YOUTH HEALTH FOCUS

YOUTH HEALTH NOW

Fall 2025 Issue

BREAKING BARRIERS: ACCESS, AFFORDABILITY, AND TRUTH IN PUBLIC HEALTH

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LETTER FROM THE EDITORS

Youth Health NOW — Fall 2025 Issue

As the Youth Health NOW editorial board, we are proud to present the Fall 2025 issue of Youth Health NOW, an edition shaped by the voices of young researchers who refuse to accept the status quo in public health.

This issue, “Breaking Barriers: Access, Affordability, and Truth in Public Health,” arrives at a moment when systemic inequities, rising healthcare costs, and widespread misinformation continue to determine who receives quality care and who is left behind. Across high schools, college campuses, and community programs, students are confronting these challenges with clarity, originality, and an unwavering commitment to health equity.

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The works in this edition represent the breadth and urgency of the barriers youth see in their own communities, homes, and digital spaces. Students examine how financial disparities shape treatment outcomes, from the overwhelming cost of staying alive with Parkinson’s disease to the broader question of how socioeconomic inequality becomes “medicine” in its own right. Others interrogate misinformation as a public health threat, analyzing its spread on social media, the credibility of fitness influencers, and the growing misuse of peptides among teens navigating online fitness culture.

Several authors tackle structural and cultural barriers to care: the broken promises of the organ donation system, persistent gaps in culturally competent care for Muslim communities, and the consequences of decentralized healthcare in the Philippines. Others push into the ethical frontier, questioning how gene-editing policies intersect with eugenics, or how emerging neuroscience and AI research must remain grounded in ethics, transparency, and accessibility.

LETTER FROM THE EDITORS

Each submission in this issue underwent a rigorous double-blind peer review, ensuring both academic integrity and the elevation of underrepresented perspectives. We are deeply grateful to our editorial board and reviewers, whose thoughtful evaluations and revisions uphold the journal’s commitment to high-quality youth scholarship.

This issue also serves as a prelude to the upcoming Spring 2026 Youth Health Research Symposium, where selected authors will present posters, talks, and multimedia exhibits. The symposium serves as a space for collaboration, mentorship, and the celebration of youth-led inquiry, bridging research with community impact.

To the students who contributed their work: thank you for your courage, your rigor, and your belief that research can be a tool for justice. To educators, community partners, and readers: thank you for supporting the next generation of health leaders.

As you read these pieces, we invite you to reflect on the barriers that persist, and on the power of informed, dedicated young people to dismantle them.

In solidarity and scholarship,

The Editors of Youth Health NOW
Youth Health Focus (YHF)

TEAM

Patrick Ting, Co-founder of Youth Health Focus, is dedicated to amplifying marginalized voices and addressing systemic injustices that perpetuate barriers to healthcare access and health equity.

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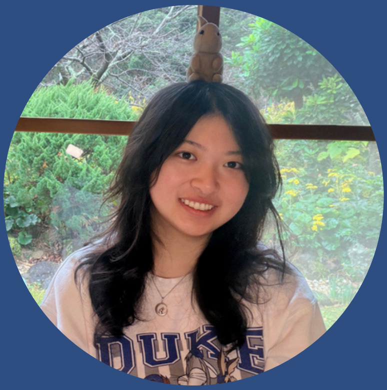
As Co-founder of Youth Health Focus and Co-President of the Berkeley chapter, **Ariel Lee** works alongside underserved communities to promote equitable access to healthcare, prioritizing education, prevention, and community empowerment.

As Co-President of the Youth Health Focus UC Berkeley chapter, **Hanbin Yu** champions health advocacy and policy to help close access gaps, focusing on community-driven initiatives that amplify patient voices and improve health equity.

TEAM

Anjana Goli is the Director of Research and Journalism at YHF's Berkeley Chapter. She is passionate about making medicine and healthcare more sustainable and accessible for all.



Mei-Mei Hu, President and Founder of Youth Health Focus' Duke Chapter, is committed to advancing health equity by empowering youth-led service and storytelling initiatives that amplify marginalized voices and reduce barriers to care in the Durham community.

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ACCESS & AFFORDABILITY

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THE BROKEN PROMISE OF ORGAN DONATION: INEQUITIES, INEFFICIENCIES, AND THE PATH TOWARD REFORM

MITALI SRIVASTAVA

Despite decades of medical progress, the U.S. organ donation system continues to reflect deep and systemic inequities. More than 100,000 people remain on the national transplant waiting list (Salahi). Yet the system governing organ transplantation remains riddled with bias, inefficiency, and structural neglect. These failures are not merely bureaucratic; they are moral and public health crises that disproportionately harm poor and minority patients, who face the lowest odds of survival.

THE INEFFICIENCY OF MONOPOLY AND MISMANAGEMENT

A single organization largely oversees organ donations across the U.S.. The United Network for Organ Sharing (UNOS) is a nonprofit established in 1984 to track and allocate organ transplants under contract with the U.S. government. Since then, it has been the sole manager of the national transplant list, which matches donors with recipients. It also maintains a database of information from every U.S. organ transplant performed ("About UNOS"). Recently, UNOS has faced mounting criticism for mismanagement and lack of accountability, evident through the failures of its local organizations.

Organ Procurement Organizations (OPOs) are local groups that manage day-to-day operations of assessing donor potential, obtaining organs, and updating transplant data. There are currently 56 OPOs in the U.S., and they all operate under UNOS and the Centers for Medicare and Medicaid Services (CMS). However, OPOs have faced inadequate levels of regulation from these groups. A 2022 Senate report found that they have lost or wasted viable organs due to poor logistics and procedural errors. In 2020, for instance, a recently procured kidney was discarded after being rendered unsterile. In 2017 and 2018, two separate OPOs oversaw organ retrieval procedures on donors who were still alive upon surgical entry into the chest cavity. Even more troubling, only about 40 percent of claims like these are referred for additional review within UNOS (O'Malley). As a result, OPOs can make grave errors that lead to organ wastage and premature procurement without facing meaningful consequences. These inefficiencies are not only immoral but also uneconomical. Kidney transplants, for example, save patients far more money in the long run than the ongoing cost of dialysis (Salahi). Such dysfunction erodes public trust and increases the financial burden on patients.

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SYSTEM BARRIERS TO ACCESS

U.S. organ donation services reflect and reinforce existing inequalities that plague the healthcare system. Low-income patients face steep barriers, as they are 45 percent less likely to be placed on the waitlist and 97 percent more likely to die before receiving a transplant (Salahi). In 2022, over half of all white patients on the transplant list received organs, while only 30 percent of Black patients did (O'Malley). This disparity is partly attributable to socioeconomic inequality: many underprivileged, predominantly Black neighborhoods lack access to quality education and healthcare. These gaps reveal that barriers extend beyond individual behavior or medical suitability; they are structurally embedded. Poverty, lack of insurance, and geographic distance from major transplant centers all reduce the likelihood that a patient can complete the lengthy evaluation and referral process required to be listed. Race alone can further restrict access. A 2025 study published in JAMA Network Open found that Black patients are 39 percent less likely to be evaluated for a lung transplant, even when controlling for income and neighborhood factors (Salahi). Unconscious biases among healthcare providers influence referral decisions, leading to fewer Black patients being evaluated regardless of medical need. Sensitive to both unconscious racial bias and socioeconomic disadvantage, Black patients face disproportionately high barriers to healthcare access.

BIAS IN ALLOCATION

Inequity also emerges from the formulas used to determine transplant priority. The Estimated Post-Transplant Survival (EPTS) score calculates how long a patient is expected to live after a transplant based on diabetes status, dialysis status, prior transplants, and age. The Kidney Donor Profile Index (KDPI) measures the functionality of a donor kidney. Because white patients are statistically more likely to receive better EPTS scores—due in part to systemic advantages in health and earlier diagnosis—they are disproportionately prioritized for the highest-quality organs. In 2019, despite a similar number of Black and white patients on the kidney waitlist, white patients received 65 percent of preemptive treatment while Black patients received only 17 percent (Kinney). Indices such as EPTS and KDPI, therefore, reflect and amplify racial and economic disparities.

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Gender-based disparities further persist. For years, women were systematically disadvantaged in liver allocation. The Model for End-Stage Liver Disease (MELD) score prioritized recipients based on levels of creatinine, bilirubin, and international normalized ratio. Studies found that women, who tend to have lower creatinine levels, scored on average two points lower than men with equivalent liver function. One study found that women on the waitlist under the MELD system were 8.6 percent more likely to die waiting for a liver and 14.4 percent less likely to receive one. Only in 2023 did UNOS update the model to MELD 3.0, which adjusts for gender differences in creatinine, albumin, bilirubin, and sodium levels (Kinney). The improvement demonstrates that algorithmic reform can enhance equity, but it also highlights how long inequities can endure before institutions act. Even with updates, these systems remain imperfect and require continual revision.

ECONOMIC AND ETHICAL IMPERATIVES FOR REFORM

Stronger regulations must be implemented for OPOs to increase efficiency and ensure accessible, economical care for patients. One change could involve altering how OPOs are compensated. Currently, CMS pays OPOs based on self-reported costs, which may be inaccurate or overinflated. Instead, compensation should be calculated by CMS based on factors such as donation rates, transplantation rates, patient survival, and the number of discarded organs to ensure that OPOs are rewarded for quality rather than quantity.

Organ donation inefficiencies also stem from deeply rooted systemic barriers tied to healthcare, education, and housing. Reducing these inequities would indirectly make organ allocation more equitable by improving health outcomes. Schools should receive equitable funding, regardless of ZIP code, so that families can secure stable employment, housing, and healthcare, rather than being trapped in cycles of poverty. Housing policies must also be reformed to address the legacy of racially biased “redlining” adopted by the FHA, which denied mortgages to underprivileged minority neighborhoods (Lathan). Such policies trapped families in poor living conditions and restricted financial mobility. Creating programs that assist people in disadvantaged neighborhoods to purchase safe homes would reduce inequality and improve community health.

Reforms must also address bias within allocation algorithms by funding healthcare research and regularly updating models. Although MELD 3.0 is more equitable than its predecessor, a new system developed in Europe, the Gender-Equity Model for Allocation Incorporating Sodium (GEM-Na) more accurately accounts for sex-based differences (Kinney). Algorithms can always be improved, and it is essential to fund studies and pressure UNOS to update its models consistently based on well-tested findings.

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CONCLUSION

The organ donation system embodies the broader failings of the American healthcare system: inequitable access, bureaucratic inefficiency, and structural bias. Reform demands a moral and policy reckoning with how fairness is defined and whose lives are prioritized. Every wasted organ, missed evaluation, and patient left waiting represents a lost opportunity to save a life. Until accountability and equity are prioritized, the promise of organ transplantation will remain an impossible-odds game for far too many.

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COST, ACCESS, AND EQUITY: A DUAL APPROACH TO REFORMING U.S. HEALTHCARE

THANAPAT NIMMANPIPAK

Introduction: The Cost of Inequality in U.S. Healthcare

The CDC defines health equity as the state in which everyone has a fair and just opportunity to attain their highest level of health (CDC, 2024). Historically, issues involving economic and social injustices have been the leading factor in exacerbating health inequality in the United States. According to Deloitte, health inequalities account for approximately $320 billion in annual health care spending and could potentially rise to $1 trillion by the year 2040 (Davis et al., 2022). The leading cause for rising health care costs is primarily attributed to rising prices for drugs and services, and a lack of insurance coverage. Despite efforts by pharmaceutical companies to limit increases in drug prices, the median price increase between 2024 and 2025 is 4.5%, outpacing the rate of inflation by 1.5% (Erman, 2024). Moreover, launches of new drugs are attributed to high price hikes, with new U.S. drugs being introduced at prices 35% higher in 2023 than in 2022, limiting access to novel life-saving medicines (Erman, 2024).

Diabetes is one of the most prominent diseases in which patients experience health disparities. The United States has the highest price of insulin globally, with reports demonstrating prices five to ten times higher than in other developed nations. Data show that Black adults are significantly more likely to be diagnosed with diabetes and are two to three times more likely to experience complications due to health inequality (Davis et al., 2022). In fact, unnecessary spending associated with disparities in diabetic patients accounts for $15.6 billion annually (Davis et al., 2022).

Inaccessibility to healthcare, combined with high pharmaceutical prices, discourages low-income families, racial and ethnic minorities, young adults, and rural communities from seeking appropriate care. In 2023, a National Health Interview Survey reported that 28% of U.S. adults delayed or avoided medical care due to cost (Rakshit et al., 2024). Among this population, 36% were Hispanic, 32% were Black, 25% were White, and 20% were Asian, demonstrating that cost-related barriers disproportionately affect Hispanic and Black communities (Rakshit et al., 2024). Furthermore, data from the same report indicate that 11% of adults lacked a usual source of care, 11% struggled to pay medical bills, and 45% worried about future medical expenses (Rakshit et al., 2024).

Insurance status further compounds unequal access to care. Of adults who delayed or did not receive health or dental care due to cost, 55% were uninsured, including 16% Black and 13% Hispanic individuals (Rakshit et al., 2024). Reports from the Commonwealth Fund show that even insured individuals often incur medical debt, discouraging prescription adherence and healthcare utilization (Collins et al., 2023). This review examines existing research and critically analyzes current solutions to health inequality in the United States to highlight initiatives aimed at improving healthcare access and affordability.

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Solution I: Policy Reform

Policy reform remains one of the most effective approaches to increasing healthcare access and affordability in the United States. State-level initiatives have demonstrated viable strategies for limiting spending while improving health outcomes. A Commonwealth Fund report highlights the role of Health Policy Commissions in states such as Massachusetts and Maryland in enforcing spending benchmarks, supporting agency-led reforms, and directly authorizing cost-containment measures (Chernew et al., 2021). For example, Massachusetts' Health Policy Commission, in collaboration with the state attorney general, mediated the merger between Beth Israel Deaconess Medical Center and Lahey Health due to concerns over potential price increases and reduced access for underserved populations (Chernew et al., 2021). The settlement resulted in over $70 million in financial commitments to low-income communities.

Additionally, several states have implemented rate caps on provider payment increases and expanded population-based payment models, in which hospitals and clinics receive fixed annual budgets rather than billing per service. These changes encourage coordinated care and discourage unnecessary utilization, improving both efficiency and equity (Chernew et al., 2021).

At the federal level, Stanford Medicine researchers have proposed policies to expand Medicare drug price negotiations by increasing the number of eligible drugs from 10 to 30 annually by 2026. This initiative aims to reduce excessive launch prices and expand access to essential medications, generating an estimated $550 billion in savings over a decade (Patel & Schulman, 2024). Notably, federal negotiations have already led to reductions in the price of non-branded insulin from Eli Lilly, dropping from $275 to $25 per vial (Patel & Schulman, 2024). Complementing these efforts, the National Institutes of Health has advocated for increased pricing transparency and improved reimbursement structures for high-cost medications to promote equity and affordability (Rajkumar, 2021).

Solution II: Corporate Restructuring

Beyond government regulation, reducing inequality requires restructuring how healthcare organizations and employers purchase and deliver care. The Center for American Progress highlights Louisiana's "Netflix-style" subscription model for hepatitis C treatment, in which the state pays a flat annual fee for unlimited access to medication rather than per-prescription pricing (Waldrop, 2021). This approach secured lower per-unit drug costs and ensured treatment access for over 10,000 residents who otherwise could not afford care (Waldrop, 2021). Similar collective purchasing strategies can counter monopolistic pricing and expand access to critical medications for low-income and minority populations.

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The Commonwealth Fund's case study of employer-provider collaboration in Findlay, Ohio, further illustrates the potential of incentive restructuring. Local employers partnered with physicians and hospitals to pool claims data, identify gaps in chronic disease management, and standardize care pathways for conditions such as diabetes and hypertension (The Commonwealth Fund, 2024). Within two years, the initiative reduced emergency department visits and improved outcomes for high-risk patients (The Commonwealth Fund, 2024). These findings demonstrate that shared accountability between employers and providers can shift healthcare delivery toward prevention, affordability, and long-term wellness.

Conclusion: The Dual Approach to Achieving Health Equity

The evidence from policy and market-based initiatives demonstrates that reducing health inequality in the United States requires a dual approach: government-driven reform to control systemic spending and market restructuring to realign incentives toward public health goals. Together, these strategies can lower drug prices, improve care coordination, and ensure equitable healthcare access—particularly for communities most affected by cost barriers. Continued integration of these approaches represents a necessary step toward building a just, affordable, and sustainable healthcare system in the United States.

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WHEN MONEY BECOMES MEDICINE: THE HIDDEN COSTS OF SOCIOECONOMIC INEQUALITY

HAJER HADID

Abstract:

Health doesn't start at the doctor's office; it starts in your wallet, your neighborhood, and sometimes even in your crib. Yet, too often, people assume that chronic diseases in Black communities are simply a matter of genetics, as if biology alone dictates who thrives and who struggles. But is this really the case? The answer lies largely in socioeconomic status. From neighborhoods where a dollar buys less to the daily stress of making ends meet, socioeconomic status shapes health in ways we often overlook. Add in decades of systemic discrimination and medical mistrust, and it becomes clear that health isn't just passed down in your DNA. This paper looks at how resources and opportunities shape health, proving that genetics tells only part of the story.

Where Money Buys Health:

Undoubtedly, socioeconomic status plays a huge role in a person's health outcomes (Kaufman, Cooper, & McGee, 1997). But let's pause. One might say that Black communities might just be more genetically susceptible to these health issues, rather than it being socioeconomic status. This is very common in what I like to call the "sickle cell argument," where people argue that just based on genetic differences, that is why a group is more susceptible to health outcomes. While that may be partially true, many of the chronic diseases that make up the bulk of morbidity and mortality among Black people (like hypertension, stroke, and common cancers) do NOT have a consistent genetic link to African ancestry. So, this begs the question of where these health disparities come from.

The socioeconomic status of Black people compared to White people can provide a plausible explanation for this. Black people, on average, have a lower SES than White people, and we know that it affects many health outcomes. Data also show that Black people are more likely to live in neighborhoods where equivalent housing, basic food costs, insurance costs, and loan interest rates are higher. In these neighborhoods, a dollar buys fewer goods and services, and a given income has less real value (Kaufman, Cooper, & McGee, 1997).

Not only that, but having more money can even affect your infants. There was a very interesting experiment conducted called "Baby's First Years," where 1,000 low-income mothers (most of whom were Black or Latina), shortly after birth, received a monthly cash compensation. One group received a large cash gift of $333/month, while the other group received a smaller cash gift of $50/month. They continued receiving these cash gifts for 12 months, and the results on the babies' electroencephalograms (EEGs) were intriguing. The babies of the mothers who received the larger cash gift exhibited mid to high frequencies, which are

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associated with better language, emotional, and cognitive development later in life, compared to the other group (Troller-Renfree et al., 2022). This study undisputedly highlights that not only can race play a role in health disparities, but also poverty itself.

The Role of Medical Mistrust in Health Misinformation:
It's important to note that some racial and ethnic groups have experienced medical discrimination and exploitation, which can cause distrust towards official health sources. From many studies, we can see that various racial groups experience medical discrimination. One notable example is the origin of the famous “HeLa cells.” Henrietta Lacks was a Black woman suffering from cervical cancer, and her cells were collected from her tumor without her consent. These cells are still well-known today as HeLa cells because they were the first immortal human cell line, which continues to be used for numerous medical breakthroughs, such as vaccines, cancer research, and cloning studies. This is just one example of the medical field’s failures toward the Black community, and we can also observe the magnitude of this mistrust during the tragic COVID-19 era. Many Black individuals were hesitant to take the COVID-19 vaccines (Nah et al., 2024). If we look at the data, Black Americans represented about 14.3% of the total COVID-19 deaths in the country, which is a shockingly high number considering they make up only 13% of the United States population (Nah et al., 2024).

Research has suggested that medical mistrust may be associated with belief in misinformation. An online survey conducted in The Roles of Social Media Use and Medical Mistrust in Black Americans’ COVID-19 Vaccine Hesitancy: The RISP Model Perspective asked Black Americans to respond to a variety of statements related to medical mistrust, such as, “People of my ethnic group cannot trust doctors and healthcare workers” and “Doctors and healthcare workers treat people of my ethnic group like ‘guinea pigs.’” Participants rated these statements on a 1–5 scale (1 = Strongly Disagree, 5 = Strongly Agree). They were also given statements regarding belief in misinformation about the COVID-19 vaccine, such as “The COVID-19 vaccine causes infertility” and “The vaccine can be used to control people,” and rated them on the same 1–5 scale (Nah et al., 2024).

The results showed a positive correlation between increased belief in vaccine misinformation and higher levels of medical mistrust, which in turn strongly predicted vaccine hesitancy.

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Conclusion:

When we peel back the layers of health disparities in America, it becomes clear that the story isn't written in our genes but rather in our circumstances. Money, opportunity, and trust each play powerful roles in determining who gets to live a long and healthy life. The research makes one thing undeniable: socioeconomic inequality doesn't just shape the quality of our neighborhoods or our communities, but it shapes our very biology. From the neural development of infants to the chronic stress of adulthood, poverty leaves fingerprints on the body and the brain. And when you add generations of systemic racism and justified medical mistrust, the gap in health outcomes widens even further. If we truly want to address racial health disparities, the solution isn't found in the genome but in justice. Because at the end of the day, health is not just a matter of medicine; it's a matter of equity.

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THE COST OF STAYING ALIVE WITH PARKINSON’S DISEASE

ALANI CHUNG

Who would have thought that one has to pay to exercise? Many people pay for gym memberships or Pilates sessions as a matter of leisure or fitness; however, for those living with Parkinson’s, access to exercise therapy can be a matter of survival.

Parkinson’s Disease is a neurological movement disorder that only worsens over time. It impacts nearly 90,000 people in the U.S. each year and there is no definite cure (Statistics). Its complexities not only make it difficult for patients to recognize their symptoms and determine which treatments may be most effective, but they also highlight how the wide range of symptoms leads to less accessible individualized treatments. While medication is the primary treatment for reducing or controlling symptoms, particularly Carbidopa-levodopa, Dopamine agonists, and Monoamine oxidase B (MAO B) inhibitors, their benefits only go so far. This is where additional therapy comes in to aid in managing symptoms (Staff).

While physical, occupational, and speech therapy are the most common methods, exercise and boxing clinics have been gaining popularity as they help increase mobility, strength, and balance in patients. For instance, the Rock Steady Boxing Organization is an international nonprofit that aims to improve the quality of life for people with Parkinson’s. Although there appears to be a wide range of various treatments available, many people are still unable to access the comprehensive care they need in reality. This is largely due to various barriers, including clinical perceptions, unfunded therapies, language barriers, and limited insurance coverage, which can only fund one’s treatment to an extent. This brings a significant burden to minority or less fortunate communities that can not afford these services let alone be provided these certain types of care in the first place.

There is often a stigma associated with physical therapies to treat Parkinson’s Disease, despite them being very helpful with reducing symptoms. The Resolve Parkinson’s foundation emphasizes how these alternative therapies often go unstudied and therefore are underfunded or dismissed, which means that even if there are available resources nearby individuals are unaware and will likely not be recommended by their primary care providers. This is especially true as oftentimes, these clinics are typically in major urban areas, which creates a geographical barrier for those who have Parkinson’s that live in smaller communities, and when on the rare occasion there are clinics in rural areas they often face significant financial barriers.

It is also important to note that insurance coverage is patchy; the National Library of Medicine reveals that patients often face either long wait times for neurology referrals or out-of-pocket costs for specialist visits, advanced therapies, and transportation which create further burdens for low-income patients. Even with a steady income, Parkinson’s takes control of one’s moment, cognitive abilities, and more, which forces people out of their work, so gaining continuous coverage is a challenge for everyone.

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ALANI CHUNG

So now the question is, is there a solution? While there is no quick fix, society can begin to contribute to building a more inclusive and accessible community for those with Parkinson’s Disease, ensuring that underrepresented or smaller communities can also access the resources they need. One way to do this is to fund or advocate for smaller clinics across communities, which branch off from bigger organizations. For instance, Starting Line Strength and Stability Center is a nonprofit that serves small surrounding communities and partners with the Rock Steady Boxing Organization, providing care to people with Parkinson’s through boxing training, exercise, and cognitive activities. If more communities had small clinics that are not overpriced, such as Starting Line, available to them, this would create a significant difference in the accessible care provided. Society should not allow a system of health inequality to exist and should advocate for a future of accessible healthcare for everyone.

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BRIDGING THE CULTURAL GAP: HOW BARRIERS TO CULTURALLY COMPETENT HEALTHCARE AFFECT MUSLIM COMMUNITIES

NOUR EL HUDA HADID

Abstract

The importance of religious and cultural sensitivity in healthcare is still a major factor to consider in achieving health equity. Even though patient populations are increasingly diverse, many hospitals and clinics do not have doctors and nurses who are able to adequately care for Muslim patients, particularly women who require gender-concordant care. This literature review gives an overview of existing studies on the impact of the absence of either Muslim healthcare professionals or culturally competent non-Muslim healthcare professionals on healthcare access, trust, and outcomes within the context of Western Muslim communities. Moreover, it points to the interventions being done to address these barriers for the sake of inclusive care.

Introduction

The Muslim community in the United States and parts of Europe has experienced a demographic boom. However, the healthcare sector has not yet been able or willing to adapt to its unique cultural and religious requirements. For many Muslims, the practice of making health decisions is not separate from religious practices, like gender interactions, fasting during Ramadan, and beliefs about death. If these issues are not respected or acknowledged, it will lead to not only Muslims being uncomfortable but also to worse health outcomes and withdrawal from the health system.

According to research, Muslims are a major group that has a hard time getting healthcare that does not violate their values (Zagloul et al., 2024). The limited cultural competence of non-Muslim healthcare professionals, discrimination of Muslim healthcare professionals, and a specific shortage of female providers are factors that contribute to the difficulties mentioned earlier. This question must be answered for the sake of improving both health equity and public trust.

Barriers to Access and Trust

Several studies demonstrate that Muslim patients are usually the ones who feel mistrust and fear of being discriminated against or getting embarrassed when they are treated by specialists who lack knowledge regarding their religious needs (King et al., 2023). Among all patient groups, women show the strongest need for physicians of the same gender, but such options are unavailable in many clinics and rural areas, and emergency care is the worst affected (Azhar et al., 2022). This situation can easily turn into a refusal to go to the doctor for a consultation, especially in cases of reproductive health or cancer screening, which are considered sensitive procedures.

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According to Attum et al. (2023), misunderstandings about modesty, fasting, or halal medication may lead to unintentional injury. A case in point is that some Muslim patients refuse to take gelatin or alcohol-derived medicine. In such situations, if medical practitioners do not consider these patients' fears seriously, or if they do not suggest alternatives, the patient-doctor relationship simply erodes. Patients may then seek the help of community healers, online forums, or family advice, which may lead to the spread of misinformation and thus interrupt the provision of evidence-based care.

Impacts on Health Outcomes

According to a 2024 review, screening for cervical and breast cancer was much less common among Muslim patients who were distrustful of the healthcare system (Zagloul et al., 2024). In the area of mental health, many Muslim communities still carry heavy stigma, and the problem is even more pronounced when non-Muslim practitioners either fail to diagnose spiritual distress correctly or fail to acknowledge religious coping mechanisms. Patients who feel unappreciated tend not to come for follow-up counseling or to inform the doctor about symptoms (Cucchi, 2022). Similarly, lack of knowledge about Muslim customs in end-of-life care, such as the prohibition of euthanasia and modesty requirements, can cause conflicts and emotional disturbances and lead to feelings of dehumanization (Klitzman et al., 2023).

The Importance of Representation

Discrimination, Islamophobia in the workplace, and unwelcoming training environments are some of the factors that discourage physicians-in-training from entering and remaining in the medical profession (Padela et al., 2023). These barriers are often compounded for Muslim women, who face intersecting biases related to both gender and faith. Discrimination against Muslim healthcare providers leads to unequal access for Muslim patients—particularly women—who enter the system seeking similar care, perpetuating a vicious cycle of structural inequity.

Cultural Competence as a Bridge

Increasing Muslim representation is absolutely vital, but it cannot be done at once. Hence, the education and training of non-Muslim doctors to be culturally and religiously competent remains the main priority. A couple of interventions have shed light on the following approaches:

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Medical Education Curricula: The research team led by Sarsour & Hammoud (2021) introduced modules on the care of Muslim patients, which included Ramadan fasting, modesty, and communication as covered issues. The surveys conducted after the training sessions indicated that clinicians' confidence and empathy had increased.

Institutional Policy Changes: The hospitals that established staffing systems with the same gender for the doctors and the patients, provided halal food options, and made prayer arrangements reported higher levels of patient satisfaction and trust (Abdulbaseer et al., 2025).

Community Partnerships: Collaborations between mosques and departments of public health, for instance, have led to increased vaccination uptake by conveying the message through the trusted faith leaders (Padela et al., 2011).

Policy Implications
It is necessary to establish multi-level reforms to deal with these problems:

1. Recruitment and Mentorship: The implementation of scholarships and mentoring programs for Muslim students in medicine and nursing, especially to support and retain women in patient-facing specialties, will not only help in diversifying the workforce but also in the creation of support networks.

2. Mandatory Cultural Competence Training: Education on Islamic health perspectives should be incorporated into diversity, equity, and inclusion standards by accrediting bodies.

3. Institutional Flexibility: The implementation of policies that allow flexibility in scheduling during Ramadan or gender-concordant care models can help reduce attrition and increase satisfaction.

4. Community Advisory Boards: In hospitals catering to large Muslim populations, it is essential that policy and ethics discussions involve the Muslim community representatives.

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Critical Gaps and Future Research

The literature so far, although indicating a large number of qualitative cases, does not provide sufficient quantitative data. The number of large-scale investigations that directly consider the effects of provider-patient religious concordance on health outcomes and cost savings is very limited. To better understand Muslim patients' experiences, mixed-methods studies should be among the future research approaches used to evaluate whether an increase in cultural competence has a significant impact on the rates of screening, medication adherence, or satisfaction scores.

Another area of concern that needs further exploration is the diversity of the intra-community. Muslim groups have a variety of ethnic and language backgrounds and healthcare systems need to be careful not to consider them all to have the same needs. Research comparing Muslim-dominant areas with those having very few Muslims could shed light on which adaptable best practices work across contexts.

Conclusion

The scarcity of Muslim as well as culturally competent non-Muslim healthcare professionals creates a barrier that is silent but still powerful and that still undermines the creation of an equitable healthcare system. It restricts access, erodes trust, and aggravates misconceptions in the Muslim population. However, there are methods to solve the problem: welcoming education, policy changes, and honest involvement of the community.

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ISSUES IN PHILIPPINES' HEALTHCARE AND DECENTRALIZATION OF HEALTHCARE SYSTEMS

ANJANA GOLI

The Philippines is known as Asia’s Pearl of the Orient for the beauty of its geographical landscape and its rich culture. The Philippines, with its 7600 islands, has quite a few remote places. The country is broken into 18 regions, 81 provinces, 149 cities, and 1483 municipalities (Philippines Statistics Authority, 2016). Both public and private sectors hold a strong presence in the Philippines healthcare system. Public hospitals take an active interest in educating the public on health care, along with offering primary and preventive care. The private hospitals offer specialized health care services. During the pandemic, they upgraded all hospitals to cope with the situation. The PhilHealth program, which came into being with the Universal Health Care law in 2019, has allowed all Filipinos access to health care (International Trade Administration, 2024). Creating such a robust health care system that would have widespread implementation across the country and provide every remote location with it is a unique and huge challenge. This is compounded by the tendency of the highly educated doctors and nurses to stay away from the remote villages and the immigration to the cities, or worse yet, settle in a foreign country, creating brain drain. Public hospitals have historically struggled to keep staffing levels adequate and at sustainable levels, as nurses and doctors often move to the private sector for better wages and a better quality of living in the cities. This has created disparities in the quality of healthcare services between remote villages and cities.

The Philippines’ health care system is, by design, distributed between public and private sectors. The public hospitals tend to handle primary care for their citizens, while any specialized care for specific diseases like cancer and cardiovascular diseases is dealt with by private hospitals. All government spending on health care is focused on supporting the development of treatment for specific diseases. There has not been a government or policymakers' vision to create universal health care until recently. The PhilHealth program at this time serves more than 90% of the Philippines population (International Citizens Insurance, 2025). The Philippines’ policy-making has been historically geared towards disease-specific initiatives rather than creating a strong health care system. However, policymakers also need to hold a vision for strengthening the entire health care system and uniting across all initiatives along the way. A deep paradigm shift in policy-making is necessary to strengthen the Philippines' healthcare system from one that is driven to focus on disease-centered initiatives (International Trade Administration, 2024). PhilHealth has put the trajectory of the Philippines in the right direction. The public health care system struggles to staff these health stations adequately due to a lack of quality and sufficient health care staff who are willing to spend their lives in the villages. Treatments are very commonly delayed at a public health care facility. The private health care system pays its doctors, nurses, and non-medical staff much higher than their public counterparts and offers better employment benefits with more flexibility than quality of employment.

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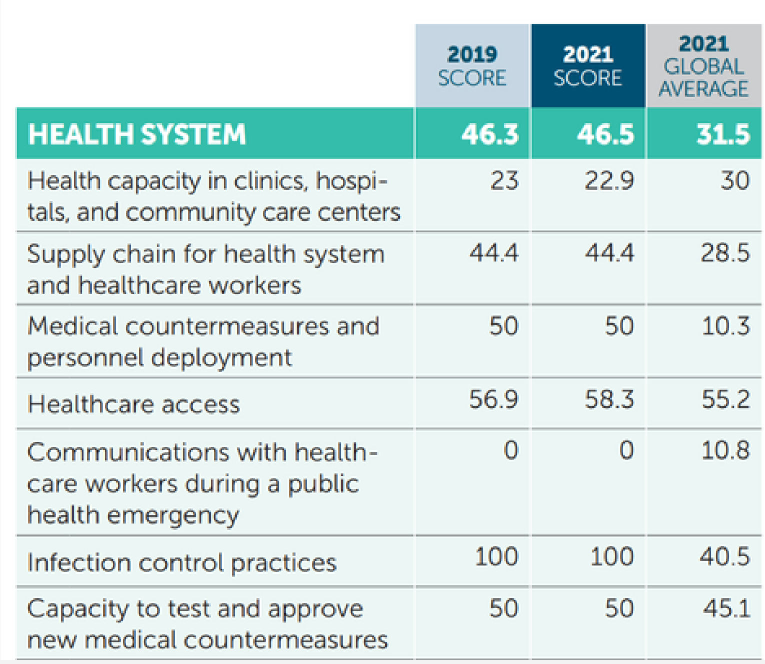
The Philippines healthcare costs have been on the rise, which is detrimental to the general population of the Philippines, given approximately 18% of its population was below the poverty line (Philipp, 2024). The rising healthcare costs, with 18% of the Filipinos below the poverty line has created an unaffordable healthcare system. The healthcare costs need to be controlled, even if the geographical challenges are handled to ensure ease of access and affordability to the common man.

According to the Global Health Security Index score for the country of the Philippines, specifically the health system scores at 46.5 out of 100 in its ability to prepare for emergencies like epidemics and pandemics. Healthcare access itself is at 58.3 out of a possible 100 points (GHS Index, 2025). Telemedicine can play a great role in reviving these specific segments. The pandemic supported unconventional opportunities like telemedicine. Telemedicine provides a key tool to transform the health care system of the Philippines. The COVID-19 pandemic gave it a great opportunity to pilot test unconventional opportunities like telemedicine, which has given a strong base and proof that it works. However, no solid legislation currently exists to support telemedicine in the Philippines. The Philippine Department of Health and the Philippine Health Insurance Corporation (PhilHealth) realize that legislation can support the health care system in the Philippines and have recently developed Health IT standards and are currently working towards creating policies that would allow efficient, equitable planning and implementation (GHS Index, 2019).



	2019 SCORE	2021 SCORE	2021 GLOBAL AVERAGE
HEALTH SYSTEM	**46.3**	**46.5**	**31.5**
Health capacity in clinics, hospitals, and community care centers	23	22.9	30
Supply chain for health system and healthcare workers	44.4	44.4	28.5
Medical countermeasures and personnel deployment	50	50	10.3
Healthcare access	56.9	58.3	55.2
Communications with healthcare workers during a public health emergency	0	0	10.8
Infection control practices	100	100	40.5
Capacity to test and approve new medical countermeasures	50	50	45.1

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PhilHealth has attempted a great deal of standardization on health care procedures and standard responses for patient conditions, which created unanimity in patient experience and has also allowed efficient supply chain management. However, a lot of manual intervention to handle patient records, etc., is still required to handle the systematic procedures. With the amount of manual intervention involved, there is scope for manual errors which result in incorrect diagnosis, treatment, and shakes the supply chain management and effectively slows down the entire process with no effective outcome. The Philippines health care system, much like the rest of the world, also lacks real-time healthcare infrastructure facilities management. It becomes imperative to remove the inefficiencies and medical errors created through manual intervention in the Philippines' health care system. The Philippines also has a doctor-population ratio lower than the WHO recommendation ratio of 10 doctors per 10,000 population (Yap, 2025). This creates enormous demand and burden on the doctors serving in the country. This is because the medical device industry in the Philippines is very import-dependent. This leads to an excessive workload, which subsequently leads to burnout, causes medical errors, and reduces efficacy. It creates overcrowded hospitals, a shortage of beds, supplies, and diagnostic equipment, causing delays in providing patient care. Inequitable access to healthcare in the Philippines is another issue that needs to be addressed. According to the WHO, almost half the world’s population lacks access to healthcare either because of proximity, accessibility, information, or affordability (World Health Organization: WHO, 2017). This led Filipino policy makers to attempt to fully adopt the electronic medical records system to support the universal healthcare law (UHC), which the COVID pandemic has delayed. At least 100 million are being added to the extreme poverty zone each year (World Bank Group, 2020). The Philippines faces very similar issues every day.

Decentralization of the Philippines health systems provides a great opportunity for reforming the health sector. Localized governance improves the quality of solutions rendered for the Philippines. When the problems are local, solutions, the majority of the time, are local too. However, if not implemented correctly, decentralization can increase the depth of “decision space” at regional centers and their unique needs. A few aspects, like fund allocation and distribution, personnel deployment, etc., are harder to manage. Measuring performance of the regional centers is harder, because of the uniqueness of regional centers, and the customization each regional center has created, measuring performance of the regional centers becomes harder. In a recent survey that was conducted with 200 participants aged between 18 and 65, the majority found telemedicine to be satisfactory and that it provides efficient, convenient, and affordable means of receiving health care (Noceda et al., 2023). The survey identifies that patients prefer telemedicine when their condition is not urgent or something that requires the use of medical equipment, like MRI scans, etc. They looked at it as an affordable alternative. There are negative perceptions of telemedicine regarding the quality of service rendered. Inherent limitations on accessibility to various diagnostic tools, technical and connectivity challenges stand as barriers to telemedicine usage and satisfaction. However, as far as the legislative framework is considered, no thorough legislation currently exists to support telemedicine in the Philippines.

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Legal infrastructure must be enhanced to create a cohesive framework and be conducive to the organic growth of the Philippines Health Care System. Policy makers and government bodies of authority should encourage and advance further public/private partnerships. Implementing a decentralized health care system captures the diversity and caters to the varied interests of the local population. A full-blown implementation of telemedicine should cater to the whole healthcare system, handle supply chain management, handle technology implementation, connectivity, handle staffing hiring and training, ensure effective decentralization, and take it all to remote places within the Philippines. This should be combined with legislative and policymakers' support, along with inviting public-private partnerships and foreign investments, by making the environment much more conducive than today.

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MISINFORMATION & HESITANCY

FALL

2025

WHY MISINFORMATION SPREADS FASTER THAN ACCURATE HEALTH ADVICE AND WHAT CAN BE DONE.

TALIA BAHATT

Introduction

Attention-grabbing, misinformed headlines spread like wildfire throughout social media in 2020, during the height of the COVID-19 pandemic and the development of vaccines. Sensationalist and misleading headlines highlight the rapid threat of health misinformation that can lead to real dangers in public health, as they lead people to operate under the guise of misinformation as genuine medical expertise. A YouGov online poll taken among 1,000 US citizens in November 2023 revealed that 20% of Americans believe the US government is using the COVID-19 vaccine to microchip citizens.[1] Despite scientific information being more advanced than ever before, misinformation continues to dominate the public space and threatens the health of communities both locally and globally.

Contributing Factors

Many factors contribute to the spread of misinformation and converge in its ability to span farther than accurate information. A large contributing factor is the emotional appeal that misinformation can cater to.[2] False claims and headlines can evoke fear, anger, and even hope, which are all powerful in influencing behavior and decision-making. Scientific claims tend to remain more cautious, nuanced, and usually require familiarity with scientific topics, often containing advanced dialogue and less emotion-evoking language. Furthermore, false information is usually straightforward to understand, so with only basic scientific knowledge, a viewer may gravitate towards information that is more digestible, which is usually untrue. Consequently, false information garners more clicks and shares, enabling it to spread faster and reach larger audiences.

An NYU study about misinformation on Facebook in 2021 reported that news “known for putting out misinformation got six times the amount of likes, shares, and interactions on the platform”.[3] Dynamics of social media nurture a fast-paced environment that revolves around clicks, allowing misinformation to benefit from quick, catchy headlines that can be easily shared and promoting a false sense of trustworthiness. Lastly, confirmation bias plays a large part in the spread of misinformation, where people tend to be attracted to information that they already believe is true. According to the American Psychological Association, trusting falsehoods is effortless for people because believing information that fits into their pre-established worldviews is easier than doing outside research and obtaining scientific information from a direct, reliable source.[4] Namely, plenty of medical misinformation aligns with distrust in Big Pharma and the institutionalized nature of large medical companies, which further reinforces people's false perceptions.[5]

WHY MISINFORMATION SPREADS FASTER THAN ACCURATE HEALTH ADVICE AND WHAT CAN BE DONE.

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Consequences

The spread of misinformation in the media can have serious consequences for individual and public health. A major repercussion is vaccine hesitancy, which is a state of doubt or uncertainty when it comes to making the decision to receive vaccines. In recent years, the COVID-19 mRNA vaccine, produced in late 2020, sparked widespread pushback and hesitancy, with many believing claims about its dangers and perceived lack of efficacy. Considering that the overall efficacy of vaccines relies on herd immunity, this phenomenon exacerbates individual risk due to a lack of collective buy-in. Further threats of misinformation not only result in vaccine hesitancy but can also cause people to take dangerous actions in the name of health. A study published in the American Journal of Tropical Medicine and Hygiene reported that 800 deaths and about 5,800 hospitalizations were the result of drinking methanol as a cure for coronavirus.[6] The spread of misinformation can also increase the general public's mistrust of public health institutions.[7] A major task of public health institutions like the Center of Disease Control and Prevention, the World Health Organization, etc., is to communicate relevant health and medical information to the public, including medical advice that should be readily taken. Erosion of the public's trust in these institutions threatens public health when it results in people ignoring important medical advice provided by such organizations.

Solutions

Although the threat of misinformation continues to grow, some solutions can help us combat its dangers; one of which is adopting a proactive approach to communication. Health organizations need to produce and promote clear, engaging information in mainstream media before misinformation is able to take root. One way to make scientific content more engaging is to describe the facts while sharing real patient testimonies alongside. Someone's personal experience will appeal to the emotional side of people and provide a relatability factor that engages audiences to comprehend and trust information. Another solution is to implement community-level approaches that aim to leverage local leaders who have the trust of their communities, enabling effective channels of communication and promoting scientific engagement at local levels. Lastly, media literacy education should be implemented in schools to teach youth how to navigate online media and decipher between real and false information, along with bolstering biology courses to address this specific challenge. This will equip media consumers with tools they need to avoid misinformation and find reliable sources.[8]

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TEEN MISUSE OF PEPTIDES AND MISINFORMATION IN FITNESS CULTURE

MARK WONG

Introduction

Today, adolescents are increasingly exposed to performance-enhancing drugs like exogenous hormones, specifically human growth hormone (HGH) and anabolic steroids, and their synthetic variants like selective androgen receptor modulators (SARMs). These drugs have come under the “peptides” and “legal steroids” category in the fitness communities on social media platforms like TikTok, Instagram, and YouTube, despite the marked differences between SARMs/anabolic steroids and peptides made up of short amino acids. The growing awareness and use among today's adolescents, specifically through social media, and subsequently the growing risk of abuse, are issues that need attention and solutions in the health and fitness communities. The paper shall examine the extent to which the use, encouraged by social media misinformation in the health and fitness communities, has increased the use among adolescents of HGH, the use of “testo” and other “testo” variants, SARMs, and other related hormones, and the ways and means by which the misuse has and shall be reduced.

Prevalence and Exposure

There appears to be evidence that significant numbers of adolescents have tried or have been exposed to hormone-stimulating enhancers. As an example, there was an increase in the percentage of high school students who had ever tried synthetic HGH, from 5% in earlier surveys to 11%, according to an extensive survey conducted by the Partnership Attitude and Tracking Study in 2013. There was also an increase in the use of anabolic steroids from 5% in 2009 to 7% in 2013, among adolescents. In an earlier survey, about 5% of tenth-grade male high school students had tried HGH, conducted in high schools in the Midwestern U.S. in 1992. The use of social media further accentuates the problem of exposure in the teen audience. Fitness influencers commonly partner with uncontrolled suppliers in promoting “legal steroids,” SARMs, and HGH secretagogues, using teen-oriented hashtags (#TeenBodyBuilding, #Fitness).

Recent studies have revealed that TikTok videos using “steroid”- and “SARM”-oriented hashtags accumulated hundreds of millions of video views in the 18-24-year age group over three years. The corresponding investigation by the Associated Press on the same dataset revealed over 587 million hashtag-associated video views in the United States over the same duration, with the greatest audience again primarily in the 18-24-year age group. These videos commonly use sensational “before-and-after” dramatics and minimize adverse risks, such as in a video circulating among teens where they encouraged their parents by calling the drugs vitamins. “Gymfluencers” on Instagram and video producers on the platform “YouTube” commonly use dramatic, extreme physiques and superficial supplement musings, implicitly recommending hormones and, consequently, steroids. “Reddit” and other health and exercise-oriented online forums also circulate peptide and/or steroid simulators, with variable quality. Simultaneously, it facilitates the problem; the commercial environment provides direct access to the substances, since SARMs and hormone simulators commonly come from “research chemical” suppliers who need no prescription.

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Health Risks and Misinformation

The use of exogenous hormones and SARMs without supervision poses a great health risk, especially among the growing generation. HGH is a peptide hormone. High HGH levels contribute to the development of acromegaly, with the most notable symptom being the abnormal growth of bones and internal organs. Health complications arising from the use of HGH include arthritis, sleep apnea, diabetes, high blood pressure, and cardiovascular disease.

Low-dose HGH use increases the risk factors for the latter conditions, and the long-term effects on the growing generation are still unknown. The use of exogenous GH takes the form of injections, posing risks such as infection, thrombosis, and wrong dosages. SARMs, also known as tissue-selective androgen mimics, and anabolic steroids, also known as testicular androgens, pose similar risks. The FDA has not approved the use of SARMs and anabolic steroids. The FDA has listed some serious side effects related to SARMs and other drugs, namely, SARMs, and they include myocardial infarction, stroke, hepatotoxicity and failure, infertility, sexual dysfunction, psychosis and hallucinations, miscarriages, and testicular atrophy. The use of anabolic steroids in adolescents has long been related to problems in linear growth, tissue damage, high blood pressure, problems related to fertility, and psychological problems.

Misinformation in the fitness industry heightens these dangers. These substances are commonly misrepresented on social media and commercial websites by influencers and suppliers, respectively, as safe, natural, and “legal” alternatives, despite scientific evidence. These substances are marketed under the misnomers “research chemicals” and “dietary supplements” without warning labels, under the presumed, and unwarranted, assumptions of their safe use. In truth, the FDA specifically warns that SARMs are unsafe, unapproved “drugs” without assurance of their safe use. Consumers, in this scenario, unaware they are injecting powerful hormones, have discovered through detailed chemical analyses that the so-called SARMs they bought on the internet would either contain a different substance altogether or nothing. In one sample survey, only 52% out of 44 SARMs labeled “SARMs” actually contained SARMs, 39% contained an unapproved “drugs” in the form either of an “off-label” use and perhaps in the hope they might be safe in their underprescribed dose forms, namely the GH “secretagogue” ibutamoren, in 9%, their “drugs” simply contained nothing.

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Strategies for Prevention

Experts recommend a holistic approach in the prevention and management of teen peptide abuse. Media and health literacy are among the essential components. These include health class curriculum development that teaches critical evaluation and consumption of messages in the field of fitness. An example would be the controlled media health literacy approach conducted over 12 sessions, where there was a significant decrease in positive attitudes and use of "legal" performance-enhancing agents among their subjects (Lucidi et al.). These would help in the integration of influencer and critical health literacy in curricula, and using the aspects of healthy physiques in counteracting extreme physiques.

The need for regulatory actions cannot be overemphasized. The FDA and anti-doping agencies have warned and enforced against suppliers and vendors who distribute SARMs and peptides, together with public warnings on suspicious drugs. Academics and activists have called on the government to investigate the loopholes in regulations regarding the use and distribution on the internet concerning unapproved peptides, and there have been reports from watchdogs recommending that social media companies heighten enforcement on the issue of drug sales and promotions. Support from the family and the school still has an essential role. Parent-teen communication needs to be open and factual, focusing on the dangers rather than the morality. Training school officials and sports leaders in detecting the warning signs—sudden muscular development, secrecy, and mood swings—is essential. Special services offered in the wider community can provide guidance and referrals on a strictly confidential basis, particularly in cases where the teenager has questions and qualms about the peptide use.

Conclusion

The rise of hormone performance-enhancing drugs among adolescents in the fitness scene has become an escalating issue in public health. According to national surveys and studies conducted (PATS, AP, BI/CCDH), there has been widespread use among teens in the following ways: about 10% have tried synthetic HGH, over 7% have tried anabolic steroids, and there has been widespread use of social media content available on these drugs. This problem has continued because access through the internet has become easy, and fallacious information about the potency and harmlessness of these drugs has continued. Health professionals declare that the unchecked use of HGH, Testosterone, SARMs, and other hormones has potentially resulted in permanent adverse health conditions, some of which are listed below. The solution to this problem, therefore, needs an approach that combines the role of the educational system, the government, and social support. Young people need the truth concerning the health implications involved in the process; media literacy training must help them resist health scams in the fitness world. The government must remain determined in its crackdown on the illegal distribution

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and promotion of these health supplements. There needs to be an awareness and communication approach among social actors like the health and fitness world, always prioritizing health over performance. The growing popularity among the young cohort, therefore, demands the need for health communication.

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CREDIBILITY AND AUTHENTICITY OF FITNESS INFLUENCERS ON SOCIAL MEDIA: A COMPARATIVE SCORING ANALYSIS

HEEMEE TON

Introduction:

Social media platforms such as Instagram and TikTok have become dominant sources of information, including health and fitness. While it is often advised to be cautionary of misinformation on social media platforms, influences of information presented on these platforms are still significant. Fitness influencers, with no needed background in formal training in exercise science, can spread content and exert substantial influence on fans and followers' beliefs and behaviors regarding proper training and nutrition.

A large source of audience in social media fitness content are individuals seeking aesthetic outcomes. This leads to emphasis of aesthetic outcomes over health outcomes, possibly contributing to exercise misconceptions or disordered behaviors (Audrezet et al., 2018). Such misinformation can be thoroughly implanted into the beliefs of individuals, as parasocial relationships formed between influencers and their audiences can often foster perceived authenticity and trust (Carrotte et al., 2017). The conflict between various goals and priorities in fitness information poses an issue of availability of accurate information to those seeking inspiration and guidance on social media.

This study aims to quantify and compare important aspects of popular fitness influencers: scientific accuracy, accessibility, language quality, and authenticity. A structured scoring system aims to assess whether online figures with large-scale outreach provide physiologically valid information with responsible communication and if their own character reflects their branding and beliefs.

Methods:

Data Collection

A sample of 25 fitness influencers was analyzed, focusing on individuals with large Instagram followings and active content output relating to training and health. Names and handles were obtained using data from GRIN, Feedspot Influencer directories, and Creator TikTok lists.

Evaluation

Physiological accuracy was based on recent meta-analyses of strength and hypertrophy adaptations, as well as functional performance (Schoenfeld et al., 2017; Carvalho et al., 2022; Hasan, 2023; Zheng et al., 2025). Key points to be evaluated in media were: movement specificity, volume and frequency of training, and motor unit recruitment relating to exercise selection.

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Scoring Framework:

Influencers were evaluated across four categories, scored on a 1-5 scale, unless inapplicable due to the limits of their content output, or goal in the community.

1. Physiological Accuracy (1-5)

Measure of the Scientific correctness of training advice, particularly focusing on the accuracy of physiological statements and the quality of their workouts.

- Metric: The 5 most recent informational posts were analyzed for accuracy. A point was awarded for each post that was physiologically accurate or applied the correct principles for the intended goal.

2. Accessibility of Information (1-5)

Assesses how clearly influencers explain concepts and whether their content is hidden behind paywalls.

1: Only advertisement for paid resources
2: Provides some vague content on training philosophy, but mostly promotional glimpses
3: Sometimes it provides tutorials and informational content, but doesn't explain statements
4:Higher frequency tutorials and informational content that goes further in depth with basic explanations
5: Informational content covers a full explanation of mechanism/purpose and application, may also include citations and references

3. Language Quality (1-5)

Evaluation of content language and the inclusion of buzzwords, fear-based language, and promotional language toward their own brand. A fraction-based score that reflects a rounded proportion of their posts that contain any suggestive language used for eye-catching or financial promotion.

4. Authenticity (Penalty Score)

Negative score applied to influencers who knowingly promote misinformation, participate in deceptive marketing, or fail to apply their own principles.

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Results:

Aggregate Scores

Category	Mean Score	Interpretation
Physiological Accuracy	2.82 / 5	Moderate; frequent gaps in scientific correctness
Accessibility of Information	3.0 / 5	Average clarity: some content restricted or overly commercial
Language Quality	3.0 / 5	Average; mixture of concise and overly promotional language
Authenticity Penalty	1 (for 5 offenders)	Roughly 20% displayed misinformation or inconsistency

Top-Performing Influencers

Jeff Nippard: Demonstrated consistently evidence-based explanations grounded in exercise science. Information was presented with background and conciseness, also exploring how to apply certain mechanisms to an individual's training. Information is easily obtainable often with references. He also does not present any sponsor or financial incentive in his largely informational posts.

Whitney Simmons: Has a clear message about mental and physical health. Instruction and presentation of training philosophy is clear and accurate, though simple. The content is applicable and theoretically effective to her target audience of females.

Low-Performing Influencers

Lucy Wyndham-Read: Several captions providing false information about training. Her target audience does not align with the information provided, as her training methods are widely unstimulating for hypertrophy, strength, and functional movement patterns entirely.

Simeon Panda: Penalized for authenticity due to promotion of Selective Androgen Receptor Modulators and experimental peptides to viewers despite holding pride in being a natural athlete. His demonstration workouts are also ineffective and are constructed for the purpose of engagement and views rather than physiological improvement.

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Overall Trends

All categories were graded moderately, suggesting a significant issue of misinformation and poor authenticity within the social media of fitness. Among the most popular influencers. A proportion of nearly half of the information provided by them is ineffective as a means of achieving an individual's fitness aspirations. Only a small subset of influencers demonstrated consistently accurate, accessible, and authentic content.

Implications for Public Health Communications:

These findings align with previous work emphasizing the dual-edged role of influencers in public health messaging. While influencers may increase engagement and motivation among the audience (Tiggemann & Zaccardo, 2018), misinformation can contribute to injury risk, unsustainable fitness behaviors, or distorted self-perception (De Veirman et al., 2017).

Given the expansive reach of influencer culture, media literacy and critical consumption should be integrated into fitness education initiatives. Platforms might also consider developing more advanced labeling and verification systems for health claims. Platforms may also consider the implications of viewers of misinformation, even in the presence of disclaimers about health claims.

Limitations:

This analysis was limited by the subjective nature of the scoring and the reliance on publicly available content. Further analysis should be done utilizing in-app data that covers engagement and views to analyze the content that has the broadest impact. Further research should incorporate a more stringent methodology for quantifying content quality.

Conclusion:

The social media fitness community harbors tensions between authenticity and accuracy. While influencers serve as vessels to promote physical activity and motivation to improve, the quality of information provided by them is largely inconsistent. The average physiological accuracy of 2.82/5 among some of the most popular influencers suggests a need for better scientific grounding in online fitness content. As the modern world progresses further on digital platforms and individuals consume information regarding health guidance, scientific literacy among influencers, and greater literacy about misinformation among consumers is critical to facilitate the pursuit of wellness.

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ETHICS AND POLICIES OF GERMLINE GENE EDITING FOCUSING ON EUGENICS

MARKUS CHENG

Introduction

In 2015, Liang et al. used CRISPR/Cas9 to edit the endogenous β-globin gene in tripronuclear human zygotes.[1] The study showed that CRISPR/Cas9 can cut genes in a human zygote and that the resulting double-stranded break can be repaired through non-homologous end joining or homology-directed repair.[1] With proof that germline gene editing (GGE) is possible, scientists could potentially change the genes of future generations—changes that can be passed down to subsequent generations—to eliminate mutations that cause disease or even to improve people's abilities. However, GGE also raises ethical questions, such as safety concerns for future generations and issues of consent from the next generation.[2] To explore these concerns, this paper analyzes the ethical and policy implications of GGE focusing on eugenics, and evaluates current regulations in various countries and their inadequacy.

Background

The emergence of CRISPR (clustered regularly interspaced short palindromic repeats)/Cas9 technology provides an efficient and simple way to target and edit DNA sequences in cells.[3,4] Human GGE targets genes in human embryos, gametes, or other precursors so that the edits will be heritable.[5,6] In the United States, people affected by genetic diseases comprise about five to seven percent of the population.[6] GGE is a potential way to relieve this burden. It can not only cure unborn children who carry genetic diseases inherited from their parents, but also prevent the transmission of these genetic diseases to future generations.

However, GGE is still immature. Off-target editing (additional unwanted modifications) and mosaicism (when some cells do not have the desired edit), which can occur with current CRISPR/Cas9 approaches in GGE, raise safety concerns.[4,6] These safety concerns may be reduced as the technology improves. Other ethical concerns also need to be addressed and discussed before GGE is applied in real life.

Ethics

Even without considering safety concerns, some argue that editing the human genome is unnatural and against God. They argue that "humans lack a god-like omniscience that would be required to make any changes in the genome safely."[6] However, humans' influence on genes began long ago with the domestication of plants and animals. Others argue that embryos are incapable of giving informed consent to genetic editing, thereby undermining the ethicality of such practices.[7] However, preimplantation genetic testing in in vitro fertilization already exists for parents to select embryos without genetic disorders.[8] If parents can choose embryos without the embryos' consent, it is arguably reasonable to extend this choice to GGE.

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Eugenics is the influence aiming to improve the genetic quality of humans.[9] One of the most tragic applications of eugenics occurred in Nazi Germany, where Hitler authorized the killing of mentally and physically disabled Germans to "purify" their genes, leading to countless deaths.[10] Eugenics diminished after WWII, but the idea has re-emerged because GGE can directly edit genes that may be passed down to future generations, with the potential to influence the gene pool of a population. There are three main ways GGE could be applied in the future: government requirements for editing to treat diseases, parents' free choice to use GGE for their children, and a prohibition on using GGE.

Human GGE can be divided into GGE for therapy and GGE for enhancement. There are two proposed benefits to government-mandated GGE to treat genetic mutations. First, children with genetic diseases cured by GGE would not die early or endure pain and inconvenience throughout their lives. Second, the government could reduce long-term healthcare costs because future generations would have fewer genetic-mutation-related diseases, since they would inherit non-mutated genes from cured parents. However, this approach gives extra power to the government and could potentially lead to abuses reminiscent of past eugenics. As recognized in U.S. jurisprudence and echoed in guidance cited by the World Health Organization, parents have rights related to having children and to "direct the care, custody, and control of their children."[11,12] If the government could force GGE on all embryos with genetic mutations before birth, rights that should belong to parents would be partly transferred to the government—meaning the government could increasingly decide for its citizens' children. The government may begin to play a dominant role in shaping future generations instead of parents. The government could then attempt to "produce" people according to perceived societal needs, not only for gene treatment. For example, it might mandate genetic enhancements to increase children's physical strength to address labor shortages. This would diminish population diversity and evoke parallels with authoritarian eugenics of the past.

Another point of view is that parents can choose to use GGE for their children; this is often referred to as liberal eugenics. Some argue that allowing parents to have free choice may lead to social inequality, as only wealthy people could access it because the intervention would be expensive at the beginning.[6] However, it is important to note that GGE could be a one-time intervention with effects across multiple generations, rather than requiring multiple treatments (or having no existing treatment). For example, some sickle cell disease patients need frequent blood transfusions to prevent severe complications, which can cost about $400,000 per decade.[13] If GGE were possible, patients might only need to pay once, and they would not need to worry about treatment for their children.

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Liberal eugenics not only supports parents' choice of gene editing for treatment but also for enhancement. Because what counts as a disease is hard to define, Nicolas Agar, a professor known for supporting liberal eugenics, argues that "we do not limit ourselves to the avoidance of disease, rather we are concerned with the person's well-being, welfare or quality of life" (142).[14] Enhancement, under this view, should be allowed because it could improve children's futures. Two concerns remain about liberal eugenics. First, the public may criticize parents for not choosing gene editing to cure diseases or disabilities. For example, it is possible for a deaf couple to have deaf children who can grow up happily, especially because the parents' own experiences can help them raise their children. The public, however, may criticize them for not giving their children a "normal" life, creating unreasonable social pressure. Second, it remains vague which GGE interventions truly improve quality of life. For example, experiments have shown that gene editing can change the fur color of rats.[15] If similar results applied to humans, parents might edit a child's skin color while claiming it would help avoid racial discrimination and thereby improve quality of life (for example, by increasing the likelihood of college enrollment).[16] This could negatively impact human diversity and reinforce social bias, which would need to be addressed by future policies.

If GGE were totally prohibited, eugenics-related risks would be reduced. At the same time, many patients might lose a potential way to be treated or cured, which raises its own ethical concerns.

Current Policy and Future

Current policies regarding GGE in various countries are generally similar but vary in their specifics. Here, the policies of the United States, China, Japan, and South Africa are considered. In these four countries, GGE research related to human health is generally allowed, but the United States prohibits public funding of GGE research.[17,18,19,20] Even though public funding for GGE research is not allowed in the U.S. (as Congress has ruled that FDA funds cannot be used to support this kind of research), private funding is allowed.[17] For example, GGE research aimed at editing a blindness-related mutation has been funded by the New York Stem Cell Foundation and the Russell Berrie Foundation Program in Cellular Therapies, which are private organizations.[21]

Clinical trials that attempt to implant gene-edited embryos into humans are strictly prohibited in many jurisdictions, though policies differ across countries.[17,19,20,22] In China, proceeding in this area can violate criminal law and can be punished by up to seven years in prison and fines.[22] In Japan, growing human cells in animals and transferring embryos to a uterus has been allowed since 2019, aiming to grow human organs in animals.[23] In addition, recent Japanese guidelines reflect an overall positive view toward gene-editing research, stating that it "holds significant potential for addressing genetic diseases and improving human health."[19] Overall, there is a tendency in some places to loosen previously strict policies.

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Differences in policies across the world can hinder research collaboration, thus impeding the development of GGE. A global policy framework may also be necessary because it is important to build a public view that supports improving future generations' quality of life while also maintaining diversity and reducing discrimination. Achieving this is difficult because different countries and their citizens may evaluate GGE differently, given its potential effects on economics, science, and future generations. A global convention could be convened regularly to share and update new research so that policies can be revised. However, holding such conventions too often would be time-consuming and costly, while the technology is developing quickly.

Conclusion

Considering eugenics concerns, parental choice for GGE—paired with necessary policies to define what is classified as improving quality of life—seems reasonable. Current policies are cautious in ways that align with present safety concerns. However, variation across countries makes collaboration difficult, suggesting that a more coordinated global approach is urgently needed.

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OUR PROGRESS

FALL

2025

JHU AND UC BERKELEY CHAPTERS

HANBIN YU

This past semester, Youth Health Focus chapters at Johns Hopkins and UC Berkeley made meaningful progress in advancing health education and community support through practical resources, targeted outreach, and strong local partnerships.

At the Johns Hopkins chapter, our team focused on creating accessible, high-impact educational materials that address common day-to-day health needs. Over the past month, we developed four educational pamphlets covering hygiene, menstrual health, nutrition, and over-the-counter (OTC) medication. These topics were selected to provide clear guidance that can be applied immediately, especially for communities navigating limited access to consistent healthcare information. With the support of Grace Helping Hands, we have already distributed the hygiene and menstrual health pamphlets, and we ensured broader accessibility by preparing Spanish-translated versions as well. In addition to resource development, the Hopkins chapter also emphasized direct community support. In partnership with Grace Helping Hands, we hosted a health-kit distribution event at People's Baptist Community Church, strengthening our connection with the community while pairing health education with tangible resources.

At UC Berkeley, our chapter centered its work on addressing barriers to preventative care through advocacy, culturally responsive education, and hands-on engagement with community members. This semester, our Research & Journalism and Communications & Media committees created posts advocating for the importance of health screening and preventative care, with a specific focus on the stigmas that often prevent individuals from seeking routine screenings and early intervention. Our messaging emphasized how preventative care through screenings, immunizations, and effective care coordination can significantly improve outcomes at both the individual and community level. Alongside this advocacy work, our chapter created a healthy eating pamphlet to share practical guidance on nutrition and sustainable health habits. To better serve diverse communities, we produced translated versions in English, Spanish, and Korean, and distributed these materials at the Center for Elders' Independence (CEI) during our workshops. In October, our Berkeley members also delivered a CEI presentation on elderly nutrition and health, incorporating interactive elements to keep the session engaging and accessible. We led simple stretching and exercises, provided crossword puzzles and bingo inspired by traditional cuisines reflective of the center's demographics, and participated in arts and crafts with seniors to build connection and create a welcoming learning environment. In December, our Health Education and Medical Initiatives committee hosted a second workshop at CEI focused on a cold weather advisory. Moving forward, the chapter's Outreach & Community Engagement committee is actively identifying additional clinics in the Berkeley area where we can host workshops and distribute pamphlets.

Across both chapters, the past semester reflects a shared commitment to strengthening health literacy, reducing barriers to care, and showing up consistently for community partners. Through multilingual educational materials, advocacy that challenges stigma, and community-centered events that blend information with action, both YHF Hopkins and YHF Berkeley are building momentum toward more equitable and preventive health outcomes.

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