

NEW YORK CITY COLLEGE OF  
TECHNOLOGY  
DENTAL HYGIENE DEPARTMENT

DEN 2413 – Introduction to Public Health

Service Learning Field Project Activity

ARMY HYGIENE

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## Introduction

Proper oral hygiene care involves daily removal of plaque/ biofilm from all surfaces of the teeth and structures in the oral cavity, including the tongue and tissue. Dental plaque is a sticky, colorless film of bacteria that is constantly forming and adhering to structures in the oral cavity; primarily the teeth. When saliva, food and acidic fluids combine, plaque forms between the teeth and along the gingival margin. Plaque is constantly forming, which is why it is crucial to maintain proper oral hygiene care at home at least twice a day. If plaque is not properly removed it can flourish and cause various complications such as halitosis or bad breath, carious lesions, and periodontal disease, involving bone loss making the effects irreversible. Proper oral hygiene can prevent all these complications that are induced by plaque.

Oral complications can have effects on the body systemically and it is oftentimes ignored by majority of society. Many people are ignorant to the fact that blood circulation does not bypass the oral cavity. A “simple” tooth abscess can lead to a brain abscess resulting in mortality if not caught in time. This emergency can be avoided if oral hygiene care was done properly. According to an article the Center of Disease Control and Prevention (CDC) published, “Some adverse consequences of oral diseases (eg, tooth loss, pain) can be avoided by early treatment during regular dental visits” (Azofeifa,Intro). Neglecting oral hygiene care can lead to complications that have a major impact on various components of one's life such as performing normal daily activities. However, at times people are unaware of the complications that can arise from improper oral hygiene care. This lack of knowledge and education is seen in the members of the Army. Members of the army are being sent home because they prioritized other things

over oral hygiene, leading to oral complications disabling them from completing their full stationary duties.

“Oral diseases can cause impaired duty performance, work loss, restricted activity, poor diet, difficulty pronouncing words, inability to sleep, and excruciating pain” ( De La Cruz). Due to the pain, there were many dental related emergencies, all of which could have been prevented with proper oral hygiene care. With many members and recruits being sent home, the numbers of people able to actively serve has been decreasing. This is where Dental Hygienists can serve as educators and promoters of oral health. Through setting up meetings at Army recruitment centers, Dental Hygienists can educate members on the importance of oral health and teach proper methods of effective daily plaque/biofilm removal. By educating and providing proper instructions and guidance, less recruits and members will be sent home resulting in effective serving time.

### **Assessment**

-Identify the target population. What is the status of their oral health and what are their needs?  
What does the published literature indicate about their oral health status and needs?

Our target population is the United States Army. According to the Military Health Systems Communication Office, in 2008, 40 percent of DoD Selected Reserve troops were classified as unfit for duty, due to poor oral health. Members of the army present with oral complications such as dental caries, dental erosion, gingivitis and periodontitis. These oral implications are primarily the result of poor oral hygiene care as well as improper nutrition

intake and stress due to the war ridden environment and or substance abuse. These oral diseases are common, and may cause pain and disability in all age groups and individuals.

Most adverse consequences from oral diseases can be avoided by having early detection and early treatment through regular dental visits. These oral complications can be prevented with proper home oral care and proper dental office care. Our targeted population need further education and promotion of oral health care and proper nutrition.

### **Planning**

-Develop specific goals and measurable objectives to meet the oral health needs of the target population. Based on the assessment findings, what type of health promotion/education program do you need to develop? How will you develop your program, including alternatives?

Our goals focus on educating this population to prevent the occurrence of oral health conditions in those that have not acquired them and in preventing the progression in those that already have presented with them. We want to focus on the importance of proper oral hygiene involving brushing, flossing and rinsing. We want to be able to measure the difference in this populations knowledge of oral hygiene before and after our education program. We will develop the program using brochures and our poster board as visual aids for our population to learn the importance of oral hygiene and the proper techniques and steps to take when brushing, rinsing and flossing. We also have a mouth model with toothbrush incorporated as an interactive manner to give our targeted population a hands on experience and therefore implementing a better way of education and promotion of oral health.

Our main program goal was to educate the population on proper oral hygiene methods. Our measurable objective for the population we worked with consisted of their level of knowledge and confidence in regards to oral hygiene. This was evaluated before and after the presentation when we consulted and asked questions to the group to help determine where their level of information was. This education program was chosen based on the findings that most troops are unfit for duty to poor oral health.

### **Implementation**

-How will the goals and objectives be met? What materials, activities and/or methods will be or can be used to accomplish the goals and objectives? What tools do you need (i.e. pamphlets; brochures; video; audio)? Where and how do you present your program?

Education and awareness has a major impact on the avoidance of dental emergencies in the army. The primary goal is to make sure that before army recruits are stationed, they are fully aware on how to maintain a healthy oral cavity and the adverse effects that can result due to improper oral hygiene. Appropriate methods and materials must be used in order to demonstrate oral hygiene instructions. Education starts before members are sent out, that is the reason why we chose a recruiting Army center. Visual props are one of the most effective methods in education. The group made a poster which included images, as well as instructions, on how to properly brush, rinse, and floss. The poster also included adverse effects that result due to improper oral hygiene care. The poster was placed in the middle of the room where it was seen clearly by the audience.

Props such as a mouth model and a toothbrush, dental floss, and mouthwash were used as the members of our group introduced each oral hygiene care aid. In order not to overwhelm the recruits, each member of the group took on the role of educating the recruits on flossing, rinsing, and brushing, answering any questions they have regarding each aid. In addition to the poster, the group put together a brochure that included similar images and instructions from the poster. The brochure was created so that the recruits can take it with them where they will be stationed and reference it whenever they are unsure on how to effectively execute hygiene instructions. The group provided the recruits with a toothbrush and oral rinse in order to put the oral hygiene instructions they were taught to use.

### **Evaluation**

-What available tools for program and project evaluation will you need? How to measure effectiveness? How will the group conduct the re-evaluation of goals and measurable objectives? Did the program accomplish what was initially planned? If not, how to address the issues that arose?

In order to assess the knowledge that the recruits have on how to maintain an healthy oral cavity, we asked several questions before we started the presentation. One question was: Do your gums bleed when you brush and how many minutes do you brush for? Two recruits stated that they bleed everytime they brush and thought that meant they were brushing efficiently. One reported that he brushed for 4 minutes and another shared that he brushed for five minutes. Another question was: Do you use an interdental aid? All of the recruits responded that they did not use a form of an interdental aid. Last question was: Do you feel a burning sensation when

you rinse? Three recruits stated that they thought the burning sensations meant that the Listerine works and the bacteria is being killed.

These questions gave us an idea on the limited knowledge these men had regarding taking care of their oral health and the importance of slowly demonstrating and presenting each oral hygiene care aid. After the presentation, surveys were given to the recruits in order to evaluate the effectiveness of the project and their level of oral hygiene knowledge compared to their knowledge before the presentation. Out of the nine surveys that were filled out, all recruits answered that they feel more confident with their oral hygiene knowledge after the presentation. Two of them reported that the army needs improvement on educating members on how to maintain proper oral hygiene care. One member shared a story about an army colleague who was sent back due to a bad cavity that prevented him from properly serving, he expressed how that made him realize he needs to follow proper oral hygiene instructions in order to prevent that from happening to him. The evaluation after the presentation assured us that all recruits understood the adverse effects that can arise due to poor oral hygiene care and that they had the proper educational tools, such as the brochure, as a guide to help maintain their oral hygiene. This proved that the program accomplished its goal of educating the recruits with proper oral hygiene instructions and informing the consequences that can arise if oral hygiene is neglected.

## **Conclusion**

Oral hygiene is an ongoing practice that requires our attention. Oral hygiene instructions may be one of the best preventive measures to reduce dental decay, erosion, gingivitis and periodontitis in the Army population, especially if there is good patient compliance. A motivated patient can



achieve significant reduction in the incidence of oral diseases when oral hygiene is constantly improved. Motivating was one of our main goals when developing our educational program. One of the main things we learned from this project is that there is a great lack of awareness on the importance of frequent oral hygiene in the target population. We, as Dental professionals, decided to take this opportunity to use our knowledge to help and motivate the Army population.

In order to reduce the potential risk of oral diseases, we wanted to make sure our target population understood that these oral complications can be easily avoided with proper home oral care, which will also reduce the amount of members being sent home due to oral health problems. Educating them on proper brushing and flossing technique, as well as recommending the use of a chemotherapeutic rinse after mechanical hygiene, provides a great way to improve their overall gingival health.

## References

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Participation Form 2019

Your Name: Kenia Pichardo

Name of the Site: U.S. Army Recruiting Station

Address of the Site: 8516 4th Avenue 2nd Floor Brooklyn, NY 11209

Date of Visit: February 25th, 2019

Group Members: Kenia Pichardo, Jebunnaheer Chowdhury, Lourys Mejia and Saja Musa

Your Responsibilities:

- Written Report: Assessment and Planning
- Oral Presentation: In the oral presentation, my role was to introduce our topic and the baseline information for the population we were presenting to. I spoke about what biofilm/plaque is, how it develops, the importance of it and how it affects our oral health.

As a group, we worked together as a unit gathering information for our oral presentation and for this paper. We gathered data and images for the brochure, the poster and the surveys and we presented this data to our population of choice in order to educate, promote oral health and provide a basis of motivation.

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Participation Form 2019

Your Name: Jebunnaher Chowdhury

Name of the Site: U.S. Army Recruiting Station

Address of the Site: 8516 4th Avenue 2nd Floor Brooklyn, NY 11209

Date of Visit: February 25th, 2019

Group Members: Kenia Pichardo, Jebunnaher Chowdhury, Lourys Mejia and Saja Musa

Your Responsibilities:

- Written Report: Introduction, References and Formatting for the Brochure
- Oral Presentation: During the presentation, I spoke about how oral health influences our army recruits. This included information from literature on the reasons its most important and the complications that have come from lack of knowledge as well as implementations of oral hygiene care.

As a group, we worked together as a unit gathering information for our oral presentation and for this paper, creating the brochure, the poster and the surveys as well as presenting data and educating our population of choice.

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Participation Form 2019

Your Name: Lourys Mejia

Name of the Site: U.S. Army Recruiting Station

Address of the Site: 8516 4th Avenue 2nd Floor Brooklyn, NY 11209

Date of Visit: February 25th, 2019

Group Members: Kenia Pichardo, Jebunnaher Chowdhury, Lourys Mejia and Saja Musa

Your Responsibilities:

- Written Report: Conclusion and Proofreading of Final Draft
- Oral Presentation: During the presentation, my focus was oral hygiene instruction and the importance of it to the population we were addressing. Along with Saja Musa, we instructed the population step by step on the proper methods of brushing, flossing and rinsing. We also educated our population on the different types of aids that are available to us depending on our oral health status or condition.

As a group, we worked together as a unit gathering information for our oral presentation and for this paper, creating the brochure, the poster and the surveys as well as presenting data and educating our population of choice.

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Participation Form 2019

Your Name: Saja Musa

Name of the Site: U.S. Army Recruiting Station

Address of the Site: 8516 4th Avenue 2nd Floor Brooklyn, NY 11209

Date of Visit: February 25th, 2019

Group Members: Kenia Pichardo, Jebunnahe Chowdhury, Lourys Mejia and Saja Musa

Your Responsibilities:

- Written Report: Implementation and Evaluation
- Oral Presentation: My role for this presentation included educating members of the army on the importance of properly using home care aids. Along with Lourys Mejia, we instructed the population step by step methods on how to effectively brush, floss, and rinse. We also educated our population on the different types of aids that are available depending on the oral health status or condition of the patient.

As a group, we worked together as a unit to gather information for our oral presentation and paper, as well as finding data and images for the brochure, the poster and surveys.