

Background documents (in chronological order of their publication):

1. Formulation and management of National Programmes for the Prevention of Blindness (WHO/PBL/90.18)  
accessible at [http://whqlibdoc.who.int/hq/1990/WHO\\_PBL\\_90.18.pdf](http://whqlibdoc.who.int/hq/1990/WHO_PBL_90.18.pdf)
2. Informal Consultation on Analysis of Blindness Prevention Outcomes, Geneva, February 1998 (WHO/PBL/98.68)  
accessible at [http://whqlibdoc.who.int/hq/1998/WHO\\_PBL\\_98.68.pdf](http://whqlibdoc.who.int/hq/1998/WHO_PBL_98.68.pdf)
3. A framework and indicators for monitoring VISION 2020 – The Right to Sight (WHO/PBL/03.92)  
accessible at [http://whqlibdoc.who.int/hq/2003/WHO\\_PBL\\_03.92.pdf](http://whqlibdoc.who.int/hq/2003/WHO_PBL_03.92.pdf)
4. Developing health management information systems: a practical guide for developing countries. World Health Organization 2004. ISBN 92 9061 1650
5. The VISION 2020 Action Plan, 2006-2011  
accessible at [http://www.vision2020.org/documents/publications/VISION2020\\_report.pdf](http://www.vision2020.org/documents/publications/VISION2020_report.pdf)
6. WHO Action Plan for Prevention of Blindness and Visual Impairment (2009-2013)  
accessible at [http://www.who.int/blindness/ACTION\\_PLAN\\_WHA62-1-English.pdf](http://www.who.int/blindness/ACTION_PLAN_WHA62-1-English.pdf)
7. IAPB Standard List for a VISION 2020 Eye Care Service Unit 2010  
accessible at [http://www.vision2020.org/documents/publications/IAPB\\_StanList2010\\_FINAL.pdf](http://www.vision2020.org/documents/publications/IAPB_StanList2010_FINAL.pdf)
8. AusAID documents (1) Revised Performance Assessment Framework, Avoidable Blindness Initiative, October 2011 and (2) Performance Assessment Framework, Avoidable Blindness Initiative, August 2011

### **Summary of relevant information on indicators collated from the background documents**

This summary aims to present the evolution of thinking in this context and the process through which development of indicators to monitor elimination of avoidable blindness has progressed.

The current piece of research attempts to obtain a set of approximately ten simple, representative and globally measurable indicators for monitoring progress towards elimination of avoidable blindness. This will be achieved through dialogue among voices that have advised, informed and implemented the development and utilization of indicators and informed by among other sources, the summary provided below.

May we suggest to the persons engaged in this dialogue that the ‘nominated indicators’ that you suggest be limited to those collated in this summary either as is or modified to improve either rigor or ease of collection. However, please do not let this suggestion be a constraint should you wish to include any other relevant, simple and accurate indicators.

### **3. A framework and indicators for monitoring VISION 2020 – The Right to Sight**

The global initiative has identified indicators and proposed a monitoring framework to track progress in the implementation of interventions and the achievement of a set of objectives and targets. A list of indicators was drawn up by a WHO working group in June 2002; however, as the collection of data on eye-care services proved to be challenging, the list was subsequently revised.

Indicators are relevant at global, regional and national levels. In determining the indicators for monitoring VISION 2020, the following issues were addressed:

#### *Broad consensus*

VISION 2020 is the collective effort of a number of partners in different disciplines who agreed on a common objective and a common agenda to work towards that goal; therefore, a common monitoring framework is implicit. One of the prerequisites of a monitoring framework is that it be technically sound.

#### *Relevance to VISION 2020 objectives and components*

The framework and indicators should reflect the objectives of VISION 2020 directly. They should permit an assessment of the impact of VISION 2020 on the burden of blindness and visual impairment and make it possible to monitor the principal strategies, interventions and related efforts to reinforce eye-care delivery.

*Standardized but adaptable approaches*

The epidemiology of blindness and visual impairment and health systems vary considerably among countries and regions, and this variation must be taken into account in a monitoring framework and method. It was therefore considered expedient to develop a general framework that covers all situations and to develop a series of indicators that reflect the main variations in blindness patterns and related epidemiology in different countries and in the principal interventions.

**Countries and regions are encouraged to select from the basic set those indicators that are the most appropriate for their epidemiological situation and intervention strategy.** This approach will ensure standardization of the basic framework and flexibility to suit special circumstances and needs.

*Local feedback*

The main aim of data collection at community and district levels is to provide feedback to eye-care providers and the health-care system. The monitoring system and the selected indicators should facilitate this process. The information can be used by local decision-makers and stakeholders for planning and management.

*Minimal data collection*

The chores of record-keeping and reporting are often seen as a needless burden in many health-care settings, and much of the information collected and reported is never used. Only minimal data are to be collected for VISION 2020, and collection should be undertaken only if the data are likely to be reliable and useful for decision-making. Wherever possible, existing mechanisms for data collection, with suitable modification and strengthening, should be used.

The critical data for the objectives of VISION 2020 are on:

- the impact on the burden of blindness and visual impairment;
- related human resource development;
- related eye health sector and technology development; and
- Member States' commitment to implementation of VISION 2020 and development of partnerships.

The framework details the main components of VISION 2020, especially at country level. Reduction and eventual elimination of avoidable blindness will be achieved through interventions that are strengthened or initiated by national VISION 2020 partners, and these partnerships should be monitored. The actual interventions will vary with the pattern and epidemiology of blindness and visual impairment, and with the status of the health delivery system; however, interventions specific to blindness include the whole gamut of eye-health promotion, protection, treatment and at least some forms of rehabilitation. These interventions will require strengthening and therefore monitoring of human resources and relevant components of the health-care system, including health policy, health systems management and service delivery at all levels. Inter-sectoral collaboration when called for should also be monitored.

National interventions require international support. Other critical areas for monitoring are the resources available at national and global levels, the technical support provided to countries and the effectiveness of research and development for new tools and strategies.

## 5. The V2020 action plan 2006-2011

### Targets

#### **Cataract**

- Cataract surgical rate: Each country's national plan for the prevention of blindness should include achievable targets for increasing the cataract surgical rate to the desired level, which should be the rate required to eliminate cataract-related, severe visual impairment calculated on the basis of data for the local population. The rate will depend on the prevalence of cataract causing visual impairment, the visual acuity recommended for eligibility for surgery and demographic trends.
- Cataract surgical coverage: Ultimately, the highest possible cataract surgical coverage (at least 85%) should be reached. Monitoring cataract prevalence at district and subnational level and using cost-effective methods for assessing cataract surgical coverage will allow identification of gaps, so that services are targeted to areas and subgroups at greatest need.
- Quality of cataract services: WHO targets for the quality of cataract surgery will be met, i.e. at least 85% of eyes achieve 6/18 or better presenting visual acuity postoperatively (22).

### Indicators

- national (regional or global) prevalence of blindness due to cataract, obtained from population-based epidemiological studies or rapid assessment;
- national, district or subnational cataract output (number of cataract operations per year) and cataract surgical rates (number of cataract operations per million population per year);
- cataract surgical coverage (proportion of need that is being met, for example, the proportion of aphakia or pseudophakia in relation to blindness due to cataract in representative samples of the population);
- proportion of cataract surgery with intraocular lenses (intraocular lens implantation rate); and
- quality of cataract surgery in representative samples of the population, evaluated, for instance, in rapid assessments of cataract surgical services.

#### **Refractive error**

### Targets

- Each national VISION 2020 plan shall incorporate measures to address visual impairment due to uncorrected refractive errors.
- Achieve a ratio of one trained functional refractionist per 100,000 population by 2010 and 1:50,000 by 2020.
- Comprehensive eye care services should ensure that refraction services with provision of suitable correction tools are available at all levels of service delivery, including during outreach.
- Particular attention should be paid to children of primary and secondary school age, the working poor and adults over the age of 50 years.
- The correction provided should be affordable, of good quality and culturally acceptable.
- Epidemiological research should be conducted on the prevalence of uncorrected refractive errors and its trends.

### Indicator

- Proportion of people with uncorrected refractive errors that cause visual impairment (i.e. presenting with visual acuity < 6/18 in the better eye)

## **Low Vision**

### Targets

- Each national VISION 2020 plan has incorporated low-vision services.
- In countries with no provision, establish at least one low-vision centre by 2011. For countries that already have low-vision services, expand the provision with a target of one tertiary low-vision service for every 10 million population, or at least one per country, by the year 2020.
- Examine all children in schools and in services for vision-impaired children for the need for low-vision devices, and assess whether referral will be required for rehabilitation or educational services.
- Have functioning low-vision clinics in all tertiary child eye-care centres with trained eye-care professionals.
- Complete national focal person training courses in all regions, with refresher training and mentoring.
- Equip tertiary, secondary and primary low-vision services according to the VISION 2020 standard list.
- Have at least two low-vision resource centres in operation by 2011.

### Indicators

- number and percentage of low-vision services at tertiary level that have equipment that meets or exceeds the VISION 2020 standard list requirements;
- number of persons with functional low vision who have access to low-vision services; and
- number of countries with a trained national focal person.

## **Childhood Blindness**

By 2011, each country's national plan will include the control of blindness in children, with achievable targets.

- For disease control:
  - reduction in the global prevalence of blindness in children from 0.75/1000 to 0.4/1000 by the year 2020;
  - reduction in corneal scarring caused by vitamin A deficiency, measles, neonatal conjunctivitis and the use of traditional eye remedies;
  - reduction in the proportion of blindness due to retinopathy of prematurity, particularly in countries where it is responsible for more than 10% of blindness in children; and
  - appropriate management of children with cataract, with immediate, effective optical correction in suitably equipped specialist centres.
- For human resource development:
  - prevention of blindness in children an explicit aim of primary health care programmes and included in all primary eye-care training curricula;
  - personnel in secondary-level eye clinics with knowledge and skills necessary to manage less complex eye conditions in children; and
  - at least one child eye-care centre with a well-trained team for every 20 million population by the year 2011 and one per 10 million by 2020.
- For infrastructure and technology:
  - all child eye-care centres have adequate supplies of consumables for children, e.g. paediatric aphakic spectacles and low-power, small-diameter intraocular lenses; and
  - secondary-level eye clinics have facilities to provide appropriate spectacles for children with refractive errors.

#### Indicators

- prevalence of childhood blindness
- prevalence of avoidable childhood blindness, by cause
- number of child eye-care centres per at least 20 million population (recommended);
- from other WHO programmes:
  - proportion of countries with measles immunization coverage > 80%;
  - proportion of countries with vitamin A deficiency control programmes or with eliminated vitamin A deficiency, in line with global targets; and
  - proportion of countries with a policy or immunization programme for rubella.

#### **Trachoma**

##### Target

By 2020, all 49 countries where endemic trachoma has been confirmed should have achieved their ultimate intervention goals.

##### Indicators

- number of countries with blinding trachoma as a public health problem;
- proportion of endemic communities covered by the SAFE strategy;
- recommended, where applicable:
  - prevalence of trachomatous entropion trichiasis at district level;
  - prevalence of active trachoma in 1–9-year-olds at district level; and
  - progress in achieving the ultimate intervention goals.

National data are being used to refine ultimate intervention goals and annual intervention objectives in countries. The data are included in WHO information on neglected tropical diseases, in the WHO Global Health Atlas and in the WHO Infobase.

#### **Onchocerciasis**

##### Targets

- Satisfactory coverage with a national onchocerciasis programme in six countries in the Americas, 19 countries in Africa plus Côte d'Ivoire and Sierra Leone (previously covered by the Onchocerciasis Control Programme) and Yemen by 2010 and in all endemic countries by 2015; and
- satisfactory surveillance systems in Benin, Ghana, Guinea and Togo (previously covered by the Onchocerciasis Control Programme) by 2010 and in all endemic countries by 2015.

##### Indicators

(From the African Programme for Onchocerciasis Control, the Onchocerciasis Elimination Programme in the Americas and special intervention zones of the former Onchocerciasis Control Programme)

- at national level, number of infected persons with or at risk for onchocerciasis;
- number of persons treated annually with Mectizan®, ivermectin;
- coverage with treatment for onchocerciasis:
  - ultimate treatment goal coverage: minimum, 85% (mostly in the Region of the Americas);
  - therapeutic coverage: minimum, 65% (mostly in the African Region); and
  - geographical coverage, 100% (general);
- existence of a satisfactory national surveillance system; and
- incidence of blindness from onchocerciasis.

### **ARMD**

#### Targets

- To enhance vision-related quality of life for people with functional low vision

#### Indicators

- prevalence of blindness and visual impairment due to age-related macular degeneration; and
- recommended, where applicable, coverage of age-related macular degeneration patients with low-vision services

### **Diabetic retinopathy**

#### Targets

- Each country's national VISION 2020 plan for the prevention of blindness includes achievable targets for the prevention and treatment of diabetic retinopathy.

#### Indicators

- prevalence of blindness and visual impairment due to diabetic retinopathy;
- population per standard eye centre for management of diabetic retinopathy with competent retinal specialists, functional retinal laser and standard diagnostic equipment (recommended at national level);
- population per tertiary eye centre providing comprehensive medical and surgical posterior segment services (recommended at national level); and
- recommended, where applicable, coverage by services (e.g. percentage of diabetic patients who undergo an annual eye examination and percentage of patients with diabetic retinopathy who are treated with retinal laser)

### **Glaucoma**

#### Target

- Each country's national VISION 2020 plan for the prevention of blindness includes achievable targets for reducing blindness due to glaucoma.

#### Indicators

- prevalence of blindness and visual impairment due to glaucoma; and
- number of countries in which prevention of visual impairment due to glaucoma is adequately addressed in the national VISION 2020 plan for prevention of blindness.

### **Human Resource Development**

Train community health-care workers, where they exist, or adequately qualified persons in the community in primary eye care for preventive education, simple treatment, early detection and referral to health facilities.

Set up interdisciplinary teams of personnel with complementary skills at all levels of eye-care delivery.

Develop and promote management and leadership skills in selected personnel, who will comprise the support system for service delivery.

Train mid-level eye-care personnel as needed, using a core curriculum and the necessary modules, such as for instrument maintenance and repair, low-vision care and simple refraction.

Organize continuing professional development, as appropriate.

#### ***Ophthalmologists:***

- Retain and optimally use existing ophthalmologists.
- Plan for and train new ophthalmologists.
- Where necessary, influence the national plan for human resources for health to help achieve the targets listed below.
- Train ophthalmologists in the required sub-specialities.

#### Indicators

- number of eye-care personnel, including ophthalmologists and mid-level eye-care personnel, per population (preferably disaggregated data, as national averages can be misleading); and
- performance of personnel at different levels of eye-care delivery.

#### **Community eye care**

##### Targets

- Integrate community eye care into training curricula for all eye-care providers.
- Develop or strengthen existing community ophthalmology training centres.

##### Indicators

- proportion of residency programmes in a country that have integrated a community ophthalmology module into the training curricula; and
- number of eye-care personnel who have been trained in community ophthalmology (short and long courses)

#### **Optometrists**

##### Target

- Optimally use the skills of existing optometrists in primary care programmes with particular emphasis on refractive error and low vision.

##### Indicator

- Proportion of optometrists per population
- Proportion of optometrists integrated into primary care programmes

#### **MLOPs**

##### Target

- Ensure a sufficient number of well-trained mid-level personnel and integrate them into eye-care teams.
- In sub-Saharan Africa, achieve a ratio of one ophthalmic medical assistant, officer or nurse per 200 000 population by 2010 and a ratio of 1:100 000 by 2020.
- In Asia, achieve a ratio of 1:50 000 by 2010.

##### Indicator

- Proportion of functional ophthalmic medical assistants, officers or nurses per population and, in secondary and tertiary settings, the indicated ratio to ophthalmologists refractionists

#### **Refractionists**

##### Target

- Train sufficient appropriate staff in underserved populations with a high prevalence of uncorrected refractive error.
- Achieve a ratio of one trained functional refractionist per 100 000 population by 2010 and 1:50 000 by 2020.

##### Indicator

- proportion of functional refractionists per population

### **Managers**

#### Target

- Enhance the use of human and other resources and thus improve eye care.
- Place personnel trained in management at tertiary and secondary eye-care centres.

#### Indicators

- number of personnel trained and
- number of centres with management positions filled.

### **Equipment technicians**

#### Objective

- Train personnel to maintain and repair equipment, produce low-cost spectacles or procure affordable low-vision equipment.
- 25% of secondary centres with functioning trained personnel by 2010 and 50% by 2020
- 60% of tertiary centres with functioning trained personnel by 2010 and 100% by 2020

#### Indicator

- proportion of secondary and tertiary level centres with trained and functional units

### **Human Resource Development Infrastructure**

#### Targets

- By 2011, establish at least six global resource centres.
- Assess geographical needs and identify locations for an additional 15 regional resource centres.
- In each country's national VISION 2020 plan, identify at least one collaborating resource centre and one training centre.

#### Indicators

- numbers of global and regional resource centres and national and local training centres established to address core needs in their target areas; and
- numbers of trained personnel in priority cadres

### **Infrastructure and technology**

#### **Infrastructure**

#### Target

- Set the appropriate targets for infrastructure at primary, secondary and tertiary levels in each country's national VISION 2020 plan.

#### Indicators

- populations served by primary, secondary and tertiary centres (absolute numbers);
- numbers of primary, secondary and tertiary centres in a country;
- at national level, proportion of health administrative areas with eye-care and cataract surgical services;
- population served by one ophthalmologist or one cataract surgeon; at national level, average size of the population served by one ophthalmologist;
- recommended, with examples of links to other categories of indicator:
  - numbers of district eye units with adequate numbers of trained personnel, improved facilities, established referral networks and community coverage;

- numbers of primary health-care workers trained in primary eye care;
- cataract surgical rate (cataract operations per million population per year);
- availability of affordable spectacles and low-vision devices; and
- ratio of ophthalmic nurses and assistants, optometrists, refractionists and other personnel to the population served.

**Technology**

Targets

- District and training programmes are well equipped to deliver services.
- The supply of low-cost devices and consumables is uninterrupted.
- All items of equipment needed to deliver services are affordable, robust and of high quality.
- The information needed by practitioners is readily available, accessible and regularly updated.
- Each eye unit has a well-trained staff member who can maintain the equipment.
- There is good access to service for more sophisticated equipment.

Indicators

- existence of regularly updated and expanded information on technology;
- numbers of district eye-care services with adequate equipment, eye medicines and other ophthalmic items (in accordance with appropriate licensing laws and other legal requirements);
- numbers of equipment training programmes and numbers of personnel trained; and
- material available in languages other than English

[Updated \(from A framework and indicators for monitoring VISION 2020: The Right to Sight - WHO/PBL/03.92\) indicators for prevalence of visual impairment and disease control.](#)

Indicators for prevalence of visual impairment

- Prevalence of visual impairment

<b>Level of collection</b>	National (disaggregated in large countries)
<b>Level of collation</b>	Regional or global
<b>Brief definition</b>	Global, regional and national numbers of blind persons and numbers with low vision
<b>Unit of measurement</b>	Absolute number
<b>Purpose</b>	Programme monitoring, public relations and advocacy
<b>Links to other indicators</b>	Level of development, gender
<b>Underlying definition</b>	Presenting visual acuity < 3/60 and < 6/18–3/60 in the better eye
<b>Measurement method</b>	Estimates from surveys or rapid assessments
<b>Limitations</b>	Requires population-based studies, some of which are of limited generalizability
<b>Frequency</b>	5 years

- Prevalence of visual impairment due to avoidable causes

<b>Level of collection</b>	National (disaggregated in large countries)
<b>Level of collation</b>	Regional or global
<b>Brief definition</b>	Global and regional numbers of blind persons and numbers with low vision due to avoidable causes
<b>Unit of measurement</b>	Absolute number
<b>Purpose</b>	Monitoring of trends, public relations and advocacy
<b>Links to other indicators</b>	Level of development, gender
<b>Underlying definition</b>	Presenting visual acuity < 3/60 and < 6/18–3/60 in the better eye
<b>Measurement method</b>	Estimates from surveys or rapid assessments
<b>Limitations</b>	Limited accuracy
<b>Frequency</b>	5 years

Indicators for control of cataract

- Cataract output

<b>Level of collection</b>	National
<b>Level of collation</b>	Regional or global
<b>Brief definition</b>	Number of cataract operations

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<b>Unit of measurement</b>	Absolute number
<b>Purpose</b>	Monitor trends, public relations and advocacy
<b>Links to other indicators</b>	Human resource development, infrastructure, appropriate technology, level of development
<b>Underlying definition</b>	Cataract surgery
<b>Measurement method</b>	Compilation from district and national data
<b>Limitations</b>	Incomplete reporting (e.g. private sector)
<b>Frequency</b>	Annual

### ➤ Cataract surgical rate

<b>Level of collection</b>	National and subnational
<b>Level of collation</b>	Regional or global
<b>Brief definition</b>	Number of cataract operations performed per million population per year; categorization
<b>Unit of measurement</b>	Number of cataract operations plus total population, by country, disaggregated (subnational)
<b>Purpose</b>	To identify countries in need of capacity-building; track trends in output; advocacy at national level
<b>Links to other indicators</b>	Human resource development, infrastructure, appropriate technology
<b>Underlying definition</b>	As above
<b>Measurement method</b>	Compilation from national and subnational (district) data
<b>Limitations</b>	Incomplete reporting (e.g. private sector)
<b>Frequency</b>	Annual

### ➤ Cataract surgical coverage

<b>Level of collection</b>	National and subnational
<b>Level of collation</b>	Regional or global
<b>Brief definition</b>	Proportion of people with bilateral cataract who have received surgery in one or both eyes (at 3/60 and 6/18 level)
<b>Unit of measurement</b>	Proportion
<b>Purpose</b>	To assess the degree to which cataract surgical services are meeting the need
<b>Links to other indicators</b>	Cataract blindness prevalence; cataract surgical rate
<b>Underlying definition</b>	Proportion eligible for surgery who have received surgery
<b>Measurement method</b>	Estimates from population-based surveys and national data on cataract output
<b>Limitations</b>	Requires population-based studies, which are of limited generalizability
<b>Frequency</b>	5-yearly or more frequently when possible

### ➤ Intraocular lens implantation rate

<b>Level of collection</b>	National
<b>Level of collation</b>	Regional or global
<b>Brief definition</b>	Proportion of all cataract operations with intraocular lenses
<b>Unit of measurement</b>	Absolute numbers with and without intraocular lenses
<b>Purpose</b>	Proxy measure of quality
<b>Links to other indicators</b>	Cataract output
<b>Underlying definition</b>	Cataract surgery with intraocular lenses
<b>Measurement method</b>	Compilation from regional and national data
<b>Limitations</b>	Incomplete reporting, e.g. private sector
<b>Frequency</b>	Annual
<b>Recommended</b>	Quality of cataract surgery outcome (at level of individual surgeon or surgical centre; various software packages available)

### Indicators for control of refractive errors

<b>Level of collection</b>	National
<b>Level of collation</b>	Regional or global
<b>Brief definition</b>	Proportion of people by age group with uncorrected refractive errors causing visual impairment (i.e. presenting < 6/18 visual acuity in the better eye)
<b>Unit of measurement</b>	Absolute number; prevalence
<b>Purpose</b>	To assess refraction service provision; advocacy for policy and priority setting
<b>Links to other indicators</b>	Demographic data
<b>Underlying definition</b>	Number of persons requiring refraction correction
<b>Measurement method</b>	Population-based surveys, refraction error service compliance
<b>Limitations</b>	Patient adherence; poor data availability
<b>Frequency</b>	Up to 5 years

### Indicators for control of low vision

#### ➤ Low vision

<b>Level of collection</b>	National
<b>Level of collation</b>	National, regional or global
<b>Brief definition</b>	Number of persons with low vision needing low-vision services

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<b>Unit of measurement</b>	Absolute number
<b>Purpose</b>	Programme management, human resource development, advocacy
<b>Links to other indicators</b>	Level of development, gender
<b>Underlying definition</b>	< 6/18–3/60 in the better eye, after standard refraction correction or treatment
<b>Measurement method</b>	Population-based surveys, refraction service compliance
<b>Limitations</b>	Limited accuracy and limited data
<b>Frequency</b>	5 years

### ➤ Low-vision care

<b>Level of collection</b>	National
<b>Level of collation</b>	National or regional
<b>Brief definition</b>	Availability of low-vision care services
<b>Unit of measurement</b>	Proportion of countries in which low-vision services are established
<b>Purpose</b>	To assess availability of low-vision care
<b>Links to other indicators</b>	Indicators of refraction services
<b>Underlying definition</b>	Proportion with individuals with low vision who have adequate correction and services
<b>Measurement method</b>	Rapid assessment
<b>Limitations</b>	May not indicate geographical coverage
<b>Frequency</b>	5 years

## Indicators for control of childhood blindness

### ➤ Prevalence of childhood blindness

<b>Level of collection</b>	National
<b>Level of collation</b>	Regional or global
<b>Brief definition</b>	Number of blind children per million population; definition of 'childhood' age group
<b>Unit of measurement</b>	Absolute number
<b>Purpose</b>	Track trends in control of avoidable childhood blindness
<b>Links to other indicators</b>	Under-5 mortality, socioeconomic data
<b>Underlying definition</b>	Absolute number per million population
<b>Measurement method</b>	Population-based surveys, estimates from studies of schools, under-5 mortality rate, childhood blindness registers
<b>Limitations</b>	No established reporting system
<b>Frequency</b>	5 years

### ➤ Prevalence of avoidable childhood blindness by cause

<b>Level of collection</b>	National
<b>Level of collation</b>	Regional or global
<b>Brief definition</b>	Number of children blind from avoidable causes (must be clearly defined, e.g. vitamin A deficiency, cataract, retinopathy of prematurity) per million population
<b>Unit of measurement</b>	Absolute number
<b>Purpose</b>	Track trends in control of avoidable causes of childhood blindness
<b>Links to other indicators</b>	Under-5 mortality; socioeconomic data; low-birth-weight monitoring
<b>Underlying definition</b>	Absolute number per million population
<b>Measurement method</b>	Population-based surveys, estimates from studies of schools, under-5 mortality rate, childhood blindness registers
<b>Limitations</b>	No established reporting system
<b>Frequency</b>	5 years
<b>Recommended</b>	<ul style="list-style-type: none"> <li>• Number of child eye-care centres per at least 20 million population</li> <li><i>From other WHO programmes:</i></li> <li>• proportion of countries with measles immunization coverage &gt; 80%;</li> <li>• proportion of countries with vitamin A deficiency control programmes or which have eliminated vitamin A deficiency, in line with global targets; and</li> <li>• proportion of countries with a policy for or implementation of rubella immunization</li> </ul>

## Indicators for control of trachoma

### ➤ Blinding trachoma

<b>Level of collection</b>	Endemic areas
<b>Level of collation</b>	National, regional or global
<b>Brief definition</b>	Number of countries (by category) in which blinding trachoma is a public health problem
<b>Unit of measurement</b>	Number
<b>Purpose</b>	To monitor elimination of trachoma as a cause of blinding eye disease
<b>Links to other indicators</b>	GET 2020 5-year plan, in accordance with VISION 2020 national plan; neglected tropical diseases commitment and plan; socioeconomic development
<b>Underlying definition</b>	Countries with new cases of blindness due to trachoma

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<b>Measurement method</b>	From GET 2020 Alliance
<b>Limitations</b>	Data not available for some endemic countries
<b>Frequency</b>	Annual

### ➤ SAFE strategy coverage (to be decided by GET 2020 Alliance)

<b>Level of collection</b>	Districts in which blinding trachoma is endemic
<b>Level of collation</b>	National, regional or global
<b>Brief definition</b>	Proportion of endemic communities covered by SAFE strategy
<b>Unit of measurement</b>	Ultimate intervention goals; annual intervention objectives
<b>Purpose</b>	To assess coverage and progress
<b>Links to other indicators</b>	Incidence of blinding trachoma
<b>Underlying definition</b>	Progress towards elimination
<b>Measurement method</b>	Population-based surveys in endemic areas, rapid assessment
<b>Limitations</b>	Resources, socioeconomic development, environmental conditions
<b>Frequency</b>	Annually at GET 2020 meetings or every 3 years in endemic areas
<b>Recommended (where applicable)</b>	<ul style="list-style-type: none"> <li>• prevalence of trachomatous entropion trichiasis at district level;</li> <li>• prevalence of active trachoma in 1–9-year-olds at district level; and</li> <li>• progress in achieving the ultimate intervention goals</li> </ul> National data are being used to refine ultimate intervention goals and annual intervention objectives. The data are included in WHO information on neglected tropical diseases, in the WHO Global Health Atlas and the WHO Infobase.

## Indicators for control of onchocerciasis

### ➤ Population at risk for onchocerciasis

<b>Level of collection</b>	National
<b>Level of collation</b>	National
<b>Brief definition</b>	Number infected with or at risk for onchocerciasis
<b>Unit of measurement</b>	Absolute number
<b>Purpose</b>	Assess treatment needs
<b>Links to other indicators</b>	Demographic
<b>Underlying definition</b>	
<b>Measurement method</b>	From African Programme for Onchocerciasis Control, Onchocerciasis Elimination Programme in the Americas and the former Onchocerciasis Control Programme for special intervention zones
<b>Limitations</b>	Data not available from certain areas (e.g. those in conflict)
<b>Frequency</b>	Annual

### ➤ Treatment for onchocerciasis

<b>Level of collection</b>	National
<b>Level of collation</b>	National
<b>Brief definition</b>	Number treated annually with Mectizan®
<b>Unit of measurement</b>	Absolute number
<b>Purpose</b>	Coverage
<b>Links to other indicators</b>	Number of Mectizan® tablets received
<b>Underlying definition</b>	
<b>Measurement method</b>	From African Programme for Onchocerciasis Control, Onchocerciasis Elimination Programme in the Americas and the former Onchocerciasis Control Programme for special intervention zones
<b>Limitations</b>	
<b>Frequency</b>	Annual

### ➤ Coverage with treatment for onchocerciasis (three indicators)

<b>Level of collection</b>	Regional (in the African Programme for Onchocerciasis Control)
<b>Level of collation</b>	
<b>Brief definition</b>	<ul style="list-style-type: none"> <li>• Ultimate treatment goal coverage, minimum 85% (mostly in the Americas Region)</li> <li>• Therapeutic coverage, minimum 65% (mostly in the African Region)</li> <li>• Geographical coverage, 100% (general use)</li> </ul>
<b>Unit of measurement</b>	Proportion of total population at risk receiving treatment
<b>Purpose</b>	Measure coverage
<b>Links to other indicators</b>	Demographic; disease-specific prevalence of blindness
<b>Underlying definition</b>	
<b>Measurement method</b>	From African Programme for Onchocerciasis Control, Onchocerciasis Elimination Programme in the Americas and the former Onchocerciasis Control Programme for special intervention zones
<b>Limitations</b>	Data not available from certain areas (e.g. those in conflict)
<b>Frequency</b>	Annual

## Indicators for control of age-related macular degeneration

- prevalence of blindness and visual impairment due to age-related macular degeneration (mostly at national level, e.g. from population-based epidemiological survey); and recommended, coverage of patients with age-related macular degeneration with low-vision services

Indicators for control of diabetic retinopathy

- prevalence of blindness and visual impairment due to diabetic retinopathy;
- population per standard eye centre for management of diabetic retinopathy with competent retinal specialists, functional retinal laser and standard diagnostic equipment (recommended at national level);
- population per tertiary eye centre providing comprehensive medical and surgical posterior segment services (recommended at national level); and
- recommended: coverage by services (e.g. percentage of diabetic patients who undergo annual eye examination, percentage of patients with diabetic retinopathy who are treated by retinal laser)

Indicators for control of glaucoma

- prevalence of blindness and visual impairment due to glaucoma; and
- number of countries in which prevention of visual impairment due to glaucoma is adequately addressed in the national VISION 2020 plan for prevention of blindness

2. Indicators for human resource development

- Ophthalmologists

<b>Level of collection</b>	National (disaggregated in large countries)
<b>Level of collation</b>	Regional/global
<b>Brief definition</b>	Number per million population
<b>Unit of measurement</b>	Absolute number
<b>Purpose</b>	To assess availability of services
<b>Links to other indicators</b>	Performance indicators, cataract surgical rate
<b>Underlying definition</b>	Cadre as defined in country
<b>Measurement method</b>	Health management information system
<b>Limitations</b>	Numbers do not denote performance
<b>Frequency</b>	Annual
<b>Recommended</b>	Similarly, for: cataract surgeons, optometrists, refractionists, ophthalmic nurses and assistants, personnel trained in childhood eye care and management. <ul style="list-style-type: none"> <li>➤ professions must be clearly defined,</li> <li>➤ collection at subnational and national levels</li> </ul>

3. Indicators for infrastructure and technology

- Eye-care service delivery, geographical coverage

<b>Level of collection</b>	National
<b>Level of collation</b>	Regional or global where applicable
<b>Brief definition</b>	Proportions of health administrative areas with and without eye-care and cataract surgical services
<b>Unit of measurement</b>	Proportion
<b>Purpose</b>	To identify areas at greatest need of services and to monitor trends in increasing service delivery to the least served
<b>Links to other indicators</b>	Cataract surgical rate
<b>Underlying definition</b>	Health administrative area, area with a population of 0.5–2 million Cataract surgical services, static facility that can deliver cataract surgical services (as a minimum), by ophthalmologist(s) working in the facility, a trained cataract surgeon working in the facility or a visiting team that goes regularly to the facility to do cataract surgery
<b>Measurement method</b>	Number of health administrative areas in the country; number with and without cataract surgical services
<b>Limitations</b>	Does not ensure that the population has access to or makes use of the service for a variety of reasons (e.g. distance, cost, fear, ignorance)
<b>Frequency</b>	Annual
<b>Recommended</b>	<ul style="list-style-type: none"> <li>• Quality of surgical service (e.g. visual outcome after cataract surgery, at level of individual surgeon or surgical centre, various software and methods are available)</li> <li>• Populations served by primary, secondary and tertiary centres (absolute numbers)</li> <li>• Numbers of primary, secondary and tertiary centres in a country</li> </ul>

➤ Eye-care delivery, population served by one ophthalmologist or cataract surgeon

<b>Level of collection</b>	National (disaggregated in large countries)
<b>Level of collation</b>	Regional or global where applicable
<b>Brief definition</b>	Average size of the population served by one ophthalmologist
<b>Unit of measurement</b>	Absolute number
<b>Purpose</b>	To identify areas at greatest need for services and to monitor trends in increasing service delivery to the least served
<b>Links to other indicators</b>	Cataract surgical rate
<b>Underlying definition</b>	Ophthalmologist, qualified as defined by country
<b>Measurement method</b>	Health management information system
<b>Limitations</b>	Hides rural–urban distribution
<b>Frequency</b>	Annual
<b>Recommended</b> (including examples of links to other categories of indicators)	<ul style="list-style-type: none"> <li>• numbers of district eye units with adequate numbers of trained personnel, facilities, established referral networks and community coverage;</li> <li>• numbers of primary health-care workers trained in primary eye care;</li> <li>• cataract surgical rate (cataract operations per million population per year);</li> <li>• availability of affordable spectacles and low-vision devices;</li> <li>• ratio of ophthalmic nurses and assistants, optometrists, refractionists and other personnel to population served;</li> <li>• numbers of district eye-care services with adequate equipment, eye medicines and other ophthalmic items (in accordance with appropriate licencing laws and other legal requirements);</li> <li>• numbers of programmes for training for equipment maintenance and numbers of personnel trained;</li> <li>• amount of material available in languages other than English.</li> </ul>

**4. Country, regional and global indicators of implementation of VISION 2020**

➤ National partnership: VISION 2020 prevention of blindness committee

<b>Level of collection</b>	National
<b>Level of collation</b>	National, regional or global
<b>Brief definition</b>	National committees are composed of VISION 2020 stakeholders (e.g. Ministry of Health, eye-care professionals, WHO country office representatives, nongovernmental organizations, civil society and the private sector) and plan, provide resources, implement and monitor in a coordinated manner.
<b>Unit of measurement</b>	Number of countries with a well-established committee
<b>Purpose</b>	To enhance advocacy, mobilize resources, set priorities and increase implementation and coverage
<b>Links to other indicators</b>	VISION 2020 prevention of blindness action plan
<b>Underlying definition</b>	
<b>Measurement method</b>	Reported by the committee
<b>Limitations</b>	Willingness of partners to work together
<b>Frequency</b>	Periodic review of active committees

➤ National VISION 2020 action plan

<b>Level of collection</b>	National
<b>Level of collation</b>	National, regional or global
<b>Brief definition</b>	Definition of actions for disease control, human resource development, infrastructure and technology, advocacy and community participation
<b>Unit of measurement</b>	Number of countries in which the plan has been adopted
<b>Purpose</b>	To identify needs for eye-care services and resources, to demonstrate a practical commitment to achieve VISION 2020 objectives and set up guidelines for doing so.
<b>Links to other indicators</b>	Other national and regional indicators
<b>Underlying definition</b>	<p>Establishment of partnerships among WHO, professionals, nongovernmental organizations, governments, civil society and the private sector</p> <p>Requires assessment of eye-care needs and identification of national requirements to achieve VISION 2020 objectives</p> <p>The plan should cover 20 years, with an initial achievable 5-year implementation plan showing the resources needed to achieve the VISION 2020 goals</p> <p>Should identify the financial requirements</p> <p>Detailed plan for human resource and infrastructure development</p>
<b>Measurement method</b>	Absolute number of countries with an action plan and percentage of all countries that should have an action plan
<b>Limitations</b>	Difficult to evaluate the success of the plan
<b>Frequency</b>	Periodic review of existing plans being implemented

➤ National VISION 2020 prevention of blindness workshop

<b>Level of collection</b>	National
<b>Level of collation</b>	National, regional or global
<b>Brief definition</b>	Bring together the main national stakeholders to introduce them to the standardized VISION 2020 concept

	and methods or to develop a national or district prevention of blindness plan of action
<b>Unit of measurement</b>	Successful organization and implementation
<b>Purpose</b>	To assess needs, develop an action plan, mobilize resources to implement the VISION 2020 action plan
<b>Links to other indicators</b>	VISION 2020 action plan
<b>Underlying definition</b>	
<b>Measurement method</b>	Reported by the national VISION 2020 committee
<b>Limitations</b>	Willingness of partners to work together, availability of resources
<b>Frequency</b>	Periodic review of workshops

➤ Observance of World Sight Day

<b>Level of collection</b>	National
<b>Level of collation</b>	National, regional or global
<b>Brief definition</b>	National observation of World Sight Day (second Thursday in October) to enhance VISION 2020 advocacy and awareness
<b>Unit of measurement</b>	Yes or no, description of activities
<b>Purpose</b>	To enhance VISION 2020 advocacy and awareness
<b>Links to other indicators</b>	Particularly to well-functioning partnerships
<b>Underlying definition</b>	
<b>Measurement method</b>	Identify the number of countries that recognize World Sight Day
<b>Limitations</b>	The actual effectiveness of communication might be limited
<b>Frequency</b>	Annual

[6. WHO Action Plan for Prevention of Blindness and Visual Impairment \(2009-2013\)](#)

Objective 5: Monitor progress in elimination of avoidable blindness at national, regional and global levels.

INDICATORS

In order to assess trends in the causes of blindness and visual impairment, to measure the progress made by Member States in preventing blindness and visual impairment, and to monitor implementation of this action plan, a set of core process and outcome indicators needs to be identified and defined. The indicators will mostly focus on action taken by the Secretariat and by Member States. Each country may develop its own set of indicators based on priorities and resources; however, in order to track progress globally and regionally, data and information collection needs to be standardized. The current set of indicators used by WHO in monitoring and reporting on the global status of the prevention of blindness and visual impairment<sup>1</sup> should be reviewed and updated.

Baseline values are available in WHO for many of the indicators; for those for which there are no baseline values, mechanisms will be established for collecting relevant data.

[9. AusAID Documents](#)

This is from the October 2011 revision of the Performance Assessment Framework (PAF), and reflects the VISION 2020 Australia ABI Consortium Program (work plans 1 and 2). It covers three domains of change; the *Core Outcome Areas* of the PAF in alignment with AusAID's Development For All Strategy and the ABI Strategic Framework Objectives, the *Key Result Areas* aligned with the ABI Strategic Framework Objectives and the VISION 2020: The Right To Sight Global Initiative of the WHO and IAPB, and the *Enabling Outcome Areas* of the PAF in alignment with the Guiding Principles outlined by AusAID in the Vision 2020 Australia Global Consortium Partnership Framework and Funding Order.

The 'original ABI Consortium PAF' with those indicators that are relevant globally are modified and included here, with recommended *Core Indicators* highlighted in italics.

CORE OUTCOME AREAS

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<sup>1</sup> Document WHO/PBL/03.92.

### Integrated<sup>2</sup> Eye Health Care

- *Number of eye health care centres providing integrated eye care.*

<b>Baseline availability</b>	Variable – estimates in some countries
<b>Level of collection</b>	ANGOs
<b>Level of collation</b>	Secretariat
<b>Brief definition</b>	
<b>Unit of measurement</b>	Absolute number
<b>Purpose</b>	
<b>Links to other indicators</b>	
<b>Underlying definition</b>	
<b>Measurement method</b>	
<b>Limitations</b>	Variable baseline data available so will be difficult to represent number as a % increase. Variations of definitions: definition or parameters of “integrated” required.
<b>Frequency</b>	Annual

### Disability Inclusive Eye Health Care

- Number of people with a disability accessing eye health services
- The quality of the engagement experience with eye health services for people with disabilities

### KEY RESULT AREAS

#### Disease control

- *Number of patients treated (disaggregated by condition, gender, age, location)*

<b>Baseline availability</b>	Available for some locations but not disaggregated
<b>Level of collection</b>	Hospitals and eye health service providers
<b>Level of collation</b>	Secretariat
<b>Brief definition</b>	
<b>Unit of measurement</b>	Absolute number
<b>Purpose</b>	
<b>Links to other indicators</b>	
<b>Underlying definition</b>	
<b>Measurement method</b>	Patient records and ANGO progress reports
<b>Limitations</b>	Accuracy and completeness of eye health centre records Accessibility of the data.
<b>Frequency</b>	Annual

- Number of occasions where patients have been referred to Disabled Persons Organisations such as Blind Association
- Quality of Life impact for a sample of patients

#### Infrastructure Development

- *Number and type of buildings constructed/renovated (disaggregated by rural/urban and level)*

<b>Level of collection</b>	Hospitals and eye health service providers
<b>Level of collation</b>	Secretariat
<b>Brief definition</b>	
<b>Unit of measurement</b>	Absolute numbers (Narrative technical) description
<b>Purpose</b>	
<b>Links to other indicators</b>	
<b>Underlying definition</b>	
<b>Measurement method</b>	ANGO Progress reports
<b>Limitations</b>	Does not indicate level (or extent) of usage (or utilization)
<b>Frequency</b>	Annual

- *Number and type of equipment supplied*

<b>Level of collection</b>	Hospitals and eye health service providers
<b>Level of collation</b>	Secretariat

<sup>2</sup> The use of the term “Comprehensive” was considered to be problematic with different meanings to different stakeholders. The term “integrated” is used instead.

## Developing Global Indicators for monitoring progress in elimination of Avoidable Blindness

<b>Brief definition</b>	
<b>Unit of measurement</b>	Absolute numbers (Narrative technical) description
<b>Purpose</b>	
<b>Links to other indicators</b>	
<b>Underlying definition</b>	
<b>Measurement method</b>	ANGO Progress reports
<b>Limitations</b>	Does not indicate level (or extent) of usage (or utilization)
<b>Frequency</b>	Annual

- Geographical distribution of eye health care centres relative to population

### Human Resource Development

- *Number of eye health care personnel trained (disaggregated by cadre)*

<b>Baseline availability</b>	Baseline data available from situational analysis but needs to be collated
<b>Level of collection</b>	Hospitals and eye health service providers
<b>Level of collation</b>	Secretariat
<b>Brief definition</b>	
<b>Unit of measurement</b>	Absolute numbers using VISION 2020 cadre classification
<b>Purpose</b>	
<b>Links to other indicators</b>	
<b>Underlying definition</b>	
<b>Measurement method</b>	ANGO Progress reports
<b>Limitations</b>	Cadres used by Vision 2020: The Right to Sight, such as cataract surgeons, optometrists, refractionists, ophthalmic nurses and assistants, personnel trained in childhood eye care and management may be different to those used by individual agencies and countries.
<b>Frequency</b>	Annual

- Quality of eye health care services provided by newly trained personnel
- Geographical distribution of trained personnel relative to population
- Retention of new HR capacity in eye health care system
- Occasions when training and employment opportunities have been created for marginalised people

### In-country Policy and Planning Capacity

- Number of new provincial level PBL plans developed and adopted
- Number of occasions of PBL collaboration between District , Provincial and National level governments
- *Number of eye health care centres implementing data collection systems as a result of ABI Vision 2020: The Right to Sight projects*

<b>Baseline availability</b>	Available from ANGOS, but needs to be collated
<b>Level of collection</b>	Hospitals and eye health service providers
<b>Level of collation</b>	Secretariat
<b>Brief definition</b>	
<b>Unit of measurement</b>	Absolute numbers If baseline data is reliable, then percentage increases.
<b>Purpose</b>	
<b>Links to other indicators</b>	
<b>Underlying definition</b>	
<b>Measurement method</b>	ANGO Progress reports
<b>Limitations</b>	Does not indicate efficiency or effectiveness of data collection systems
<b>Frequency</b>	Annual

## ENABLING OUTCOME AREAS

### Sustainability

- Occasions where (Consortium members) eye health programmes are working with existing public health structures
- *Commitments by in-country governments to support (policy) and contribute to ongoing eye health care investment*
- Capacity strengthening initiatives undertaken (with in-country partners and governments).

#### Inclusive participation

- Targeted actions to facilitate marginalised groups and/or communities participating in ABI projects
- Occasions where marginalised groups and/or communities have influenced ABI program design and practice
- Awareness within impacted communities of new eye health services available

#### Gender Equity

- Occasions where analysis of the barriers to gender equity has influenced project design and practice
- Occasions where in-country women's groups have collaborated with project activities
- Number of males and females benefitting from project activities - training/employment and sight restoration

#### Partnership

- Occasions and type of coordination between (Consortium) VISION 2020 / IAPB members and government PBL Committees and/or other government departments
- Occasions of coordination between (Consortium members) private organizations and Vision 2020: The Right to Sight (Western Pacific Regional) structures.
- Number of partnerships established beyond (Consortium) VISION 2020 Members e.g. within public sector, private sector and civil society.
- Occasions of joint strategic thinking, review and decisions on Partnership direction and priorities between AusAID other (health) service providers and the Consortium Vision 2020: The Right to Sight structures
- Occasions where Consortium members Vision 2020: The Right to Sight structures and AusAID Posts other (health) service providers have liaised on program activities or there have been joint AusAID-Consortium monitoring visits.
- High quality, analytical, timely reporting by Consortium; thoughtful feedback and timely funds release by AusAID within and for eye health programmes.