INTERNATIONAL

Gender and Eye Health: Why Women Are Left in the Dark

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Even a casual observer would agree that the landscape of health and disease around the world is not a level one. And when the topographies of public health are scrutinized, eye care appears to be as irregular as any other.

Visual impairment is distributed unequally across age and economic stratifications, according to the World Health Organization. Approximately 87 percent of the world's visually impaired population lives in developing countries, for example, and more than 82 percent is age 50 or older. One especially pernicious disparity originates in gender. "In every region of the world and at all ages, females have a significantly higher risk of being visually impaired," according to the WHO Web site.

The most impaired of the impaired. WHO estimates that globally there are approximately 314 million people with visual impairment, a demographic that includes people with low vision and those with no light perception.

When it comes to gender, WHO estimates that women account for more than 64.5 percent of all visually impaired people worldwide. Even adjusted for age, the overall odds ratio of blind women to men is 1.43, representing a range from 1.39 in Africa to 1.63 in industrialized countries.

In a meta-analysis published in 2001, Susan Lewallen, MD, found that the excess burden of blindness among women is likely due to a number of interrelated factors.[1] These factors include life expectancy, access to care and the primary conditions that lead to visual impairment. Dr. Lewallen is codirector of the Kilimanjaro Centre for Community Ophthalmology in Moshi, Tanzania.

Chromosomes are not the problem. The blindness disparities had nothing to do, per se, with an individual's sex. In a review of that meta-analysis, Suzanne Gilbert, PhD, MPH, found that "In no instance was the disparity explained by biological differences." Dr. Gilbert is the director of the Seva Foundation's Center for Innovation in Eye Care in Berkeley, Calif.

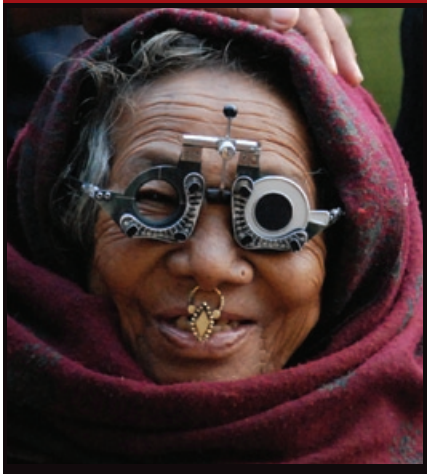
Where, Exactly, Are the Disparities?

The factors that influence the gender disparity in eye health, and especially the ability for women to access quality health care, are substantially affected by whether patients live in an industrialized or developing nation. "When we discuss access, what we are really referring to is the ease with which women use services: financial, local, transportation, etc.," said Dr. Lewallen.

Is cataract the canary in the coal mine? Evidence of the lack of access in developing nations is most visible upon reviewing cataract surgery rates. In 1999 cataract was identified by the WHO as the leading cause of global blindness, with the vast majority—90 percent—of those affected living in developing nations. In 2009, Dr. Lewallan published a study in the *British Journal of Ophthalmology* indicating that in low- and middle-income countries, men were 1.71 times more likely to have cataract surgery than women.[2] It estimates that severe visual impairment could be reduced by more than 10 percent if women were to receive surgery at the same rate as men. Comparatively, said Dr. Lewallen, "About 60 to 65 percent of the people getting operated on in industrialized countries are women, which is what should be expected in developing countries," said Dr. Lewallen.

First problem: getting to the doctor. The actual barriers to access for women range from sociocultural influences and financial limitations to education level of the patient and awareness of the care provider. Ac-

Correcting Errors



This Nepalese patient was reached through gender-sensitive community eye health education efforts.

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A young woman waits patiently as her bandage is removed.

cording to Dr. Gilbert, one significant, common barrier to access for women is transportation. "Even if they can somehow afford the surgery, they cannot afford the transportation to the provider or are unable to travel alone because of cultural standards," said Dr. Gilbert. "Moreover, families in developing countries may not find it to be a worthwhile use of financial resources to correct a woman's eyesight, especially upon incorporating transportation costs."

Next problem: paying the doctor. The decision to invest in corrective surgery becomes even more complex when the outcome is taken into account. There can be a general fear of poor surgical outcomes, largely due to the inability to purchase IOLs, said Dr. Gilbert. "Even if the family agrees that the woman will have surgery, it is far less likely a woman will receive an IOL than a man. As a result, the surgery is seen to have a less desirable outcome, reinforcing the belief that her surgery is not a worthwhile investment for the family's limited resources."

Tracking the Patterns

Women show an increased prevalence of several other blinding diseases, including trachoma, primary angle-closure glaucoma (primarily in Asia) and age-related macular degeneration.

Trachoma inequity follows a pattern similar to that of the disparity in the cataract surgical rates. It is most common in developing nations and has clear sociocultural indicators. In trachoma-endemic areas, women account for about 70 percent of trachomatous trichiasis, according to Dr. Lewallen. And, as there is no biologic predisposition, it is widely accepted that the excess risk is due to their gender role and responsibilities.

Caring for kids carries risks. "Trachoma infection tends to be carried through children. And because women in these areas usually function as the primary care providers, they continue to pass the disease back and forth until it develops into blinding trichiasis," said Dr. Gilbert.

In contrast, there are some data from industrialized nations that suggest women have a slightly increased risk of AMD, a disease that, by nature, is related to longevity. As identified by Dr. Lewallen in a WHO paper titled Gender and Blindness, Eye Disease and Use of Eye Care Services, "Increased longevity and excess risk of blinding eye disease may play the largest role in industrialized countries while inadequate use of eye care services may be more important in developing countries."

Longevity, however, cannot account for the gender disparity entirely, according to Dr. Gilbert. Even among age-adjusted studies, women show a higher prevalence of visual impairment in both industrialized and developing nations.

Success Stories

While the barriers to care are systemic, they are not insurmountable. Ciku Mathenge, MD, the Kenyan medical advisor for the Fred Hollows Foundation, which sponsors blindness prevention work in Africa, Asia and Australia, has helped women successfully overcome some of the more readily identifiable barriers to care. Recent surveys in Kenya have shown that the gap in cataract surgery coverage narrowed significantly. In fact, the coverage is now close to equal.

Democratize the care. "I made sure to treat the family," said Dr. Mathenge. "When I had a male patient, I always asked about his wives and family. It was surprising how many of them had wives with eye conditions. I always insisted they had to bring their wives along when they came for their own surgery."

Tailor the care. Another strategy that Dr. Mathenge uses: Schedule women's appointments in the morning, allowing them to return to their household responsibilities. She also attributes some of the improved care to the rising level of education in some parts of Kenya. "An increased level of education seems to have empowered women to be in charge of their health."

To remove the barriers, understand them. Hugh R. Taylor, MD, is chairman of Indigenous Eye Health at the University of Melbourne. According to Dr. Taylor, more research is needed in order to "address the barriers that hinder access to quality health care, and then, within that, to determine whether there are particular barriers for men or for women." He added that it is crucial for societies in the developing world to encourage practical measures, such as basic education for all women and skills building for ophthalmic assistants and practice managers.

Dr. Gilbert reiterated the idea that international programs must promote awareness in local communities of cultural barriers to care. "It is important to consider how a blind woman with few educational and financial resources can find a way to get her sight back. Programs that analyze their communication methods based on their cultural environment and that then empower women will show a markedly higher level of success."

1 Lewallen, S. and P. Courtright. *Br J Ophthalmol* 2001;85(8):897–903.
2 Lewallen, S. et al. *Br J Ophthalmol* 2009; 93:295–298.

Vision for Women

For more images of eye care access for women and girls, go to the May issue of *EyeNet* online at www.eyenetmagazine.org.

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