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Medical Ethics: How Resource Distribution Affects the Decision Making of Doctors in Rural India: An Explorative and Comparative Study in Jamkhed, Maharashtra

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Medical Ethics: How Resource Distribution Affects the Decision Making of Doctors in Rural India: An Explorative and Comparative Study in Jamkhed, Maharashtra

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SIT Study Abroad Fall 2022

India: Public Health, Policy Advocacy, and Community

Table of Contents

Section **Page #**

I. Abstract….. 2

II. Introduction….. 2

III. Methodology…...5

IV. A Discussion of Study Limitations…..6

V. A Brief Breakdown of Western Medical Ethics… 8

VI. Ethics Enforcement and Hospital Structure… 9

VII. Rural Patient Economics…..13

VIII. Clinical Function with Limited Resources…..19

IX. The Collective Over the Individual…..23

X. Physician Expectation of the Medical Field…...27

XI. Religion, Caste, and Medicine… 28

XII. Concluding Thoughts…...31

XIII. Bibliography…...33

Astract

Using rural Mahrasthra as a case study, I was able to explore the medical ethics and common dilemmas that occur in Rural India. Through a collection of interviews and articles, I was able to piece together my understanding of some common ethical challenges that India faces, emphasizing ones that were unique to the location and circumstance. Using observations I made through my work in the hospital, I learned that limited resources effects all sides of ethics in the medical field, with a signficinant effect on economics, hospital structure, and clinical protocol. In an attempt to source the aspects of Indian society that caused these differences, I decided to explore some notable causes, such as India's collectivistic society, cultural and religious phenomenon, and medical schooling. Compiling my explorative journey into the following findings, it is notable that western medical ethics is somewhat of a privledge, and changes in bioethic principles hierarchy must be considered when in a medical system that does not have abundant medical resources.

Introduction

As the 2010s came to a close the world was thrown into one of the most significant medical challenges ever seen in history. The COVID-19 pandemic swept the globe, and every country and person was affected. Whether it be receding into the home and not being able to feel the sunlight on their skin, to losing jobs and loved ones, the covid 19 pandemic had touched the lives of every person in some shape or form, but the pandemic was not fair to everyone. SARS-CoV-2, the virus responsible for causing the pandemic, varies in severity depending on age, class, and gender. Some

would have no symptoms, while others would be immediately put into critical condition. The United States, spending the most in the world on health care, often priding itself as the leader of biomedical advances in technology and methodology, found all of its hospitals suddenly under capacity. Despite spending the most on its medical system in the world, the US struggled to find the resources for the massive influx of patients that came into the hospital doors. Healthcare workers were working overnight, putting themselves at risk of infection just to try and save as many lives as they could. Proper sanitary procedures and equipment, which had somewhat turned into a suggestion rather than a protocol in the years prior to covid, were now underdeveloped and in too little supply, leading to many healthcare workers early on in the pandemic helping to spread the virus rather than cure it. As the hospital beds became filled with patients, healthcare providers in the US were forced to make a decision that they weren't used to making: who deserves priority treatment when there are not enough resources to treat everyone?

Medical ethics in the United States have always been based on exclusively the context of the medical professional-patient relationship. Decisions are mostly made in tight conjunction with patient wishes and familial consent, as they should be. If a conclusion between family members cannot be easily reached, the usual method in the US is to keep the patient stabilized until a course of action can be recognized. However, what the COVID-19 pandemic exposed was the reality of a third, less biomedical-related aspect of patient care: resource distribution. From a doctor's perspective, costs for treatments and procedures are usually not disclosed or discussed with the patient, and one can argue that it is for a good reason. The doctors should always pick the most

effective treatment plan and make no exceptions in the quality of patient care, and it is left up to the hospital to seek compensation for the resources that the treatment ended up consuming from the hospital. However, what they often do not realize is that the medical bills that the patient can end up receiving can be insurmountable. While not always the case, any treatment in the US has been characterized as a career or lifestyle ending in terms of cost for the average American and has caused many Americans to be aversive to receiving care for many of their injuries. In fact, according to a study poll conducted by the NORC at the University of Chicago, 40% of Americans are afraid of crippling medical expenses, while only 33% of Americans are afraid of becoming seriously ill.[1] Clearly, the medical cost of American hospitals has become something to fear, even more so than getting a life-threatening illness. However, it does go to show that there is nothing compromised when providing treatment in the US. No matter the cost or resources used, the decision-making of doctors is based on the best possible prognosis almost exclusively. During the pandemic, however, people have become more aware than ever of how resources can play a significant role in ethical decision-making. The usual “how can we provide the best treatment” began to more closely reflect “how can we provide the most treatment.” While hospitals did their best to provide care for as many patients as possible, the reality was that many patients who were in semi-critical conditions were required to receive less care. As the pandemic began to fade, the world spotlight was on the medical field. While many were occupied with the new advances in vaccine technology and or the path of disease travel via

[1] NORC at the University of Chicago, Americans' Views on Healthcare Costs, Coverage and Policy, February 19, 2018, accessed December 14, 2022, https://www.norc.org/PDFs/WHI%20Healthcare%20Costs%20Coverage%20and%20Policy/WHI%20Healthcare%20Costs%20Coverage%20and%20Policy%20Topline.pdf.

epidemiology, there was a newfound spotlight in the west regarding the ethics in the distribution of medical resources.

While this problem has only recently been brought to the forefront in the United States, other, more developing countries, have been grappling with limited medical resources for decades. Many of these countries, despite their challenges, have found considerable success in handling their medical distribution issues. One of the countries where resource distribution has been a consistent and long-term issue is India. Despite India being on a sharp rise when it comes to the global economy, now boasting the fifth-largest economy in terms of GDP, this is barely enough to keep up with India's enormous population. Despite its increasing economic growth, India is one of the 50 poorest countries when in terms of GDP per capita.[2] Despite having access to advanced medical technology, there is simply not enough room or space in government hospitals to provide care for everyone who requires it, leading to exhaustingly long wait times for those who try and take advantage of the free government health system. The private sector, which makes up a considerable portion of the healthcare in India, is mainly for those who have considerable resources to spend on their healthcare. Physicians in India are faced with drastically different circumstances than those present in the US. Rather than being resource conscious only during the pandemic, many Indian physicians have to deal with limited resources and support on a near-daily basis. With this change in circumstance, the medical ethics that we so value in the US may manifest differently in India than they might in a Western country that has relatively

[2] World Bank, "GDP by Country," WorldOMeter, last modified July 7, 2022, accessed December 14, 2022, https://www.worldometers.info/gdp/gdp-by-country/.

limitless resources to provide their patients. In traveling to India, through a collection of literature, personal observations, and case studies involving qualitative data gathered through interviews, I hope to disclose what, if any, effect limited resources have on ethical decision-making as a physician, and in what ways this difference might manifest in both patient-physician interaction and hospital dynamics.

Methodology

The methods of gathering data were qualitative by nature. While much of my analysis will be incorporated in quantitative data found through online research, the rest of my data will be through observation with my time working at the CRHP clinic in Jamkhed, Maharashtra as well as structured interviews with the physicians that were able to accommodate me. The first interview question was picked to get an idea of the resources and services their institution was able to offer. Next, the interviewees were asked what some of the most difficult ethical challenges were that they encountered during their practice. They were also encouraged to state what factors lead to the decision that they ended up making. After, physicians were presented with a number of ethical dilemmas taken from a US medical Ethics Journal.[3] They were asked to share their course of action based on the institution where they normally worked in. While communication was occasionally an issue due to the language barrier, most physicians were able to understand the questions. By comparing these responses with the “correct” responses dictated in the medical journal, I hope to unearth how limited resources might manifest themselves in ethical decision-making. I additionally had the opportunity to volunteer and help in the clinic at the comprehensive rural health program, which

[3] Anji Wall et al., "Ethics in Surgery," Current Problems in Surgery 50, no. 3 (March 2013).

allowed me to get first-hand observations on how a clinic is conducted, and any potential ethical challenges that might arise.

A Discussion of Study Limitations

The research conducted was explorative in nature, mostly relying on qualitative statements from a collection of experts and medical professionals. However, one major limiting factor to the study is the number of interviews. With only 8 individuals interviewed, it is impossible to make any definite conclusions about the state of medical ethics in India. However, it does give us a good insight into the realities of a day-to-day physician, and while these claims might not be universal, there are definitely conclusions to be made based on the limited data available. Another difficult barrier to the study was the translation and questions used during the interviews. Many of the questions used during interviews were scenarios taken directly from a medical ethics journal. This means that the questions were very technical in nature and had considerable medical vocabulary that might have not translated well into the foreign languages that these physicians spoke. While all of the interviewees spoke English, their English was often shaky, and many questions felt like they did not receive a satisfying answer based on a lack of translation. The translator himself did now have the medical knowledge to be able to translate these technical terms. Another limitation of the study is the awareness of the interviewees of the nature of the interview. As will be explored later, the threat of lawsuits and social repercussions is always a risk for a physician, and discussing ethical challenges that might incriminate them would be difficult. This might skew the qualitative data to what should be seen as the “correct

answer." To bypass this, I have also gotten a chance to interview people who work in public health, but the data might be skewed. No physician wants to seem like the antagonist, and any shortcuts or unethical practices would be difficult to bring to light in full. This aspect applies to trying to cover taboo topics as well. While some of my interview questions were designed to try and cover things like the caste system, religion, and women's access to health care, considered controversial topics in India, it was difficult to unearth the realities of the situation. To limit any forms of backlash, no interviewee or individual, save for Ravi, the CRHP administrator, shall be mentioned by name, only by occupation. The clinic I observed, CRHP, is a non-government organization rooted in combatting inequalities and providing free care for people who were not able to receive it in other places. This must be taken into account when I mention my observations in the paper, as CRHP, while it does function similarly to a normal hospital, is distinctly different from other private or public industries. As an American researcher, my outside perspective is undoubtedly subject to bias, and as I am quite inexperienced with the Indian health system, I run the risk of falling into generalization. This study should be considered a discussion of personal observations during my visit and volunteer work at CRHP, and while I attempt to find a throughline and make a judgment based on what I have seen, my sight is limited. Lastly, a more personal limitation, most of my time spent in Jamkhed was spent preparing for my future endeavors as a physician. Between preparation for the MCAT and acquiring 100 hours of clinical experience at CRHP, my effort and time were spread between 3 different elements. While this research did take priority, between other physicians' schedules and my hours at the clinic, interviews were hard to find, and many physicians would only

entertain for short periods of time. Keep in mind that all of the claims made in this document are only applicable to a select amount of doctors in rural Maharashtra India, and while they may provide insight into ethical practices across the country, they should not be considered definitive truth.

A Brief Breakdown of Western Medical Ethics.

The foundation of secular Western bioethics is the core concepts of respect for autonomy, nonmaleficence, beneficence, and justice. These four concepts must be the primary four concepts upon which medical decisions should be made. Respect for autonomy in the medical field refers to respect and adherence to patients' wishes regarding their care.[4] This is often considered the most unbreakable one, as the patient's wishes, even if they do not align with the physician's preferred course of action, must be adhered to. The next foundation, "nonmaleficence" stems from the Hippocratic oath of "do no harm." To do no harm is one of the core concepts of any medical practice, and it is up to the physician to make decisions based on the avoidance of inflicting damage on the patient without notable benefits. The next foundational principle is beneficence. This principle states that the physician should do anything within the extent of his power to maximize benefits to the patient with each procedure or course of action. This principle is often considered secondary to the prior, as maximizing patient benefit against the patients will never be an ethical decision. Finally, and arguably the most abstract, is the concept of justice in medicine. Justice has to do with the consideration of what seems fair as a medical practitioner. Often having to do with resource distribution, as in the case of donor organs, or priority for treatment. This is

[4] ibid.,

usually one of the most challenging ones to resolve, and can most often clash with the other foundations of bioethics. In increasing the pressure of limited resources, my hypothesis is that the foundations of beneficence and justice will be altered in priority, and it might become more important to uphold one at the expense of the other.

Ethics Enforcement and Hospital Structure

Throughout observing India and collecting data through interviews, it can be immediately noticed that there is a distinct difference in how ethical practice and patient rights are enforced and upheld between India and the US. While this aspect of government structure might not exactly pertain to the difference in resources between the United States and India, it does pose a potential confounding variable when it comes to ethical thinking amongst physicians. While lawsuits for negligence and malpractice are present in both countries, one thing that has become more commonplace in India is the utilization of this legal threat to extort money from doctors. With India's vast, and spread out, population, it is difficult to enforce a standard in many laws throughout the nation. One can immediately notice this upon entry to rural India. For example, while it is currently illegal to put more than 2 people on a scooter, one will readily observe entire families present on the backs of scooters, and traffic laws are rarely obeyed. While road traffic is quite different than hospital conduct, it does suggest observationally that India struggles with enforcing a baseline set of laws and protection. According to a doctor who owns his own hospital in Jamkhed, when approached with fake cases it is almost impossible to not be extorted for his money. Fake patients, he said, will rile up a mob outside of the hospital demanding compensation for doctor

negligence, despite the doctor never recalling providing him treatment. As the fake patients come with more people and more threats, the doctor is forced to pay a fee in order for the extorter to leave him alone. While extortion might be something that occurs in the United States as well, rural physicians in India often are not equipped with effective malpractice insurance or lawyers in the same way.[5] With the Indian police in recent years losing accountability and being susceptible to corruption,[6] doctors are unable to reliably turn to the police to resolve these affairs. This has made many doctors more aversive to taking in patients that have difficult illnesses or are at high risk of complications.

What comes along with this lack of physician protection is a strong culture of mob justice that is present in Rural India. “There is a very strong culture of gossip and rumors,” a village health worker at CRHP stated, “if people are found publicly fighting or arguing, even if it is between family members, it becomes a village problem.” This strong village unity and gossip culture can be a mobilizer when faced with outrage. In healthcare, this manifests in mob justice when a physician is accused of negligence or malpractice. According to a second-hand account by a physician and hospital coordinator, one doctor, who had once stopped to help someone during an automobile accident, was falsely accused of being the cause of his death. What followed was an outraged crowd of friends and family members who proceeded to beat the physician to death on the road. This is just one of the many stories this physician had to share about the prevalence of mob justice in rural India. While a few accounts are not enough to

[5] Legal Service India E-Journal, June 18, 2018, accessed December 14, 2022, https://www.legalserviceindia.com/legal/article-1933-rising-cases-against-doctors.html.
[6] Ravikanth B. Lamani and G. S. Venumadhava, "Police Corruption in India," International Journal of Criminology and Sociological Theory 6, no. 4 (December 2013)

make a conclusion about how common mob justice and violence against doctors is in rural India, its presence is notable enough to scare many physicians, including many who participated in the interviews. A western physician could argue that it is the obligation of a physician to help an injured man on the side of the road, but many of the Indian physicians interviewed warned against doing so, claiming that the doctor's life could be put at risk. Despite this might not be directly related to the scarcity of resources, the culture of rural India, in which socioeconomic status plays a significant part in shaping, has affected the ethical decision-making of physicians.

The fear of mob justice and extortion has caused some doctors to be aversive to admitting certain types of patients, an aversion that can easily fall victim to prejudice and stereotypes. During an interview with a doctor in the private sector, when I asked what type of people he might be aversive to treating, he said that "when a patient is bad and the relatives are aggressive, it makes you wonder whether to take them or not," stating that he was "afraid, and when I was recently threatened it affects my mental health and my ability to treat patients." Many patients in tough conditions might see themselves continually referred or waitlisted, barring the most critical and worst cases from receiving treatment out of fear. Rather than refer, one doctor and hospital coordinator stated that in the case of a dying/unsavable patient he would "tell them how it is. If I were to refer to these challenging cases they would simply be continuously referred up the chain, having to pay absurd quantities of money and wait extremely long to only meagerly extend their life without returning much quality of life to the patient. The reality is, if my institution is not able to treat them, I will tell the patient to go home and spend time with their family, so they can be supported and in a comfortable place for

their death." Many doctors think carefully about which patients they will admit and which they will turn away/refer. In the US. it is considered unethical to ever turn away a patient in need of treatment. If a patient walks into the emergency room, it is expected that they will be able to receive treatment or at least be told where to get it. However, in the case of the physician that decided to turn a patient in critical condition away, he states that while he may be unable to provide treatment at his own institution, he is saving them from having to suffer through the medical economics of rural India.

Rural Patient Economics

Health care in India, especially in rural areas, differs quite significantly from what one might observe in the US. First and foremost, the government provides free health care for its citizens. According to the Indian constitution, it is an obligation of the government to ensure the right to health for all of its citizens. In 2018, the government of India launched "Ayushman Bharat," which generated a fund that would cover the socioeconomic bottom 50% of all Indian citizens.[7] Unlike the US, which relies on private hospitals and health insurance for most of its citizens (supplemented by things like medicare), the Government plays a direct role in providing healthcare for, ideally, a majority of its citizens. Despite the government's strides to provide healthcare for all of its citizens, India's private sector has become extremely prevalent and dominant in most areas.[8] While India's governmental health care system is quite ambitious and respectable on paper, in practice it has left many feeling skeptical about the government

[7] Sanjay Zodpey, "Universal Health Coverage in India: Progress achieved & the way forward," National Library of Medicine, last modified April 2018, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6057252/.
[8] Insurance Regulatory And Development Authority of India, Annual Report 2019-2019, December 19, 2019.

hospitals' ability to provide. During a trip to a community health center, the primary care physician explained how many doctors, have been moving to the private sector, as the private hospitals provide significantly more incentives in terms of monetary compensation. In fact, the Saltoli community health center was severely understaffed, lacking all of the specialists a community health center is supposed to have. The lack of staffing and migration of doctors from the public to private sectors has also caused a shift in attitude for many regarding government care. When asking patients in a private hospital in Jamkhed, why they chose private care, many claimed that the government health care provided lower quality care, or had too long of wait times for it to be worth it for the family. It is clear that the public consensus regarding government health care is that it might be more worth it to pay for private care.

Another critical point of the healthcare system of India is how private institutions operate. With government health systems being severely overcrowded, often underfunded, and, according to public consensus, lacking in the quality of care, many physicians choose to go the private route.[9] While the urban areas of India closely reflect the American private system, with massive corporate hospitals and doctors working together to provide high-quality, but quite expensive care, rural areas follow a different model. As many people in rural areas do not pay for health insurance, private care tends to be out of pocket. In Jamkhed, Maharashtra, most of the hospitals are indeed private. The private sector in the rural area acts as a number of small owned hospitals, usually run by a collection of doctors. Rather than have a hospital that bills the patient

[9] Swagata Yadavar, "More Indians die of treatable diseases than lack of access to healthcare," Business Standard, September 6, 2018, accessed December 14, 2022, https://www.business-standard.com/article/current-affairs/more-indians-die-of-treatable-diseases-than-lack-of-access-to-healthcare-118090600102_1.html.

after they have received treatment, doctors in the rural areas of India perform more of a bartering for goods and services, much like one would see in a market or bazaar.[10] In visiting with one of the doctors at these hospitals, a couple with a small child approached the doctor seeking care for their child's pneumonia. The doctor sat down and started describing the cost of each part of the treatment. When the patients expressed their concern with the price, the doctor told them that he could reduce the price to x amount, but that was all he could afford to do. The couple walked out of the hospital with their critically ill daughter, implying that they would need to discuss the finances first. Compared to the US system, which would seek to treat the child first, then charge the family after their daughter's illness has been cured. The way payment for services is carried out creates ethical dilemmas that might not be as familiar in the United States. Doctors often find themselves having to make compromises in their treatment in order to make the price of treatment affordable to their patients. When comparing this to our 4 principles of bioethics, doctors often find themselves having to compromise beneficence for justice. For example, if a doctor believes that the best way to acquire a diagnosis would be an MRI, but the patient would not be able to afford it, the doctor must make a compromise and potentially risk a false or incorrect diagnosis. Beneficence must be compromised in order for the patient to receive treatment at all, with treatments often being less effective all for the purpose of lowering costs for the patients. As the physicians in rural India often own the hospitals, they have a large say in determining the cost for patients and are able to reduce or increase costs where they see fit. In doing so, they get to determine how much they take away from each case.

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[10] Amit Sengupta and Samiran Nundy, "The private health sector in India," BMJ, November 2005, https://doi.org/10.1136%2Fbmj.331.7526.1157.

This provides another opportunity for potential ethical challenges as doctors can determine their own salary, giving ulterior for their care and services.

In the west, patients who are not able to afford the treatment often receive some subsidies from the government in order to cover the costs of the hospital. However, in India, the hospitals must find their own way to cover the cost. This is often done by charging some individuals more than others, allowing those who are impoverished to suffer less of a financial burden for health, and allowing wealthier individuals to, in some ways, cover the deficit they might leave behind (taken from an interview with a private doctor). However, determining who should pay more is ultimately left up to the administrative physician. With the average income in rural areas being 700-1500 US dollars a year,[11] it becomes difficult to truly determine who is in more critical condition than another. A physician is tasked with choosing someone who “should pay” based on word of mouth and self-reporting in order to cover the costs for those less privileged, which can be seen as unethical in its own right. While the intention to allow poorer patients treatment is an admirable one, judging who should pay more based on observation alone, often without any sort of financial statements, can lead to stereotyping and other forms of discrimination and dangerous categorization. According to a worker at Arohi, a medical NGO in the north of India, “if they are able to pay for school or petrol, or a house, then they should be able to afford their payment. It is one of the basic necessities along with food and shelter, and they ought to be willing to cover small coverage that we expect.” Justice as a principle of bioethics is continuously

[11] Statista Research Department, Number of rural households in India from 2018 to 2022, by annual income, September 13, 2022, https://www.statista.com/statistics/1012366/india-rural-households-by-annual-income/.

tested in the low-resource environment in India, and physicians often have to analyze a patient from a socioeconomic point of view, rather than just from a medicinal one.

One final prominent ethical dilemma that arises due to the payment system in healthcare has to do with the practice of referral. When discussing ethical challenges with a physician in the private sector, he asked if he could speak to me without the recording of his voice. In the private healthcare practice, he stated, there has sprouted a culture of referring patients to one another. Many of these small, doctor-owned hospitals vary in the capacity of what they can cover, so they will often need to refer patients to larger more capable institutions. However, what has begun to happen is that many physicians expect to receive a commission fee when referring a patient to some of these slightly bigger hospitals. As previously discussed, hospitals are already obligated to cover all their expenses and make a profit on their own, and this commission charge adds an additional expense. According to this doctor, what many of these hospitals do to make back the cost of having to pay a commission fee is to prescribe the patient extra tests and extra steps for treatment in order to be able to bill the patient more, making accepting referred patient more economically favorable and enabling them to make a profit on top of the commission fee. This is extremely unethical, and the physician I was speaking to denounced these hospitals for these actions. The low amount of resources has created an environment where people compete to maximize profit. These hospitals' exploitation of the patients, as well as the expensive commission fees, are examples of how these limited resources might have inspired some greed in these smaller hospitals. While it is impossible to make sweeping conclusions based on

this single physician's statement alone, the situation he described is believable given the circumstances and conditions of rural India.

What is often not considered in patient care from a physician's perspective is the economics behind the medicine, as it is usually the hospital that handles the expenses. However, a quick analysis of the Indian healthcare system proves that economics must be considered in part as part of the "suffering" a doctor must inflict to reach the desired outcome. Responsiveness, defined by the WHO, is the ability of the healthcare system of a nation to meet the expectation (not simply the need) of the population that it covers. Distinctly separate, the WHO mentions the financial burden of the health system in conjunction with the socioeconomic capabilities of its population.[12] However, what India's system proves is that an aspect of a healthcare's responsiveness is to respond to financial concerns. According to an Australian physician who has worked in India's public health system extensively, there are many who are forced to change their entire lifestyle in order to afford the cost of certain treatments of healthcare. It does not matter how life-threatening the disease is when it means that they might not have the ability to afford food in the following months. In reality, the financial aspect of healthcare responsiveness is paramount in these regions of low socioeconomic status. Even in the United States, a country often characterized by its excesses in healthcare people are cripplingly afraid of medical expenses and would rather not see a doctor out of fear.[13] One thing that the US health system could learn from India is that minimizing cost should be part of the care. Despite the previous ethical concerns that India's system might entail, it does have the benefit of making doctors consider what tests and

[12] Health Systems: Improving Performance (Geneva: World Health Organization, 2000).
[13] NORC at the University of Chicago, Americans' Views.

procedures are truly necessary. Many doctors in India find themselves performing hours upon hours of extensive clinical examination in hopes to cut costs from expensive testing methods such as MRIs. In one physician's words, “In the US, doctors use 80% lab and 20% clinical examinations. Here in India, it is 80% clinical exam and 20% lab tests.” Many of doctors are able to cut out what they feel is unnecessary to lower costs, as they have realized that it is part of their responsiveness as healthcare providers to ensure financial health as well as physical. While the United States Health System’s problems are complex and not easily resolved, if anything can be learned from health systems abroad it should be that there is an ethical obligation to heighten responsiveness through the maintenance of patients’ financial security.

Clinical Function with Limited Resources

Similar to the idea of cutting costs, medical ethics in the operating room has also been transformed in India by the limited amount of resources. During my stay in Rural Maharashtra, I had the opportunity to observe the surgical clinic that CRHP would perform. While CRHP did possess an impressive operation theatre, capable of holding 4 patients at a time, they only had the manpower to operate on around 2 patients at a time. Additionally, they only had the capacity for a single patient at a time to receive general anesthesia. Most of the clinic revolved around reconstructive surgery, involving skin grafts and burn contracture releases and there were many patients who needed to undergo some pretty significant operations. As the clinic put on by CRHP was free, the volume of patients on the first days was staggering. Patients came from hundreds of kilometers away for a chance to be selected for free care. Selecting the patients posed

the first ethical dilemma. With the raw volume of patients who registered for the camp, surgeons and clinicians alike were forced to ask themselves which cases should be prioritized. According to Ravi, the administrator at CRHP, patients were selected on a unique set of criteria. As this camp was a volunteer camp and was not aiming in making a profit when treating these patients, CRHP chose to prioritize those who did not have access to these resources. Their first priority was women, especially if they were unmarried. According to Ravi, the entire future of a woman in these rural areas can be dependent on these cosmetic surgeries. Women who suffer from any defect will never be able to find a husband, which, in the culture of rural India, will undoubtedly lead to a life of ostracization, extreme poverty, and, in many cases, violence. Ravi chose these young women first as, while their cases might not be as severe as another patient, their entire lives can depend on this surgery. Next on the list was socioeconomic status. For patients who could not seek treatment in other places, this free camp in CRHP would be vital if they were able to seek treatment at all. Last on the list was severity. While Ravi insists that they usually would perform numerous highly complex cases, this December Surgical Camp was the first one since the beginning of the pandemic, and while things were coming up to speed, complex cases were postponed to the next surgical camp they would have in spring. Easy cases were taken in volumes, as these simple cases could be rapidly operated on in between the more serious cases.

CRHP's recognition of women's healthcare needs reflects a particular ethical challenge that is not nearly as severe in the United States. Many women in these rural communities suffer from strict gender roles, discrimination, and a lack of rights. According to the National Family Health Survey, 13.5% of women have been denied

permission to access healthcare for themselves, and only 10.1% of women between the ages of 15 and 49 could make independent decisions about their healthcare (compared to 33% of men).[14] This disparity could be witnessed firsthand during the surgical clinic at CRHP. During the surgical triage, a young teen girl with an extremely severe hand disfiguration was discussed with the surgeons. The mother and daughter were sincerely hoping to receive treatment, as any disfiguration can have an immensely detrimental effect on a woman's chance for marriage. However, just as the surgeons were discussing when to place her on the schedule, an older male figure, possibly the grandfather, expressed to Ravi that they would no longer want to go through with the treatment and that they would look for other solutions. There is a sort of hesitance to spend time and effort on providing care for female members of the family, and many family members in rural India believe that the limited medicine and treatment they are able to receive should be saved for the men. While saying that the relationship between limited resources and gender discrimination is causational would be far too much of a stretch, it is interesting that as the area becomes more rural and farther from quality medical care so does the gender disparity.[15] The topic of women's discrimination and healthcare is immensely vast and beyond the scope of this paper. However, there is a notable confounding relationship between access to medical resources and women's empowerment.

The classification of what determined a "serious case" was also an element where the "Justice" aspect of bioethics was tested. While the operating room could hold up to 4 patients at a time, only 2-3 patients would ever have enough staff to be operated

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[14] Ministry of Health and Family Welfare and Government of India, "National Family Health Survey - 5," table, 2021, PDF.
[15] ibid.,

on. Most notably, there is only the capacity for a single patient to be receiving general anesthesia through intubation. Suddenly, it was not just about who should be operated on, but who deserves general anesthesia as well. Many patients would undergo pretty significant operations only with the use of local anesthesia, or the occasional intravenous drug. The gaseous general anesthesia was typically reserved for the youngest patients, and the physicians did their best to minimize the limited use of general anesthetic they had available. This is a notable distinction from the US, where patients are almost always sedated when undergoing any somewhat lengthy procedure. One notable example was a woman with a breast tumor. In order to conserve the operating tables and anesthetic for children, a woman, roughly the age of 30, was brought to the operating table without the use of any sedation anesthetic. While it can be somewhat common to perform a breast tumor removal under local anesthetic, it is general practice in the United States to at least sedate the patient using a little bit of propofol or fentanyl.[16] This woman was instead only given a series of numbing shots, and then had the tumor removed while she was fully conscious. This caused moments of intense pain for her when the surgeon would make cuts in places deep into her breast that was not entirely numbed. This type of operation, by American standards, could be seen as unethical, as you are directly subjecting the patient to intense amounts of pain, and beneficence. According to the American Medical Association (AMA), it is the ethical obligation of a physician to relieve pain when possible and should be considered a part of maximizing the benefit of the patient, much aligned with the

[16] Yuan Ching Chan, Comparing Local Anesthesia With General Anesthesia for Breast Cancer Surgery, research report no. NCT00938171, July 13, 2009, accessed December 14, 2022, https://clinicaltrials.gov/ct2/show/NCT00938171.

foundational principle of beneficence.[17] However, in the case of limited resources, as in the clinic in CRHP, the foundational concept of beneficence must be compromised for the sake of Justice.

The Collective Over the Individual

When compared to western countries, there is a general attitude of valuing dependence and family care over the independence we see paraded in the west. India is generally considered a collectivistic society, placing value on interdependence and a reliance on family and peers for most day to day actions.[18] While this sweeping statement is untrue for many of India's diverse communities and regions, there are some aspects of Indian culture that highlight these differences. Between the high rates of arranged marriages to simply traveling to the hospital with extended family, it is clear that there is a strong value placed on the family dynamic in India. In addition to the previously discussed issue of crowd dynamic, this emphasis on the family may alter the ethical decision-making of doctors in regard to patient autonomy. One of the scenarios proposed to the physicians involves a patient who is desperately refusing a colostomy, despite his family insisting that they go through with the procedure. The patient was stated to have early-onset dementia but is still capable of taking care of himself. The colostomy was discussed as a course of action before the patient possessed any complications, but now is refusing that complication.[19] Interestingly, while they would undoubtedly wait for patient consent, all of the Indian physicians generally proritize the

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[17] Ana Sofia Carvalho, "Ethical decision making in pain management: a conceptual framework," Journal of Pain Research 11 (2018): https://doi.org/10.2147%2FJPR.S162926.
[18] Rakesh K. Chadda and Koushik Sinha Deb, "Indian family systems, collectivistic society and psychotherapy," Indian Journal of Psychiatry 55 (January 2013), https://doi.org/10.4103%2F0019-5545.105555.
[19] Wall et al., "Ethics in Surgery."

family in some way. Some physicians said they would just "get the family to talk some sense into him and he would be convinced in no time." One physician, who had practiced both in the US and Rural India, noted that in actual practice when not under surveillance, most Indian physicians would go along with the decision of the family, and while they would insist on getting verbal consent, the family and the patient are considered a single unit. One doctor even noted that some families would be present n the operating room during an operation, allowing them to immediately consult the family when a decision needed to be made. Unlike the United States, where many patients will even keep their ailments secret from the family, one physician noted that disagreements between family members and patients in the case of encouraging treatment (not in the case of the family preventing treatment) are not particularly common. While this could potentially be seen as "Unethical" in the eyes of traditional western medical ethics, the emphasis on family dependency and unity that is present in India may provide this scenario with justification.

Another notable change in the norms of patient autonomy is the lack of written consent when it comes to rural Indian health care. According to a physician at CRHP, legal forms are often extremely intimidating to many patients. Rather than rely on forms of consent for an operation, physicians only really require a statement of verbal consent, one that is not typically recorded. This poses a scenario that would typically never happen in the United States. With a legal system that is so heavily active, consent without any recorded form, especially one that does not explicitly express all of the details of the legal agreement, would be strongly suggested against. While the legal system does play a role in health care, with doctors in India still able to suffer lawsuits,

the fact that verbal consent is usually sufficient to dictate patient care does provide an opportunity for some ethical dilemmas. Without everything explicitly laid out on paper, the patient might not entirely understand the implications of the treatment. Additionally, verbal consent has much less of a barrier to being given. External pressure, such as the presence of a doctor or the suggestion of a friend, can sway a patient heavily towards one decision. It presents the physician with significant power over the patient in the clinical setting, and, while the good faith of a physician may be assumed, it does open the doors for some abuse.

On the other hand, the power difference between a physician and their patient in rural India is far wider than what might be seen in the United States. Only 64.7% of India's rural population is literate.[20] While the literacy rate is a good indication of a baseline of education, it does not encompass individuals who have received enough education regarding basic science or medical principles. Many people in rural areas lack any understanding of the body at all, and medical knowledge is often held exclusively in the hands of the surgeon/physician. According to a public health professional who has worked extensively in India, the average Indian from a rural area cannot even comprehend what treatments entail or how they are even performed. With the insurmountable volume of patients, there are many doctors who barely even try to explain procedures or treatments, as they are trying to tend to as many patients as possible within their limited time frame. Patients are expected to make a decision about their care quickly and are not given the luxury of contemplating for days or weeks at a

[20] India Brand Equity Foundation, "Rural Education – Integral To India's Progress," INDIA ADDA – Perspectives On India (New Delhi, NCR), March 3, 2022, https://www.ibef.org/blogs/rural-education-integral-to-india-s-progress#:~:text=As%20of%202021%2C%20the%20literacy,important%20for%20the%20Indian%20economy.

time. For a patient to even understand what their ailment entails, the patient would somehow have to be caught up to speed on elements of basic anatomy and biology in a very small timeframe. With a massive volume of patients, especially in primary health government facilities, many doctors will skip an explanation of treatments and side effects and just provide basic instructions. Government surgeons will just pick what they think to be the best procedure or operation for the patient without listing all the options, as many people just simply lack the ability to understand what was going on. One physician from Australia during an interview noted that many doctors who immigrate from places like rural India run into some complications with Australian ethics boards because they had been so conditioned to providing quick and rapid care to a population that lacks the education level to understand. Clearly, when combined with the high patient volume and limited resources, the immensely large gap between the educational levels of the physician and the patient is having a significant effect on patient autonomy.

According to “Current Problems in Surgery,” this problem can manifest itself in the US as well during residency. Residents, just like many government doctors in India, are faced with a seemingly unbearable workload. This runs to the danger of antagonizing the patient, as they are largely the element that is creating this unending and seemingly unbearable work.[21] Physicians, both in the US and India, are at risk of dehumanizing the patient, seeing them as a task to be completed rather than a being to care for. It is important that the community of physicians remember that they are doing this to care for others, and maybe a slightly less intense experience as a resident could allow these physicians in training to reflect more on their compassionate selves.

[21] Wall et al., "Ethics in Surgery."

Physician Expectation of the Medical Field

The Medical Schooling system and the path a doctor needs to take in order to become a physician likely also plays a contributing role to the ethics dynamics we see in India. This problem is not unique to India and plays a role in many of the schooling systems. However, in the climate of India's public vs private healthcare, the manifestation of these issues might be a bit more tangible. The road to becoming a physician is a long one, and one that undoubtedly breeds competitivity. From as early on as high school, the highly selective nature of the medical field pits students against one another, and they are conditioned to always strive to be a better candidate than another. Both in India and the west, there is a tight association between becoming a physician to the idea of success, both financially and academically.[22] As one makes their way through the grueling schooling system, there is an expectation to be rewarded financially in the end. According to an Australian public health expert who has worked extensively in India, there is an expectation that these young doctors in training become highly specialized doctors. To become a primary care physician - one that would work in the primary and secondary facilities of rural India - is to "throw away the medical degree" in the eyes of some family members, as you are forfeiting potentially higher wages and more respect. There is an aversion for many physicians to work in these rural areas, despite it being the place in most need of care. One Indian physician claimed that "He did not desire to end up serving the rural communities" when he was assigned to Jamkhed, and hoped for a prestigious private practice in an urban area, but that "when he realized the need," he was happy to stay. There is societal and familial pressure that pushes these doctors to make large sums of money and participate in the

[22] ibid.,

most prestigious specialties when most of what India rural India needs are primary care physicians that are capable of treating communicable diseases. Communicable, treatable diseases such as TB, malaria, and digestive diseases continue to be one of the biggest expenditures of care in India.[23] And while becoming a neurosurgeon might be impressive, will it really do much to help the rural community one comes from?

This desire for success has caused a massive amount of doctors to migrate from the public sector to the private sector. Private sectors are able to pay their physicians more and will likely have more impressive facilities. While many doctors choose to make their end goal to help people, according to the previously mentioned public health expert, most physicians will focus on financial success first, and then once they are more than comfortable will they begin the pro-bono work. This often comes in the form of owning one's own private hospital, as is the case in Jamkhed, with dozens of privately owned 2-3 doctor hospitals making up a bulk of the medical facilities. This focus on financial success likely contributes to the unethical practices of patient commissions that were explored earlier, and this abundance of small privately owned hospitals are constantly competing for business.

Religion, Caste, and Medicine

Despite being abolished in the Indian constitution, caste still plays a significant role in shaping Indian culture from day to day. From simple glares on the street to outright discrimination and violence, the caste system can impact one's experience in India, especially as a health determinant. The Dalit community, the lowest caste of

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[23] Swagata Yadavar, "More Indians die of treatable diseases than lack of access to healthcare," Business Standard, September 6, 2018, accessed December 14, 2022, https://www.business-standard.com/article/current-affairs/more-indians-die-of-treatable-diseases-than-lack-of-access-to-healthcare-118090600102_1.html.

individuals, has the highest rates of communicable diseases, defects, and other health concerns. Dalits are often referred to government health centers when seeking their treatment or are even outright refused care by institutions outright. While there has been much research to show the health discrimination between castes, gathering first-hand qualitative data proved to be a significant challenge.[24] Many doctors would deny they have ever considered caste when providing care, and gathering an account of how physicians viewed members of lower castes proved to be difficult. However, it can be inferred from previous statements that many doctors would be concerned about a Dalit's ability to afford their private care, and would likely refer them to government centers to avoid that dilemma.

Religion, especially in recent years, has become quite a difficult political topic in rural areas of India. With Muslim discrimination on the rise and a Hindu fundamentalist group in control of the government, Muslim discrimination in healthcare has also proved to be a reality. A study conducted in 2021 by the Patient's Rights Charter of the Health Ministry showcased that nearly 33% of all Muslims have reported some sort of mistreatment regarding their healthcare. Many of the respondents, nearly 70% reported being rushed through the care system and simply given a prescription or test without ever being seen by a physician.[25] While discrimination against Muslims has been an ethical concern in India, qualitative data gathered through interviews made it difficult to expose mistreatment. In a question targeted at addressing religious differences in the hospital setting, modeled closely to a question found in “Current Problems In Surgery,

[24] Paul Kowal and Sara Afshar, "Health and the Indian caste system," The Lancet 385, no. 9966 (January 13, 2015), accessed December 14, 2022, https://doi.org/10.1016/S0140-6736(15)60147-7.
[25] Abhirr VP, "Patients Rights and Inequality in Vaccine Survey," Oxfam India (New Delhi, NCR), November 23, 2021.

Indian physicians were asked what they would do if a Muslim asked the physician, who was typically Hindu, to join in prayer prior to an operation.[26] The responses were varied. Some claimed that they would join in the prayer, as spiritual treatment is a part of the patients wishes. Others claimed that they would join in the prayer, but pray to their Hindu gods rather than Muslim ones, stating that they wish the best for the patient but do not feel the need to comprimise their religion. Some even claimed they would outright refuse, as a hospital is a place for scientific healing and not a place for religion, and that while they would permit prayer, they would ask the patient to do it on their own time. The last answer could indicate a slight prejudice against Muslim people and prayer, but it is difficult to determine without a point of comparison.

Religion does prove to play a role in places of low socioeconomic status outside India. In an interview with an anesthesiologist from Uganda, she described how religion can play a major factor in ethical decision-making. She described a scenario in which a child with parents who belonged to the Jehovah's Witness religion, was undergoing surgery and required an immediate blood transfusion to survive. The parents told the anesthesiologist to refuse blood transfusion in any scenario, and the anesthesiologist was at a loss for what to do. On one hand, she could let the child die and maintain the parent's religious integrity for their children, or she could give the transfusion anyways and save the child's life. In the end, she was able to convince the parents to let her do the transfusion, but she claimed she would have chosen to do the transfusion anyways. She stated that the hospital would protect her from ramifications and that in her own right mind she could not live to see an infant die when it could have been saved. "The infant has not even become old enough to know if they would follow that religion as

[26] Wall et al., "Ethics in Surgery."

well," she argued. When comparing her decision with the standard ethical protocol, western medical ethics and law claim that it is a breach of patient autonomy to give a transfusion to members of Jehovah's Witness,[27] but does that same rule apply to a child who would be forced to let die? It is an interesting ethical debate and worth discussing. She claimed that because her hospital was a wealthier one, she was able to be defended against potential legal or social ramifications if she chose to violate the parent's wishes, but in the case of a larger government hospital, she claims, she could have been endangered.

Concluding Thoughts

This explorative study revealed many ethical challenges that can be intensified by a lack of resources. The standard principles of bioethics that are upheld by law are often strictly enforced in the west, protecting people's rights and ensuring proper treatment of patients. However, when using India as a case study, it is clear that much of American bioethics is dependent on an idealistic medical setting, a setting that is often impossible in rural India. The foundations of patient autonomy, nonmaleficence, beneficence, and justice cannot always be maintained to the western standard, with justice largely taking a more determinant role in patient care. Beneficence is largely sacrificed in the name of justice, with doctors often having to cut out as many unnecessary parts of treatment as they possibly can. Economics in India has become a part of patient care, as many doctors, despite having better options at their disposal, must consider the overall livelihood of the patient when determining treatments. Patient

[27] Carlo Petrini, "Ethical and legal aspects of refusal of blood transfusions by Jehovah's Witnesses, with particular reference to Italy," Blood Transfus 12 (January 2014), https://doi.org/10.2450%2F2013.0017-13.

autonomy is often sacrificed on a cultural or patient-volume basis, and in order to see that everyone is cared for, ethics, in a western sense, has been altered. In this sense, American medical ethics is largely privileged on the massive quantity of resources at hospitals disposals, and physicians usually do not consider the cost of treatment as a factor that affects their ethical decision-making. Women in India have long been discriminated against when seeking medical care, and the priorities of many physicians have changed to tailor to those needs. While many of these cases might come across as unethical in the eyes of a westerner, they can be more closely considered a rearrangement in the importance of ethical principles. Between economics, patient volume, and gender inequality, justice, rather than patient autonomy and beneficence, has become the primary bioethics foundation that decisions are being made. The scarce resources in rural areas have led many physicians to feel pressured to become successful rather than beneficial to their community, which helps perpetuate the shortage of medical professionals. And while the United States has no shortage of social determinants of health, the caste system and religious strife provide a very systematic and rooted form of discrimination that is similar, but nonetheless distinct from the racial inequality in the US. The U.S. can learn a lot from studying ethics in these developing countries. With the health system scaring more and more individuals away from seeking care, it is becoming the responsibility, as it is In India, to be aware of patients' socioeconomic states when determining treatment. All of these dilemmas, while they might appear in the United States, are uniquely severe in places that do not possess the same resources, and it is important to remember the privilege that the United States’ ethical system is founded upon.

Bibliography

Carvalho, Ana Sofia. "Ethical decision making in pain management: a conceptual framework." *Journal of Pain Research* 11 (2018). https://doi.org/10.2147%2FJPR.S162926.

Chadda, Rakesh K., and Koushik Sinha Deb. "Indian family systems, collectivistic society and psychotherapy." *Indian Journal of Psychiatry* 55 (January 2013). https://doi.org/10.4103%2F0019-5545.105555.

Chan, Yuan Ching. *Comparing Local Anesthesia With General Anesthesia for Breast Cancer Surgery*. Research report no. NCT00938171. July 13, 2009. Accessed December 14, 2022. https://clinicaltrials.gov/ct2/show/NCT00938171.

Health Systems: Improving Performance. Geneva: World Health Organization, 2000.

India Brand Equity Foundation. "Rural Education - Integral To India's Progress." *INDIA ADDA Perspectives On India* (New Delhi, NCR), March 3, 2022. https://www.ibef.org/blogs/rural-education-integral-to-india-s-progress#:~:text=As%20of%202021%2C%20the%20literacy,important%20for%20the%20Indian%20economy.

Insurance Regulatory And Development Authority of India. *Annual Report 2019-2019*, December 19, 2019. PDF.

Kowal, Paul, and Sara Afshar. "Health and the Indian caste system." *The Lancet* 385, no. 9966 (January 13, 2015). Accessed December 14, 2022. https://doi.org/10.1016/S0140-6736(15)60147-7.

Lamani, Ravikanth B., and G. S. Venumadhava. "Police Corruption in India." *International Journal of Criminology and Sociological Theory* 6, no. 4 (December 2013): 228-34. PDF.

Legal Service India E-Journal, June 18, 2018. Accessed December 14, 2022. https://www.legalserviceindia.com/legal/article-1933-rising-cases-against-doctors.html.

Ministry of Health and Family Welfare, and Government of India. "National Family Health Survey - 5." Table. 2021. PDF.

NORC at the University of Chicago. *Americans' Views on Healthcare Costs, Coverage and Policy*. February 19, 2018. Accessed December 14, 2022. https://www.norc.org/PDFs/WHI%20Healthcare%20Costs%20Coverage%20and%20Policy/WHI%20Healthcare%20Costs%20Coverage%20and%20Policy%20Topline.pdf.

Petrini, Carlo. "Ethical and legal aspects of refusal of blood transfusions by Jehovah's Witnesses, with particular reference to Italy." *Blood Transfus* 12 (January 2014). https://doi.org/10.2450%2F2013.0017-13.

Radhakrishnan, Vignesh. "In 11 Indian States, fewer than 40% households covered with health insurance as of 2019-20." *The Hindu* (New Delhi, NCR), July 5, 2021. Accessed December 14, 2022. https://www.thehindu.com/data/data-in-11-indian-states-fewer-than-40-households-covered-with-health-insurance-as-of-2019-20/article61445857.ece.

Robone, Silvana, Nigel Rice, and Peter C. Smith. "Health Systems' Responsiveness and Its Characteristics: A Cross-Country Comparative Analysis." Abstract. *Health Services Research*. https://doi.org/10.1111%2Fj.1475-6773.2011.01291.x.

Sengupta, Amit, and Samiran Nundy. "The private health sector in India." *BMJ*, November 2005. https://doi.org/10.1136%2Fbmj.331.7526.1157.

Statista Research Department. "Number of people with health insurance across India from financial year 2016 to 2021, by business type." Infographic. Statista. July 21, 2022. Accessed December 14, 2022. https://www.statista.com/statistics/657244/number-of-people-with-health-insurance-india/.

Statista Research Department. “Number of rural households in India from 2018 to 2022, by annual income.” Infographic. September 13, 2022. https://www.statista.com/statistics/1012366/india-rural-households-by-annual-income/.

Thapa, Raksha, and Edwin Van Teijlingen. "Caste Exclusion and Health Discrimination in South Asia: A Systematic Review." *Asia Pacific Journal of Public Health* 33, no. 8 (November 2021). https://doi.org/10.1177%2F10105395211014648.

VP, Abhirr. "Patients Rights and Inequality in Vaccine Survey." *Oxfam India* (New Delhi, NCR), November 23, 2021. https://www.oxfamindia.org/press-release/patients-rights-and-inequality-vaccine-survey.

Wall, Anji, Peter Angelos, Douglas Brown, Ira J. Kodner, and Jason D. Keune. "Ethics in Surgery." *Current Problems in Surgery* 50, no. 3 (March 2013).

World Bank. "GDP by Country." WorldOMeter. Last modified July 7, 2022. Accessed December 14, 2022. https://www.worldometers.info/gdp/gdp-by-country/.

Yadavar, Swagata. "More Indians die of treatable diseases than lack of access to healthcare." *Business Standard*, September 6, 2018. Accessed December 14, 2022.

https://www.business-standard.com/article/current-affairs/more-indians-die-of-treatable-diseases-than-lack-of-access-to-healthcare-118090600102_1.html.

Zodpey, Sanjay. "Universal Health Coverage in India: Progress achieved & the way forward." *National Library of Medicine*. Last modified April 2018. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6057252/.