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REVIEW OF VISION CENTRES IN NTB
(Nusa Tenggara Barat)
PROVINCE INDONESIA



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Background: Fred Hollows Foundation (FHF) with support from Seeing is Believing (SiB) has established vision centers in partnership with Government of Indonesia health department at its health centres. Although the primary objective is to take care of children eye screening and glasses, the effort is towards primary eye care services and sustainability. In the above context the consultant visited Lombok Island and reviewed the Vision Centres and school screening programme.

Summary of findings:

1. The government health centres in Indonesia is found to have excellent infrastructure and well staffed
2. The vision centres are established within the health centre premises which is very good and ideal way to integrate eyecare into health systems for comprehensive primary healthcare and sustainability.
3. The Vision Centres are generally staffed with a doctor (general physician) and a Nurse who are trained for five days in eye screening and primary eye care by a specially designed training programme. Only in few centres there is a trained Refractionist (3 years training) employed. Most vision centres are given an administrative staff also by the government.
4. As my ToR was not to check the clinical examination protocol and skill, I did not go into that part. I did not take an Optometrist with me to do that evaluation.
5. It was a pleasant surprise to see the five day eyecare trained staff so confident in their work although neither a refractionist nor an optometrist.
6. As most of the vision centres are established in last 1-2 months time period, the performance is almost same in most of those. They have seen on an average 100 patients a month and found 40-50 Refractive Error cases and prescribed glasses. But the order for glasses in the vision centres are only 8-10 (20% of actual need).
7. The reason for not ordering glasses was found to be cost of glasses which is expensive considering the rural region of Indonesia/NTB Province. On an average a pair of glasses cost US\$25-US\$35 minimum. Not only that issue, patient must place order by paying money in advance and again come back to the health centre to collect that which is extra effort for the patient.
8. The vision centres are ordering frames and glasses from a predetermined contract private optical shop in the near by town. Glasses can be dispensed from the vision centres directly to the patients and in most cases in 5-10 minutes. Except few complex glasses which would in the percentage of 5-10% of the total glasses need per month which can be made to order outside. The simple presbyopia glasses can be dispensed by the vision centre staff instantly at an affordable price point after the eye examination if they stock readymade Reading glasses which are plentifully available at US\$1 wholesale price from many sources. These readymade reading glasses can be dispensed at US\$3-4 to the needy population.
9. Considering the vision centre to be the only primary eye care facility for the catchment population of the health centre which ranges from 30,000-50,000 people, it would be ideal to train staff on proper refraction with retinoscopy, foreign body removal, Cataract identification and referral, measuring eye pressure, suspect glaucoma and retina problems and refer to higher level of eye care treatment.

10. To do the above, ideally a vision centre should be equipped with a slit lamp, tonometer, lensometer, Retinoscope, direct ophthalmoscope and manual edger and glasses fitting equipment.
11. I was surprised to know that the three years trained refractionists are not trained in many basic primary eye care knowledge and skills. As a result I observed the level of skills and confidence between the five day trained health staff and the three years trained refractionist is almost same. May be the refractionist can do a better refraction in a complex case. But the refractionist is also not trained in retinoscope.
12. The other surprise was when we visited a school screening programme, I found that what ever no of children the school teacher had identified as refractive error, the same was confirmed by the vision centre staff. Which indicated to me that either the school teacher is well trained in school screening so that he could do the job of a refractionist or the vision centre staff have same skills as of the school teacher. In an ideal scenario from every 100 children the school teacher would identify 30-40 eye problems and present those to eye screening trained staff or refractionist. And refractionist will identify exact 8-10 children with Refractive error and few other eye diseases who can be referred to eye hospital in the province for confirmatory checkup by an Ophthalmologist.
13. With all the above observations, I feel there is a scope to review the country's refractionist training curriculum and the five day training given to doctors and nurses to ensure the knowledge and skills imparted are matching the need in the vision centre by the population.
14. In absence of availability of Ophthalmologists in rural health centres a well trained refractionist or optometrist can serve major eye care services needs at primary health care level. Hence well trained refractionist/optometrist are key to eye care services in any health system. Indonesia may refer to Indian curriculum for Boptom (Bachelor in Optometry) programme. There are Diploma in Optometry curriculum also available in India. Even a one year vision technician (VT) course in India covers many of the primary eye care skills I have referred to.
15. I also visited Indera Cooperative Opticals in the Mataram City. I was surprised to see there the availability of affordable ready made reading glasses available at 20000 rupiah (1.5\$). I was wondering why the rural health centres don't have those. Why poor people in rural health centres are asked to pay 25-30\$ even for a pair of simple reading glasses? May be Indera cooperative opticals should be the wholesale supplier of glasses and frames to the health centres VCs. Instead of contracting with private profit making optical business shops if health centres can procure the frames, lenses, ready made reading glasses etc from Indera cooperative optic in Mataram.
16. School Screening programme and glasses for children are currently funded by FHF through the SiB grant. Because of which the programme is running well with active interest in screening. The vision centre staff visit schools and train the teachers to do preliminary screening and then they do final screening. Which ever child is requiring glasses s/he is given glasses ordered from the partner optical shop of the respective vision centre. In this case a negotiation is done by FHF that they will pay only 100000 rupiah (7-8\$) per pair of glasses for children. Its observed that 5-7% of children are refractive error. But I strongly feel the clinical examination of school children eyes need to be cross checked by an expert ophthalmologist/paediatric ophthalmologist/expert optometrist to ensure what the vision centre staff are doing as refraction and primary eye care examination is correct. If major discrepancy found then follow-up training need to be organized

to rectify their skills and errors if any. There is also provision for providing glasses to same children if there is damage or loss or change in power etc. The only concern I have is how long the free glass distribution can be continued in case of children? Hence its advisable to start asking for a copayment of a small amount from children’s parents to avoid misuse of the glasses and also to take ownership of the provision of glasses later in life.

17. Key to success of the Eyecare programme is trained and skilled Human Resources. Any organization can buy equipment and instruments literally over night through available funds. But can not buy human resources overnight for a specific country or geography. Developing well trained and skilled human resources takes time and effort. Hence Its advisable to look into the current levels of training and their curriculum and revisit the curriculum taking reference from other similar developing nations and redesign the training programmes depending on the urgency of the need for trained and skilled human resources. My experience in the developing nations has been that the critical workforce is allied health professionals who are key to rural healthcare, primary health care, primary eye care and strong referral mechanism to higher levels of hospitals in the health system.

Issue areas	Current Practice	Suggested Practice
Clinical Quality	<p>The VC with its available space have managed to get the six meters positioning of snellens chart from patient sitting position</p> <p>In most scenarios due to lack of space the six meter is not straight and, in many locations, its just an arrangement without realizing the precision and perfection of vision test and refraction. I feel there must be errors in getting the perfect refractive error prescription.</p>	<p>If space is a constraint to get exact straight line six meters in vision centres for refraction, it can be reduced to three meters with different size alphabet snellens chart which is available now a days.</p> <p>Or</p> <p>Keeping the same snellens chart or vision drum a mirror can be fitted in three meters distance opposite to snellens chart and patient can sit under the snellens chart and read in the mirror.</p> <p>In both ways the room size required is only three meters which is available in most places where vision centres are established. With a perfect setting of refraction room the eye test and results can be precise.</p>
	The General graduate doctor and Nurse have been trained only for five days on refraction and primary eye care before they are assigned the responsibility of Vision Centres	It would be ideal to cross check their clinical skills in primary eye care by sending an expert/ophthalmologist/optometrist to randomly cross check their

		<p>refraction results by doing the same case. This is to ensure that what they are doing is correct.</p> <p>And if necessary, follow-up training must be given at regular intervals till no error is found in their tests/eye examinations.</p>
	<p>Refractionists trained for three years only on refraction with out training in Retinoscopy examination. As a result although they are trained for three years they can not add more value to primary eye care because of lack of any advanced knowledge and skills in comparison to five day trained staff of the health centres.</p>	<p>It would be worth reviewing the refractionists curriculum and make necessary changes to skill them with higher level of primary eye care skills. So that they can do a good job and also can train others at vision centre level.</p> <p>Ideally a refractionist should know retinoscopy, slit lamp eye examination, tonometry, foreign body removal from eye, good refractive error prescription, dispensing of glasses. Identifying or suspecting glaucoma and retina problems and referring them to eye hospitals for diagnosis and treatment by Ophthalmologist.</p>
<p>Glasses Availability and Affordability</p>	<p>Vision Centres at rural district and sub districts are dependant on contracted optical shops in the city.</p> <p>The price of frames and glasses are determined by their choices</p> <p>The prescription glasses and even the simple presbyopic glasses are ordered paying 25-35\$ to the partner/contracted optical shop in the city and is delivered to patient after few days. The patient has to travel again to the health centre to collect the glasses</p>	<p>Ideally the glasses are categorized in three parts.</p> <ul style="list-style-type: none"> • Simple Reading glasses which can be given readymade on the spot • Simple Prescription glasses which also can be done on the spot by having precut lenses matching to few frames size. • Complex prescription glasses which are generally 10% of the total need. This type of glasses its not easy to keep stocks etc. Hence this is the only one category which is a very small % need to be made outside and then

		<p>dispensed to the patient on another day.</p> <ul style="list-style-type: none"> • The ready made reading glasses which is almost 50% of the adult refractive error need can be bought at 1-2\$ and dispensed to patients at 3-5\$ range. • The simple prescription glasses can also be dispensed as pre cut lens model and can be dispensed at 6-10\$ range • Hence I did not understand the logic of asking 25-35\$ for a pair of simple glasses. • This expensive cost of glasses has resulted in poor uptake of glasses inspite of knowing that they need the glasses. • My suggested model is practiced at Indera Cooperative Optic in mataram. Hence did not understand why vision centres are not partnering with Indera cooperative? Why they are partnering with private business optical shops?
<p>School Screening</p>	<p>The vision centre staff have been assigned to the schools in their respective catchment population to do teachers training and final screening. Glasses are given free of cost to the diagnosed school children by the respective vision centre with funding from FHF.</p> <p>In case of damage, loss, change in power the glasses will be provided free of cost to the school children. The case will be reported</p>	<ul style="list-style-type: none"> • The proactive school screening in catchment population of VC is a very good idea. • The clinical aspect of the examination need review and cross check to ensure what the school teachers and vision centre staff are doing as part of the

	by the school teacher to vision centre staff.	<p>clinical protocol is right.</p> <ul style="list-style-type: none"> In case any discrepancy found in terms of protocol to actual practice on ground then need to be managed through follow-up training and some regular interval checks.
Sustainability	<p>Currently the vision centres see on an average only 100 patients a month</p> <p>Sale only 10-15 glasses a month</p> <p>The major amount of profit is taken by the contracted private business optical partner</p>	<p>The low volume of patients in vision centres is due to new opening of centres. Only 1-2 months old since its establishment.</p> <p>I can foresee that the same vision centres with change in cost of glasses and onsite instant dispensing strategy, the patient volume would go up to 300 per month from just 100 now.</p> <p>The glasses sale will touch 150 pairs a month if they make the cost of glasses affordable like they are doing in Indera Coop Optic.</p> <p>With sale of 150 glasses a month the vision centre will earn profit of atleast 500\$ a month. This would have potential to grow upto 500 patients visiting VC per month and 250 glasses order.</p> <p>In this way the vision centres would be financially sustainable. The profit can be utilized to buy new equipment and instruments for the vision centre and also serve for the children glasses at a subsidized cost from vision centre.</p>
Referral	Current referral system is passive for eye care	With vibrant vision centres and the suggestions given if implemented can lead to more volume of patients visiting vision centres and as a result more active referrals can happen to province eye hospitals.

		The children blind or visual impairment years can be reduced through early detection and prompt intervention through a active referral mechanism.
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Project

Seeing is Believing – Nusa Tenggara Barat, Indonesia: Ch(eye)ld Health – Addressing Child Blindness, Low Vision, and Visual Impairment in Indonesia.

Summary:

The Seeing is Believing project seeks to address the growing problem of avoidable blindness in Indonesia through an efficient and effective school eye health and community eye care program that will

1. Serve five Districts of Nusa Tenggara Barat Province: Mataram City, West Lombok, Central Lombok, East Lombok and West Sumbawa.
2. The goal of the project is to establish a system within Nusa Tenggara Barat (NTB) Province where all children with visual impairment or other avoidable eye health conditions are identified early and have access to quality, affordable services.
3. The project activities are aimed at introducing eye health education to all primary and junior high schools in the project area, increase human resource capabilities in visual acuity (teachers and primary health workers),
4. Increase selected primary health care workers’ skills in refraction,
5. Establish a central Vision Centre in Mataram City to allow for the availability of high quality low cost eye wear, provide essential equipment for screening and refraction services,
6. Increase community awareness about eye health and vision care practices and available services, and
7. Support national and provincial level advocacy efforts.

Duration: 2.5 Years (30 months) October 2017 to March 2020



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