

Dental treatment service supplement in four townships in Chin state in Myanmar

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Purpose: The purpose of this project is to compare the dental services by national hospital of three areas in Chin state, Myanmar.

Materials and Methods: Demographic statistics were collected from Township health profile of every township stocked in municipal office. Number of patients who attended at the dental clinic within four national hospitals was summarized by month and year. The diagnosis and contents of treatment were summarized by year. In addition, fluoride concentration of tap water was measured.

Results: Number of the patients who visited for the national hospital is fluctuated by month because of the school dental health checkups and landslide that prevent the people in local area to the national hospital. The most of the dental disease diagnosed were dental caries and pulpitis. More than seventy percent of the treatment was filling and extraction.

Conclusion: The primary health care is not sufficient in Chin state. In addition, health promotion is important especially health education. To promote these concepts, there still existed many obstacles in Chin state in Myanmar.

(Asian Pac J Dent 2019; 19: 27-31.)

Key Words: community dentistry, oral health

Introduction

Decline of dental caries is worldwide trend. However, prevalence of dental caries is still high level in Myanmar [1,2]. Furthermore, oral health management of Myanmar has many problems and obstacles. The people in Myanmar consisted by 150 kinds of ethnics. The ethnics vary the life style, habit, value, and economic status.

Chin state is located in middle north-east in Myanmar, and adjunct in India. The most of this area is covered with mountain. It is a mountain district and people lives in valley or mountain slope. The traffic and transportation of this area is limited. Therefore, health and medical service of this area has many problems. For the people living in the rural area, the access for the urban area in which national hospital existed is not easy. The supply of the product for medical use is limited. When medical devices are in trouble, repair and maintenance is limited. For example, repair of the dental chair took two years, even for the National Hospital existed in urban area of Chin state.

According this situation, government of Myanmar began to obligate the local hospital to summarize the activity of local dentist who works at national hospital. In addition, submitting of the annual report every year has been obligated for the dentist who works in all of the National Hospital. This report compares the annual report of four townships in Chin state in Myanmar and discusses the problems to be solved in future.

Materials and Methods

Demographic statistics were collected from Township health profile of every township stocked in municipal office. Number of patients who attended at the dental clinic within four national hospitals was summarized by

month and year. The diagnosis and contents of treatment were summarized by year. Fluoride concentration of tap water was measured by Pack Test Fluoride (Kyoritsu Chemical-Check Lab., Corp., Tokyo, Japan).

Results

The demographic characteristics and medical service supply of Tonzang, Tedim, and Hakha townships, Chin state in Myanmar is shown in Table 1. Population density of these four areas is very space. Access to the medical service is very inconvenient. Figure 1 shows the number of patients who attended at the department of dentistry in national hospitals. The lines were fluctuated, and both high and low peaks were observed.

Figure 2 shows the diagnosis of the patients who attended at the department of dentistry in Tedim and Tonzang. Fifty five to 70% of the diagnosis was dental caries and pulpitis. These two diagnoses were derived from dental caries. In Tedim, more than 10% of diagnosis was abscess. It also derived from dental caries. When compared Tonzang and Tedim, percentage of dental caries was higher than that in Tonzang. Figure 3 shows the proportion of treatment in Tonzang, Falam, and Hakha. More than 70% of the treatments were filling and extraction. The difference in percentage for these two areas was not clear.

People living in these four townships in Chin state drink tap water or commercialized mineral water. Commercialized mineral water is expensive for the people living these areas. Some high-income people drink commercialized mineral water, however, even these people use tap water for cooking. Tap water is supplied by one water purifying plant in each township. Fluoride concentration in tap water in this area was less than 0.4 ppm.

Table 1 Demographics and medical service status of Tonzang, Tedim, and Hakha townships in Chin state

	Tonzang	Tedim	Hakha	Falam
Area (km ²)	3,583.38	949.99	Not available	Not available
Number of village	88	132	Not available	Not available
Village tract	32	55	Not available	Not available
Population* Urban	6,180	12,740	48,352	Not available
Population* Rural	26,149	81,558	Not available	Not available
Household	5,301	Not available	Not available	Not available
Ward	4	Not available	7	Not available
State hospital	0	0	1	1
Township hospital	1	1	Not available	Not available
Station hospital	1	3	1	Not available
Rural health center	6	18	3	Not available
Sub rural health center	1	72		Not available
Dentist	1	3	5	Not available
Dental nurse	0	1	Not available	Not available

*Data was obtained by 2014 census.

State hospital has two hundreds hospital bed and township hospital has twenty five to one hundred hospital bed.

Station hospital works only for emergency treatment of medical and dental diseases. Medical doctor and dentist are not stationed.

Rural health center and sub rural health center distributed in rural area, they also works only for emergency treatment of medical and dental diseases. Medical doctor and dentist are not stationed.

In Myanmar, dental hygienist system is not existed. Dental nurse means whom educated dental treatment after the nurse education as a postgraduate course. The number of the student who finished dental nurse course per year is only 30 in whole country.

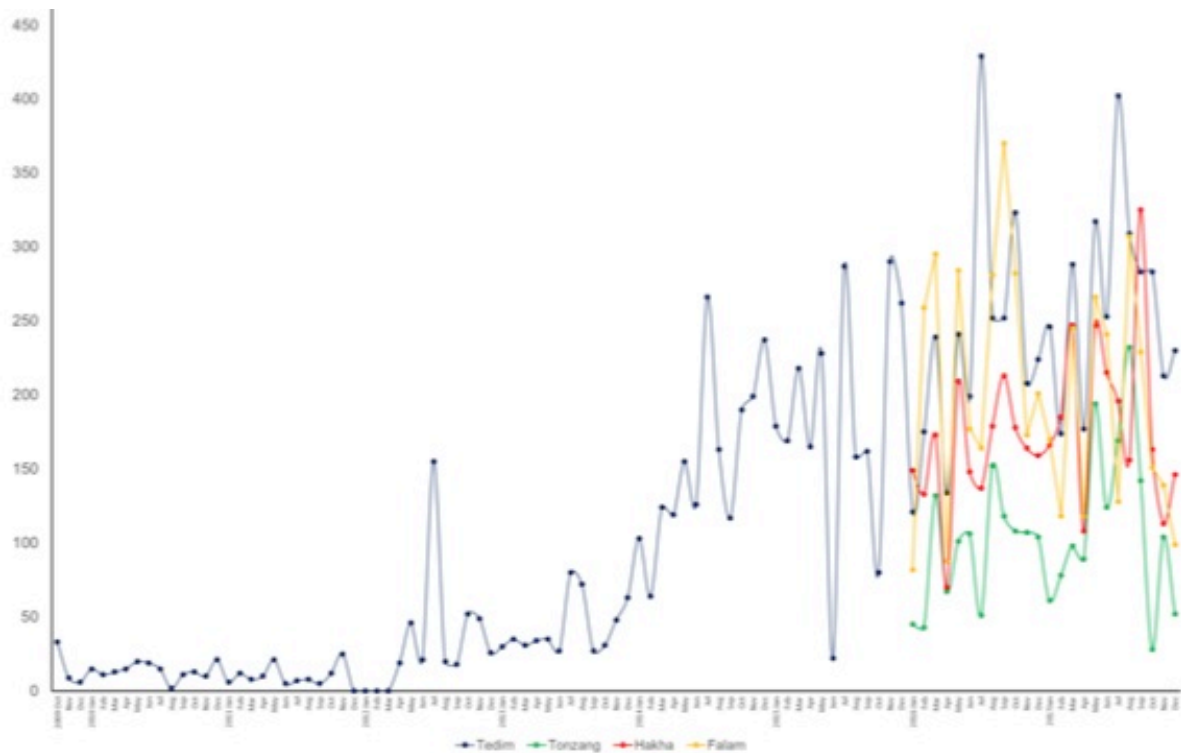


Fig. 1 The number of patients who attended at the department of dentistry in national hospitals in Chin state
 The number of patients was fluctuated, and both high and low peaks were observed. From October to December, landslide prevented the transportation from the rural areas. People live in rural area cannot come to urban area.

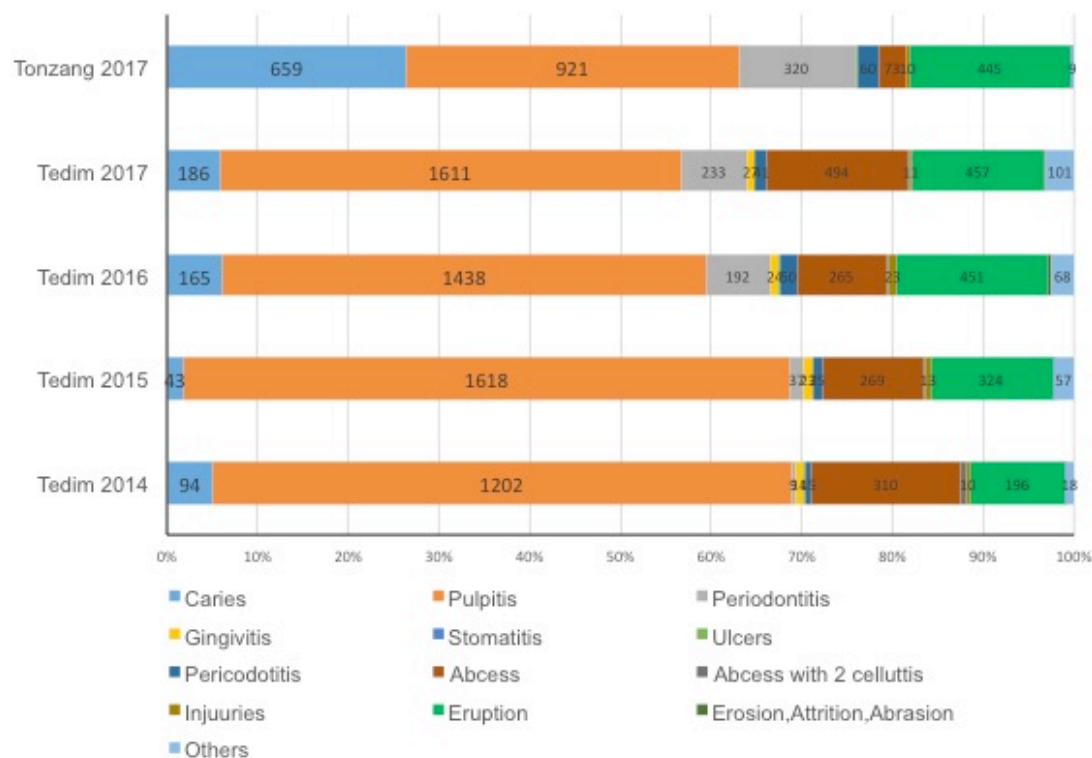


Fig. 2 Proportion of diagnosis of the patients attended at national hospital in two townships in Chin state
 Proportion of pulpitis is very high level.

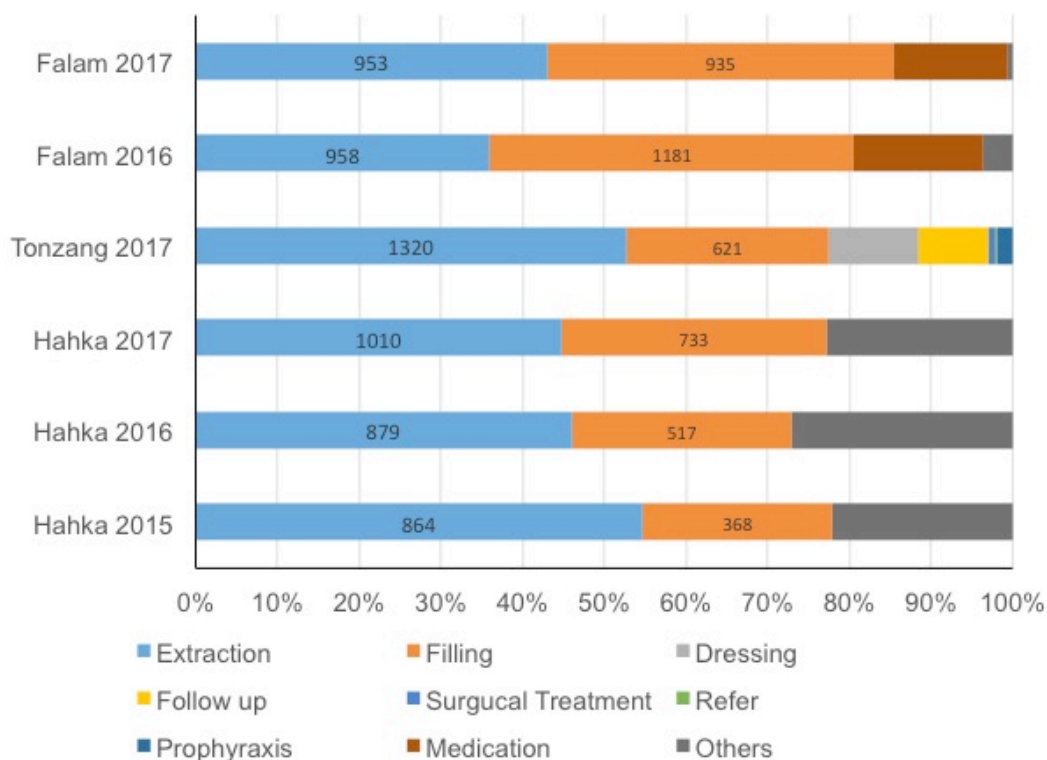


Fig. 3 Proportion of treatment for the patients attended at national hospital in three townships in Chin state
Most of the treatment was tooth extraction and fillings.

Discussion

Chin state is located middle-east area in Myanmar. Most of this area is covered with mountain. Therefore, transportation is very inconvenient including medical services. The land of this area is not suitable for agriculture. Income level of the people living in this area is low. The most eminent medical problem of this area is high mortality rate of neonatal and infant. The second problem is high fatality rate by malaria because of the lacking drugs and inconvenient medical services.

Myanmar government distributed rural health center and sub rural health center in remoted rural areas. These centers can supply only emergency treatment. Medical doctor or dentist is not stationed in these centers. When the patients are referred to the national hospital, the distance for the urban area is very far. In some rural area, distance from urban area is more than 60 km.

Number of the patients attended at the national hospital is fluctuated. In general, number of patients who attended in June was high. This is because dentist working at national center went to schools and oral examinations were carried out. Subjects were recommended to dental treatment if necessary. However, government does not regulate this system. Mass checkups are dependent on the dentist in each township. From October to December, landslide prevented the transportation from the rural areas. People live in rural area cannot come to urban area.

Only in Tedim, data was recorded from 2009. From September 2009, a dentist began to work in the national hospital as a volunteer. From December 2011 to March 2012, this doctor was absent. From March 2012, the dentist works in this hospital as a regular employee. Then one dentist began to work from March 2015 and additionally one dentist began to work from December 2017.

When compare with the number of diagnosis at Tedim and Tonzang at 2017, proportion of dental caries was

higher in Tonzang. In Myanmar, other than national hospital, private dental clinic is available and non-licensed technician provide dental treatment. Fee of the private dental clinic is very expensive for the people in general. Income level is a bit higher in Tedim than Tonzang. Therefore, not sever dental caries were treated at private dental office in Tedim, most of the patients in Tedim was poor people. However, in Tonzang, most of the people were very poor, and people live in Tonzang could not afford to pay dental treatment free. Therefore, people in Tonzang could not choose dental treatment. Non-licensed dental technician is legally not allowed. However, government could not control. In 2017, a woman was died one week after tooth extraction by visiting non-licensed dental technician.

As shown in Fig. 3, most of the treatment at Tonzang, Falam, and Hakha were tooth extraction and fillings. Hakha is a biggest city in Chin state, and number of private dental office was higher in Hakha than other areas in Chin state. Many non-licensed technician existed in Hakha. Therefore, most of the patients who visited to national hospital were low-income population. Therefore, the content of treatment in Hakha is not different in Tonzang. Even though the Hakha is biggest city in Chin state, the number of the patients shown in Fig. 1 is not higher than Tedim.

Fluoride concentrations of tap water in these areas were not sufficient to prevent dental caries. Fluoride contained toothpaste is available in these areas. However, price is expensive for these people. School based fluoride mouth rise and water fluoridation is the candidate for the dental caries prevention [3-5]. The primary health care is not sufficient in Chin state. And health promotion is important especially health education. To promote these concepts, there still existed many obstacles in Chin state in Myanmar.

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Accepted April 12, 2019.

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