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Health Care Services: Addressing the Global Challenge of Universal Eye Health

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Experience without theory is blind, but theory without experience is mere intellectual play.

—Immanuel Kant

The World Health Assembly, in 2003, supplied official organizational motivation for the international community to commit to the Vision 2020: The Right to Sight campaign,¹ and again, in May 2013, it voted in support of a Global Action Plan towards universal eye health. Many people affiliated with this journal, having devoted their professional careers working towards the prevention of blindness and visual impairment, are grateful for the external incentive to re-energize stakeholders to work, alone or in partnerships, to achieve this goal. Therefore, it seems fitting that the journal has devoted an entire issue to health services research as teams around the world design and implement strategies and position (re-access and re-position) resources to meet the dual challenges of eliminating avoidable blindness and promoting eye health. In pulling together research articles for this special issue, we are struck by the range in topics, in the geographic diversity represented among the authors, and the varied collaborations whose teamwork and scientific exchange has made possible the publication of their work which, hopefully, will serve as an inspiration for others.

The delivery of health care effectively, efficiently, efficaciously, and equitably to all population sectors, has been a topic of much discussion within and among nations and across the spectrum of economic development. The global financial downturn has focused even more attention on the necessity to use evidence to align delivery of health care services with public health need. And, with the demographic shift towards older ages occurring in many countries, an assessment of disease burden and clinical capacity is necessary to transform the eye care delivery infrastructure and its workforce to strategically supply quality care. In this issue, a mathematical model was applied to existing survey data and the results used to estimate new cases of cataract and, in turn, appraise the need for cataract

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surgery treatment in different localities across the region. As described in “Cataract incidence in Sub-Saharan Africa: What does mathematical modeling tell us about geographic variations and surgical needs?” by Lewallen and colleagues it turns out that the need for cataract health services are geographically varied and in providing cataract treatment where needed, the unequal distribution of resources may be entirely appropriate.² As an added bonus to this strategy, the differential distribution of incident cataract cases themselves might be useful to provide on-going surveillance as well as generate insights about underlying risk factors which may differ across the various ethnic groups in the region. Similarly, the need for sufficient numbers of adequately trained professionals was assessed in another article in a different region of the world. Estopinal and co-authors in their paper entitled “Access to ophthalmologic care in Thailand: A regional analysis,” reach the conclusion that while the nation as a whole has the requisite human resource capacity, trained eye specialists are not deployed uniformly throughout the country.³ Most are stationed primarily in urban areas, leaving rural areas understaffed.

The rapid pace of economic growth and widespread technical advances offer new opportunities to better assess the need for health care services to, in turn, have a positive, measurable impact on health and quality of life. However, making health care services available does not necessarily translate into use. In this issue at least three articles report on the topic of suboptimal use of services among those with eye disease or visual impairment. In the study by Peng and colleagues called “Eye care use among rural adults in China: The Handan Eye Study” which was carried out in a rural community, they examine the perceived need for eye care services, the actual need (based on diagnosis of disease), and possible reasons to explain the apparent disconnect between need for eye care and use.⁴ They conclude the key to reducing unnecessary visual impairment is education, therein improving health literacy (realigning perceived need with reality) which, in turn, should increase the use of services and, in time, will spur additional demand.

Even for conditions like diabetic retinopathy where health promotion has been refined many times, including bundling the delivery of eye care with other types of medical care, underuse is rampant. In “Factors contributing to diabetes patients not receiving annual dilated eye examinations” by Paksin-Hall and colleagues,⁶ individuals with diabetes were asked a variety of questions to get at reasons why patients with diabetes do not receive an annual dilated eye examination.⁵ The study findings serve as a reminder that the social determinants of health play a critical role in the accessibility, acceptability and use of health services.

In recent years, numerous advances have occurred in the delivery of high quality ophthalmic health services, but the deployment has not been consistent across geographic regions or even among diverse population groups within a given nation. The highly variable quality of care for cataract was addressed specifically in two articles, namely “Cataract surgical outcomes from a large-scale micro-surgical campaign in China”⁶ by Xiao and co-authors and “Outcomes and projected impact on vision restoration of the China Million Cataract Surgeries Program” by Yan and colleagues.⁷ Both studies were carried out within the same Chinese province, occurred about the same time, and reached different conclusions. Findings from the “Brightness and Smile Initiative” conducted between May 2009 to July 2010 suggest, in comparison with WHO recommended standards, a low rate of good cataract

surgical outcomes.⁶ In the second study, the “Million Cataract Surgeries Program” studied 715 persons with cataract who were recruited and provided with cataract surgery between January and October 2010.⁷ Extrapolating results from this sample to the entire province, the authors concluded cataract surgical results were generally good. Readers willing to compare and contrast the articles themselves may glean some insight as to why these two studies report such apparently disparate results.

The methodology used to assess disease burden, measure clinical infrastructure capacity, evaluate clinical outcomes, and gauge public demand for health services is constantly evolving and is not always exact. In “Review of blindness and visual impairment in Paraguay: changes between 1999 and 2011,” Duerksen and co-authors present results from a recent rapid assessment of avoidable blindness and compared its prevalence results with those obtained from a previous survey, rapid assessment for cataract surgical services, which had occurred over a decade earlier.⁸ In monitoring progress over the interval, the authors report advances in the quality of cataract surgery and a decline in barriers to accessing cataract surgery, thus translating to a tremendous reduction in the prevalence of blindness due to cataract. They also remark on a noticeable increase in patient awareness of the benefit of cataract surgery, therein increasing demand for services and requiring infrastructure refinements to increase the output of services while simultaneously providing appropriate, quality outcomes of care. The team is looking to keep the momentum going by redirecting efforts to address other causes of avoidable blindness.

The prevention of blindness requires attention to eye disease but as rates of blindness decrease, on-going surveillance activities in many countries indicate rates of visual impairment are on the increase world-wide. Uncorrected refractive errors are an important, and worsening, public health problem with widespread implications. Two papers in this issue address the topic. In “Cluster randomized trial to compare spectacle delivery systems at outreach eye camps in South India” Ramasamy and co-authors describe three alternate strategies to provide spectacles for those in need of refractive correction, specifically for presbyopia (in addition to other refractive correction as needed).⁹ They conclude spectacle usage is closely tied to procurement and uptake is highest when spectacles are made and delivered on the spot. In other words, providers have to make it easy to access eye care services and to deliver these services in a format compatible with the perspectives of the patient and their family. In addition, continued success requires providers to maintain a reliable, consistent, sustainable delivery framework that the community can come to expect. Another article in this issue, “Self-vision testing and intervention seeking behavior among school children: A pilot study” by Rewri and colleagues, describes a clever attempt, deployed in a low resource school-based setting, to encourage school-age children to assess their own vision using standard charts left hanging in school common grounds.¹⁰ While the naysayers will argue that children cannot possibly access their own vision, and if the goal is to measure exact visual acuity in each eye they may be correct. However, many children today, savvy as they are, may be quite competent at screening their own vision, either alone or in combination with their classmates or friends, and deciding whether or not their visual ability is above or below a threshold. In many resource limited settings, such an effort may be the only exposure to an eye chart (or any vision testing) some children may ever have. Also, creating the opportunity for such children to improve their own health literacy begins

to address, however superficially, the serious problem of inequity in access to eye care. Certainly, the strategy to post eye charts themselves provides a creative way to promote eye health in children who will likely carry on to adulthood the knowledge of the importance of vision (and perhaps might promote it among their elders who themselves might be in need of eye care services). In any event, linkage to quality refractive services (easily accessible and at low cost) for children identifying themselves with suboptimal vision is critical, and children need to be informed about how to access the services.

The final article selected for this special issue describes a strategic use of resources in a non-traditional setting to promote quality of life among visually impaired persons. “Integrated depression management: A proposed trial of a new model of care in a low vision rehabilitation setting” by Rees and colleagues describes an innovative strategy to test the utility and cost-effectiveness of a service delivery model to treat depression among patients in need of low vision rehabilitation services.¹¹ For many visually impaired individuals, particularly those in their later years many of whom are economically disadvantaged or have a multitude of health issues, the provision of eye care together with medical care of concomitant health conditions may prevent unnecessary visual impairment and promote improved quality of life.

There are several other manuscripts we would like to have included in this special health services issue, but they were still in the review process when the publication deadline was met. For readers who feel inspired to build on the work published herein or to embark on a new scholarly effort while simultaneously answering the “so what” question,¹² continue to do good work, document it in manuscript form, and submit it to the journal. More articles on health services will be published in subsequent issues. In the coming years health service delivery (access, acceptance, and use) will remain critically important to achieving the global challenge of universal eye health and the elimination of avoidable visual impairment.

Things do not happen. Things are made to happen.

—John F. Kennedy

This special journal issue would not have been possible without the support of the Editor-In-Chief, the Managing Editor, and the all-volunteer Editorial Board whose time, energy and commitment to seek out critical reviewers willing to supply constructive comments to improve the rigor, clarity, and depth of the manuscripts submitted to the journal. We hope that the journal's diverse readership appreciate the detailed methods used to reach conclusions, consider some practical lessons learned, and cultivate ideas and perspectives which might be applicable within the reader's local setting. Even as the journal leadership and its readership are involved in scientific research, continuing education, and direct service provision, we are also reminded of the persistent, evolving need to look afresh at issues and to engage in-country implementers of public health policy in a partnership to design pathways to allow access to and delivery of eye health care for entire communities. With the ever growing demand among the populace for equity and prevailing economic drivers requiring more be done with fewer resources, the time may be ripe for integration of eye health into national health agendas. Recognizing this, the journal will soon publish a special health economics issue. Keep an eye out for it.

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