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## Meeting the Challenge Of Cataract Blindness In China: The Story of the Project Vision-ASCRS Foundation Collaboration to Teach Cataract Surgery in China

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### Part I: Cataract Blindness In China

It is well known among ophthalmologists that cataracts are the leading cause of blindness in the developing world. In my 2009 Binkhorst Lecture, I highlighted three international programs that serve as model systems for how best to address the growing backlog of cataract blindness in developing countries.

These are the Aravind Eye Hospital System in southern India, the Himalayan Cataract Project based at Tilganga Eye Center in Nepal, and Project Vision in China. All of these model systems rely on manual, sutureless, small incision ECCE procedures which can be done in very high volumes at low procedural cost.

For all but the most experienced phaco surgeons, this technique would be safer for the mature brunescient cataracts so prevalent in poor populations, and with less reliance on technology there is a shorter surgical learning curve for new trainees. Uncorrected and corrected visual outcomes were comparable to phaco in a randomized, prospective study in Nepal that we conducted.

Generally, the societal rate at which cataract surgery is performed parallels the national GDP, meaning that the United States and Sub-Saharan Africa are at opposite extremes of the global spectrum.

What is therefore both astonishing and inexplicable is that the national rate of cataract surgery in China is mired at the lowest end of the spectrum, on par with the poorest African nations. This is due to a complicated interplay of many factors. Although economic growth in China has skyrocketed during the past two decades, the societal wealth is concentrated in urban areas while more than 60% of the population lives in rural communities.

Until recently, the lack of any national health insurance has meant that the poorer rural population could not afford many basic health care services, and according to one survey, nearly one third of the poor attribute their poverty to a large but necessary healthcare expenditure.

As a nation, China also has a severe shortage of cataract surgeons. Less than half of the country's 23,000 ophthalmologists perform surgery and most rural eye doctors have little or no training in cataract surgery. Because of deficiencies in equipment and training, the outcomes of those cataract surgeries performed in county hospitals serving the rural population have been historically poor. This, in turn, has undermined the confidence of rural patient populations in the procedure.

Combining China's inefficient system for training cataract surgeons with the economic incentives for urban practice has meant that quality surgery is either unavailable or unaffordable for much of China's population. India is the only other country whose population approaches the size of China's. However, China's cataract surgery rate (CSR) of 682 operations per million persons per year (as of 2008) is in stark contrast to India's CSR of 5050. Because of this deficient surgical rate, the backlog of cataract blindness in China reached 6.7 million in 2008 and there are approximately 1.3 million new cases of cataract blindness every year.

This unmet need for cataract surgery in China will balloon further due to accelerating aging demographics. In coming decades, the number of patients over age 65 will triple (from 7% of the current population to 20% by 2040). This threatens to increase cataract blindness at a frightening rate.

*Next Issue: Part II, Dr. Lam's Vision*



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