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Management of Dental Health Services in Selected Upazila Health Complex

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Objective: To find out the status of the management of dental health services in selected Upazila Health Complex.
Methodology: A cross-sectional study was conducted between January 2022 and December 2022 at Three Upazila Health Complex (UHC) in Mymensingh District. The study aimed to assess the management of dental health services. A total of 368 respondents, comprising 35 service providers and 333 service receivers, were selected using a convenient sampling method. Relevant data were collected through a pretested semi-structured questionnaire, and an observation checklist was used to identify the available facilities. The collected data were analyzed using SPSS software version 22.
Results: Out of 35 service providers, 51.4% recommended the need for an adequate supply of gloves and masks. 80% of them expressed concern over the inadequate number of service providers, while 68.6% suggested an increase in manpower. Additionally, 17.1% of service providers suggested ensuring an adequate supply of instruments and materials.
Among the 333 service receivers, 45% reported being consulted and referred to a referral system.

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All service receivers would recommend their family, friends, and relatives to visit the UHC for dental health services. Furthermore, 79.9% of service receivers were satisfied with their treatment.
However, 75.6% of service receivers did not receive test facilities, 53.2% did not receive all prescribed medicines, and 85.9% did not receive dental health education. About 23.37% of service receivers recommended providing all types of treatment, and 22.28% recommended ensuring an adequate supply of all drugs.
Unfortunately, there were no emergency generators and wheelchairs available for severely ill and aged patient.
Conclusion: Continuous improvement is necessary to achieve the ideal dental service. This improvement can be achieved through the enhancement of facilities, utilization of modern equipment, adequate manpower, in-service training, and other means to improve the overall management of dental health services under the Upazila Health Complex (UHC).

Keywords: Dental health; Management; Upazila Health Complex; Healthcare; Dental diseases.

1. INTRODUCTION

Healthcare is not just about providing treatment but also about providing comfort and empathy. Dental and oral health is an integral part of overall health and is one of the main indicators of the quality of life [2]. Poor dental and oral health can have negative effects on general health, psychosocial well-being, and economic status. It is also an important indicator of a country's socio-economic development level. Therefore, the quality of dental health services is crucial. Oral and dental diseases are significant health problems that are prevalent worldwide. These diseases can cause pain, dysfunction, and reduced quality of life for individuals and communities. Unfortunately, many communities, particularly those with low socioeconomic conditions in developing countries, face oral and dental health issues. Geographical location, employment status, and socioeconomic status are three important factors that influence an individual's decision to seek dental health services [10].

One of the most commonly used phrases in dentistry is "Visit your dentist twice a year", as it has the potential to save more teeth and promote the best dental health. However, financial constraints often prevent people from visiting their dentist regularly. Convincing people to undergo regular dental treatment has become one of the most challenging problems in dentistry [9]. Dental diseases can have serious implications and devastating effects on an individual's quality of life and health. Therefore, every dental health care worker should be responsible for breaking the cycle of disease transmission. Pathogenic microorganisms can cause contamination, infections and decay, but proper procedures can prevent transmission of infection among patients and dental health care personnel. Achieving the highest level of infection control and practicing sterile techniques is crucial to prevent infection. Although it may not be possible to achieve an ideal dental practice, day by day improvement is necessary for betterment. For effective dental practice management, it is essential that the entire dental team works efficiently and follows the correct rules and laws [1].

Healthcare services that focus on promoting, maintaining, attaining, and restoring oral health can be divided into two types: oral healthcare and dental care. Oral health is a part of overall health and is defined as a state of being free from pain, diseases, and disorders affecting the oral cavity. Oral healthcare is part of the overall patient care, which includes activities such as risk assessment, health education, and referral for dental care services. Dental care is a vital component of oral healthcare, including services that specifically focus on maintaining, attaining, or restoring oral health. While oral healthcare involves identifying needs and engaging patients, dental care is focused on delivering interventions and restoration. All healthcare team members are responsible for oral healthcare, while dental care requires specific knowledge, training, and certification. Dental care services are provided by healthcare team members who have completed the appropriate training and possess the required skills [8]. In 2011, the Institute of Medicine (IOM) published a report that highlighted the need for collaborative and multidisciplinary healthcare teams to address oral health in America [12].

Dental care practice should be safe, effective, patient-centered, timely, and efficient. Safety is a priority to avoid injuries to patients during care. Effectiveness involves providing services based

on scientific knowledge and avoiding overuse and underuse [6]. Patient-centered care is respectful and responsive to individual patient preferences, needs, and values. Timeliness reduces waiting time for both patients and caregivers. Efficiency avoids waste, including equipment, supplies, ideas, and energy [7].

The key to oral health service is patient satisfaction, which is related to the quality of service provided [3]. Patient satisfaction is the ratio between the patient's expectations before receiving the care and their perception of the care received. If expectations are met, it means that the service has provided exceptional quality, leading to high satisfaction. However, if expectations are not met, it indicates that the service quality does not meet what is expected [5].

Effective management of all aspects of service provision, including the educational, training, and professional development needs of healthcare providers, is necessary for the efficient and effective use of resources to provide high-quality dental health services [4]. However, the management system in the health service sector, especially in the dental sector, is facing various problems in Bangladesh. Identifying and evaluating these problems is crucial to suggest ways and measures for better health service.

Nowadays, people are more conscious of their health, including dental health. In Bangladesh, improving health service delivery is a challenge to satisfy the needs of the population and use resources effectively. Providing high-quality services requires a holistic approach [11].

2. MATERIALS AND METHODS

A cross-sectional study was conducted at Nandail, Valuka & Muktagachha UHC in Mymensingh from January, 2022 to December, 2022 to assess the management of dental health services. A total of 368 respondents (35 service providers & 333 service receivers) were selected by purposively sampling method. Based on related literature reviewed, a written semi-structured questionnaire was developed by using selected variables according to objectives. Relevant data were collected by pretested semi-structured questionnaire. An observation checklist was used to reveal the available facilities. Necessary permission was obtained from authority to carry out the study & then collected data by face to face interview. Collected data were analyzed by using SPSS version 22 & Microsoft Excel.

3. RESULTS

Table1. Distribution of respondents (service providers) according to designation (n=35)

Designation	Frequency	Percentage
UHFPO	3	8.6%
Dental Surgeon	3	8.6%
Dental technologist	1	2.9%
Receptionist	8	22.9%
Pharmacist	4	11.4%
Lab technologist	5	14.3%
Aya/ward boy	5	14.3%
Cleaner	3	8.6%
Security Guard	3	8.6%

Table 2. Distribution of respondents (service providers) according to their response regarding adequate supply of gloves & musk (n=35)

Supply of gloves & masks	Frequency	Percentages
Adequate	17	48.6%
Not adequate	18	51.4%

Table 3. Distribution of respondents (service providers) according to their response regarding adequate number of service provider (n=35)

Adequate Number of service provider	Frequency	Percentages
Yes	7	20%
No	28	80%

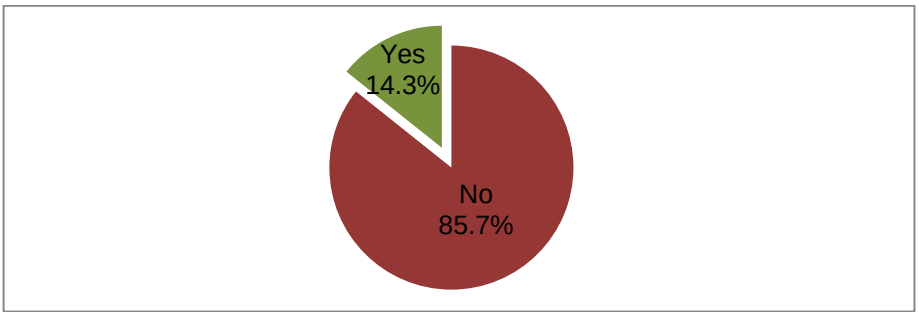

Fig. 1. Distribution of respondents (service providers) according to their response regarding in-service training (n=35)

Table 4. Distribution of respondents (service providers) according to their problems to provide service (n=22)

Problems	Frequency	Percentages
Lack of instruments and materials	2	9.09%
Lack of manpower	19	86.36%
Congested treatment room	1	4.55%

Table 5. Distribution of respondents (service providers) according to their opinions (n=29)

Opinion	Frequency	Percentage
Increase manpower	24	68.6%
Adequate instrument supply	6	17.1%
Provision of enough space in the treatment room	1	2.9%
Provision of modern equipments	2	5.7%
In-service training	5	14.3%
Adequate medicine supply	3	8.6%
Adequate gloves & musk supply	2	5.7%

Table 6. Distribution of respondents (service receivers) according to age group (n=333)

Age group	Frequency	Percentage
2-12 years	117	35.1%
13-23 years	48	14.4%
24-34 years	36	10.8%
35-45 years	54	16.2%
46-56 years	40	12.0%
57-67 years	20	6.0%
68-78 years	12	3.6%
Above 78 years	6	1.8%

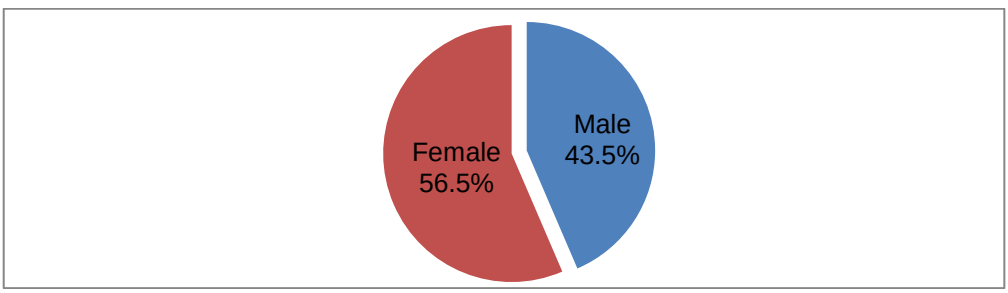

Fig. 2. Distribution of respondents (service receivers) according to gender (n=333)

Table 7. Distribution of respondents (service receivers) according to educational status (n=333)

Educational Status	Frequency	Percentage
Illiterate	76	22.8%
Up to class 5	106	31.8%
SSC	68	20.4%
HSC	20	6.0%
Graduation	17	5.1%
Post-graduation	1	0.3%
Madrasa	26	7.8%
Others	19	5.7%

Table 8. Distribution of respondents (service receivers) according to waiting time (n=333)

Waiting time	Frequency	Percentages
no waiting	92	27.6%
1-15min	72	21.6%
16-30min	109	32.7%
31-60min	46	13.8%
61-120min	8	2.4%
more than 120min	6	1.8%

Table 9. Distribution of respondents (service receivers) according to their dental problems (n=333)

Dental problems	Frequency	Percentage
Sensitivity problem	42	12.6%
Toothache	202	60.7%
Tooth decay	5	1.5%
Cavity	85	25.5%
Bad breath	2	0.6%
Gum pain	71	21.3%
Gum bleeding	32	9.6%
Mobile tooth	106	31.8%

Table 10. Distribution of respondents (service receivers) according to their treatment (n=333)

Treatment	Frequency	Percentage
Consultation only	150	45.0%
Consultation with referred	79	23.7%
Extraction	104	31.2%

Table 11. Distribution of respondents (service receivers) based on prescribed drug (n=333)

Types of drug	Frequency	Percentage
Analgesic	333	100%
Anti-ulcerant	290	87.1%
Anti-biotic	319	95.8%
Mouthwash	87	20.1%
Toothpaste	41	12.3%
Others	18	5.4%

Table 12. Distribution of respondents (service receivers) based on their response regarding behaviour of doctor (n=333)

Doctors behaviour	Frequency	Percentages
Highly satisfied	323	97%
Satisfied	9	2.7%
Average	1	0.3%

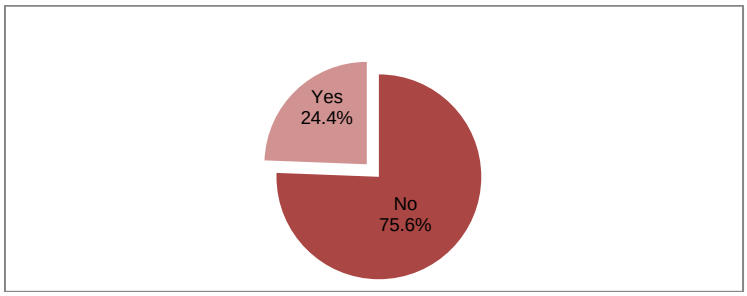

Fig. 3. Distribution of respondents (service receivers) based on their response regarding diagnostic test facility (n=82)

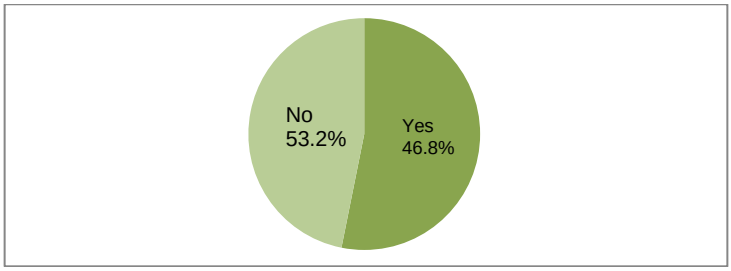

Fig. 4. Distribution of respondents (service receiver) based on getting all medicine (n=333)

Table 13. Distribution of respondents (service receivers) based on their response regarding dental health education (n=333)

Dental health education	Frequency	Percentages
Yes	147	14.1%
No	286	85.9%

Table 14. Distribution of respondents (service receivers) regarding satisfaction with treatment (n=333)

Satisfaction with treatment	Frequency	Percentage
Satisfied	266	79.9%
Average	52	15.6%
Not satisfied	15	4.5%

Table 15. Distribution of respondents (service receivers) based on their opinion to improve quality of services (n=184)

Opinion	Frequency	Percentage
All treatment should be provided	43	23.37%
Ensure adequate supply of all drugs	41	22.28%
Ensure adequate sitting arrangement	36	19.57%
Need fan & proper ventilation	36	19.57%
Ensure enough time to consult	32	17.39%
Reduce waiting time to consult with doctor	31	16.85%
Prevent long waiting time to get ticket	22	11.96%
Prevent crowding	17	9.24%
Improve toilet facilities	14	7.61%
Ensure safe drinking water supply	14	7.61%
UHC should be more clean	10	5.43%
Need prayer room for female	3	1.63%

4. DISCUSSION

The study provides information on the educational background of service providers. It reveals that 28.65% of service providers studied up to class 5, 20.0% studied diploma, 17.1% studied MBBS/BDS and 11.4% studied HSC. Meanwhile, other studies found that dental surgeons and post-graduates make up a significant percentage of service providers.

The study also looks at the use of personal protective equipment (PPE) among service providers. About 57.1% of service providers use gloves and masks, while 42.9% do not use them. Half of the service providers claimed they had inadequate supply of gloves and masks. Other studies found that a high percentage of service providers use facemasks, while a low percentage use goggles and head caps.

The study also provides information on the age, gender, and educational background of service receivers. Among the 333 service receivers, 35.1% were from the 2-12 years age group, 14.4% were from the 13-23 years age group, and 10.8% were from the 24-34 years age group. Females made up the majority of service receivers at 56.5%. Additionally, 22.8% were illiterate, 31.8% studied up to class 5, 20.4% studied SSC, and only 5.1% were graduates.
The study also highlights the waiting time of service receivers. Some respondents did not wait, while others waited for varying lengths of time. Other studies found that the average waiting time for consultation ranges from 20 to 40 minutes.

Furthermore, the study looks at the satisfaction of service receivers regarding the explanation of treatment and prescribed medication by their doctors. The majority of the respondents in this study reported that they were given an explanation of treatment and were prescribed medication. Other studies found that service receivers were generally satisfied with the explanation and attention given to them by their doctors.

Lastly, the study observed that there were limited treatment facilities in the UHC, including a lack of instruments, materials, and physical facilities. There was no X-ray facility and no emergency generator.

5. CONCLUSION

The study has represented the management of dental health services in three UHC. In this study, reception facilities were good but there were no emergency generator and treatment facilities were limited. Referral system was present. Service providers used only two types of PPE-gloves & mask. Most of the service provider opined that manpower should be increased. All of the service receivers said that they would like to recommend their family, friends & relatives to come at the UHC to get dental health services. Most of the service receivers were satisfied with treatment they received.

Based on findings of the study, following recommendations can be made with a view to improve the management of dental health services in UHC.

1. Essential drugs & logistics should be supplied adequately & on a regular basis.
2. Proper staffing should be ensued.
3. Health complex authority should arrange training program regarding management for all service providers.
4. X-ray facility should be available in UHC.
5. Focus on dental health education to create awareness among general population.
6. Further research should be undertaken in large sample size that covers all aspects of the management.

CONSENT

Purpose of the study: To find out the status of the management of dental health services in selected Upazila Health Complex.

Type of participation of the study respondents: Face to face interview.

Procedure: Individual participants should be interviewed based on a semi-structured questionnaire.

Duration: It will take approximately 10 minutes for each participant.

Risk: There is no risk involved in your participation in this research. Your responses will be used only for the purpose of this research.

Benefits: Your participation in this research will help to ensure proper management of dental health service in UHC.

Confidentiality: Your given information will keep confidential and your name will not use.

Voluntary participation: Your participation is completely voluntary. You have the right to withdraw yourself from this research any time you want to or refuse to answer any question if you wish. The interview will be conducted in a private place.

Consent for study participation: Participation in this study was informed to me under the title of "Management of Dental Health Services in Selected Upazila Health Complex".Research purpose, procedure, risks and benefits have been informed to me. I have received satisfactory answers to all my questions regarding this study. I voluntarily agree to participate in this study and I am aware that I can withdraw at anytime.

ETHICAL APPROVAL

An ethical clearance of the study was taken from The Institutional Review Board (IRB) of National Institute of Preventive and Social Medicine (NIPSOM). Official permission was taken before collection of data. The respondents were explained about the aim and objective before the initiation of the interview. They were informed about their full right to participate or refuse to participate in the study. A complete assurance was given to them that all information provided by them would be kept confidential and their names or anything which can identify them would not be published or exposed anywhere. Any kind of harm or complication of the cases was not expected in this research. Informed written consent was taken from each respondent.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Adams T, Freeman R, Gelbier S, Gibson B. Accessing primary dental care in three London boroughs. Community Dental Health. 1997;14(2):108–112.
2. Ahamed S, Moyin S, Punathil S, Patil NA, Kale VT, Pawar G. Evaluation of the Oral Health Knowledge, Attitude and Behavior of the Preclinical and Clinical Dental Students. Journal of International Oral Health : JIOH. 2015;7(6):65–70.
3. Akbar FH, Jaya MT. Relationship between Service Quality on Public Health Center and Patient Satisfaction. Global Journal of Health Science. 2017;9:96.
4. Amaral COF, Belon LMR, Silva EA, Nadai A, Amaral Filho MSP, Straioto FG. "The Importance of Hospital Dentistry: Oral Health Status in Hospitalized Patients". 2018;66(1):35-41.
5. Arua SO, Fadare AS, Adamu VE. The etiology and management of dentinal hypersensitivity. Orapuh Journal. 2021;2(2):e815.
6. Aurangjeb AM, Zaman T, Badruddoza M. Practice of Dental Surgeons about Dental Splatter and Aerosol. City Dental College Journal. 2013;10(2):10–16. Available:https://doi.org/10.3329/cdcj.v10i2.16314.
7. Awad Allah MB, Eltwansy MS, El-Shafei DA. "Patient satisfaction at Dentist Clinic in Zagazig University Hospitals Egypt", Public Health International. 2017;2(4):1-6. \ DOI: 10.11648/j.phi.s.2017020401.11.
8. Da Mata LL, Rodrigues da Cunha AMS, Moronte AM. Dental Management of a Patient with Special Health Care Needs. Case Reports in Dentistry. 2021;6692325. Available:https://doi.org/10.1155/2021/6692325.
9. Das M, Pradhan D, Sharma L, Sinha PK, Mohanty S, Todkar M. An Insight to Dental Practice Management: A Literature Review. Int J Oral Health Med Res 2018;5(1):54-56.
10. Deshmukh MA, Upadhye JJ. Patient satisfaction of outpatient department at ESIS hospital, Nagpur, India. International Journal of Research in Medical Sciences. 2019;7(3):918–922. Available: https://doi.org/10.18203/2320-6012.ijrms20190949
11. Dipankar. Management of Outpatient Department in a Specialized Hospital; 2017.
12. Fadare AS, Daniel B, Fadare C, Adamu V. Oral health knowledge and practices among elementary pupils attending Saint Louis College, City of San Fernando, La Union, The Philippines. Orapuh Journal. 2021;2(2):e812. Available: https://www.orapuh.org/ojs/ojs-3.1.2-4/index.php/orapj/article/view/40.

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