

Annual Report: Caritas Takeo Eye Hospital 2011

Vision: Takeo Eye Hospital is to be an agent in reducing poverty by providing compassionate, quality, tertiary care with efficiently trained staff and equipped with appropriate ophthalmic equipment, instruments and medicines.

Mission: To provide quality diagnostic, curative and rehabilitative eye care in order to eliminate preventable and treatable blindness, train eye personnel in provision of quality eye care and conduct research relevant to eye conditions in Cambodia and neighbouring countries.

Goal: Quality services with compassion and gentleness is accessible to the patients especially those who are in need.

Part A: Stories of Change

Name: Neang Channy

Programme: Takeo Eye Hospital (TEH)

Location: Takeo, Cambodia

As part of the ABI training program, ophthalmic eye nurse Mrs. Pring Kimmy was sent to ARAVIND Eye Hospital, India to attend six months training for Orthoptics in Paediatric Ophthalmology and adult strabismus from July to December 2011.

After having returned from her training Mrs Kimmy took over responsibility for the implementation of a new department for Orthoptics at TEH.

One of her first patients was Neang Channy, 13 years old, from Samrong commune, Takeo province. She studies at Pryar Primary School in the 2nd grade. She was identified and referred by Catholic Relief Services (CRS), through their Disability Inclusive Education service. Channy was one of 17 children referred to TEH by CRS.



Prior to the initial external examination, Channy squinted, had uncorrected myopia and she could not read the board or read books properly. Most often she kept to herself and she would not play with other children. In the classroom she preferred to sit at the back so that she would not be asked questions by the teacher.

Channy's eyes were properly tested by Mrs Kimny and she was prescribed myopic correction. Her vision improved from approximately 25% to 66% on the better eye. She now wears her eyeglasses regularly and feels more confident in school. She can read books, write on the blackboard and plays happily with the other children. As a result of the intervention she is now able to fully participate in school and daily life. She feels more included and is able to socialise more with her classmates.



Case Study 2:

Name: Sam Yath

Programme: Caritas Takeo Eye Hospital/CBM

Location: Takeo, Cambodia

Mrs Sam Yath is 70 years old and she lives in Chous village, Chikhma commune, Traing district. She has seven children (four male and three female) who are all married now. She lives with her the sixth daughter, Mrs Ho Huth who is 34 years old and has no children. Gradually over the past two years her vision has become blurry however it was only in the last three months that her blurred vision became so serious that she could see only Counting Fingers at 1 metre with both eyes. As her vision deteriorated Mrs Sam found it very difficult to do anything on her own and her life became very isolated.



On the 7th of October 2011 the Kirivong Vision Center conducted an outreach eye screening at Chikhma Health Centre (Yath's local health centre). Mrs Sam was informed and referred to the outreach eye screening examination by CDMD staff who work in the area with disabled people. During the eye examination Mrs Sam was diagnosed with cataracts in both eyes and she referred for surgery at TEH on the 11th of October 2011. On this day hospital staff picked Mrs Sam up from her village and brought her to the hospital. On the 12th of October 2011 her right eye was operated on and an intraocular lens was inserted. At discharge, her visual acuity improved already to 6/24. During her admission at TEH, Mrs Sam had all her fees waived as she qualified for TEH's social services subsidised surgery given her low income status.



After surgery Mrs Sam can see things more clearly. She is able to be useful around the home, like feeding the cow, and therefore contributes to the income of her family again. She is able to walk around the village and she can go to the pagoda to pray or visit with her friends.

Part B: Implementation Progress

1. Effectiveness of implementation progress:

Objective 1: To develop, test and implement a Gender and Disability Inclusive Approach to Community Eye Health (DIACEH) Program (model, manual, guidelines) with appropriate / adequate referral pathways (diagnosis - treatment - reintegration - rehabilitation) in collaboration with the Cambodian Development Mission for Disability (CDMD) in Kiri Vong Operational Districts and Takeo Province by Dec, 2011.

Key Achievements:

- Completion of additional training of TEH staff on DIACEH (Feb).
- Completion of additional training of KV Community Health Care Workers on DIACEH (May & June).
- Distribution of DIACEH manual to all stakeholders including NPEH during INGO meeting in June 2011
- 139 patients referred to CDMD (65 women, 62 men and 12 children) for rehabilitation.
- 1,423 patients referred from CDMD to TEH (849 female /114 children) 4% increase compare to 2010. 2.18% are disabled).
- Disability: 9,213 seeing problem, 824 hearing problem (521 females, 10 children), 104 physical problem (34 females, 9 children), 48 understand problem (27 females, 1child).
- 8.7% of all new patients suffered from blindness (presenting VA < 3/60), male with 11.9% more than female patients (7.9%).

Objective 2: To strengthen Takeo Eye Hospital (TEH) and Kiri Vong Referral Hospital to upscale their capacity to provide essential Community Eye Health services to reduce Avoidable Blindness by Dec. 2011

Key Achievements:

1. Training:

- 9 resident doctors (4 female) trained in the national resident program for ophthalmologist under the umbrella of NPEH (National Program for Eye Health) and the University of Sciences, Faculty of Medicine, Phnom Penh
- 3 doctors (all male) upgrading of diploma in ophthalmology to be fully qualified ophthalmologists (2 were TEH doctors upgraded to ophthalmologist: Dr.Neang Mao and Dr.Chea Ang)
- 18 secondary nurses (6 females) Diploma in Ophthalmic Nursing (August, 2010- July, 2011 with 11 nurses and August, 2011 - September, 2012 with 10 nurses).
- Follow up post of DON training in Mondulkiri, Odormeanchey, Kampong Thom and Kampong Cham provinces.
- 31 nurses (8 female) on June, 2011 and 22 nurses (5 females) on Dec, 2011 participated in CME for Cambodian Ophthalmic Nurse Society.
- Training of Paediatric Nurse in India (3 months) Mrs. Heang Prang completed on 30th Sept, 2011.
- Training of Orthoptist Nurse in India (6 months) Mrs. Pring Kimny completion on 26th December, 2011.
- 1 nurse participated Asia Pacific Optometry Congress (APOC) Conference in Singapore (Nov).
- 2 doctors from TEH attend APAO Conference in Sydney Australia, (March).
- Follow up Low Vision and refraction Training for 2 Nurses at TEH by CBM Germany, Karin van Dijk (March).
- 2 nurses(Mr.Nol Rattana and Mrs.Pring Kimny) trained 10 days on Low Vision with ICEE at Phnom Penh (April)
- Completion Child Protection Policy and Project Management Training for 17 TEH staff (March and July)
- 2 senior staff of TEH participated in Asia annual reflections Workshop of ABI in Hanoi, Vietnam (Nov).
- 50 Takeo secondary school teachers (2 female) trained in low vision screening (27 and 28 Oct 2011).

2. Service/Corrections/Outreach:

- Consultations TEH 28,979 (14,954 Females/3610 children/1,697girls) 15,682 new out patient 14% increase compared to 2010.
- Consultations KVC 3,578 (2,022Females/272 children/139girls)
- 2,494 cataract surgeries (1,572 (63%) female/54 children) 14 % increase compared to 2010.
- Cataract outcome: At discharge 50% good, 41.5% borderline, 8.5% poor, best-corrected VA 1st follow-up (64.9% attended): 70.5% good, 23.3% borderline, 6.2% poor.Total complication 3.3% (1.8% vitreous loss, 0.8% capsule rupture without vitreous loss). Complication rate for ophthalmologists 2.7%, for resident 4.3%.
- Cataract surgery rate 1,582 (2009:1,257; 2010:1,366)
- 111 low vision (40 females/30 children) and 119 low vision devices dispensed (32 females/29children)
- TEH Refraction 3,884 (2,134 females/249 children), prescribed 2,212(1,177females/146 children), 2,373 spectacles dispensed (1,214 females/ 126children) 38% increase compared to 2010.
- KVC Refraction 1,267 (692females/ 5children), 927 prescribed (493 females) and 484 spectacles dispensed (232 females)
- 180 glaucoma-surgeries performed (123 females/ 2 children) decrease 12.6% from 2010.
- 50 Takeo secondary school teachers trained in vision screening (27& 28 Oct).

- 11,016 secondary school (Grade 7, 8, and 9) students screened (5,269 females - 48%). Prevalence of refractive error: 2.12% (1.21% for male, 0.92% for female).
- TEH outreach: 1,493 vision screenings: (1,028 females - 69%).
- Outreach referral attendance at TEH increase from 37% in 2010 to 42% in 2011. This could be due to an organized pick-up service for poor patients.
- KVC outreach: vision screenings 2,099: (1,387 female - 66%/71 children).
- 28 village health workers (12 female) attended monthly follow up training for corneal ulcer Intervention (895 consultations, finding 780 corneal abrasions, 765 treated healed, and 77 referred to TEH for further treatment).

Objective 3: To enable the target populace districts to access a quality affordable continuum of care (diagnosis - treatment - reintegration - rehabilitation) in Kiri Vong Operational Health District and Takeo Province by Dec. 2011.

Key Achievements:

- Twice daily local radio spots promoting eye health such as corneal ulcer, cataract, glaucoma, pterygium, diabetic retinopathy, and promotion of eye care services in Takeo and neighbouring provinces.
- 11 kinds of eye health education materials prepared printed and distributed in the villages, schools and at the hospital.
- Basic eye care and health education given to out patients daily at TEH waiting area (26,372 patients and companions).
- World Sight Day celebrations on 12th -14th Oct at TEH attracted over 400 patients and carers participant during ceremony, and who came for free eye examinations and surgeries (including 842 consultations and 104 surgeries), attended by the director of the PHD (provincial health department), Deputy director of Disability Action Council (DAC), Deputy director of provincial Social Affaire, CDMD, Handicap International, and 8 relevant health NGOs.
- For cataract surgeries 2% of patients are able to pay the full fee, 3% above USD\$50, 69% below USD\$50 (on average they can contribute USD\$7) and 26% are unable to contribute any payment.

2. Implementation Variations:

Some specific variations in the project that did not impact specifically on the achievement of the objectives:

- 2.1. **End of Project KAP Survey:** This KAP, which was initially planned to be conducted at the end of 2011 was postponed given that it would have been too close to the first (baseline) KAP which was we conducted on February 2010. The close proximity of the KAPs would have meant the results would not yielded useful or meaningful information.
- 2.2. **RAAB survey:** The RAAB was initially planned to be conducted in the final quarter of 2011, however it was conducted in December 2011 and January 2012. The late start of the RAAB was due to the delays encountered in sourcing appropriate and accurate census data from the local government. This delay in the RAAB however did not effect the outcome of the project.

3. Monitoring and Evaluation Systems:

3.1. Activity data (covering consultations, surgeries, outreach/screenings, training, medicines, spectacles, etc) is continuously collected and collated on a monthly basis. This timely reporting has enabled activities to be monitored accurately and for the activity work plan to be implemented. This monitoring was able to highlight the need for budget revisions in the project caused by the delay in the RAAB (to December 2011 and January

2012), conducting an outreach survey study (June to September) and postponing a second KAP survey (since the first KAP survey was conducted recently in 2010*).

First preliminary results of the RAAB survey are now available (see table at end of report) and suggest a reduction of bilateral blindness (best-corrected visual acuity < 3/60 in the better eye) from 2.95% in 2007 to 2.75% in 2012. Cataract surgical coverage for blind persons increased from 55 to 65%, as well as IOL-implantation rate from 89 to 93%. Cataract surgical outcome improved considerably with only 7.7% poor outcome (BCVA < 6/60) in the last 5 years compared to 11.5% in 2007. Good outcome improved from 82% to 89%.

Results from the 1st KAP-survey played an important role in tailoring TEHs health information messages (e.g. KAP suggested that 75% of disabled participants and 99% of the overall sample reported some knowledge about cataract, but only 18.6% reported surgery as the best treatment. 21.3% reported traditional medicine as best treatment. Simple explanations of appropriate treatment for cataracts will therefore play a more important role than before, especially for disabled people).

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The Impact of Knowledge and Attitudes on Preventative Eye Care Practice and Service Uptake in Cambodia

AIM
To investigate how knowledge and attitudes influence eye care practices and service uptake in Takeo Province, Cambodia

METHODS
Thirty villages were randomly selected from three districts of Takeo province (Figure 1). Using a random walk method, interviewers approached occupants of buildings located along the trajectory from a randomly selected landmark in each village until 20 people in each village were interviewed. Participants were men and women from three demographic groups:
• 30-49 years
• 50+ years
• Parents with children aged ≤ 5 years.

RESULTS
Convenience sampling was used to recruit one or two people with a disability in each village. Disability was based on participant self-report and defined as having difficulty in seeing, hearing, walking and/or understanding.
• 599 adults were surveyed (mean±SD age 45.3 ± 15.6 years; range 19-90 years; 64% female)
• 94% were from rural areas and 82% were farmers or unpaid workers
• 52% had only a primary school education and 22% had never having been to school.
• 26% reported having at least one impairment.
• Difficult in seeing was the most commonly reported impairment across all groups

KNOWLEDGE
• Overall participants in the 30-49 year age group and parents group had a higher level of knowledge about eye diseases compared with the 50+ year age group (Table 1).
• A higher proportion of the 50+ year age group had heard of trachoma compared to the other groups.
• 49% did not know how cataract could be treated and only 19% listed surgery as the best treatment option (Table 2).
• Regression analysis using disability, age, and education variables found that older age and limited education were the main predictors of knowledge and not disability.
• The main sources of information related to eye problems were: relatives/family members (41%), health centre staff (24%), friends (13%) and radio (12%) (Table 3).

ATTITUDES
• The most trusted sources of eye health information were Health Centre staff (25%) and radio (24%) (Table 3).
• 52% (310/598) of participants considered that a child with vision impairment (VI) could go to school, 43% said 'no' and 5% did not know.

PRACTICE
• 77% of participants (459/599) had never had their eyes checked
• Of those who have had their health checked (n=142), 70% (290/412) have never had their eyes checked.
• 62% (372/599) of participants had an eye problem in the past but only 23% of these (142/370) had an examination for their eye problem.
• Red eye, difficulty seeing/refractive error and pterygium were the main types of prior eye problems reported (Table 4)
• More females had examinations for eye problems than males (46% vs 26% ($\chi^2(1) = 14.9, P < 0.001$)).
• Proportionately fewer of the older age groups went for an eye examination ($\chi^2(2) = 24.7, P < 0.001$) (Figure 2).
• Those who had eye examinations mainly went to health centres or Takeo Eye Hospital (Table 5).
• Key preventive behaviours included using clean water, wearing a hat in the sun, wearing sun glasses and wearing safety goggles when working

CONCLUSION
Knowledge of eye diseases and appropriate treatment differed by age group. The group most prone to vision-threatening eye conditions (i.e. older cohorts) were also the group least informed of these conditions. The need clearly exists for tailored eye health messages to be developed and promoted.

DISCUSSIONS
An understanding of the knowledge, attitudes, and practices (KAP) that underpin a community's eye health behaviours is critical if the barriers to preventive practices and service uptake are to be identified and addressed.
Prior research in Cambodia found that the most common causes of bilateral blindness were cataract (74.7%), corneal scars (6.0%) and glaucoma (3.1%) while uncorrected refractive error was the main reason (52.8%) for visual impairment (presenting VA <6/18-6/60 in the better eye).
In this study, community knowledge of these conditions varied by age group. Younger people tended to be better informed than older cohorts for all conditions except trachoma, possibly reflecting generational differences in exposure to trachoma. These older age groups were not only the groups most prone to the vision-threatening eye conditions listed but also the group least likely to have had an eye examination for prior eye problems.
Preventative eye health practices were limited and service uptake for check-up and treatment purposes was limited.

BIBLIOGRAPHY
1. National Program for Eye Health, August 2009. Unpublished information from the RAAB conducted in Cambodia in 2007 by Hans Limburg

ACKNOWLEDGEMENTS
The Knowledge Attitude and Practice (KAP) was a CBM project conducted with Takeo Eye Hospital in Cambodia.
Thanks to all the staff at Takeo Eye Hospital, particularly Dr Ngeeth Sarun, Dr Sun Sarun, Sir Myrna Porto, Sr Evangeline Durston, Mr Cham Theoun, Mr Sam Pumbol, Mr Kong Chhean, Mr Kan Puntok, Mr Chhek Vannak, Mr Chan Samnang, Ms Koy Chanthouen, Mr Seng Puthisey, Mr Saing Rong.

Figure 1: Location of Takeo Province

The fact that 23.5% of the participants reported Health Centre staff as their second most important source of information about eye problems (41.2% relied on family members/friends and 11.8% on radio spots) means that intensified training of government staff could result in a better knowledge of the population in Takeo province. Interestingly, material like leaflet, poster etc don't seem to play an important role. This is consistent with results from focus group discussions in rural China where barriers to cataract surgery were identified: "Educational interventions to increase knowledge about cataract are needed, but may face scepticism among patients".¹

The results of the first KAP-survey were already presented at international meetings².

¹ Zhang M, Wu X et al, Understanding barriers to cataract surgery among older persons in rural China through focus group. *Ophthalmic Epidemiology*, 18(4), 179-186, 2011.

² Ormsby G, Arnold AL, Sarun N, Bonn TS, Mörchen M, Keeffe J, Eye Health: A knowledge, attitude and practice survey in Takeo province, Cambodia: gender and disability differences. APAA Sydney, March 2011. Ormsby G, Prasad N, Mörchen M, Bonn TS, Nguyen NH, Nguyen NA, Keeffe J, Establishing an evidence-base for disability inclusion in eye health programmes. *The World Report on Disability*, University of Sydney, 2011

3.2 Evaluation undertaken

- TEH project and financial management evaluation (February - March).
Analysis of project and financial management/organisational structure of TEH, highlighting strengths and weaknesses and to assess the capacity of TEH's project management staff to implement its activities, highlighting strengths and weaknesses with reference to effectiveness, efficiency and sustainability. Main recommendations were: the need for financial technical assistance to help focus financial budgeting and accounting systems and for the consolidation/restructure of TEH's senior management.
- Takeo Province RAAB survey (December - January 2012).
To accurately measure the prevalence of avoidable blindness of blindness in persons aged >50 years and to be informed about causes of blindness and visual impairment, barriers to cataract surgery for blind cataract patients and population-based outcome of cataract surgical services. Results will be available February 2012

4. Sustainability Strategies

TEH has 59 local staff and 22 of them are government staff designated to work at TEH. Most of them will stay at TEH since they are from Takeo except for some who might move to Phnom Penh due to more lucrative offers or opportunities given by other NGOs. Additionally the Provincial Health Department provides support with TEH's electricity and water supply and some medicines. TEH's vision is that the project will encourage the government to take over and be more responsible for eye care services in Cambodia. Therefore it is hoped that additional training and capacity building for human resources together with improved infrastructure will encourage more patients to use the service. Quality of service is also crucial, as this will convince patients and other stakeholders of the government to use and feel responsible for the service.

However without adequate payment to staff, TEH understands that human resources will not improve. Therefore to help retain staff, TEH where possible tries to hire qualified staff that have family who reside in Takeo, staff are given opportunities such scholarships to improve their educational level, training outside the country to develop special services, and where funding is available increases in salary to reflect good work performance.

Cambodia has a shortage of qualified and well-trained staff in the field of ophthalmology, health administration, community based rehabilitation etc. Therefore, the project aims to contribute to various training courses aimed to empower local staff in the field of ophthalmology capable of increasing the quality of service provided to the eye patients in the country, e.g. residency ophthalmologists, diploma in ophthalmic nursing nurses, nurse upgrade from basic eye nurse to diploma in ophthalmic nursing nurses, low vision nurses, refraction nurses, spectacle technicians, primary school teachers on vision screening, CDMD field workers and village health workers trained in community eye health.

Cost recovery is also a strategy aimed to aid sustainability. Currently TEH has 4 beds reserved for full fee paying patients and at the optical shop 48.8% of patients/customer paid the full price for their glasses (\$2-6) and at KV VC 69.0% pay the full price (\$1-2) 99% of the dispensed sunglasses are fully paid (\$0.5-4).

The localisation of TEH's management has also been a major focus in 2011. In agreement with Caritas Cambodia, the Daughters of Charity who managed the hospital for the last 11 years will fully phase out in 2014. The new Project Director together with the management team (all Cambodians) were given the responsibility to prepare the TEH Multi Year Plan (2012 - 2014) including the budget details for the following years. A fully localised team has now been managing the Project since June 2011. Intensive collaboration on the future integration of TEH's management and operations into the Caritas project management system have started in 2011 with the overall goal of achieving independence from in-country based expatriate staff.

5. Cross cutting issue: Gender

The number of both women and girls patients has increased (female/male ratio increased from 1.023 in 2008 to 1.35 in 2011). The higher percentage of female patients highlights the fact that avoidable blindness in Cambodia is significantly higher in females than males (prevalence of blindness in Takeo Province: female =3.4%, male=1.73%). While the percentage of female patients at TEH is only slightly higher than male patients (57.45%), the picture is different at KV VC: 68% are female patients. Even more so for outreach screenings by TEH: 71% are female patients. More emphasis on community ophthalmology appears to be one keystone to improved accessibility for female patients. From all new patients who came to TEH in 2011, 8.7% have been blind (PVA < 3/60), male more than female patients (11.9 versus 7.9%).

Additionally 63% of all cataract surgeries have been performed on female patients and girls, however this percentage was already high in 2008 (61%) and 2009 (63%). Preliminary results from the RAAB 2012 suggest that there was almost no reduction in female blindness compared to 2007 (3.5 to 3.4%), but a significant decrease in male blindness (from 2.1 to 1.73%). This highlights the need for even more increased efforts in tackling female blindness. However, it should be noted that the higher life-expectancy in women are one of the reasons of higher prevalence of blindness, therefore a stable or slightly decreased prevalence could still be an indicator for a successful program.

TEH has playground equipment for children and a child friendly examination room, which aims to encourage women (who are mostly the primary child care givers in Cambodia) to be able to come to TEH and know that their children are welcomed and will have something to occupy them.

A major challenge that TEH faces with regards to gender inclusiveness is in human resources. While foreign females hold high positions within the upper management of TEH, thus ensuring there is a balanced gender perspective in the decision making process; there is still a distinct lack of local female staff in upper management and professional medical positions. This is very much a reflection of Khmer culture as males are favoured more in providing educational/career opportunities. Similarly TEH must rely on the government to select nurses/doctors to attend training courses and TEH has no input in that selection process. TEH took significant action in increasing the capacity of female staff by attempting to select more female nurses for training (see PAF Human Resource). TEH encouraged the NPEH and other NGOs to send female candidates for training at TEH. However the numbers of female trainees are still limited since most students at nursing technical schools are male.

In order to encourage the recognition of women TEH celebrates International Women's Day (8 March) and provides gender and disability sensitivity training. It should also be noted that TEH's financial manager is a woman and during the ABI extensive training and mentoring has been given to her.

6. Cross cutting issue: Disability Inclusive Approaches

The new TEH facilities completed in April 2010 incorporated many disability inclusive features including: ramps, wheelchair accessible toilets, 2 additional wheelchairs, colour

markings on steps, large type signage, wide walkways playground facilities and a large kitchen preparation area for caretakers of patients with special needs.

TEH has clearly established protocols for the registration, examination and diagnosis of patients, ensuring that staff are kind and polite, clearly explain procedures, provide clear physical directions and are observant of patients should they require assistance (physical or otherwise).

TEH provides counselling to vulnerable patients who may have difficulty paying for health services and in particular the situation (financial/disabilities in family etc.) of patients is a strong consideration when subsidies are provided to patients.

TEH has a strong referral system where patients may require further disability assistance beyond their eye health care. Patients are referred to TEH's partner, CDMD who has a strong presence in Takeo especially within its remote areas with a strong network of volunteer health workers and self-help groups. (139 patients were referred to CDMD (65 women, 62 men and 12 children) for rehabilitation and 1,423 patients were referred from CDMD to TEH (849 female /114 children) 4% increase compare to 2010). The 1st KAP suggested that significantly less disabled participants are able to travel to an eye-institute on their own. Providing free transportation and more intense collaboration with CBR-services seem crucial in overcoming this barrier.

The completion of the Disability Inclusive Approach in Community Eye Health training workshops has meant that staffs at TEH, KVC and CDMD have reinforced their disability and gender inclusive approach to their work.

Collecting data on disabled patients has not yet yielded reliable data. Even though a practice guide for DIACEH was developed with simple tools for disability measurement, the suggested options haven't proven to be feasible. Workshops were helpful in engaging initial debate, but more assistance (e.g. from The Nossal Institute) in daily activities might be needed. Statistics for patients with disabilities in 2011: 9,213 seeing problem, 824 hearing problem (521 females, 10 children), 104 physical problem (34 females, 9 children), 48 understand problem (27 females, 1 child).

7. Cross cutting issue: child protection

All staff have signed a child protection policy and completed training on the child protection policy. Staffs are trained on how to appropriately treat children, respect their rights and know how to identify child abuse victims. Staffs are trained to ensure that a parent or guardian is present with children during examinations and that their informed consent is given for any medical procedures. During the year 17 TEH staff also completed Child Protection Policy and Project Management Training. Two nurses were also sent to India for specialised training one as a paediatric nurse and the other as an orthoptist nurse.

A separate child examination room was built at TEH to provide children with a child friendly environment to help ease the stress that an eye examination can cause. The availability of these facilities are broadcast over a loudspeaker to patients in TEH's waiting area. Nurses and staff also advise patients before they are admitted into the hospital.

The absolute number of children increased from 3497 in 2009 to 3610 in 2011. This impressive increase could be one of the effects of the separate children examination room and the child protection policy in place.

8. Performance Assessment Framework Data

Outcome	Core Indicator	Result Data																																																															
Integrated Eye Health Care	1. Number of eye health care centres providing integrated eye care as a direct result of ABI projects.	Two centres 1 - Takeo Eye Hospital. Comprehensive eye health care services: surgery (cataract, glaucoma, trichiasis laser), refractive error correction services, optical shop - readymade and onsite prescription made spectacles. 2 - Kirivong Referral Hospital Vision Centre. Limited eye health care services: refractive error correction, optical shop for readymade spectacles, and specific prescriptions made at TEH.																																																															
	2. Number of eye health services with documented referral pathways to disability services and/or Disabled Peoples Organisations	-139 patients referred to CDMD (65 women, 62 men and 12 children) for rehabilitation. -1,423 patients referred from CDMD to TEH (849 female /114 children) (4% increase compare to 2010).																																																															
Disease Control	3. Number of patients treated (<u>disaggregated by condition, gender, age & location</u>)	TEH Patient Consultations Categorised by Eye Conditions <table border="1" data-bbox="751 846 1268 1317"> <thead> <tr> <th rowspan="2">Eye Condition</th> <th colspan="2">2011</th> </tr> <tr> <th>Total</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Cataract - male</td> <td>1,442</td> <td>5%</td> </tr> <tr> <td>Cataract - female</td> <td>2,776</td> <td>10%</td> </tr> <tr> <td>Cataract - child</td> <td>113</td> <td><1%</td> </tr> <tr> <td>Trachoma</td> <td>88</td> <td><1%</td> </tr> <tr> <td>Glaucoma</td> <td>826</td> <td>3%</td> </tr> <tr> <td>Refraction</td> <td>3,884</td> <td>13%</td> </tr> <tr> <td>Corneal Ulcer</td> <td>1,262</td> <td>4%</td> </tr> <tr> <td>Injury</td> <td>231</td> <td>1%</td> </tr> <tr> <td>Other - child</td> <td>2,984</td> <td>10%</td> </tr> <tr> <td>Other - adult</td> <td>15,373</td> <td>53%</td> </tr> <tr> <td>Total</td> <td>28,979</td> <td></td> </tr> </tbody> </table>	Eye Condition	2011		Total	%	Cataract - male	1,442	5%	Cataract - female	2,776	10%	Cataract - child	113	<1%	Trachoma	88	<1%	Glaucoma	826	3%	Refraction	3,884	13%	Corneal Ulcer	1,262	4%	Injury	231	1%	Other - child	2,984	10%	Other - adult	15,373	53%	Total	28,979		TEH Patient Consultations Categorised by Age <table border="1" data-bbox="1314 813 1902 1070"> <thead> <tr> <th>Age range*</th> <th>Male</th> <th>Female</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>0-4</td> <td>651</td> <td>698</td> <td>1,349</td> </tr> <tr> <td>5-14</td> <td>1,274</td> <td>997</td> <td>2,271</td> </tr> <tr> <td>15-49</td> <td>6,469</td> <td>6,457</td> <td>12,926</td> </tr> <tr> <td>>=50</td> <td>3,935</td> <td>8,498</td> <td>12,433</td> </tr> <tr> <td>Total</td> <td><u>12,329</u></td> <td><u>16,650</u></td> <td><u>28,979</u></td> </tr> </tbody> </table>	Age range*	Male	Female	Total	0-4	651	698	1,349	5-14	1,274	997	2,271	15-49	6,469	6,457	12,926	>=50	3,935	8,498	12,433	Total	<u>12,329</u>	<u>16,650</u>	<u>28,979</u>
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Cataract - male	1,442	5%																																																															
Cataract - female	2,776	10%																																																															
Cataract - child	113	<1%																																																															
Trachoma	88	<1%																																																															
Glaucoma	826	3%																																																															
Refraction	3,884	13%																																																															
Corneal Ulcer	1,262	4%																																																															
Injury	231	1%																																																															
Other - child	2,984	10%																																																															
Other - adult	15,373	53%																																																															
Total	28,979																																																																
Age range*	Male	Female	Total																																																														
0-4	651	698	1,349																																																														
5-14	1,274	997	2,271																																																														
15-49	6,469	6,457	12,926																																																														
>=50	3,935	8,498	12,433																																																														
Total	<u>12,329</u>	<u>16,650</u>	<u>28,979</u>																																																														

TEH Patient Consultations Categorised by Origin Location

Location	2011	
	Total	%
Takeo	18,313	63%
Daunkeo	1,261	4%
Angkor Borei	925	3%
Tramkak	3,838	13%
Treang	2,257	8%
Samrong	3,056	11%
Kirivong	1,041	4%
Koh andet	601	2%
Prey Kabas	1,898	7%
Borey Julsa	363	1%
Bati	3,073	11%
Kampot	2,995	10%
Kg. Speu	1,963	7%
Other Province	5,708	20%
Total	28,979	

<p>Infrastructure Development</p>	<p>5. Number and type of equipment supplied</p>	<p>2011: 3 desktop computer sets (monitor, UPS, keyboard, mouse), 1 laptop, 5 laserjet printers, 3 UPSs, 1 office chair and 1 wireless router.</p>
<p>Human Resource Development</p>	<p>6. Number of eye health care personnel trained</p>	<p>-9 resident doctors (4 female) (from Kampong Cham, Kampot, Kampong Thom, Seim Reap, Battambang, Bantey Maenchey, Takeo, and Sihanouk Ville) trained in the national resident programme for ophthalmologist under the umbrella of NPEH and the University of Sciences, Faculty of Medicine, Phnom Penh. -3 doctors (all male) upgrading of diploma in ophthalmology to be fully qualified ophthalmologist (from Pras Ang Doung Hospital, Municipal Hospital Phnom Penh and Takeo). -18 secondary nurses (6 females) Diploma in Ophthalmic Nursing (DON IV started on August, 2010- July, 2011 with 8 nurses 1 Pailin, 1 Kampong Speu, 1 Kampot, 1 Phnom Penh, 1 Kirivong and 3 Takeo and DON V started on August, 2011 - September, 2012 with 10 nurses 4 Battambang, 2 Kampot, 1 Sihanouk Ville, 1 Prey Kabas and 2 TEH).</p>

		<ul style="list-style-type: none"> -5 nurses follow up (all male) (post DON training) (2 in Mondolkiri, 1 Odar Meanchey, 2 Kampong Cham) -31 nurses (8 female) on June 2011 and 22 nurses (5 female) on Dec. 2011. Participated on CME for Cambodian Ophthalmic Nurse Society. -Training of Paediatric Nurse in India (3 months) Mrs.Heang Prang completed on 30th Sept, 2011. -Training of Orthoptist Nurse in India (6 months) Mrs.Pring Kimny completion on 26th December,2011. -28 villages health workers (12 female) monthly follow up training for corneal ulcer intervention. -1 nurse (male) refractions' participated in Asia Pacific Optometry Congress (APOC) in Singapore (Nov.) - Follow up Low Vision and refraction Training for 2 Nurses (1female) at TEH by CBM Germany, Karin van Dijk (March). - 2 nurses (Mr.Nol Rattana and Mrs.Pring Kimny) trained 10 days on Low Vision with ICEE at Phnom Penh (April) -2 senior staff (all male) of TEH participated in Asia annual reflections Workshop of ABI in Hanoi, Vietnam (Nov). -15 TEH staff (7 females) 6 admin staff, 9 medical staff continues training on using new HMIS. -2 doctors (all male) from TEH attend APAO Conference in Sydney Australia (March). -50 Takeo secondary school teachers (2 female) trained in low vision screening (27 and 28 Oct 2011).
<p>Partner Government (in-country) Policy and Planning Capacity</p>	<p>7. Number of commitments by in-country governments to support (policy) and contribute (funds) to ongoing eye health care investment</p>	<p>The provincial government granted TEH with a 25 year lease for the 15,689 m2 of land which the hospital occupies. In September 2011 the provincial government renewed TEH's MOU for another 3 years. An official MOU for the hand over of the Kirivong Vision Centre to Kirivong Referral Hospital will be finalised in February 2012. Kirivong Referral Hospital has submitted a proposal for a higher budget (for the Vision Centre) with the provincial government however they are still awaiting a response.</p> <p>The (5 year) National Plan for Eye Health is still in the process of being approved and integrated into the strategic plan of the Ministry of Health, however TEH has been recognised as a Regional Eye Hospital and Training Hospital and the Takeo Provincial Health Department is contributing to the cost of water and electricity for TEH.</p> <p>CBM/CARITAS and Fred Hollows are members of the team to revise the National Strategic Plan to Reduce Avoidable Blindness 2009-2015 together with the NPEH and a facilitator from MoH Dr.Lo Veasnakiri.</p>
	<p>8. Number of eye health care centres implementing data collection systems as a result of ABI projects</p>	<p>Two centres 1 - Takeo Eye Hospital. 2 - Kirivong Referral Hospital Vision Centre.</p>

Rapped Assessment Avoidable Blindness Survey:

	RAAB Cambodia 2007	RAAB Takeo 2007 breakdown	RAAB Takeo 2012
Prevalence BCVA * < 3/60	2.81% (Female 3.4% Male 2%)	2.95% (Female 3.5% Male 2.1%)	2.75% (Female 3.4% Male 1.73%)
Cataract Surgical Coverage in eyes < 3/60	34% (Female 31.3% Male 39.8%)	-	44% (Female 41.7% Male 49.4%)
Cataract Surgical Coverage in persons < 3/60	54.9% (Female 49.8% Male 67.4%)	-	64.7% (Female 59.5% Male 78.1%)
Outcome % good BCVA	75.5%	-	82.5%
Outcome % poor BCVA	15.2%	-	11%
Outcome % good last 5 years BCVA	81.9%	-	88.7%
Outcome % poor last 5 years BCVA	11.5%	-	7.7%
IOL-implantation	88.7%	-	92.7%

Note: The figures from RAAB 2012 are preliminary and need further analysis; therefore caution should be taken in the interpretation. Final results will be available after analysis by CERA, University of Melbourne!

*BCVA: Best-corrected visual acuity

Lessons learned:

- When setting up the vision centres within provincial referrals hospitals/health centres, close collaboration within the existing government hospital management systems need to be observed by TEH in order to ensure the successful operation of the vision centre and to aid the future hand over of the visions centre's operations.
- In 2010 the prevalence of uncorrected refractive errors (URE) in primary schools was found to be 0.39% (which is very low) therefore in 2011 URE screenings were stopped for primary schools and URE screenings were only conducted in secondary schools.
- The provision of free transport (to TEH) and subsidies on surgery costs greatly improved the number of poor patients accessing TEH's services.
- The KAP survey conducted in 2010 revealed that a large number of the community did not understand that cataracts cause blindness. Therefore advocacy materials were updated and designed to ensure this message was conveyed.

Plans for 2012:

1. Continue Supporting the National Eye Health Program Office

2. Service Delivery and Referrals

- To treat 35571 patients
- To increase by 2% Outreach referral attendance rate each year (37% in 2010)
- 300 people attending World Sight Day activities
- People who attend basic eye care education sessions at TEH to increase by 10% each year New vision centre established inside health centre (by August 2013)
- Target for corneal ulcer interventions (70 per month)
- Maintain corneal ulcer intervention referral rate of 13%
- 120 patients from the district level referred to TEH (per year in 2014 and 2015)
- Cataract Surgery Rate (CSR) to increase by 5% annually (CSR in 2010 was 1366)
- Cataract surgery complication rate to be less than 5%
- Cataract surgeries to increase by 100 per year
- Maintain spectacle distribution rate of 80%
- Diabetic retinopathy screening unit established (by the 2nd quarter of 2012)

3. Community Ophthalmology, Health Promotion and Advocacy

- Conduct 4 Outreach Screenings per month for TEH and Kirivong vision centre
- Conduct 2 URE screenings in schools
- Trained 50 teachers in URE screening
- Produce advocacy 250 posters and distribute 10,000 advocacy leaflets
- Local Air daily radio spots promoting eye health and morning do health education in hospital
- Train/provide support in the corneal ulcer intervention of 28 volunteer health workers

4. Human Resource and Trainings

- To continue train doctors in Ophthalmology Residency Program
- Train nurses, Diploma Ophthalmic Nurses (DON)
- Primary Eye Care for HCs and VHV
- Provide training Diabetic Retinopathy screening
- Support the Continuing Medical Education of CONS
- Gender/Disability Inclusive Approach in Community Eye Health /Primary Eye Care for Kirivong Health Center staff, Takeo Eye Hospital staff
- Low Vision screening training for Secondary School Teachers
- Follow up training corneal ulcer intervention
- Follow Up Workshop on the implementation of the Child Protection Policy at CTEH
- APAO Congress
- Provide one CTEH's doctor for Laser in Diabetic Retinopathy Management training in India
- Nurse trained on Eyexelcel-Expanding Global Eye Care workforce through Excellence in training in India
- Community Outreach and Social Marketing of Eye Care Services in India
- Counselling and Behavioural Attitude towards Patient Centered Services for CTEH's staff

5. To purchase Special medical equipment

- A/B Scene
- Yag Laser
- Diod Laser

6. To sign Bilateral agreement with Mo Po Tsyo to develop the Diabetic Retinopathy clinic

7. To hand over Kirivong Vision Centre to Kirivong Referral Hospital

8. To study and plan for establish new Vision Centre in Prey Kabas Referral Hospital, OD Prey Kabas, Takeo province.

9. To review the role and responsibility on Diploma Ophthalmic Nurse (DON) training between Caritas Takeo Eye Hospital, NPEH, HRD Ministry of Health, and RTC Kampot.

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