

Concept – Eye care

SRC International Cooperation



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Second reviewed edition October 2012

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Abbreviations

AMD	Age-related macular degeneration
CBM	Christoffel Blindenmission/Blind Mission
DALY	Disability-adjusted life year
DRR	Disaster risk reduction
IAPB	International Agency for the Prevention of Blindness
ICEH	International Centre for Eye Health
MDG	Millennium Development Goals
NGO	Non-governmental organisation
QA	Quality assurance
SRC	Swiss Red Cross
WHO	World Health Organization

1 Introduction

For more than 20 years, the Swiss Red Cross (SRC) has been working in a number of countries promoting eye health and preventing visual impairment and blindness¹. The SRC has built up extensive expertise and is recognised as an important and valuable actor in the eye care sector. Within the International Red Cross and Red Crescent Movement, the SRC is one of the few National Societies to engage in and support the eye care sector.

The SRC first developed an eye care concept in 2004, in order to outline its engagement in that field. The time has now come to revise that concept in the light of the latest global developments and challenges in the eye care sector, as well as the establishment of new SRC policies.

This document aims to reflect the current global situation with regard to eye care trends and opportunities and determines the future position and strategic directions of the SRC in eye care for the next five (2012-2016) years.

2 Context and challenges for the SRC

2.1 Eye care in the global context

Epidemiological situation

According to the most recent data, released at the end of 2011, an estimated 285 million people are visually impaired and an estimated 39 million are blind worldwide (Pascolini and Mariotti 2011). This is 12 per cent less than in 2004, a clear indication of the progress made in recent years.

The global distribution of blind and visually impaired people of all ages in the six regions defined by the World Health Organization (WHO) was as follows in 2010 (in millions):

WHO Regions	Visual impairment (millions)	Blind (millions)
Africa Region	26.3	5.9
Region of the Americas	26.6	3.2
Eastern Mediterranean Region	23.5	4.9
Europe Region	28.2	2
South-East Asia Region	90.5	12
Western Pacific Region	90.2	10.6
Total	285.3	38.6

¹ SRC uses the definition and categories of visual impairment and blindness as per the International Classification of Diseases-10 (updated and revised in 2006).

Visual impairment affects around 285.4 million people globally, distributed between the different age groups as follows:

- ≤ 14 years – 18.9 million people (7%)
- 15-49 years – 80.2 million people (28%)
- ≥ 50 years – 186.2 million people (65%)

Globally, 80 per cent of all cases of blindness are preventable, treatable and curable. Ninety per cent of all blind people live in low-income countries, and two thirds are women. Nearly 65 per cent of all people with visual impairment are over 50 years of age. Finally, 19 million children are visually impaired (WHO 2011). The number of children who are blind worldwide has declined by around 10 per cent in the last ten years, from 1.4 million to 1.26 million (Chandna and Gilbert 2010). Better measles immunization and vitamin A supplementation programmes have undoubtedly contributed to this. However, regional data show an unequal distribution of child blindness. In India and sub-Saharan Africa, the percentage of childhood blindness is increasing, in sub-Saharan Africa up to 31 per cent.

The main causes of visual impairment, including blindness, are cataracts (33%) and uncorrected refractive errors (42%).

Aetiology and magnitude of blindness

The data on the different causes of blindness are based on the systematic review carried out by Pascolini and Mariotti in 2010. The individual disorders are explained in more detail in Annex 1.

Cataract: Of the 39 million blind people worldwide, WHO estimates that almost 20 million are blind because of cataracts (51%).

Glaucoma accounts for 8 per cent of global blindness. Particularly in developing countries, prevention and treatment of glaucoma is not yet a recognised public health intervention. Case detection and management are very difficult, leaving tens of millions of cases undiagnosed and untreated.

Age-related macular degeneration (AMD) is highly prevalent in developed countries and is a gradually emerging condition in low- and middle-income countries. Globally, AMD ranks fourth as a cause of visual impairment, contributing to global blindness with 5 per cent of cases. Treatment is expensive and not affordable in low- and middle-income countries.

Corneal opacities: Corneal visual impairment encompasses a wide variety of infectious and inflammatory eye diseases that cause scarring of the cornea, the clear membrane that covers the outside of the eye. Significant scarring ultimately leads to functional vision loss. The fourth cause of blindness globally (4%), corneal blindness is one of the main causes of visual deficiency after cataracts, glaucoma and AMD.

Trachoma is responsible for 3 per cent of global blindness. WHO estimates that 40.6 million people in 57 endemic countries are infected with trachoma and that 8.2 million suffer from the disabling pain of trichiasis and are at immediate risk of blindness (Mariotti et al. 2009). Of these 8.2 million, the majority are women. Because of their more immediate contact with sources of contamination, women are almost twice as likely to develop trichiasis as men (Cromwell et al. 2009). The huge drop in trachoma-induced blindness, from 15.5 per cent in 1999 to 2.9 per cent in 2009, is largely due to the profound impact of the Alliance for the Global Elimination of Trachoma as well as developments in the water, sanitation and hygiene sector. Successful action has also been taken to prevent **onchocerciasis** (river blindness), which is on the verge of eradication.

Uncorrected refractive errors: Vision deficiency due to uncorrected refractive errors accounts for 3 per cent of global blindness. With adequate correction, the functionality of a vision-impaired person can easily be restored.

Diabetic retinopathy is responsible for 1 per cent (0.4 million people) of blindness worldwide. The condition is most prevalent and detected essentially in the developed world. In developing countries, case detection has only recently started to be integrated part of eye care programmes. The International Diabetes Federation nevertheless estimates that at least 366 million people will live with diabetes mellitus by 2030, and that Asia, including India and China, the Middle East and Latin America will be particularly affected. A high percentage of people live unaware that they have diabetes. A long-term condition affects the eyes in 75 per cent of cases (WHO 2006).

Economic relevance of eye care

Blindness significantly reduces quality of life and is a factor of immense economic loss to the individual and society. In developing countries, blind people are almost totally dependent on their families. Some of them are able to perform certain tasks and do a limited amount of work, but most are unable to provide for a family. They require a caregiver, usually a family member. Most caregivers are children; they have to act as constant guides and helpers for the blind person and are unable to go to school and pursue their own development. The losses in productivity and the high opportunity costs pose an additional burden on the already weak social and economic development of the poorest countries of the world. A recent study estimated that productivity losses from blindness and low vision in developed economies was around USD 167 billion in 2010, rising to USD 176 billion in 2020 (Gordois et al. 2010).

In comparison to the loss caused by blindness, the costs of treating or preventing blindness are extremely low, particularly in developing countries. For cataract operations, which in 95 per cent of cases involve extracapsular cataract surgery, the costs range from 57-60 international dollars (I\$) per disability-adjusted life year (DALY) averted in South-East Asia to 89-109 I\$ per DALY averted in Africa to 776 I\$ per DALY averted in the United States, Canada and Cuba, and even more in some countries of the Western Pacific Region (Baltussen et al. 2004). Through its eye care programmes, the SRC alleviates individual suffering, restores quality of life and makes a significant social and economic contribution to society.

Relevance of eye care for development

In relation to the Millennium Development Goals (MDGs), eye care programmes help reduce disability and thus contribute to poverty reduction (MDG 1) and enable visually impaired children to complete their education (MDG 2).

2.2 Challenges

The challenges of how to reduce the prevalence of eye diseases and visual impairments and how to increase coverage of services remain vast. The provision of eye care services is affected by the migration of health personal, in particular rural-urban, South-South or South-North migration, and the lack of training opportunities. The shortage of health workers, in particular ophthalmologists, affects predominantly rural and remote areas. Staff needs to be not just trained, but also retained in their jobs. Particularly in remote rural areas, it is difficult to stop health workers from moving to urban centres. They need appropriate working conditions and appreciation. Other challenges arise from the global surge in chronic and

non-communicable diseases. The increase in diabetic conditions poses a new challenge to eye care. Early and better identification of glaucoma as well as comprehensive child eye health are areas in which developing countries require more capacity-building and the application of new techniques if they are to meet appropriate international standards.

The supply of good quality medicines at affordable prices and well-functioning supply chains are other challenges to be addressed. They are crucial to sustain eye care programmes. Not all countries have integrated eye care into their public health system. Some implement eye care as a stand-alone health intervention without linking and integrating it into existing public health programmes. Stand-alone programmes tend to be unproductive and make inefficient use of scarce health care resources. Besides being inefficient, some countries simply do not allocate sufficient funds to eye care.

Quality of care is a concern that goes beyond eye care services. It needs to be established and implemented as a holistic Ministry of Health policy, encompassing all sectors of a health system, or at least a health facility. Quality-of-care policies developed and implemented only for eye care may not have the anticipated impact.

Establishing a good, regular and functional monitoring and supervision system is another challenge. In most countries, the Ministry of Health has put in place a consolidated structure for monitoring and supervision of general health facility activities. Lack of financial resources and of commitment on the part of the authorities has nevertheless relegated monitoring and supervision activities to the background. Any attempt to set up such a structure solely for eye care may meet with resistance from the authorities and is not sustainable. Activities to improve monitoring and supervision have to be comprehensive, covering all health facility/system activities, if they are to be sustainable.

2.3 SRC eye care programmes in the international context

The SRC is an active member of the International Agency for the Prevention of Blindness (IAPB) and the worldwide WHO-run campaign Vision 2020 – The Right to Sight. Vision 2020 was launched in 1999, and in 2003 the 56th World Health Assembly adopted a resolution to eliminate preventable blindness by the year 2020. VISION 2020 encourages governments to develop and implement national strategies for the prevention of blindness and to integrate eye care into national health policies. The fundamental principles for the worldwide Vision 2020 campaign are applicable to all SRC eye care projects (see Annex 2).

In order to scale up efforts for strengthening eye health in member States by developing comprehensive eye health programmes at national and sub-national level, WHO developed the Action Plan for the prevention of avoidable blindness and visual impairment (2009-2013). The extension of the Action Plan beyond 2013 is currently under development with the focus on enhanced Government commitment to allocate more resources to achieve the goal of reduced avoidable blindness by 2020². The countries in which the SRC is engaged in eye care follow this Action Plan.

2.4 Eye care in the strategic context of the SRC

Eye care, including the prevention of blindness and visual impairment, is integral part of the SRC's Strategy 2020 for International Cooperation. In the SRC Health Policy 2012-2017 eye care is a thematic priority contributing to the achievement of the SRC's overarching goal:

Enable healthy and safe living for vulnerable groups and communities.

² As per August 2012 the zero draft of 'Universal access to eye health: a global action plan, 2014-2019' is under development.

To achieve this goal, the SRC has defined four priority approaches, which are incorporated into eye care programmes as described below.

1. *Reinforce community health capacities*: Eye care programmes are anchored in the community. They aim to integrate eye care into the national primary health care system.
2. *Strengthen health systems and enable access for all*: Eye care programmes work within the national health system. They strengthen the existing system and enable access for all.
3. *Promote healthy living and act on the determinants of health*: The success of eye care programmes is closely linked to the existence of and access to water, sanitation, a healthy environment and waste management. Eye care programmes tackle determinants of health either in combination with other SRC programmes or with relevant programmes of other stakeholders in the area of intervention.
4. *Engage in advocacy for health*: Together with other Swiss partners in the eye care sector, the SRC engages in advocacy work in Switzerland to raise awareness and educate the local population about the magnitude of global blindness.

The SRC works together with partner National Societies, with local governments and with other national and international eye care non-governmental organisations (NGOs). By making a concerted effort under a joint strategy and development plan, the partners can maximise resources and bring about positive results in eye care. It is generally governments that take the lead in this process. Depending on the country context, the SRC works with the government and/or the National Society, providing technical and financial support.

2.5 SRC eye care programmes: experiences and lessons learnt in the past decade

The SRC has been engaged in eye care programmes in specific geographical regions on two continents: West Africa (Ghana, Mali and Togo) and South Asia (Nepal and China/Tibet Autonomous Region). Networking between countries in the vicinity (e.g. Ghana – Togo – Mali and Nepal – Tibet) has allowed the stakeholders to enhance knowledge and exchange, compare impact and effectiveness, and capitalise on experiences. It proved important for each programme and its geographical area to attain a critical size in order to achieve economies of scale and improve quality of care. The integration of basic eye care into primary health care services and the development of a functional referral system for specialised services have proved to be effective and efficient means of improving access. The latter calls for a holistic multi-stakeholder approach with a strong national commitment, which requires time and resources. Thus, to measure and evaluate different experiences and their long-term effect in the field, an eye care programme should last at least ten years.

3 Principles of action

SRC eye care programmes follow the guiding principles of the SRC Strategy 2020 for International Cooperation and the Health Policy for International Cooperation 2012-2017.

3.1 Guiding principles in line with the SRC Strategy 2020 for International Cooperation

Focusing on marginalised and most vulnerable people: The aim of eye care programmes is to ease the burden of blindness and thus reduce the vulnerability and enhance the self-help capability of the beneficiaries. SRC programmes strive to improve access by the poorest and most disadvantaged sectors of the population to affordable eye care services. They prioritise areas that are grossly undersupplied with eye care services. Individual ability to pay for services is taken into account to reduce access barriers. Securing access for the most vulnerable and ultra-poor through health insurance and exemption systems remains an area requiring further exploration and strengthening. The SRC will particularly target women, as they access eye care services significantly less than men.

Empowering people and promoting self-help potential: The core of SRC eye care programmes is strong community outreach work. SRC eye care programmes have grown using a holistic approach, where not only eye care, but also health promotion and healthy lifestyle are promoted in all areas of daily living. Information and education of local communities are important to transform patients into well-informed decision-makers in the areas of eye care, other important health issues and determinants of health. In order to do this, the SRC strives to have eye care integrated into primary health care services.

Promoting gender equality: Since women are statistically more likely to be visually impaired than men, eye care programmes emphasize detection among and delivery of services to women. In order to reach out to more women, more female health workers and volunteers will be engaged in the programmes.

Promotion of voluntary service: Besides the many eye care professionals, Red Cross volunteers play an important part in all eye care programmes. They are the link between provider and community and furnish valuable services to the people. Volunteers are more readily retained if they undergo regular capacity-building, are properly motivated and are provided with small incentives.

Relevance and impact: SRC programmes aim to contribute to relevant local, national and global development goals and policies. Programmes and projects are based on a thorough assessment of the local disease burden and the beneficiaries' health needs. SRC health care interventions are based on an understanding of the local pattern of mortality, morbidity, disabilities and risk factors, and on the existing evidence about the effectiveness and impact of the chosen intervention. For the SRC, eye care is not a stand-alone intervention, but integrated with other health care components in the respective country programme.

The SRC strives for eye care programmes of a certain critical minimum size in order to achieve economies of scale for cost-effectiveness. The SRC International Cooperation Department focuses on the priority countries listed in the regional concepts. In the eye care sector it concentrates geographically on a few countries. Experience has shown that a minimum of two eye care programmes per continent are needed to take advantage of synergies and enhance impact and efficiency.

Working in partnerships: The local partner organizations are strengthened and their capacity is built up with a view to enabling them to manage eye care services independently. Besides implementation, the SRC enables partners to carry out needs assessments, do

appropriate planning and budgeting and conduct regular programme monitoring and analysis.

Fostering alliances and the multi-stakeholder approach: The SRC always works together with its local partners and jointly builds linkages and alliances with the government and with organizations working in the same sector. In these alliances, the SRC plays an important advocacy role in terms of recognition, integration and financing of eye care in national health systems. The alliances lobby government to acknowledge the importance of eye care, integrate it into primary health care services and allocate sufficient resources to develop and maintain a functioning eye care system. Furthermore, the SRC lobbies for the inclusion of eye conditions in health insurance systems and promotes the local production and procurement of primary medicines and eye drops in order to enhance sustainability.

Within the network of partners and alliances of national eye care providers, SRC programmes refer patients to the appropriate secondary or tertiary provider as necessary. The SRC works together with national institutions which are engaged in the education and vocational training of the permanently and irreversibly blind. When detecting irreversibly blind persons, the SRC programmes provide information about special institutions and refer the persons concerned to them. The SRC does not support any rehabilitation services for the blind.

Conflict sensitivity and do no harm: When planning and implementing its projects and programmes, the SRC always considers the unintended negative effects of its work (do no harm). A careful development of criteria and transparency in beneficiary selection when providing subsidies to the poorest for cataract operation is required to not foster dividers among the community.

In fragile contexts the SRC programmes apply conflict-sensitive project management to uphold access and provision of services while maintaining safety of clients and staff.

3.2 Additional guiding principles in line with the SRC Health Policy

The guiding principles of the Health Policy are based on those of the SRC Strategy 2020. Besides the above-mentioned principles, further principles apply:

Realizing the right to health: SRC eye care programmes ensure that local people have access to eye care services, particularly at primary care level. The programmes comply with national health policies and strategies and are in all cases carried out within the framework of the national strategies and blindness-prevention programmes in the relevant country. SRC-supported projects aim to strengthen the existing health care system using a systems approach. The SRC takes part in policy dialogue with the health authorities and, whenever possible and appropriate, provides technical and financial support to help reinforce services working in the eye care sector. In so doing, the SRC also takes into consideration the roles of the private sector and traditional healers in the eye care system. Other important areas are staff capacity-building, a more robust logistics supply chain and adequate financing. In countries where eye care is not a strong public health component, SRC projects foster professionalism, enthusiasm, ownership and accountability on the part of government health workers in eye care.

Bridging the gap between health care providers and communities: In order to improve quality, the SRC uses a comprehensive approach comprising prevention, promotion and curative care to support eye care services. Effective preventive education, health promotion and reliable curative services in eye care and ophthalmology are equally important components of its commitment. The SRC focuses on quality care in terms of technical services and personnel. It keeps abreast of medical and technological developments in ophthalmology and helps to introduce appropriate techniques and treatment standards in

programmes, in order to improve quality and ensure equal access to technology. Good clinical results through quality surgery are as important as good conduct of health personnel towards patients. Quality-of-care and biosafety guidelines are standard in all programmes (see also point 6).

4 Objective and outcomes

4.1 Objective

SRC eye care programmes enable vulnerable groups and communities to have equitable access to quality eye care services. They also help empower vulnerable groups and communities to claim their right to health, to act on the determinants of health (For example, water is an important determinant of trachoma prevention and eradication) and to reduce their vulnerability.

The SRC works towards this objective through the worldwide Vision 2020 campaign to combat poverty-induced blindness and impaired vision. The aim is to overcome the main causes of preventable and curable blindness by the year 2020. In the places in which the SRC has programmes, SRC commits to fulfil the right to see, in particular to the poor and most vulnerable people

4.2 Outcomes

SRC eye care programmes focus on the following outcomes.

- The prevalence of blindness caused by cataracts, trachoma, glaucoma or diabetic retinopathy, and of childhood blindness, is reduced through preventative and curative measures.
- Screening is conducted for vision defects, refractive errors and poor eyesight (low vision) and timely treatment provided, in particular for children and teenagers.
- Regional and local eye care systems are strengthened by:
 - building the capacity of eye care professionals and volunteers;
 - providing advanced training for specialists (ophthalmologists, ophthalmology nurses, ophthalmic assistants, opticians, etc.);
 - involving the private sector and traditional healers in capacity-building;
 - introducing measures and incentives to retain eye care staff, particularly in remote areas;
 - building up and expanding eye care facilities;
 - developing appropriate technologies and promoting the necessary management skills;
 - establishing functional referral systems from primary to tertiary eye care facilities;
 - lobbying the government to take full responsibility for the health of the population and to rely on support from NGOs, etc., for complimentary and supplementary purposes only;
 - promoting synergies and exchanges between SRC-supported projects and other governmental and non-governmental actors.
- Eye care is integrated into the public health care system, with the aim of creating a holistic approach in primary health care.

5 Partnerships and alliances

Partnerships and linkages between the relevant stakeholders are essential to deliver efficient and effective eye care services. Working in partnerships is the only means of anchoring the activity in the local context over the long term. Depending on the country context, the SRC provides technical and financial support.

5.1 Local partners

Ministry of Health: As a rule, the State Health Ministry is the SRC's main partner.

National Red Cross and Red Crescent Society: The SRC seeks an active partnership with the National Society and its volunteers in a bid to link the prevention of poverty-induced blindness sensibly with health care promotion.

Other ministries: Other key ministries are the Ministry of Education (for school vision programmes) and the Ministry of Finance (for health financing); their local administrative bodies are also important.

Multilateral organisations: Examples are the local WHO delegations, which are the SRC's partners in the Vision 2020 campaign.

International and local non governmental partners in the country of intervention are important partners for carrying out joint programmes, promoting and advocating eye care, exchanging experiences, building capacity and moving the Vision 2020 agenda forward.

Local service clubs: The local service clubs of Lions and Rotary support the eye care in the country of operation through advocacy and sponsorships. They support eye camps in rural areas and provide subsidies to poor patients.

Community members: School teachers and volunteers are the most important direct implementation partners at grassroots level.

5.2 Swiss and international partners

In Switzerland and around the world the SRC maintains alliances for the constant exchange of experiences and knowledge with the following partners.

VISION 2020: The SRC is a supporting member of the worldwide campaign VISION 2020 – the Right to Sight. In this capacity, the SRC maintains regular exchanges with WHO, the IAPB, the International Centre for Eye Health (ICEH), the International Centre for Eye Education and the Alliance for the Global Elimination of Trachoma.

Swiss Association for the prevention of blindness: The SRC, in association with the Christoffel Blindenmission (CBM) Switzerland, sponsors the Swiss Committee for the Prevention of Poverty-Induced Blindness. Within this organization, the SRC plays an active role publicising the mission of Vision 2020.

Swiss Society of Ophthalmology: Of great significance for the SRC are its exchanges with the Swiss Society of Ophthalmology and with a large number of individual ophthalmologists and opticians.

NGOs in eye care: The SRC is in close contact at institutional and operational level with a large number of leading NGOs and institutions working in ophthalmology and blindness prevention, in particular the CBM, Sightsavers International, Seva Canada, Seva Foundation, Helen Keller International, the Fred Hollows Foundation, ORBIS, Operation Eyesight Universal and the Sight and Life Foundation in Basel.

Service clubs: Service clubs are valuable partners and sponsors of SRC eye care programmes at local level. The SRC's most important partners are the Lions Club International Foundation, the Rotary Club and Kiwanis International.

Private sector: The SRC works together with private sector companies and associations. The private sector sponsors or subsidises medicines, instruments and capacity-building.

5.3 Terms and conditions of cooperation

Cooperation can take various forms, depending on the needs of the intervention country. The SRC aims to fill the following gaps in eye care, where they are not yet covered by other stakeholders.

Programme management support: The SRC will build the partner's capacity to plan, implement and monitor the eye care programme to a high standard.

Integration support: SRC programmes are carried out within the frame of the national health policy. In countries where eye care is not yet integrated into the national health policy, the SRC advocates that this be done and that eye care services be integrated into the public health system.

Continuous professional development: The SRC invests in the development of professionals and volunteers. The training helps to increase output and improve the quality of curative and preventative care. Appreciation and acknowledgement of the local staff's performance are important motivators.

Deployment of foreign experts: If special expertise is required, the SRC deploys experts for limited periods and only to places where there are too few national specialists. These experts are recruited from the SRC advisory group or the regional and global pool of experts.

Knowledge exchange: The SRC stimulates and encourages eye care programmes and its partner organizations to form a network within which specialists exchange experiences. Where useful and necessary, exchange visits are organised. In this way, the SRC promotes institutional learning and knowledge transfer and the improvement of individual programme quality.

6 Quality assurance

All SRC interventions emphasise good quality services. The standards and guidelines for quality and project cycle management of SRC health programmes are defined in the Quality Management manuals for the field and for SRC headquarters and apply to all eye care programmes (see section 7.2 of the Health Policy).

The following specific guidelines and instruments are in place to assure quality in SRC-supported eye care programmes.

Quality of care: The SRC has developed and introduced universal quality-of-care guidelines to be applied in all eye care programmes (see Annex 3). These guidelines ensure adherence to minimal quality standards for the technical provision of eye care services and outputs, such as visual acuity. The standards are based on and measured with WHO common standard indicators.

Biosafety: In order to maintain the best possible hygiene and safety standards, the SRC has introduced biosafety guidelines in all eye care programmes. They regulate sterilization

processes and the personal hygiene and protection of patients and staff when using eye care services (see Annex 4). The application of the biosafety guidelines is an important element of HIV-mainstreaming to protect patients and staff from contracting HIV or other infectious diseases. Where possible, HIV prevention activities will be carried out during eye care interventions (e.g. during eye camps).

Expert team: The SRC draws on the professional expertise of the Eye Care Advisory and Coordination Group in Switzerland, which comprises several Swiss ophthalmologists, opticians and programme managers with many years of experience in development cooperation. The advisory group is involved at all the important stages of an eye care programme (project development, project launch, new project stage, project completion) and provides ad hoc technical advice whenever needed. Besides the Swiss expert team, the programmes draw on the professional expertise of local and regional teams, individual experts and consultants.

Monitoring and evaluation framework: All SRC programmes establish a monitoring framework, against which the programme's successes and drawbacks are analysed. The monitoring is done by applying internal standards for monitoring and evaluation. Recommendations and lessons learnt are integrated into further programme design. The SRC conducts regular evaluations and systematic analyses of its programmes. The lessons learnt are widely disseminated within the SRC and applied in the implementation of subsequent and other programmes. In addition, the SRC reviews, compares and exchanges its knowledge with other organisations active in the same field.

Evaluations and research: The SRC supports regular programme evaluation and conducts operational research and technical research where applicable. It works with the ICEH and local authorities on research in order to find local solutions to persistent problems.

Knowledge management: The SRC engages in active knowledge management in eye care. A SRC programme manager for eye care programmes is the eye care focal point responsible for ensuring that expertise is not lost to the organisation. Synergies among the different regional eye care programmes are promoted and supported. The expert advisory group is closely linked to the country programmes and coordinated by the focal point. If possible, exchange visits are organised between programmes.

Programme handover: Any eye care programme comprises a phasing-out strategy right from the project start. The phasing-out strategy prepares the communities and government for when the SRC departs and designs how the government or other partners will take over the programme. The Phasing-out and handover is done as a gradual process during programme implementation.

7 Resources

7.1 Human resources

The SRC makes available the human resources needed to plan, implement and supervise quality eye care programmes. An expert team, comprising of ophthalmologists, opticians, medical practitioners and development specialists advise the SRC programmes on specific eye care related issues. The team meets minimum three times per year in Switzerland. The individuals provide additional advise to the programmes over distance or by taking on specific short-term country assignments on eye care e.g. for assessments, trainings, and evaluations.

7.2 Financial resources

In 1984, the SRC launched the *Aktion Altgold für Augenlicht* (Old Gold For Eyesight) campaign in cooperation with Swiss dentists. Gold extracted from teeth and donated jewellery is sold and the profit invested entirely in blindness-prevention and -reduction programmes. The eye care programmes also receive funds from the Swiss Government through the programme contribution to the SRC.

Local resources have been increasingly tapped in recent years, a trend that will be continued and stepped up in the future. These resources may be contributions in kind or cash from the Ministry of Health, local administrative offices or other local stakeholders (e.g. local Lions and Rotary Clubs, private donors, etc.).

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Annex 1: Explanation of disorders of the eye

The explanations are based on the definitions used by WHO.³

- **Cataract** cause blindness by making the eye lens go cloudy. The removal of the opaque lens and its replacement with an implant (intra ocular lens) is a short, cost-effective operation that restores the blind patient's sight. The operation requires a minimum of surgical facilities and an experienced surgical ophthalmologist. Although most cases of cataract are related to the ageing process, occasionally children can be born with the condition (congenital cataract) or a cataract may develop after eye injuries, inflammation, or some other eye disease.
- **Glaucoma** is an eye disorder in which the optic nerve suffers damage, permanently impacting vision in the affected eye and progressing to complete blindness if untreated. It is often, but not always, associated with increased intraocular pressure.
- **Age-related macular degeneration** usually affects older adults and results in a loss of vision in the centre of the visual field (the macula) because of damage to the retina. It is a major cause of visual impairment in older adults (>50 years). Macular degeneration can make it difficult or impossible to read or recognise faces, although enough peripheral vision remains to allow other activities of daily life.
- **Corneal opacities:** Corneal visual impairment encompasses a wide variety of infectious and inflammatory eye diseases that cause scarring of the cornea, the clear membrane that covers the outside of the eye. Significant scarring ultimately leads to functional vision loss.
- **Diabetic retinopathy** is damage to the retina caused by complications of diabetes mellitus, which can eventually lead to blindness. It is an ocular manifestation of a systemic disease, with blood vessels forming and bleeding at the fundus of the eye. The result is blurred vision and eventually blindness.
- **Trachoma** is one of the oldest infectious diseases on earth. It is passed on to another person through infected eye secretions. After repeated infections the inside of the eyelid can be so distorted that it turns in on itself, the eyelashes rubbing against the eyeball and scarring the cornea. In areas where trachoma is prevalent WHO promotes the so-called SAFE strategy (Surgery, Antibiotics, Facial cleanliness, Environmental hygiene).
- **River blindness or onchocerciasis** is caused by the parasite *onchocerca volvulus*, which is transmitted by the black fly. Past attempts to stamp out this disease used vector control. Nowadays a single oral dose of Mectizan yearly is used to keep river blindness in check.
- **Childhood blindness** refers to a group of diseases and conditions occurring in childhood or early adolescence, which, if left untreated, result in blindness or severe visual impairment that is likely to be untreatable later in life. The main causes of blindness in children vary widely from region to region and are largely determined by socio-economic development and the availability of primary health care and eye care services. In high-income countries, lesions of the optic nerve and higher visual

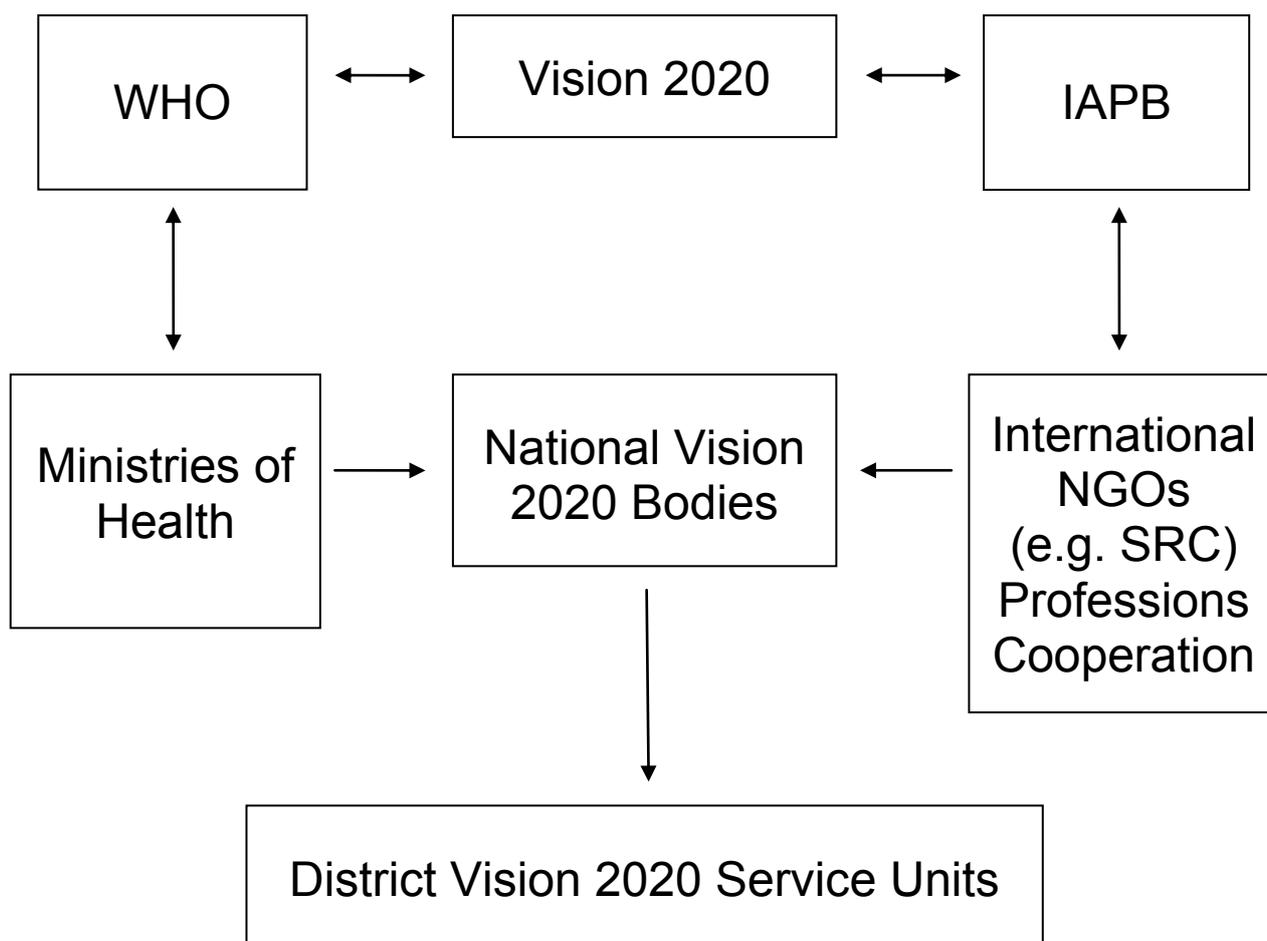
³ <http://www.who.int/blindness/en/> as per 1 August 2011

pathways predominate, while corneal scarring from measles, vitamin A deficiency (xerophthamia), the use of harmful traditional eye remedies, ophthalmia neonatorum, and rubella cataract are the main causes in low-income countries. Congenital abnormalities such as congenital cataract can also cause childhood blindness.

- **Refractive error:** In 2004, more than 145 million people around the world suffered from poor eyesight, which includes myopia (short-sightedness) and hyperopia (long-sightedness) with or without astigmatism (when the eye can sharply image a straight line lying only in one meridian). The Vision 2020 campaign is committed to ensuring that visually impaired people are given easy access to vision aids and spectacles.
- **Low vision** is extreme poor eyesight in individuals who have reduced vision even when using the best possible spectacle or contact lens correction available. The visual acuity is less than 6/18 and equal to or better than 3/60 in the better eye with best correction.

Annex 2: Structure of Vision 2020 and the SRC's role

At the heart of the Vision 2020 global initiative lies the partnership agreement between WHO and the IAPB. WHO works with the Health Ministries of its Member States. Within WHO, the Prevention of Blindness and Deafness Unit in Geneva takes the lead in matters concerning Vision 2020. Four of the six WHO Regional Offices have also established posts that focus on promoting Vision 2020. The Action Plan for the prevention of avoidable blindness and visual impairment, adopted by the World Health Assembly in 2009 and the pledge to continue made in January 2012, are the most recent documents to articulate the important role that WHO plays within Vision 2020.



Annex 3: Minimum requirements for quality in eye care
Quality monitoring table (recommended for use in all SRC-supported eye care projects)

Dimension	Site	Staff involved	Indicator	Standard	Monitoring tool	Frequency of the monitoring	Monitoring team	Experiences from Ghana
Technical competence and effectiveness	Regional hospitals District hospitals Outreach	Ophthalmologists	Post-operative outcomes	The presenting visual acuity at discharge is more than 6/60 in more than 80% of cases	Tally sheet system; categorical record form for every patient	Analysis every quarter by the regional QA ⁴ team	QA team	Forming a QA team is difficult, they do not exist formally. Who does an “independent” quarterly analysis?
	Regional hospitals District hospitals Outreach	Ophthalmologists and ophthalmic nurses Optometrists	Quality of treatment/process quality	Clinical protocols are in place and followed	Standard national guidelines	Daily check against protocols; analysis every quarter by the respective supervisor	According to professional hierarchy	New for Ghana
	Regional hospitals District hospitals Outreach	Equipment manager and ophthalmic nurses	Equipment available and maintained (type and quantity)	Sufficient surgical tools and equipment are functional at all times (depending on patient turnover)	Checklist for regional/district hospital; outreach; observation	Regular check before use in hospitals; prior to outreach programme	QA team Logistician; maintenance technician; estate officer	To be done preferably before planning and budgeting meetings

⁴ The Quality Assurance (QA) team is a team of professionals composed of local staff and SRC representatives, if there is an SRC delegation in country.

User - provider relations and rights	Regional hospitals District hospitals	Ophthalmologists and ophthalmic nurses Optometrists	Patient satisfaction rate	80% of patients are satisfied with the attitude of doctors, optometrists and nurses 100% of patients are informed about their condition and rights (e.g. informed consent; poor patient fund; prices; complaints, etc.)	Exit questionnaire administered to at least 10 patients per facility. Patients are selected at random. Magic client study.	Every quarter Interviews conducted by staff/volunteers	QA teams	Sometimes SRC delegation has to do the analysis
Efficiency	Regional hospitals District hospitals Outreach	Ophthalmologists	Number of operations per day per doctor	Minimum 200 operations per year (depending on the region)	Statistics	Every quarter and added up at the end of the year	QA team	Forming a QA team is difficult.
Continuity	Regional hospitals District hospitals Outreach	Ophthalmologists and ophthalmic nurses Volunteers	Number of patients coming back for follow-up	Referral system in place and functional	Medical records	Ongoing and analysed every quarter	QA team	90% of cataract patients referred by volunteers for surgery are visited by volunteers 70% of referred patients go back to hospital for follow-up

Safety	Regional hospitals District hospitals Outreach	Ophthalmic nurses	Adherence to asepsis	Biosafety standards are applied.	SRC biosafety measures and checklist	Daily routine in regional and district hospitals and during out-reach	QA team	Forming a QA team is difficult.
Physical aspects	Regional hospitals District hospitals	Hospital administrator and ophthalmic nurses	Cleanliness and comfort	Comfortable and very clean	Checklist Observation	Every quarter	QA team	Forming a QA team is difficult.
Access to service	Regional hospitals District hospitals Outreach	Ophthalmologists and ophthalmic nurses Volunteers	Number of poor patients treated Number of women treated	10% of patients benefit from subsidised rates (poor patient fund) At least 50% of patients are women	Medical records Financial records	Analysis every quarter	QA team	New for Ghana

Annex 4: Standard biosafety procedures in SRC-supported eye hospitals and eye camps

Activity	Procedure
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A) Concerning the patient

Wash face and hands of patient before surgery	Wash face and hands of patient with soap and dry with a fresh towel for each patient
Change the patient's clothes	The patient dresses with a gown, a cap and socks. These clothes are either single-use or laundered after each patient
Disinfection of eyes	Disinfection three times with compresses soaked with Iodine Povidone (dilution 1:8=125 ml in 1 liter of NaCl 0.9% or sterile water). The solution is stable for two days. At higher concentrations the solution is painful and toxic for the cornea.
The patient enters the operating theatre	
Second eye disinfection	Same as the first
Surgical site	Cover the head with a fenestrated drape
Dressing after operation	After operation instil antibiotic cream, put a dressing and shield on the eye

B) Concerning the staff

Wash hands	Normal hand wash with disinfectant soap on base of Iodine Povidone 10%. Cut nails. Take off watches, rings and jewellery.
Change clothes for surgeon, assistants and operating theatre staff	Before entering the operating theatre, change trousers and shirt. Put on a cap, a face mask and special shoes. The operating theatre clothes have to be changed every day. Wash hands with alcohol solution for 1.5 minutes.
Surgical hand wash for surgeon and assistant	Brush nails, wash hands twice for 2.5 minutes with disinfectant soap. An alternative is to wash hands in alcohol solution for 1.5 minutes.
Surgeon's clothes	Sterilized gown to be changed once a day.
Gloves	Single use or cleaned in alcohol (70%) after each patient

C) Concerning the material

Syringes and needles	Single use, container to discard
Liquid for intraocular use	Sterile Ringer Lactate
IOL	Original package
Sutures	New sutures for each patient, including those for fixation of the eye
Sterilisation of surgical dressing	Standard autoclaving
Cleansing and sterilising instruments	Careful cleansing of instruments in water. Standard autoclaving. An alternative is to soak instruments in a solution of quaternary ammonium like Deconnex 53 plus ^R at 2% for 15 minutes. Rinse in sterile water wearing sterile gloves. Immediate use. Put instruments on a sterile cloth.
Microscope handles	Standard autoclaving or soaking as for instruments. If possible change after each patient.

D) Concerning rooms

Cleaning the operating theatre	To be done before and after use. Sweep the floor and walls with a broom soaked with disinfectant. Clean and disinfect furniture and medical equipment with a towel soaked in disinfectant. Clean top down. Don't forget door handles and wheels of furniture. If possible sweep the floor after each patient.
Clean air conditioning	Regular services and change of filters
Septic ward	To be separated from normal ward and operating theatre
Septic operations	At the end of the daily programme
Incinerator	Necessary

The same standards must be applied in eye camps. This requires good logistics.

Acetone is to be banned because all it does is remove grease; it neither disinfects nor sterilises.

Detol is of only limited usefulness as a disinfectant.

