Invisibility of Groups in Relation to Medicine and Toxin Dumping

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Introduction

Looking at cancer globally, it is the second leading cause of death. When it comes to low- and middle-income countries, it accounts for more than half of all deaths (Mattila et al, 2021). Why are areas with minorities suffering to a greater extent than those that are more privileged? Further, this is not only unique to cancer. When exploring United States toxic waste regulations, the Environmental Protection Agency has very thorough guidelines on waste, chemical, and cleanup enforcement. How well are these regulations followed, though? There have been numerous cases of corporations overlooking this legislation and jumping through loopholes to avoid them. Again, this occurs at a higher frequency in minority and lower income areas. There is a system in place that makes groups that are underprivileged and underrepresented invisible to the standards of medical care and being given to more privileged areas. This is seen through the causes of medical issues, toxin dumping, and the response to those issues, race correction in diagnoses. Social injustice can come about in many ways. In a world so greatly emphasizing equality, it is difficult not to see ways that the system put in place ostracizes different types of people. As this issue continues to grow, researchers are looking for ways to put medical attention back on the groups who need it.

This paper will explore how groups become invisible when looking at the medical field in relation to social, health, and environmental injustice. It does so through the study of two distinct themes. Firstly, the paper will elaborate on how the introduction of toxins into neighborhoods unequally affects those in low-income areas. A second form of injustice comes from racism in medical practices which leads to a consideration of agnotology, the creation of ignorance, in relation to harm. Both cases harm minority groups, including those with little socioeconomic

power, in systemic ways. How are certain groups excluded from the protection and scientific process of determining risks? Moreover, how do these groups then become visible? Are there ways for risks to be emphasized with these groups that are currently being placed with lesser importance? The framework being looked at through this research project is that of risks and standards. This framework helps us understand how standards and risks treat the underprivileged as insignificant.

More specifically, when looking at environmental toxins, there is regulatory science and standards to protect all people from dangerous effects. Further, private medical interactions allow for more localized ways of determining when patients are at risk for certain illnesses when it comes to toxins, environmental variables, etc. In both areas, people are still invisible, but why?

When looking at environmental regulations, the Toxic Substances Control Act (TSCA) has very detailed rules for polychlorinated biphenyls, chemicals linked with cancer. The main law that deals with the management of hazardous and non-hazardous waste is the Resource Conservation and Recovery Act (RCRA). This is the law that outlines generation, transportation, treatment, storage, and disposal of waste (EPA, 2021). It is clear from this large number of laws that there is proven science behind these regulations. Why is this science being ignored when it comes to certain groups of people?

While looking at medical diagnoses and treatments, race correction comes into effect. This happens when diagnostic algorithms include a factor of race and ethnicity to guide a decision that will be made by caregivers. Race correction is used when predicting breast cancer development, rectal cancer survival, heart failure, cardiac surgery complications, donor kidney failure, successful natural birth, UTI risk, and more. For certain races, these algorithms predict a lower risk, while for others there is a higher risk. For example, the algorithm predicts that

non-white women are at a lower risk for breast cancer and black patients will have shorter survival with rectal cancer as compared to white patients (Vyas et al., 2020).

Analysis

In particular, with respect to cancer in the early 2000's, African American women were found to be three times more likely than Whites to present advanced stages of Breast cancer. Further, Blacks with Colorectal cancer were more than 25% less likely to undergo major procedures as compared to their White counterparts. Another study showed that with lung cancer, almost 50 excess Black deaths (as compared to Whites) could be attributed to differences in surgery rates. It was concluded that in many of these cases, there was an absence of physician recommendation for surgery (Geiger, n.d.).

With this study, although these figures are somewhat outdated, the trend continues in today's time. This leads to a discussion of agnotology. When it comes to testing and diagnoses, physicians are intentionally creating ignorance. There are no standards that physicians are being held to, meaning people of color are suffering due to lack of testing and a decrease in quality care. This creates an invisibility of risks. For example, people of color are being diagnosed later in the course of their illness, the risks are invisible up until that point due to the lack of standards addressing racial and ethnic disparities. This can also be attributed to the invisibility of African Americans in localized private medicine.

How these illnesses are caused is another problem. One example of this is in Canada's Sydney Tar Ponds, the home place of the indigenous Mi"kmaw people and a waste site for coal, tar, and cancer-causing PCBs. Because of this, the cancer rate of the Mi"kmaw people was 45% higher than the average in Nova Scotia (Waldron, 2018).

The Sydney Tar Ponds case study shows that there was a lack of standards, allowing corporations to dump in a region with no pollution control. The TSCA and RCRA were ignored. This greatly comes about because the indigenous people did not have a large say in the government. They were made invisible. Later, the Mi"kmaw people were made visible through public effort, although it was through association. Meaning, the issue wasn't addressed due to the higher cancer rate, but it was acknowledged because lobsters in the harbor contained large amounts of toxic materials. After this, millions of dollars were put in to clean the Tar Ponds. It is interesting to see that the struggle of the indigenous people wasn't directly addressed. Why is it that it takes the lives of the upper class being at risk (people who are eating the lobsters) to finally bring attention to the plights of the indigenous?

Further, in Louisiana's "Cancer Alley," also known as Donaldsonville, contaminants make it so that those who drink from the Mississippi River have a 2.1 times chance of getting rectal cancer and those who live within a mile of chemical facilities have a 4.5 times chance of getting lung cancer. The majority of people getting cancer in Donaldsonville from oil spills, dumping, shuck burning, chemical leaks, and more, are extremely low income, high poverty, and high illiteracy African Americans. Much of the toxin dumping in this area comes from the ease in which waste discharge applications are approved by the Environmental Control Commission. Residents of Donaldsonville have also noted that while trying to organize in opposition to the environmental condition, chemical industries have been known to buy out those that are protesting. Residents have no choice but to accept due to the poverty they live in (Singer, 2011).

"Cancer Alley" is notable because it shows the power of corporations in Louisiana when it comes to the law. Standards are bent to accommodate the priorities of industries, while overlooking the residents of Donaldsonville due to their lack of resources, funding, education,

and political power. Moreover, the industries and government have downplayed the effect of human made toxins on the health of residents in the "Cancer Alley." Sickness has been attributed to the lifestyle choices of residents, including eating habits, smoking, exercise, etc. It is evident that this divide has swayed residents into believing that the environmental risk they face is a natural feature, it is normal and there is no large danger to it. This has created additional ignorance in the community, making the underprivileged living in Donaldsonville even more invisible to risks they are facing due to a lack of standards (Singer, 2011).

Race Correction and Biases

To further the discussion about invisibility in medical diagnoses and treatment, it is important to recognize the role of race correction and biases in the medical field. As stated earlier, race correction allows for race and ethnicity to be factored in when making a diagnosis and treatment plan. Race correction isn't relevant in all fields of medicine; however, it is still used to this day. Is the use of racial adjustments, in itself, causing invisibility in the healthcare field? A significant idea is that race is used in medicine as a biological concept, whereas it is truly political in nature. As stated by Dorothy Roberts, "Race was invented in order to implement racism," it was used to create a grounds for slavery. This means that the use of race correction is inherently racist (Roberts, 2021).

More than this, race correction can lead to misdiagnoses, which can in turn lead to delayed treatment plans. When looking back to the first study introduced in this paper, "older black women were consistently less likely than comparable white women to receive a mammogram" and "African- American women were much less likely than white women to undergo biopsy (Geiger, n.d.)." It is very likely that race correction played a significant role in these testing procedures. In the oncology field, all people of nonwhite race and ethnicity have

lower risk estimates as compared to their white counterparts, especially with respect to breast cancer (Vyas et al., 2020). This risk estimate leads medical providers to give lesser care and lax surveillance to nonwhite people. This is also what may lead to the diagnosis of breast cancer in later stages than when it comes to nonwhite people. Using this evidence, it is clear that while correcting for race, racism is still present.

Race correction doesn't consider that much of the idea behind medicine and racial disparities comes from the structural racism in society. Race adjustment diagnoses are built upon stereotypes. The idea that black people are more susceptible to environmental toxins, lack of nutrition, and more, is racist in itself. Society makes it so that nonwhite people have health issues such as these, causing medical professionals to believe that by correcting for these issues in diagnosis, people will be better taken care of. It is the opposite of this. The correction for races cannot be an umbrella for all people of the same race. For example, all black people do not have the same socioeconomic status, they don't have the same diet, they don't live in the same areas, so how can a singular adjustment for race be true for all black people? Why is the individualization of medical care being taken away?

More than this, race correction does not take into account all kinds of races. As recommended by the Office of Management and Budget, medical professionals fit their patients into one of five races and two ethnicities (Vyas et al., 2020). How is someone of mixed race accounted for? Again, everyone is being fit into a group whether or not they are truly part of it. Everyone is being fit into the social construct of race. The lack of standards to address how race correction will work with people who don't fit, will lead to more misdiagnosis and delayed treatment plans. Further, race correction has been in place since the time of slavery (Roberts 2021). Even after extensive progress in science and society, why is an outdated practice still in

use? It is possible that race correction is kept in medicine to allow structural racism to continue emanating from the field. It may be that race correction is being used to force the constant invisibility of all nonwhite people, specifically African Americans, in the medical field.

Toxin Dumping

Another topic that needs to be addressed is why people in certain areas are made invisible when it comes to toxin dumping? Is there some reason that the people in the Sydney Tar Ponds, "Cancer Alley," and similar areas are disproportionately affected by carcinogens and hazardous chemicals?

When looking at where to locate factories, corporations take certain variables into consideration. This is because of how costly it is to release hazardous chemicals into the environment. Firms who do this must pay penalties, compensate local residents, and implement a clean-up program as per EPA guidelines (De Silva et al., 2021). Factories must decide whether or not it is more profitable to release chemicals or to properly dispose of them, which in itself is a very costly process. This being said, one of the most important variables that manufacturers look at when placing factories is the median income of the area. Intuitively, it may be less costly to dump toxins and then compensate residents in a low-income area as opposed to disposing of the toxins according to regulations.

A study performed in 2021 aimed to determine the relationship between income and local pollution, factory location decisions, and factory pollution level decisions. After creating a theoretical framework and formula, the authors came to the conclusion that firms are most swayed by the financial risks of dumping toxins. They further stated that as the median income of an area increases, firms will take measures to minimize the risk of the release of toxic chemicals. This is because the local compensation of hazardous waste in higher income areas

will most likely be higher than the cost of proper disposal. The final conclusion made by the study is that the population group most affected by toxic releases will be a working-class population located in an industrial area (De Silva et al., 2021).

It is evident that a large factor contributing to the invisibility of people when it comes to increased medical diagnoses from the release of hazardous chemicals is the socioeconomic status of local inhabitants and personal profitability of those releasing the chemicals. Although these factors contribute to the silencing of different groups of people, it is truly rooted in structural racism and politics. In the United States, many people of color are restricted to low-income housing and low-income jobs. These low-income jobs may be more directly related to toxins and their disposal, such as waste collection (Huzar, 2021). Further, it has been found that factories that dump toxins are in the areas of working-class people. This means those of poorer income, confined to these areas due to race, will be more exposed to hazardous chemicals as compared to other groups of people. Meanwhile, politics comes into play where risks and standards are involved. As stated with the case of “Cancer Alley,” corporations are not being held to regulations that are in place. Areas such as these are publicized by the EPA as being highly dangerous when it comes to chemicals and toxins. However, nothing is being done to change the situation because corporations are in control of the local people and political system. Politics and lack of power is making the people of “Cancer Alley" and the Sydney Tar Ponds invisible. The voice that these people have does not amount to the power that industries hold.

Undermining Inequities and Creating Visibility

It may seem that these two issues of toxin dumping and race correction are unrelated, however they are intertwined. Both show that people of low-income, low socioeconomic status, and those who are non-white are systematically undermined. However, there is more to it than

this overarching theme. Looking at "Cancer Alley" as an example, toxin dumping causes a significant decline in health of local residents. This is the first introduction of invisibility in the lives of the people of Donaldsonville.

It is probable that those experiencing more severe symptoms of illness will travel to see a medical professional. Since the people of Donaldsonville are mostly African American, when these residents seek medical help, they will face another way society is attempting to make them invisible – race correction in medical diagnoses. In particular, rectal cancer is at large in "Cancer Alley." Race correction is used to determine rectal cancer survival rate. This means that the people of Donaldsonville may be condemned to death at an earlier rate than their white counterparts due to the race corrected calculation of survival. To account for this, there may be changes in treatment plans – either a more aggressive or less aggressive intervention. However, as is known, race correction in the medical field is unreliable. In effect, it may decrease chances for survival of Donaldsonville residents because of incorrect and ineffective calculations, diagnoses, and treatment plans.

Thus, the residents of Donaldsonville are given what is close to a death sentence. They cannot avoid the dumping of toxins or the racist practices in medicine, leading them closer and closer to an unfulfilled life. In this way, toxin dumping and race correction have a cause-effect relation. They are each steps in the pathway that some minority groups will take in their journey. Toxin dumping causes illness which sends people to doctors that likely employ racist practices, as per standards, in their treatment.

With issues in healthcare from environmental injustice to the unfair treatment of minorities, it is difficult to create change and combat the wrongs being carried. It is important to note that people do not want to bring attention to problems because then they have no choice but

to try to solve them. With this comes the solution of education and increasing awareness. Many people lack knowledge in these areas and are therefore ignorant and part of the problem. By educating the public, bigger actors can take part and speak on behalf of those who are overlooked. Furthermore, problems where residents themselves are in denial of risk, like with "Cancer Alley", will be less prevalent. When it comes to medical disparities, education of physicians accomplishes the same thing. By making sure all physicians are aware of racial biases, they can then work towards mitigating prejudice when it comes to their work. More than this, it is important for the standards to be changed at the base. Through education, people will be able to band together and press the government and controlling corporations to put in the effort to push for better standards, or at least compensate the people affected by injustice.

More specific to racial disparities in health care, education may not be enough. One solution to this is to push physicians to individuate - share power with the patient, develop a relationship, and see them as an individual (Penner et al., 2014). There should also be a very large emphasis on clear communication. Lastly, the issue comes back to knowledge. Information within health care systems should be aggregated to make clear what bias is really taking place. This information should be analyzed and released to the public, so that all parties know and can work towards a benchmark to decrease the bias.

In specific, when it comes to race correction, this ideology needs to be abolished in the field of medicine. Not only is it outdated, it perpetuates racism in a field where people's lives are truly at stake. A doctor holds the lives of patients in their hands. Those same doctors should not be discriminating on treatment and diagnoses simply because a race adjusted formula tells them to. Many people of the same socioeconomic class are at the same risk, regardless of their race (Geiger, n.d.).

With respect to toxin dumping, reform that can work towards making people of color and those of lower socioeconomic class visible is by creating more strict standards. The regulations in place by the EPA allow for manufacturers to choose what makes the most sense for themselves in a financial aspect, this allows them to dump toxins while making profit. This is a backwards way to go about rules and regulations. Why is something that is detrimental to human life AND the environment more profitable than something that would benefit both of those? These regulations need to be revised to make it so that manufacturers have no choice but to properly dispose of chemicals. If this is the case, then the power that firms hold in places such as "Cancer Alley" will decrease, and the people will have a say again.

Conclusion

Through this paper it is evident that certain groups of people are made invisible when it comes to medical diagnoses, treatments, and toxin dumping. It is important to note that the groups made invisible are generally the same across the board. These groups are low income, people of color. Much of the reason these people are made invisible is because of structural racism and politics. More specifically, the standards of race correction in certain areas of medicine create a more racist atmosphere, further contributing to invisibility. On the other hand, the political regulations that the EPA puts in place to address the risks of toxin dumping are not doing their job in that they have loopholes allowing for firms to be more profitable after harming the environment and the surrounding communities. Through discourse, abolishment of racist practices, and more aggressive standards, slowly these groups of people that were made invisible will have the power to push back into a more equal life.

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