

The Development of the Nursing Care System for Patients with Cleft Lip-Palate and Craniofacial Deformities at Tawanchai Cleft Center, Srinagarind Hospital, Khon Kaen, Thailand

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Background: The highest incidence of cleft lip-palate and craniofacial deformities in Thailand occur in the Northeastern Region. There is the necessity for an interdisciplinary care team as well as the specialized care center with systematic coordinated care, thus "Tawanchai Cleft Center" is becoming a superior medical center for patients with cleft lip-palate and craniofacial deformities. Therefore, the development of the nursing care system for patients with cleft lip-palate and craniofacial deformities at Tawanchai Cleft Center, Srinagarind Hospital is extremely important and necessary.

Objective: To develop the nursing care system appropriate for a super tertiary hospital (Tawanchai Cleft Center).

Material and Method: It is a participation study which has 3 steps as follows, 1) Analyzing the situations and collecting the opinions of the 22 Out-patient Surgery Department staff and Tawanchai Cleft Center staff by using 6 questions, 2) Summarizing of the situation analysis from the meetings and the questionnaires, then using such summary as the guidelines for developing the nursing care system from January 2011 onwards, 3) evaluating the satisfaction after the 4 month development period (May-August 2011) with 106 caregivers by using 8 questions and being analyzed by the average value, percentage and standard deviation.

Results: 1) The nursing care system consisted of psychosocial care, breast feeding, counseling and other assistance as required. This various assistance responded to the patient/family problems by following the treatment guideline of the multidisciplinary team which uses the continuous evaluation processes for the holistic patient/family care. 2) The patients with complete cleft lip-palate were the most common type, found in 44 cases or 41.53 percent. The highest number of caregivers were mothers which were 68 percent; the average age of those mothers was 36 years old. The highest number of them finished elementary school at 43 percent and 40 percent were farmers. The satisfaction for the services of Tawanchai Cleft Center showed the average for each satisfaction subject all at very good level ($\bar{x} = 3.56$, $SD = 0.13$).

Conclusion: The care for patients with CLP and craniofacial deformities at Tawanchai Cleft Center, Srinagarind Hospital has been developed in order to have the appropriate nursing care system to provide superior quality care, which provides patient-holistic care, as well as improving effective accessibility to the services. Thus, the patients/caregivers who are satisfied with given services, get continuing monitoring and treatment and are able to live their lives in the society happily.

Keywords: Cleft lip-palate and craniofacial deformities, Nursing care system development, Tawanchai cleft center

J Med Assoc Thai 2012; 95 (Suppl. 11): S55-S61

Full text. e-Journal: <http://jmat.mat.or.th>

The occurrence of CLP and Craniofacial Deformities in the Northeastern Region has the highest rate in Thailand (2.49 per 1,000 children born)^(1,2). Most treatment is still focused on the operation of repair for

cleft lip-palate patients only, but doesn't address other aspects which greatly affect the life quality of patients and their families in terms of physical, mental, social, and others life aspects.

CLP and Craniofacial Deformities affect the expectations of parents and relatives. The conditions of disease affect the structure of the face system. The treatment also depends on the age and the appropriate time (critical time) in a long period from birth until 18-20 years old which requires a multidisciplinary team with

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expertise in various fields who come together to achieve the same goal of the patients appearance and function to be made as normal as possible. This will ensure patient and family satisfaction and help the patients and their families overcome this difficult situation. They must be encouraged, receive advice from health care team and social welfare in order to be able to face problems and difficulties throughout more than 18 years^(2,3).

After the gathering of a multidisciplinary team for care of patients with cleft lip in 1999, the Tawanchai Cleft Center was established with full supporting staff as a center for the co-operation of patients and teams in 2004. Then in 2007, the nurses started to provide medical care coordination with the multidisciplinary team at Tawanchai Cleft Center. Their roles were to assess, give consultation and nursing care, also to coordinate health care with a team of nurses and the multidisciplinary team in all departments where patients with CLP are admitted to the hospital.

The task of providing care for several types of patients in different units, make it harder to provide continuity of coordination of care for patients. Sometimes, the patients/caregivers may not receive complete treatment information, for example; the patients need to be well prepared and informed before operation for the repair of a cleft lip and cleft palate. They need to be informed that they are not allowed to suck milk or other kinds of liquid food for at least two weeks after operation. That precaution prevents the patients having a more serious wound and the adhesive from the palate by crying and the muscles moving when sucking milk. From the statistics through the years 2009-2010, it was found that 10 patients did not receive information regarding milk sucking; those 10 patients were 10 percent of the whole amount of the surgical repair of cleft lip and palate operations. According to the continuous treatment, it was found that there were some patients who brought their children to treatment processes, but stopped the treatment before it was completed. This causes the patients to have had insufficient treatment and rehabilitation for becoming complete adults.

Misunderstanding towards the roles of nurses and other supporting staff of outpatients and Tawanchai Cleft Center may cause the patients and their families not to be able to access the integrated services such as missing appointment with the plastic surgeon due to coming at incorrect day/time. Also the unclear action of the staff at one point service. Some of them remake appointments, but some of them suggest

to/ or transfer to Tawanchai Cleft Center for meeting cooperated nurses and getting the assessment, counseling and then treatment from the multi-disciplinary team who consisted of a pediatrician, a clinic of breast milk after birth, ENT physician, speech therapist and dentist before the next appointments.

Srinagarind Hospital, Faculty of Medicine, Khon Kaen University, has been giving surgical treatment to patients with cleft lip and palate since 1978. Since 1984 until now, the data shows that 2,153 patients were operated on and there were 3,545 operations, which is approximately 150 cases/year by average. The trend for patients getting surgical treatment has increased from 200 to 250 cases/year and there are also patients coming for other treatment. For example, there are 300-400 cases/year and more than 1,000 visits/year to come to be followed-up on development and nutrients, check up for ears and hearing and for speech therapy and 250 to 300 cases per year for getting care of the teeth in Cleft lip and palate clinic with open integrated service once a month. During 2008-2010 at Tawanchai Cleft Center, the number of treatments was 960, 1,280 and 1,340 each year respectively. The numbers of patients which are continuously increasing is influenced by the treatment taking quite a long time, hence to develop and harmonize a system of surgical centers and Tawanchai Cleft Center will be a benefit for patients to receive the best service quality as the superior medical center in the Northeast of Thailand.

The development of an efficient nursing system was by instigating the concept of process development along with improving the nursing system with new working processes and conducting procedures, by changing the scopes of responsibility and work purposes in order to transform the input into the output through using the process; also to be up to date and flexibly and able to adapt from time to time will create increasingly better task performance and change for the better. In addition, it is also helpful for human resources, work systems, organizations, working places, and better way of thinking. Regarding such importance, the development concepts of the work system which is used for nursing patients of the cleft lip and palate at cleft center is to make the most excellent benefit for the cleft lip and palate patients and their families to fully access the highest quality care at the excellence center.

Objective

To study and develop the nursing care system of patients with CLP and craniofacial deformities at Tawanchai Cleft Center.

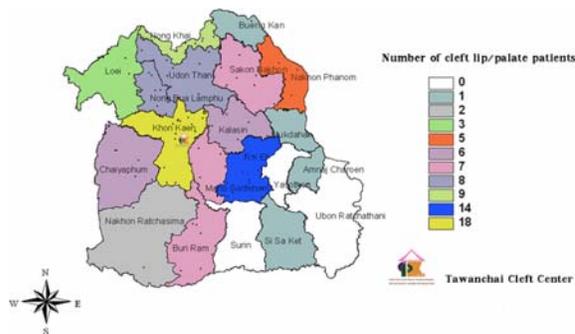


Fig. 1 Geographic distribution of patients with cleft lip and palate at Tawanchai Cleft Center

Material and Method

The present study of the development of the nursing care system for patients with CLP and craniofacial deformities at Tawanchai Cleft Center was action research to discover the appropriate care pattern in the context of tertiary hospitals which have specialized care center and completely approved by the Ethics Committee for Human Research (KKU), then studied by the following 3 steps. (1) Analysis of the situation by meeting of 22 staff regarding the work procedures in the past and then asked them to comment on 6 questions in semi-structured questionnaire for 2 months (November-December 2010). (2) Summarized the meeting and analyzed the situation by collected data from the questionnaires and implemented into the guidelines used by the nursing care system at Tawanchai Cleft Center and used since January 2011. (3) Evaluated the results after the guidelines were used at the Tawanchai Cleft Center for 4 months (May-August 2011) with 106 caregivers, from 128 of sample group which calculated from the formula by KV Krejcie and DW Morgan as 83 percent. The evaluation of service satisfaction used in the present study consisted of two parts: the first part was about the general information of staff, patients and their caregivers. The second part was the 6 questions in opinion interview forms used by staff and the 8 questions in caregiver satisfaction questionnaires. Those evaluation instruments were checked for validity by 5 experts and reliability using the Cronbach's alpha coefficient of the second part of the questionnaires, satisfaction value was 0.79. The data were analyzed by SPSS software to calculate the average value, percentage and standard deviation.

Results of the study

1. Nursing care system consists of psycho-

social care, counseling, assistance in various fields in response to the patient/family under the care guidance from a multidisciplinary care team with the continuous evaluation for the patients/family holistic care.

2. The biggest sample group was nursing staff, 27 percent. When the patients came to get treatment in the Out-patient Surgery Department but it was the surgeons' day off, 77 percent were picked up by Tawanchai Cleft Center. It was found 95 percent of staff knew the location of Tawanchai Cleft Center. It was 73 percent that agreed the consultation at the surgery room services should be completed before 12.00 AM. It was 100 percent of the staff who knew that the cleft lip-palate patients must get treatment and receive care under the multidisciplinary team and also 100 percent of staff who felt sympathy with cleft lip-palate patients and their families (Table 1).

3. It was 44 cases or 41.53 percent of the patients were complete Cleft lip-left, 68 percent of the caregivers were patient's mother. The average age of caregivers was 36 years old. It was 43 percent of the patients completed primary school and 40 percent were farmers (Table 2).

4. Caregivers satisfied with the services of Tawanchai Cleft Center was at the excellent level ($x = 3.56$, $SD = 0.13$) and each item was also at the excellent level as shown in Table 3.

Discussion

The cleft lip-palate patients nursing care system at Tawanchai Cleft Center has a variety of staff working together for the same goal of providing a quality service to patients with cleft lip-palate. The opinion of all 22 officers to improve work system performance in the same manner is necessary. As shown, many different staff including nurses, practical nurses, medical staff, general staff and staff at Tawanchai Cleft Center are working with cleft lip-palate patients and patients' family members. Therefore, meetings, consultations and opinion seeking are the basis for further improvement and development which parallel with the concept of Ractham A⁽⁵⁾ regarding the work system development process consisting of a meeting to present the problem and discuss all the details of problem and find solutions together. After that, examine the solution and carefully evaluate before the real implementation, which should be done together. Following implementation, allow to evaluate and make revisions to the service development of quality and continuity.

The satisfaction of services of the nursing

Table 1. General information and awareness about patients with CLP of Out-patient Surgery Department staff and Tawanchai Cleft Center (n = 22)

Variables	Items	Number	Percentage
1. Position	Nurse	6	27.27
	Practical Nurse	5	22.72
	Medical officer	5	22.72
	Worker	1	4.54
	Tawanchai Cleft Center's staff	5	22.72
2. When a patient comes to cleft lip-palate surgery clinic on wrong day, you will	Make an appointment card in the day surgery clinic service	4 times	18.18
	Call to Tawanchai Cleft Center	17 times	77.28
	Others.... advice to contact Tawanchai Cleft Center	1 time	4.54
3. Do you know the location of Tawanchai cleft center?	Faculty of Dentistry	1	4.54
	A dentist room behind Srinagarind Hospital	21	95.45
4. When do you think that the consultation room, children's cleft lip-palate should complete consultation?	By 12.00 AM	16	72.72
	By 12.30 PM	2	9.09
	Others.... 11.30 AM	3	13.63
5. Do you know that the cleft lip-palate patients must be taken care by a multidisciplinary team?	know	22	100
6. How do you feel with cleft lip-palate patients?	Feel pity and sympathized and want them to have continuous treatments at the Tawanchai Cleft Center by offering suitable diagnostic places, not crowded as the present.		

care system was evaluated four months after implementation. The results show that caregiver's satisfaction towards receiving service was at very good level of all aspects, so that the development of service among staff has created the satisfaction of caregivers.

This is consistent with the studies of Pochan S⁽⁶⁾ which is about the present study of the development of outpatient services and one stop service for cancer patients who underwent chemotherapy with a humanized health care at out-patient department, Khon Kaen Hospital. The developed service system by a multidisciplinary team was focused on the roles and responsibilities, specified to exchange knowledge of patients self-care, self-image, healthy cooking, exercising, dhama therapy, promoting appropriate occupations. It also had a hotline communications system with 24 hour operation. The results from this developed system found that patients decrease lost follow-up, have better self-care and their quality of life, none of the disappointment and satisfaction of cancer patients receiving chemotherapy with the patient treated as a human being. It is consistent with the study of Khurasei L⁽⁷⁾ about the development of outpatient services, Jung Harn Hospital, Roi-Et, which found that

the level of satisfaction of patients after development of the outpatient services was at high level. Also, the study of Kawee Wong S⁽⁸⁾ which studied the development of out-patient department at Gom laa sai Hospital, Kalasin which found that the satisfaction with the outpatient services after development was at a high level. It is consistent with the studies of Peter Johansson, Magnus Oleni and Bengt Fridlund⁽⁹⁾ which is "Patient satisfaction with nursing care in the context of health care: a Literature study". It was found that the satisfaction of patients in the hospital consisted of 8 dimensions: social-economy, expectation in nursing care, environment, communication and information, participation, relationship between caregivers and patients performance in nursing and nursing care system.

To provide nursing, they used specialized nurses for taking care and giving information such as breast and nutrition feeding, nursing care information, surgery information before and after operations and so on. The good relationship between nurses and patients/caregivers who give long term care thus creates the satisfaction of caregiver at a high level as mentioned. To sum up, the continuing development of nursing

Table 2. General information of patients and their caregivers (n = 106)

Variables	Items	Number	Percentage
Diagnosis	Bilateral Cleft Lip & Palate	40	37.73
	Rt. Unilateral Complete Cleft Lip & Palate	20	18.86
	Lt. Unilateral Complete Cleft Lip & Palate	44	41.53
	Cleft Palate	2	1.88
	Total	106	100
Patient's relationship	Father	19	17.92
	Mother	72	67.93
	Grandfather, Grandmother	7	6.60
	Others	8	7.55
	Total	106	100
Age	Average 36.2 years SD = 9.48		
Education	Primary school	45	42.45
	Secondary school, Certificated, Diploma	42	39.62
	Bachelor's degree	18	16.98
	Graduate school	1	0.95
	Total	106	100
Occupation	Government office	11	10.38
	Farmer	42	39.62
	Selling	13	12.26
	University Student	2	1.89
	Employee	23	21.70
	housewife	11	10.38
	Etc.	4	3.77
	Total	106	100

Table 3. The satisfaction with the service in the surgery room and Tawanchai Cleft Center (n = 106)

Service	Average	Standard Deviation SD	Average Raking
1. Your satisfaction of getting information and advice about the location and step of services at the exam rooms and surgical cleft lip-palate patients care center.	3.6698	0.52954	excellent
2. Your satisfaction of information about the diseases and treatments.	3.5000	0.55635	excellent
3. Your satisfaction of transferring your children to the care team, such as surgeons, dentists and ear, nose and throat doctors, nurses, speech training, pediatrician, breast practicing nurses, or other necessary teams.	3.6981	0.48146	excellent
4. Your satisfaction about information to prepare for admission.	3.5377	0.53762	excellent
5. Your satisfaction about information about the rights to treatments	3.6226	0.54253	excellent
6. Your satisfaction about the information before and after surgery.	3.6415	0.55530	excellent
7. Your satisfaction of telephone contact with the nurse when you have problems.	3.5283	0.63557	excellent
8. Your satisfaction in services from outpatient diagnostic room.	3.3019	0.63501	excellent
Total	3.5625	0.12726	excellent

care system benefits patients and caregivers until they are satisfied with the service received.

Conclusion

The nursing care system for patients with

cleft lip-palate craniofacial deformities at Tawanchai Cleft Center has been developed to create an appropriate model of nursing care of superb quality and create a centre of excellence. This provides the patient with holistic care, integrated, accessible,

efficient service to patients/caregivers satisfaction and also provides continuous monitoring and treatment until they can live normally in society.

Acknowledgement

The authors wish to thank the patients and their families for their participation, (a) the Faculty of Medicine and (b) the Center of Cleft Lip-Cleft Palate and Craniofacial Deformities, Khon Kaen University in association with Tawanchai Project for support and (c) Mr. Martin Leach and Darawan Augsornwan for assistance with the English-language presentation.

Potential conflicts of interest

None.

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การพัฒนาระบบการพยาบาลผู้ป่วยที่มีความพิการปากแหว่งเพดานโหว่ ไบหน้ และคีรีษะ ศูนย์ตะวันฉาย โรงพยาบาลศรีนครินทร์

สุธีรา ประดับวงษ์, สุมาลี พงศ์ภักทิพย์, ชนิษฐา วรธงชัย, บวรศิลป์ เชาวน์ชื่น

ภูมิหลัง: จากอุบัติการณ์ของภาวะปากแหว่งเพดานโหว่ ที่เกิดสูงสุดในภาคตะวันออกเฉียงเหนือ และความจำเป็นในการดูแลรักษา แบบทีมสหวิทยาการ รวมทั้งการเป็นศูนย์กลางในการดูแลที่เฉพาะทาง การประสานงานการดูแลอย่างเป็นระบบ "ศูนย์ตะวันฉาย" จึงเป็นศูนย์กลางในการรักษาพยาบาลขั้นเลิศ ในผู้ที่มีภาวะปากแหว่งเพดานโหว่ ดังนั้นการพัฒนาระบบการพยาบาลผู้ป่วยที่มีความพิการปากแหว่งเพดานโหว่ ไบหน้ และคีรีษะ ศูนย์ตะวันฉาย โรงพยาบาลศรีนครินทร์ จึงมีความสำคัญและจำเป็นอย่างยิ่ง

วัตถุประสงค์: เพื่อให้ได้ระบบการพยาบาลที่เหมาะสมกับบริบทของโรงพยาบาลระดับเหนือตติยภูมิ (ศูนย์ตะวันฉาย)

วัตถุประสงค์และวิธีการ: เป็นการศึกษาแบบมีส่วนร่วม โดยมี 3 ขั้นตอน คือ 1) วิเคราะห์สถานการณ์ และสอบถามความคิดเห็นของเจ้าหน้าที่ห้องตรวจคัดสรรกรรมและศูนย์ตะวันฉายจำนวน 22 คน โดยใช้คำถาม 6 ข้อ 2) สรุปการวิเคราะห์สถานการณ์จากการประชุม และแบบสอบถาม นำข้อสรุปที่ได้มาเป็นแนวทางในการปฏิบัติงานเพื่อพัฒนาระบบการพยาบาลตั้งแต่เดือนมกราคม พ.ศ. 2554 เป็นต้นไป และ 3) ประเมินผลความพึงพอใจหลังพัฒนาระบบ 4 เดือน (พฤษภาคม – สิงหาคม พ.ศ. 2554) กับผู้ดูแลผู้ป่วยปากแหว่งเพดานโหว่ 106 คน จำนวน 8 ข้อ วิเคราะห์ข้อมูลโดยคำนวณหาค่าเฉลี่ย ร้อยละ ส่วนเบี่ยงเบนมาตรฐาน

ผลการศึกษา: พบว่า 1) ระบบการพยาบาล ประกอบด้วย การดูแลด้านจิตสังคม การให้นม การให้คำปรึกษา แนะนำการให้ความช่วยเหลือในด้านต่างๆ เพื่อตอบสนองต่อปัญหาของผู้ป่วย/ครอบครัวตามแนวทางการรักษา ของทีมสหสาขาวิชาชีพ โดยมีการติดตามประเมินผลเพื่อให้ผู้ป่วย/ครอบครัวได้รับการดูแลแบบองค์รวมอย่างต่อเนื่อง 2) ผู้ป่วยมีภาวะปากแหว่งเพดานโหว่ข้างซ้ายชนิดสมบูรณ์พบมากที่สุด 44 ราย คิดเป็นร้อยละ 41.53 ผู้ดูแลเป็นมารดามากที่สุดคิดเป็น ร้อยละ 68 อายุเฉลี่ยของผู้ดูแลคือ 36 ปี จบประถมศึกษามากที่สุด ร้อยละ 43 มีอาชีพทำนามากที่สุดร้อยละ 40 มีความพึงพอใจต่อการให้บริการของศูนย์ตะวันฉาย มีค่าคะแนนเฉลี่ยและรายข้อ อยู่ในระดับดีมากทุกข้อ ($\bar{x} = 3.56, SD = 0.13$)

สรุป: การพัฒนาระบบการพยาบาลผู้ป่วยที่มีความพิการปากแหว่งเพดานโหว่ ไบหน้ และคีรีษะศูนย์ตะวันฉาย โรงพยาบาลศรีนครินทร์ เพื่อให้ได้รูปแบบการพยาบาลที่เหมาะสมกับการเป็นศูนย์กลางการดูแลเฉพาะทางขั้นเลิศที่มีคุณภาพ ซึ่งจะส่งผลให้ผู้ป่วยได้รับการดูแลอย่างองค์รวม สามารถเข้าถึงบริการได้อย่างมีประสิทธิภาพ ผู้ป่วย/ผู้ดูแลมีความพึงพอใจในบริการที่ได้รับ มีการติดตามการรักษาอย่างต่อเนื่อง จนสามารถดำรงชีวิตอยู่ในสังคมได้อย่างปกติสุข
