Preventable Vision Loss Among Black Americans in Hennepin County, Minnesota

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Policy Proposal
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Abstract

Too many Black Americans in Hennepin County are losing their sight to glaucoma, a preventable disease which leads to permanent vision loss if left untreated. Black Americans have far higher rates of glaucoma than white Americans due to structural racism and access barriers. In Hennepin County, Minnesota an estimated 1,566 African Americans are at risk for developing glaucoma, but many likely are unaware of the risk because of the lack of warning symptoms. The Minnesota legislature must act to address this health disparity with preventative policy.

Problem

Too many Black Americans in Hennepin County are losing their sight to preventable disease. Glaucoma is the leading cause of irreversible vision loss among Black Americans, but it can be stopped [1, 2].

What is Glaucoma?

Glaucoma is irreversible damage to vision cells caused by high inner—eye pressure. If detected early, eye drops can stop glaucoma from developing, but without treatment it causes permanent vision loss and even blindness [3]. During the critical early stage there is no warning pain, so the only way to detect it soon enough is through medical assessment [4, 5].

Magnitude

Who is affected?

People who are 40 years or older, have high blood pressure, or have diabetes are at risk for glaucoma [1, 2]. Beyond these risk factors, Black Americans have far higher rates of glaucoma than whites because of structural racism and access barriers (Figure 1) [6, 7]. Glaucoma is the leading cause of irreversible vision loss for Black Americans [1, 7].

How does this impact Hennepin County?

An estimated 3,068 Black Americans in Hennepin County already report visual impairment, and calculated estimates indicate that at least 1,566 Black Americans in Hennepin County are at risk for glaucoma [7–9].

What does this cost?

Glaucoma costs the United States $2.8 billion per year in health expenses and productivity losses [10, 11]. In Minnesota, only 33% of individuals with vision disabilities work full—time and 41% do not work at all [12]. As a result, 20% of Minnesotans with vision disabilities live in poverty and 23% qualify as low—income [12].

Key Issues

Lack of early detection

The disabling effects of glaucoma can be prevented, but early detection is vital for successful treatment [5]. In the critical early period, professional screening from an eye doctor is necessary. Despite this necessity, only 13% of adults in the U.S. regularly see an eye doctor, and Black Americans have eye exams even less frequently than White Americans [13–16].

Access barriers

Glaucoma screenings and treatment can be prohibitively expensive. The average cost is $200 and can be as high as $500 depending on new patient required exams and related screenings [17].

Social barriers

Many areas of health care are underutilized by Black Americans because of institutionalized racism and historical trauma from systematic abuse by medical practitioners [18, 19].

Main Issue to Address

Glaucoma can be prevented, but only with screenings and treatment from eye doctors. The key issues to be addressed

are raising awareness and reducing costs to encourage at—risk Black Americans to get regular screenings.

Policy Question

How can the Minnesota legislature prevent glaucoma among Black Americans in Hennepin County?

Problem Trajectory

Racial glaucoma disparities have been known within the medical community for decades, but policy makers have only recently begun to address the underlying social determinants that cause these inequities [2, 20]. Why has it taken so long?

Political forces

Black Americans are historically and currently underrepresented in the Minnesota legislature (Figure 2), with the first Black Caucus in the Minnesota legislature formed in 2019 [21, 22]. Without adequate representation, their needs have been continually overlooked and ignored, leading to stark disparities [23]. Black Minnesotans are 3 times as likely to be uninsured as white Minnesotans [24].

Social forces

The size of the Black American population in Hennepin County has increased by almost 70,000 since 2000, including tens of thousands of immigrants [25–29]. Despite this increasing diversity, the vast majority of doctors are white [30]. Culturally insensitive care impedes trust between doctors and patients, reducing follow—up appointments and lowering the likelihood of successful long—term treatment [31, 32].

Economic forces

Minnesota ranks 47th in the United States regarding racial economic inequity and 50th regarding racial inequities in educational outcomes [33]. These disparities make it harder for Black American Minnesotans to afford glaucoma screenings.

Previous Policies

Adult vision care was not a required Essential Health Benefit for the MNsure expansion under the Affordable Care Act (ACA) [34, 35]. As a result, having vision insurance is rare despite overall improvements in health coverage [34—36].

Pressure for Action

Black Americans in Minnesota have always been underrepresented, but this historic inequity is now changing thanks to electoral triumphs of Black American politicians. These leaders have the power to address the problem of preventable glaucoma for their Black American constituents.

Policy Proposal 1: Subsidize glaucoma screenings and follow up care with the Minneapolis Glaucoma Detection and Treatment Project

In recent years, pilot interventions have set a precedence for glaucoma prevention policy. The Philadelphia Glaucoma Detection and Treatment Project, for example, combined community—focused educational outreach, targeted glaucoma screening, and wellness follow—through for at—risk Black Americans in the community [37]. This comprehensive program followed and supported Black Americans from their first screenings, preventative treatment, and annual check—ups. The results of the Philadelphia Glaucoma Detection and Treatment Project confirm what experts have insisted for over a decade: Routine screening for glaucoma among at—risk groups is a cost—efficient intervention, with benefits outweighing the cost of investments [38, 39].

Supported by this success, Policy Proposal 1 recommends that Hennepin County adapt the Philadelphia model to create a Minneapolis Glaucoma Detection and Treatment Project.

Effectiveness

The Philadelphia Glaucoma Detection and Treatment Project has been lauded by the CDC for its success and cost—effectiveness [10]. It increased glaucoma detection rates by 39%, allowing medical treatment to stop the progression of this debilitating disease [37]. The key to its success was the focus on follow—up. By maintaining contact with program members and supporting continued treatment and recommended follow—up appointments, the program increased rates of successful glaucoma management.

Political feasibility

This program would gain support from Democrats as it helps Black Americans and improves health for Minnesotans. This is especially true at present given the recent victories of Democratic Black American politicians who can directly advocate for their communities in the Minnesota legislature.

On the other hand, Republicans would be resistant due to the up—front costs of the program, especially as this program could be characterized as expansion of welfare and government—run health care. Nevertheless, as the program would assist older and elderly populations, decrease Medicare and other welfare spending, and help keep Minnesotans employed, it would be possible to gain bipartisan support.

Financial and administrative feasibility

This program would require upfront costs to establish community outreach programs, subsidize glaucoma screenings, and engage in treatment follow—up communication. To be successful, this program would require dedicated staff from Hennepin County or the Minnesota Department of Health, who would be paired with hired community partners. The Philadelphia model had an average per—participant cost of $139 for outreach, follow—up, and associated services [34]. Furthermore, depending on the level of subsidization for each screening, this could mean up to $200 per screening for every person enrolled [17].

Analysis of the Philadelphia Glaucoma Detection and Treatment Project, however, shows that these initial costs would be offset by savings to Medicare, disability services, and unemployment services [38]. According to research, up to $2,903 in health costs per person per year can be saved when glaucoma is successfully detected and prevented [39].

Ethical feasibility

Ethical concerns with this policy proposal include patient privacy and compliance with HIPAA medical data regulations. To successfully implement this policy, participant demographic and medical information will need to be collected and stored. These concerns are outweighed by the potential benefits of preventing irreversible vision loss from glaucoma.

Given the seriousness of vision loss, excluding other populations from this Black American targeted program is another ethical issue. Ideally, the program would be expanded after success in this highest—risk group has been established.

Policy Proposal 2: Minneapolis Expedited Glaucoma Referral Program

Policy Proposal 2 adapts a narrow, targeted program from Philadelphia, specifically the Wills Eye Hospital mobile eye clinic program. These clinics were created to provide glaucoma screenings to underserved Black Americans where they lived, gathered, and worshipped [10]. When glaucoma was detected, initial prescriptions were written and referrals were provided for local eye doctors, but all follow—up care was provided by private eye practices.

For this narrower Policy Proposal 2, it is recommended that Hennepin County create a Minneapolis Expedited Glaucoma Referral Program to bring mobile glaucoma screening clinics to Black Americans.

Effectiveness

The Minneapolis Expedited Referral Program mobile clinics would be comprised of four to seven vision technicians, one glaucoma specialist, and required medical equipment. The teams would go to senior living homes, community centers, and places of worship to perform glaucoma screenings and provide referrals to local eye doctors for follow—up treatment. As early detection is vital in preventing the progression of glaucoma, this policy would protect the sight of Black Americans by increasing screenings and awareness of the disease.

If patients are motivated and have the financial means to support long—term preventative prescriptions, they will reap the benefits of this program. Yet without follow—up and long—term financial support, increased glaucoma detection rates may not result in equal improvements in long—term vision loss prevention.

Political feasibility

Democrats will support an initiative that improves health for Black Americans while Republicans will protest the costs to taxpayers. The more targeted scope of the Minneapolis Expedited Referral Program and significantly lower up—front costs would nevertheless make this policy more feasible for bipartisan support. In addition, if the mobile clinic teams were assembled through paid initiatives for local eye doctors, Republicans could get behind the policy as a dual investment in local businesses.

Financial and administrative feasibility

Upfront costs would include recruiting mobile clinic teams, paying team member wages, subsidizing initial treatments, and possibly investing in mobile screening equipment. One option to mitigate these costs is partnering with the University of Minnesota's Medical School, thereby benefiting the community and offering a unique learning opportunity for medical students. In this arrangement, experienced eye doctors would lead the mobile clinics, provide initial training, and be accountable for providing quality care to this underserved population. With safeguards to ensure patient welfare is prioritized, these mobile clinics could be an opportunity for medical students to learn how to administer glaucoma screenings,

practice cultural sensitivity, and directly serve their communities.

If this were agreed to be mutually beneficial for the University of Minnesota and Hennepin County, cost sharing could further reduce the expenditure, significantly lowering the average cost per glaucoma screening, ideally to below $100 per test [17]. These costs could be reduced still further if a Medical Education and Research Costs (MERC) grant were procured to fund the program [40].

Ethical feasibility

Patient privacy and compliance with HIPAA medical data regulations are ethical concerns affecting this proposal. By going into the community, certain aspects of privacy, confidentiality, and data protection will be harder to maintain in mobile clinics than if screenings happened in established eye doctor offices. If a partnership with the University of Minnesota's Medical School were formed, additional ethical concerns would arise from including medical students in the clinics. Careful supervision of students and voluntary consent from patients would be necessary for the program.

There are also serious ethical questions involved with diagnosing people with diseases that they may not have the resources to treat. While the Minneapolis Expedited Referral Program of Policy Proposal 2 would require a relatively small investment of taxpayer dollars, it would also leave a heavier burden on participants during long—term glaucoma prevention treatment.

Recommendation

It is recommended that the Minnesota legislature pursue Policy Proposal 1, the Minneapolis Glaucoma Detection and Treatment Project. As a policy that promotes health in Black American communities, this should gain strong Democratic support. It is possible to gain Republican support as the program will decrease social spending in the long—term and help keep Minnesotans seeing, working, and self—sufficient.

Though Policy Proposal 1 may be the more cost—intensive option, it is by far the more comprehensive. The additional expenses would be paid for in the long—run through decreases in glaucoma—related health care spending, disability services, and employment services. This holistic, humanizing intervention will also help make amends for the medical abuse of Black Americans by building long—term relationships between doctors and communities.

It is therefore strongly encouraged that the Minnesota legislature and Hennepin County invest in Policy Proposal 1, the Minneapolis Glaucoma Detection and Treatment Project.

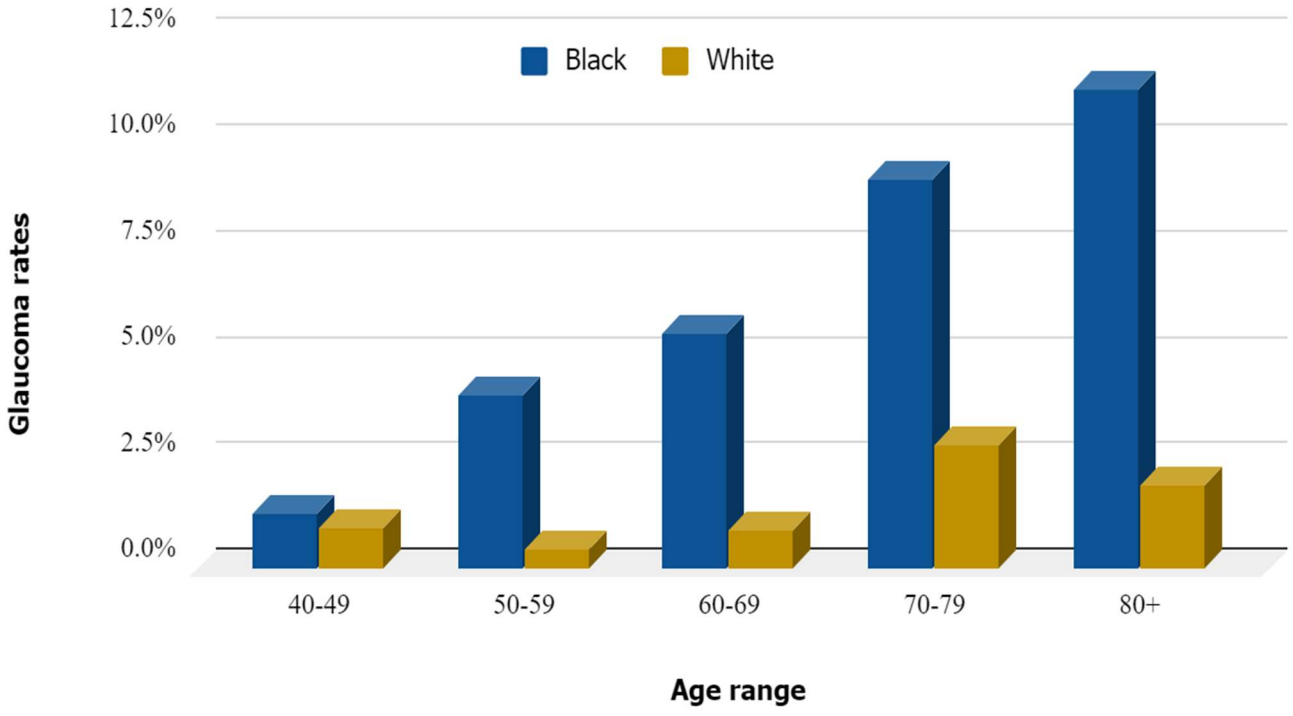

Figure 1: *Glaucoma Rates by Race: Black vs White.* Created by author using data from Tielsch et al [7].

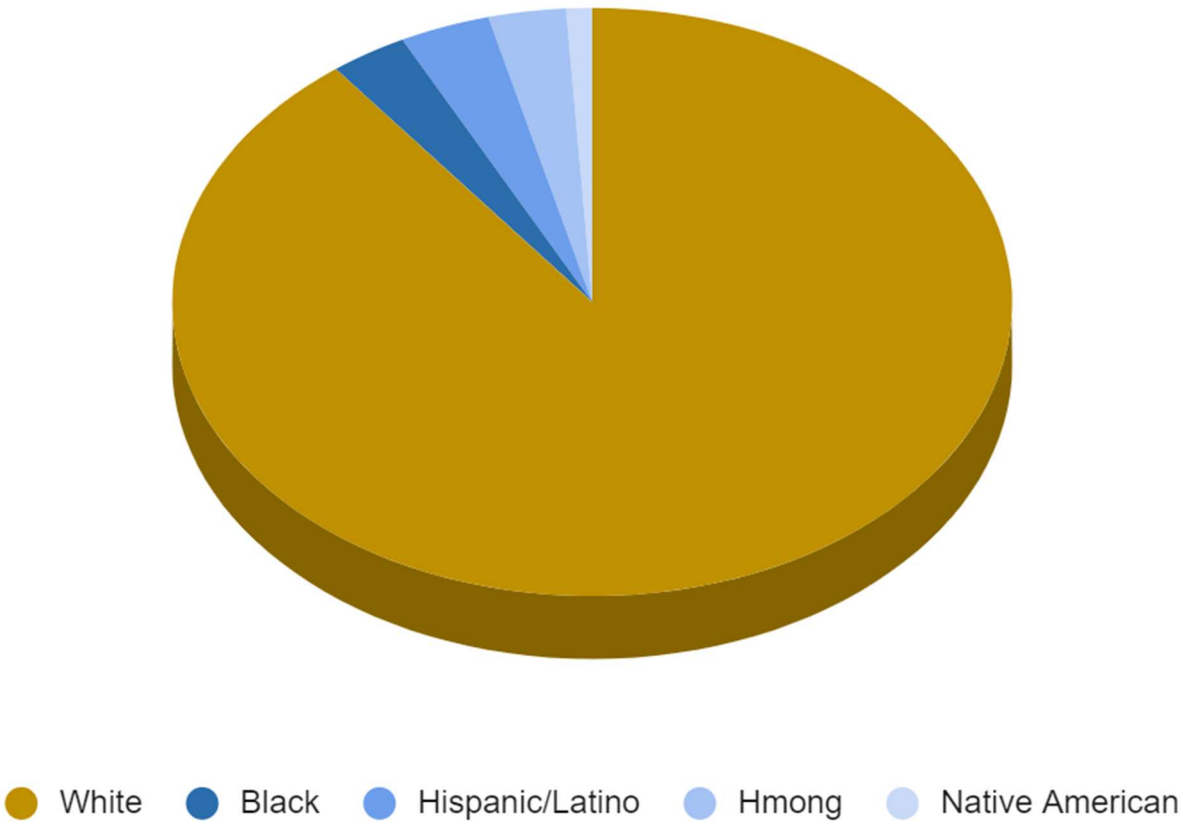

Figure 2: *Racial Diversity in the Minnesota Legislature, 2019—2020.* Created by author using data from Faircloth [21] and the Minnesota Legislature [41] .

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