

Lifeline Express Dental Camp – An Experience Afar Expectation

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Abstract: The purpose of the article is to put a glance on the oral health conditions of the rural and urban areas of the country. This particular paper is the experience of a group of dental practitioners who served the world's first hospital train, lifeline express at a district in UP, Ghazipur. The clinical experience was afar expectation and gave a clue on the prevailing oral health conditions of our country. But the contribution of Impact India Foundation is exceptional and is undoubtedly of international fame. It also suggests that it is imperative for the Government to set a strong background for the Community Health Initiative programme and also help and support models like LLE to stand.

Keywords – Community health, Impact India Foundation, LLE- Lifeline express.

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I. Introduction

Despite immense accomplishments in the oral health of populace globally, problems remain in many communities all over the world - particularly among under-privileged groups in developed and developing countries. Over the past three decades the oral health of Indians has improved. Most oral disorders and diseases are found less common today than they were 30 years ago. Many oral disorders and diseases are preventable; yet, oral health has not been practically promoted. Furthermore, access to oral health care is limited, largely due to inadequate insurance coverage and a limited supply of providers. Substantial oral health disparities between populations of different income levels, ages, and cultures also exist. Ignorance is a huge cause for the wide prevalence of practices that are detrimental to oral health in India. To improve the oral health of the people, World Health Organization has set the promotion of self care of as one of the goals for the year 2020. Conceding the outlook of WHO, the Impact foundation in association with UNDP, UNICEF and WHO initiated first hospital on train to outreach the requirements of underprivileged patients in the country. ¹(Impact India Foundation, CHI Process Document May 2012)

II. Aim of the Study

the rationale of Impact India Foundation, the present study aimed at the interpretation of the clinical findings observed during the dental camp held in the lifeline express train in November 2015 at Ghazipur.

III. Objectives of the Study

- Screening of the rural patients of the local area.
- To diagnose the oral diseases prevalent in the constituent population.
- To provide the preventive and therapeutic treatment.

IV. Material and Methods

As recognized, the notion of the Lifeline express is modeling and executing the Community Health. It implies that if the disable patient cannot get to the hospital, the hospital should reach them. There are certain mandates in Impact foundation and LLE. **Primarily** it includes initiation, augmentation and intensification action against those causes of massively prevalent impairment against which there exist a strong and potential way of prevention and control. **Secondarily**, it aims at treating mass of disabilities like sight, hearing, mobility and correction genetically induced craniofacial anomalies like cleft lips/palate. Considering the aims of the

Impact foundation and LLE, the following epidemiological survey included total 1263 patients, age ranging from 18-80 years who seems to be those vulnerable people who face challenges to access the oral care. Vis-à-vis dental facilities, LLE had two dental chair units which were electrically operated with shadow less lamp, spittoon, three-way syringe, micro motor, airtor, scalar, instrument tray and suction. It had one portable dental chair with suitcase unit fitted with complete dental unit. There were two autoclaves for sterilization purpose and two commanding generators of 125 KVA for uninterrupted power. The train also has a recovery room, meeting room/conference hall, auditorium, counseling room for training sessions for up to 50 persons, facilities for performing x-ray including dental and routine laboratory investigations. Medical and dental surgeries commonly performed include cleft palate repair, polio sequelae repair, cataract, ear surgeries and dental extraction.

The sponsors for our project were Mahindra & Mahindra Limited who in coordination and consultation with district administration assessed the needs of an area. After receiving a formal request, assessment of staff services was made available by the district hospital administration (Ghazipur, UP) and the dates were finalized. Arrangements were made for large outstation health teams for accommodations and food. Indian Railways coordinated movement of the LLE, with parking at sidings along with provision for water, electricity, and leveling of the siding. Medical, dental and paramedical professionals offered their services and expertise on a voluntary basis. Local and national media informed the local people about the services of the LLE and acquired funds from multinational corporations and firms.

Methods

The study was conducted for 7 days in November 2015 in the remote area of Uttar Pradesh. The dental camps started with the registration of the patients who wants dental checkup or treatment. The volunteers are assigned with the duties of registration, maintaining the waiting area of the patients and appointments and follow-ups. These volunteers represent different NGOs and paramedical students. After thorough examination by the efficient dentist, the patients were advised for the appropriate treatment. The dental procedures like extraction, restoration, scaling, x-ray and minor surgery were performed after taking the informed consent.

V. Results

Although the lifeline express had voyaged in diverse parts of India at different times and has conducted multiple camps, we did analysis of this camp in Uttar Pradesh and could register the unforeseen results. Around **66%** of the population suffered from regressive changes in the tooth structure predominantly **abrasion and attrition**. To our surprise, the prevalence of **dental caries** among all age group was more than **50%**. The prevalence of **malocclusion** was less than **3 %** that too in school-age children. And only **2%** of the geriatric patients suffer from the chronic disease like **diabetes and hypertension**. **Per observations, 90% of adults were having periodontal diseases.**

5.1 Regressive changes

The regressive changes of teeth which include attrition, abrasion, erosion and abfraction has biologic, functional and esthetic insinuations. Dento-alveolar compromise is the serious outcome of all these regressive alterations. It reduces the vertico-occlusal dimension and increases the tooth wear. All such deteriorations are irreversible but can be managed and treated if acknowledged.

All these regressive changes were a predominant condition in this patient population: one in two adult patients had four or more teeth with moderate to severe tooth wear, and one in three children had one or more teeth with moderate to severe wear. The facts for evidencing such oral threat includes the following reasons like physiological normality in elderly patients, bruxism, malocclusion, carbonated beverages and orthodontic treatment. But the facts for corroborating these oral evils in this region and population was a manifestation of periodontal disease but customarily the conditions of oral health prevailed. The findings here suggest a strong association between tooth wear severity and presence of habits (tobacco chewing) and awareness of condition amongst study subjects. Tobacco contains abrasive silica particles which when mixed with saliva and chewed, an abrasive paste is formed that over times can wear down the tooth structure. The number of pathologically worn surfaces increases with the simultaneous increase in the frequency and duration of chewing tobacco. The challenge for facing the population with the problem is the patients' awareness of the problems. They develop tooth wear but might not notice their problem so it was patient's levels of awareness, their understanding about the etiology of these diseased forms which wrecked the situation. Timely diagnosis and preventive care can limit the amount of tooth surface loss but what prevailed was the unfamiliarity of the people of this situation as a problem.^{2, 3, 4, 5}

5.2 High prevalence of dental caries

The WHO recognizes oral diseases such as dental caries, periodontal diseases, tooth loss, and oral cancer as crucial public health problems in the member countries of the South-East Asia principally India. Census of India 2015 studied the prevalence of dental caries among all age group and found results of 50%. According to estimates, about 50% of school children were suffering from dental caries. The observations of our camp are in complete concordance with the census findings. About 17 states of India are fluorosis endemic because of the excess of fluoride in ground water, but the results for fluorosis in Ghazipur were contradictory. The high prevalence of dental caries in children in Ghazipur caused an increase in the malingering of school hours for children and loss of working hours for the parents affecting the economy gravely. Amongst the most shocking of revelations is that nearly half of the population did not use a toothbrush. Only 51% regularly brushed regularly but once a day. The conversations with the camp patients divulged some more alarming statistics related to the consequences of poor oral hygiene; 56 percent of people thought there were no serious consequences of never changing a toothbrush and 65 percent of people believed that their diet had no significant influence on their dental health. Both disclosures show a very poor understanding of oral hygiene and oral health across the population. The availability, affordability, and quality of toothpaste and knowledge of fluoride toothpaste seem nowhere in the vicinity of awareness in the camp population.⁶

5.3 High prevalence of Periodontal disease

Health is a universal human essential. It has been stated that optimal health cannot be accomplished independent of oral health. Oral health devastation was majorly seen in the camp population as tooth loss due to periodontal disease.

The literature says that 75% of all adult tooth loss is due to periodontal disease. Periodontal disease wears away the bone and gum needed to support your teeth. Studies indicate that periodontitis may confer two and seven-fold elevations in risk for cardiovascular disease. People think of gum disease in terms of their teeth, but they don't think about the fact that gum disease is a serious infection that can release bacteria into the bloodstream. In our study, more than 80% of the population shown the presence of grade III calculus and stains. All these people had a probable idea of possible correlation of the calculus with bleeding gums and 56% answered it also leads to unhealthy gums. But to our surprise there was complete non-association of periodontal disease with systemic disease. So, what could be the probable reasons for such discernible periodontal problems with no association of systemic illness? The answer to this could be the lower standards of education that has been recognized as a potential component for the prevalence of periodontal diseases in such population. To add a synergistic effect, the high prevalence of periodontal diseases can be attributed to the untreated malady over a long period of time. The results of the periodontal health in the area reflected combination of inadequate availability of the dental service providers and the obliviousness of the population to the periodontal diseases.⁷

VI. Conclusion and Recommendations

Ghazipur is a district of Uttar Pradesh state in northern India with an area of 3384 square km, 6 tehsils and 539 villages. The approximate population of the area is 3620268 as per 2011 census. To our knowledge, there were two dental surgeons posted in the district hospital and approximately 6-10 private practitioners. This number explains the pronounced lack of dental service providers in the area. The issues that concern the most are:

- Lack of awareness and knowledge among both the public and health care professionals of the importance of oral health and its links to overall health.
- Risks associated with poor oral health, including its links to other diseases and serious health conditions.
- Lack of understanding that better access to preventive oral health services could result in savings to the health care system.
- Low-income of the population, including children and seniors, do not have adequate access to preventive oral health services or treatment when and where they need it.

Recommendations

- To review and improvise the government funded and non-government funded oral health programs and services for the population.
- Explore opportunities to improve access to oral health services as well as awareness of oral health services available.
- Better integration and/or alignment of the variety of available dental programs.

Thus, with all the efforts taken in right direction could help achieve Impact India Foundation's aims by the use of available delivery systems, existing infrastructures, application of available appropriate technology and at an acceptable level of cost effectiveness. As a dental professional, I extend the request of support to all the dental institutes at all levels in our country to provide unbiased support to Impact India Foundation.

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