Community-Based Model for Speech Therapy in Thailand: Implementation

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Objectives: *To establish a Community-Based Model for Speech Therapy in Thailand and to implement it.*
Materials and Method*: The development of a Community-Based Model for Speech Therapy was based on the principles of primary healthcare, community-based rehabilitation and institutional sharing. Workshops for speech and language pathologists (SLPs), including "Training for Trainers" and six "Smart Smile & Speech" workshops were held. We held 1) a workshop for training SLPs in how to manage speech and language problems in cleft lip and palate (CLP)**;** 2) a workshop for training healthcare providers who are not speech and language pathologists (para-speech and language pathologists: para-SLPs) how to identify speech, language and hearing problems in CLP and undertake early intervention; and, 3) four speech camps for continuing education via life demonstration and practice.*
Results: *Standard guidelines were produced for SLPs to remedy speech and language disorders in children with CLP in Thailand and para-SLP manuals for speech and language intervention for CLP were developed. Para-SLPs will be better equipped to identify and then provide early intervention for individuals with CLP, as well as to refer children with CLP and complicated speech and language disorders to speech clinics for the further management. Percentage of agreement among SLP, audiologists and para-SLPs ranged 50-93.33 while the Kappa coefficients ranged -0.07 to 0.86.*
Conclusion: *The Community-Based Model for Speech Therapy for Children with CLP was an appropriate approach for coming up with solutions for the lack of speech services for children with CLP in Thailand.*

Keywords: *Community-based, Cleft lip/palate, Speech therapy model*

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Cleft lip and palate (CLP) is a birth defect with many associated problems and management challenges that must be overcome before finally achieving a favorable outcome. Having a child with CLP exposes a family to many psychological, medical, economic and financial problems. A successful program for treatment of CLP requires early multi-/inter-disciplinary involvement. This team approach is employed in developed countries and is being adopted in developing countries both for the benefit of patients and as a means of overcoming the lack of resources[1-3].

Most developing countries currently emphasize the surgical correction of structural defects to increase function and to remove the social stigma; thus most of the children with CLP continue to have speech and language problems from both residual structural abnormalities and compensatory speech disorders and persistent stigmatization. In Thailand, both domestic volunteers (non-government organizations: NGOs) (*e.g.*, the Duangkaew's Foundation, the Thai Red Cross Council, the Project of the Royal College of Surgeons of Thailand) and international mission teams (*e.g.*, Operation Smile, Smile Train) are also committed to increasing the availability of surgical care for cleft palate and craniofacial defects, particularly in remote rural

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areas[4].

The birth incidence of cleft palate in Thailand was 1.10-2.49/1,000 live births[4]: most in the northeast region; estimates of the annual occurrence of cleft births in this area was 745 live births each year[5]. Thus, the challenge for interdisciplinary team management of hospital-based interventions is real and immediate. The Khon Kaen University Cleft Palate and Craniofacial Center, the first interdisciplinary center in Northeast Thailand was established in 1999[6] to create and provide interdisciplinary care for patients with clefts, to conduct research into the prevention of cleft palate and to improve relevant healthcare services. The centre's organization of an interdisciplinary approach for cleft care has faced many obstacles; such as, a lack of resources, funding, and professionals, and limited knowledge, particularly in speech services. Management of speech and language problems for cleft care, therefore, urgently needs an infusion of resources and a national policy to make the interdisciplinary treatment of CLP a priority.

Community-Based Model for Speech Therapy has been under development since 2003[7]. It is based on the primary healthcare (PHC) approach[8] and community-based rehabilitation (CBR). PHC involves a state of physical, social and mental well-being that goes beyond the mere absence of disease[9]. As such, gross inequities persist, as indicated by the relatively low health budget for non-urban areas[10]. CBR necessarily includes all measures aimed at reducing the impact of disabling and handicapping conditions and enabling disabled and the handicapped people to achieve social integration[11]. This research focused on the amalgamation of PHC and CBR as a means of achieving awareness of services and cooperation among institutions and communities for a more effective service delivery[8].

The purpose of this research was to establish the Community-Based Model for Speech Therapy and implement in Thailand.

Materials and Method

The community-based model for speech therapy was divided into three stages.

Stage I: Consensus concept

Two consensus meeting workshops were conducted to combine the institutional management into PHC and CBR. They were: 1) "The first International Congress on Interdisciplinary care for Cleft Lip and Palate 2003, 1-4 Dec 2003: Community-Based Model for Speech Disorders for Children with Cleft Lip and Palate in Developing Countries"; and, (2) "Community-Based Model for Holistic Nursing Care for Children with Cleft Lip and Palate in Developing Countries". The strengths and weaknesses of healthcare systems in developing countries were identified and objectives set on how to solve problems encountered by speech-disordered children with CLP[7].

Stage II: Workshop for accessing PHC and CBR

In 2004, group discussions were conducted in order to achieve a "Holistic Care Network System for Improving Quality of Life, Health Promotion, Speech and Language Stimulation for Thai Children with CLP" to access the PHC and CBR needs. The issues dealt with included: problems which frustrated holistic care, speech and language stimulation for children with CLP, and problem solving. Panelists agreed on the basic problems confronting healthcare for CLP in Northeast Thailand related to cleft care and delayed speech therapy or no interventions. Projects for promotion and development of networking for healthcare providers in cleft care were proposed[7].

Stage III: Training for the trainers

The Model was implemented in 2005 through two workshops entitled, "Training for Trainers" for eight speech and language pathologists (SLPs) interested in CLP children at the Department of Otorhinolaryngology, Faculty of Medicine, Khon Kaen University and the Department of Otorhinolaryngology, Faculty of Medicine Ramathibodi Hospital, Mahidol University.

The objectives of these workshops were for SLP_S were to: 1) understand and realize the concept of an interdisciplinary approach for CLP and refer patients to appropriate treatment; 2) provide appropriate assessment and treatment for CLP; and, 3) gain experience and knowledge in training others basic speech and language management.

Domestic and international specialists for speech therapy for CLP in developing countries delivered lectures on CLP theory and conducted a hands-on workshop for velopharyngeal assessment. After the workshops, the eight SLP_S issued a draft manual for early speech and language intervention for CLP. This was revised after trials in two speech camps conducted for training caregivers and speech and language assistants who expected to help early speech and language intervention for children with CLP.

The Community-Based Model for Speech

Therapy was piloted as a national project in 2007, under the aegis of the "Smart Smile & Speech Project" in celebration of the 50th birthday of Her Royal Princess Sirinthorn. Six projects were proposed to solve the shortage of trained personnel to provide services for CLP children with speech, language and hearing problems:

1. A workshop for SLP (n = 22) dealing with assessment and intervention for speech, language and hearing problems in CLP was conducted at Prapokkloa Hospital, Chanthaburi province for 3 days May 13-15, 2008. The objectives of this workshop were to provide and exchange knowledge and information related to management of speech and language problems among speech and language pathologists, and to establish the standard protocol for speech services in CLP in Thailand.

2. A workshop for training in screening and early intervention for speech, language and hearing problems in cleft lip and palate was launched at Woraburi Ayothaya Convention Resort, Pranakornsriayuthaya between June 23 and 27, 2008. The 57 participants or para-speech and language pathologists (para-SLPs) were healthcare providers, mostly nurses, with at least bachelor degrees. The objectives of this workshop were to provide basic knowledge and information related to speech and hearing assessment and services in CLP, both theory and practice. Then scenarios for practicing the assessment of language and hearing and video presentation for practicing the assessment of articulation and resonation were performed. The percentage of agreement and Kappa coefficients were used to assess the agreement among SLPs and para-SLPs.

3. Four speech camps were conducted to help healthcare workers identify and practice early remediation of speech, language and hearing problems. The camps also trained parents and caregivers how to conduct a home program for their CLP children. The hands-on camps were held in:

1) the Central region at Chonburi Hospital, Chonburi between 26-28 August, 2009;

2) the Southern region in Trang Hospital, Trang between 2-4 September, 2009;

3) the Northeast region in Sappasithiprasong Hospital, Ubon Ratchathani between 7-9 October, 2009; and,

4) the Northern region at Rajanagarindra Institute of Child Development, Chiangmai between 18-20 November, 2009.

Ten to sixteen healthcare workers who registered in the previous workshop attended each speech camps for life demonstrations and practices. The camps were held near the hospital where the participants worked.

Results

Stages I and II of the model included investigating the functions of each healthcare unit (*i.e.*, from the community level to the Khon Kaen University Cleft Palate and Craniofacial Center). The strengths and weaknesses of each healthcare unit mentioned previously were also included[7].

Stage III: Training for the trainers, the manual for parents and trainers for early intervention in CLP, was issued and implemented for training speech and language assistants. SLPs who attended the first workshop were trainers for the next workshop and speech camps. The standard protocol to manage speech and language service in Thailand was concluded. SLPs rated their overall satisfaction of the workshop management from good to excellent.

The goal for the workshop training in screening and early intervention for speech, language and hearing problems in CLP for speech and language assistants was that participants be able to identify language and, hearing problems and provide early intervention. The percentage of agreement and Kappa coefficients of agreement among SLPs and par-SLPs are presented in Table 1. The overall satisfaction of most (90 %) of the attendees was ranged from moderate to good.

At the speech camps, participants were given life demonstrations and practice, and learned more about identifying speech, language, and hearing problems, how to do early speech and language intervention, and how to refer children with CLP with complicated speech and language problems (*i.e.*, suspected cases of velopharyngeal insufficiency, compensatory articulation, voice disorders) to the speech center. Approximately 88 % of attendees and caregivers rated their overall satisfaction with program from moderate to good.

Discussion

To date, most individuals with CLP in Thailand have had to make do without access to an interdisciplinary team in the center or speech services which were unavailable in many areas. As in other developing countries[3,7], most children with CLP do not get speech rehabilitation either before or after

Table 1. Percentage of agreement and Kappa coefficients among SLP and speech and language assistants from work

Speech and language assessment	Percent of agreement*	Kappa Coefficients	
		1st time*	2nd time*
Articulation	58.62 -89.08	0.11-0.54	0.14-0.60
Resonation	53.33-83.33	-0.07-0.38	-0.04-0.56
Language	-	00 .00-00.93	
Hearing	50.00 -93.33	- 0.05 – 0.86	

*p-value is less than 0

surgery in Thailand[2,7,12]. To overcome this problem, the reasons were explored. There are many reasons that individuals with CLP do not get speech services including: misconceptions regarding both the cause of the impairment and availability of treatment, belief that surgery is the only and final solution, no awareness of supplementary services among healthcare providers of speech pathology services and their importance for individuals with CLP, most patients live in remote areas or small communities where speech services are not available and/or they cannot afford or are unable to travel to a treatment center, and lack of professionals[7,13]. Thailand has 63 million people but approximately 40 SLPs[14] and most of them work in Bangkok, except for 5 in the North, 4 in the South and 1 in the Northeast[7,13]. Therefore, adequate speech services for CLP is not currently possible, not even in the foreseeable future.

The results of our workshops showed the percentage of agreement among SLPs and para-SLPs was of an acceptable range but the Kappa coefficients did not reach an acceptable level[15] for identifying speech, language, and hearing problems. Participants might be given more training to reach an acceptable level of agreement. However, The Community-Based Model for Speech Therapy's aim was to provide early speech and language services for children with CLP in Thailand where there are limited resources. As in other developing countries[16], the Community-Based Model for Speech therapy for children with CLP in Thailand was established for solving problems and even though the model might not meet all of the needs[3], it is particularly useful in areas where speech and language services are limited. This model might be applied to any developing country which lack resources of speech services. The Model evaluation and process to reach the community services should be continued. Establishing an education center to produce qualified speech and language pathologists is also essential for achieving a long-lasting solution.

Conclusion

The Community-Based Model for Speech Therapy in Thailand was developed with the view of sharing awareness of knowledge, programs and services between institutions and communities (PHC and CBR) and was implemented under the aegis of the "Smart Smile & Speech Project". Training for SLP, related healthcare workers and parents or caregivers in communities aided the identification and provision of early intervention for individuals with CLP and the way to refer children with CLP and complicated speech and language problems to speech centers for future management. SLP now has guidelines for remediation of speech, language and hearing disorders for children with CLP within Thai context.

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รูปแบบการให้บริการด้านการฝึกพูดแบบชุมชนสำหรับเด็กปากแหว่งเพดานโหว่ในประเทศไทย: การนำไปใช้

เบญจมาศ พระธานี, ปรียา หล่อวัฒนพงษา, กัลยาณี มกราภิรมย์, รัชนี สุภวัตรจริยากุล, รัตนา ถิ่นนัยธร, พนิดา ธนาวิรัตนนิจ

วัตถุประสงค์*: เพื่อสร้างรูปแบบการฝึกพูดสำหรับเด็กปากแหว่งเพดานโหว่ในชุมชน และนำมาใช้ในประเทศไทย*

วัสดุและวิธีการ*: รูปแบบการฝึกพูดสำหรับเด็กปากแหว่งเพดานโหว่ในชุมชนถูกสร้างขึ้นจากการแนวคิดร่วมกันของการ บริการสุขภาพขั้นพื้นฐานการฟื้นฟูในชุมชน และการบริการในสถาบันสุขภาพโดยการประชุมเชิงปฏิบัติการสำหรับนักแก้ไขการพูดในเรื่อง "การอบรมเพื่อเป็นวิทยากร" และการประชุมเชิงปฏิบัติการภายใต้โครงการยิ้มสวยเสียงใส 6 ครั้ง ประกอบด้วย 1) การประชุมเชิงปฏิบัติการในการจัดการปัญหา ด้านการพูดและภาษาในผู้ป่วยปากแหว่งเพดานโหว่สำหรับนักแก้ไขการพูด 2) การประชุมเชิงปฏิบัติการสำหรับบุคลากรทางการแพทย์ ในการคัดแยกปัญหาทางการพูด ภาษาและการได้ยินในเด็กปากแหว่งเพดานโหว่ และการฝึกพูดเบื้องต้น 3) ค่ายฝึกพูด 4 ค่ายสำหรับการศึกษาต่อเนื่องด้วยการสอนแสดงและปฏิบัติการจริง*

ผลการศึกษา*: ได้แนวทางมาตรฐานสำหรับนักแก้ไขการพูดในการแก้ไขปัญหาการพูด และภาษาในเด็กปากแหว่งเพดานโหว่ในบริบทของประเทศไทยคู่มือการสอน ภาษาและการพูดในเด็กปากแหว่งเพดานโหว่ บุคลากรทางสาธารณสุขสามารถคัดแยก และให้การฝึกพูดเบื้องต้นสำหรับเด็กปากแหว่งเพดานโหว่และสามารถส่งเด็กปากแหว่งเพดานโหว่ที่มีปัญหาการพูด และภาษาที่มีความซับซ้อนไปยังคลินิกฝึกพูด ร้อยละของความสอดคล้องของการคัดแยกปัญหาทางภาษาการพูด และการได้ยินระหว่างนักแก้ไขการพูดนักแก้ไขการได้ยินอยู่ระหว่าง 50-93.33 และ Kappa coefficients ระหว่าง -0.07 to 0.86*

สรุป*: รูปแบบการให้บริการด้านการฝึกพูดแบบชุมชนสำหรับ เด็กปากแหว่งเพดานโหว่เป็นวิธีการที่เหมาะสมวิธีหนึ่งในการแก้ไขปัญหาการขาดแคลนการบริการด้านการฝึกพูดสำหรับเด็กปากแหว่งเพดานโหว่*