". No difference in familiarity was observed between the professions with regard to this term, $P=0.64$. In contrast, group differences were noted when respondents were asked about their familiarity with periodontal disease, early childhood caries, and their confidence in identifying oral lesions (all $P<0.01$). While no differences existed between PA/NPs' and nurses' knowledge of periodontal disease and early childhood caries, physicians were proportionally more familiar with periodontal disease (n=17, 68.0%) and early childhood caries (n=10, 40.0%) than either of the other two professions. However, when asked about one's confidence in identifying oral lesions, it was PAs/NPs who showed the most confidence with 86.6% (n=13), indicating that they were either very confident or confident.

Table 3 (See Appendix) elucidates providers' beliefs with regard to oral health care and inter-professional collaboration. When asked if medical professionals should be taught about oral health care all groups overwhelmingly agreed (n=84, 88.4%), $P=0.25$. Only a single PA/NP (6.7%) and three nurses (5.5%) disagreed, indicating that medical professionals should not receive oral health education. Similarly, when asked if all dental care should be completed by dental professionals the majority of respondents (n=66, 66.3%) asserted that dental care should be solely the responsibility of dental professionals. Again, no difference was observed by

profession, $P=0.74$. In response to the question “Does nutrition affect dental health?”, the majority of respondents from all professions ($n=89$, 93.7%) asserted that it does, $P=0.14$. Interestingly the only respondents who disagreed with the assertion were six nurses (10.9% of nurses).

Regarding oral health care education and inter-professional collaboration between the medical and dental communities, no differences were observed among respondents based on their professions, all $P>0.05$. The majority of respondents ($n=91$, 95.8%) indicated that medical providers would be effective in encouraging early intervention before oral health problems progress. The majority of respondents (81, 85.3) also indicated the belief that their profession required additional training on oral health care and prevention. Unsurprisingly, most respondents ($n=65$, 68.4%) asserted that dental professionals could best provide this additional training. Finally, as a natural extension of the previous opinions it was natural that 89.5% of respondents ($n=85$) asserted that medical and dental collaboration would be effectively improve a patient’s quality of life.

Discussion

Medical providers report a lack of training on oral health care which in turn leads to bad patient outcomes. Medical providers form relationships early on in a patient’s life and are considered a trustworthy source of information. Therefore, oral health care prevention and education should be integrated into medical visits from the beginning. Our study validated the overall lack of oral health knowledge among medical professionals at WAMC but with the majority expressing interest in expanding their oral health care education. Now that the knowledge gap has been identified, we can investigate a course of action on how to begin inter-professional training between our medical and dental professionals.

Our findings correlate with those of Ferullo et al., in that the majority surveyed (48.3%) received less than two hours of oral health care training in their training programs. Ferullo surveyed eighty eight U.S Medical schools and found that the majority of schools had between one to four hours (59.1%) of oral health care training in their curriculum [8]. Surprisingly in our study, 73.7% of respondents stated that they have received some oral health care training while in the military. We would need to assess the Army's training program curriculum to identify what type of oral health care training staff are receiving and if it is beneficial to their clinical practice. It may also be beneficial to add oral health competencies to the task lists of certain medical military occupational specialties.

In regards to overall knowledge, the majority of our surveyed professionals have never heard of the term 'Oral-Systemic Link' or 'Early Childhood Caries' (ECC). Research suggests a relationship between poor oral health to systemic health, including cardiovascular disease, respiratory disease, diabetes, and adverse pregnancy outcomes [7] – solidifies the importance of inter-professional collaboration. Dental caries is the most common chronic disease of childhood. Approximately 40% of children have dental caries by the age of 5. [1] As stated earlier and discussed by Langelier et al., children see their medical clinicians up to eight times by age two, whereas only 63% of children see a dentist before starting school. [4] Adults missed approximately 2,442,00 days of work due to acute dental conditions, while children experienced 1,611,000 days lost from school. [3] All medical providers would benefit from learning about the systemic and quality life consequences of poor oral health in adults and children.

The physicians are most dissatisfied with their oral health training, whereas the nurses and PAs are neutral, yet all are open to continuing education, specifically given by dental professionals.

This correlates with a survey by Acharya et al. in which the “majority of respondents felt the need for patient’s dental information to coordinate or provide effective medical care.” [12]

With effective training, early intervention and referral to dental providers will increase. In the studies surveying providers pre and post oral health training, all have had a positive effect on the students. Czarnecki et al., surveyed nursing students after inter-professional training with dental and pediatric dental residents and found that “the rotation for nurses – although only one week long – was quite effective in not only increasing their knowledge and improving their attitudes but also in increasing their readiness for inter-professional learning.” [13] At Boston University, the survey by Kaufman et al. of PA students pre- and post-training showed similar results that a “significant amount of knowledge acquisition and long-term retention can occur after a short and focused amount of instructional time in oral health.” [9]

Our study shows that the preferred method of oral health care training should be from dental professionals. Inter-professional collaboration can help everyone to understand that each of us plays an important role in health care and that we should treat the whole patient instead of focusing solely on our one specific specialty.

The Physicians Assistants responded that they are confident in identifying oral lesions yet they the majority (86.7%) only sometimes or rarely recommend their patients go to visit the dentist. There appears to be a disconnect in identifying and referring. A future study could investigate deeper in to what types of lesions they are identifying and if they are identifying and referring to dental providers correctly.

We acknowledge several limitations in our project that should be considered when interpreting the results. First, we were unable to access a comprehensive email distribution list from the

WAMC Public Affairs Department. This resulted in a smaller sample size and required the combination of job positions into larger groups to achieve statistically relevant data. Also, the limited participation of less than one hundred persons in our study does not give an accurate representation of the whole.

Second, the survey link was also posted on the WAMC weekly bulletin, which did not allow us to calculate a total sample size or response rate. In the future, a similar survey could be sent out to all providers in Army Medical Corps, resulting in a larger sample size and a more comprehensive exam of Army providers.

Third, the questions surveyed allowed for self-reporting. Self-reporting of past training in school may not be accurate due to selective memory. Also, the survey questions could be more specific to include images and provide a definition of terms to limit individual interpretation.

This pilot survey is the first of its kind in assessing oral health knowledge and attitudes of medical providers in the military health care system. Many surveys and studies of oral health curriculum implementation into training programs have been completed and all have had positive results – finding that collaboration and training between medical and dental is beneficial to the medical providers. The findings of this survey will serve as a baseline for military medicine moving forward and hopefully a catalyst to creating inter-professional collaboration between the Medical and Dental Corps and be consistent with the Defense Health Agency's mission of increased readiness, better health, better care and lower cost.

Conclusion

Our study revealed that primary care providers at WAMC have limited knowledge in oral health care due to insufficient training. However, the majority are willing to partake in oral health

continuing education in hopes to decrease oral health disparities, improve overall health, and build a positive relationship between medical and dental providers. The Army should explore adding general oral health education into medical training programs with lectures such as Smiles for Life, or by having a dental officer provide monthly or quarterly continuing education to medical staff. These findings provide valuable information for future inter-professional training in the United States Army, creating a patient-centered treatment system focused on prevention and early intervention in oral health.

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Appendix

Table 1. Respondent characteristics by group, n (%)

	Total	Nurse	Physician	PA/NP	P ^a
Number of years in practice					
Less than 5 years	17 (18.1)	10 (18.5)	6 (24.0)	1 (6.7)	0.23
5 - 10 years	22 (23.4)	10 (18.5)	8 (32.0)	4 (26.7)	
Greater than 5 years	55 (58.5)	34 (63.0)	11 (44.0)	10 (66.7)	
Received oral health care education in training program					
Yes	30 (31.9)	18 (33.3)	5 (20.0)	7 (46.7)	0.81
No. of hours of training received					
Less than 2 hours	14 (48.3)	10 (62.5)	3 (50.0)	1 (14.3)	0.51
3 - 5 hours	6 (20.7)	3 (18.8)	2 (33.3)	1 (14.3)	
6 - 8 hours	4 (13.8)	2 (12.5)	0 (0.0)	2 (28.6)	
More than 8 hours	5 (17.2)	1 (6.3)	1 (16.7)	3 (42.9)	
Currently in training program					
Yes	11 (11.6)	6 (10.9)	5 (20.0)	0 (0.0)	0.16
Received oral health care education while in the military					
Yes	70 (73.7)	42 (76.4)	18 (72.0)	10 (66.7)	0.77
No	16 (16.8)	7 (12.7)	6 (24.0)	3 (20.0)	
Don't recall	9 (9.5)	6 (10.9)	1 (4.0)	2 (13.3)	
Satisfaction with oral health care training					
Satisfied	19 (20.0)	10 (18.2)	4 (16.0)	5 (33.3)	0.04
Neutral	56 (58.9)	36 (65.5)	11 (44.0)	9 (60.0)	
Dissatisfied	20 (21.1)	9 (16.4)	10 (40.0)	1 (6.7)	

^a Significance is based on Kruskal-Wallis test

Table 2. Respondent knowledge and behaviors

	Total	Nurse	Physician	PA/NP	P ^a
Do you typically perform oral exams					
Yes	20 (21.1)	3 (5.5)	12 (48.0)	5 (33.3)	<0.001
No	75 (78.9)	52 (94.5)	13 (52.0)	10 (66.7)	
How often do you suggest patients seek dental care					
Often	22 (23.2)	9 (16.4)	11 (44.0)	2 (13.3)	<0.01
Sometimes	33 (34.7)	13 (23.6)	11 (44.0)	9 (60.0)	
Rarely	40 (42.1)	33 (60.0)	3 (12.0)	4 (26.7)	
Are you familiar with the term "Oral-Systemic Link"					
Yes	24 (25.3)	12 (21.8)	8 (32.0)	4 (26.7)	0.64
No	71 (74.7)	43 (78.2)	17 (68.0)	11 (73.3)	
Are you familiar with periodontal disease					
Yes	82 (86.3)	50 (90.9)	17 (68.0)	15 (100.0)	<0.01
No	13 (13.7)	5 (9.1)	8 (32.0)	0 (0.0)	
Have you heard the term "Early Childhood Caries"					
Yes	18 (18.9)	4 (7.3)	10 (40.0)	4 (26.7)	<0.01
No	77 (81.1)	51 (92.7)	15 (60.0)	11 (73.3)	
Confidence identifying oral lesions					
Very confident	12 (12.6)	4 (7.3)	3 (12.0)	5 (33.3)	<0.01
Somewhat confident	45 (47.4)	24 (43.6)	13 (52.0)	8 (53.3)	
Not at all confident	38 (40.0)	27 (49.1)	9 (36.0)	2 (13.3)	

^a Significance is based on Kruskal-Wallis test

Table 3. Respondent beliefs

	Total	Nurse	Physician	PA/NP	P ^a
Should medical professionals be taught about oral health care					
Agree	84 (88.4)	47 (85.5)	24 (96.0)	13 (86.7)	0.25
Neither agree nor disagree	7 (7.4)	5 (9.1)	1 (4.0)	1 (6.7)	
Disagree	4 (4.2)	3 (5.5)	0 (0.0)	1 (6.7)	
Should all dental care be completed by dental professionals					
Agree	63 (66.3)	40 (72.7)	15 (60.0)	8 (53.3)	0.74
Neither agree nor disagree	19 (20.0)	7 (12.7)	7 (28.0)	5 (33.3)	
Disagree	13 (13.7)	8 (14.5)	3 (12.0)	2 (13.3)	
Does nutrition affect dental health					
Yes	89 (93.7)	49 (89.1)	25 (100.0)	15 (100.0)	0.14
No	6 (6.3)	6 (10.9)	0 (0.0)	0 (0.0)	
Would medical providers be effective encouraging early intervention in oral health issues					
Very effective	47 (49.5)	29 (52.7)	10 (40.0)	8 (53.3)	0.35
Somewhat effective	44 (46.3)	23 (41.8)	14 (56.0)	7 (46.7)	
Not effective	4 (4.2)	3 (5.5)	3 (5.5)	0 (0.0)	
Should providers receive more training on oral health care and prevention					
Yes	81 (85.3)	45 (81.8)	23 (92.0)	13 (86.7)	0.49
No	14 (14.7)	10 (18.2)	2 (8.0)	2 (13.3)	
Who should provide oral health care training					
Dental professionals	65 (68.4)	39 (70.9)	19 (76.0)	7 (46.7)	0.09
Medical professionals	6 (6.3)	2 (3.6)	3 (12.0)	1 (6.7)	
Online resources	24 (25.3)	14 (25.5)	3 (12.0)	7 (46.7)	
Would medical and dental collaboration effectively benefit patients					
Very effective	47 (49.5)	27 (49.1)	12 (48.0)	8 (53.3)	0.54
Somewhat effective	38 (40.0)	20 (36.4)	11 (44.0)	7 (46.7)	
Not effective or not sure	10 (10.5)	8 (14.5)	2 (8.0)	0 (0.0)	

^a Significance is based on Kruskal-Wallis test

Survey Questions

1. What is your profession?
 - a. MD/DO
 - b. Physician's Assistant
 - c. Nurse Practitioner (NP)
 - d. Registered Nurse (RN)
 - e. Licensed Practical Nurse (LPN)
 - f. Other _____

2. How long have you been practicing in your field?
 - a. <5 years
 - b. 5-10 years
 - c. 4-6 years
 - d. >10 years

3. Are you currently in school or a training program such as residency?
 - a. Yes
 - b. No

4. Have you received any oral health care training in your training program?
 - a. Yes
 - b. No
 - c. Don't recall

5. If you responded yes to #4, how many hours of training did you receive?
 - a. <2hours
 - b. 3-5 hours
 - c. 6-8 hours
 - d. >8 hours

6. Have you received any oral health care training while working for the military?
 - a. Yes
 - b. No
 - c. Don't recall

7. How satisfied are you with your overall oral health care training throughout your career?
 - a. Very Dissatisfied
 - b. Dissatisfied
 - c. Neutral
 - d. Satisfied
 - e. Very Satisfied

8. Do you typically perform oral exams on your patients?
 - a. Yes
 - b. No

9. How often do you suggest your patients follow up with a dentist or seek dental care?
 - a. Hardly ever
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Very Often

10. To what extent do you agree or disagree that (all?) medical professionals should be taught about oral health care.
 - a. Strongly Disagree
 - b. Disagree
 - c. Neither Agree or Disagree
 - d. Agree
 - e. Strongly Agree

11. To what extent do you agree or disagree that ALL dental care should be completed by dental professionals.
 - a. Strongly Disagree
 - b. Disagree
 - c. Neither Agree or Disagree
 - d. Agree
 - e. Strongly Agree

12. How familiar are you with the term “Oral-Systemic Link or Connection”?
 - a. Very familiar
 - b. Somewhat familiar
 - c. Not at all

13. How familiar are you with periodontal disease?
 - a. Very familiar
 - b. Somewhat familiar
 - c. Not at all

14. Have you heard of the term Early Childhood Caries?
 - a. Yes
 - b. No

15. Do you feel confident identifying oral lesions in the mouth (i.e cavities, abscess, oral pathology)?
- Very confident
 - Somewhat confident
 - Not at all confident
16. To what extent do you agree or disagree that nutrition has an effect on dental health.
- Strongly Disagree
 - Disagree
 - Neither Agree or Disagree
 - Agree
 - Strongly Agree
17. To what extent do you do you think primary care providers (i.e doctors, physician assistants, nurses) can help identify and encourage early intervention before oral health problems progress?
- Not very effective
 - Somewhat effective
 - Moderately effective
 - Very effective
 - Not sure
18. Do you believe your profession requires more training on oral health care and prevention?
- Yes
 - No
19. Where would you prefer additional training from?
- Online resources
 - Medical professionals
 - Dental professionals
20. To what extent would inter-professional collaboration between your local medical and dental units improve patient's quality of life?
- Not very effective
 - Somewhat effective
 - Moderately effective
 - Very effective
 - Not sure