

Eye Health Situation in Vietnam

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The Socialist Republic of Vietnam is a country in South East Asia. The country is bordered on the north by China, on the west by Laos PDR and Cambodia. Its area is 331,690 square kilometers. Hanoi, the capital city, is located in the northern part of the country. Ho Chi Minh City is the largest city and is located in the southern part.

Vietnam is divided into 61 provinces grouped into 7 regions: North Mountain and Midlands, Red River Delta, North Central Coast, South Central Coast, Central Highlands, North Eastern South Region, and Mekong River Delta.

Vietnam has a population of 83.5 million (2005 estimate). The southern part of the country is more urbanized than the northern part. Most of the people live in rural areas. The population growth rate is 1.04%.

Eye health problems

Vietnam's latest national blindness survey was performed in 2007. The Rapid Assessment of Avoidable Blindness (RAAB) protocol was used. In this protocol, only people aged 50 years or older were examined. The survey was done in 16 provinces. The percentages of people aged 50 years or older in these provinces range from 10.4% in Gia Lai to 25% in Can Tho. (Table 1) In each province, 1,800 people were

selected and examined. The total of 28,044 people was examined, which represents the overall coverage rate of 97.3%.

The prevalence of blindness among people aged 50 years or older, defined as the visual acuity with available correction in the better eye of less than 3/60 (<20/400), is 3.16%. This number can be extrapolated into the prevalence of blindness among elderly people in the whole country, which is roughly 370,640. The prevalence of blindness varies among provinces. The blindness prevalence is lowest in Lao Cai (2.08%), and highest in Binh Dinh (5.76%). (Table 2) The survey also looks for people with severe visual impairment, which is defined as the visual acuity with available correction in the better eye between 3/60 to less than 6/60; and visual impairment which is defined as the visual acuity in the better eye from 6/60 to less than 6/18. The data indicates that the number of visual impairment among people aged 50 years or older in Vietnam is roughly 1.58 million. There are more women with visual impairment than men.

The major causes of blindness in the survey are shown in figure 1. Untreated cataract accounts for 66.1%, uncorrected aphakia 0.1%, and surgical complications 4.1%. Posterior segment diseases account for 10.1% of blindness. Glaucoma accounts for 6.5%, corneal scars (from other diseases, not include

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trachoma) 5.7%, trachoma 1.7%, phthisis 3.2% and refractive errors 2.5%. Thus the major causes of blindness are cataract, posterior segment diseases and glaucoma. The data from the survey shows that now trachoma is not the major cause of blindness in Vietnam. Blinding trachoma can be found in a few provinces such as Bac Ninh, Ha Tay, and Lao cai.

Cataract is the most common cause of blindness in Vietnam. To date, the only treatment of cataract is cataract operation. Data from RAAB survey shows cataract surgical coverage in each province. Cataract surgical coverage (CSC) is an indicator in public health ophthalmology. CSC is the ratio of operated cataracts by the sum of operated cataracts and blinding cataracts. CSC is usually reported as percentage. The high number of CSC means high number of operated cataracts and low number of unoperated blinding cataracts. CSC can be reported in eyes or in persons. CSC (eye) looks at each eye separately, while CSC (person) looks at each single person as a whole. The CSC in 16 provinces in Vietnam is shown in table 3. The cataract surgical coverage is highest in Ninh Thuan and Ho Chi Minh City. As the results, these areas have low blindness prevalence (Table 2).

Trachoma is one of the leading cause of blindness in the world. Chronic or repeated inflammation from trachoma lead to entropion and trichiasis. At this stage, (trichiatic trachoma, TT) trachoma can develop to corneal scarring and severe visual loss. In Vietnam, the RAAB survey finds TT (with at least one trichiasis in one or both eyes) prevalence of more than 5% in only 5 provinces (Ha Tay, Bac Ninh, Phu Tho, Thai Nguyen, and Nghe An). For the TT stage of trachoma with more than 4 lashes trichiasis, the prevalence of more than 5% is found in Bac Ninh province only (Table 4). Thus we could say that

trachoma is not general problem in Vietnam any more. It is problematic in some endemic provinces especially in the northern part of the country. To date, the annual output of surgeries to correct trichiasis and entropion is around 22,800 cases per year. Trachoma blindness could be within control in a few years.

Eye care network in Vietnam

Eye care network in Vietnam is under the lead from the Ministry of health as the central level. The Vietnam national institute of ophthalmology (VNIO) in Hanoi is in charge of the prevention of blindness in the whole country. In the provincial level, there are 12 provincial eye hospitals, 64 provincial eye departments, 12 provincial eye centers, and provincial center for control of social diseases in other 30 provinces.

In the district level, there are mid-level eye care personnel existed in 247 out of 668 districts (37%). At the community level, primary eye care exists in 317 districts out of the total of 668 districts (47.5%). The first contact that people can have primary eye care is through the village health workers.

Eye care manpower

There are several categories of eye doctors in Vietnam with different training level. There are professors and PhD, master, ophthalmologists and basic eye doctors. As a whole, the total number of eye doctors in the country is 1,083. The ratio of eye doctors per population is one to 77,100. About half of these eye doctors perform cataract surgery. There are 1,208 nurses working in eye care. More than 12,000 community health workers have been trained on primary eye care. About 2,291 village health workers have been trained in primary eye care. The number of eye care personnel and the development capacity are shown in table 5.

National plan for prevention of blindness

Vietnam has a national plan for prevention of blindness which aims to reach the target of vision 2020. The overall goal is to reduce the blindness prevalence to below 0.4% by the year 2012 and to below 0.3% in the year 2020.

The specific plans for prevention of blindness in Vietnam can be divided into following groups:

1. Control of the avoidable blindness

Cataract blindness backlog and the incidence cases must be controlled. The plan aims to raise the target of cataract output to 170,000 cases in 2012, and to 250,000 in 2020.

Trachoma should be controlled by the year 2012 by enhancing the number of trichiasis/entropion corrective surgeries.

Xerophthalmia and vitamin A deficiency should be controlled by the year 2012. This will be done by supplement of 7 million high dosage Vitamin A capsule for children below 3 years of age twice a year. Vitamin A 360,000 capsules will be provided to all hospitals nationwide. Primary health care activities and nutritional education will be provided for communities to ensure the improvement of daily food intake of children.

Plans are made to set up the system to provide refractive services. School eye health screening for refractive errors will be started first on children aged 11–15 years. Spectacles will be provided. The program will expand to children aged 6–10 years. People aged 40 years or older will be provided with low cost glasses.

Glaucoma and diabetic retinopathy services will be launched. The plan is to develop some provincial centres (such as Nam Dinh, Thai Binh, Hue, Da Nang, Ho Chi Minh city) for treatment and follow up glaucoma. Hanoi and Ho Chi Minh centers will be

developed to be training centers for glaucoma.

2. Strengthening of manpower development in every level of eye care

The Ministry of Health cooperates with the Ministry of Education to set up the training targets of health care personnel for the country. For upgrading the existing personnel, as well as continuing medical education, the Ministry of Health request provincial health departments to send district staffs to be trained in specific topics. At present, about 500 districts do not have ophthalmic personnel. The target in the next 5 years is that each district hospital should have at least one eye doctor and 1–2 ophthalmic assistants or nurses.

The training targets are 200 basic eye doctors and 100 ophthalmologists annually (training in Hanoi, HCM, Hue and Thai Binh), 300 ophthalmic nurses (training in Hanoi, HCM, Hue, Hai Phong and Da Nang). Fifty cataract surgeons will be trained each year. There are needs in subspecialty services in which 10 retina specialists, 10 pediatric ophthalmologists, and 10 glaucoma specialists are needed. One hundred of refractionists will be trained each year. For the community and village health workers, there will be a 1 day primary eye care course to train 10,000–20,000 of these personnel each year.

Training to produce more eye care personnel is only one part of the plan. The Ministry of Health should also develop policy or mechanisms to promote these personnel to work in rural, mountainous and island areas. The quality of training should also be raised to higher standard. Another strategy is to strengthen cooperation with private sector in human resource training and also prevention of blindness.

3. Develop technology and eye care infrastructure

The target is that all province should have eye care unit at the provincial level (eye hospital, or eye

center). All district hospital should have eye departments or joint departments of eye, ear, nose, throat (EENT), and dentist departments.

100% of all provinces should have eye care units at provincial level for the community service such as eye hospital/eye center/or SDC centers. All eye department district hospitals should have necessary equipments (direct ophthalmoscope, trial lens set, retinoscope, tonometer, lid and pterygium surgical set, minor surgery set, and operating light). All community health center should be supplied with basic instruments (torch light, pinhole, visual acuity chart, and binocular loupes).

Spectacle lenses and ophthalmic drug manufacturers should be supported to be able to provide cheap glasses and drugs for the country. This

support may be in term of tax reduction or other means.

4. Create eye care information system

To reach the goal of prevention of blindness, eye care information system should be established to cover the whole country. Technology in telemedicine can be use to enhance training and also to support eye care personnel in rural and remote areas.

Vietnam has been through a long journey in prevention of blindness. Substantial accomplishment has been reached through dedication of the Ministry of Health, eye care personnel and cooperation with other sectors such as private sectors, NGOs, and international cooperation. There are still many things to do to reach the expected goals.

Region	Provinces	% of population aged 50 years or above
Northeast	Lao cai	12.2
	Phu Tho	16.2
	Thai nguyen	15.2
Red River Delta	Hay phong	18.8
	Bac Ninh	16.0
	Ha Tay	16.7
North Central Coast	Nghe An	15.6
	Hue	15.0
South Central Coast	Binh Dinh	15.4
Highlands	Gia Lai	10.4
Southeast	Binh Phuoc	12.4
	Vung Tau	13.5
	HCM City	15.8
	Ninh Thuan	11.8
Mekong River delta	Tien Giang	16.1
	Can Tho	25.0

Table 1 Shows 16 provinces selected to perform the Rapid Assessment of Avoidable Blindness (RAAB), and the percentages of people aged 50 years or older in these provinces

Region	Provinces	Prevalence of blindness ($<3/60$)	Prevalence of severe visual impairment ($<6/60$ to $3/60$)	Prevalence of visual impairment ($<6/18$ to $6/60$)
Northeast	Lao cai	2.08	1.58	7.34
	Phu Tho	2.73	1.70	7.74
	Thai nguyen	2.16	1.55	6.06
Red River Delta	Hay phong	2.88	2.10	9.19
	Bac Ninh	4.79	2.81	9.49
	Ha Tay	3.08	1.89	9.81
North Central Coast	Nghe An	4.15	5.05	12.06
	Hue	3.57	2.30	9.95
South Central Coast	Binh Dinh	5.76	5.06	16.83
Highlands	Gia Lai	3.14	2.22	8.77
Southeast	Binh Phuoc	2.62	1.82	11.21
	Vung Tau	3.01	2.35	14.54
	HCM City	2.35	2.24	12.43
	Ninh Thuan	2.34	1.25	4.78
Mekong River delta	Tien Giang	2.38	2.02	11.53
	Can Tho	3.51	2.19	11.04
Overall		3.16		

Table 2 Shows the prevalence of blindness, severe visual impairment and visual impairment in 16 provinces

Region	Provinces	Male	Female	Total	Male	Female	Total
Northeast	Lao cai	35.7	34.5	35.0	56.8	54.4	55.4
	Phu Tho	40.2	36.4	37.9	68.0	54.1	59.8
	Thai nguyen	31.1	38.8	35.6	47.1	56.8	53.6
Red River Delta	Hay phong	40.8	40.2	40.3	78.0	66.0	68.7
	Bac Ninh	46.8	34.8	37.9	73.9	63.6	65.8
	Ha Tay	39.8	35.3	36.4	63.7	62.8	63.0
North Central Coast	Nghe An	19.8	22.8	21.7	36.8	41.4	39.7
	Hue	51.3	35.1	39.6	75.8	55.3	61.1
South Central Coast	Binh Dinh	38.7	31.9	34.0	59.5	59.5	59.5
Highlands	Gia Lai	34.1	23.9	27.7	51.2	47.0	48.4
Southeast	Binh Phuoc	43.2	29.7	34.8	74.5	54.3	61.6
	Vung Tau	62.4	46.7	51.5	79.9	69.3	72.4
	HCM City	74.4	67.7	70.1	91.8	85.3	87.5
	Ninh Thuan	61.2	63.5	62.8	97.6	92.4	93.9
Mekong	Tien Giang	56.9	46.9	50.7	74.8	67.2	70.3
River delta	Can Tho	45.6	37.7	40.2	62.8	59.7	60.5

Table 3 Shows the cataract surgical coverage (CSC) in the 16 provinces divided by sex

Region	Provinces	TT (at least on trichiasis)	TT (> 4 lashes trichiasis)
Northeast	Lao cai	4.9	3
	Phu Tho	6.2	3
	Thai nguyen	5.9	4
Red River Delta	Hay phong	2.5	1
	Bac Ninh	10.3	7
	Ha Tay	7.9	3
North Central Coast	Nghe An	5.3	2
	Hue	0.1	0
South Central Coast	Binh Dinh	0.9	1
Highlands	Gia Lai	1.1	1
Southeast	Binh Phuoc	1.2	1
	Vung Tau	2.6	2
	HCM City	1.2	1
	Ninh Thuan	4.3	4
Mekong River delta	Tien Giang	0.1	0
	Can Tho	0.0	0
Overall		3.8	2.1

Table 4 Shows the prevalence of trichiatic trachoma (TT) in 16 provinces

Categories	Number (2006)	Training output per year
Professors and Ph.D	33	2
Master	117	20
Ophthalmologists	509	50
Basic Eye Doctors	424	100
Total of Eye doctors	1,083	150
Cataract Surgeons	555	20
Registered eye nurses & assistants	1,208	100
Primary eye care workers	15,167	1000

Table 5 Shows the manpower in eye care in Vietnam

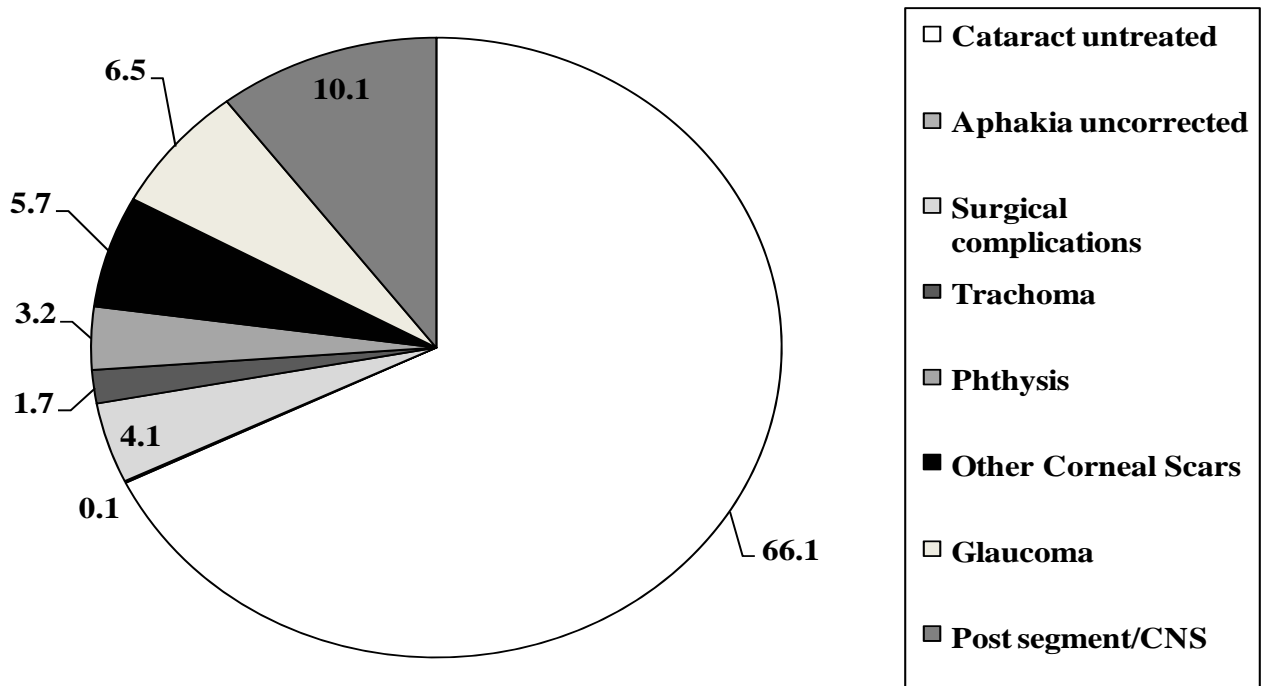


Figure 1 The pie graph shows the causes of blindness

สถานการณ์ด้านสุขภาพตาในประเทศเวียดนาม

เรียบเรียงโดย ภาศ หาญอุตสาหะ, พ.บ. *

บทสรุป:

สาธารณรัฐสังคมนิยมเวียดนามเป็นประเทศในเอเชียอาคเนย์ มีพื้นที่ 331,690 ตารางกิโลเมตร มีเมืองหลวงคือฮานอย ซึ่งตั้งอยู่ทางเหนือของประเทศ เวียดนามแบ่งพื้นที่การปกครองเป็น 61 จังหวัด ซึ่งสามารถจัดกลุ่มเป็น 7 เขต มีประชากร 83.5 ล้านคน อัตราการเพิ่มประชากร 1.04% เวียดนามมีเมืองขนาดใหญ่ที่อยู่ทางใต้ของประเทศคือเมืองโฮจิมินห์

ในปี 2007 เวียดนามทำการสำรวจตาบอด โดยวิธี Rapid assessment of avoidable blindness (RAAB) โดยทำการตรวจคนอายุ 50 ปีขึ้นไป ใน 16 จังหวัด ซึ่งจากการสำรวจนี้ พบอัตราตาบอดในคนอายุ 50 ปีขึ้นไป เป็น 3.16% การกระจายตัวของคนตาบอดนี้ไม่สม่ำเสมอ ตัวอย่างเช่นจังหวัด Lao Cai มีอัตราตาบอด (ในคนอายุ 50 ปีขึ้นไป) อยู่ 2.08% ในขณะที่จังหวัด Binh Dinh มีอัตราตาบอด 5.76% ต้อกระจกเป็นสาเหตุสำคัญที่สุดของตาบอด พบถึง 66% นอกจากนี้ยังพบตาบอดจากภาวะแทรกซ้อนจากการผ่าตัดถึง 4.1% โรคทางส่วนหลังของดวงตา (Posterior segment diseases) เป็นสาเหตุของตาบอด 10.1% ต้อหิน 6.5% และแผลเป็นที่กระจกตา 5.7%

เครือข่ายการให้บริการทางตา อยู่ภายใต้การนำของกระทรวงสุขภาพ มีสถาบันจักษุวิทยาแห่งเวียดนาม (Vietnam National Institute of Ophthalmology, VNIO) เป็นผู้นำในโครงการป้องกันตาบอดของประเทศ ในระดับจังหวัด มีโรงพยาบาลตาระดับจังหวัด 12 แห่ง และแผนกตาในโรงพยาบาลจังหวัด 64 แห่ง ในระดับอำเภอ จะมีเจ้าหน้าที่สาธารณสุขให้บริการทางตาอยู่ ด้านบุคลากร มีจักษุแพทย์ (ซึ่งมีระดับการฝึกอบรมแตกต่างกันมาก) 1,083 คน พยาบาลที่ปฏิบัติงานทางจักษุวิทยา 1,208 คน และมีคณานสาธารณสุขระดับชุมชนประมาณ 12,000 คน

เวียดนามมีแผนป้องกันตาบอด ซึ่งมีหัวข้อสำคัญได้แก่ การควบคุมภาวะตาบอดที่สามารถหลีกเลี่ยงได้ (avoidable blindness) พัฒนาศูนย์จักษุ แพทย์และโครงสร้างพื้นฐาน และระบบข้อมูลข่าวสาร เวียดนามประสบความสำเร็จในการดำเนินการป้องกันตาบอด ปัจจุบันโรคต้อกระจกได้แก่ ริดสีดวงตา ลดลงเป็นอย่างมากทำให้ความสำคัญของโรคนี้ในด้านจักษุสาธารณสุขเริ่มลดลง

Keywords: Vietnam, blindness prevalence

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เรียบเรียงโดย ภาศ หาญอุตสาหะ, พ.บ. ภาควิชาจักษุวิทยา คณะแพทยศาสตร์ โรงพยาบาลรามธิบดี