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Survey Analysis of Parental Awareness and Behaviors Regarding Children's Dental Care and Dental Infection Control

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Methodologies

Western University of Health Sciences, College of Dental Medicine (WesternU CDM) contributed to a survey focused on dental care conducted with dental patients in early 2014. The survey focused on patient attitudes, knowledge, and beliefs regarding dental care for children and dental infection control for themselves and their children. The topics included: the age a child should first see the dentist, use of dental sealants, and the use of disposable supplies in the dental office. This survey was conducted online among 304 adults 18 to 65 years of age throughout the U.S. An augment survey was also conducted among 75 respondents aged 18 to 65 who fell below the U.S. poverty threshold. These interviews were conducted by telephone using the same format as the main sample.

Dental Care by Age One

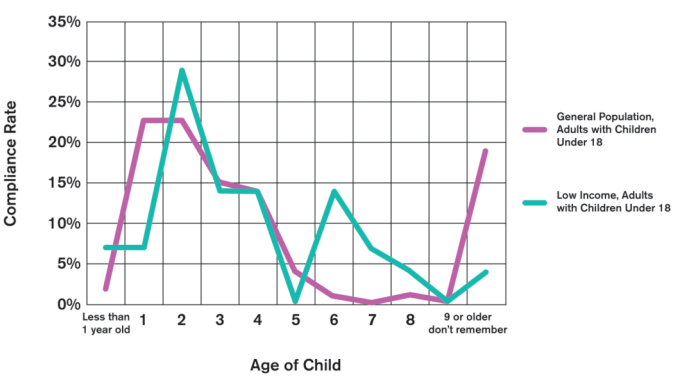
The American Academy of Pediatric Dentistry recommends the children be evaluated by a dental professional no later than twelve (12) months of age (AAPD, 2012). Similarly, the American Academy of Pediatrics recommends that children receive an oral health screening from their primary care provider by six (6) months of age (AAP, 2014). This recommendation is critical, as it aligns with The American Academy of Family Physicians direction that describes the primary care practice as, "the patient's first point of entry into the healthcare system and as the continuing focal point for all needed health care services." (AAFP, 2014)

Of the 102 respondents to the consumer survey who are parents of children under the age of eighteen, the average age for the first visit to the dentist visit reported at 2.5 years old.

Of the parents of children who were aware of the recommendation of a dental care by age one, most stated that they did not think the visit was necessary (67%) or that the pediatrician or doctor stated it was not necessary (22%)

Of those parents that were aware of the recommendation of a child's dental visit by age one, the most frequent source of this message was the child's doctor or pediatrician (41%), followed by media (32%), the parent's own dentist (23%), and a family member or friend (5%).

Average Age for Taking Child to First Dental Visit

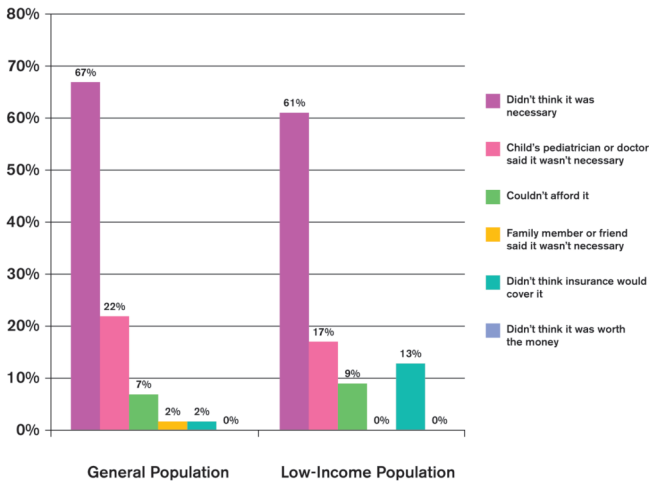


The evidence of social inequalities is witnessed in the results of consumer surveys completed by low-income parents. Their child's first visit to the dentist was at an average age of 3.4 years old, more than a year older than the general population. Of this population, those who were aware of the recommendation to seek dental care by age one, six out of ten parents did not think it was necessary (61%). A small percentage of this group's pediatricians reinforced this belief (17%). Furthermore from the low socioeconomic respondents, some of the parents replied that they could not afford dental service for their child (9%), and some were not aware that the dental visit would be covered by their insurance (13%).

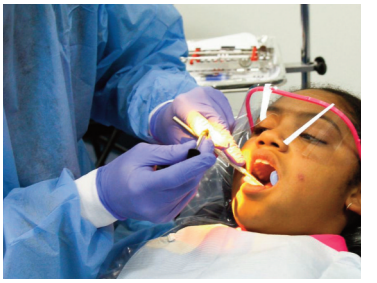
Of concern, fewer than half (43%) of parents within the general population are aware that dentists recommend children have their first dental exam by age one.

In addition, women are more likely to know this than men. Particularly, 74% of the females surveyed were aware of the recommendation versus 31% of the males. Likewise, 26% of the females were not aware of recommendation versus 69% of the males.

Reasons Parents Didn't Take Children to Dentist by Age One



Dental Sealants



Dental sealants are thin plastic coatings that are applied to the grooves on the chewing surfaces of the back teeth to protect them from tooth decay. In an article co-authored by the Center's for Disease Control (CDC) and American Dental Association (ADA), the following comments on the use of sealants was recommended: *"Evidence supports recommendations to seal sound surfaces and noncavitated lesions, to use visual assessment to detect surface cavitation, to use a toothbrush or handpiece prophylaxis to clean tooth surfaces, and to provide sealants to children even if follow-up cannot be ensured." (Gooch, 2009)*

The U.S. Surgeon General's report on oral health indicates that sealants can reduce decay in school children by more than 70 percent (U.S. Surgeon General, 2000). In the consumer survey, 95% of parents stated that their child's dentist recommended sealants. The vast majority of these parents (88%) took this advice and had the sealants applied.

Infection Control in the Dentist Office

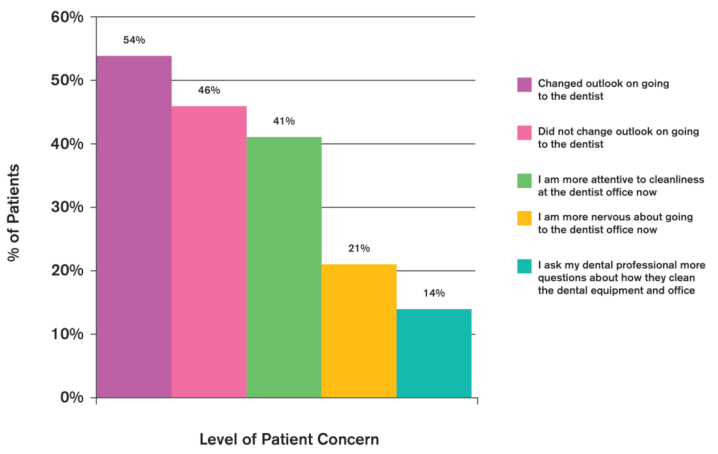
Recent issues of infection control in the dental setting have been reported throughout the United States. One of the most current headlines included 60 patients who may have been exposed to blood-borne viruses in an Oklahoma oral surgeon's office. This incident has been described to have been the country's first known outbreak of hepatitis C among dental patients (Tulsa Health Department, 2013). In another case, 20 patients in Hawaii may have been ex-

Disposable bib holders eliminate the risk of cross-contamination.

posed to viruses like Hepatitis because of the use of unsterilized dental instruments (Garcia, 2014).

In the patient survey conducted, approximately one-third (35%) of adults recalled hearing or reading news stories about dentist offices that exposed patients to infectious diseases. For half of these people (54%), it has changed their outlook on going to the dentist. For those who indicated their outlook had changed, they now report as being more attentive to the cleanliness at the dentist office (41%).

How Negative News Stories on Dental Infection Control Influence Patients

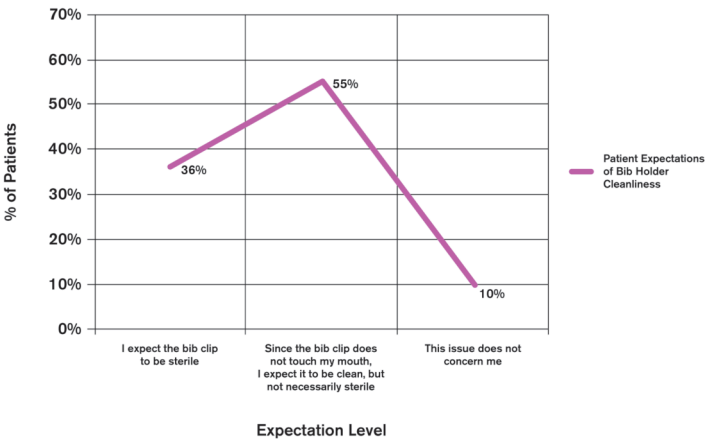


Others reported being more nervous about going to the dentist (21%). Respondents did state that they would ask their dental professional more questions about how they clean the dental equipment and office (14%). 34% of adults expressed concern about the cleanliness of the bib holders their dentist uses. 9 out of 10 respondents expect the bib clip to be clean or sterile, which was similarly reflected in the lower-income cohort (83%).

Equipment utilized in the dental office can potentially harbor pathogens if not properly disinfected. Even something as simple as the bib clip around the patient's neck can harbor pathogens. Although a bib clip is considered a non-critical instrument it needs to be reprocessed between patients by intermediate or low-level disinfection (CDC, 2008). According to a study performed by Tufts University School of Dental Medicine and the Forsyth Institute, utilizing bib clips at a hygiene clinic "chains that were used throughout the day without being cleaned between patients' appointments showed high concentrations of bacteria on their surfaces." This study also found that, "40% of the bib clips tested post-disinfection retained one or more aerobic bacteria and that 70% of bib clips tested post-disinfection retained one or more anaerobic bacteria" (Alt-Holland, 2013). Furthermore, the ADA made a recent comment about infection control in dental settings. According to Dr. Faiella, "While isolated cases occur, it understandably raises questions about infection control in the dental office. The ADA encourages people to talk with their dentists, who will be glad to explain or demonstrate their infection control procedures" (ADA, 2013).

For those respondents who expect a sterile bib holder, 30% said they would definitely or probably ask for a disposable bib holder on their next visit. This was more apparent from the low-income group because a greater proportion (72%) of this group commented that they would ask for a disposable bib clip the next time they visited the dentist. All respondents feel their dental practitioners are doing everything they can to create a clean environment and provide sterile equipment. In order to ensure quality assurance for infection control, WesternU CDM utilizes disposable bib holders in all community-based clinics.

Summary of Patient Expectations of Bib Holder Cleanliness



Organized Dentistry and Inter-Professional Collaboration

The trends in the consumer survey regarding both communicating of a child's dental visit by age one, as well as the recommendation of an oral exam by six months by a primary care practitioner, do point toward the positive influence of inter-professional collaboration on oral health. There is also a lesser percentage (23%) of messaging from the dental profession regarding the establishment of a dental home by age one. At WesternU the focus in the DMD program is a "paradigm shift in dental education" leading to general practice dentists that are prepared to see children in all practice settings by age one. This new cohort of dentists will lead the transition of the profession towards early intervention to eradicate early childhood caries.

The World Health Organization (WHO) and its partners recognize inter-professional collaboration in education and practice as an innovative strategy that will play an important role in mitigating the global health workforce crisis. Inter-professional education occurs when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes. Collaborative practice happens when multiple health workers from different professional backgrounds work together with patients, families, caregivers and communities to deliver the highest quality of care. It allows health workers to engage any individual whose skills can help achieve local health goals (WHO, 2010). WesternU CDM works with multiple health professions, such as nurses, medical doctors, physician's assistants, and other fields, to establish an opportunity to provide high quality oral health care in the primary health setting. This unique model encourages health professionals to adopt early oral health intervention practices.

Conclusion

This consumer survey displays the dental patients' attitudes, beliefs, and knowledge of infection control in the dental office, the age of the child's first dental visit, and use of dental sealants. Continued messaging on the importance of establishing a dentist-patient relationship by age one by all health professions will be critical to parents' knowledge and use of this information. Also, the communication on the importance and use of dental sealants will be crucial to the continued eradication of early childhood caries. Information regarding utilization of proper infection control technologies will continue to help educate the dental consumers on what type of products are available for their use in the dental office.

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