

## Outcome of the Project: Treatment and Care for Patients with Cleft Lip/Palate in Republic of the Union of Myanmar

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**Background:** In developing countries, the treatment approaches for patients with cleft lip/palate mostly on surgery but lack connection or referral integrated care. Therefore, in 2017, the Tawanchai Center established a network of cooperation with medical institutions in the Mekong sub-region with the Republic of the Union of Myanmar to develop comprehensive care.

**Objective:** To evaluate the outcomes of the project in surgery, anesthesia induction, nursing care, nursing coordination, and speech training for patients with cleft lip/palate of the care team of the Republic of the Union of Myanmar.

**Materials and Methods:** A questionnaire survey study was conducted to determine the outcomes of treatment and care project for patient with cleft lip/palate at University of Dental Medicine Mandalay, Republic of the Union of Myanmar during 22 to 25 August 2017. Response data from the questionnaires were analyzed by statistic, percentage, average, and content analysis.

**Results:** Fifty members of interdisciplinary team from five institutions attended the workshop 42 (84%) replied the questionnaire. Twenty-three of these were females (58.40%) and twenty-five of these were oral-maxillofacial surgeons (61%). Overall satisfaction of the attendance was high ( $x = 3.68$ ). There were 21 patients with cleft lip/palate attended the workshop. Four of the patients attended speech and language training and 17 patients underwent surgery with satisfied outcomes.

**Conclusion:** The interdisciplinary team who attended this workshop gained experiences and had opportunity to exchange ideas about surgical techniques, anesthesia induction, pre-post ops care, nursing coordination, and planning for speech and language assessment. Patients, who underwent surgery safely, were satisfied with their facial outcomes. The attendees were willing to develop comprehensive cleft care.

**Keywords:** Cleft lip/palate, University of Dental Medicine Mandalay, Republic of the Union of Myanmar, Tawanchai Center

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Cleft lip/palate is congenital defects of the orofacial area. The incidence rate of cleft lip/palate is high in the northeast of Thailand with 2.49 per 1,000 newborns<sup>(1)</sup>. The condition causes negative impact on the patients and families both in physical and mental aspects<sup>(2)</sup>. Also, continuous and long-term treatment have required medical personnel from diverse disciplines to take a role in caring, surgery, and rehabilitation<sup>(2)</sup> i.e. surgeons, anesthesiologists, operation staffs, scrub nurses, pre-post ops care units staffs, including

the specialists in audiology, speech therapy and training, oral hygiene, breastfeeding and nutrition, and nurse coordinator to deliver comprehensive care at appropriate times and ages until adulthood.

However, the treatment approaches for patients with cleft lip/palate in developing countries are most likely to focus on surgery and specific cases management without utilizing integrated care or referral system in holistic way. Thus, there are redundant treatments or complications without necessary, which cause impact on mental and socioeconomic to the patient's and the nation.

Tawanchai Center in Thailand has operation plan that aligns with the university's strategic plan to transfer knowledge, technology, and innovation to society<sup>(3)</sup>. Its main mission is to create a network with medical institutions and hospitals in the Greater Mekong Sub-region such as Lao

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People's Democratic Republic, Republic of the Union of Myanmar, Kingdom of Cambodia, and the Socialist Republic of Vietnam to exchange academic knowledge, experience, and to foster the competency of medical personnel in comprehensive care under interdisciplinary team care, surgery, and rehabilitation together with WHO Community Based Rehabilitation Guideline 2010<sup>(4)</sup>. This mission was completely carried out in Lao People's Democratic Republic and in the Republic of the Union of Myanmar.

The study of outcomes of patients with cleft lip/palate who participated workshops held at 10 provincial hospitals in Lao People's Democratic Republic found that medical personnel had moderate level of knowledge about patients' care<sup>(5)</sup>. The most common problems comprised of a lack of specialists, especially speech pathologists<sup>(5,6)</sup> and orthodontists<sup>(5)</sup>, as well as a lack of knowledge and operation materials<sup>(5,7)</sup>. In addition, it also found that many patients and families were unable to afford travelling cost to obtain treatment<sup>(8)</sup> so they received poorly timed surgery and inappropriate treatment. These cause sequences of problems i.e. articulation defects, resonance disorders, and psychological stigma<sup>(5)</sup>. Most of the caregivers lack essential knowledge such as causes of cleft lip/palate, enamel hypoplasia and the need of alveolar bone grafting, wound care, post ops care, hearing test, and speech training<sup>(6)</sup>.

The first research was conducted according to the First Forerunner Workshop in Comprehensive Care in Cleft Lip-Palate and Craniofacial Deformities, Republic of the Union of Myanmar in 2016. Since the project was initially launched, Tawanchai Center did not prepare for outcomes assessment thus we lost information to develop and extend cleft care service. Therefore, the researchers aimed that this Second Workshop in Comprehensive Care in Cleft Lip-Palate and Craniofacial Deformities, Republic of the Union of Myanmar which organized during 22 to 25 August 2017 at University of Dental Medicine Mandalay (UDMM) would be the opportunity to study outcomes of treatment and care from the workshop to plan and develop the comprehensive cleft care workshop in the future. Also, the study will help developing interdisciplinary team care for cleft lip/palate in Thailand, Republic of the Union of Myanmar, and other countries in South East Asia region which will benefit in patients' quality of life.

### Objective

1) To enhance the interdisciplinary team's ability to perform anesthesia induction, surgery, nursing care, coordination, and speech therapy for patients with cleft lip/palate in Republic of the Union of Myanmar.

2) To evaluate the outcomes of the project in caring, surgery, treatment, and the rehabilitation of patients with cleft lip/palate in the Republic of the Union of Myanmar.

### Materials and Methods

Descriptive study was carried out according to the outcomes of workshop organized at University of Dental Medicine Mandalay, Republic of the Union of Myanmar

between 22 to 25 August 2017. The research received certification of ethics in human research (HE611241). Questionnaires were summarized from 42 medical staffs and 22 patients who participated in the workshop, which was focused on general information and satisfaction. Both qualitative and quantitative data were collected, using statistical percentage, averages, and content analysis to analyze the data.

### Results

There were 50 participants from 5 institutes; 1) Mandalay General Hospital, 2) University of Dental Medicine, 3) University of Dental Medicine Yangon, 4) Yangon General Hospital, and 5) Pinlon Hospital Yangon. 42 in these number answered the questionnaire which were estimated as 84 percent. Most of them were female or 23 persons (54.80 percent) and the majorities were surgeons and oro-maxillofacial surgeons with the number of 25 (61 percent). Average satisfaction was high ( $x = 3.68$ ) as shown in Table 1 and 2.

#### General comments from participants

Need to support Myanmar young doctors for training program to improve health care quality and believe our comprehensive cleft care will become more efficient after workshop.

Hand-on surgery and supervision is suggested.

It is necessary to join cleft workshop from more sectors like otolaryngologist, social workers, pediatrician, pediatric surgeons, and psychologists to complete our goals and also from many places like Toengyi, Mandalay, Yangon, and Universities for representative should join to know the aim & goal.

"I think that pediatric dentistry role is also important for comprehensive cleft care. I want to learn more

**Table 1.** General information of the participants (n = 42)

Information	Number (persons)	Percentage
Sex		
Male	19	45.20
Female	23	54.80
Ages		
20 to 29	13	31.7
30 to 39	13	31.7
40 to 49	9	22.0
50 to 59	5	12.2
60 years and older	2	4.8
Positions		
Surgeons & oral and maxillofacial surgeons	25	61.0
Dentist	11	26.8
Nurses	1	2.4
Others	5	12.2
Total	42	100

**Table 2.** Satisfaction of workshop participants (n = 42)

Items/Issues	Satisfaction level		
	$\bar{x}$	SD	Results
1) I receive sufficient information of workshop beforehand (to obtain information and documents about the project)	3.44	0.83	Moderate
2) Workshop duration is appropriate (3 Days for operation demonstration, 1 Day and a half for academic conference)	3.74	0.91	High
3) The sequence of activities is appropriate (operation demonstration is held before academic conference)	3.50	0.92	Moderate
4) Speakers are proficient in their topics	3.88	0.70	High
5) Speakers are proficient in transferring knowledge	3.88	0.73	High
6) Speakers explain and answer the question clearly	3.59	0.76	High
7) Enough time is given for discussion and group work.	3.38	0.84	Moderate
8) Overall satisfaction for speakers	3.73	0.71	High
9) I gain new knowledge, approaches, and experiences from the workshop	3.79	0.67	High
10) Knowledge from the workshop is useful and applicable	3.90	0.72	High
11) The workshop meets my expectation and goals	3.64	0.68	High
12) Learning atmosphere is calm and relaxed	3.07	0.60	Moderate
13) The workshop helps me to understand comprehensive cleft care	3.85	0.75	High
14) The workshop benefits my profession.	3.95	0.73	High
15) Overall satisfaction	3.83	0.66	High
Mean	3.68	0.79	High

Full score = 5

Level of satisfaction 4.51 to 5.00 = Very high, 3.51 to 4.50 = high, 2.51 to 3.50 = moderate, 1.51 to 2.50 = fair, 1.00 to 1.50 = poor

about the information of nutrition and maxillo-facial orthopedic devices for cleft patients”.

“As I attend speech therapist training, I need more experience about speech therapist training and clinical treatment. Expecting to get/learn clinical treatment procedure next conference, Thanks”.

“If I have a chance, I would like international experiences & training in your country collaborates with the experienced surgeons at your Tawanchai Center”.

### Suggestions

Need more operation demonstration days and need more days for lectures, group discussion for specific treatment, need to communicate with surgeons during demonstration and should invite anesthesia doctors & nurses. There were totally 23 patients who participated this project. 4 of them had attended speech assessment and training and 19 of them need surgery. However, there were only 17 patients who passed screening process and were prepared for surgery at the hospital. Of this number, 6 of them had cheiloplasty and another 6 had palatoplasty. All of the patients were safe and satisfied with the outcomes, as detailed in Table 3.

### Discussion

The Treatment and Care for Patients with Cleft Lip/Palate in Republic of the Union of Myanmar project which purposed to enhance the interdisciplinary team’s competency in anesthesia induction, surgery, nursing, coordination, and speech training for patients with cleft lip/palate in the Republic of the Union of Myanmar contributed

to collaboration between 5 medical institutions in the Republic of the Union of Myanmar from the 3-day workshop which comprised of anesthesia induction, surgical demonstration, nursing process, pre post ops care, and speech assessment and training. This led to cooperation within the interdisciplinary team which mainly included surgeons and oro-maxillofacial surgeons. The project highly improved proficiency of Myanmar team in patients care. Thus, the team were very satisfied with the workshop and showed their confidence to achieve a better care process. They suggested that Tawanchai team should continually organize the workshop and should offer the opportunity for training abroad e.g. at Tawanchai Center, Khon Kaen University as well as to help them coordinating to receive financial support from the Smile Train. The feedback corresponds to the study of Pradubwong et al<sup>(5,8)</sup> conducted in Champasak and Khammouane Provinces in Lao PDR, which revealed that the participants of comprehensive cleft care workshop had highest satisfaction at 100 percent. However, they also lacked the specialists and needed support from the government, the Tawanchai Center, and the Smile Train for abroad training<sup>(7)</sup>. Overall, the outcomes of the Treatment and Care for Patients with Cleft Lip/Palate in Republic of the Union of Myanmar project showed that there were totally 23 patients who participated in treatment program; 4 of them needed speech training and 17 patients underwent cleft surgery. However, there were only 3 patients who met the aging criteria of cleft lip/palate repair; the rest of patients exceeded the appropriate age<sup>(9)</sup>. This is similar to the cleft patients in Lao PDR which commonly have primary surgery later than the criteria with

**Table 3.** Outcomes of surgical treatment and rehabilitation of the patients who participated in the project (n = 21)

No.	Age/ Year	Sex		Diagnosis	Surgery	Outcome of Treatment given by Interdisciplinary team
		M	F			
1	1	√		RCLP	Cheiloplasty & Palatoplasty	Every patients received information for continuous care
2	1	√		BCLP	Palatoplasty	Every patients had pre and post ops care
3	1	√		LCL	Cheiloplasty	Operation were successful without complication
4	1		√	RCLP	Cheiloplasty	
5	1	√		LCLP	CLN Correction & Palatoplasty	Every patients were satisfied
6	2		√	LCLP	Cheiloplasty	13 patients received general anesthesia
7	3	√		CP	Palatoplasty	4 patients received local anesthesia
8	7		√	RCLP with fistula	Closer fistula	
9	8	√		LCLP	Cheiloplasty	
10	9	√		BCLP with Fistula	Re-cheiloplasty	
11	10	√		BCLP	Palatoplasty	
12	11	√		LCLP	Palatoplasty	
13	12	√		RCL	CLN Correction	
14	15		√	BCLP	CLN Correction	
15	17	√		LCL	Cheiloplasty	
16	17	√		RCLP with fistula	Closer fistula	
17	30		√	Nose deformity	Nasal correction	
18	5		√	BCLP	Speech assessment and	
19	12	√		BCLP	training speech assessment	
20	20		√	Submucous cleft	and training speech assessment and training	
21	23		√	BCLP	Speech assessment and training	

RCLP = Right Complete Cleft Lip and Palate, LCLP = Left Complete Cleft Lip and Palate, BCLP= Bilateral Complete Cleft Lip and Palate, LCL = Left Cleft Lip, CP = Cleft Palate

the average of 6.3 years<sup>(5)</sup>. Myanmar patients who attended speech training were during 5 to 23 years old which is considered as late case<sup>(9)</sup>. This also corresponds to a study of Prathanee et al<sup>(6)</sup> on satisfaction of speech and treatment for children with cleft lip/palate in Lao PDR which revealed that the patients had the lowest degree of satisfaction with articulation. The majority of caregivers and patients agreed that correction of articulation defects was the aspect of their care most required further treatment.

However, the interdisciplinary team showed enthusiasm to improve comprehensive care for patients with cleft lip/palate. The support from government, networks, the Tawanchai Center, and the Smile Train will greatly help the team's development.

### Conclusion

The interdisciplinary team who participated the workshop had the opportunity to gain and exchange of experiences in the areas of surgical techniques, anesthetic induction, pre post ops care, nursing coordination, and speech training. Patients received the speech training and were safely repaired their cleft in surgical demonstration workshop and all of them satisfies with the outcomes. All the participants

aimed to achieve comprehensive cleft care development in the future.

### What is already known on this topic?

There are existing problems in interdisciplinary team and comprehensive care development in Mekong sub-region countries.

### What this study adds?

The interdisciplinary team of the Republic of the Union of Myanmar showed impressive enthusiasm to develop comprehensive cleft care. Additional support from the government, networks, or non-profit organizations such as Tawanchai Center and Smile Train will help accelerating the competency of team members.

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### Potential conflicts of interest

The authors declare no conflicts of interest.

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