



**Asia-Pacific
Economic Cooperation**

Advancing Free Trade
for Asia-Pacific **Prosperity**

Workshop on Development of Economic Analysis due to Visual Impairment and Avoidable Blindness

APEC Health Working Group

June 2022



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Economic Cooperation**

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Development of Economic Analysis due
to Visual Impairment
and Avoidable Blindness**

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Introduction

This summary report is an output of an APEC project of Health Working Group (HWG) from Session of 2020, “HWG 07 2020A - Workshop on Development of Economic Analysis due to visual impairment and avoidable blindness”. It is co-sponsored by Republic of Korea; Malaysia; Australia; Singapore; Hong Kong, China; Japan; Thailand; Peru.

Visual impairment and avoidable blindness imply to the socioeconomic when considering an individual’s unemployment, care-taking requirements, increased dependence on others, lower quality of life, economic productivity loss, and increase poverty. However, some economies have lack of knowledge and skill to calculate its economic impact.

This project aims to create a framework to analyze the economic consequences of visual impairment and avoidable blindness.

This virtual workshop was held from March 25 to 27, 2022, through the platform of Zoom Meetings. Apart from the keynote speech, the three days workshop consisted of main sessions: “Economic Burden of Diseases”, “Basic Concept of Health Economics in Eye Care”, “The Case for Investing in Population Eye Health”, “Analysis of Loss of Economic Productivity due to Visual Impairment”, “Policy Development for Visual Impairment Control Program”, “Public Health Approach in Eye Care in Indonesia: Short Description”, “2030 In Sight: a New Strategy for Ending Avoidable Sight Loss”, “Lesson Learned: Advocacy of Visual Impairment Control Program in Viet Nam”, “Application & Simulation: Analysis of the economic impact of visual impairment (Indonesia’s case study)”, and “The Importance of Integrated Research on Eye Health for Reliable Data”. The agenda of the conference is in Annex 1.

There was a total of 80 participants from 12 member economies and 1 non-member economy joining in the workshop. These member economies are Australia; China; Indonesia; Malaysia; New Zealand; Papua New Guinea; Peru; The Philippines; Singapore; Republic of Korea; Thailand; Viet Nam; and one non-APEC member economy is The United Kingdom.

Topic-Based Summaries of Presentations

Day I – Friday, 25 March 2022

Keynote Speech – The Role of Economic Analysis in Health Policy

This keynote speech was delivered by Professor Laksono Trisnantoro, expert staff of Ministry of Health.

This session deliver four big frame about

1. Preface: The Burden of Visual impairment and blindness. Visual impairment and blindness is devastating the economies converting people and communities into poverty because inadequate access to good facilities. At least 2.2 billion people globally have visual impairment and blindness then economic burden projected increase approximately 20% by 2020 but the problem is not in policy makers attention in many economies
2. Policy making and evidence
Policy making cycle: 1. Agenda setting, 2. Policy formulation, 3 Policy implementation, 4. Policy evaluation, 5. Policy change, 6. Policy termination.
3. Evidence informed policy making to ensure the best available research evidence is used to inform decision making while the obstacles are: politic, economy, regulation, ethics
4. Economic analysis and policy making

Advocacy and policy making

Current Problems:

- a. Some economies have lack of knowledge and skill to calculate its economic impact of non-communicable diseases because they don't have or lack of knowledge and skill of it
- b. Not sufficient knowledge and skills for advocating the urgency in implementing visual impairment and avoidable blindness control program

Political practicality: a policy will be politically practical if it has sufficient support to be passed into law and practice by the legislative and administrative branch of government

At the end of session it is expected the issues could be tackled by strengthen capacity in analysing the economic impact, improving the knowledge and skills for advocating policies for visual impairment and avoidable blindness control program

Economic Burden of Diseases, Professor Mardiaty Nadjib, Indonesia

Burden of disease is a concept that was developed in the 1990s by the Harvard School of Public Health, the World Bank and the World Health Organization (WHO) to describe death and loss of health due to diseases, injuries and risk factors for all regions of the world. Murray defined it as a measure of ill-health which reflects functional limitation and premature mortality, and its adjusted for age, sex and time of illness.

This burden could be estimated by measure the Disability Adjusted Life Year (DALY), by adding together :

- **Years of Life Lost (YLL)**

Number of years of life a person loses as a consequence of dying early because of the disease

$$YLL = N \times L$$

(N= number of death, L = standard of life expectancy at age of death in years)

- **Years of Life lived with Disability (YLD)**

Number of years of life a person lives with disability caused by the disease.

$$YLD = I \times DW \times L$$

(I= number of incident cases, DW = disability weight, L = average duration of the case until remission or death in years)

One DALY represents the loss of one year of life lived in full health.

Disease burden is scientific evidence which used as a health information to generates domestic and global health policies. Aside from DALY, it also can be represented by economic burden. Economic burden estimates the possible cost reduction if a disease is prevented, to quantify the socioeconomic burdens that illness imposes on society in general.

Cost of illness (COI) analysis provides the economic costs of illness, injury, or a risk factor. It is a way of measuring medical and other costs resulting from a specific

disease or condition. This analysis can provide decision makers an information on the economic burden of a disease or condition, offers a sense of how big a problem is, hence inform the priority setting.

Visual impairment and avoidable blindness imply to socioeconomic when considering an individual's unemployment, care-taking requirements, increased dependence on others, lower quality of life, economic productivity loss and increase poverty. The total cost of visual impairment and blindness globally is 3 trillion US\$. In the low-and-middle-income economy is estimated 52 billion US\$ annual impact. Reducing and preventing vision loss, developing and implementing strategies, may result in significant productivity gains.

Economic burden data can be used to understand the magnitude of the loss due to certain disease and also help the policy makers to build the strategy.

Basic Concept of Health Economics in Eye Care, Jack Hennessy and Debby Muirhead, Australia

Economic evaluation, suite of methods to compare costs and consequences of alternative interventions

Cost effectiveness analysis, often longevity and quality of life (QALYs gained or DALYs averted)

Cost benefit / benefit cost analysis, most useful when comparing alternative instruments across sectors (Ministry of Finance)

Cost of illness, usually estimates health care costs plus time / productivity costs

Perspective – viewpoint of costing are societal, government budget holder, health system, health care purchaser, provider, and patients.

Investment cases – key concepts:

- Problem definition
- Policy options / intervention for scale up
- Comparator scenario
- Perspective
- Cost per intervention
- Effects per intervention and package (different units)
- Incremental interventions required

- Cost estimate across interventions
- Other costs of scale up
- Benefits across scaled up interventions
- Compare benefits to costs
- Other considerations: equity, budget, impact, etc

The Case for Investing in Population Eye Health, Professor Matthew Burton, United Kingdom

Outline from The Lancet Global Health Commission on Global Eye Health :

1. The eye, vision impairment and conditions
2. The importance of eye health
3. Magnitude of eye disease
4. The economics of vision
5. Global eye health research
6. Beyond 2020 à delivering high quality universal eye care

Eye health definition: The state in which vision, ocular health and functional ability are maximized, thereby contributing to overall health, and wellbeing, social inclusion and quality of life.

Resolution adapted by the general assembly on 23 July 2021 :calls upon member states to ensure access to eye care services for their population and to mobilize the necessary resources and support in this regards, in order to contribute to global efforts to reach, by 2030 at least 1,1 billion people who have a vision impairment and currently do not have access to the eye care services that they need.

Magnitude of eye disease:

1. 1.1 billion people have visual impairment by 2020. 43 million was blind. 295 million have moderate visual impairment. 258 million have mild visual impairment and 510 million have near visual impairment
2. Number of people living with vision impairment, 90% live in lower middle income economies.
3. Women affected more than men
4. Not all economies have data of population-based eye health surveys

There are 5 Grand challenges in global eye health:

- Demand And Access For Refraction And Spectacles Services
- Improve Cataract Surgery Services — Equality, Equity , Access
- Improve And Integrate Child Eye Health Services
- Design Services That Prioritise Reaching Marginalized Groups
- Reduce Out Of Pocket Cost For Eye Care

Delivering High Quality Universal Eye Care:

1. Eye health within universal health coverage : increase population coverage, reduce financial hardship, deliver more services
2. Delivering Integrated people-centered eye care
3. Effective cataract surgical coverage
4. Increasing equity in eye care

“investing in universal eye health is a realistic, cost-effective way of unlocking human potential by improving health and wellbeing, education, work and the economy; it is essential to achieving the Sustainable Development Goals”

Analysis of Loss of Economic Productivity due to Visual Impairment, Ana Patricia Rego da Silva Santos Marques, United Kingdom

Health economic evaluation: category of costs are divided into direct and productivity: while direct are medical, non-medical, and productivity: morbidity, mortality

Productivity costs is described as cost associated with production loss and replacement costs due to illness, disability and death of productive persons, both paid and unpaid

The key productivity cost are: absenteeism, early retirement or job loss, presenteeism, unpaid productivity, compensation mechanisms, multiplier effects (disability)

Several studies already reported global estimates visual impairment and blindness; uncorrected refractive error, neglected tropical disease; trachoma in the working age population are potentially associated with productivity loss

Next steps to improve estimates we will need:

- More studies reporting the employment status of people living with blindness and visual impairment
- Research investigating how different severity levels of vision impairment affect productivity

- More studies around absenteeism, presenteeism and productivity losses of caregivers
- More information about social protection and pension systems for people with blindness and visual impairment

People with vision loss need to have good eye health service access to reduce the problem and give significant productivity gain.

Day II – Saturday, 26 March 2022

Policy Development for Visual Impairment Control Program, Deni Kurniadi Sunjaya, Indonesia

Every program including visual impairment and avoidable blindness program has a framework. First we should determined desired result, by generating the input, output, and impact, besides the process and outcome. These desired result are influenced by environment factor, which is policy.

The definition of policy is decision taken by those with responsibility for a given area. Next definition is broad statement of goals, objectives and means that creates the framework for activity. Last definition is whatever government to do or not to do.

Policy cycle is a process of policy being developed. Starts from a problem – issue – agenda setting – policy formulation – policy implementation – policy evaluation – back to problem, because the policy itself could be appear as a new problem, hence this termed as a cycle.

As a start we should define what is a problem, it is a gap between expectation and reality. We should focus about is it really exist, how big the problem is, and is it common or a public problem. After finding problem, then we should find the root or cause of the problem. Finding the cause could be achieved by theoretic or evidence. We should also identify the symptoms or effect of a problem which seen on the surface. Later after finding the root, we could get the problem statement, define the effect or impact and find a solution.

In order to get the information about the problem, we should have a strong health information system (HIS). The interest of the people and stakeholder should be gained to this problem that we seen, thus further could make into a policy.

The role of research in policy is to generates new knowledge that will become a evidence-based policy.

Visual impairment control defined by a health service, social cohesion and behavior, and structural factors. The current global strategy is achieving Universal Health Coverage (UHC), a program to ensure an equity to every people, access to high-quality health essentials, and no financial hardship to obtain health care services.

This strategy then become a program, gone into operational, and budget planning. The end result of the process would be an activity. These steps could only be obtained after a policy was issued. Finally all these steps from gathering problem to policy making and taking agenda activity are needed to be watched and evaluated.

Public Health Approach in Eye Care in Indonesia: Short Description, Yeni Dwi Lestari, Indonesia

Indonesia is currently the 4th world most populous citizen with more than 273 million people and density of 126,4 persons per square kilometers. Although the density is high, the challenge lies on the geographical aspects as well as improved life expectancy hence more degenerative diseases.

Demographic trend in Indonesia shows that life expectancy is increased therefore more challenges lie in the degenerative diseases, and especially in eye health, cataract, diabetic retinopathy, and glaucoma.

Indonesia still facing many challenges in combating visual impairment

Partnership is pivotal in providing eye care programme. Eye care is not a priority in domestic health programme, therefore it creates limitation in budgeting. To be able to combat blindness, partnership to all is important where we all can gather our forces in combating eye care.

Our challenge in meeting the aim of consumables and technology block is that we rely on imported consumables. These consumables are then charged with luxury goods tax therefore it still a challenge for us to provide cost-effective eye care.

Indonesia's very own vision centers which will be a part of primary health care focusing on cataract, refractive error, diabetic retinopathy, glaucoma. This initiative aims to ensure everyone could have access to comprehensive and qualified eye care in accordance to IPCEC

Many measures have been taken to prevent blindness and visual impairment in Indonesia

To provide eye care budget for all, Indonesian government has integrated eye care delivery with domestic health insurance which ensures all citizens are adequately funded and did not meet any financial hardships for their eye problems.

In the future, more efforts towards prevention programme, community engagement, and accessibility must be highlighted

2030 In Sight: a New Strategy for Ending Avoidable Sight Loss, Peter Holland, United Kingdom

Globally, there are 1.1 billion people around the world living with the consequences of sight loss because they do not have access to eye care services. These are some of the poorest and most marginalised in society. Without change, this will rise to 1.8 billion people by 2050.

By 2030, we want to see a world where:

- No-one experiences unnecessary or preventable sight loss and everyone can achieve their full potential
- Eye care and rehabilitation services are accessible, inclusive and affordable to everyone, everywhere, whenever they are needed
- People understand the importance of caring for their own eye health and demand access to services, free from the weight of any social stigma

The mission of 2030 In sight is set out in these 3 elements:

1. **Elevate:** Embed vision as a fundamental economic, social and development issue
2. **Integrate:** Incorporate eye health in wider health care systems
3. **Activate:** Drive patient, consumer and market change

Action planning by 2030 include:

1. SDG's achieved
2. Eye Health include in 2045 agenda
3. Trachoma elimination
4. 30% point increase in effective coverage of cataract surgery
5. 40% point increase in effective coverage of RE

6. 1 billion more people have access to eye health (care)
7. IPEC implemented everywhere

There are 10 (ten) priorities how the sector needs to change: Develop leadership; Advocate differently; Secure new forms of funding; Embrace technological solution; Strengthen partnership with the private sector; Create new allies; Develop a competent workforce; Prove our case; Improve accountability; and Influence the widest audience

Implementation :

- Build on sectoral capability and learning developed from VISION 2020
- Make best use of global network
- Secretariat will provide support
- Need to develop approach - has to be implemented in line with domestic contexts
- Government ownership
- Complex system change

Day III – 27 March 2022

Lesson Learned: Advocacy of Visual Impairment Control Program in Viet Nam, Phuc Huynh Tan, Viet Nam

11.4% of Vietnamese age \geq 50 year old are visually impaired while 9.5% have moderate visual impairment. Eye health is still a public issue, but not on the priority agenda, as the government has other priorities, and limited resource and infrastructure for eye health, particularly at the primary and secondary levels.

The Foundation in Vietnam has focused to advocacy and health system strengthening over the 2016-2024 period.

Key focus areas:

- Strengthening quality assurance for eye care services, enhancing partnerships at domestic level
- Influencing policy and guidelines on eye health through an improved partnership with relevant ministries
- Improving multi-sectoral collaboration between eye care providers and non-eye care providers, between public and private health sectors

- Improving awareness and support for equitable access to eye health among high-ranking leaders and the public.

Key Approaches and relationship targets also advocacy strategies were made to facilitate and tackle the issues

Lessons learned from the current condition explain to:

- Strengthen the ownership of government on the issue. Making it an objective of the government, not the NGO
- Allocate more time to prepare for complying with required procedures in the paper works.
- Though achieved highlights in advocacy, follow-up actions should be undertaken to ensure enforcement of the endorsed policies.
- Establish eye health coalition: collaboration of Eye Care Working Group (ECWG)
- Having advocacy staff based in the capital
- Should have an overarching advocacy plan for the domestic program
- The global standardized eye care guidelines should be integrated into the domestic eye care new intervention guidelines

Application & Simulation: Analysis of the economic impact of visual impairment (Indonesia's case study), Adiatma Yudistira Manogar Siregar, Indonesia

Health investment potentially affect health, social and financial impact, this session focus on financial impact. The speaker use an instrument to explain content of the session. The instrument was made to help those who doesn't really understand about economic view from a health issue.

The instrument is in the form of worksheet. The sheets contain about basic parameter, direct cost blindness, direct cost of moderate and severe visual impairment (MSVI), indirect cost of blindness, indirect cost of MSVI and summary. There are some specific numbers needed to be fulfilled depends on domestic situation.

Direct or medical cost means the cost to treat blindness or MSVI but is not cure the people from blindness or MSVI (eyeglasses). Indirect or non-medical cost means the cost projected to be loss due to blindness or MSVI (productivity loss, unemployment).

Participants were given link to the Worksheet one day prior to the meeting

The Importance of Integrated Research on Eye Health for Reliable Data, Vidhyandika Djati Perkasa, Indonesia

Eye health is a complex problem: it is not solely a medical problem but connected by socio-cultural, political and economic issues (economic consequences of visual impairment)

Integrated research is about bureaucratic divisions in policy, disciplines, ideas or knowledge (interdisciplinary-transdisciplinary), research issues, data (availability, validity, linking), technology (software), methodological preferences, organizations, institutions, physical locations (research areas) and form of innovation

GAPSED+ (Gender, Age, Place of residence, SSE, Ethnicity, Disability+ LGBT, Migrant). It's not about women *per se*. It's not only about sex (men and women). It's about dimensions which contributed (or not contributed) towards inequality, social injustice, marginalization and discrimination on accessing eye care.

There are 'economic implications' in each of the GAPSED+ dimensions. Integrated policy recommendations: There is a need to advocate eye health to become program priority within the domestic health care.

Optimizing access to social security, including the BPJS and KIS, to reduce the financial barriers at eye health care services, especially for elderly.

Provide high-value gender-sensitive training and awareness workshops to health workforce management and leadership.

Along with the development of eye health care center, other strategies should be implemented parallelly, including providing the opportunity for women to obtain higher education, both formal and informal education

Increase the numbers of social services (*Baksos*) for cataract surgery.

Integrated eye health services with primary care for all, especially elders and people with disability

Human resource development on eye health training for eye health nurses/programmers at the *puskesmas*, *puskesmas* doctors, cadres, religious leaders, and leaders in the community.

Annex 1

AGENDA

APEC Workshop on Development of Economic Analysis due to Visual Impairment and Avoidable Blindness

Date: 25-27 March 2022

Time zone: GMT+7

Friday, 25 March 2022 Moderator: Dicky Budiman	
09:30 – 09:45	Registration and Reception (Online)
09:45 – 10:00	Introduction - Workshop Overview and Goals 1. A short introduction to the event, including the member of the mentor team. 2. Precautions for online workshop Speaker: <i>Nina Ratnaningsih, Project Overseer, Cicendo Eye Hospital, Indonesia</i>
10:00 – 10:15	Opening Ceremony Welcome Speech - <i>Irayanti, MD, Cicendo Eye Hospital, Indonesia</i> Opening Speech - <i>Kunta Wibawa Dasa Nugraha, PhD, Ministry of Health, Indonesia</i>
10:15 – 10:30	Keynote Speech The Role of Economic Analysis in Health Policy Speaker: <i>Professor Laksono Trisnantoro, Ministry of Health, Indonesia</i>
10:30 – 11:00	Economic Burden of Diseases Speaker: <i>Professor Mardiaty Nadjib, University of Indonesia</i>
11:00 – 11:30	Basic Concept of Health Economics in Eye Care Speaker: <i>Jack Hennessy and Debby Muirhead, Fred Hollows Foundation, Australia</i>
11:30 – 11:45	Discussion
11:45 – 12:00	Break
12:00 – 12:30	The Case for Investing in Population Eye Health Speaker: <i>Professor Matthew Burton, London School of Hygiene & Tropical Medicine, United Kingdom</i>
12:30 – 12:45	Discussion
12:45 – 13:15	Analysis of Loss of Economic Productivity due to Visual Impairment Speaker: <i>Ana Patricia Rego da Silva Santos Marques, London School of Hygiene & Tropical Medicine, United Kingdom</i>
13:15 – 13:30	Discussion

Saturday, 26 March 2022 Moderator: Syumarti	
10:15 – 10:30	Registration and Reception (Online)
10:30 – 11:00	Policy Development for Visual Impairment Control Program Speaker: <i>Deni Kurniadi Sunjaya, Center for Economics and Development Studies, Padjadjaran University, Indonesia</i>
11:00 – 11:15	Discussion
11:15 – 11:45	Public Health Approach in Eye Care in Indonesia Short Description. Speaker: <i>Yeni Dwi Lestari, Indonesian Community Ophthalmology Society</i>
11:45 – 12:00	Discussion
12:00 – 12:15	Break
12:15 – 12:45	2030 In Sight: a New Strategy for Ending Avoidable Sight Loss Speaker: <i>Peter Holland, IAPB, United Kingdom</i>
12:45 – 13:00	Discussion

Sunday, 27 March 2022 Moderator: Alfiah Hasanah	
09:00 – 09:15	Registration and Reception (Online)
09:15 – 09:45	Lesson Learned: Advocacy of Visual Impairment Control Program in Viet Nam Speaker, <i>Phuc Huynh Tan, Fred Hollows Foundation, Viet Nam</i>
09:45 – 10:00	Discussion
10:00 – 11:15	Application & Simulation: Analysis of the economic impact of visual impairment (Indonesia's case study) Speaker, <i>Adiatma Yudistira Manogar Siregar, Center for Economics and Development Studies, Padjadjaran University, Indonesia</i>
11:15 – 11:30	Discussion
11:30 – 12:00	The Importance of Integrated Research on Eye Eye Health for Reliable Data Speaker, <i>Vidhyandika Djati Perkasa, CSIS, Indonesia</i>
12.00 – 12.15	Closing Remarks Speaker, <i>Professor Nila F. Moeloek, Indonesia</i>