

The Importance of Implementing Oral Health Care Education in the Lehigh Valley

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Abstract

A severe need for dental hygiene education in low-income areas is apparent. The dental clinics associated with Lehigh Valley Health Network are representative of low-income areas throughout the nation. Many of the conditions treated at the clinic are a result of poor oral hygiene and are clearly preventable. The purpose of this quality improvement project was to propose an effective patient education system to teach the importance of essential oral care and explain techniques necessary to maintain good oral health. Observation was done at the 17th Street Dental Clinic; and an informational pamphlet and video tutorial are proposed to provide better patient education. The improved pamphlet and video are intended to create an effective means to inform patients about the risks associated with poor oral health; and, help patients access the information needed to establish a proper daily oral hygiene routine. It is expected that after the implementation of the subject proposals there will be a decrease in the number of patients with preventable dental problems, such as periodontal disease and caries. For the future it is recommended that alongside an informative pamphlet, a multi-lingual video tutorial on routine oral hygiene be presented systematically to patients, for example in waiting areas or during treatment.

Introduction

Education is arguably one of the most important, and effective aspects of health and physical wellness. Not only does being educated help a person understand their body, it also provides the specific information necessary to make better life choices. In dental medicine it appears that, the need for patient education is pressing. In the Lehigh Valley Health Network, two dental clinics serve as the main resources for dental care to low-income residents. The majority of the patients are uninsured or financially unstable; and that patient base is expanding every year creating increasing pressure on an already burdened program.

Poor oral hygiene is an epidemic throughout the world including the United States. In the United States the Center for Disease Control (2012) reports that, one out of every two American adults over the age of 30 has periodontal disease. Periodontal Disease is a bacterial infection of the soft tissue supporting the teeth (Eke, Dye, Wei, Thornton-Evans, & Genco, 2012). A recent study done by the CDC had astounding results. In 2009 and 2010 it was estimated that 47.2% or 63.8 million of American adults suffer from mild, moderate, or severe cases of periodontitis (Eke et. al, 2012). People suffering from periodontitis are 40% more likely to have chronic disease (Barker, 2012). The reason that the bacteria build up on the teeth creates an area that is likely to become re-infected. The immune response will attack the infection and cause chronic gum inflammation (Barker, 2012). Chronic inflammation of the mouth will ultimately weaken the body's ability to fight off infection and lead to other conditions, for example, diabetes. Dental caries is another common disease in patients with poor oral hygiene. Caries, or a cavity, is characterized by decay in the tooth enamel, caused by bacteria. Although this is a manageable

condition without a proper oral hygiene compliance program the caries will continue to occur (Hygiene-related diseases, 2014).

Many seemingly unrelated health conditions may result from poor oral hygiene, which may have profound negative affects on the overall health of our population. According to a database regarding “Adult Health” done by the Mayo Clinic (2013), chronic diseases linked to poor oral health include: endocarditis, cardiovascular disease, premature birth and pregnancy issues, diabetes, HIV/AIDS, osteoporosis, and Alzheimer’s diseases. All of these chronic diseases can arise from or be aggravated by poor oral hygiene. Oral disease is a neglected epidemic because little has been done to create a sense of urgency about getting preventative care to those having the greatest risk. Therefore, it is critical that the population is educated about the consequences of poor oral hygiene and what those individuals can do about it. Awareness of the information and making dental care a more prominent part of social consciousness will improve overall health significantly (Allukian, 2008).

The figure below is data from a survey done in 2008 by the Center for Disease Control (Bloom, Simile, Adams, & Cohen, 2012). The graph shows seven different categories with the percentage of adults between the ages of 18-64 years with mouth or tooth problems that did not seek dental care in the preceding six months. The categories are divided up into the reasons for not seeking the care. Out of the categories only 3 are related to the patients not having adequate resources, those 3 are; “could not afford/no insurance, waiting for an appointment, and not having transportation”. The other 4 categories representing 57% of the patients are related to the patient not knowing about oral hygiene, those categories include “didn’t think it was a problem, the problem went away, fear, and those who didn’t think a dentist could fix it are all not properly educated in regards to dental medicine”. If they were better educated about the risk factors and importance of maintaining proper oral hygiene then it is believed there will be a decrease in the percentage of people who do not go to the dental office when they have an issue.

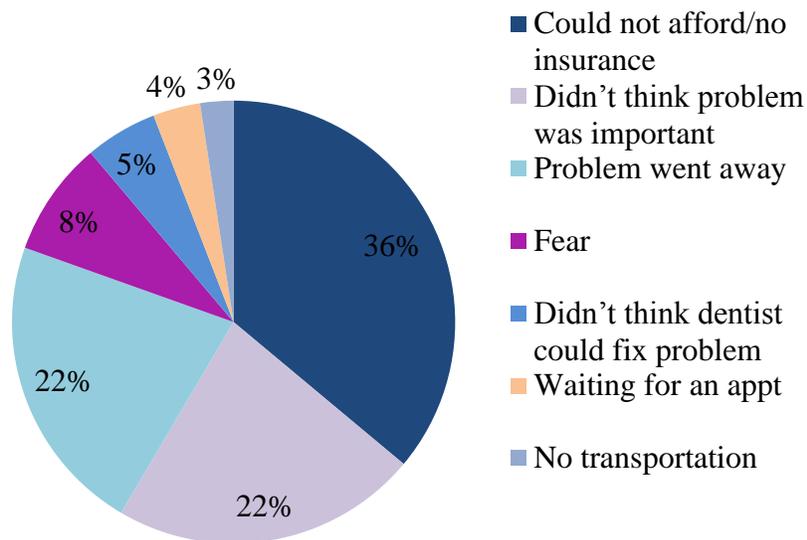


Figure 1. Chart of the data collected from the CDC of adults aged 18-64 within a 6-month period with dental related problem who did not seek professional help or advice

This data suggests that an important component of any education program should also include information about resources for those who cannot afford care or have the means to get to the dentist. The information provided in the pamphlet should include the options for assistance with paying for dental care, as well as other types of resources available to them through the hospital to ensure better health.

Finding a unique way to reach out to this specific population in the Lehigh Valley Health Network about the significance of oral hygiene and ways to improve their oral health will reduce the number of patients with urgent and severe dental problems, as well as reduce their chronic diseases. This would reduce the number of patients coming into the clinic with a dental problem and therefore benefit the overall network.

Because there are so many patients that require care, it is important that dental issues that can be prevented are prevented. A first step to prevention is education about good daily practices. It may be difficult to reach out to patients outside our comprehensive care program, in the Lehigh Valley Health Network, due to a lack of access to technology or a means of communication; however, it may be possible to educate current and new patients. The goal of this effort would be to see a reduction in the number and severity of cases and an overall improvement in patient oral health.

Methods

Our observation of clinical practice at the 17th Street clinic in Allentown, PA provided better understanding of patient population, level of education, and nature of their dental problems.

While the clinic has a pamphlet for oral hygiene education, its' content and distribution could be improved. The current program pamphlet needs to be revised and adapted for the current patient pool, according to their respective reading skills and language. During observation, it was noted that a large population of the Lehigh Valley are not native English speakers and are unable to read; therefore it is imperative that this is taken into account for the new pamphlet. When improving the content and information it must be informative and representative of proper oral hygiene in the simplest way possible. Ideally the improved pamphlet will also include pictorials for visual understanding. The pamphlet will need to include information regarding proper daily routine, possible consequences of not following a routine, and understanding overall oral health. In addition to improving the written information, distribution of the pamphlet is equally important. In order for the program to be successful it needs to reach as many patients as possible and, preferably be reviewed with the patient by a trained professional.

Creating a multi-lingual video tutorial to supplement the proposed pamphlet would also help get the information across to patients more effectively. The information needs to be understood by as many people in the community as possible. To insure the information is reaching the patients it would be beneficial to have the video playing in the waiting areas, as well as the treatment rooms encouraging questions. The video will be beneficial for patients whose respective reading skills and language are not as strong. Alongside the pamphlet and video, the ultimate step to implement the program and follow-up with patients.

Expected Results

According to a study done in the Journal of Clinical Periodontology, patients who undergo a specific preventative program were seen to have reduced gingivitis and a reduced progression of periodontitis and caries, while patients who just underwent dental care had no change in symptoms (Axellson, 1981). This shows that some form of education is crucial in making the right steps towards proper oral health. After the new program is executed, we expect that patients will be more educated about the topic and therefore aware of the importance, ultimately resulting in a reduced number of patients who will need follow-up treatment.

Another study done by the International Dental Journal on the Problems and Proposals for recording gingivitis and plaque states that a system that allows patients to physically see the healthiness of their mouth would increase patient compliance and prevention for the future. This proposal states that, for oral hygiene in particular, recording the frequency of occurrences of dental surfaces that are covered in plaque, as well as the occurrence of inflamed or bleeding gums would help patients become more aware. By using these parameters, patients would be able to visibly see and understand what should and should not be present in their mouths. (Ainamo, J.). Using the results of this study, it is assumed that after the proposed education plan were to be implemented in the Lehigh Valley; patients would become more aware of their oral health. Hopefully, through more education, patients will see the need to continue and maintain proper dental health.

Conclusion

In order for there to be significant improvement the plan needs to be implemented and reviewed with the entire staff in the dental clinic. To assess the new proposed programs impact on the clinic patients it is necessary to collect data and analyze it to see statistical change. The data will hopefully show how many of the patients went through the proposed education program had improved oral hygiene. Analyzing the data regarding the need for follow-up care following the education will also indicate whether or not the patients are improving their oral hygiene. The program can only help the clinic and patients become healthier and more aware of the importance the oral cavity has on one's overall body. The conclusions from this data analysis will either show that the education the patients receive is improving the overall oral health of the Lehigh Valley or that it is not and there may be adjustments or more improvements that would need to take place. However, initially the simplest information is predicted to show significant improvements. This proposed program will help the entire Lehigh Valley Health Network community improve the quality of life for patients.

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