Assessing the Value of Preventive Ophthalmologic Care in Ghana

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ABSTRACT

Glaucoma is the second leading cause of blindness in Ghana. At Emmanuel Eye Centre in Accra, Ghana, a large portion of glaucoma patients do not receive glaucoma treatment until the disease has progressed to an advanced stage. To identify the possible barriers between glaucoma patients and ophthalmologic care, patients who arrived at the clinic with both early and late stages of glaucoma were selected for semi-structured interviews. This Institutional Review Board-approved study had three targets: knowledge of what glaucoma is, perception of the need for eye care before treatment, and specific barriers to glaucoma care. The findings suggest that the "invisibility" of early stage glaucoma is a significant barrier to care. Rather than a lack of funds, patients did not see the value in seeking preventive ophthalmologic care.

KEYWORDS: *glaucoma, prevention, ghana, aging*

The Ghanaian people are a social and warm group. They do not need maps, menus, or price lists as everything is spoken. In the capital, Accra, the best place for Ghanaian hospitality is at "He Is Mighty," a small chop bar. The owner will accommodate a group of visitors to steaming fried rice topped with a scrambled egg on the family's porch behind the store with a candle lit to eliminate the darkness. It is these small, pleasant interactions that reflect the Ghanaian life style and their intense focus on making the present meaningful. But, in a country where roughly 44.8 % of the population lives on less than $ 1 per day, implementing expensive necessities like medical care is a challenge.[1] As the government of Ghana and various other non-governmental organizations attempt to make medical care available for more people, it is important to assess the value of medical care perceived by the people. Efforts to establish an effective medical care system in Ghana hinge on the system's ability to both provide the treatment needed by its people and create an incentive to receive medical care, in large part by stimulating trust that health services are indeed valuable.

This focused research project involved studying preventive ophthalmologic care in Ghana while volunteering with Unite For Sight during the summer of 2010. Unite For Sight supports local eye clinics in Accra to deliver ophthalmologic care to the rural poor. While participating in this outreach program, I found medical care did not exist in much of the rural areas in Ghana. Dr. Michael Gyasi, a glaucoma ophthalmologist working at Emmanuel Eye Centre in Accra, found that 96 % of patients diagnosed with glaucoma in this rural setting already had moderate to advanced disease.[2] He also found that 76 % of his glaucoma patients in the urban capital setting already had an advanced case of glaucoma.[2] Even in a setting with available ophthalmologic care, patients were not receiving glaucoma treatment soon enough. Glaucoma affects about 8 % of people over the age of 40 in Ghana.[3] For comparison, the prevalence of glaucoma in the United States hovers around 2 % for people over the age of 40.[4] Throughout the world, it is also the second leading cause of blindness.[5] Glaucoma, usually associated with increased ocular pressure, is characterized by progressive damage to the major optic nerve inside the eye that transmits light generated signals from the retina to the brain. Optic nerve damage generally causes a subtle loss of peripheral vision initially with gradual loss of central vision if left untreated. Increased ocular pressure is generally caused by ineffective drainage of aqueous humor fluid in the anterior chamber of the eye through the trabecular meshwork.[6] Glaucoma treatment is focused on lowering and controlling ocular pressure. Eye drops, generally beta-adrenergic antagonists, can effectively manage the disease by decreasing the production of aqueous humor. However, some cases require surgery, such as a trabeculectomy, to open up the trabecular meshwork and decrease the pressure. Oddly, there are rarely symptoms until vision has already begun to decline.[6] Preventive management of the pressure inside the eye is critical in blindness prevention, especially since the vision loss is irreversible.

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While working at Emmanuel Eye Centre, an Institutional Review Board-approved exploratory study was conducted to investigate why a significant number of glaucoma patients seek vision treatment late. The goal was to gain insight through patients and their stories by exploring the barriers between them and their ophthalmologic care. The conversations had three goals: 1) gain patient knowledge about glaucoma; 2) understand the reluctance for preventative treatment; and 3) define the barriers to glaucoma care with the intention of developing a solution. While talking to glaucoma patients, more than half expressed feeling no need to seek care from an eye doctor until they noticed a problem. Several patients commented about seeing a doctor for a broken arm and a dentist for teeth cleaning, but never to see an eye doctor with seemingly perfect vision. Moreover, patients had a strong grasp about the most popular mechanism of glaucoma, elevated ocular pressure, but few noted its fearful outcome: blindness. Even when specifically asked about difficulties in affording medical care, patients did not identify an inability to afford ophthalmologic care as a significant barrier.

These exploratory findings suggest that the "invisibility" of early stage glaucoma clouds a patient's perception about seeking ophthalmologic care, which is directly caused by the lack of glaucoma symptoms. This invisibility, an inability to perceive glaucoma, hinders a patient's ability to see the value of routine eye exams. Another special finding from the investigation was the overwhelming affirmative answer to the following question: would you recommend seeing an eye doctor to your friends and family? Even when probed to see if the patients would recommend a friend or family member to see a doctor without a problem and simply for an eye exam, they still responded affirmatively. This demonstrated that after being diagnosed and receiving glaucoma treatment, patients then saw the value of preventive ophthalmologic care.

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One patient who participated in the study was a pastor at an Accra church being treated for late stage glaucoma. He was an intelligent, soft-spoken yet determined and passionate man. He spelled out the problem the study slowly uncovered. He told his story about how the people in Ghana culturally do not seek medical care unless there is a foreseeable problem. If something is hurting or broken, then they will seek a physician. He now has taken action to reverse this; the pastor invites health professionals to speak to his congregation about basic healthcare and the need for certain kinds of preventive care.

The healthcare system in Ghana does not currently provide enough incentive for people to seek regular ophthalmologic care. It is both a private and public operation, largely supported by the government national health insurance. The system focuses on dealing with infectious diseases caused, generally, by unsanitary conditions. An estimated 52 % of Ghana's population lives in an urban city area compared to 30 % for the rest of Africa.[7] The national insurance largely supports projects to build health centres that will expand treatment for communicable diseases such as malaria and tuberculosis (TB).[8] While enhancing the availability of health clinics, this policy does not effectively address other types of disease in Ghana, including glaucoma and AIDS, that require a different strategy for treatment: one that focuses instead on prevention. This preventive strategy treats with the objective of stopping the disease from occurring, while the current healthcare system is supporting treatment of infectious disease. When a health system is desperately scrambling to manage the heavy burden of infections disease like HIV, TB, and malaria, basic health promotion and primary prevention of other illnesses are often neglected. Glaucoma is a prime example of an illness that, with appropriate prevention and early diagnosis, can be treated successfully.

Although coupled with the structural constraint of the lack of support of glaucoma care, individual responsibility is ultimately the challenge facing effective glaucoma treatment. The 76 % of patients in the urban setting who arrive late for glaucoma treatment do have access to ophthalmologic care unlike the 96 % in the rural areas where there is no access to ophthalmologic care.[2] An increase in the access to ophthalmologic care does not significantly increase its perceived value. Intertwined with the efforts needed to expand the structure of care should also be a motive to demonstrate the value of the care. One plausible option for this is pursuing the vision of the pastor, namely medical screenings for local communities. By measuring the major risk factor of glaucoma, elevated eye pressure, those who may be glaucoma suspects can be referred to see a glaucoma ophthalmologist like Dr. Gyasi. These screenings not only provide the necessary early treatment but also demonstrate the

value and awareness that will hopefully give patients the motivation and incentive to seek routine eye screenings.

As the medical system in Ghana becomes a greater priority, the ability to treat the needs of the population is critical. The African Glaucoma Summit, a conference of ophthalmologists from around the continent meeting to discuss glaucoma care, was held in Accra in August 2010. Two of their main goals for glaucoma vision care were to both improve the ability to provide glaucoma care through more trained personnel to screen for the disease and to increase public awareness about the sight-stealing disease.[9] The population of Ghana, in terms of glaucoma treatment, needs support from the structure of their healthcare system as well as motivation to seek treatment. The interviewed glaucoma patients did associate value with receiving vision care for their glaucoma. They saw the connection between quality of life and their vision. Considering the significant prevalence of glaucoma in Ghana, there is a need to expand the focus of the healthcare system to reduce the numbers. In remembering the words, stories, and smiles of the glaucoma patients interviewed, the goal is not to just to treat the numbers but to treat each individual person.

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