



Access to Cataract Surgical Services

A Position and Policy Statement

Un-operated cataract remains the leading cause of avoidable blindness in poor and emerging countries. As ophthalmology is uniquely charged with responsibility for cataract surgery, ophthalmology has a unique responsibility for recognizing the magnitude and extent of the problem and for proposing effective, practical approaches to solving it.

There are numerous reasons why patients who are blind and visually impaired from un-operated cataract do not receive the surgical services they need. Simply stated however, there are not enough ophthalmic surgeons doing enough high quality cataract surgery in an accessible locale to meet patient needs.

While the incidence of visually-impairing cataracts may differ from one locale to another, in general, most populations in which the CSR (cataract surgical rate—the number of cataract operations per year per million people) is 2500 to 3500 or more, are unlikely to have large numbers of individuals not receiving the minimal care they need. However the concentration of coverage can be highly variable, with some populations experiencing very high rates, while others, particularly underserved pockets of poverty, far lower. As countries advance economically, and the level of visual impairment justifying surgery declines, the “appropriate” average CSR will necessarily rise.

There are at least two very different situations in which large numbers of people are not receiving the cataract surgery they need; each requires its own unique solution, though common themes will be relevant to both settings.

1. Countries already training significant numbers of ophthalmologists

In countries where large numbers of ophthalmologists are trained each year, it is possible to vastly increase the efficiency of ophthalmic surgery and overcome obstacles to access, even if the ratio of ophthalmologists per population is much lower than that of wealthier nations. It takes enlightened commitment; well trained and organized cataract surgical teams (including ophthalmologists, nurses, technicians and other support staff); a systematic approach to reaching those in need; suitable training in both cataract surgery and management of the cataract surgical process; adequate facilities, equipment and supplies; and government support and investment.

India is a prime example of the success that this approach can achieve.

India has only one-tenth the concentration of ophthalmologists, per capita, enjoyed by wealthy countries. Two decades ago, India was performing less than one million

cataract operations a year, a “cataract surgical rate” (CSR) of 500–1000 per million population (one-sixth to one-eighth that of wealthier nations). Through governmental incentives and attention to training, efficiency, and innovative delivery strategies, Indian ophthalmologists now perform over 5 million cataract operations each year, and their CSR approaches that of the West.

Other nations that train significant numbers of ophthalmologists each year, but have not yet begun to provide the cataract surgical services their populations need (China, many Latin American countries, Egypt, Indonesia), could dramatically increase their CSR by embracing efficient, high volume, high quality, affordable and accessible cataract surgery, combined with well designed outreach programs to increase demand. Some of these countries graduate ophthalmologists not trained in cataract surgery; these ophthalmologists spend much of their time on medical conditions and refraction. Where cataract surgical rates are low, these provide a natural pool of trained ophthalmologists who should be taught appropriate cataract surgical techniques.

The ophthalmic profession has the unique capacity—and the responsibility—for exploring, adapting and helping to lead these efforts.

2. Countries presently training few ophthalmologists

Other countries however, like many of those in sub-Saharan Africa, face an entirely different and overwhelming set of obstacles to eliminating unnecessary cataract blindness and visual impairment: a serious deficiency in the number of ophthalmologists well trained and experienced in cataract surgery (on average, one-tenth that of India and China; one-hundredth that of wealthy nations); low population density combined with a lack of infrastructure (roads and public transport) that might otherwise permit patients to access ophthalmologists residing in urban areas and provincial capitals; government rules, regulations, and reimbursement schemes that provide little opportunity and incentive for ophthalmologists to perform the surgery that is needed; a lack of capital investments in facilities, equipment, supplies and teams that would make serving the needy poor possible. Indeed, many of these countries graduate very few doctors at all, which means the number available to be trained as ophthalmologists is miniscule. It will be generations before sufficient numbers of ophthalmic surgeons can be trained, retained and incentivized to meet the needs of the urban poor, and even longer, to meet the needs of the rural countryside, where a very large proportion of the population resides.

Solutions to this urgent problem will necessarily vary from country to country, and cannot be imposed from outside. But a variety of approaches can dramatically improve the situation. The first relates to increasing the number of well-trained ophthalmic surgeons:

1. Many programs graduate ophthalmologists who have little, if any, practical training or experience in cataract surgery (while this problem is not limited to countries with a low CSR—the overall paucity of cataract surgeons in low CSR countries makes the situation acutely problematic). If all accredited

ophthalmology training programs included adequate hands-on, accomplished training in cataract surgery, it would appreciably increase the number of trained ophthalmic cataract surgeons available to the population.

2. Some ophthalmology training programs appear to be inappropriately prolonged, particularly in countries where too few ophthalmologists are trained to meet their needs. In the U.S. for example, nearly all ophthalmology programs last three years, turning out general ophthalmologists well-skilled in many surgical procedures, including cataract. Yet many programs in underserved nations require five to seven years of training. A thoughtful and determined reorganization of these programs in underserved countries would graduate twice as many ophthalmic surgeons capable of performing excellent cataract surgery each year if the training of comprehensive ophthalmologists (skilled in cataract surgery) were reduced to 3 -4 years; those seeking additional expertise in subspecialty areas would seek additional training.
3. In some countries with low CSR, ophthalmic cataract surgeons do few cataract operations and their skills are significantly underutilized. The causes are many: government pay scales that provide little incentive for performing surgery; regulations that interfere with access to critical, capital-intensive equipment; the lack of funding (or capital investment in) needed facilities, equipment, and supplies. The discouragement these predicaments produce often result in out-migration of well-trained surgeons to nations where they can better apply their skills and support their families.

While addressing these constraints would inevitably increase the “supply” of available cataract surgical capacity, there will still be countries in which the number of available physicians is so low that ophthalmologists will be unable, even under the most efficient circumstances, to meet local cataract surgical needs. An alternative, hopefully “temporary,” solution is needed in the meantime. The only expedient, indigenously sustainable solution would appear to be the careful training of non-ophthalmologist “cataract surgery providers”, willing and able to work in underserved, remote areas under the monitoring and oversight of “supervising ophthalmologists.” In situations where it is necessary and appropriate to utilize non-ophthalmologist “cataract surgery providers”, ophthalmology has an obligation to establish carefully designed programs that train non-ophthalmologists to perform high-quality cataract surgery and to monitor and supervise their work to ensure that the choice of patients, and surgical outcomes, meet appropriate standards. Experience has shown that high quality programs depend upon well-trained ophthalmologists providing leadership for organization and supervision. Well funded, organized and carefully evaluated pilot programs are needed to determine whether this approach can be effective, viable, and sustained.

Ophthalmologists are necessary to ensure quality standards in both the training and the ongoing supervision of non-ophthalmologist cataract surgical programs; in the absence of dedicated leadership and supervision by ophthalmologists, experience has shown that the quality of surgical outcomes generally falls far short of patient expectations and needs. Prior qualifications for these “cataract surgical providers” will necessarily differ

with local circumstances. In all countries, they should be individuals who are mature and responsible, and have demonstrated good judgment and manual dexterity. Whatever is deemed to be appropriate prior training and experience, “cataract surgical providers” must undergo rigorous, well-documented surgical cataract training; prove themselves capable of acceptable surgical outcomes; and remain carefully monitored by “supervising ophthalmologists.”

The training, experience, judgment and expertise of “non-ophthalmologist cataract surgical providers” will necessarily be limited. The eventual goal, in all countries, is to achieve sufficient numbers of formally trained and credentialed ophthalmologists to meet the eye care needs of the population, at which time the need for “cataract surgical providers” will have disappeared.

Issues related to the “demand” for cataract surgery

In some countries, despite a low CSR and a high rate of visual impairment and blindness, there is often a serious lack of demand from those populations who would benefit from cataract surgery. This, too, has many origins: culture, experience, tradition, and little if any exposure to patients who have benefited from high quality pseudophakic cataract surgery; conditions that perpetuate the belief that cataract blindness is a “natural” part of aging, or in which populations have come to trust their sight to locally respected traditional healers (who often offer couching and other inappropriate forms of “treatment”). Solutions to these obstacles are obvious, even if their implementation is not necessarily easy. Experience has shown that increasing “demand” for cataract surgical services in the rural countryside requires facilitation and “marketing”: outreach screening services are unlikely to be successful in many areas unless they also provide transport to and from the site of surgery. Local patients who return to their village as “grateful patients,” with excellent pseudophakic correction, are the best “advertisement” for modern cataract surgery, which in turn inevitably generates further surgical “demand.”

The key to addressing unmet needs from too little demand for cataract surgery is excellent surgical outcomes with restoration of useful pseudophakic vision and visual function. Once people are aware that good vision is regularly restored after cataract surgery, demand will inevitably increase.

A Way Forward—Regardless of a Country’s Circumstances

Just as ophthalmology has the responsibility for cataract surgery, it has the responsibility for developing locally appropriate systems that will enable those who need cataract surgery to receive it. It is the responsibility of government agencies and other institutions to provide adequate facilities, equipment and supplies needed to perform quality surgery, a sustainable source of income for those performing the surgery, and stipends and support for the “supervising ophthalmologists” who train “cataract surgical providers” and oversee their work. Management expertise is vital for the design of effective and efficient systems, and for recognizing opportunities for further

improvements. Well-trained and coordinated teams are needed to maximize the efficient utilization, and impact, of any cataract surgical program.

Commitment, thought, and careful planning and execution should enable most countries to eventually meet the cataract surgical needs of their people. Every program must be focused on high quality outcomes, not simply the rapid expansion of the number of operations performed. Generic training and proficiency standards, even those that might be developed by the ICO, will require modification and adaptation to local conditions.

Full-fledged demonstration programs, with adequate staffing and support, can develop, evaluate and provide suitable models of training and supervision that yield high volume, high quality cataract surgical outcomes. Experience has shown that patients will often travel miles when they know that the outcome of surgery is likely to be excellent; indeed, they begin to come before they are “blind,” when cataract surgery can *prevent* blindness, rather than just *cure* it. Visual indications for cataract surgery should be assessed in relation to local needs. Operating on patients with significant visual impairment, long before they are blind (vision less than 3/60) will allow them to maintain economically productive employment. Active outreach to the rural areas, whether by screening and provision of transport to and from the surgical service, the establishment of fixed satellite facilities, or itinerant (but repeated, sustained, and predictable) surgical services are inevitably required to meet rural needs, particularly where population density is low.

No one says it will be simple or easy; but to achieve the goals of Vision 2020, and provide the services that people need, it is important that ophthalmology lead the way.

Potential Role for the ICO

The ICO can play a valuable role where greater numbers of ophthalmic cataract surgeons are needed, primarily through its educational efforts. It can

1. Insist that ophthalmology programs include adequate training in cataract surgery to all their residents.
2. Issue ICO certificates to ophthalmological graduate programs that meet ICO cataract surgical training standards.
3. Prepare advocacy material that can be used by local ophthalmology organizations to influence government policies in ways that increase the availability, efficiency and impact of ophthalmic cataract surgical services.
4. Provide guidance to governments on the types of facilities, equipment and supplies required to promote efficient, high volume, quality cataract surgical services.
5. Recommend the reorganization of residency training programs so as not to exceed three years.
6. Develop appropriate curricula and educational modules for training all cadres involved in providing cataract surgery.

7. Facilitate local and regional workshops of ophthalmologic societies and other appropriate agencies working to develop locally appropriate approaches to increasing CSR and the quality of cataract surgical outcomes.

If ophthalmology is to continue to “own” cataract surgery, it must “own” as well the enormous problem of unmet cataract surgical needs.

This policy statement will be re-visited at least every three years, or earlier if conditions warrant. It will be updated in response to experiences gained in the interim, including the growth in the number of ophthalmologists delivering quality cataract surgical services and the level of unmet cataract surgical need.