**Uncorrected Refractive Error Position Paper**

SightFirst Long Range Planning (SFLRP) Working Group

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**Introduction**

The mission of the Lions’ SightFirst program is to support the development of comprehensive eye care systems to fight the major causes of blindness and vision loss and care for the blind and visually impaired. The program funds high-quality, sustainable projects that deliver eye care services, develop infrastructure, train personnel and/or provide rehabilitation & education in underserved communities.

When SightFirst was launched in 1990, the leading causes of blindness were cataract, trachoma and onchocerciasis. While these conditions remain of concern today and require continued action on the part of Lions, recent evidence indicates there are other threats to sight that also warrant SightFirst support. Uncorrected refractive errors, for example, are a major cause of low vision and even blindness.

The Lions have long been recognized for their efforts to screen for refractive errors and distribute glasses. These activities have traditionally been organized at the club and district levels and largely supported with local monies and LCIF grants. Now, with funds raised through Campaign SightFirst II, there is an opportunity to focus and improve these initiatives while engaging Lions as leaders in a new program area.

This paper, prepared as part of a long range planning effort mandated by the SightFirst Advisory Committee (SAC), recommends strategies to guide future SightFirst uncorrected refractive error programming.

**Uncorrected Refractive Error (URE)**

Refractive errors - myopia (nearsightedness), hyperopia (farsightedness), astigmatism and presbyopia - occur when the eye is unable to properly focus images on the retina resulting in blurred vision. Refractive errors can be easily corrected with glasses or other refractive interventions, but when left uncorrected or when the correction is inadequate, they can cause severe visual impairment and even blindness. Refractive errors may not be addressed because of lack of awareness or recognition by the individual or family, the limited availability or affordability of refractive services and glasses and cultural stigmas that discourage the use of glasses.

It is estimated that of the 153 million people visually impaired from URE, eight million are blind. When combined with the other 161 million people visually impaired from all other...
causes, URE becomes the main cause of moderate and severe visual impairment and the second leading cause of global blindness.¹

**SightFirst & URE**

The Lions have a long history of screening for refractive errors and distributing recycled (used) and new glasses. Lions operate 17 eyeglass recycling centers around the world that collect and process used spectacles for distribution during Lions eye care missions and outreach projects. Lions clubs and districts frequently sponsor eye exams and purchase new glasses for deserving individuals in their communities. On a larger scale, the Lions Sight for Kids (SFK) program, funded by Johnson & Johnson with administrative support from LCIF, trains school teachers from eight Asian countries to screen children and arrange for their treatment and follow-up by local eye care providers. To date, this program has screened more than 7 million children.

With anticipated funding from Campaign SightFirst II, Lions will support new URE-related initiatives focused on capacity building and the development of sustainable systems for the provision of glasses.

**SFLRP Working Group Recommendations**

The SFLRP Working Group convened meetings with blindness prevention experts in January, March and August 2008 to review the definition and global prevalence statistics of URE, discuss current trends related to URE intervention and informally analyze Lions URE-related efforts to date. The meetings included input from the following professionals: Dr. G.N. Rao, President of the International Agency for the Prevention of Blindness (IAPB), Drs. Serge Resnikoff and Silvio Mariotti of the World Health Organization (WHO), Dr. R. Pararajasegaram, IAPB Affiliate and SAC Member, Dr. Leon Ellwein, former SightFirst Technical Advisor, Dr. Bruce Moore, Chairperson, Department of Specialty and Advanced Care, New England College of Optometry and Dr. Jill Keeffe, Professor at the Centre for Eye Research Australia and SightFirst Technical Advisor. Also present were Ed McManus and Phoebe Sebring, consultants for the SFLRP effort, and Phillip Albano, Joshua Friedman, Karim Bengeraine, Kristen Eckert and Gina Prendki of the LCIF Sight Programs Department.

With this information, the SFLRP Working Group has developed the following conclusions and guiding principles for future SightFirst support of URE:

**Conclusions**

1. The SFLRP Working Group recommends that SightFirst URE programming focus on capacity building and the development of systems for the manufacture and distribution of new glasses rather than the provision of individual spectacles.

Why? While providing glasses for individuals is a noble endeavor, the development of systems to manufacture and/or distribute spectacles is a more sustainable solution that will ultimately enable SightFirst to serve more people. Lions’ long tradition of collecting and distributing used eyeglasses remains a respectable service opportunity. SightFirst URE projects, however, should produce and distribute new spectacles. This will ensure that SightFirst URE efforts align with the program’s overall philosophy of providing high-quality, low-cost and culturally appropriate interventions.

2. The SFLRP Working Group recommends that SightFirst URE programming target underserved school-aged children of both genders.

Why? While URE is most prevalent in persons over age 50, this is a “working” population that is frequently able to contribute towards the cost of their eye care and glasses. Children, on the other hand, do not often have access to such resources and early intervention prevents significant years of vision loss. In addition, programs to benefit children evoke significant volunteer and donor enthusiasm and support.

3. The SFLRP Working Group recommends that the approach to SightFirst URE programming be relatively flexible.

Why? Because of the diversity of health and eye care systems that may be involved in SightFirst URE projects, the approaches may vary as they are adapted to each environment. For this reason, it will be important to evaluate projects and evolve strategies for a variety of models as lessons are learned.

Project Elements

Since this is a new area of programming for SightFirst, the SFLRP Working Group has outlined the basic elements of a URE project. Future grant applications may solicit funding for the following activities:

1. Community-based early detection & referral services
a. Training – would likely require ½ day course to train volunteers (teachers, Lions, etc.) to perform visual acuity testing

b. Equipment – minimal set-up and equipment needs; visual acuity/eye charts

c. Referral center – critical that local eye care center be identified and willing to accept patient referrals

2. Diagnosis and provision of glasses at eye care centers

a. Training - of mid-level personnel to perform comprehensive eye exams with cycloplegia (dilation) and optical lab technicians to manufacture glasses

b. Equipment/supplies - for comprehensive eye exams, an initial stock of spectacles as well as equipment for manufacturing a sustainable supply of spectacles

c. Referral center – links to tertiary eye care centers for those patients found to require services in addition to refraction

3. Follow-up & compliance

a. Monitoring & evaluation tools – resources for data collection and analysis; using standard measures for all SightFirst URE projects (i.e. outcomes of referrals from screenings)

b. Eye health education – development of materials encouraging regular eye exams and compliant use of spectacles

c. Referral center – links to tertiary eye care centers for those patients that are later found to require services in addition to refraction

Recommended Strategies

The following strategies are relevant to SightFirst URE efforts and their specific application is explained below each definition:

1. Help develop comprehensive eye care systems
**Definition:** A comprehensive eye care system provides prevention, treatment and rehabilitation services for all eye diseases. Hospitals or clinical programs involved in SightFirst URE projects will provide (or work towards the provision of) comprehensive care, or at least diagnosis and referral of all relevant eye problems.

**What does this mean?**

- While the focus of future SightFirst URE projects may be school-aged children, other populations and eye diseases should be addressed within the context of providing comprehensive eye care. That is, all SightFirst projects should work towards the strengthening of eye care systems so that they are able to respond to all patients either directly or through referral.

**2. Use and/or collect data to identify and evaluate projects**

**Definition:** SightFirst URE projects will take place in communities of greatest need as identified through existing or newly captured survey data. In addition, SightFirst URE projects will be properly evaluated through the collection and analysis of both output and outcome data.

**What does this mean?**

- While data on the prevalence of URE amongst school-aged children is available in some regions, it may be necessary for SightFirst to support rapid assessment surveys in other regions to both justify and improve planning of specific projects.

- SightFirst URE projects should use standard measures of output and outcome. Evaluation of all URE projects will be especially important in the first few years of implementation to help refine program strategies and ensure success.

**3. Target underserved populations through equitable eye care services**

**Definition:** SightFirst URE projects will provide services to those who cannot access care because of economic, social or geographic barriers.

**What does this mean?**

- URE occurs in both developed and developing countries and, as always, SightFirst support is for the underserved in these communities.

**4. Provide high-quality eye care services**

**Definition:** SightFirst URE projects will provide high-quality eye care services.

**What does this mean?**
✓ SightFirst URE projects should include detection rather than screening activities. Screening is a blanket approach to entire populations while detection focuses on populations with specific risk factors. The particular age group to be served in each SightFirst URE project will be determined by the local epidemiological profile and, in most cases, repeat monitoring of the same children over multiple years will be necessary to ensure detection of all cases.

✓ Children detected through a SightFirst URE project must receive a comprehensive eye exam with cycloplegia (dilation), as appropriate, by trained personnel for prescription of glasses.

✓ Long-term patient follow-up and compliance activities are necessary to ensure those aided by SightFirst URE projects receive quality care.

5. Help create sustainable eye care services

Definition: SightFirst URE projects will provide resources to establish sustainable eye care services through the training of local personnel, provision of appropriate equipment and facilities and development of locally appropriate cost recovery mechanisms.

What does this mean?

✓ The development of systems to produce low-cost, high-quality glasses, where needed, will not only ensure a sustainable supply, but, in some cases, may also provide small business development opportunities for local entrepreneurs. In other cases, it may be necessary to provide funds for temporary business support services to help manage the establishment of the system. This might also be a volunteer opportunity for a local Lion(s).

✓ As an additional means of sustaining the local supply of glasses, it is recommended that there be a cost-sharing between Lions and patient receiving glasses through SightFirst-sponsored programs. This may also encourage increased compliance and ownership on the part of the patient.

✓ While funds may be requested for training of new and existing personnel, it remains SightFirst policy that monies are not available to support salaries.

6. Engage Lions as advocates

Definition: SightFirst URE projects will include significant opportunities for Lions involvement and recognition.

What does this mean?
✓ Priority should be given to projects where there is significant opportunity for Lions involvement including business support services, organization of awareness and detection programs, patient transportation and patient follow-up.

✓ SightFirst may now provide funding to help publicize the efforts of local Lions and their work with children.

**Next Steps**

Should the SAC approve the strategies outlined above, the SFLRP Working Group recommends the following next steps with regards to implementation:

- The SightFirst grant application, including funding criteria and guidelines, will need to be revised and new written resources developed for URE projects.

- LCIF SightFirst staff should be provided with resources to inform regional technical advisors in all regions, as well as Lions, about the new strategies and grant application process. Additional resources may be needed to help inform Lions leadership in countries that have not traditionally received SightFirst support.