



Standard Chartered Bank 'Seeing is Believing' Phase IV

Establishing a Pediatric Eye Care Centre in Dalian He Eye Hospital (HEH) to Serve Northeast China

ORBIS China Final Evaluation Report – July 2009 to June 2013

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Part I Background

Dalian is located at the west of the Yellow Sea and the east of Bohai Sea roughly in the middle of the Liaodong/Liaotung peninsula at its narrowest neck or isthmus. With a coastline of 1,906 km. Dalian governs six districts , three county level cities and one county. Dalian City is home to 6.1 million people. According to the official statistics in 2007, children under the age of 14 account for 15% of the total population (about 915,000), while elderly people above the age of 60 constitute 17% (about 1,037,000). Males make up 51% of the population and females make up 49% of the population.

In the city and urban areas, the most serious problem related to eye care is the lack of pediatric services. There is a huge need for affordable general eye care services of good quality. This project will contribute to increasing the availability of quality pediatric eye care and the coverage of high quality cataract services in Dalian City and surrounding areas in the northeast region of China by building up the pediatric eye care capacity of Dalian He Eye Hospital, and by expanding its network to county level and township level hospitals in Dalian and surrounding areas, to reach more people who are in need of eye care services.

Goal:

To increase the availability of quality pediatric eye care and the coverage of high quality cataract services in Dalian City and surrounding areas in the northeast region of China.

Objectives:

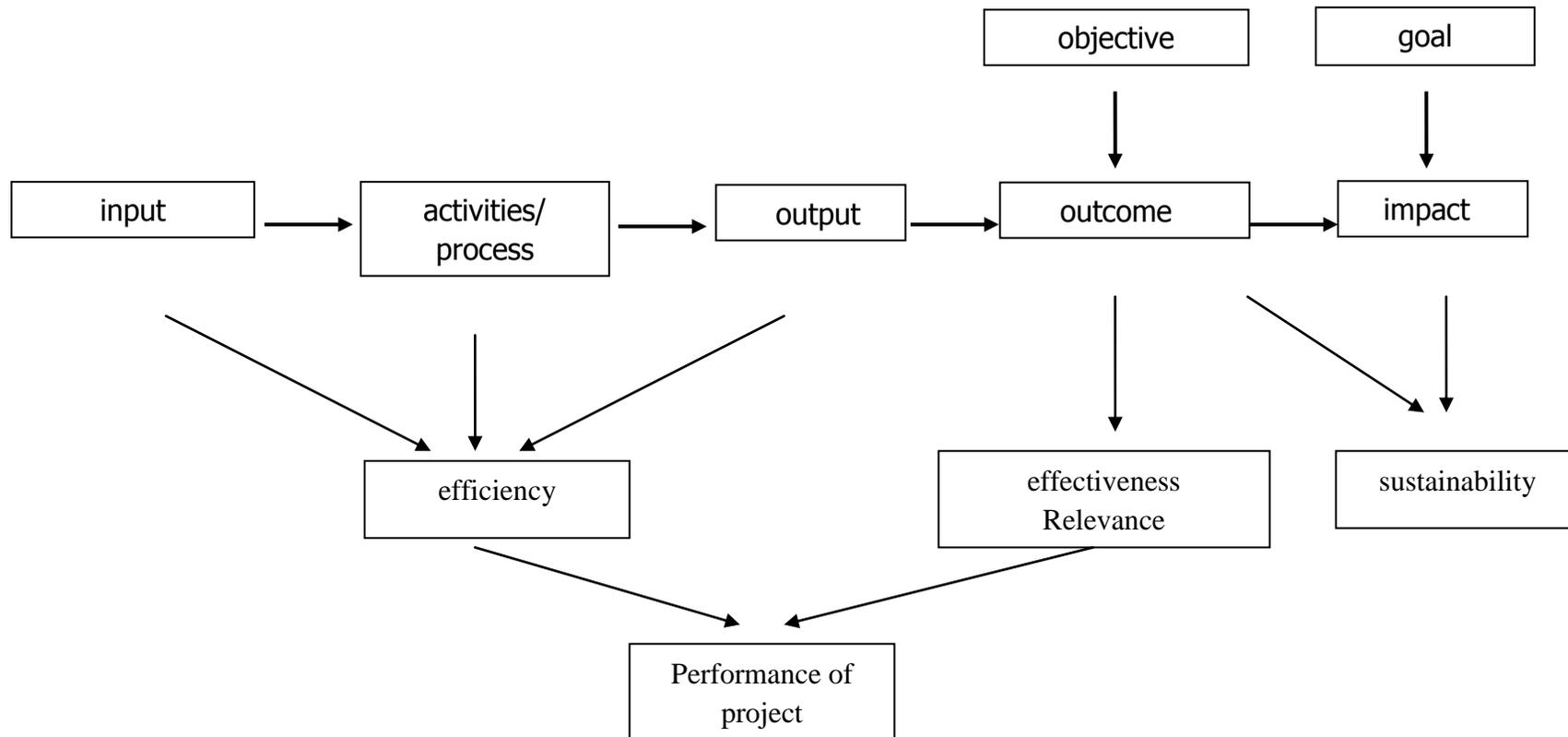
1. By the end of the project, a fully equipped, child friendly pediatric eye care center will be established at Dalian He Eye Hospital (HEH), with a trained eye care team (pediatric ophthalmologists, anesthetist, mid-level professionals, managers, and outreach workers) in place.
2. By the end of the project, Dalian HEH will be able to provide pediatric eye care services in cataract, glaucoma, refractive error, strabismus and ptosis.
3. By the end of the project, a network between Dalian HEH and 3 county hospitals, 6 Maternal and Children's Health (MCH) hospitals and 20 healthcare stations will be established for treatment and referral of pediatric eye care cases in Dalian City and surrounding areas.
4. By the end of 2012, the volume of high quality cataract surgery in Dalian HEH will increase by 40% as compared to the baseline by expanding coverage of services in Dalian City and surrounding areas.
5. By the end of the project, a Quality Assurance system will be institutionalized in Dalian HEH.

6. By the end of the project, at least three health communication strategies will be adopted to disseminate knowledge of eye health as well as information of available services to 3,450,000 people in Dalian City and surrounding areas.

Strategy:

The strategies of this project will focus on four main areas: building pediatric clinical capacity at HEH, expanding the service and referral network to improve cataract service coverage, improving the quality assurance system for HEH, and raising public awareness about both pediatric eye diseases and services, and cataracts . The pediatric clinical capacity building will include training of eye care personnel and equipment investment. Outreach and network establishment will include conducting the large scale screenings, and referral for pediatric eye care and cataract treatment. Quality assurance system building will focus on training and technical support in the area of Quality Assurance for all hospital staff. Public awareness raising will include social mobilization and programme communication activities.

Parts II The Log frame for evaluation



Part III Evaluation procedures:

Composition of evaluation team:

- Tao Ran, independent external evaluation specialist
- Ping Xu, project manager of ORBIS International
- Xu Meng, project manager of ORBIS International
- Xu Yang, operational controller of ORBIS International
- Wag Lei, project manager of ORBIS International
- Crystal Tsui, financial auditor of ORBIS International

Composition of respondents:

- Stakeholders from partner: the CEO of He Eye Hospital, the director of Dalian He Eye Hospital, the vice director of Dalian He Eye Hospital, and other staffs from the hospital, including hospital project coordinator, community manager, pediatric ophthalmologists, optometrists, visual doctors, nurses, anesthetist, and biomedical engineer
- Stakeholders of beneficiaries: pediatric eye patients, and their parents, adult patients
- Stakeholders from network: community doctors and patients from county level copartner (The Third People's Hospital of Pulandian), MCH copartner (The Second Hospital of Wafangdian), and township level copartner (Central health care station of Chengzitan town).
- Stakeholders from Local governmental of Dalian city and Shahekou district: director of medical administration department of Dalian public health bureau, and director of rehabilitation department of disabled federation of Shahekou district.

Data collection instruments:

- Interview: designed for all the stakeholders
- Focused group discussion: particularly planned for hospital management team and governmental officials with regard to the components of advocacy, impact and sustainability in the project.
- Observation: mainly applied in practice procedure of service delivery in Dalian He Eye Hospital and network copartners.
- Role play: alternative data collection method has been adopted when no real scenario can be observed such as health education process and refraction process.
- Examinations of program records: to obtain all project implementation related information.
- Checklist: used to double check the provision and availability of infrastructure development in the project.
- on-site visit: to verify the (pediatric) eye care needs and local capacity in service delivery, community eye health and social advocacy, especially in rural areas.
- Reporting: to grasp visualized pictures of the project progress through the

presentation by partner.

Evaluation Schedule: Please see appendix I

Part IV: Evaluation matrices and evaluation study questions

Matrix 1: Input Evaluation

Input	Indicator	Audience (who)	Content (what)	Data collection method (how)
Human resource	<ul style="list-style-type: none"> ● # of staff ● Staffing of staffs ● Job description of staffs 	director of Dalian He Eye Hospital, vice director of Dalian He Eye Hospital, project coordinator, community manager, pediatric ophthalmologists, optometrists, visual doctors, nurses, anesthetist, and biomedical engineer and community doctors from network	<ul style="list-style-type: none"> ● How many staffs have been recruited since the launch of the project? ● What is the background of all the staffs? ● What is the job description for all staffs? ● Are there any differences from traditional staffing in the center? 	interview on-site visit
Infrastructure and equipments	<ul style="list-style-type: none"> ● In place of infrastructure and equipments 	director of Dalian He Eye Hospital, project coordinator	<ul style="list-style-type: none"> ● How much contribution the partner has made including space and instruments since the launch of the project? ● Have all the equipments been purchased and been in place as 	interview, on-site visit checklist

			planned in the project?	
skills	<ul style="list-style-type: none"> ● Service delivered 	director of Dalian He Eye Hospital, vice director of Dalian He Eye Hospital, project coordinator, community manager, pediatric ophthalmologists, optometrists, visual doctors, nurses, anesthetist, biomedical engineer and community doctors from network	<ul style="list-style-type: none"> ● What services can hospital provide? ● What skills are needed to provide these services? 	interview, on-site visit program record
fund	<ul style="list-style-type: none"> ● The fund figure that ORBIS provided ● The figure that the partner contributed 	Director of Dalian He Eye Hospital, project coordinator	<ul style="list-style-type: none"> ● How much is the fund that ORBIS has supported? ● How much is the contribution that the partner has made? 	interview, program record
Patients/customers	<ul style="list-style-type: none"> ● Source of patients 	Director of Dalian He Eye Hospital, project coordinator, community manager	<ul style="list-style-type: none"> ● What is the composition of screening team and their roles? ● Where do screenings take place? ● How frequent do screenings 	interview, program record

			take place?	
information	<ul style="list-style-type: none"> ● Information types and amount 	Director of Dalian He Eye Hospital, project coordinator, community manager, hospital staffs in the hospital and network	<ul style="list-style-type: none"> ● What information will be delivered to patients, public, communities, health care professionals, hospital management, and government officials respectively? 	Interview, program record information materials
Policy and environmental support	<ul style="list-style-type: none"> ● The way how hospital and government support the project and the hospital and copartners ● Support from other sectors 	Director of Dalian He Eye Hospital, project coordinator, community manager, governmental officials	<ul style="list-style-type: none"> ● Which official departments offer support in the project? ● What support do they provide? 	interview, focused group discussion program record information materials

Matrix 2: Activities/process Evaluation

Process	Indicator	Audience (who)	Content (what)	Data collection method (how)
Screening and referral process	<ul style="list-style-type: none"> ● Screening procedure ● Referral standard ● Follow up standard and procedure 	Director of hospital, project coordinator, community manager,	<ul style="list-style-type: none"> ● What is the purpose of screening? ● What is the procedure of (children) eye condition screening? ● How is the cost of screening? ● What is the referral standard for pediatric eye conditions? ● How to do the follow up for those who have been screened for further exams. 	Interview program record
Health education process	Behavior change communication process	Director of Dalian He Eye Hospital, project coordinator, community manager, patients and family members	<ul style="list-style-type: none"> ● How to develop the educational information in community eye health promotion? ● What channels have been used to disseminate eye health information? ● How do you try to persuade patients/public to seek eye care service actively? ● How do you see the optometry service comparing other 	Interview program record observation role play

			<p>commercial optical shops on the street? Why do you seek the service here?</p> <ul style="list-style-type: none"> ● What is your understanding of medical optometry service? ● Do you know what lazy eye is? Why early treatment is needed for lazy eye patients? ● How do you know these eye care knowledge? ● Are you willing to tell others to come to visit here for pediatric eye care service? ● What is the percentage for the screened in community among all the outpatient patients? ● What are the reasons for those who are screened in communities but not coming to center for further check and service? ● Are there any data or information to asses the effectiveness of health education in community? ● What mechanism has been 	
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			<p>applied to ensure the functioning referral network and enable patients to receive eye care?</p> <ul style="list-style-type: none"> ● What do you think of the most difficult things in community work to persuade patients to seek service actively? 	
Pediatric Outpatient process	(Pediatric) Outpatient process	Staff in the hospital, patients and parents	<ul style="list-style-type: none"> ● Are you satisfied with the environment? ● How long is it for open hours? ● Is it convenient for you to come at open hours? ● How long will patients wait to be seen? ● How long will the medical staff communicate with patients? ● What do you think of the attitude of the staff? 	Observation interview
Refraction and spectacle dispensing process	Refraction and glass dispensing process			Observation Role play
Training process	<ul style="list-style-type: none"> ● Types of training ● Contents of training ● Ways to deliver the 	Director of hospital, project coordinator, Staff in the hospital	<ul style="list-style-type: none"> ● What kinds of trainings that the staff received? ● What kinds of trainings that staff expect? 	Interview program record training materials

	<p>training</p> <ul style="list-style-type: none"> ● Training opportunities 		<ul style="list-style-type: none"> ● How were the trainings delivered? ● What trainings can be delivered to lower level trainees? ● How to select trainees for trainings? ● How to assess the training needs of trainees? ● How to evaluate the training effectiveness? ● What have you learnt from the trainings? ● Are there any aspects to improve for the trainings? ● Where are you willing to receive similar trainings if there are more opportunities? ● Are there any updates and progress in related area? 	
Equipment procurement process	<ul style="list-style-type: none"> ● Selection of equipment supplier ● Equipment Bidding procedure ● Equipment purchasing 	Director of the hospital, project coordinator,	<ul style="list-style-type: none"> ● How to select/upgrade needed equipments? ● What is the procedure of equipment bidding? ● What is the procedure to purchase equipments and 	Interview program record

	procedure		<p>process payment?</p> <ul style="list-style-type: none"> ● What is the procedure to change planned equipments purchasing? 	
Human resource management	<ul style="list-style-type: none"> ● Staff motivation mechanism ● Staff salary and benefit system ● mechanism enables trainees to apply the knowledge and skills acquired ● utilization of staff 	Director of the hospital, project coordinator, Staff in the hospital	<ul style="list-style-type: none"> ● How to motivate staff? ● What is the mechanism to enable the trainees to apply all the knowledge and skills acquired through training programs? ● Have the capacity of each staff been fully developed and used? ● How is the salary and benefit and income distribution system in the center? ● Are you satisfied with the workload and your salary? ● Are there any career development planning each staff? ● Do you have enough legal holiday to take? ● What is your dream in your life? ● What is your career objective in 	Interview

			5 years?	
HIS and quality assurance system management	The management of hospital information system and service quality assurance system	Director of the hospital, project coordinator,	<ul style="list-style-type: none"> ● Has the center established the information system and how it works? ● What are the indicators for service quality assurance? ● How the quality assurance system works? ● How to monitor the quality of eye care service? 	Interview On-site check
Social advocacy and community mobilization	<ul style="list-style-type: none"> ● Fund and policy support ● Community involvement 	Director of the hospital project coordinator, community manager,	<ul style="list-style-type: none"> ● What kind of support have all related stakeholders provided through social advocacy efforts? ● How do you see the role of community copartners? ● How to empower community based copartners to involve in (pediatric) eye care network? 	Interview and group discussion
Project management process	The process of project implementation and management	Director of the hospital, project coordinator, community manager,	<ul style="list-style-type: none"> ● Were all the activities implemented as budgeted and scheduled? ● What is the process to monitor the progress of the project? 	Interview program record

Matrix 3: Output Evaluation

Output	Indicator	Audience (who)	Content (what)	Data collection method (how)
Numbers of children/adults screened	Numbers of children/adults screened	Director of hospital, project coordinator, staffs in the hospital	How many children/adults have been screened so far?	Interview program record
Number of children/adults treated by medical treatment or surgeries by He Eye Hospital and network partners	Number of children/adults treated by either medication, or surgeries	Director of hospital, project coordinator, staffs in the hospital	<ul style="list-style-type: none"> ● How many cases have been treated in OPD so far? And what is the percentage for children? ● How many surgeries have been performed? ● Specifically how many for cataract surgeries, and for children surgeries? 	Interview program record

<p>Number fo training workshops and Number of people who have received training program</p>	<p>Number fo training workshops and Number of people who have received training program</p>	<p>Director of hospital, project coordinator, staffs in the hospital</p>	<ul style="list-style-type: none"> ● What types of trainings were they? ● How many training have been conducted? ● How many trainees have received trainings? 	<p>Interview program record</p>
<p>Number of people who have received educational eye care information Numbers of IEC materials distributed</p>	<ul style="list-style-type: none"> ● Number of people who have received educational eye care information ● Number of IEC materials distributed ● Types and numbers of BCC channels 	<p>Director of hospital, project coordinator, staffs in the hospital</p>	<ul style="list-style-type: none"> ● How many people have received educational eye care information? ● How many IEC materials have been distributed? ● What types and how many BCC channels have been adopted to raise the awareness of pediatric eye care of public? 	<p>Interview program record</p>

<p>Infrastructure and equipments</p>	<ul style="list-style-type: none"> ● Equipped unit in place ● Number of equipments ● Value of equipments 	<p>Director of the hospital, project coordinator, staffs in the hospital</p>	<ul style="list-style-type: none"> ● How many pieces of equipments have been purchased? How much value are they? ● What are the equipment that have been changed to purchase, and why? ● What infrastructures have been newly set up since the launch of the project? 	<p>Interview program record</p>
<p>efficiency</p>	<p>The delivery of service by cost ,quality and time</p>	<p>Director of hospital, project coordinator, staffs in the hospital</p>	<ul style="list-style-type: none"> ● To what degree have services been delivered as agreed? ● Could it have been done cheaper, more quickly and with better quality? ● Were the activities achieved at least cost? ● Was the project implemented in the most efficient way comparing to alternative ways? 	<p>Interview program record Group discussion</p>

Matrix 4: Outcome Evaluation

Outcome and objectives	Indicator	Audience (who)	Content (what)	Data collection method (how)
Project effectiveness	<ul style="list-style-type: none"> Achievements of objectives 	Director of hospital, project coordinator, staffs in the center Governmental officials	<ul style="list-style-type: none"> To what extent have agreed objectives been reached? Are activities sufficient to realize agreed objectives? 	Interview Program record discussion
Project relevance	<ul style="list-style-type: none"> Consistency of project objectives and local needs and policy priority 	Director of hospital, project coordinator, staffs in the center Governmental officials	<ul style="list-style-type: none"> Are objectives in keeping with needs and priorities? Should activities be continued or terminated? Are the activities and outputs of the project consistent with the overall goal and the objectives? 	Interview Program record Focused group discussion

Matrix 5: Goal Evaluation

Impact and goal	Indicator	Audience (who)	Content (what)	Data collection method (how)
Availability and accessibility	<ul style="list-style-type: none"> ● Available pediatric eye care service through network establishment 	Director of hospital, project coordinator, staffs in the center Governmental officials, patients and public	<ul style="list-style-type: none"> ● How is the eye care network established? ● How much population can be covered by the network? ● How far from your home to the center? ● What transportation do you use to come, and how long does it take? 	Interview Program record
Quality service	<ul style="list-style-type: none"> ● Types of (Pediatric) eye care service delivered ● Effectiveness and safety service ● Efficient service ● Success rate of surgeries ● percentage of patients with vision corrected / restored ● numbers or 	Director of hospital, project coordinator, staffs in the center Patients	<ul style="list-style-type: none"> ● What (pediatric) eye care services can be provided by pediatric eye care center? ● What surgeries can be performed? ● How much is the success rate of surgeries? ● What percentage is the complication rate? ● What is the ratio for the vision corrected among all the refractive error? ● How to monitor the follow up of patients? 	Interview program record information system

	<p>percentage of surgical complication rate</p> <ul style="list-style-type: none"> ● patient follow up ● bed occupancy rate ● Utilisastion of equipments ● MIS and surveillance system utilisation 		<ul style="list-style-type: none"> ● How is the utilisation of equipments? ● How is the utilisation of MIS and surverllance system if there is any? ● Do you feel comfortable with clear and lasting vision by wearing the glass dispensed here in this center? 	
Sustainability (environmental, social, institutional, and financial)	<ul style="list-style-type: none"> ● Likelihood of benefits to continues after project ends ● Changes of financial invest and policy support eye care ● Institutional development strategy ● Cost recovery measurements ● Other income generation 	Director of hospital, project coordinator, staffs in the center Governmental officials,	<ul style="list-style-type: none"> ● To which extent does the positive impact justify investment? ● Are the involved parties willing and able to keep design and exit strategy? ● Was the sustainability issue broadly addressing issues of environmental, economic or social sustainability? ● Will government continuously provide policy support in pediatric eye care? ● Has the strategic development of the center been considered and planned for at least coming 5 	Focused group discussion

	<p>consideration</p> <ul style="list-style-type: none"> ● fundraising components ● continuous policy support ● income and expense status ● effective referral network 		<p>years?</p> <ul style="list-style-type: none"> ● Are there any measures to reduce the cost in all aspects? ● How to ensure the effective running of referral network? ● To what extent local community is empowered and participated in eye care? ● What cost recovery and cost control measures have been taken? ● Are there any other income generation consideration? ● Are there any fundraising plans? ● Is the project needed further support? Why? 	
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Part V Findings and recommendations:

1. The official ending time of the project should be in July, 2012. The actual length of operation of this pediatric project is 1 year later than planned which was originally designed for three year period due to foreign currency ratio change. But at output level, almost all the project targets have been achieved. See following table 1

Project Outputs	Achievements	Targets
Pieces of equipments purchased as planned	761	759
ophthalmologists trained through international and domestic fellowships.	5	5
visual doctors trained for three months	2	2
optometrist trained for three months in Shenyang	10	10
one anesthetist trained for three months in Kunming	1	1
biomedical engineer trained	1	1
nurses trained for screening, OR, clinic	10	10
Management Staffs trained in eye care management and community outreach & social marketing in Laico in India	4	4
doctors and nurses trained on communication and counseling skills.	25	20
(both management staff and doctors) trained through experience sharing study visit	5	5
ophthalmologists trained through HBPs	30	26
Doctors from community network will receive 3-month general ophthalmology training in Dalian HEH,	18	18
Primary eye care training workshops for health care doctors in schools/kindergartens, MCHs and Family planning committee staffs	24	19
Primary eye care training workshops for doctors in township clinic	10	10
Seminar on pediatric eye care network	200	150
project conclusion workshop	30	30
Study tour for experience sharing,	5	5
a QA Training Conducted by QA consultant	32	30

children examined at the OPD Dalian HEH.	49143	16,000
children medically treated at Dalian HEH and network units	55420	29,000
children surgically treated.	565	700
children screened for refractive error and other visual problems by Dalian HEH and Its network units	307662	200,000
cataract surgeries performed, including 2200 low price surgeries.	10254	8,540
adults screened mainly for cataract.	154960	120,000
other eye surgeries performed.	8848	6,460
both adults and children, educated on eye health through community lectures, Public eye care education for parents and community,	624517	100000
both adults and children, exposed to eye health knowledge through IEC materials dissemination and mass media.	6041000	3350000

Outputs achievements Table 1

- The space and equipments have been in place and functioning well under the support of ORBIS and the contribution of partner. All the equipments are essential and being used for daily work. The procurement of equipments and devices follows appropriate procedure. The majority equipments are purchased as planned. In April 2009, the partner has applied to change several pieces of equipment and was accepted by ORBIS. The changed items are 2 non-contact tonometer, 1 imported automatic perimeter, 1 comprehensive refraction phoropter, 1 keratometer, 1 contact IOL pen, and 1 pentacam to replace 1 YAG laser, 2 comprehensive refraction phoropters, 1 OQAS, and 1 imported ophthalmic surgical scope within budget plan, which are reasonable for partner to provide eye care service that the project focuses, except the keratomete and pentacam are more commonly used in LASIK surgery design and evaluation, which can be irrelevant with project focus and objectives.

Recommendation: careful assessment is needed in project design phase, and a background of medicine is preferred for project manager to better judge partner needs, and ophthalmic consultation is crucial at this stage.

- The provision of refraction equipments for network units is not very optimal for quality optometric service. The main equipment to do refraction is auto refractor, which can only roughly assess the refractive status. A trail lens set and retinoscope are more appropriate and cheap for lower level clinic to provide accurate refraction service, but unfortunately not in place.

Recommendation: careful assessment is needed in project design phase, and a background of medicine is preferred for project manager to better judge partner needs, and ophthalmic consultation is crucial at this stage.

- Except international and national fellowships, all the trainees from Dalian He Eye Hospital received trainings in Shenyang He Eye Hospital which is inside He system. All the staffs are willing to learn more trying to fulfill their job description and tasks well. And most of the trainees expressed that they would communicate more with other renowned eye institutions and ophthalmic conference in China if there are any other opportunities.

Recommendation: HEH should undertake the obligation to train their own staffs rather than at the cost of ORBIS, and more training opportunities should be provided in other domestic high level eye institutions for the trainees from He Eye Hospital. And also academic conference is necessary for the trainees to update and share the knowledge and skills with the peers.

- The partner has conducted quite a lot of training workshops to lower level health workers on community eye care and received trainees for hospital based training program, but there is lack of systematic training procedures including the training workshops designing, the selection of the trainers and trainees, defining training needs, training manual and materials development, curriculum designing, monitoring and evaluation of training workshops, and follow-up of trainees. So the effect and quality of the training can not be guaranteed and measured, which directly influence the service delivery level. And the majority of trainings are focused on the clinical technique skills, but ignored of community health education method, interpersonal skills(only there is one consultation skill training but not related to behavior change communication skills), the patient-centered approach, community mobilization, and validate community screening method.

Recommendation: The training experience of partner is rich. But partner training capacity can be improved to develop and implement a systematic and practical training procedures, training curriculum, related selection criteria, and management policies. Meanwhile, to set up an appropriate monitoring and evaluation system . And establishment and maintenance of a pool of competent trainers is also necessary.

- The network has established but not functioning well. Especially at lower level units there is no HIS and the patient record is kept manually and it is hard to obtain the statistics on OPD visit, management and the follow up of patients or screened. Though they are asked by HEH to do so. But most of

the copartners are governmental nature they are not very much motivated or restrained to perform as required.

Recommendation: How to select and motivate network partner has to be considered. Community mobilization and participation combined with hospital strategic development can be a mechanism to motivate community partners to work together in blindness prevention.

2. Project outcome objective level: At outcome level indicated by ORBIS, all the objectives have been reexamined respectively for a better performance in following categories:

- Outcome 1: After the project, a fully equipped, child friendly pediatric eye care centre will be established at Dalian He Eye Hospital (HEH), with a trained eye care team (pediatric ophthalmologists, anesthetist, mid-level professionals, managers, and outreach workers) in place.
Fully achieved
- Outcome 2: Dalian HEH will be able to provide pediatric eye care services in cataract, glaucoma, refractive error, strabismus and ptosis.

Pediatric team is in place and the capacity in managing common pediatric eye diseases of children is in leading position in local area and acknowledged by local people. Standard service practice process is adopted by partner. More complex surgical services such as congenital cataract and congenital glaucoma have been delivered at the center with the enhanced capacity through capacity building endeavors, especially Dr Xu, also the director of the hospital, her performance in managing difficult cases of congenital cataract has been praised by the peers in China and her paper has been published in authoritative journals in China .

Specifically, by the end of 2012:

Outcome 2	Achievements	Targets
increase in the number of paediatric outpatients in Dalian HEH as compared to baseline	440%	60%
increase in the number of paediatric surgeries in Dalian HEH as compared to baseline	613%	700%

- Outcome 3: A network between Dalian HEH and 3 county hospitals, 6 Maternal and Children’s Health (MCH) hospitals and 20 healthcare stations will be established for treatment and referral of pediatric eye care cases in Dalian City and surrounding areas.

The network has been established but not yet fully functioned. The service at lower level of the network are mainly for adults not for children. Although the screening targets are fulfilled, screening is mainly conducted by HEH but not network partners, and the screening for children are normally the tasks of local MCH or CDC department, and it is more vision screening but not eye condition screening. The accuracy of tool of the screening is worrying as the sensitivity and specificity are not guaranteed, which related directly to further referral of children patients and seeking behavior of their parents. It is estimated that there are many missing cases in such screening activities. In this outcome screening tasks are fulfilled but the purpose and effectiveness of screening are not achieved.

Recommendation: Except to explore a mechanism and cost effective model to motivate network units to involve in community eye care such as actively conducting screening and referral patients, capacity in community eye health from public health perspective also needs to be built and enhanced such as designing effective screening tools. Additionally, knowledge and skills are needed for HEH and network units in social work techniques and behavior change communications to promote parents to seek for further consultation and treatment.

Specifically, by the end of 2012:

Outcome 3	Achievements	Targets
increase in the number of children screened by network units as compared to the baseline	Fulfilled as no screening has been done before the project	200%
increase in the number of children medically treated by network units as compared to the baseline	no baseline data, no patients records, not much children patients and service	30%
increase in the number of children referred to Dalian HEH for treatment from network units as compared to the baseline.	no baseline data, no patients records, not much children patients and service	100%

Reasons for the results:

- 1) There are quite a lot of children patients in the communities, and many of them have optometric problems. But performing refraction check still need technique and skills comparing seeing and detecting cataract patients at the OPD of network units. Many local doctors express that they would like to receive further training on OPD basic refraction skills if there are any more opportunities.
- 2) Inappropriate equipment provision: as stated in equipment part, for some network unit doctors who are able to do refraction but the equipments are not enough; for some units that have suitable equipments, but they have not many patients because rarely do screenings and community advocacy activities.
- 3) Little motivation to provide service
- 4) In china it is very hard to get access to kinder gardens and schools to do eye disease screening. It must be permitted by related governmental sectors. Even screenings are conducted but they are just vision screening and the tool is not validated to detect certain eye conditions so the parents are hard to be persuaded to take further action coming to clinic

Recommendations:

- 1) Continuous capacity building efforts in pediatric eye care for lower level health providers
 - 2) Motivation mechanism exploration to empower network units to involve in community eye care
 - 3) Social advocacy and community mobilization efforts
 - 4) ORBIS to develop validated screening tool for partners
- Outcome 4: The volume of high quality cataract surgery in Dalian HEH will increase by 40% as compared to the baseline by expanding coverage of services in Dalian City and surrounding areas.

Quantitatively the task has been fulfilled by 36.8%, but qualitatively there are no indicators can be tracked to evaluate the quality as the quality assurance system can not run now due to incompatibility with local medical insurance reimbursement system.

Recommendation: to speed up the process to get the quality assurance system incompatible with local health insurance reimbursement system.

- Outcome 5: A Quality Assurance system will be institutionalized in Dalian HEH to ensure that: Average visual acuity increases from 0.12-0.15 to 0.3 one month after surgery for SICS and from 0.6 to 0.67 one month after surgery for PHACO

- 90% of strabismus patients have their eyes at orthophoric position after surgery
- 90% of amblyopia patients return for follow up treatment and exam
- 80% of patients score their experience at satisfaction or above in the patient satisfaction survey at the time of discharge

The system has been in place and indicators has been designed for cataract service and pediatric service but not yet institutionalized due to the same reason as above

Recommendation: same as above

- Outcome 6: At least three health communication strategies will be adopted to disseminate knowledge of eye health as well as information of available services to 3,450,000 people in Dalian City and surrounding areas.
Fully achieved

- 3. Project goal:** To increase the availability of quality pediatric eye care and the coverage of high quality cataract services in Dalian City and surrounding areas in the northeast region of China.

Sustainability consideration:

Hot debate was going on regarding the eventual objectives whether available, accessible, affordable and quality pediatric eye care service can be provided continuously after the project ends. From perspective of environmental sustainability it won't be the major concern as long as partner can get continuous policy support as usual, and the partner actually have gained and are still getting very positive comments and strong policy support from governmental departments.

Institutionally HEH is able to provide high quality cataract and pediatric eye care service through capacity building efforts in clinical techniques, especially to city patients who have the ability to pay. From all the indicators that we can see the increased tendency for OPD and surgical uptakes. And the partner has professional and efficient management system and they have strategic development plan for every five years. Moreover they have other income generation service, such as optometry service. And they also have fundraising department and are able to raise fund continuously from multichannels. They have cost-recovery, cost control and performance assessment KPI measures for all departments. Now the revenue of the services provided by the hospital has increased dramatically these years. So institutionally and financially sustainability can be guaranteed.

Social aim of the hospital is clear and the partner is working hard and trying to fulfill it. But the likelihood of benefits especially to community children seems not clear. Although the physical network has established but the effective running of referral network of pediatric eye service has not set up. And all the community screening activities have been conducted by HEH itself and local communities have not been empowered and participated in it. The cost of community work is quite high in terms of investment of fund, human resource, time, equipment and other logistic arrangement, but the effect of community work is not promising (from the indicator of referral and uptake of service). Technically the capacity in community eye health with regard to behavior change consultation and validate screening needs to be strengthened so that more community potential patients can be referred and actively uptake quality service, which is directly linked to project goal and sustainability. And the cost benefit of community outreach activities still need to be studied combined with institutional development strategy. So social sustainability including economic consideration has to be addressed for both ORBIS and partner.

Recommendation:

- To explore motivation (win-win) mechanism to empower network units to involve in community eye care. It is also ORBIS responsibility to focus not only on the task target achieved but also to combine project activities with partner institutional development plan.
- Social work methodology including how to do social advocacy, community mobilization and health promotion is the key factor to increase the effectiveness of community work, at the same time to increase public awareness and create pediatric eye care demands. The capacity in this aspect can be strengthened through training workshops and experience sharing visit or contracting service with social organizations that is professional in community work to provide efficient and quality social service.
- Cost-benefit of community outreach of HEH can be studied to look at how the hospital benefit from community investment and whether it is worth to do so, or whether there are more space to expand in detecting and referring more patients or whether other more efficient modes can be considered, especially for community pediatric eye care service.

Part VI Conclusion

From the evaluation trip we can see that the project reflects the pediatric eye care needs of local children. Local government appreciate the long term support of ORBIS, and they expressed that they will give as much support as they can as ORBIS with HEH have set the example in caring about

disadvantage people. Local partner values very much the opportunity as well and they are enthusiastic and ambitious to be the number one in providing available, accessible, affordable and quality pediatric eye care in local area. More importantly, under the support of ORBIS, the partner is optimistic to explore a successful model in providing available, accessible, affordable and quality pediatric eye care pediatric service. And through other social advocacy efforts the model has been acknowledged and promoted in China.

From perspective of the output, outcome objectives and goal, the partner has worked very hard to achieve most of them in project length, which is a great success. As further comments for the performance of the project and partner, there are several points to share for next steps:

- The coverage of pediatric eye care service should be more and more from city reaching to the rural.
- More attention should be paid on quality of service especially community service besides of the quantity consideration.
- How to mobilize and motivate local community to participate in community eye care is the key to improve the pediatric eye health of local community.
- Training capacity and training quality are one of the ways to contribute to local eye health, which needs to be further addressed.

ORBIS has established a long-term partnership with HEH through a variety of cooperation. As an international organization which has been working in China since 1980s, we witnessed incredible growth of the eye care industry of China, regardless medical infrastructure, service delivery capacity, or health awareness among the public. Through this project, we observed tremendous improvement of eye care service at Dalian, in both quality and quantity, which has demonstrated the effectiveness of our perspective, strategy and experience. Meanwhile, we can foresee the challenges ahead. Nothing is completely perfect as our first cooperation with Chinese private hospital still remains many issues. But we will continue nurturing and supporting private eye hospitals like HEH to diversify eye care services in China. Many important lessons have been learned and we will adjust our tactics in other projects. For example, we will include people working at front line in project development; we will share our partner assessment experiences with partner to help them extend network effectively; we will also provide partners consistent financial control and project management trainings before and during the project since most Chinese hospitals don't have community reach-out experience. In next step, we will provide a detailed evaluation report to HEH. Our organization will provide unconditional assistance for partner to take immediate actions as suggested. Actually, the partner has been very positive in taking up our suggestions. We're confident that the partner hospitals can make the most from the SCB IV project.

Appendix 1: Schedule of the evaluation trip

Itinerary of Dalian Project Final Evaluation

Date	Time	Activity	Venue
July 29		<ul style="list-style-type: none"> ◆ Arrival ◆ Internal meeting of evaluation team and records review 	Zhongshan Hotel Dalian
July 30	9: 00-12: 00	◆ Project progress report from partner and meeting with hospital leaders and partner project manager	Meeting room/ Dalian He Eye Hospital
	14:30 - 17: 30	◆ Program records review	Meeting room/ Dalian He Eye Hospital
July 31- August 1 Project records review and interview	9: 00-11: 00	<ul style="list-style-type: none"> ◆ Visit pediatric eye care center ◆ Observe service process ◆ Interview with patients and parents 	Dalian He Eye Hospital
	11: 00-11: 30	◆ Interview with pediatric ophthalmologist 1 (international fellowship)	Dalian He Eye Hospital
	11: 30-12: 00	◆ Interview with pediatric ophthalmologist 2 (domestic fellowship)	Dalian He Eye Hospital
	14: 00-14: 30	◆ Interview with visual doctor	Dalian He Eye Hospital
	14: 30-15: 00	◆ Interview with optometrist	Dalian He Eye Hospital
	15: 00-15: 30	◆ Interview with management staff /community manager	Dalian He Eye Hospital
	15: 30-16: 00	◆ Interview with anesthetist	Dalian He Eye Hospital
	16:00-16:30	◆ Interview with nurse	Dalian He Eye Hospital
August 2	9: 00-17: 00	◆ Field visit on one county hospital, one MCH hospital, 1 health care station	field
			field

August 3	9: 00-12: 00	<ul style="list-style-type: none">◆ Debriefing with partner regarding the evaluation findings◆ Internal debriefing meeting with evaluation team member◆ departure	Dalian He Eye Hospital
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