MANDATORY COVID-19 VACCINATION IN THE PERSPECTIVE OF INTERNATIONAL HUMAN RIGHTS LAW AND DOMESTIC LAW IN PAKISTAN: AN OVERVIEW

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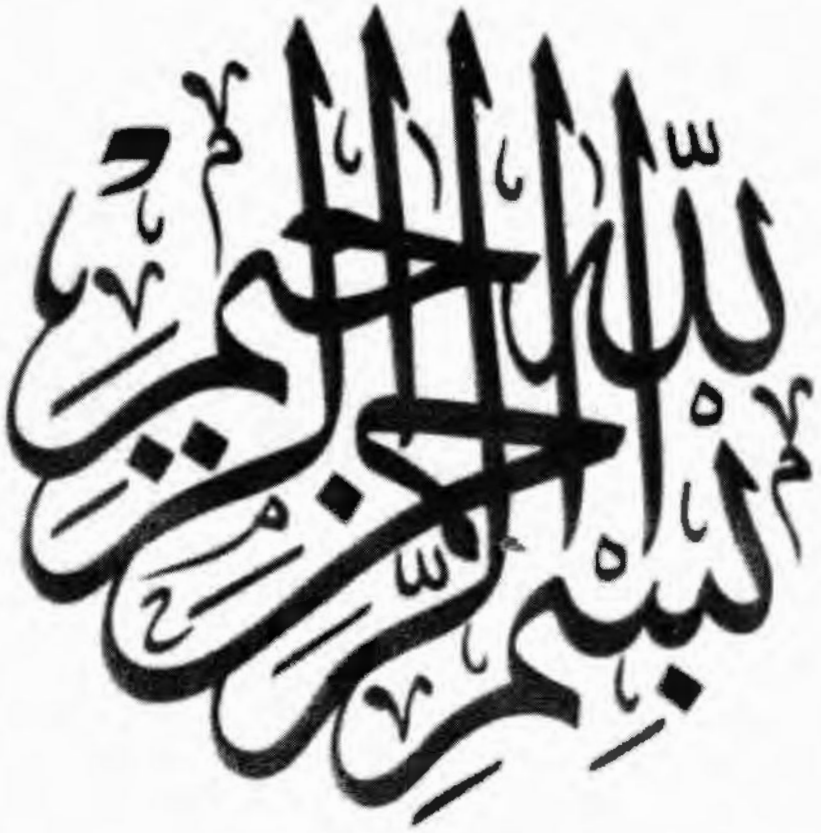
Human rights
Rights of man



"In the name of Allah, the Merciful, the Compassionate";

APPROVAL SHEET

MANDATORY COVID-19 VACCINATION IN THE PERSPECTIVE OF INTERNATIONAL HUMAN RIGHTS LAW AND DOMESTIC LAW IN PAKISTAN: AN OVERVIEW

SUBMITTED BY MR. AHMAD KHALIQUE

Accepted by the Faculty of Shariah & Law, International Islamic University Islamabad (IIUI) in Partial Fulfillment of the Requirements for the Award of the Degree of LL.M. (Human Rights Law).

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Author's Declaration

I, Ahmad Klalique, affirm the originality and authorship of my LLM thesis entitled "MANDATORY COVID-19 VACCINATION IN THE PERSPECTIVE OF INTERNATIONAL HUMAN RIGHTS LAW AND DOMESTIC LAW IN PAKISTAN: AN OVERVIEW." I confirm that this work is entirely mine and has not been previously submitted by me for any academic degree at the International Islamic University, Islamabad, or any other institution within the country or abroad. I acknowledge that if my statement is later proven to be false, even after my graduation, the University reserves the right to revoke or invalidate my LLM degree.

Name of scholar: Ahmad Khalique

Date: 10-08-2023

Dedication

I dedicate this work to Allah Almighty, who is my Creator, my steadfast Supporter, and my wellspring of insight.

I am extremely grateful to my devoted parents, Mr. and Mrs. Khalique ur Rehman, my elder brothers and sisters-in-law, my close relatives, and my dear friends, who supported me financially and morally through thick and thin, who kept bucking me up in times of despair, depression, and anxiety, I can't pay them back forever, may Allah Almighty bless them all here and hereafter.

I also dedicate this work to my respected supervisor Dr. Susic Sejo and the whole Shariah and Law faculty; who supported me in pursuing my goals and completing my thesis.

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In the exalted name of Allah, the most Compassionate and Merciful, the Supreme and Benevolent, whose Graciousness has granted me the opportunity to undertake this seemingly insurmountable task, I extend praises and blessings upon our revered Holy Prophet, Muhammad (P.B.U.H). Through his profound teachings, humanity has come to recognize its Creator, Allah, and has been inspired to seek knowledge for the betterment of mankind.

I am profoundly grateful to my esteemed supervisor, Dr. Susic Sejo, a distinguished professor at the Faculty of Shariah and Law, International Islamic University Islamabad, who consistently urged me to strive for excellence throughout the course of my research.

Finally, I must acknowledge that without the unwavering prayers, support, and abundant encouragement from my family and friends, I could never have brought this work to fruition. Their steadfast belief in me served as a guiding light in this journey of completion.

Case Laws and Statutes

Case Laws

Abgrall and 671 Others v. France

Jacobson v. Massachusetts

Maudoodi v. Government of Pakistan

Raja Muhammad Nadeem v The State and Another

S.M.C. 01/2020 (Suo Moto Action Regarding Combating the Pandemic of Corona Virus [COVID-19]),

Supreme Court of Pakistan

Vavrika and Others v. The Czech Republic

Zucht v. King

Statutes

Charter of Fundamental Rights of the European Union

Convention on Human Rights and Biomedicine (Oviedo Convention)

European Convention for the Protection of Human Rights and Fundamental Freedoms (ECHR)

International Covenant on Civil and Political Rights (ICCPR)

KP Public Health (Surveillance and Response) Act, 2017

Punjab Epidemic Diseases (Amendment) Act, 2011

Punjab Infectious Diseases (Prevention and Control) Act, 2020 (PIDA)

Sindh Epidemic Diseases Act, 2014

The Schengen Borders Code and Directive 2004/38

Universal Declaration on Bioethics and Human Rights (UDBHR)

WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects

West Pakistan Epidemic Diseases Act, 1958.

Abbreviations

AI	Amnesty International
CAA	Pakistan Civil Aviation Authority
CCPR	United Nations Human Rights Committee
CFR	Case Fatality Ratio
COVID-19	Coronavirus Disease 2019
CRPC	Code of Criminal Procedure 1898
DRAP	Drug Regulatory Authority of Pakistan
ECHR	European Convention for the Protection of Human Rights and Fundamental Freedoms
ECtHR	European Court of Human Rights
EMA	European Medicines Agency
EPI	Expanded Program on Immunization
EUA	Emergency Use Authorization
FDA	Food and Drug Administration
HRCP	Human Rights Commission of Pakistan
ICCPR	International Covenant on Civil and Political Rights
IIFA	International Islamic Fiqh Academy
IND	Investigational New Drug
MERS	Middle East Respiratory Disease
NCC	National Coordination Committee

NCOC	National Command and Operation Center
NDMA	National Disaster Management Authority
NSC	National Security Committee
OHCHR	Office of the United Nations High Commissioner for Human Rights
PEMRA	Pakistan Electronic Media Regulatory Authority
PHEIC	Public Health Emergency of International Concern
PIDA	Punjab Infectious Diseases (Prevention and Control) Act 2020
PMA	Pakistan Medical Association
SOPs	Standard Operating Procedures
SVD	Standard Vaccine Development
UDBHR	Universal Declaration on Bioethics and Human Rights
UNO/UN	United Nations Organization
WHO	World Health Organizations
WMA	World Medical Association

Contents

CHAPTER 1

INTRODUCTION

1.1 Thesis Statement

The public opinion on mandatory vaccination for COVID-19 is heavily divided and become heated based on human rights arguments, hence; there is a need to research whether Pakistan may have the proper legislative framework on COVID-19 vaccination to strike a balance between the basic rights of the people and punitive actions of the state.

1.2 Introduction

The 'Coronavirus Disease 2019' (hereinafter referred to as COVID-19), which is the fifth documented pandemic since the 1918 Spanish flu, emerged in Wuhan, China, and swiftly disseminated worldwide.[1] The International Committee on Taxonomy of Viruses officially designated the coronavirus as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) after conducting a phylogenetic analysis.[2] SARS-CoV-2 is believed to have originated from an animal coronavirus and subsequently underwent mutations, enabling its transmission from person to person.[3] Owing to its high infectivity, the virus spreads rapidly and continues to evolve in populations globally.[4] It swept the globe, sparking the worst pandemic of the 21st century. There have been 755,703,002 reported infections of COVID-19 as of February 13, 2023,

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[1] Yen Liu, Rei-Lin Kuo, and Shin-Ru Shih, "COVID-19: The First Documented Coronavirus Pandemic in History," *Biomedical Journal* 43, no. 4 (January 1, 2020): 328–33, https://doi.org/10.1016/j.bj.2020.04.007.

[2] Alexander E. Gorbalenya et al., "The Species Severe Acute Respiratory Syndrome-Related Coronavirus: Classifying 2019-NCoV and Naming It SARS-CoV-2," *Nature Microbiology* 5, no. 4 (March 2, 2020): 536–44, https://doi.org/10.1038/s41564-020-0695-z.

[3] Jasper Fuk-Woo Chan et al., "A Familial Cluster of Pneumonia Associated with the 2019 Novel Coronavirus Indicating Person-to-Person Transmission: A Study of a Family Cluster," *The Lancet* 395, no. 10223 (February 15, 2020): 514–23, https://doi.org/10.1016/s0140-6736(20)30154-9.

[4] Liu, Kuo, and Shih, "COVID-19: The First Documented Coronavirus Pandemic in History."

recorded to the World Health Organization (hereinafter referred to as "**WHO**"), with 6,836,825 deaths. An aggregate of 13,168,935,724 vaccine shots were delivered as of January 30, 2023.[5]

1.2.1 Are COVID-19 Vaccination Mandates Permissible Ethically and Legally Under International Human Rights Law?

On January 10, 2020, the genetic sequence data of the SARS-CoV-2 virus was publicly shared through the Global Initiative on Sharing All Influenza Data (GISAID). By March 19, 2020, the pharmaceutical industry had already made a definitive commitment to develop a COVID-19 vaccine. Through the Emergency Use Authorization (EUA) program, the clinical development of COVID-19 vaccines was completed within a year, a remarkable achievement considering it was approximately 10 to 15 times faster than the traditional Standard Vaccine Development (SVD) program.[6]

The President of the European Commission, Ursula von der Leyen, encouraged the 27 member states to consider making vaccinations mandatory. While some proponents argue that this measure is ethically justifiable and should carry penalties for non-compliance, others contend that it could potentially infringe upon international human rights laws.[7]

We have discovered that the specific list of human rights outlined in Article 4(2) of the International Covenant on Civil and Political Rights (ICCPR), which has been adopted by 193 States Parties worldwide, contains non-derogable rights, even during times of national emergency. Among these are the "physical integrity rights," which are universally recognized as

[5] "WHO Coronavirus (COVID-19) Dashboard," WHO Coronavirus (COVID-19) Dashboard With Vaccination Data, n.d., https://covid19.who.int/.
[6] Willem Aardt, "COVID-19 Vaccine Passports: Derogating Non-Derogable Fundamental Human Rights," *Medical Research Archives* 10, no. 2 (January 1, 2022): 3, https://doi.org/10.18103/mra.v10i2.2684.
[7] Aardt, "COVID-19 Vaccine Passports," 2.

internationally acknowledged human rights and are not subject to any exceptions or limitations.[8] Article 7 of the ICCPR states: "No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment. In particular, no one shall be subjected without his free consent to medical or scientific experimentation." And it definitely includes freedom from the right to be administered with a possibly lethal experimental vaccination.

International human rights law is clear and categorical in affirming that every individual possesses an inherent and non-negotiable entitlement to grant consent freely and with adequate information. Violations of international human rights law, particularly concerning non-derogable rights acknowledged as fundamental human rights under the principle of *jus cogens* (peremptory standards of general international law),[9] state parties must not make COVID-19 vaccination compulsory, and according to normative ethical viewpoints and legal obligations, *erga omnes* (a state's responsibility to the international community as a whole).[10]

Achieving a satisfactory equilibrium between preserving individual autonomy and ensuring the welfare of the public is an immensely challenging task, especially amid the unparalleled epidemiological and scientific landscape of the COVID-19 pandemic. The COVID-19 vaccine, with its distinct structures and the novel approaches employed in its development to combat the disease, adds further complexity to this challenge.[11] Consequently, in formulating public health policies, it becomes imperative to find a delicate balance that respects the common good while upholding the personal human rights safeguarded by various international human rights treaties.

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[8] Aardt, 5.

[9] Thomas Weatherall, "Peremptory Norms of General International Law (Jus Cogens)." *Cambridge University Press EBooks*, July 1, 2015, 1–2. https://doi.org/10.1017/cbo9781139976664.004.

[10] Brian D. Lepard, "Defining Erga Omnes Customary Norms," in Customary International Law A New Theory with Practical Applications (Cambridge University Press, 2010), 261–69. https://doi.org/10.1017/cbo9780511804717.018.

[11] Filippo Gibelli et al., "COVID-19 Compulsory Vaccination: Legal and Bioethical Controversies." *Frontiers in Medicine* 9 (February 2, 2022), 1. https://doi.org/10.3389/fmed.2022.821522.

1.2.2 Pakistan Case: Mandatory COVID-19 Vaccination and Legal Framework

On February 26, 2020, Pakistan informed its first two verified cases among religious travelers. These were tied to travel history in Iran, as well as later travel history from other nations, especially the Kingdom of Saudi Arabia (KSA), Italy and the United Kingdom.[12] According to WHO, as of 14 February 2023, there have been 1,576,538 reported cases of COVID-19, with 30,640 fatalities. An overall of 333,085,477 vaccination shots had been delivered as of 21 January 2023.[13]

It is a known fact that Pakistan's current health conditions are unsatisfactory. The country is suffering from a significant health crisis because of poor health conditions, lack of awareness, overpopulation, lack of medical facilities, and so on. On top of it, people in many regions/vicinities have declined to vaccinate their kids with anti-polio drops, which has resulted in the reappearance of the disease of poliomyelitis over and again.[14] So, vaccine apprehension is not an unfamiliar occurrence in Pakistan. Therefore, according to an earlier survey conducted by the Gallup Coronavirus Attitude Tracker Poll (Pakistan), as many as 49 percent of Pakistanis did not intend to get jabbed against coronavirus.[15] The fear of vaccination, as well as the public misperception of the seriousness of COVID-19 in Pakistan, prompted an inquiry into whether compulsory vaccination was the best strategy to control the virus. This query was brought up due to legal questions about the person's right to physical independence, self-respect, and

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[12] Nadia Noreen et al., "COVID 19 Pandemic & Pakistan: Limitations and Gaps," *Global Biosecurity* 1, no. 4 (May 21, 2020), https://doi.org/10.31646/gbio.63.

[13] Pakistan: WHO Coronavirus Disease (COVID-19) Dashboard with Vaccination Data." n.d. Covid19.Who.int. https://covid19.who.int/region/emro/country/pk.

[14] Ghina -e-Sahar, "An Analytical Study to Discuss the International as Well as Local Legal Structure for Prevention of Infectious Diseases and Epidemic Control Measure," *Journal of Law and Social Policy* 2 (September 2020): 66, 72. https://www.balutia.edu.pk/luric/law/wp-content/uploads/2020/12/JLSP-Vol2-Article5-Sep2020.

[15] Momna Taufeeq, "The Curious Case of Vaccine Hesitancy | Political Economy | Thenews Com Pk," *The News International*, June 13, 2021, https://www.thenews.com.pk/tns/detail/848574-the-curious-case-of-vaccine-hesitancy

confidentiality as guaranteed by Article 14 of the Constitution. While the provision solely pertains to the privacy of the home, the Superior Courts have interpreted it broadly to include a basic right to privacy everywhere. The primary argument put forth against compulsory vaccination revolves around the constitutional protection and guarantee of an individual's right to dignity, encompassing the rights to privacy and bodily autonomy. Making vaccination mandatory raises concerns about potential violations of the right to privacy, which is intrinsically linked to an individual's sense of self-respect.

In Pakistan, the sole law that deals directly with diseases is the outdated Epidemic Diseases Act 1897, which was revised in 1958 and retitled the West Pakistan Epidemic Diseases Act, 1958. It allows officials to break into any home and forcefully check a suspected ill person, but it does not allow the government to impose a shutdown, screen passengers, or perform any sort of monitoring.

As health is now a devolved topic following the 18th Constitutional Amendment, the provinces are responsible for guaranteeing healthcare mechanisms in the case of a pandemic. All provinces, except Balochistan, have their relevant epidemic disease control laws. Out of these laws, if we single out and examine The Punjab Infectious Diseases (Prevention and Control) Act, 2020 (PIDA), we see that there is no mention of the protection or preservation of human rights in the context under consideration. There are no limits, so the patient can be kept indefinitely, provided the medical officer's assessment. The aforementioned limitation predominantly pertains to the right to freedom of movement, which is ensured by Article 15 of Pakistan's Constitution.[16]

[16] Ghulam Abbas, Muhammad Sajjad, and Naseem Razi, "COVID-19 Pandemic and Legal Response: A Review of Punjab Infectious Diseases Law," *Palarch's Journal of Archaeology of Egypt/Egyptology* 18, no. 4 (2021): 6579–93, https://archives.palarch.nl/index.php/jae/article/view/7310.

So currently, Pakistan does not have any specific legislation mandating compulsory coronavirus vaccination. This begs the question of whether such divergence from fundamental rights would be conceivable without the statutory framework facilitating deviance from fundamental rights under the Epidemic Diseases Act of 1958.

1.3 Framing of Issues

1. To what extent does mandatory COVID-19 immunization align with the principles and norms established in international human rights law?
2. Is vaccination the singular imperative for addressing, and potentially mandating, measures to safeguard public health, or are alternative strategies equally efficacious?
3. To what extent, if any, can the preservation of societal well-being take precedence over the inviolable human rights of individuals within the context of public health emergencies?
4. Does the potential imposition of legal ramifications pertaining to human rights violations constitute a substantiated rationale from a public health standpoint?
5. Do the prevailing domestic laws, particularly the epidemic laws, in Pakistan, possess a sound legal foundation for effectively managing and mitigating pandemics?

1.4 Literature Review

The literature review of the present thesis provides a comprehensive survey of key works addressing the intersection of vaccination mandates, human rights, and legal frameworks. These sources collectively offer an insightful foundation for understanding the complex legal and ethical landscape surrounding compulsory vaccination, serving as a crucial backdrop to the ensuing discussion. They encompass diverse perspectives, from international human rights law

to specific case studies within Pakistan, offering a robust framework for analyzing the critical issues at hand.

1. ***Epidemics And Pandemics From Ancient Plagues To Modern-Day Threats***[17] by **Joseph P. Byrne and Jo N. Hays** is a two-volume book authored by each one of them respectively. It provides a comprehensive and engaging exploration of the history and impact of epidemics and pandemics. Volume 1 delves into the emergence, spread, and prevention of these diseases, considering modern factors like global travel and antibiotic resistance. It also examines the roles of public health agencies and the media. In Volume 2, readers gain insights through detailed case studies, uncovering the enduring effects of specific outbreaks throughout history.
2. ***The Vaccine Debate***[18] by **Tish Davidson** is a comprehensive resource offering accurate and easily understandable information about vaccines and the associated controversies. The book covers the historical context of vaccine regulation and its interactions with the immune system, providing thoughtful consideration of various vaccine debates. It offers detailed insights into the uses, dosages, potential adverse events, contraindications, and limitations of each vaccine. The text also traces the evolution of vaccine resistance from the 1800s to the present day and discusses the government's role in vaccination requirements. Additionally, it delves into the debate surrounding potential links between vaccines and neuropsychological disorders like autism spectrum disorder and attention-deficit hyperactivity disorder. Lastly, the book examines the appropriateness of currently recommended childhood vaccines.

[17] Joseph P. Byrne and Jo N. Hays, *Epidemics and Pandemics: From Ancient Plagues to Modern-Day Threats [2 Volumes]* (Santa Barbara, California, United States of America: Greenwood, An Imprint Of Abc-Clio, Llc, 2021)
[18] Tish Davidson, *The Vaccine Debate* (ABC-CLIO, 2018), 184.

3. In ***Vaccine Epidemic How Corporate Greed, Biased Science, and Coercive Government Threaten Our Human Rights, Our Health, and Our Children,***[19] authors and editors **Louise Kuo Habakus and Mary Holland** delve into the heated discourse surrounding individual and parental vaccination choice in the United States. Drawing on the expertise of over 20 professionals spanning ethics, law, science, medicine, business, and history, the book passionately advocates for reform. Its updated edition includes additional chapters covering issues like scientific misconduct, mandates for healthcare workers, concerns about HPV vaccine development, and insights into the recent Supreme Court decision on vaccines. It stands as a crucial resource for the vaccination choice movement and is essential reading for anyone considering vaccination for themselves or their children.

4. In ***Islamic Biomedical Ethics.***[20] **Abdulaziz Sachedina**, a seasoned scholar in Islamic law, bridges traditional Islamic values with contemporary ethical dilemmas in medicine. He goes beyond legalistic interpretations, seeking the underlying moral reasoning behind actions. By drawing on various Muslim theologians, Sachedina develops a framework that aligns with the spirit of Shari'a. Importantly, he emphasizes that these decisions are not absolute or final, allowing for ongoing reevaluation. This methodology is then applied to a range of critical issues in the human life cycle. Sachedina's work transcends the confines of Islamic scholarship, aiming for a broader conversation with Jewish and Christian ethics. He advocates for a shared moral language across Abrahamic traditions, urging Islamic theological ethics to engage with secular and scripture-based bioethics. A

[19] Louise Kuo Habakus, Mary Holland, and Kim Mack Rosenberg, *Vaccine Epidemic How Corporate Greed, Biased Science, and Coercive Government Threaten Our Human Rights, Our Health, and Our Children* (Simon and Schuster, 2011).

[20] Abdulaziz Sachedina, *Islamic Biomedical Ethics Principles and Application* (New York: Oxford University Press, 2009), https://openlibrary.org/books/OL16945055M/Islamic_biomedical_ethics.

significant advancement in Islamic bioethics, this book is essential for anyone grappling with the complex moral questions posed by modern medicine, extending its relevance beyond the Muslim community to all those concerned with ethics.

5. The research article ***COVID-19 Vaccine Passports: Derogating Non-Derogable Fundamental Human Rights***[21], written by ***Willem van Aardt,*** critically examines the concept of COVID-19 vaccine passports within the framework of fundamental human rights. Aardt argues that implementing such passports may potentially infringe upon rights deemed non-derogable under international law. Through rigorous legal analysis, the article highlights the tension between public health imperatives and individual liberties. It also traces the notion that International human rights law is unequivocal in stating that one and all have the inalienable right to free and well-versed consent, which is why it is against the law for state parties to make COVID-19 immunization mandatory.
6. The research paper titled ***COVID-19 Pandemic and Legal Response: A Review of Punjab Infectious Diseases Law,***[22] jointly authored by **Dr. Hafiz Ghulam Abbas, Muhammad Sajjad,** and **Dr. Naseem Razi,** offers a valuable examination of the legal framework invoked during the COVID-19 pandemic in Punjab, Pakistan. The article adeptly dissects the Punjab Infectious Diseases (Prevention and Control) Act, 2020, providing crucial insights into its provisions and implications.

   The authors provide a comprehensive overview, shedding light on its weaknesses and drawbacks in managing the public health crisis. Through this review, Abbas, Sajjad, and Razi contribute valuable insights into the legal tools available for pandemic response, shedding light on areas that may require further refinement or adaptation for future public

[21] Aardt, "COVID-19 Vaccine Passports: Derogating Non-Derogable Fundamental Human Rights."
[22] Abbas, Sajjad, and Razi, "COVID-19 Pandemic and Legal Response: A Review of Punjab Infectious Diseases Law."

health crises. The paper also examines the Act's procedural structure to deal with COVID-19 for the same purpose.

7. The research article, ***COVID-19 and Vaccination Campaigns as 'Western Plots' in Pakistan: Government Policies, (Geo-)Politics, Local Perceptions, and Belief***,[23] by **Inayat Ali, Salma Sadique, and Shahbaz Ali**, offers a compelling exploration of the socio-political context surrounding COVID-19 and vaccination efforts in Pakistan. By investigating the perception of these initiatives as 'Western plots', the authors shed light on the intricate interplay between government policies, geopolitical influences, and local beliefs. The article effectively uncovers a complex web of factors influencing public attitudes towards vaccination. However, while it provides a valuable analysis of these dynamics, further research may be needed to delve into potential solutions for addressing these concerns and fostering trust in vaccination efforts within Pakistan. Overall, this article is an insightful addition to the discourse on COVID-19-related fears and their impact on vaccination campaigns.

8. ***Debate on Mandatory COVID-19 Vaccination***[24] by **Fung Kei Cheng** provides a comprehensive exploration of the contentious topic of mandatory COVID-19 vaccination policies. Cheng skillfully navigates the various arguments for and against compulsory vaccination, taking into account legal, ethical, and practical considerations. The article is a valuable resource for readers seeking a well-informed perspective on the complexities surrounding vaccination mandates. Cheng's work contributes to the ongoing discourse surrounding COVID-19 vaccination policies, offering insights that are relevant not only

[23] Inayat Ali, Salma Sadique, and Shahbaz Ali, "COVID-19 and Vaccination Campaigns as 'Western Plots' in Pakistan: Government Policies, (Geo-)Politics, Local Perceptions, and Beliefs," *Frontiers in Sociology* 6 (April 23, 2021), https://doi.org/10.3389/fsoc.2021.608979

[24] Fung Kei Cheng, "Debate on Mandatory COVID-19 Vaccination," *Ethics, Medicine and Public Health* 21 (April 1, 2022), https://doi.org/10.1016/j.jemep.2022.100761

during the pandemic but also for future discussions on public health measures and individual rights.

9. ***Post COVID-19 Rulings of Islamic Law on Pandemics: An Analytical Study with Reference to Necessity and Juristic Creativity in Management of Consequential Issues Related to nCoV-19 Virus***[25] by **None Fazli Dayan** provides a thorough examination of Islamic legal perspectives on pandemics, particularly in light of the COVID-19 crisis. The article's careful analysis of necessity and juristic creativity in managing the consequential issues arising from the virus is a notable strength. However, it would benefit from more explicit case studies or practical examples to ground its theoretical framework. Additionally, a broader comparative context, considering diverse interpretations within Islamic jurisprudence, could enhance the paper's depth. Overall, this article offers valuable insights into Islamic legal responses to pandemics, serving as a significant resource for scholars and practitioners in the field.

10. ***COVID-19 Compulsory Vaccination: Legal and Bioethical Controversies***[26] by **Filippo Gibelli, Giovanna Ricci, Ascanio Sirignano, and Domenico De Leo** offers a comprehensive exploration of the legal and bioethical complexities surrounding compulsory COVID-19 vaccination. The authors adeptly dissect the multifaceted issues, emphasizing the tension between public health imperatives and individual rights. Their analysis of European human rights laws and related instruments provides a solid foundation for understanding the legal landscape. However, the paper could benefit from a more nuanced consideration of cultural and social factors influencing vaccine

[25] None Fazli Dayan, "Post COVID-19 Rulings of Islamic Law on Pandemics: An Analytical Study with Reference to Necessity and Juristic Creativity in Management of Consequential Issues Related to nCoV-19 Virus," *Russian Law Journal* 11, no 3 (April 7, 2023): 1487–1530, https://doi.org/10.52783/rlj.v11i3.1674.
[26] Gibelli et al., "COVID-19 Compulsory Vaccination: Legal and Bioethical Controversies."

acceptance. Nonetheless, this research is a timely and valuable contribution, offering essential insights for policymakers, legal scholars, and bioethicists grappling with the challenging decisions surrounding mandatory vaccination during the COVID-19 pandemic.

11. In ***Ensuring the Citizens' Rights and Freedoms in Case of COVID-19 Vaccination in the Public Health System,***[27] research writers **Nataliya Gutorova, Vitalii Pashkov,** and **Tetyana Kaganovska** provide a thoughtful analysis of the legal and ethical considerations surrounding COVID-19 vaccination. The paper offers valuable insights into safeguarding individual rights and freedoms within the context of public health measures. It serves as a pertinent reference for the *Case of Vavřička and Others v. The Czech Republic*, shedding light on the broader implications of vaccination mandates. The authors' work underscores the importance of balancing public health imperatives with the protection of citizens' fundamental rights.

12. The research article ***Pakistan: Legal Response to COVID-19***[28] provides a comprehensive examination of Pakistan's legal measures in response to the COVID-19 pandemic. Authored by **Haris Bin Isaam, Fatima Mehmood, Seher Aftab, Hafsa Ahmad,** and **Momina Naveed**, this piece is an invaluable resource. It effectively outlines Pakistan's approach to the pandemic, detailing the public health measures implemented and addressing the critical issue of implementation and adherence. The authors offer a balanced analysis, showcasing the strengths and potential shortcomings of Pakistan's

[27] Nataliya Gutorova, Vitalii Pashkov, and Tetyana Kaganovska. "Ensuring The Citizens' Rights and Freedoms In Case of COVID-19 Vaccination In The Public Health System," *Wiadomości Lekarskie (Warsaw, Poland)* 74, no. 11 (January 1, 2021): 2863–69, https://doi.org/10.36740/wlek202111201.

[28] Haris Bin Isaam et al., "Pakistan: Legal Response to Covid-19," *In Jeff King and Octávio LM Ferraz Et Al (Eds), the Oxford Compendium of National Legal Responses to Covid-19 (OUP 2021)*, September 1, 2021. https://doi.org/10.1093/law-occ19/e25.013.25

legal response. They adeptly navigate through the intricate legal landscape, shedding light on the complexities faced by the executive branch of government during a global health crisis. The article serves as a significant reference for scholars, policymakers, and practitioners, offering valuable insights into Pakistan's efforts to manage the pandemic within a legal framework. It is a crucial contribution to the Oxford Compendium, providing a nuanced understanding of the legal dimensions of the COVID-19 response in Pakistan.

13. ***Sharia (Islamic Law) Perspectives of COVID-19 Vaccines***[29] by **Yan Mardian, Kathryn Shaw-Shaliba, Muhammad Karyana,** and **Chuen-Yen Lau** provide a valuable examination of the Islamic legal considerations regarding COVID-19 vaccines. The authors meticulously navigate through the complexities of Islamic jurisprudence, shedding light on the various perspectives on vaccine manufacturing. This paper is an important reference for understanding the ethical and religious concerns that may arise within Muslim communities regarding vaccine production. However, it is worth noting that the diverse interpretations of Sharia across different regions and communities might lead to varied perspectives. The authors effectively present a comprehensive overview, yet it is advisable to complement this study with a broader range of scholarly opinions for a well-rounded understanding of Islamic law's stance on COVID-19 vaccines.
14. ***Pandemics Throughout History***[30] by **Jocelyne Piret** and **Guy Boivin** is a comprehensive and well-researched paper that provides valuable insights into the historical context of pandemics. The authors adeptly navigate through various types of pandemics, including

[29] Yan Mardian et al., "Sharia (Islamic Law) Perspectives of COVID-19 Vaccines," *Frontiers in Tropical Diseases* 2 (December 20, 2021). https://doi.org/10.3389/fitd.2021.788188.
[30] Jocelyne Piret and Guy Boivin, "Pandemics Throughout History," *Frontiers in Microbiology* 11 (January 1, 2021). https://doi.org/10.3389/fmicb.2020.631736.

plagues, influenza, cholera, and coronaviruses. Their detailed exploration of endemic, outbreak, epidemic, and pandemic stages offers a nuanced understanding of the progression of infectious diseases. The paper serves as an indispensable resource for readers seeking a comprehensive overview of pandemics and their impact on human societies. Piret and Boivin's work is a significant contribution to the field, offering a foundation for understanding the dynamics of pandemics, which is particularly pertinent in the context of the ongoing COVID-19 pandemic.

15. ***An Analytical Study to Discuss the International as well as Local Legal Structure for Prevention of Infectious Diseases and Epidemic Control Measure,***[31] written by **Ms. Ghina-e-Sahar,** is a well-researched and insightful paper that provides a thorough examination of the legal framework for infectious disease prevention and epidemic control. The author adeptly navigates through both international and Pakistan-specific legal structures, shedding light on their strengths and potential shortcomings. The analysis of the West Pakistan Epidemic Diseases Act, 1958 is particularly insightful, as it uncovers important issues and proposes practical suggestions for improvement. Overall, this paper is a commendable contribution to the understanding and potential enhancement of legal frameworks in the context of infectious disease management in Pakistan.

16. ***From the Plague to the Coronavirus: Islamic Ethics and Responses to the COVID-19 Pandemic***[32] by **Ayman Shabana** offers a compelling exploration of Islamic ethics and responses to the COVID-19 pandemic. The author adeptly traces historical precedents from plagues in Islamic history, providing a valuable context for understanding

[31] Sahar, "An Analytical Study to Discuss the International as Well as Local Legal Structure for Prevention of Infectious Diseases and Epidemic Control Measure."

[32] Ayman Shabana, "From the Plague to the Coronavirus: Islamic Ethics and Responses to the COVID-19 Pandemic," *Journal of Islamic Ethics*, April 13, 2021. https://doi.org/10.1163/24685542-12340060.

contemporary reactions to the pandemic. The researcher's work stands out for its nuanced examination of jurists' debates, shedding light on the evolving perspectives within Islamic jurisprudence. The article not only serves as an insightful reference for understanding the religious and ethical dimensions of pandemic response but also contributes to the broader discourse on the intersection of faith and public health. Overall, Shabana's research is a crucial contribution to the ongoing global dialogue on navigating crises within an Islamic ethical framework.

1.5 Hypothesis

After analyzing the literature review on the subject, the following hypothesis is proposed:

1. The enforcement of mandatory vaccination is against basic and fundamental human rights.
2. The enforcement of mandatory vaccination is not against basic and fundamental human rights.
3. The vaccination intake must be voluntary, not compulsory, and in line witb human rights.

1.6 Significance of Research

This present research falls in the domain of international human rights law and domestic laws of Pakistan (enacted in the federation and provinces), which highlights gaps and loopholes in them during epidemics and pandemics, and associated mandatory vaccination policy. It provides a quick overview of the legislation in effect in several foreign countries regarding mandatory vaccination and violation of human rights, especially in European countries. The research also

contains a comparison of Epidemic Diseases Laws adopted and in force in Pakistan at the same time with grave contradictions.

1.7 Research Methodology

The present research is based on historical, analytical and comparative methods. Various international human rights laws are critically discussed in comparison with enacted domestic laws of Pakistan to deliver suggestions for very consequential issues under consideration. Case laws of international repute regarding the subject matter of research are also consulted to get knowledge about the violation of human rights perpetrated by both state and non-state entities of Pakistan.

The researcher is focused on visiting libraries to have a clear understanding of the primary sources i.e., mandatory vaccination laws of different countries, international human rights laws and corresponding domestic laws of Pakistan, and other instruments relevant to the right to life, privacy and health. Books written by contemporary authors on the subject of research are studied. Journals, research articles and papers, web blogs, websites and other electronic and non-electronic resources are also utilized.

1.8 Organization of Study/Division of Chapters

The thesis, "Mandatory COVID-19 Vaccination in Perspective of International Human Rights Law and Domestic Laws of Pakistan: An Overview," is meticulously organized across five vital chapters. Beginning with a comprehensive introduction, the research seamlessly transitions into a detailed historical analysis of pandemics and vaccines in Chapter 2. Chapter 3 delves into the international and regional human rights laws, supported by a rich array of instruments and case

laws, providing a solid foundation for the ensuing discussion. Chapter 4 presents a focused examination of mandatory COVID-19 vaccination in Pakistan, particularly within the framework of Islamic law and pertinent domestic laws, with special attention to current epidemic prevention legislation. The research concludes with Chapter 5, offering insightful remarks, recommendations, and suggestions based on the comprehensive analysis presented throughout the preceding chapters. This structured approach ensures a thorough exploration of the subject matter, providing a robust foundation for the thesis.

Chapter 2

History of Pandemics and Vaccines

2.1 Introduction

The history of pandemics and vaccines is a testament to humanity's enduring struggle against infectious diseases. In this chapter, we embark on a journey through time, tracing the evolution of pandemics and the development of vaccines that have shaped the course of human health. Section 2.1 provides a comprehensive overview of historical pandemics, ranging from endemic to pandemic scale, defining key terms such as endemic, outbreak, epidemic, and pandemic (2.1.1). It further delves into specific pandemics that have left indelible marks on human history, such as the plague pandemics (2.1.2), influenza pandemics (2.1.3), cholera pandemics (2.1.4), and the more recent coronaviruses pandemics, counting SARS, MERS, and the unprecedented COVID-19 pandemic (2.1.5). Section 2.1.5.1 places particular focus on the COVID-19 pandemic triggered by the SARS-CoV-2 virus, which has profoundly impacted global health and societies worldwide. The chapter then shifts its gaze to the history of vaccines (Section 2.2), highlighting the transformative milestones in disease prevention. Beginning with the ancient practice of variolation or inoculation (2.2.1), it then explores the groundbreaking work of Edward Jenner and the creation of the first vaccine (2.2.2). The nineteenth century witnessed significant advancements in vaccine development (2.2.3), while the twentieth century brought about landmark achievements, revolutionizing the control of infectious diseases (2.2.4). Finally, we arrive at the twenty-first century, where vaccines continue to play an important role in safeguarding global health and mitigating the impact of infectious diseases (2.2.5). Through this

historical exploration, we gain valuable insights into the enduring battle between humanity and pathogens, underscoring the importance of vaccines in shaping our shared future.

2.2 History of Pandemics

On December 1, 2019, when the earliest recorded case (of now COVID-19) surfaced in Wuhan, China, it may have appeared insignificant, with only one patient suffering from community-acquired pneumonia from an unknown source. Nonetheless, with a population of over 11 million people, Wuhan in Hubei province is a major economic and transportation hub. On an average day, 30,000 people fly out of the city, while many more take bullet trains from the city's three railway terminals.[33] The spread of disease was unavoidable. There were 26 more hospitalized cases with a similar clinical presentation by December 31ks, and by January 11, 2020, the figure had risen to 41.[34] What was the cause of tbe disease? No one knew clearly at that time, but it looked like a big storm was coming to devastate all. So, what was it? We will come back to it in a later part of this chapter.

2.2.1 Endemic, Outbreak, Epidemic, Pandemic:

Before going into history, it is better to understand some medical terminologies first. So, what pandemics are? And what is meant by some related terms like endemic outbreak, and epidemic? The terms endemic, outbreak, epidemic, and pandemic are used to describe the occurrence of a disease concerning its expected frequency and geographical distribution. In simple words, we can say that endemic disease spreads at an expected rate within a community. An outbreak is described as an unanticipated rise in the number of people suffering from a disease or the

[33] Rae-Ellen W Kavey and Allison B Kavey, *Viral Pandemics: From Smallpox to COVID-19* (Routledge, 2020), 334.
[34] Kavey and Kavey, *Viral Pandemics*, *334*.

emergence of cases in a new place. An epidemic denotes a significant outbreak that occurs over a wide geographical region. On the other hand, a pandemic refers to an epidemic that spreads across the entire globe.[35] David Morens from the National Institutes of Health's National Institute of Allergy and Infectious Diseases proposed in his short paper titled "What is a pandemic?"[36] eight criteria for a pandemic: extensive geographical spread, disease circulation, substantial attack rates and rapidity, poor population immune systems, novelty, infectiousness, viral transmission, and lethality.[37]

2.2.2 Plague Pandemics

According to scholars, the First Plague Pandemic, also known as the Plague of Justinian, was caused by Yersinia pestis, a flea-borne bacterium responsible for the human plague. This pandemic is considered the first recorded in human history.[38] It originated in Egypt and subsequently spread to the Eastern Roman Empire and its neighboring regions. Between the years 541 and 543, this pestilence resulted in the death of approximately one hundred million people in the Roman Empire, particularly concentrated in Constantinople, the capital city. Following the first pandemic, episodes of plague occurred for about 8 to 12 years over the next 200 years before dying out for unexplained reasons.[39]

The plague resurfaced in the 1340s, traveling from Central Asia westward and possibly eastward to China via the medieval Silk Road's land and marine trading routes. The infamous **Black Death** launched the Second Plague Pandemic in practically all of Europe, Western Asia, and

[35] Piret and Boivin, "Pandemics Throughout History," 1.
[36] David M. Morens, Gregory K. Folkers, and Anthony S. Fauci, "What Is a Pandemic?," *The Journal of Infectious Diseases* 200, no. 7 (October 1, 2009): 1018–21, https://doi.org/10.1086/644537.
[37] Christian W. McMillen, *Pandemics: A Very Short Introduction* (Oxford University Press, 2016), 2.
[38] Byrne and Hays, *Epidemics and Pandemics: From Ancient Plagues to Modern-Day Threats*, 147.
[39] Piret and Boivin, "Pandemics Throughout History," 3.

North Africa (mid-1340s–1352). During those years, a third or more of Europe's population may have died of the plague, and it took an estimated 200 years for the population to recover to pre-plague proportions.[40] Subsequent waves recurred for about 400 years in Europe, especially noteworthy among these historical pandemics are the plague of Milan in 1630, the great plague of London from 1665 to 1666, and the plague of Marseille spanning from 1720 to 1722,[41] until its last appearance in the 1850s in the southern Mediterranean, which as a whole resulted in the killing of about 200 million people.[42]

The third plague pandemic emerged during the mid-nineteenth century in the Yunnan region of China, subsequently spreading to Canton and eventually reaching Hong Kong,[43] where the bacteria *Yersinia pestis* was first discovered by Alexandre Yersin (later named after him), in 1894.[44] The pandemic then spread by ships to Japan, Singapore, Taiwan, India, Hawaii, and even as far as San Francisco and Seattle. Its final big presence was in 1945, yet plague outbreaks remain to occur from time to time.[45]

2.2.3 Influenza Pandemics

Influenza, also known as the flu, is a viral *zoonosis* (spread from animals to humans) disease classified into four types: A, B, C, and D. Some circulate among humans, however, out of these influenza A and B viruses cause tropical outbreaks and seasonal epidemics in temperate zones,

[40] Paul Chrystal, *The History of the World in 100 Pandemics, Plagues and Epidemics* (Pen and Sword History, 2021), 95.
[41] Piret and Boivin, "Pandemics Throughout History," 3.
[42] Byrne and Hays, *Epidemics and Pandemics. From Ancient Plagues to Modern-Day Threats*, 1:48.
[43] Björn P. Zietz and Hartmut Dunkelberg, "The History of the Plague and the Research on the Causative Agent Yersinia Pestis," *International Journal of Hygiene and Environmental Health* 207, no. 2 (January 1, 2004): 165–78. https://doi.org/10.1078/1438-4639-00259
[44] Piret and Boivin, "Pandemics Throughout History," 3.
[45] Byrne and Hays, *Epidemics and Pandemics: From Ancient Plagues to Modern-Day Threats*, 1:48.

and then only influenza A viruses have the latent to originate a pandemic.[46] Influenza is a highly contagious disease, spread through sneezing and coughing.

The first major influenza pandemic struck Asia in 1580 and lasted until 1581. The sickness hit Europe, Africa, and Asia, with extremely high death rates in some places. The outbreak resurfaced during 1732-1733, causing widespread suffering across various regions, particularly in Britain, Europe, and North America, reaching as far south as Mexico. In one of its worst kinds, influenza circled the globe again in 1781-1782. An estimated 75% of the British became ill, as did many throughout Revolutionary America.[47]

The Russian flu pandemic, which happened between 1889 and 1893, was the initial well-documented pandemic.[48] An extremely transmissible influenza moved from the Russian Empire to Western Europe. Throughout 1890, travelers on steamers transported it to American, African, and as far as Australian harbors, while railways transported it locally. The virus spread quickly, taking only four months to circle the globe and then reappearing every year for three years.[49] Europe lost between 270,000 and 360,000 people, despite a 1% mortality rate. The global rate was 0.15%, causing about one million demises.[50]

Twenty-five years later, the flu became significantly more virulent, resulting in a worldwide pandemic known as the Spanish Flu, the worst one since the Black Death. In April 1919, the British Medical Journal reported that influenza in Bombay "caused a havoc to which the Black

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[46] Eric Lofgren et al., "Influenza Seasonality: Underlying Causes and Modeling Theories," *Journal of Virology* 81, no. 11 (June 1, 2007): 5429–36, https://doi.org/10.1128/jvi.01680-06.

[47] Byrne and Hays, *Epidemics and Pandemics: From Ancient Plagues to Modern-Day Threats*, 1:57.

[48] Jeffery K. Taubenberger, David M. Morens, and Anthony S. Fauci, "The Next Influenza Pandemic," *JAMA* 297, no. 18 (May 9, 2007): 2025, https://doi.org/10.1001/jama.297.18.2025.

[49] Alain-Jacques Valleron et al., "Transmissibility and Geographic Spread of the 1889 Influenza Pandemic," *Proceedings of the National Academy of Sciences of the United States of America* 107, no. 19 (May 11, 2010): 8778–81, https://doi.org/10.1073/pnas.1000886107.

[50] Byrne and Hays, *Epidemics and Pandemics: From Ancient Plagues to Modern-Day Threats*, 1:57.

Death . . . alone affords a parallel."[51] Within 9 months, the sickness spread in a minimum of three separate waves, in the spring of 1918, the fall of 1918, and the subsequent spring. The global death toll was formerly thought to be approximately 20 million, however, recent studies have more than doubled that figure. This influenza pandemic resulted in around five hundred million (one-third of the world's populace at that period) infections and 40 million above deaths, some say 50 million deaths, in less than a year.[52] The number of fatalities is more than twice the total count of individuals who perished on battlegrounds throughout World War I's horrific four-year span. The worldwide fatality rate is estimated to be 2.5%, which is over fourteen times greater than the last pandemic.[53]

Throughout the past century, all influenza A viruses responsible for the pandemics of 1957, 1968, and 2009 were derived from the original 1918 virus through gene reassortment among swine, avian, and, human influenza viruses.[54] The persistent transmission of the 1957–1959 pandemic started around December 1957, following subsequent waves occurring over a number of years. Based on excess deaths from respiratory disorders, the worldwide fatality rate throughout the 1957-1959 influenza pandemic was predicted to be between 1-2 million people.[55] The transmission of the 1957–1959 pandemic continued persistently, commencing around December 1957, and subsequent waves occurred over several years, whereas Europe and Asia

[51] McMillen, *Pandemics: A Very Short Introduction*, 89.
[52] Niall Johnson and Juergen Mueller, "Updating the Accounts: Global Mortality of the 1918-1920 'Spanish' Influenza Pandemic," *Bulletin of the History of Medicine* 76, no. 1 (March 1, 2002): 105–15, https://doi.org/10.1353/bhm.2002.0022.
[53] Byrne and Hays, *Epidemics and Pandemics: From Ancient Plagues to Modern-Day Threats*, 158.
[54] David M. Morens, Jeffery K. Taubenberger, and Anthony S. Fauci, "The Persistent Legacy of the 1918 Influenza Virus," *The New England Journal of Medicine* 361, no. 3 (December 10, 2009): 225–29, https://doi.org/10.1056/nejmp0904819
[55] Cécile Viboud et al., "Global Mortality Impact of the 1957–1959 Influenza Pandemic," *The Journal of Infectious Diseases* 213, no. 5 (March 1, 2016): 738–45, https://doi.org/10.1093/infdis/jiv534

saw the opposite.[56] The pandemic's global fatality rate was projected to be 0.5-2 million people.[57] The A/H1N1 influenza pandemic of 2009 was spread by pigs to humans. The virus developed in Mexico, and outbreaks occurred virtually simultaneously in Mexico and the southern United States.[58] The infection subsequently spread around the world over the next six weeks. The WHO recorded 18,631 laboratory-confirmed fatalities. Nonetheless, the fatality load from respiratory disorders was estimated to be between 148,000 and 249,000 in different nations.[59]

2.2.4 Cholera Pandemics

Cholera is a potentially lethal gastrointestinal disease caused by *Vibrio cholera* (a water-borne pathogen that is gram-negative and has the shape of a coma).[60] The bacteria invade the small intestinal tract and produce cholera toxin, resulting in a rapid and substantial loss of bodily fluids, leading to dehydration, hypovolemic collapse, and ultimately, death. Individuals contract the infection through the consumption or utilization of contaminated water for drinking or cooking. Infections are frequently minor or asymptomatic, and bacteria are removed by stools in a week or two.[61]

Whilst cholera had been present in India in the form of an endemic since at least the 18th century, The 1817 epidemic is often cited as the starting point of the history of cholera as a

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[56] Cécile Viboud et al., "Multinational Impact of the 1968 Hong Kong Influenza Pandemic: Evidence for a Smoldering Pandemic," *The Journal of Infectious Diseases* 192, no. 2 (July 15, 2005): 233–48, https://doi.org/10.1086/431150.

[57] Patrick Saunders-Hastings and Daniel Krewski, "Reviewing the History of Pandemic Influenza: Understanding Patterns of Emergence and Transmission," *Pathogens* 5, no 4 (December 6, 2016): 66, https://doi.org/10.3390/pathogens5040066.

[58] Gabriele Neumann and Yoshihiro Kawaoka, "The First Influenza Pandemic of the New Millennium," *Influenza and Other Respiratory Viruses* 5, no. 3 (May 1, 2011): 157–66. https://doi.org/10.1111/j.1750-2659.2011.00231.x.

[59] Lone Simonsen et al., "Global Mortality Estimates for the 2009 Influenza Pandemic from the GLaMOR Project: A Modeling Study," *PLOS Medicine* 10, no 11 (November 26, 2013): e1001558, https://doi.org/10.1371/journal.pmed.1001558.

[60] Shah M. Faruque, M. John Albert, and John J. Mekalanos, "Epidemiology, Genetics, and Ecology of Toxigenic *Vibrio Cholerae*," *Microbiology and Molecular Biology Reviews* 62, no 4 (December 1, 1998): 1301–14. https://doi.org/10.1128/mmbr.62.4.1301-1314.1998.

[61] Piret and Boivin, "Pandemics Throughout History," 4.

pandemic illness. due to its breadth and intensity. Since then, seven cholera pandemics have ravaged the earth through maritime trade and railroad means. The first six cases of the nineteenth and twentieth centuries were classified as "classical cholera."[62] Pandemic cholera disappeared for 38 years, from 1923 to 1961. However, for unknown reasons, The *El Tor* biotype, derived from the first-known site in Egypt, began to supplant traditional cholera, beginning off the seventh pandemic that is still ongoing.[63] The seventh pandemic of cholera has been the longest-lasting and most pervasive in terms of worldwide expansion. In 1961, it made its debut in Indonesia, and since then, it has expanded to several locations throughout the globe. It was responsible for significant epidemics in Zimbabwe in 2008, then Haiti in 2010, afterward Sierra Leone in 2012, moving to Mexico in 2013, second lastly in South Sudan and Ghana in 2014, and lastly in Yemen in 2016.[64]

The number of cases per year was projected to be between 1.3 and 4 million between 2008 and 2012, with 95,000 deaths.[65] According to WHO, in recent years, there has been a rise in both the number of cholera cases and the expansion of its geographical distribution. In 2021, 23 countries confirmed cholera outbreaks, with the bulk of cases happening in the WHO African and Eastern Mediterranean Regions. This trend continued through 2022, with more than 29 nations reporting cholera cases or outbreaks. At least eighteen nations carry on to document cholera infections as of 1 February 2023.[66] Many of these countries reported more cases and a higher case fatality ratio (hereinafter referred to as CFR) than in prior years. In 2021, the global case fatality rate

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[62] McMillen, *Pandemics: A Very Short Introduction*, 60.
[63] McMillen, *Pandemics*, 60.
[64] Ankur Mutreja et al., "Evidence for Several Waves of Global Transmission in the Seventh Cholera Pandemic," *Nature* 477, no. 7365 (September 22, 2011): 462–65, https://doi.org/10.1038/nature10392.
[65] Mohammad Ali et al., "Updated Global Burden of Cholera in Endemic Countries," PLOS Neglected Tropical Diseases 9, no. 6 (June 4, 2015): e0003832, https://doi.org/10.1371/journal.pntd.0003832.
[66] World Health Organization, "Cholera – Global Situation: Global Overview," *Who.Int/*, February 11, 2023, accessed March 16, 2023, https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON437#:~:text=In%202021%2C%2023%20countries%20reported.

(CFR) for cholera stood at 1.9% (with 2.9% in Africa), which was significantly higher than the acceptable threshold of 1%. This marked the highest peak in nearly a decade.[67] Following years of drop, the number of cholera infections and mortalities in 2022 has amplified globally. The outbreaks in 13 nations that did not report any cholera cases in 2021 are particularly concerning. Some of these nations had not experienced any cholera outbreaks for several years before this occurrence (between three and thirty), and several are not cholera-endemic countries. The current scenario is a recurrence of the continuing seventh cholera pandemic, which erupted in 1961.[68]

2.2.5 Coronaviruses Pandemics (SARS, MERS, COVID-19)

Coronaviruses are members of the *Coronavirinae* subfamily of the *Coronaviridae* family. The term "coronavirus" is centered on the Latin word corona, which means "crown", and alludes to the virus's unique appearance by electron microscopy, which displays a halo of spikes on the virus's surface identified as S proteins.[69] They are divided into four classes: alpha-, beta-, gamma-, and delta-coronaviruses.[70] Among these, beta-coronaviruses include three highly pathogenic viruses that lead to severe pneumonia in humans: severe acute respiratory syndrome coronavirus (SARS-CoV), Middle East respiratory syndrome coronavirus (MERS-CoV), and SARS-CoV-2, which is the causative agent of coronavirus disease 2019 (COVID-19).[71]

SARS is an aerial virus that may be transmitted by tiny drops of saliva, similar to colds and influenza.[72] It was the twenty-first century's first deadly and quickly transferable new disease. The disease originally surfaced in the southern Chinese province of Guangdong, where the first

[67] World Health Organization, "Cholera – Global Situation," who.int, December 16, 2022, accessed March 16 2023, https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON426
[68] WHO, "Cholera – Global Situation."
[69] Kavey and Kavey, *Viral Pandemics: From Smallpox to COVID-19*, 254
[70] Piret and Boivin, "Pandemics Throughout History," 8.
[71] Zhiqi Song et al., "From SARS to MERS, Thrusting Coronaviruses into the Spotlight," *Viruses* 11, no. 1 (January 14, 2019): 59, https://doi.org/10.3390/v11010059
[72] Chrystal, *The History of the World in 100 Pandemics, Plagues and Epidemics*, 326

confirmed case occurred on November 16, 2002.[73] Throughout the province, an increasing number of cases emerged in November and December. The first instance was reported in adjacent Hong Kong in January 2003, and the sickness quickly spread around the world from there.[74] On April 16, the WHO announced that a novel infectious agent, a part of the coronavirus family not previously observed in human beings, had been proven to be the root of SARS and would be known as SARS-CoV.[75] Afterward, the global health body confirmed 8,098 cases of the disease worldwide as of July 31, 2003, with 774 deaths. China accounted for 7,083 of these cases, resulting in 648 fatalities. Singapore, Canada, and Taiwan reported 238, 251, and 344 infections, respectively, with 33, 43, and, 37 mortalities. In the United States, there were 29 cases, none of which were fatal.[76]

Ten years after the pandemic of SARS, the Coronavirus struck again, this time in the fonn of Middle East Respiratory Disease (hereinafter referred to as MERS). MERS is a lung infection triggered by a new coronavirus called MERS-CoV (Middle East respiratory syndrome coronavirus). A student in Jordan became unwell in March 2012 with coughing, shortness of inhalation, and temperature. Despite receiving intensive care, he, unfortunately, passed away on April 25.[77] Dr. Ali Mohamed Zaki, an Egyptian virologist, was the first person to report it on September 24, 2012, in Jeddah, Saudi Arabia.[78] Thereby, The great majority of instances have happened in Saudi Arabia, with others occurring in Kuwait, Jordan, the UAE, Qatar, and Oman.

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[73] Byrne and Hays, *Epidemics and Pandemics. From Ancient Plagues to Modern-Day Threats*, 2:349

[74] Byrne and Hays, *Epidemics and Pandemics*, 2:349

[75] Centers for Disease Control and Prevention (CDC), "Update: Outbreak of Severe Acute Respiratory Syndrome --- Worldwide, 2003," March 28, 2003, accessed March 16, 2023, https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5212a1.htm

[76] "Summary of Probable SARS Cases with Onset of Illness from 1 November 2002 to 31 July 2003," n.d., https://www.who.int/publications/m/item/summary-of-probable-sars-cases-with-onset-of-illness-from-1-november-2002-to-31-july-2003.

[77] Byrne and Hays, *Epidemics and Pandemics. From Ancient Plagues to Modern-Day Threats*, 2:359

[78] Ali Zaki et al., "Isolation of a Novel Coronavirus from a Man with Pneumonia in Saudi Arabia," *The New England Journal of Medicine* 367, no. 19 (November 7, 2012): 1814–20, https://doi.org/10.1056/nejmoa1211721

MERS infections increased significantly again in April 2014, primarily in the UAE and, Saudi Arabia, where more than 200 novel cases were recorded.[79] Afterward, another spike developed in the spring of 2015, although this time in South Korea rather than Western Asia. By mid-June, the virus had affected 95 Koreans, dying 7.[80] According to WHO's latest stats, from April 2012 through January 2023, an overall of 2603 laboratory-recorded MERS cases were reported worldwide, with 935 fatalities at a CFR of 36%. Saudi Arabia reported the majority of these cases, with 2195 cases and 854 associated deaths (CFR: 39%).[81]

2.2.5.1 COVID-19 (SARS-COV-2)

We are resuming where we left off in the introductory paragraph of this chapter that the Lancet's January 2020 report on 41 confirmed cases in Wuhan noted initial symptoms on December 1, 2019.[82] In contrast, the WHO, notified on December 31, 2019,[83] reported symptom onset from December 8, 2019.[84] On January 1, the Huanan Seafood Wholesale Market in Wuhan was closed due to concerns about a potential recurrence of the 2002–2004 SARS outbreak linked to initial infections.[85] On January 7, Chinese health officials identified a novel coronavirus as the cause, affirmed by WHO on January 10, initially termed '2019-nCoV' and officially named 'Coronavirus Disease 2019' (hereinafter referred to as COVID-19) on February 11.[86] The

[79] Byrne and Hays, *Epidemics and Pandemics: From Ancient Plagues to Modern-Day Threats*, 2:359
[80] Byrne and Hays, *Epidemics and Pandemics*, 2:359.
[81] "MERS SITUATION UPDATE." World Health Organization - Regional Office for the Eastern Mediterranean, January 2023. https://www.emro.who.int/health-topics/mers-cov/mers-outbreaks.html.
[82] Chaolin Huang et al., "Clinical Features of Patients Infected with 2019 Novel Coronavirus in Wuhan, China," *The Lancet* 395, no. 10223 (January 24, 2020): 497–506. https://doi.org/10.1016/s0140-6736(20)30183-5.
[83] "CDC Museum COVID-19 Timeline," Centers for Disease Control and Prevention, March 15, 2023, https://www.cdc.gov/museum/timeline/covid19.html.
[84] Chrystal, *The History of the World in 100 Pandemics, Plagues and Epidemics*, 352
[85] "CDC Museum COVID-19 Timeline."
[86] Sarah Moore, "History of COVID-19," News-Medical.net, September 28, 2021, https://www.news-medical.net/health/History-of-COVID-19.aspx.

International Committee on Taxonomy of Viruses (ICTV) formally designates the virus as "SARS-CoV-2," noting its relationship to severe acute respiratory syndrome coronaviruses.[87] On January 20, human-to-human transmission of SARS-CoV-2 in China was confirmed by both Chinese authorities and the WHO.[88] Then, its Director-General Tedros Adhanom Ghebreyesus reconvened the International Health Regulation Emergency Committee on January 30th, declaring the 2019 Novel Coronavirus outbreak a Public Health Emergency of International Concern (hereinafter referred to as PHEIC).[89] On February 28th, WHO elevated the global risk of coronavirus transmission to "very high." The UN released $15 million from its Central Emergency Response Fund to WHO and UNICEF on March 1, 2020, to aid vulnerable countries in response to COVID-19.[90] On March 11, WHO officially categorized the global COVID-19 outbreak as a pandemic, with over 118,000 cases in 114 nations and 4,291 fatalities.[91] China's daily infection rates significantly declined by March, while Europe experienced a surge, particularly Italy with 250 deaths in a single day. Consequently, WHO identified Europe as the new pandemic hotspot on March 13th.[92] Subsequently, on March 17th, the first human immunization trials using the Moderna mRNA vaccine commenced in Seattle, Washington.[93] On March 26, Milan, Italy reported initial cases of COVID-19-related loss of taste and smell.[94] By April 2, global cases reached 1 million. On April 6, the WHO recommended mask-wearing

[87] Gorbalenya et al., "The Species Severe Acute Respiratory Syndrome-Related Coronavirus: Classifying 2019-NCoV and Naming It SARS-CoV-2," 536.
[88] Chrystal, *The History of the World in 100 Pandemics, Plagues and Epidemics*, 353.
[89] Jenny Lei Ravelo and Sara Jerving, "COVID-19 in 2020 — a Timeline of the Coronavirus Outbreak," Devex, February 13, 2023, https://www.devex.com/news/covid-19-in-2020-a-timeline-of-the-coronavirus-outbreak-99631
[90] Ravelo and Jerving, "COVID-19 in 2020."
[91] "CDC Museum COVID-19 Timeline."
[92] Moore, "History of COVID-19."
[93] "CDC Museum COVID-19 Timeline."
[94] Andrea Giacomelli et al., "Self-Reported Olfactory and Taste Disorders in Patients With Severe Acute Respiratory Coronavirus 2 Infection: A Cross-Sectional Study," *Clinical Infectious Diseases* 71, no. 15 (July 28, 2020): 889–90, https://doi.org/10.1093/cid/ciaa330.

due to evidence of aerosol transmission.[95] Worldwide, 90% of students, impacting over 1.5 billion individuals, were affected by school closures. Wuhan's quarantine was lifted on April 8. Global mortality surpassed 100,000 on April 10. On May 1, WHO reaffirmed the pandemic's status as a Public Health Emergency of International Concern (PHEIC). The World Bank projected on June 8 that the pandemic would lead to the most severe global recession since World War II.[96] On August 24, the University of Hong Kong reported the world's first case of COVID-19 reinfection, highlighting concerns about immunity duration after initial infection.[97]

In August 2020, the Lambda variant emerged in Peru, spreading to at least 29 countries. The subsequent discovery of the Alpha variant in the UK signaled significant evolutionary changes in the virus, impacting symptoms and outcomes. By September 28th, 2020, there were over 1 million COVID-19 fatalities and 33 million documented cases worldwide.[98] On December 2nd, 2020, the UK became the first country to approve the Pfizer-BioNTech COVID-19 vaccine. By December 31st, 2020, the WHO granted Emergency Use Validation (EUV) for this vaccine, marking a significant milestone.[99]

In January 2021, global COVID-19 mortalities exceeded 2 million, and cases surpassed 100 million.[100] On March 30th, the WHO issued a preliminary report on the virus's origin, deeming a laboratory release "very implausible" and suggesting a zoonotic transfer.[101] April 2021 witnessed a devastating surge, with over 5.2 million new cases reported in a single week, the highest during the pandemic. On April 21st, India registered a record 315,735 new infections in 24 hours, the

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[95] Moore, "History of COVID-19."
[96] Ravelo and Jerving, "COVID-19 in 2020 — a Timeline of the Coronavirus Outbreak."
[97] Kelvin Kai-Wang To et al., "COVID-19 Re-Infection by a Phylogenetically Distinct SARS-Coronavirus-2 Strain Confirmed by Whole Genome Sequencing," *Clinical Infectious Diseases*, August 25, 2020, https://doi.org/10.1093/cid/ciaa1275.
[98] Moore, "History of COVID-19."
[99] Jenny Lei Ravelo and Sarah Jerving, "COVID-19 in 2021 — a Timeline of the Coronavirus Outbreak," Devex, February 13, 2023, https://www.devex.com/news/covid-19-in-2021-a-timeline-of-the-coronavirus-outbreak-102417.
[100] "CDC Museum COVID-19 Timeline."
[101] Ravelo and Jerving, "COVID-19 in 2021 — a Timeline of the Coronavirus Outbreak."

highest single-day count globally.[102] Just a week later, on the 28th, Pakistan recorded its highest daily COVID-19 death toll, with 201 fatalities.[103] On the same day, the International Federation of Red Cross and Red Crescent Societies (IFRC) stated that global transmission and new cases reached their peak since the pandemic's onset.[104]

On July 30, 2021, the WHO announced a global goal to vaccinate 10% of the world's population by the end of September. By August 5, the global tally of COVID-19 cases exceeded 200 million. India, the world's second-most populous country, achieved the milestone of administering 1 billion COVID-19 vaccine shots on October 21.[105] However, the global count of recorded COVID-19 deaths surpassed five million as of November 1. A novel variant, initially identified in South Africa and later named omicron, was reported to the WHO on November 24. The WHO designated it as a "variant of concern" on November 26.[106]

In summary, according to the WHO Director General's press conference on December 22, COVID-19 claimed the lives of 3.5 million people in 2021, surpassing the combined mortality toll of malaria, HIV, and tuberculosis in 2020. Almost fifty thousand individuals perished each week due to the virus.[107]

In 2022, the COVID-19 pandemic, particularly the Omicron variant, persisted. On March 2nd, the WHO reported a 25% global increase in anxiety and despair, with youth and females most

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[102] Ravelo and Jerving, "COVID-19 in 2021."

[103] Asad Hashim, "Pakistan's Deadliest Day since COVID Pandemic Began, Curbs Mulled," News | Al Jazeera, April 28, 2021, https://www.aljazeera.com/news/2021/4/28/pakistans-deadliest-day-since-covid-pandemic-began-curbs-mulled.

[104] "IFRC Calls for an Urgent Scale-up of Vaccinations, Health Interventions and Economic Support as the Pandemic Continues to Surge in the Americas - World," ReliefWeb, April 28, 2021, https://reliefweb.int/report/world/ifrc-calls-urgent-scale-vaccinations-health-interventions-and-economic-support-pandemic.

[105] U.S. Embassy India, "Https://Twitter.com/USAndIndia/Status/1451109174830514176," Twitter, October 21, 2021, https://twitter.com/USAndIndia/status/1451109174830514176.

[106] "CDC Museum COVID-19 Timeline."

[107] "WHO Director-General's Opening Remarks at the Media Briefing on COVID-19 - 22 December 2021," December 22, 2021, https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---22-december-2021.

affected. By March 5th, over 10 billion COVID-19 vaccine doses had been administered worldwide, covering roughly 56% of the global population. However, on March 10th, reported global COVID-19 deaths surpassed 6 million, reaching 6,019,085, likely an underestimate. COVID-19 infections stood at 450 million, with actual cases likely higher.[108]

By May 5th, the WHO revealed nearly 14.9 million COVID-19-related deaths, including both direct virus-related causes and broader effects on health systems and society. This marked a significant increase from the 5.4 million deaths reported between January 2020 and December 2021. Of the excess deaths, 84% occurred in Europe, the Americas, and Southeast Asia.[109] By June 1st, the US alone reported over one million COVID-19-related deaths.[110] At year-end on December 31, 2022, global cases totaled 660.36 million, with confirmed deaths at 6.69 million.[111]

2.3 History of Vaccines

Vaccine, in the words of *Britannica*, is: "suspension of weakened, killed, or fragmented microorganisms or toxins or other biological preparation, such as those consisting of antibodies, lymphocytes (a type of white blood cells), or messenger RNA (mRNA), that is administered primarily to prevent disease."[112]

A Vaccine provides active protection against a particular pathogen by bolstering the immune system's capacity to combat that specific pathogen effectively. Passive immunity can also be provided by way of a vaccine by giving antibodies or lymphocytes that were previously

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[108] "CDC Museum COVID-19 Timeline."
[109] "CDC COVID-19 Timeline."
[110] "CDC."
[111] Jenny Lei Ravelo and Sara Jerving, "COVID-19 in 2022 - A Timeline of the Coronavirus Outbreak," Devex, June 20, 2022. https://www.devex.com/news/covid-19-in-2022-a-timeline-of-the-coronavirus-outbreak-96396.
[112] Emily K Brunson, "Vaccine | Definition, Types, History, & Facts," in *Encyclopædia Britannica*, July 20, 2018. https://www.britannica.com/science/vaccine.

created by an animal or human source. Vaccines are often given through injection (parenteral dosage), although some others are given via mouth or nose (as in the instance of the influenza vaccine).[113]

2.3.1 Variolation or Inoculation

Vaccine development did not begin with Jenner's smallpox vaccine. It starts before the first vaccine, with an immunization method called "inoculation" by some and "variolation" (from a smallpox name, 'la variole') by others. Inoculation with components from smallpox lesions to induce immunity against smallpox, according to researchers, was originally practiced in China as early as 200 BCE.[114] While the first documented description of the technique was found in 1549, inoculation spread west from China to the Ottoman Empire in the 1500s, eventually reaching Istanbul, Turkey (previously Constantinople) in the middle of the 1600s.[115]

In 1721, Lady Mary Wortley Montague, a British aristocrat living in Istanbul with her ambassador husband, had her five-year-old son inoculated by a Turkish physician.[116] She then spearheaded the first public health inoculation campaign in England by inoculating her four-year-old daughter in front of members of the royal court upon her return to London.[117] Inoculation arrived in America in the same year, and with the help of Cotton Mather and his companion Zabdiel Boylston, it became widely recognized in New England following a major epidemic in Boston.[118] After his son died of smallpox in 1736, Benjamin Franklin became an

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[113] Brunson, "Vaccine,"

[114] WHO, "A Brief History of Vaccination," www.who.int, 2022, https://www.who.int/news-room/spotlight/history-of-vaccination/a-brief-history-of-vaccination

[115] "Vaccine Timeline," History of Vaccines, n.d., https://historyofvaccines.org/history/vaccine-timeline/overview

[116] History of Vaccines, "Vaccine Timeline,"

[117] Stearns Rp and Pasti G, "Remarks upon the Introduction of Inoculation for Smallpox in England.," *Bulletin of the History of Medicine* 24, no. 2 (March 1, 1950): 103–22

[118] Cotton Mather and William Tumain. *An Account of the Method and Success of Inoculating the Small-Pox, in Boston in New-England: In a Letter from a Gentleman There, to His Friend in London*, 1722.

advocate for inoculation. He produced multiple introductions to contemporaneous written materials concerning the process.[119] During the Civil War, George Washington had all of his soldiers variolated and credited at least some of his eventual success to the elimination of smallpox in the army.[120]

2.3.2 Edward Jenner and the Creation of the First Vaccine

At the end of the 1700s, it was widespread knowledge in England that milkmaids who had cowpox were immune to smallpox.[121] In May 1796, Edward Jenner, a young English physician and scientist, improved on this finding by inoculating James Phipps, aged 8 years, with material taken from a cowpox lesion (vaccinia virus; *vacca* is Latin for cow) on a milkmaid's hand. Despite a slight response and feeling unwell for several days, Phipps fully recovered. Jenner immunized Phipps once more two months following that, in July 1796, using components from a person's smallpox lesion to evaluate his resistance. Phipps survived and was the first person who was immunized against smallpox.[122] The first vaccination was created.

2.3.3 Nineteenth Century

Louis Pasteur (a French chemist and microbiologist) developed the first lab-setting vaccine: the vaccine for fowl cholera in poultry. In 1878, he succeeded in eliciting an immunological response and generating immunity in them by vaccinating them with active yet weakened (attenuated) pathogens.[123] Then, first Robert Koch, a German physician and microbiologist,

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[119] "U.S. Military and Vaccine History," History of Vaccines, n.d., https://historyofvaccines.org/vaccines-101/how-are-vaccines-made/us-military-and-vaccine-history.
[120] Hugh Thursfield, "Smallpox in the American War of Independence.," *Annals of Medical History* 2, no. 4 (July 1, 1940): 312–18. https://europepmc.org/article/PMC/PMC7942582.
[121] Kavey and Kavey, *Viral Pandemics: From Smallpox to COVID-19*, 22.
[122] "A Brief History of Vaccination."
[123] "Brief History."

cultured the anthrax bacillus (the bacterium that causes anthrax) in 1876, and then Pasteur in 1877.[124] Afterward, around 1881, both created a vaccine of attenuated forms of the bacillus by administering it first in sheep and then in humans separately, which proved successful.[125]

Louis Pasteur effectively prevented rabies four years later, in 1885, by post-exposure vaccination. Even though the treatment was unpopular at the time, and Pasteur was not a medical practitioner, he started a course of 13 injections with patient Joseph Meister (a young man bitten by a feral animal who later became the most recognized human subject in vaccination history), each having a higher dose of the rabies virus.[126] Joseph did not show any signs or symptoms of rabies after the predicted incubation period of roughly 21 days.[127] Pasteur's vaccination proved effective. The next technological advancement in vaccination occurred, as several subsequent vaccines that were produced used the same approach of weakening the pathogen before administering it as an immunization.

Alexandre Yersin, a Swiss doctor and microbiologist, and Shibasaburo Kitasato, one of Japan's pioneering microbiologists, discovered and identified microorganisms they believed were the cause of the plague. Yersin then attempted to create an attenuated live vaccine, but what he developed had little long-term benefit.[128] Then, Waldemar Haffkine, working in Paris, was tasked with developing an early and effective vaccine against the plague. He created an anti-plague vaccine and was sent to India to put it to the test. It was extremely operative in a far-reaching immunization effort. As a result, the plague vaccine developed by Haffkine was the

[124] Byrne and Hays, *Epidemics and Pandemics: From Ancient Plagues to Modern-Day Threats*, 1:87
[125] Byrne and Hays, *Epidemics and Pandemics*, 1:87.
[126] "A Brief History of Vaccination."
[127] Howard Markel, "Louis Pasteur's Risky Move to Save a Boy from Almost Certain Death," PBS NewsHour, July 7, 2016, https://www.pbs.org/newshour/health/louis-pasteurs-risky-move-to-save-a-boy-from-almost-certain-death
[128] Byrne and Hays, *Epidemics and Pandemics: From Ancient Plagues to Modern-Day Threats*, 1:96.

initial one to give successful preventive immunization versus a bacterial human illness (prior vaccines were primarily effective against viral infections).[129]

Later in the 1800s, scientists researching human and animal immune responses found antibodies that stick to the pathogen and inactivate it. Although people created their antibodies on their own, scientists focused on safe ways to create such antibodies in huge amounts and administer them to people as a sort of immunological patch.[130] Hence began the age of anti-toxins. As an initiator, in 1894, Dr. Anna Wessels Williams found an isolate of diphtheria bacterium that was essential in the development of an anti-toxin for the illness.[131]

2.3.4 Twentieth Century

About anti-toxins, which are not truly vaccines by definition, a considerable portion of the population getting them developed an allergic response to the proteins from the animals used to manufacture the antitoxin. Consequently, in the 1920s, scientists devised a method to inactivate the toxin (the metabolic by-products of infectious organisms) before administering it as a vaccine. As a result, the age of toxoid vaccines began, providing us with diphtheria, tetanus and whooping cough (pertussis) vaccines.[132]

The first successful tuberculosis vaccine was the weakened live bacterium bacille (or bacillus) Calmette-Guérin (BCG) vaccine, which was injected into humans in 1921. For 13 years, Albert Calmette and Camille Guérin, clinical and veterinary specialists at Pasteur's Institute in Lille, France, tried to produce an appropriate, non-virulent bacillus strain (bacterium). They identified

[129] Byrne and Hays, *Epidemics and Pandemics*, 1:96-97
[130] "Vaccine Timeline."
[131] "A Brief History of Vaccination."
[132] "Vaccine Timeline."

a strain of tubercule in bovines (cows). BCG is still an important tool in the fight against tuberculosis.[133]

Developing an influenza vaccine was a top military goal during the Spanish Flu pandemic of 1918-19. Early tests were conducted in 1918, as the US Army Medical School examined 2 million dosages, but the results were ambiguous.[134] However, the electron microscope was invented in 1932, and its availability in laboratories became widespread from 1938 onwards, enabling scientists to better observe viruses and their functions.[135] Thereafter, the influenza virus was detected and categorized when samples from the Spanish Flu pandemic were studied. Then in just a few years' time, the first influenza vaccination was licensed for army use in 1945, followed by public use in 1946, thanks to research carried out by doctors Thomas Francis Jr. and Jonas Salk.[136]

Working with a promising strain of yellow fever virus, South African virologist Max Theiler, along with his team of Hugh Smith and Eugen Haagen, identified a novel mutation in 1937 that shaped the weakened live version of his vaccine exceedingly efficient.[137] It then got approved in 1938 after two years of successful trials with over a million Brazilians. Theiler and his colleagues termed this strain "17D."[138] Later, Max Theiler got the Nobel Prize in Medicine and Physiology in 1951 for this effort, the first Nobel ever awarded for vaccine development.[139] In 1939, bacterial researchers Pearl Kendrick and Grace Eldering demonstrated the efficacy of

[133] Byrne and Hays, *Epidemics and Pandemics: From Ancient Plagues to Modern-Day Threats*, 1:89
[134] "A Brief History of Vaccination."
[135] Byrne and Hays, *Epidemics and Pandemics: From Ancient Plagues to Modern-Day Threats*, 1:92.
[136] "A Brief History of Vaccination."
[137] Byrne and Hays, *Epidemics and Pandemics: From Ancient Plagues to Modern-Day Threats*, 1:92
[138] Kavey and Kavey, *Viral Pandemics: From Smallpox to COVID-19*, 63.
[139] Kavey and Kavey, *Viral Pandemics*, 63

the pertussis (whooping cough) vaccine. The researchers discovered that vaccination reduced the frequency of sick kids from 15.1 for every 100 to 2.3 in 100.[140]

From 1952 through 1955, Jonas Salk produced and evaluated the inaugural dead-virus polio vaccine. Salk examined the vaccine personally and on his family members the next year.[141] On April 26, 1954, the trial of nearly 1.8 million pupils from the United States, Canada, and Finland began the greatest public health experiment in history. The trials concluded in the late spring of 1955, and the results were released on April 12, 1955, stating that the vaccine was up to 80% successful in avoiding paralytic poliomyelitis.[142] As the *Cutter Incident* damaged public trust in vaccines in the 1960s, the live-weakened oral polio vaccine was introduced as a replacement for Salk's vaccine. Albert Sabin's oral vaccine was trialed earlier in the USSR and Latin America, before being introduced to the United States with great success.[143]

Dr. Blumberg and Irving Millman developed the earliest hepatitis B vaccine in 1969, using a heat-treated form. The first plasma-derived inactivated vaccine was approved in 1981, followed by a genetically modified vaccine in 1986. Maurice Hilleman combined measles, mumps, and rubella vaccines into a unified vaccination in 1971. A polysaccharide vaccine was licensed in 1978, and enhanced in 1983, and the first vaccination against contagions triggered by Haemophilus influenzae type b was licensed in 1985.[144]

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[140] "A Brief History of Vaccination."
[141] "History of Vaccination."
[142] Jonas Salk. "RECENT STUDIES ON IMMUNIZATION AGAINST POLIOMYELITIS," *Pediatrics* 12, no. 5 (November 1, 1953): 471–82. https://doi.org/10.1542/peds.12.5.471.
[143] "Vaccine Timeline."
[144] "A Brief History of Vaccination."

2.3.5 Twenty-First Century

The first rotavirus vaccine was withdrawn in 1999 due to intestinal issues. A lower-risk version was introduced in 2006, but it took 2019 for use in over 100 countries. Anne Szarewski's team developed an HPV vaccine in 1995, which became a crucial component in eliminating cervical cancer.[145]

Now, recently, owing to the coronavirus pandemic's urgency, governments everywhere in the world spent extensively on vaccine development. In June 2020, China launched the Sinovac vaccine. Sinovac uses a dead virus to stimulate an immune response.[146] After barely two months of clinical studies, Russia launched the Sputnik V vaccine in August 2020.[147] The same month, two American companies, Pfizer and Moderna, began clinical tests for their vaccinations. Then, on December 11, 2020, in less than a year, the U.S. Food and Drug Administration (hereinafter referred to as FDA) awarded EUA clearance to the former's vaccine, using an innovative platform comprising of mRNA encoding the virus's spike protein, created by Pfizer/BioNTech.[148]

2.4 Conclusion

In conclusion, pandemics have been characterized by widespread geographic reach, high attack rates, and rapid transmission, often with significant lethality. Historical pandemics, such as the First Plague Pandemic, marked pivotal moments in human history. Influenza, a highly contagious viral disease, has led to significant global outbreaks, with the Spanish Flu pandemic

[145] "History of Vaccination."
[146] "Vaccine Timeline."
[147] Paul Stronski, "What Went Wrong With Russia's Sputnik V Vaccine Rollout?," Carnegie Endowment for International Peace, November 15, 2021 https://carnegieendowment.org/2021/11/15/what-went-wrong-with-russia-s-sputnik-v-vaccine-rollout-pub-85783
[148] "Vaccine Timeline."

being one of the deadliest. Cholera, causing rapid and severe dehydration, has been responsible for extensive outbreaks, including the seventh pandemic with a high case fatality rate.

Coronaviruses, including SARS, MERS, and COVID-19, have emerged as novel and swiftly transmissible diseases. COVID-19, caused by SARS-CoV-2, emerged in early 2020, leading to a global pandemic. The virus's impact has been profound, with millions of confirmed cases and substantial fatalities. The development of vaccines has played a critical role in mitigating the impact of infectious diseases throughout history, with significant advancements in vaccine technology over the years. The COVID-19 pandemic has prompted the rapid development and deployment of multiple vaccines worldwide, representing a critical milestone in the fight against the virus.

Chapter 3

Mandatory COVID-19 Vaccination: International and Regional Human Rights Laws, Instruments and Case Laws Perspective

3.1 Introduction

The COVID-19 pandemic has fetched to the forefront complex ethical and legal debates surrounding vaccination policies and human rights considerations. This chapter delves into the multifaceted landscape of mandatory vaccination laws and cases, both before and during the COVID-19 era, and explores the regulatory frameworks governing vaccine development and approval. Section 3.2 examines the historical context of mandatory vaccination laws and notable cases (3.2.1) and their implications during the COVID-19 pandemic (3.2.2). Section 3.3 scrutinizes the standard vaccine development and approval process, focusing on the United States of America's framework (3.3.1). Furthermore, it delves into the specific challenges and considerations regarding COVID-19 vaccine development and approval (3.3.2), including adverse and side effects during clinical trials and after Emergency Use Authorization (EUA) approval (3.3.2.1) and the question of whether EUA-given COVID-19 vaccines are experimental or not (3.3.2.2). Section 3.4 explores the contentious issue of mandating COVID-19 vaccines under emergency measures, considering the principles of free and informed consent (3.4.1) and analyzing relevant international human rights laws and instruments (3.4.2) and European human rights laws and instruments (3.4.3). The chapter further examines pertinent case laws (3.4.4) on the subject. Moreover, it presents arguments both for voluntary vaccination and against mandatory vaccination (3.5) and considers the limitations of COVID-19 vaccines' efficacy

(3.5.2) and the ethical implications of vaccine passports in curbing the fundamental right to movement (3.5.3).

3.2 Mandatory Vaccination Laws and Cases

3.2.1 Pre-COVID-19

The earliest instance of forced variolation traced back even before the invention of the premier vaccine by Edward Jenner in 1796. As George Washington recognized the benefits of inoculation, he informed the Continental Congress in 1777 that new troops would be immunized as part of their admission into the Continental Army.[149]

Then, after the smallpox vaccine invention, Boston was the first American city to implement a mandatory vaccination law in 1809. The law was enacted in an attempt to halt an outbreak of the disease. Other cities in the state quickly followed.[150] The legislature revoked the same law in 1838, believing that vaccination was no longer necessary and infringed on individual freedoms. By 1855, there had been 1,032 documented smallpox fatalities, which resulted in Massachusetts state enactment of mandatory vaccination legislation once more[151], and started demanding proof of smallpox immunization for public school attendance the same year. Parents who were opposed to vaccination may still send their children to private educational institutions, and there were clauses in the statute for medical exemptions. Other Massachusetts legislation allowed municipal public health officials to enforce the vaccination of persons of any age if a smallpox outbreak occurred. Those who reject might face a $5 fee ($174.35 in 2023 dollars).[152]

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[149] "Timeline of Vaccination Mandates." History of Vaccines, n.d., https://historyofvaccines.org/blog/timeline-of-vaccination-mandates.
[150] Davidson, *The Vaccine Debate*, 184.
[151] "Timeline of Vaccination Mandates."
[152] Davidson, *The Vaccine Debate*, 184.

, The British Compulsory Vaccination Act of 1853 mandated the smallpox vaccine for babies within their initial 3 months of existence, making it the first compulsory vaccination policy on this side of the world. Parents who did not vaccinate their children faced a £1 fine (about £138 in today's money).[153] However, the program caused significant opposition; riots erupted in numerous UK cities.[154] The legislation of 1867 set the required immunization age at fourteen years, with repercussions for noncompliance. Critics of the 1867 legislation expressed worries about human liberty and choice, spurring the formation of the Anti-Compulsory Vaccination League in the British capital within that year.[155] Because of the outpouring of rage, the statute was changed in 1898 to permit 'conscientious objection' to obtaining a vaccination.[156] Elsewhere, mandatory vaccination came into force in German states in 1874.[157] And, when a fatal smallpox epidemic hit Montreal in 1887, it drove local administration to demand smallpox vaccination. Then, Toronto followed the example in 1894, based on Montreal's success.[158]

By 1900, apart from Massachusetts, thirteen other states mandated children to be vaccinated to attend school.[159] However, the same compulsory vaccination rules of Massachusetts were challenged in court in 1902, when a smallpox outbreak broke out in Cambridge, a tiny town west of Boston, and local officials ordered that all people be vaccinated. The majority of individuals complied, although a few objected. Pastor Henning Jacobson was one of them. Instead of paying

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[153] "Timeline of Vaccination Mandates."
[154] Nadja Durbach, "'They Might As Well Brand Us': Working-Class Resistance to Compulsory Vaccination in Victorian England," *Social History of Medicine* 13, no. 1 (April 1, 2000): 45–63, https://doi.org/10.1093/shm/13.1.45.
[155] Rina Fajri Nuwarda et al., "Vaccine Hesitancy: Contemporary Issues and Historical Background," *Vaccines* 10, no. 10 (September 22, 2022): 1595, https://doi.org/10.3390/vaccines10101595.
[156] Anne McMillan, "Mandatory Vaccination: Legal, Justified, Effective?," March 19, 2021, https://www.ibanet.org/article/70E1F93E-A23B-4F1A-A596-AEEF84750241.
[157] Rajaie Batniji, "Historical Evidence to Inform COVID-19 Vaccine Mandates," *The Lancet* 397, no. 10276 (February 27, 2021): 791, https://doi.org/10.1016/s0140-6736(21)00267-1.
[158] "Timeline of Vaccination Mandates."
[159] "Vaccination Mandates."

the fine as a punishment, he disputed it in court.[160] After three years of hearings in lower courts, in 1905, the case of *Jacobson v. Massachusetts* was heard by the United States Supreme Court, and the appeal was denied by a 7-2 vote.[161] The Court's ruling established the concept that individual liberty must occasionally be subjugated to the general good and subject to state police authority.[162] It laid the basis for subsequent legal challenges to mandatory vaccination. Also, It established the state's authority to demand vaccination in addition to the right to obtain a private health exemption.[163]

In the case of *Zucht v. King*, a new strategy to overturn mandatory vaccination laws emerged. It contrasted the right to education against the school's demand for vaccination evidence. In 1919, Rosalyn Zucht was barred from attending school in San Antonio, Texas, because she lacked a vaccination certificate and refused to get vaccinated.[164] Zucht filed a lawsuit after being expelled from school. In 1922, the US Supreme Court rejected to take up the Zucht case, refusing a due procedure Fourteenth Amendment appeal to the validity of local ordinances.[165] It upheld a lower court ruling that determined the San Antonio ordinance constitutional and that the Board of Health had the authority to implement it,[166] concluding that "these ordinances confer not arbitrary power, but only the broad discretion required for the protection of public health" (260 U.S. at 177, 43 S.Ct. at 25).[167]

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[160] Davidson, *The Vaccine Debate*, 184.
[161] Davidson, *Vaccine Debate*, 184.
[162] Philip L. Smith, David A. Wood, and Paul M. Darden, "Highlights of Historical Events Leading to National Surveillance of Vaccination Coverage in the United States," *Public Health Reports* 126, no. 2_suppl (July 1, 2011): 3–12, https://doi.org/10.1177/00333549111260s202.
[163] Davidson, *The Vaccine Debate*, 185.
[164] Davidson, *Vaccine Debate*, 185.
[165] Kevin M. Malone and Alan R. Hinman, "Vaccination Mandates: The Public Health Imperative and Individual Rights," in Oxford University Press EBooks, 2007, 348, https://doi.org/10.1093/acprof:oso/9780195301489.003.0014
[166] Davidson, *The Vaccine Debate*, 185.
[167] Malone and Hinman, "Vaccination Mandates: The Public Health Imperative and Individual Rights," 348

Measles outbreaks in the sixties and seventies of the 20th century USA prompted several present school vaccination laws, which require children to be given a vaccination against a variety of illnesses, including diphtheria, measles, rubella, and polio.[168] According to a 1963 assessment of state statutes, 18 of the 20 states with school admission requirements required smallpox, eleven required diphtheria, 10 required polio, 7 required tetanus, and five required pertussis. Measles vaccination mandates were quickly placed. By 1970, twenty states had mandated measles immunization, and by 1983, all fifty had.[169]

Recent cases have focused on the mandate of vaccination as a prerequisite for employment. Courts have typically held that private employers, such as hospitals and childcare facilities, can order employees to get vaccinated unless the vaccination will endanger somebody's health.[170]

3.2.2 In Times of COVID-19

Mandatory vaccination laws were not imposed in an instant reaction to COVID-19. More than a hundred countries now require pupils to get vaccinated against an array of ailments such as mumps, measles, polio, rubella, and tetanus. In April of 2021, Norway, Germany, Spain, Serbia, Israel, Chile, Mexico, and a few states in the US had pre-pandemic regulations in place that provided them the lawful power to establish immunization restrictions against coronavirus especially.[171]

Turkmenistan, Tajikistan, and Vatican City were the earliest countries to require every adult to be vaccinated against Covid-19. They implemented specific mandatory laws regarding this

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[168] Kathleen S. Swendiman, *Mandatory Vaccinations: Precedent and Current Laws*, 2011, http://fpc.state.gov/documents/organization/132307.pdf.

[169] Malone and Hinman, "Vaccination Mandates: The Public Health Imperative and Individual Rights," 347

[170] Davidson, *The Vaccine Debate*, 185-86.

[171] Jeff King, Octavio Luiz Motta Ferraz, and Andrew M. Jones, "Mandatory COVID-19 Vaccination and Human Rights," *The Lancet* 399, no. 10321 (January 1, 2022): 220, https://doi.org/10.1016/s0140-6736(21)02873-7.

requirement.[172] Then, a presidential decree in Indonesia made COVID-19 immunization compulsory for all qualified individuals in February 2021, with a monetary penalty of US$355 for disobedience. Whereas, Micronesia made compulsory jabs for all qualified grown-ups in August 2021, with disobedience punishable by the forfeiture of all central funds.[173]

Elsewhere, Ecuador turned out to be the first Latin American state to make the coronavirus vaccine mandatory for everyone above the age of five in the last month of 2021.[174] Moving to Europe, during a substantial increase in COVID-19 contagions in Austria in the initial months of 2022, the country announced mandatory immunization for all qualified major citizens, with a €3,600 monetary penalty for disobedience.[175] Moreover, COVID-19 vaccination was made compulsory in Greece for anyone more than 60 years old, and for health care providers, who may go through rising penalties or sacking one after the other.[176] Like Greece, Italy's aging society also chose obligatory vaccinations exclusively for at-risk age groups, limiting it to people over the age of 50. Conversely, Coronavirus vaccinations are compulsory in Costa Rica for eligible minors though.[177]

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[172] Katharina Buchholz, "The Countries Where Covid-19 Vaccination Is Mandatory," *Statista Infographics*, February 8, 2022, https://www.statista.com/chart/25326/obligatory-vaccination-against-covid-19/#:~:text=Indonesia%20and%20Micronesia%20followed%20later,whom%20coronavirus%20vaccines%20are%20mandatory.

[173] Lynette Mfimkulu-Eyde et al., "Mandatory COVID-19 Vaccination: Lessons from Tuberculosis and HIV.," *PubMed* 24, no. 1 (June 1, 2022): 86. https://pubmed.ncbi.nlm.nih.gov/35747276.

[174] Mfimkulu-Eyde, "Mandatory COVID-19 Vaccination," 86; Buchholz, "The Countries Where Covid-19 Vaccination Is Mandatory."

[175] Mfimkulu-Eyde et al., "Mandatory COVID-19 Vaccination: Lessons from Tuberculosis and HIV." 86.

[176] Mfimkulu-Eyde, "Mandatory COVID-19 Vaccination," 86

[177] Buchholz, "The Countries Where Covid-19 Vaccination Is Mandatory."

Likewise, in Canada, New Zealand, Denmark, Egypt, Saudi Arabia, and many other states, immunization became required for medical technicians, and administration staff, alongside other public and private segment personnel.[178]

3.3 Regulation of Vaccines

Vaccines are legally supervised from their inception through testing, production, distribution, preservation, and discharge. Many developing nations follow the World Health Organization's accreditation method.[179] It means that before vaccinations are widely used in people, they must go through years of research and development, as well as many series of experimental testing, to guarantee that the end product is secure and efficient. The manufacturing course is completed when a government regulatory body approves.[180]

Each country or area has its own regulatory body. The US Food and Drug Administration (FDA), Europe's European Medicines Agency (EMA), China's China Food and Drug Administration (CFDA), and Australia's Therapeutic Goods Administration are some examples. Each of these bodies has its own procedure, however, when it pertains to new medicinal authorization, their decisions usually rest on advances in science and technology facts.[181] We will discuss the standard developmental and approval process of vaccines in the USA in some detail.

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[178] Nuwarda et al., "Vaccine Hesitancy: Contemporary Issues and Historical Background."
[179] Davidson, *The Vaccine Debate*, 57.
[180] Kara Rogers, "How Is a Vaccine Approved for Use?," Encyclopedia Britannica, n.d., https://www.britannica.com/story/how-is-a-vaccine-approved-for-use.
[181] Rogers, "Vaccine Approved for Use?,"

3.3.1 Standard Vaccine Development and Approval

On average, it requires between ten and fifteen years to evaluate if a vaccine is reliable and efficient in experimental settings, finish the administrative licensing requirements, and make a sufficient amount of vaccine dosages for a broad supply.[182]

3.3.1.1 The United States of America Framework

When Congress approved the National Vaccine Act in 1813 to encourage immunization, it was the first legislative attempt to regulate vaccinations. The National Vaccine Act was repealed by Congress in May 1822 because it was politically opportune. This marked the end of the first national attempt to control vaccinations.[183] The death of 13 infants in St. Louis from diphtheria antitoxin tainted with tetanus prompted Congress to establish the Biologics Control Act in 1902. This Act mandated that makers of antitoxins, serums, and vaccinations be examined and licensed every year.[184] Today, the Centers for Biologics Evaluation and Research (CBER) of the US FDA monitors the research and authorization procedure for a vaccine contender in the USA.[185] Before testing a vaccine on people, scientists investigate its ability to generate a defense reaction in small creatures for example mice.[186] Preclinical research is critical for weeding out possible vaccines that are either harmful or do not elicit defensive immune reactions.[187] Many potential

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[182] Aardt, "COVID-19 Vaccine Passports: Derogating Non-Derogable Fundamental Human Rights," 3.
[183] Davidson, *The Vaccine Debate*, 57-58.
[184] Davidson, *Vaccine Debate*, 58.
[185] Emmanuel B. Walter and M. Anthony Moody, "Vaccine Development: Steps to Approval of an Investigational Vaccine," *North Carolina Medical Journal* 82, no. 2 (March 1, 2021): 141–44, https://doi.org/10.18043/ncm.82.2.141.
[186] "How Vaccines Are Developed and Approved for Use | CDC," n.d., https://www.cdc.gov/vaccines/basics/test-approve.html.
[187] John Hopkins University & Medicine, "Vaccine Research & Development," Johns Hopkins Coronavirus Resource Center, n.d., https://coronavirus.jhu.edu/vaccines/timeline#:~:text=Typical%20Timeline,vaccine%20doses%20for%20widespread%20distribution.

vaccines are never tested because they fail to trigger the appropriate immune system reaction. Pre-clinical phases generally last one to two years and are staffed by private-sector scientists.[188] If the vaccine exhibits encouraging outcomes, it will be tried on humans in experimental trials. Here, the vaccine undergoes a clinical development stage. For it, researchers file an Investigational New Drug (hereinafter referred to as IND) application with the FDA. [189] They have to prove that medicine is relatively safe and has commercial development potential for it to gain IND clearance.[190] The vaccine is tested in three stages soon after the IND application is accepted.[191]

The initial stage in evaluating vaccinations in humans is to conduct phase I clinical trials. The experimental vaccination is given to small sets of persons (twenty to hundred). At this phase, investigators gather data on the vaccine's safety in humans. This involves learning the risks and detecting adverse reactions, and investigating how well the vaccine stimulates an immunological reaction.[192] In reality, it takes years and hundreds of thousands of dollars to reach phase I trials. The trial itself often lasts one to two years.[193]

If the findings of phase I clinical trials are positive, the vaccine will move on to pbase II trials. These trials continue to evaluate the safety and immunological responses as they grow to hundreds (normally one bundred to three hundred) of trial subjects who share features (such as age and bodily condition) with the vaccine's projected receivers.[194] Although phase II trials can

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[188] "Vaccine Development, Testing, and Regulation," History of Vaccines, n.d., https://historyofvaccines.org/vaccines-101/how-are-vaccines-made/vaccine-development-testing-and-regulation.
[189] "How Vaccines Are Developed and Approved for Use | CDC."
[190] Davidson, *The Vaccine Debate*, 59.
[191] "Vaccine Development, Testing, and Regulation."
[192] "How Vaccines Are Developed and Approved for Use | CDC."
[193] Davidson, *The Vaccine Debate*, 60.
[194] "How Vaccines Are Developed and Approved for Use | CDC."

be completed in as little as two years, the preparation for this stage normally takes much longer.[195]

Clinical trials in Phase III are crucial for determining whether vaccinations are secure and efficient. These large-scale controlled field testing, sometimes including several thousand volunteers, are required before a vaccine is approved. The vaccination or a placebo is administered to participants at random. During phase III, participants and the majority of research investigators are unaware of who has taken the vaccination and who left out to take a placebo. The subjects are subsequently tracked to determine how many people in each of the groups get the sickness.[196] This phase lasts typically four years or so. The vaccine manufacturer then needs another 18 to 2 years to examine the data and produce a Biologics License Application (BLA) for the FDA. Once the application is submitted, the FDA examines trial data, evaluates the manufacturing plant, and goes through the labeling, which can take up to a year before the vaccine is approved and available for sale to the general public. [197]

Following approval, the FDA will continue to oversee vaccine manufacturing, including inspecting plants and examining the creator's testing of batches of vaccines for efficacy, security, and pureness. The FDA has the authority to perform its own examination of vaccinations produced by manufacturers.[198]

3.3.2 COVID-19 Vaccine Development and Approval

On January 10, 2020, the genomic sequence information of SARS-CoV-2 was shared through GISAID, and by March 19, 2020, the global pharmaceutical manufacturers had shown a

[195] Davidson, *The Vaccine Debate*, 60.
[196] John Hopkins University & Medicine. "Vaccine Research & Development."
[197] Davidson, *The Vaccine Debate*, 61
[198] "Vaccine Development, Testing, and Regulation."

substantial dedication to developing a vaccine to combat the deadly virus.[199] The pandemic prompted an urgent and swift large-scale reaction; so and so that by April 8, 2020, only a few weeks subsequently the pandemic was announced, one hundred and fifteen vaccine candidates had started preliminary testing, with 5 then being evaluated in Phase I clinical studies.[200] The earliest approvals happened fewer than 10 months from the commencement of corresponding Phase I studies—around ten to fifteen times quicker than a standard vaccine creation program, just after the earliest safety and effectiveness results from Phase III were accessible.[201]

As we discussed above in detail the FDA's BLA protocol is the standard route to vaccine licensure in the United States. However, the earliest COVID-19 vaccines' (Pfizer, Moderna, and Johnson & Johnson) approval in the USA had been authorized under an Emergency Use Authorization (EUA) dated December 11, 2020.[202]

An EUA is a system that allows healthcare interventions, including vaccines, to be made available and used in public health crises like the recent coronavirus pandemic.[203] An EUA can be issued only when there are no acceptable, acknowledged, and available alternatives, and where the established and anticipated advantages surpass the possible dangers. An EUA is likewise only valid for the length of the declared public health crises.[204]

Now we know, an EUA does not require as detailed and extensive safety and effectiveness data comparable to the regular BLA approach. For example, The EUA requirements for a COVID-19

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[199] Tung B. K. Le et al., "The COVID-19 Vaccine Development Landscape," *Nature Reviews Drug Discovery* 19, no. 5 (April 9, 2020): 305, https://doi.org/10.1038/d41573-020-00073-5

[200] Tung B. K. Le et al., "Evolution of the COVID-19 Vaccine Development Landscape," *Nature Reviews Drug Discovery* 19, no. 10 (September 4, 2020): 667–68, https://doi.org/10.1038/d41573-020-00151-8

[201] Ulrich Kalinke et al., "Clinical Development and Approval of COVID-19 Vaccines," *Expert Review of Vaccines* 21, no. 5 (February 14, 2022): 1, https://doi.org/10.1080/14760584.2022.2042257.

[202] Gibelli et al., "COVID-19 Compulsory Vaccination: Legal and Bioethical Controversies," 5.

[203] "Emergency Use Authorization for Vaccines Explained," U.S. Food And Drug Administration, November 20, 2020, https://www.fda.gov/vaccines-blood-biologics/vaccines/emergency-use-authorization-vaccines-explained.

[204] Carlie MacMillan, "Emergency Use Authorization Vs. Full FDA Approval: What's the Difference?," *Yale Medicine*, March 7, 2022, https://www.yalemedicine.org/news/what-does-eua-mean

immunization needed an average of 2 months of safety information monitoring. The procedure of obtaining EUA for vaccine production vials is almost unparalleled, having been employed only once before for making the anthrax vaccine accessible in 2005.[205] That is why, all patients who accepted to be immunized against coronavirus illness were required to take part in a medical trial. Nevertheless, according to US Federal law, 21 USC 360bbb-3(e)(1)(A)(ii)(III), the individual to whom an EUA vaccination is delivered must be conversant: "of the option to accept or refuse administration of the vaccine."[206]

3.3.2.1 COVID-19 Vaccines' Adverse and Side Effects: During Clinical Trials and After EUA Approval

There is a long list of such instances, but we will mention only a few of those instances.

- On Oct. 21st, 2020, according to the Brazilian National Health Surveillance Agency, a clinical trial subject for the AstraZeneca and Oxford University vaccine died in Brazil. The male subject was aged 28 years, belonged to Rio de Janeiro, deceased as a result of COVID-19 problems. He was apparently in the trial's control group, which got the meningococcal vaccination.[207]
- Denmark, Iceland, Ireland, and Norway had ceased circulation of AstaZeneca's COVID-19 vaccination on March 14, 2021, while the European Union (EU) examined if the immunization is connected to reports of blood clots.[208]

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[205] Douglas J. Opel, Daniel A. Salmon, and Edgar K. Marcuse, "Building Trust to Achieve Confidence in COVID-19 Vaccines," *JAMA Network Open* 3, no. 10 (October 1, 2020): e2025672, https://doi.org/10.1001/jamanetworkopen.2020.25672.
[206] Aardt, "COVID-19 Vaccine Passports: Derogating Non-Derogable Fundamental Human Rights," 4.
[207] Ravelo and Jerving, "COVID-19 in 2020 — a Timeline of the Coronavirus Outbreak."
[208] "CDC Museum COVID-19 Timeline."

- The CDC and the FDA published a joint press release on April 13th, 2021, urging a halt in the administration of Johnson & Johnson's COVID-19 vaccination until 6 reported instances of an unusual and dangerous blood clot in patients who take the J&J coronavirus vaccine were studied.[209]
- The FDA issued a warning on July 12, 2021, about a possible elevated risk of Guillain-Barré syndrome, an uncommon neurological illness, 42 days following inoculation with the Johnson & Johnson vaccine. A letter granting a modification to the vaccine's EUA also stated that severe allergic responses, thrombosis with thrombocytopenia, and capillary leak syndrome had been observed following vaccination outside of clinical trials.[210]

According to a research study titled "The Side Effects and Adverse Clinical Cases Reported after COVID-19 Immunization", published in *Vaccines*, the most common side effects were injection site soreness, weariness, headache, muscular aches, and fever. Ocular adverse effects, Bell's palsy, stroke, lymph nodes, syncope, myocardial infarction, anaphylaxis, multiple sclerosis relapse, thrombosis, facial palsy, GBS, acute disseminated encephalomyelitis, autoimmune SEs, cardiomyopathy, severe hypotension, multiple cranial neuropathies, myelitis, skin reactions, and herpes reactivation were reported.[211]

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[209] "Joint CDC and FDA Statement on Johnson & Johnson COVID-19 Vaccine," *U.S. Food And Drug Administration*, April 13, 2021. https://www.fda.gov/news-events/press-announcements/joint-cdc-and-fda-statement-johnson-johnson-covid-19-vaccine.
[210] Ravelo and Jerving, "COVID-19 in 2021 — a Timeline of the Coronavirus Outbreak."
[211] Roshina Rabail et al., "The Side Effects and Adverse Clinical Cases Reported after COVID-19 Immunization," *Vaccines* 10, no. 4 (March 22, 2022): 21, https://doi.org/10.3390/vaccines10040488.

And another study reveals, that the side effects of DNA and mRNA-based vaccinations were shown to be far more severe, whereas killed viral vaccinations were connected to more persistent side effects. In all, females and children were shown to be more vulnerable to adverse effects.[212]

3.3.2.2 Are EUA-Given COVID-19 Vaccines Experimental or Not?

The FDA mandated that vaccination recipients or their guardians receive an information leaflet for each COVID-19 vaccine approved under an EUA. Up to December 2020, Pfizer-BioNTech, Moderna, and Johnson & Johnson's Janssen fact sheets noted that the COVID-19 vaccine is an unapproved, continuing clinical study that has not been subjected to the same scrutiny as an FDA-approved product.[213]

Likewise, in a news statement issued by the US CDC on December 3, 2020, it maintained that this agency remains active in tracking the quality of COVID-19 vaccines.[214] Afterward, the CDC confirmed in June 2021, that it still continues to research vaccination efficacy, length of protection, population immunity, and efficacy against novel COVID-19 mutations.[215]

As read above, the FDA, CDC, and vaccine producers were upfront and forthright about the fact that the coronavirus vaccinations were then in medicinal testing and the trial stages.

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[212] Rabail, "Side Effects Reported after COVID-19 Immunization."
[213] U.S. Food and Drug Administration, "COVID-19 Vaccines," accessed December 20, 2021, https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines.
[214] Centers for Disease Control and Prevention, "Safety of COVID-19 Vaccines," accessed December 20, 2021, https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/safety-of-vaccines.html.
[215] Centers for Disease Control and Prevention, "Key Things to Know About COVID-19 Vaccines," accessed December 20, 2021, https://www.cdc.gov/coronavirus/2019-ncov/vaccines/keythingstoknow.html.

3.4 Mandating COVID-19 Vaccines Under Emergency Measures

3.4.1 Free and Informed Consent

Mandating the use of COVID-19 vaccination under an EUA is both legally and ethically dubious. Unlicensed biomedical product recipients must be provided with fact sheets, but formal specific consent is not required necessary in this regard. Other measures, like greater access to an IND, need the completion of written informed authorization forms. So, if FDA results are not made public or considered by national vaccine consultation committees, recipients must provide written consent to ensure they comprehend all facts.[216] The factors that contribute to uncertainty about the known safety and effectiveness of a vaccine differ from those that lead to uncertainty about unknown safety and efficacy profiles.[217]

Another point to look for is that the law permitting the FDA to grant EUAs needs the Secretary of Health and Human Services (HHS) to indicate whether persons may decline the vaccination and the implications of doing so. Vaccine mandates are uncalled for since an EUA needs less data on safety and effectiveness than a complete BLA approval. Individuals would likewise be skeptical of vaccination mandates under the EUA, regarding them as continuous clinical trials.[218]

That is why, forcing someone to engage in a medical experiment is clearly unlawful. Specifically, where coercion is accompanied by an apparent prejudice, intervention into one's privacy, or the enactment of constraints make it impossible for him to acquire a livelihood. Nevertheless, objections to such immunization owing to a lack of desire to join in a medical trial

[216] CDC, "Key Things About COVID-19 Vaccines," 1-2.
[217] CDC, 2.
[218] Lawrence O. Gostin, Daniel A. Salmon, and Heidi J. Larson, "Mandating COVID-19 Vaccines," *JAMA* 325, no 6 (February 9, 2021): 1, https://doi.org/10.1001/jama.2020.26553

and testing of a vaccine that has not completed an entire course of research trials are conceivable but regarded as unfavorable in national courts to defend human rights.[219]

3.4.2 Analysis of International Human Rights Laws and Related Instruments

People have the right to make informed decisions about mandatory immunization and any therapeutic procedures under the current international human right to bodily integrity. The basic principle is that people who take the gamble of experimentation have to make the ultimate decision regarding their own involvement after learning about the experiment's aim, dangers, and rewards.

3.4.2.1 The Nuremberg Code (1947)

While the Nuremberg Code of 1947 established the freedom to choose under international law, the worldwide right to informed consent currently includes the right to unrestricted and well-versed consent for every healthcare choice.[220] The primary principle in the Code emphasizes the critical requirement of the subject's voluntary consent. This implies that the individual must possess the legal capacity to provide consent. They should be in a position to freely choose without any influence of force, deception, manipulation, or coercion. Furthermore, they should have adequate understanding and awareness of the relevant subject matter, enabling them to make an informed and well-considered decision.[221]

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[219] Gutorova, Pashkov, and Kaganovska, "Ensuring The Citizens' Rights and Freedoms In Case of COVID-19 Vaccination In The Public Health System," 2866.

[220] Habakus, Holland, and Rosenberg, *Vaccine Epidemic: How Corporate Greed, Biased Science, and Coercive Government Threaten Our Human Rights, Our Health, and Our Children*. 44.

[221] "The Nuremberg Code (1947)," *BMJ* 313, no. 7070 (December 7, 1996): 1448, Art. 1, https://doi.org/10.1136/bmj.313.7070.1448

Later, in Article 9, the Code suggests that during the trial, the recipient should feel free to terminate the trial if he reaches a bodily or psychological condition in which extension of the trial appears to him to be undesirable.[222]

3.4.2.2 The International Covenant on Civil and Political Rights (ICCPR) (1966)

Article 4 of the legally enforceable ICCPR, accepted by 193 states worldwide is critical to the structure of protecting human rights. Article 4(1) of the ICCPR states that, in times of national crisis that endangers the nation's life, States Parties may derogate from their obligations as per the Covenant to the extent necessary needed by the circumstances of the state of affairs. Article 4(2), on the other hand, maintains that this clause allows for no derogation from Article 7.[223]

Article 7 of the ICCPR explicitly declares that no individual shall be subjected to torture, cruel, inhuman, or degrading treatment or punishment. It specifically prohibits subjecting anyone to medical or scientific experiments without their voluntary consent.[224] In essence, Article 7 states that therapeutic research without informed permission may result in torture or harsh treatment.

During the first wave of COVID-19, on April 30, 2020, the United Nations Human Rights Committee (hereinafter referred to as CCPR) reiterated its stance, emphasizing that states must not employ emergency powers or derogatory measures in a discriminatory manner, nor violate their international obligations, including those from other human rights treaties. States are also cautioned against infringing upon non-derogable provisions of the Covenant, such as the right to life and prohibition of torture, inhuman treatment, or medical experimentation without consent.

[222] "The Nuremberg Code (1947)," Art. 9
[223] International Covenant on Civil and Political Rights (ICCPR), G.A. Res. 2200A (XXI), 1966, Art. 4(2).
[224] ICCPR, Art. 7.

The Committee asserts that even during public emergencies, the essential rights that support non-derogable rights and uphold the rule of law and legality should not be compromised.[225]

So, we can deduce from the above that an individual's right to free and informed assent to therapeutic or research testing is a non-derogable essential human right that should not be infringed, even during a public health crisis.

3.4.2.3 The Siracusa Principles on the Limitation and Derogation Provisions in the International Covenant on Civil and Political Rights (1984)

The Siracusa Principles on the Limitation and Derogation Provisions in the International Covenant on Civil and Political Rights (hereinafter referred to as the Siracusa Principles) were ratified by the United Nations in 1984. These principles describe the limitations on rights that nations may apply in times of crisis.

The Siracusa Principles, specifically in point D concerning "Non-Derogable Rights", state in paragraph 58 that no state party is allowed to deviate from the Covenant's protections for the right to life, freedom from torture, cruel or degrading treatment, and from medical or scientific experimentation without informed consent, even during times of emergencies that threaten the nation's existence. These rights are non-derogable, and no exceptions are permissible, even if claimed to be necessary for preserving the nation's survival.[226]

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[225] Human Rights Committee, "Statement on derogations from the Covenant in connection with the COVID-19 pandemic," UN Doc CCPR/C/128/2 (2020), para 2(d), https://www.ichrp.org/Documents/IHRBodies-CCPR/COVID-19_Statement_Derogations.pdf.

[226] "The Siracusa Principles on the Limitation and Derogation Provisions in the International Covenant on Civil and Political Rights." *Human Rights Quarterly* 7, no. 1 (February 1, 1985): 3–10. https://doi.org/10.2307/762035.

It continues to reaffirm the same about those states that are not parties to the Covenant at point E, para 69, with further emphasis that the infringement of these basic rights is prohibited under any conditions under customary international law.[227]

3.4.2.4 The Paris Minimum Standards of Human Rights Norms in a State of Emergency (1984)

The Paris Minimum Standards of Human Rights Norms in a State of Emergency (hereinafter referred to as The Paris Minimum Standards) were accepted by the International Law Association's 61st Conference in 1984. These standards shape 16 articles outlining nonderogable privileges and liberties for people during states of crisis. They aim to warrant that states do not append core human rights deemed nonderogable under international, European, and American conventions.[228]

The Paris Minimum Standards emphasize that authorities cannot stray from universally recognized rights that are considered 'non-suspendable' and cannot be set aside during times of public crisis. These standards reaffirm that the essential rights and freedoms guaranteed by international law, including those outlined in Article 6 concerning 'Freedom from Torture' within Section C dedicated to 'NON-DEROGABLE RIGHTS AND FREEDOMS', which states that no individual shall undergo medical or scientific experimentation without their voluntary consent, remain non-derogable even in emergency situations.[229]

[227] "The Siracusa Principles," 11-12.
[228] Richard B. Lillich, "The Paris Minimum Standards of Human Rights Norms in a State of Emergency," *American Journal of International Law* 79, no. 4 (October 1, 1985): 1072–81. https://doi.org/10.2307/2201848
[229] Lillich, "The Paris Minimum Standards," Art. 6.

3.4.2.5 Universal Declaration on Bioethics and Human Rights (2005)

The Universal Declaration on Bioethics and Human Rights (hereinafter referred to as UDBHR) was sanctioned by acclamation by the UNESCO General Conference in October 2005. By establishing biological ethics in international human rights and warranting respect for human life, the UDBHR recognizes the connection between morality and human rights in the specialist topic of biological ethics.[230]

The UN Declaration of Human Rights emphasizes respecting humanity's worth, rights, and fundamental liberties, prioritizing people's needs and wellness over scientific or community objectives. Article 6 'Consent' requires aforementioned, permitted, and well-versed consent for protective, investigative, and healing medicinal interferences. Consent should be articulated and withdrawn without punishment or harm. Collective community contracts or consultants should never replace distinct informed consent.[231]

While the UDBHR does not provide enforceable rights, it does set a worldwide norm for informed consent. The UDBHR drafters consciously opted to produce a proclamation rather than a treaty on similar grounds that the UDHR drafters did a little over fifty years ago. In both cases, lawmakers saw an urgent need to modify current legislation but saw the declaration process as excessively slow and laborious—debate and discussion would take much longer, and far fewer

[230] United Nations Educational, Scientific and Cultural Organization (UNESCO), "Universal Declaration on Bioethics and Human Rights," adopted by the General Conference of UNESCO on 19 October 2005, UNESCO Doc. 34 C/Resolution 96, http://portal.unesco.org/en/ev.php-URL_ID=31058&URL_DO=DO_TOPIC&URL_SECTION=201.html.

[231] UNESCO, "Universal Declaration on Bioethics and Human Rights," Art. 3.

governments would be prepared to sign it. The UDBHR's declarative nature, however, does not undermine its credibility or potential significance.[232]

3.4.2.6 WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects (1964)

The Declaration of Helsinki, established by the World Medical Association (WMA) in Helsinki, Finland in June 1964, serves as an ethical framework for medical research that involves human participants, encompassing studies utilizing recognizable human material and data. It was amended many a time afterward, the latest of which was in October 2013.[233]

The Declaration highlights the significance of informed permission in clinical studies, stressing that involvement by those who can consent must be freely given. The study's objectives, methodology, avenues of funding, conflicts of interest, investigator connections, rewards and dangers, and post-study arrangements must be communicated to prospective participants. They must be informed of their right to refuse or withdraw permission without consequence. Healthcare professionals must seek informed permission from potential participants, ideally in written form, and allow them to understand the results of the research and the consequences. When getting informed permission, medical professionals must use caution, particularly when the individual relies on the medical professional or may consent under duress. The medical

[232] Habakus, Holland, and Rosenberg, *Vaccine Epidemic: How Corporate Greed, Biased Science, and Coercive Government Threaten Our Human Rights, Our Health, and Our Children*, 49

[233] "World Medical Association Declaration of Helsinki," *JAMA* 310, no. 20 (November 27, 2013): 2191. https://doi.org/10.1001/jama.2013.281053.

professional must advise recipients about research-related aspects of their care while still maintaining the patient-physician connection.[234]

3.4.2.7 Guidance for Managing Ethical Issues in Infectious Disease Outbreaks

This Guidance for Managing Ethical Issues in Infectious Disease Outbreaks arose from the WHO's concern about the ethical challenges posed by the 2014-2016 Ebola outbreak in West Africa.[235]

In a high-fatality epidemic, the Guidance proposes that innovative treatments may be delivered without research trials if informed permission is acquired. MEURI stands for 'monitored emergency use of unregistered and experimental interventions.' Patients need to be advised that the treatment may not be beneficial to them and may perhaps be harmful. The approach has to be in terms of appropriate culture and language, focusing on the content and clarity of the material as well as the patient's decision.[236]

3.4.2.8 Doctrine of State Responsibility for Human Rights Abuses Committed by Non-state Actors

Coming back to mandating vaccines, especially COVID-19 ones, based on the Doctrine of State Responsibility for Human Rights Abuses Committed by Non-State Actors, countries must comply with their global legal duties not to violate the fundamental rights of their citizens in

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[234] "World Medical Association Declaration of Helsinki "

[235] World Health Organization, "Guidance for Managing Ethical Issues in Infectious Disease Outbreaks," (Geneva: World Health Organization, 2016), 7. https://apps.who.int/iris/bitstream/handle/10665/250580/9789241549837-eng.pdf.

[236] WHO, "Managing Ethical Issues in Infectious Disease Outbreaks," 35-37.

respect of subjecting them to clinical trials without voluntary permission.[237] Their authority is void to obligate the private sector to mandate COVID-19 immunization for people to work, get around, educate, or go to institutions. This decision is the same as requiring a vaccination, which is a violation of the Nuremberg Code along with other fundamental rights.[238]

The Office of the United Nations High Commissioner for Human Rights (hereinafter referred to as OHCHR), on April 27, 2020, stressed the need for nations to implement human rights prevention policies during times of calamity. Investigations should be carried out to bring culprits to justice and give sufferers security and reparation.[239] Because of their normative clarity and position, nonderogable rights constitute essential human rights.[240] Recognizing them as "higher law" is both operational and logical, since they underpin all other rights.[241]

3.4.3 Analysis of European Human Rights Laws and Related Instruments

The European Convention for the Protection of Human Rights and Fundamental Freedoms (hereinafter referred to as the ECHR) is the primary legal reference for basic human rights preservation in the European oversight setting.[242] Furthermore, the Convention on Human Rights and Biomedicine (commonly known as the 'Oviedo Convention') also gives guidance in this area. Both treaties are specifically acknowledged as the grounds for the rights to morality,

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[237] W Van Aardt, "State Responsibility for Human Rights Abuses Committed by Non-State Actors under the Constitution " Doctoral dissertation, *North-West University*, 2004

[238] Aardt, "COVID-19 Vaccine Passports: Derogating Non-Derogable Fundamental Human Rights," 6.

[239] United Nations Office of the High Commissioner for Human Rights [OHCHR], "EMERGENCY MEASURES AND COVID-19: GUIDANCE," Press release, April 27, 2020. https://www.ohchr.org/sites/default/files/Documents/Events/EmergencyMeasures_COVID19.pdf.

[240] Teraya Koji, "Emerging Hierarchy in International Human Rights and Beyond: From the Perspective of Non-Derogable Rights," *European Journal of International Law* 12, no 5 (December 1, 2001): 917–41. https://doi.org/10.1093/ejil/12.5.917.

[241] Tom Farer, "The Hierarchy of Human Rights," *American University of International Law Review* 8, no. 1 (January 1, 1992): 10. http://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?article=1506&context=auilr

[242] Gibelli et al., "COVID-19 Compulsory Vaccination: Legal and Bioethical Controversies," 2.

confidentiality, and data security in the EU Charter.[243] Another key normative reference is the European Union's Charter of Fundamental Rights as well.

3.4.3.1 European Convention for the Protection of Human Rights and Fundamental Freedoms (ECHR) (1950)

The ECHR was adopted in 1950 and has been in effect since 1953. Article 8 of the ECHR describes the "Right to respect for private and family life." It stipulates that no government agency may infringe on this right unless it is necessary for national security, public safety, financial prosperity, unrest prevention, health protection, or the preservation of others' rights.[244]

3.4.3.2 Convention on Human Rights and Biomedicine (Oviedo Convention) (1997)

The Oviedo Convention, signed in 1997, is the first global accord on bioethics.[245] Under Article 5 of the Oviedo Convention, medical treatment may be performed only if the individual involved has provided free and informed permission. This individual must be informed in advance about the objective and scope of the treatment, and also about its implications and dangers. The individual affected has the right to revoke permission at any moment.[246]

It requires free and informed assent for all therapeutic processes, including prevention, evaluation, therapy, recovery, and research. The Convention strengthens individual rights by eliminating differences between study and treatment and requiring knowledge about all

[243] Maria Diaz Crego et al., "Legal issues surrounding compulsory Covid-19 vaccination," European Journal of Risk Regulation 12, no. 1 (2021): 28-38, doi:10.1017/err.2021.14.
[244] European Convention for the Protection of Human Rights and Fundamental Freedoms, opened for signature November 4, 1950, 213 U.N.T.S. 221, entered into force September 3, 1953.
[245] Gibelli et al., "COVID-19 Compulsory Vaccination: Legal and Bioethical Controversies," 3.
[246] Council of Europe, "CONVENTION ON HUMAN RIGHTS AND BIOMEDICINE," Article 5, opened for signature April 4, 1997, ETS No. 164, https://rm.coe.int/168007cf98.

therapeutic processes, including physical and psychological aspects. The Convention also acknowledges that medical procedures can be both physical and psychological.[247]

3.4.3.3 Charter of Fundamental Rights of the European Union (2000)

The Charter of Fundamental Rights of the European Union (hereinafter referred to as the Charter) was approved in Nice in 2000 and became a legal obligation for European organizations and its member nations with the coming into effect of the Treaty of Lisbon in 2007.[248]

According to Article 3 of the Charter, all persons have the right to have their bodily and psychological dignity respected. It forbids eugenic methods, commercial gain, and embryological cloning in health and life sciences, and emphasizes informed and free permission.[249] Furthermore, national vaccination mandates raised issues about the right to confidentiality and data security (Articles 7 and 8 of the Charter), based on how adherence was checked and if and how health data were maintained. Finally, if mandatory vaccination could become necessary to gain particular facilities or apply particular basic rights (for instance, the right to learning, association, or work), it was challenging.[250]

3.4.3.4 Council of Europe's Resolution No. 2361 "Covid-19 vaccines: ethical, legal and practical considerations"

On January 27, 2021, the Council of Europe, a major world body devoted to the preservation of human rights that is distinct and autonomous from the European Union, ratified Resolution No.

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[247] Habakus, Holland, and Rosenberg, *Vaccine Epidemic: How Corporate Greed, Biased Science, and Coercive Government Threaten Our Human Rights, Our Health, and Our Children*, 47.
[248] Gibelli et al., "COVID-19 Compulsory Vaccination: Legal and Bioethical Controversies," 3.
[249] Charter of Fundamental Rights of the European Union, Article 3, 2007 O.J. (C 303) 1.
[250] Crego et al., "Legal issues surrounding compulsory Covid-19 vaccination," 5.

2361 (hereinafter referred to as the Resolution) titled "Covid-19 vaccines: ethical, legal, and practical considerations."[251] The Resolution prohibits different nations from rendering COVID-19 immunization mandatory and from using it as an instrument of prejudice.[252]

The Resolution emphasizes the swift creation of COVID-19 vaccines poses concerns of faith in them, which is why urging member states and the European Union to establish independent vaccine compensation programs. It also calls for high vaccination uptake, but besides it ensures citizens are not pressured to vaccinate, no discrimination against those who choose not to, and the use of vaccination certificates to monitor vaccine effectiveness, negative effects, and adversarial occurrences.[253]

3.4.3.5 The Schengen Borders Code and Directive 2004/38

Border closures and other limitations in the initial stages of the COVID-19 pandemic within European territories contrasted sharply with the freedom of movement anticipated by both the EU Treaties and subsequent lawmaking, particularly the Schengen Borders Code (hereinafter referred to as the Code) and Directive 2004/38 (hereinafter referred to as the Directive).[254]

The Code mainly prohibits border restrictions between Member States. In some rare circumstances, the law authorizes national authorities to reinstate internal border restrictions. Nonetheless, public health is not listed as a reason for internal border restrictions (Articles 25-

[251] Gibelli et al., "COVID-19 Compulsory Vaccination: Legal and Bioethical Controversies," 5.
[252] Gibelli, "COVID-19 Compulsory Vaccinatiou." 5.
[253] Council of Europe, Resolution No. 2361, "Covid-19 vaccines: ethical, legal and practical considerations," adopted by the Parliamentary Assembly on January 27, 2021 https://pace.coe.int/en/files/29004/html.
[254] Crego et al., "Legal issues surrounding compulsory Covid-19 vaccination," 3.

30). Furthermore, the legislative history clearly indicates that the provisional reinstatement of internal boundaries was not intended to be justified by the concept of 'public health'.[255]

Similarly, Directive 2004/38/EC serves as the fundamental regulation governing the application of rights for EU residents and their families to move and reside within the borders of the EU. Its Article 27 grants member states the authority to restrict specific freedoms based on reasons of public interest, and the safety or health of the public.[256] Article 29(1) of the 2004 directive limits unrestricted movement to communicable or virulent parasitic disorders and diseases with epidemic propensity.[257]

However, the European Commission argues that free movement restrictions have become obsolete as a result of the EU's unification and the establishment of innovative public health solutions.[258]

3.4.4 Analysis of Two Relevant Case Laws

Under Articles 3 and 8 of the ECHR, the European Court of Human Rights (hereinafter referred to as the ECtHR) handles compulsory medical procedures.

3.4.4.1 Case of Vavrika and Others v. The Czech Republic

Despite the ECtHR still to decide on the legality or admissibility of any lawsuit concerning mandatory COVID-19 immunization, the ECtHR ruled recently in the relevant case 47621/13

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[255] Crego, "Legal issues," 4.
[256] Crego, "Legal issues," 4.
[257] Directive 2004/38/EC, Article 29(1), https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02004L0038-20130701&from=EN.
[258] Directive 2004/38/EC (COM(2009) 313), Section 3 1.3, https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02004L0038-20130701&from=EN; Crego et al., "Legal issues surrounding compulsory Covid-19 vaccination," 4

"Case of Vavrika and Others v. The Czech Republic"[259] that the parents were rightfully administratively penalized for refusing to immunize their children.[260]

Many Czech families, according to the case's narrative, have filed a complaint against mandated childhood vaccinations "against nine diseases well known to medical science." The complainants were persuaded that playgroups' rejection to allow kids without vaccinations was illegitimate, but the ECtHR was not convinced, and its Grand Chamber delivered a definite verdict on April 8, 2021.[261]

The ECtHR's Grand Chamber decided that mandatory vaccination under Article 8 is admissible provided it is approved by legislation, serves an adequate goal, is essential in a democracy, and is proportional. Vaccine safety, monitoring, exceptions, forced vaccination, limits, medical insurance coverage, and reimbursement for harm caused are all factors to be addressed.[262]

Advocates of COVID-19 vaccines feel that this judgment may create a standard for coronavirus immunization. However, in *Gutorova et al* opinion, given the case involves recognized diseases that have traditionally been incorporated into vaccination schedules for children per WHO recommendations, the judgment cannot serve as a precedent.[263]

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[259] CASE OF VAVŘIČKA AND OTHERS v. THE CZECH REPUBLIC, Application no. 47621/13, Judgment of the European Court of Human Rights, https://hudoc.echr.coe.int/eng#{%22itemid%22:[%22001-236253%22]}
[260] Gutorova, Pashkov, and Kaganovska, "Ensuring The Citizens' Rights and Freedoms In Case of COVID-19 Vaccination In The Public Health System," 2866.
[261] Gutorova, Pashkov, and Kaganovska, "Ensuring The Citizens' Rights," 2866-67.
[262] CASE OF VAVŘIČKA AND OTHERS v. THE CZECH REPUBLIC, Application no. 47621/13.
[263] Gutorova, Pashkov, and Kaganovska, "Ensuring The Citizens' Rights and Freedoms In Case of COVID-19 Vaccination In The Public Health System," 2867

3.4.4.2 Case of Abgrall and 671 Others v. France

The ECtHR dismissed an appeal by 672 French firefighters for temporary revoke of French law no. 2021-1040, imposing a vaccination prerequisite for work (Abgrall and 671 Others v. France, 24 August 2021, rejection of requests for interim measures). The appeal was dismissed as outside Article 39 of the Rules of Court.[264]

Indeed, the Court noted that only in extreme circumstances, when the petitioners suffer "a real risk of irreversible harm," can interim measures be given. However, it should be noted that this verdict does not prevent the prospect of the existence of situations conducive to the adoption of emergency precautionary measures, and it does not rule out the likelihood that The Court will eventually rule on the constitutionality of the firemen's conduct in terms of French law's conformity with ECHR principles.[265]

It should be emphasized that the pertinent French act that was disputed before the ECtHR relates not just to firemen and saviors, but also to educators and medical personnel. It might be claimed that the ECtHR eluded itself from evaluating the grounds of the matter in this case.[266]

3.5 Arguments for Voluntary Vaccination and Against Mandatory One

The issue of mandatory vaccinations has received a lot of attention. Mandatory vaccination campaigns may have been expanded more, as the coronavirus pandemic has posed various

[264] Case of Abgrall and 671 Others v. France, Application No. 41950/21, Judgment of the European Court of Human Rights, https://hudoc.echr.coe.int/eng#{%22itemid%22:[%22001-226784%22]}.
[265] Gibelli et al., "COVID-19 Compulsory Vaccination: Legal and Bioethical Controversies," 6.
[266] Gutorova, Pashkov, and Kaganovska, "Ensuring The Citizens' Rights and Freedoms In Case of COVID-19 Vaccination In The Public Health System," 2867.

scientific, healthcare, legitimate, moral, and strategy issues.[267] Here, The arguments between collectivist and individualist ideologies, wherein the former values social advantages and an overwhelming feeling of society whereas the latter places a greater emphasis on self-concern and liberty, are sparked by the same laws of mandatory vaccination.[268]

Now, no-jab policies like "no jab, no pay" and "no jab, no play" appear fair, but they have an impact on everybody from grownups to children in the workplace and at schools. Despite this, opponents claim that these activities result in financial penalties and social marginalization, limiting personal benefits and transgressing human rights. They continue to argue that the ideals of impartiality justify those who choose not to get immunized.[269]

3.5.1 COVID-19 Vaccines: Valid Reasons for Hesitancy Around the World

First and foremost, vaccine hesitancy is not identical to anti-vaccination. The former just raises concerns regarding recently produced vaccinations, while the latter refutes the existence of this pandemic altogether.[270] The research confirms that vaccination acts as one of several efficient interventions—it is not the only one. Compulsory immunization is expected to be a factor that

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[267] Colleen M. Flood, Bryan Thomas, and Kumanan Wilson, "Mandatory Vaccination for Health Care Workers: An Analysis of Law and Policy," *Canadian Medical Association Journal* 193, no. 17 (April 25, 2021): E629–33, https://doi.org/10.1503/cmaj.202755-f.

[268] Cheng, "Debate on Mandatory COVID-19 Vaccination," 2.

[269] Raffick A.R. Bowen, "Ethical and Organizational Considerations for Mandatory COVID-19 Vaccination of Health Care Workers: A Clinical Laboratorian's Perspective," *Clinica Chimica Acta* 510 (November 1, 2020): 421–22, https://doi.org/10.1016/j.cca.2020.08.003.

[270] Ramdas Ransing et al., "COVID-19 Anti-Vaccine Movement and Mental Health: Challenges and the Way Forward," *Asian Journal of Psychiatry* 58 (April 1, 2021): 102614, https://doi.org/10.1016/j.ajp.2021.102614.

will increase jab proportions. However, compulsion is improbable to be effective in encouraging vaccine acceptance and reducing hesitation.[271]

People who are averse to vaccination are actually concerned about potential long-term effects brought on by the rapid production of these vaccines,[272] particularly for novel vaccine technologies like mRNA and viral vector,[273] whereas, as we learned above, manufacturing a standard vaccine typically takes 15 years.[274] On the above, these vaccines also skipped the animal research necessary to understand the vaccine's mechanism of action and the virus's capacity for resistance,[275] because, as we already know, they had only received emergency use authorization, not a complete endorsement.[276] They directly utilized a human disease under control with minimal racial and geographic inequalities, which has an impact on the safety, acceptability, and effectiveness of the vaccine.

Long-term vaccine safety and contagion drop may be impacted by the drive for its emergency usage and bulk manufacturing. As a result, vaccination hesitant believe that other interventions may be used to combat this virus more effectively. They advocate for fundamental practices like wearing a public mask, which when worn properly effectively stops the spread of the

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[271] Susan Pennings and Xavier Symons, "Persuasion, Not Coercion or Incentivisation, Is the Best Means of Promoting COVID-19 Vaccination," *Journal of Medical Ethics* 47, no. 10 (January 27, 2021): 709–11, https://doi.org/10.1136/medethics-2020-107076.

[272] Mohammad S Razai et al., "Covid-19 Vaccination Hesitancy," *BMJ*, May 20, 2021, n1138, https://doi.org/10.1136/bmj.n1138

[273] Khadija El Azhari, "Emerging COVID-19 Vaccines: Safety, Efficacy and Universality," EL AZHARI | Moroccan Journal of Public Heath, July 29, 2021, https://revues.imist.ma/index.php/MJPH/article/view/27409.

[274] Tri Wibawa, "COVID-19 Vaccine Research and Development: Ethical Issues," *Tropical Medicine & International Health* 26, no. 1 (October 19, 2020): 14–19, https://doi.org/10.1111/tmi.13503.

[275] Bijayeeta Deb, Hemal Shah, and Suchi Goel, "Current Global Vaccine and Drug Efforts against COVID-19: Pros and Cons of Bypassing Animal Trials," *Journal of Biosciences* 45, no. 1 (June 12, 2020), https://doi.org/10.1007/s12038-020-00053-2.

[276] Aimee R. Eden and Anastasia J. Coutinho, "Mandating Clinician COVID-19 Vaccination May Hinder Population-Level Uptake," *Family Medicine* 53, no. 6 (June 2, 2021): 404–7 https://doi.org/10.22454/fammed.2021.545121

coronavirus;[277] individual hygiene practices[278] like repeated hand washing; utilizing hand sanitizers containing alcohol; keeping a bodily distance of between one and two meters;[279] avoiding crowded areas; and avoiding large gatherings.[280] These tools were obviously effective before the shot of the vaccine, and getting the vaccination is not the sole means to dealing with COVID-19 to protect ourselves and those around us.[281]

3.5.2 Limitations of COVID-19 Vaccines' Efficacy

The data has compelled healthcare professionals to admit that COVID-19 recovery patients or vaccine recipients are susceptible to recurrence[282] due to waning antibody potency[283] and persistent variations.[284] The evidence suggests that it is impossible to completely avoid infection and reinfection by acquiring herd immunity.[285] This unfavorable result shows that vaccination is not a powerful enough approach to stop epidemics on its own. Therefore, even those who are

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[277] Jeremy Howard et al., "An Evidence Review of Face Masks against COVID-19," *Proceedings of the National Academy of Sciences of the United States of America* 118, no. 4 (January 11, 2021), https://doi.org/10.1073/pnas.2014564118.

[278] Faisal Muhammad, "Association between Good Personal Hygiene AND COvId-19 Pandemic: A Preventive Measure," *International Journal of Health and Life Sciences* 6, no. 2 (June 22, 2020), https://doi.org/10.5812/ijhls.104268.

[279] Derek K. Chu et al., "Physical Distancing, Face Masks, and Eye Protection to Prevent Person-to-Person Transmission of SARS-CoV-2 and COVID-19: A Systematic Review and Meta-Analysis," *The Lancet* 395, no 10242 (June 1, 2020): 1973–87, https://doi.org/10.1016/s0140-6736(20)31142-9.

[280] Russell H. Fazio et al., "Social Distancing Decreases an Individual's Likelihood of Contracting COVID-19," *Proceedings of the National Academy of Sciences of the United States of America* 118, no. 8 (February 4, 2021), https://doi.org/10.1073/pnas.2023131118.

[281] Cheng, "Debate on Mandatory COVID-19 Vaccination." 3.

[282] Jingzhou Wang et al., "COVID-19 Reinfection: A Rapid Systematic Review of Case Reports and Case Series," *Journal of Investigative Medicine* 69, no 6 (August 1, 2021): 1253–55, https://doi.org/10.1136/jim-2021-001853.

[283] Amarendra Pegu et al., "Durability of MRNA-1273 Vaccine–Induced Antibodies against SARS-CoV-2 Variants," *Science* 373, no. 6561 (September 17, 2021): 1372–77, https://doi.org/10.1126/science.abj4176.

[284] Christie Aschwanden, "Five Reasons Why COVID Herd Immunity Is Probably Impossible," *Nature* 591, no. 7851 (March 18, 2021): 520–22, https://doi.org/10.1038/d41586-021-00728-2.

[285] Zuzana Strizova et al., "Principles and Challenges in Anti-COVID-19 Vaccine Development," *International Archives of Allergy and Immunology* 182, no. 4 (January 1, 2021): 339–49, https://doi.org/10.1159/000514225.

completely immunized must always practice fundamental preventative measures,[286] such as masking,[287] personal cleanliness,[288] physical distancing,[289] and public distancing.[290]

That is why, the idea of mandatory vaccination is utterly absurd in the absence of necessity and sufficiency conditions. Sanctions and centralized compulsions diminish public trust in the authorities and the medical sector's trustworthiness. Since vaccines are an invasive safeguard, so, compelled actions that violate individual liberties can only be imposed if they meet three requirements:[291] firstly, they must be the most potent, exclusive, and indisputable solution; secondly, they need to be indispensable; and thirdly, they must be proportional. The preceding argument suggests that the present vaccines are unlikely to fulfill these criteria.[292]

3.5.3 Vaccine Passport: Tool for Curbing Fundamental Right to Movement

A vaccine passport is a document that allows those who have received vaccinations to travel without restrictions, even though there are still moral, ethical, and legal issues to be resolved.[293] In addition to showing discrimination towards those who aren't immunized and limiting their

[286] Kamran Kadkhoda, "Herd Immunity to COVID-19," *American Journal of Clinical Pathology* 155, no. 4 (January 5, 2021): 471–72, https://doi.org/10.1093/ajcp/aqaa272

[287] Katie Teague, Dan Avery, and Peter Butler, "Where Are COVID-19 Mask Mandates Still in Effect?," *CNET*, April 13, 2022, https://www.cnet.com/health/cdc-and-who-recommend-fully-vaccinated-should-wear-masks-indoors-heres-the-latest/.

[288] Chon Fu Lio et al., "Effectiveness of Personal Protective Health Behaviour against COVID-19," *BMC Public Health* 21, no. 1 (April 29, 2021). https://doi.org/10.1186/s12889-021-10680-5.

[289] Frank Sandmann et al., "The Potential Health and Economic Value of SARS-CoV-2 Vaccination alongside Physical Distancing in the UK: A Transmission Model-Based Future Scenario Analysis and Economic Evaluation," *Lancet Infectious Diseases* 21, no. 7 (July 1, 2021): 962–74, https://doi.org/10.1016/s1473-3099(21)00079-7.

[290] Michael Day, "Covid-19: Stronger Warnings Are Needed to Curb Socialising after Vaccination, Say Doctors and Behavioural Scientists," *BMJ*, March 19, 2021, n783, https://doi.org/10.1136/bmj.n783.

[291] Bridget Haire et al., "Raising Rates of Childhood Vaccination: The Trade-off between Coercion and Trust," *Journal of Bioethical Inquiry* 15, no. 2 (March 1, 2018): 199–209, https://doi.org/10.1007/s11673-018-9841-1.

[292] Cheng, "Debate on Mandatory COVID-19 Vaccination," 3

[293] Androula Pavli and Helena C. Maltezou, "COVID-19 Vaccine Passport for Safe Resumption of Travel," *Journal of Travel Medicine* 28, no. 4 (May 1, 2021). https://doi.org/10.1093/jtm/taab079

right to movement,[294] It further impedes the mobility of local and international passengers, economic recovery, social contacts, and social interaction.[295] Rather, since voluntary vaccination integrates the interconnected personal and communal goals, the individualistic approach does not oppose the collectivist one in this circumstance, alleviating tensions between the collective good and personal freedom.[296] In fact, The WHO emphasizes that compulsory vaccination is not a rigid necessity; instead, criminal sanctions should not be used to dissuade failure to comply, and central governments and transport companies should refrain from making vaccines mandatory for international travel.[297]

Basically, individuals who decline immunizations owing to unproven, long-lasting side effects are carrying out their civic duty. Conversely, mandatory vaccinations reject concerns and push people to forfeit their safety, akin to social bullying. Compulsory immunizations jeopardize unity and exacerbate tensions between public and individual health. When enacting contentious programs, policymakers should take extreme care.[298]

3.6 Conclusion

In conclusion, the implementation of mandatory vaccination laws has been observed in numerous countries globally, reflecting a diverse range of approaches. The COVID-19 pandemic prompted an unprecedented acceleration in vaccine development, leading to Emergency Use

[294] Julietwalker, "Covid-19 Vaccine Passports and Vaccine Hesitancy: Freedom or Control?," *The BMJ*, April 1, 2021. https://blogs.bmj.com/bmj/2021/03/30/covid-19-vaccine-passports-and-vaccine-hesitancy-freedom-or-control/.
[295] Cheng, "Debate on Mandatory COVID-19 Vaccination," 3.
[296] Jackson G. Lu, Peter J. Jin, and Alexander S. English, "Collectivism Predicts Mask Use during COVID-19," *Proceedings of the National Academy of Sciences of the United States of America* 118, no. 23 (May 20, 2021), https://doi.org/10.1073/pnas.2021793118.
[297] World Health Organization, "COVID-19 and Mandatory Vaccination: Ethical Considerations and Caveats: Policy Brief, 13 April 2021." 2021, https://apps.who.int/iris/handle/10665/340841.
[298] Cheng, "Debate on Mandatory COVID-19 Vaccination," 3.

Authorizations (EUAs) for COVID-19 vaccines, a departure from standard approval protocols. The ethical and legal implications of mandatory COVID-19 vaccination under EUAs have spurred debates surrounding informed consent, human rights, and the balance between public health imperatives and individual freedoms.

International human rights laws, including the Nuremberg Code, ICCPR, Siracusa Principles, and the Declaration of Helsinki, emphasize the importance of informed consent in medical interventions. These instruments establish a framework for respecting individual autonomy and safeguarding against coercive measures. Within the European framework, the ECHR, Oviedo Convention, and the Charter of Fundamental Rights of the European Union outline principles for protecting fundamental rights in the context of medical procedures, including vaccinations.

The European Court of Human Rights (ECtHR) provides a legal framework for assessing compulsory medical procedures, considering factors such as legality, legitimate aim, necessity, and proportionality. While previous ECtHR judgments offer insights, they may not serve as definitive precedents for COVID-19 vaccination mandates. It is essential to distinguish between vaccine hesitancy and outright rejection, recognizing the nuanced perspectives surrounding vaccination.

Mandatory vaccination campaigns have raised concerns about potential long-term adverse effects and their impact on individual rights. The pandemic has highlighted the complexity of achieving herd immunity through vaccination alone. Policymakers must carefully weigh the potential benefits and risks of vaccination mandates, considering alternative approaches that prioritize individual well-being and protection.

Ultimately, a voluntary approach to vaccination emerges as a compassionate and potentially more effective strategy in combating COVID-19. In pursuing public health goals, policymakers should prioritize the safety and autonomy of individuals, striking a delicate balance between collective well-being and individual rights.

Chapter 4

Mandatory COVID-19 Vaccination in Pakistan through the Lens of Islamic Law and Domestic Laws and Policies

4.1 Introduction

Chapter 4 of this thesis delves into the intricate intersection of mandatory COVID-19 vaccination in Pakistan, scrutinized through the dual prisms of Islamic law and domestic legal frameworks. The chapter embarks with an introductory section followed by an exploration of the inception of the vaccination campaign in Pakistan. Thereafter, it meticulously dissects Article 2A Objective Resolution from an Islamic law perspective, offering insights into historical pandemics, jurists' debates, and the general precepts of Islamic law governing public health crises. Furthermore, it scrutinizes select jurisprudential decisions in Islamic law in the aftermath of the COVID-19 pandemic and addresses pertinent concerns surrounding vaccine manufacturing. The chapter proceeds to provide an Islamic bioethics viewpoint on emergency use vaccinations, encompassing clinical testing and scientific experimentation. A comprehensive analysis of Pakistan's response to the pandemic ensues, encompassing public health measures, implementation strategies, and adherence levels. The chapter meticulously unpacks the human rights implications of response and implementation measures, shedding light on executive rule-making powers devoid of legislative oversight, interventions by the Supreme Court in government's discretionary powers, hindrances to freedom of the press, and the impact of lockdowns on the labor class. Additionally, it scrutinizes stern measures employed for enforcement, including the contentious issue of mandatory vaccination. This inquiry navigates through emergency-use approval, analysis of adverse events following immunization, and the

constitutional limits underpinning vaccination campaigns. The chapter culminates in an exploration of the rationale behind vaccine hesitancy, addressing prevailing perceptions of earlier vaccines and specific apprehensions related to COVID-19. Furthermore, it conducts a thorough examination of extant epidemic prevention laws at both federal and provincial levels, identifying shortcomings in the West Pakistan Epidemic Diseases Act, 1958, and offering constructive recommendations. Finally, it critically appraises the Punjab Infectious Diseases (Prevention and Control) Act, 2020, concluding with a comprehensive synthesis of findings.

4.2 Start of Vaccination Campaign in Pakistan

The commencement of vaccination in Pakistan dates back to the 1970s, following the republic's signing of the UN Charter to hold and eradicate numerous infectious diseases. The Expanded Program on Immunization (hereinafter referred to as EPI) began on an experimental basis in 1976 and was expanded throughout the nation in 1978.[299]

The EPI seeks to protect infants between the ages of 0 and 11 months from six infectious illnesses. New vaccinations have been added over time to reduce mortality and morbidity.[300] The EPI monitors parents for vaccines and ensures vaccinations at the national, provincial, municipality, town, and Basic Health Unit levels.[301]

[299] Inayat Ali, "Constructing and Negotiating Measles: The Case of Sindh Province of Pakistan." (Ph.D. Thesis, University of Vienna, Vienna, Austria., 2020)
[300] Ali, "Constructing and Negotiating Measles."
[301] Ali, Sadique, and Ali, "COVID-19 and Vaccination Campaigns as 'Western Plots' in Pakistan: Government Policies, (Geo-)Politics, Local Perceptions, and Beliefs." 4

4.3 Article 2A Objective Resolution: Islamic Law Perspective on Vaccination

Article 2A, the Objective Resolution, in the Pakistani Constitution is for the implementation of the Quran and Sunnah within the ideologies and provisions of every legislation passed before or will be passed after it. After its induction as a substantive part, It becomes the obligation of courts to judge matters before them in line with the fundamentals of Islam as written down in the Holy Quran and Sunnah, and to seek direction from Islamic principles in areas where statutes currently do not exist in Pakistan. Hence, we can deduce from it that no law can be made in repugnance to the Islamic Law (*Shariah*') in Pakistan.

That is why, we will see the topics of pandemics and vaccination. laws and policies for its uptake, historically and currently according to Islamic Law first, and then we will move to the domestic laws of Pakistan, and discuss them in detail.

4.3.1 Pandemics (or Plagues) in Islamic History, and Jurists' Debates

During the early age of Islam, *al-Nawawi* (d. 676 bijrah/1277 A.D.) recorded five major plagues. The first happened during the Prophet's (peace be upon him) lifetime in the municipality of *al-Mada'in* in Iraq in the years 6/627-628 and is recognized as the *Shirawayh* epidemic. The next one was the infamous epidemic of *Amwas*, which occurred in the year 18/639 under the reign of Umar (R.A., r. 13-23/634-44) and killed around 25000 people. The third occurred in the year 69/688 during the reign of Abdullah ibn al-Zubayr (R.A., r. 64-73/683-692) and is referred to as the sweeping plague (*al-ta'un al-jarif*). It is estimated that over 70,000 people perished per day for three days amid this plague epidemic. The fourth, described as the plague of the girls *(al-*

fatayt) as the majority of the casualties were young misses, happened in Syria and Iraq in the year 87/706. And lastly, around the year 131/749, the fifth plague pandemic struck.[302]

Islam does not prohibit the use of contemporary healthcare amenities; instead, it requires the practice of modern health expertise, as well as the usage of various gears, methods, and methods of treatment developed by present-day biomedical advances, on the condition that such a remedy does not go against Islamic injunctions. However, there is a primary ethical conflict in the topic of medical therapy related to whether it would be at odds with faith in Allah Almighty as the Ultimate Healer. This conflict, however, was frequently handled by referring to various Prophetic accounts that advocate medical therapy as a means of curing ailments. These testimonies demonstrate that therapy may be used to bring about the reasons that God established in the cosmos. Regarding contagion, one should keep in mind that medical therapy should not be viewed as an independent cause and hence should be followed in conjunction with approved devotional activities involving prayers and supplications to Allah Almighty.[303]

Besides, contagion was argued not just among religious academics in light of conflicting scripture quotations, but also between physicians themselves, according to historiographical records of epidemics and pandemics. Disagreements among medical specialists over the presence of contagion spurred a long dispute about how diseases were spread, which lasted until the modern era.[304] In his latest research on the utilization of contemporary therapeutic practices in nineteenth-century Egypt, for example, Khaled Fahmy documents that medicinal experts in Egypt, like their colleagues in Europe, were split into two distinct camps: those who believed in

[302] Shabana, "From the Plague to the Coronavirus: Islamic Ethics and Responses to the COVID-19 Pandemic," 6-7
[303] Shabana, "From the Plague to the Coronavirus," 11.
[304] Shabana, "Plague to the Coronavirus," 12.

the effeotiveness of contagion and those who believed diseases were spread by atmospheric variables like poor air quality or miasma.[305]

4.3.2 General Guidelines of Islamic Law during Pandemics for Public and/or for Individuals in Case of any Disease

In situations of pandemics or specific natural tests, Islam has provided a set of norms and precepts to observe. These essential guidelines may be found in the Holy Quran, Sunnah, and Prophetic lives. Fazli Dayan, in his research article 'Post COVID-19 Rulings of Islamic Law on Pandemics…' presents the relevant guidelines[306] which are summarised below, one by one:

1. In the event of a pandemic, the first and primary counsel, based on Islamic teachings, is to turn to Allah Almighty. This form of wisdom is expounded upon in Surah al-'Arāf within this context: "We tested them with good and bad times so that they might return."[307] Furthermore, mankind must focus on their misdeeds because whatever ailment befalls them is the result of their own actions. Allah says: "Whatever hardship befalls you is because of what your own hands have committed, while He overlooks many (of your faults)."[308]
2. Humanity (Muslims) are obliged to have confidence in godly fate because they have full conviction and trust in the Singleness of God (Allah Almighty). In terms of the section on

[305] Khaled Fahmy, *In Quest of Justice: Islamic Law and Forensic Medicine in Modern Egypt*, 2018, 38, https://muse.jhu.edu/chapter/2226235/pdf.
[306] None Fazli Dayan, "Post COVID-19 Rulings of Islamic Law on Pandemics: An Analytical Study with Reference to Necessity and Juristic Creativity in Management of Consequential Issues Related to nCoV-19 Virus," 1498–1509.
[307] Al Quran, chapter no. 7, verse no. 168.
[308] Al Quran, chapter no. 42, verse no. 30.

medicine in ḥadīth literature: "Allah has not sent down any disease except that He has also sent down the cure for it."[309]

3. Patience is the ultimate instrument and strategy in unusual circumstances to obtain Allah's blessings. Allah Almighty says: "Surely We will test you with a bit of fear and hunger, and loss in wealth and lives and fruits, and give good tidings to the patient; who, when a suffering visits them, says: "We certainly belong to Allah, and to Him we are bound to return."[310] Moreover, Usāma bin Zaid (R.A.) is reported to have conveyed the saying of Allah's Messenger (ﷺ): "this calamity or illness was a punishment with which were punished some of the nations before you. Then it was left upon the earth. It goes away once and comes back again. He who heard of its presence in a land should not go towards it, and he who happened to be in a land where it had broken out should not fly from it."[311]
4. To be cured of any sickness, the patient must have fortitude, bravery, and mental power. Motivating patients for such features is also necessary to easily combat the disease. Abu Sa'īd Al-Khudrī (R.A.) relayed that the Prophet of Allah (ﷺ) declared: "when one of you visits the ill, then reassure him regarding his lifespan, thus, indeed that will not repel anything, but it will comfort his soul."[312]
5. Believers must put their faith and confidence in Allah Almighty. The Prophet of Allah (ﷺ) proclaimed that afflictions such as plagues and similar ailments are a form of mercy bestowed upon the Muslim community. He stated: "it is (plague) a punishment which Allah used to send on whom He wished, but Allah made it a blessing for the

[309] At-Tirmidhī, *Jāmi'at-Tirmidhī*, vol. 2, ḥadīth no. 21.
[310] Al Quran, chapter no. 02, verse no. 155-56.
[311] Al-Muslim, book no. 39, chapter no. 32, ḥadīth no. 129.
[312] At-Tirmidhī, book no. 28, chapter no. 35, ḥadīth no. 52.

believers."[313] In essence, confidence and trust in Him is the fundamental Islamic doctrine that maintains believers firm-footed, firm-hearted, and firm-faithful amid difficult circumstances.

6. Itinerant travel to epidemic/pandemic zones is likewise banned according to Islamic principles. The Prophet of Islam (ﷺ) strongly advised avoiding areas affected by pandemics. He stated: "if you hear about it (an outbreak of plague) in a land, do not go to it; but if plague breaks out in a country where you are staying, do not run away from it."[314]
7. As an essential preventative measure for the health and safety of healthy people, adequate distance must be kept between infected patients and regions. Abu Hurairah (R.A.) reported the saying of Allah's Messenger (ﷺ): "that.....one should run away from the leper as one runs away from a lion."[315]
8. The feeling of disappointment among patients spreads any illness quicker in a live organism than the pandemic itself. When confronted with illnesses, averting suffering becomes an unavoidable technique. The Holy Quran states: "Say (on My behalf), "O servants of Mine who have acted recklessly against their own selves, do not despair of Allah's mercy. Surely, Allah will forgive all sins. Surely, He is the One who is the Most-Forgiving, the Very-Merciful. Turn passionately towards your Lord, and submit to Him before the punishment comes to you, after which you will not be helped."[316]
9. Getting medical care is one of one's responsibilities. The Holy Quran and Sunnah explicitly illustrate the use of health care. Prophetic traditions distinctly advocate the

[313] Al-Bukhārī, book no. 76, 82 & 60, chapter no. 31, 15 & 54, ḥadīth no. 49, 25 & 141.
[314] Al-Bukhārī, book no. 76, chapter no. 30, ḥadīth no. 44 & 45; Al-Muslim, book no. 39, chapter no. 32, ḥadīth no. 139
[315] Al-Bukhārī, book no. 76, chapter no. 19, ḥadīth no. 27.
[316] Al Quran, chapter no. 39, verse no. 53-54.

application of treatment for both humans and animals. As reported by Abu Hurairah (R.A.), the Prophet (ﷺ) said: "the cattle suffering from a disease should not be mixed up with healthy cattle", or said: "do not put a patient with a healthy person as a precaution."[317]

10. According to Islamic law, both generosity and supplication (dua) are simple techniques for overcoming adversity. The Prophet of Islam likewise advised his ummah in the same manner. Ali (R.A) conveyed the saying of Allah's Messenger (ﷺ) as follows: "Give the *sadaqah* (charity) without delay, for it stands in the way of calamity."[318] While in the realm of supplications, 'Ubadah bin As-Sāmit (R.A) recounts from the ḥadīth literature: "the Messenger of Allah (ﷺ) said: "whenever a Muslim supplicates Allah, He accepts his supplication or averts any similar kind of trouble from him..."[319]
11. Islam has always emphasized hygiene and cleansing. It not only emphasizes the need to keep your body clean but also stresses making your surroundings clean as well. The Holy Quran states: "Surely Allah loves those who are most repenting, and loves those who keep themselves pure."[320]
12. Humans are required by Islam to consume halal, clean, and healthful food and to exercise balance in their intake habits. The Quran encapsulates the principles of both ancient and contemporary medicine succinctly in three words, which are: "Eat and drink and do not be extravagant."[321] Likewise, Islam emphasizes not only avoiding eating/drinking haram (forbidden) and unhealthy food since it renders the human physique ill but also not overeating pure and over the limit. Miqdām bin Ma'dīkarib recounted that he heard the

[317] Al-Bukhārī, book no. 76, chapter no. 54, ḥadīth no. 87.
[318] *Mishkāt al-Masābīh* 1887, book no. 6, chapter no. 6(c), ḥadīth no. 114
[319] *Riyād al-Sālihīn* 1501, book no. 16, chapter no. 252, ḥadīth no. 1501.
[320] Al Quran, chapter no. 02, verse no. 222.
[321] Al Quran, chapter no. 07, verse no. 31.

Messenger of Allah (ﷺ) saying: "the human does not fill any container that is worse than his stomach, it is sufficient for the son of Adam to eat what will support his back, if this is not possible, then a third for food, a third for drink, and third for his breath."[322]

4.3.3 Post-COVID-19 Pandemic: Select Jurisprudential Rulings of Islamic Law

This part analyzed some of the post-COVID-19 Islamic law interpretations on pandemics, arguing that Islam provides a comprehensive set of principled codes for preventing and protecting against contagions and lethal illnesses.

1. Current medical research demonstrates that coronavirus spreads quickly through the mouth, nose, and ear. As a result, patients should exercise caution when sneezing and coughing. In this regard, fourteen hundred years earlier, the Prophet of Islam educated his ummah on the proper manners of coughing and sneezing. Abu Hurairah (R.A.) recounted: "When the Messenger of Allah (peace be upon him) sneezed, he placed his hand or a garment (cloth) on his mouth and lessened (lowered) the noise."[323]
2. A Prophetic *hadith* is a point of contention for conventional Muslims when it comes to the closing of mosques: "Verily, if Allah sends disease from heaven to the inhabitants of the earth, Allah will keep the disease away from those who enliven the mosque."[324] Yet, many Islamic scholars think that social distance should be maintained during all prayers in mosques. When the safety of the general public was in danger, they believed in other measures. As a result, they believe that reducing the attendance of worshipers during congregational Friday prayers is necessary to curb the spread of the COVID-19 virus.

[322] At-Tirmidhī, book no. 36, chapter no. 47, hadīth no. 77; Ibn Mājah, book no. 29, chapter no. 50, hadīth no. 99.
[323] Ibn Mājah, book no. 31, chapter no. 44, hadīth no. 108; Ahmad bin Hambal, *Musnad Ahmad*.
[324] Ibn 'Asākir ('Alī bin al-Hasan bin Hibat Allāh bin 'Abd Allāh, Hūssain, known as Ibn 'Asākir al-Dimashqī al-Shāfi'ī al-Ash'arī, died: 571AH/1176), vol 17, p. 11.

Conversely, a minority of Islamic intellectuals assert that in situations of severe fear and illness, the obligatory Friday prayer (*Jumm'ah*) could potentially be substituted with the noon prayer (*dhuhr*) even if performed at home.[325]

3. Another debate that appeared during the COVID-19 pandemic was whether Muslims should fast throughout *Ramadan*. In this context, Al-Azhar's Islamic Legal Research Committee convened in Cairo on April 7, 2020, with numerous top medical authorities and diverse medical professionals, including WHO medical specialists. The meeting's main objective was to gather expert views on whether fasting reduces human immunity. After lengthy discussions and arguments, the committee of several specialists in the area concluded that no medical study has clearly shown a relationship between fasting and developing the COVID-19 virus to date. As a result, the committee proposed that Muslims be required to fast throughout the sacred month of *Ramadan*.[326]

   Likewise, on April 16, 2020, the Organization of Islamic Cooperation's International Islamic Fiqh Academy (hereinafter referred to as IIFA) released a legal judgment based on its committee's recommendations and existing information that fasting has no effect on people's health and immune systems in general. Furthermore, the IIFA concluded that Muslims are not allowed to skip fasting solely due to illness. Therefore, any capable, non-traveling, non-ailing, healthy, and *mukallaf* (accountable) Muslim was obligated to observe fasting. However, COVID-19-infected patients or those believed to be infected

[325] Dayan, "POST COVID-19 RULINGS OF ISLAMIC LAW ON PANDEMICS." 1514.

[326] Official Azhar Facebook Post. April 07. 2020. https://www.facebook.com/OfficialAzharEg/posts/pfbid0gVCnTZHk8WXp5515dCqA3HgjEHYHwEPTVaLNjx[illegible]

with such a virus are in the care of Muslim-qualified and credible clinicians who will assess whether those infected or believed should fast or not.[327]

4.3.4 Islamic Law Concerns about Manufacturing of Vaccines

From an ethical standpoint, the subject of vaccination frequently involves several normative queries about distribution, availability, and freedom - whether people can refuse vaccinations. Notwithstanding the concurrent presence of opposing and lenient viewpoints within Muslim, Protestant, Hindu, Buddhist, and Jewish groups,[328] the religious exemption is permitted when devotees demonstrate hesitation in that vaccination differs from their belief fundamentals.[329] There have been questions made about whether religious freedom is appropriate,[330] and if the right to maintain one's physical integrity should be upheld to ensure individual freedom of choice.[331] This makes mandatory vaccination unfair to those who do not receive this exemption.

One of the key ethical considerations from an Islamic perspective concerns a specific vaccine's ingredients and whether they contain any items that Islam prohibits.[332] In this regard, ingredients used for vaccine manufacturing can consist of animal-derived origins, such as swine (pig) or

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[327] Organization of Islamic Cooperation, "2020 Second Medical Fiqh Symposium Recommendations The Novel Coronavirus (Covid-19): Medical Treatments and Shariah Rulings," Organization of Islamic Cooperation, n.d., https://www.oic-oci.org/topic/?t_id=23480&t_ref=13985&lan=en.

[328] Gordana Pelčić et al., "Religious Exception for Vaccination or Religious Excuses for Avoiding Vaccination," *Croatian Medical Journal* 57, no. 5 (October 1, 2016): 516–21, https://doi.org/10.3325/cmj.2016.57.516.

[329] Matt Hadro, "Bioethicist: There Must Be Conscience Exemptions to Vaccine Mandates," *Catholic News Agency*, July 24, 2023, https://www.catholicnewsagency.com/news/248581/bioethicist-there-must-be-conscience-exemptions-to-vaccine-mandates.

[330] Roland Pierik, "Mandatory Vaccination: An Unqualified Defence," *Journal of Applied Philosophy* 35, no. 2 (May 18, 2016): 381–98, https://doi.org/10.1111/japp.12215.

[331] Gyan Moorthy, "Compulsory COVID-19 Vaccination?," *DOAJ (DOAJ: Directory of Open Access Journals)*, December 1, 2020, https://doi.org/10.7916/vtb.v9i.7301.

[332] Aasim I. Padela, "ISLAMIC VERDICTS IN HEALTH POLICY DISCOURSE: PORCINE-BASED VACCINES AS A CASE STUDY," *Zygon* 48, no. 3 (August 23, 2013): 655–70, https://doi.org/10.1111/zygo.12036.

derivatives, from deceased animals, or blood, that Muslims are not permitted to ingest.[333] Swine are among the animals specifically prohibited by Islamic law. The use of their components and derivatives in medications renders them unfit for eating by Muslims.[334] However, pig byproducts such as porcine trypsin and porcine gelatine are routinely employed in vaccine manufacturing. Porcine trypsin is a chemical derived from the pig's pancreas that is utilized during the proliferation phase of the development of some vaccines, for instance, the process involves eradicating or segregating cells from the culture tanks or vessels prior to harvesting, as seen in the case of Japanese encephalitis and poliovirus immunizations. It can also be utilized for vaccine stimulation during the last culture stage of viral generation, for instance with influenza and rotavirus.[335]

Likewise, the MMR vaccination, together with the rubella vaccine, was created using cells from aborted fetal tissue. In addition, the MMR vaccination comprises porcine gelatin as a stabilizing agent, which ensures proper storage. Because every religion has a broad variety of practice preferences, certain adherents of faiths like Islam, Judaism, and Hinduism strongly object to receiving a piggish product with the vaccination.[336]

4.3.4.1 Few Islamic Rulings (*Fatawas*) for and against COVID-19 Vaccines

Now, how to strike a balance between the pressing requirement for the COVID-19 vaccine, and the period and assets that it would demand had been brought up by the global pressure, and the

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[333] Johari Ab. Latiff, Zalina Zakaria, and Saadan Man, "The Challenges in Implementation of Halal Vaccine Certification in Malaysia," *Journal of Food and Pharmaceutical Sciences*, March 18, 2021, 366–71, https://doi.org/10.22146/jfps.1147.

[334] Yvonne S. K. Khoo et al., "Unique Product Quality Considerations in Vaccine Development, Registration and New Program Implementation in Malaysia," *Human Vaccines & Immunotherapeutics* 16, no. 3 (October 25, 2019): 530–38, https://doi.org/10.1080/21645515.2019.1667206.

[335] Mardian et al., "Sharia (Islamic Law) Perspectives of COVID-19 Vaccines," 2

[336] Azhar R. Hussain et al., "The Anti-Vaccination Movement: A Regression in Modern Medicine," *Cureus*, July 3, 2018, https://doi.org/10.7759/cureus.2919

hurry to develop it made added ethical queries. In this regard, the IIFA statement emphasized the need for experiments to follow recognized ethical and scientific principles.[337]

Firstly, general rules regarding "*Halal* pharmaceuticals" must only have components that are allowed by Islamic law. They must particularly: (1) not include *najs* (impurities); (2) not contain components or end products of animals designated non-Halal by Islamic law or not sacrificed in accordance with it; and (3) not be hazardous, addictive, or represent a health risk to consumers when taken as prescribed.[338]

In Indonesia, the Indonesian Ulama Council (hereinafter abbreviated and referred to as MUI), which is authorized to administer the Halal certification process, may issue a *fatwa*, or ruling under Islamic law, stating that certain vaccine is Halal or not.[339] The MUI issued a Halal certificate to Sinovac, the first COVID-19 vaccine allowed in the nation, on January 11, 2021. According to the certification, no additional animal enzymes or porcine trypsin were used in the production of this vaccine.[340] On March 19, 2021, the MUI later released another *fatwa* claiming that the AstraZeneca COVID-19 vaccine is "Haram-permittable." However, due to the pressing need to solve COVID-19, MUI asserted that although it practices porcine trypsin in the initial phases of manufacture, it is legal to use (or mubah) for the time being.[341] Other COVID-19 vaccines, like those made by Sinopharm and Pfizer-BioNTech, are also recognized as Haram-

[337] Shabana, "From the Plague to the Coronavirus: Islamic Ethics and Responses to the COVID-19 Pandemic," 27-28.
[338] Khoo et al., "Unique Product Quality Considerations in Vaccine Development, Registration and New Program Implementation in Malaysia."
[339] Harapan Harapan et al., "Religion and Measles Vaccination in Indonesia, 1991–2017," *American Journal of Preventive Medicine* 60, no. 1 (January 1, 2021): S44–52, https://doi.org/10.1016/j.amepre.2020.07.029.
[340] Majelis Ulama Indonesia (MUI), "Fatwa MUI No 02 Tahun 2021 tentang Produk Vaksin COVID-19 dari Sinovac Life Sciences Co. Ltd, China, dan PT Bio Farma," https://mui.or.id/produk/fatwa/29485/fatwa-mui-no-02-tahun-2021-tentang-produk-vaksin-covid-19-dari-sinovac-life-sciences-co-ltd-china-dan-pt-biofarma/.
[341] Majelis Ulama Indonesia (MUI), "Fatwa MUI: Hukum Penggunaan Vaksin COVID-19 Produk AstraZeneca," accessed June 5, 2023, https://mui.or.id/produk/fatwa/29883/fatwa-mui-hukum-penggunaan-vaksin-covid-19-produk-astrazeneca/.

permissible and should only be administered in dire circumstances according to the MUI ruling.[342]

Since the *fatwa* clearly authorizes the usage of non-*Halal* vaccines in an emergency, religious issues should be taken into account during mass vaccination, with the involvement of religious leaders as a first preference.[343]

4.3.4.2 Arguments about these Islamic Rulings (*fatwas*)

Clerics in various Muslim states have permitted vaccines that comprise adulterated (*haram*) materials like porcine gelatine in their production procedure, despite apparent conflicts with Islamic law. They concluded that the hydrolysis of the gelatine in vaccines, which cleanses it by the Islamic legal principle of *istihalah* (perfect transformation), makes the gelatine in vaccines *Halal*.[344] *Istihalah* is the term for changing a product's physicochemical makeup from a non-approved *Haram* form to a permissible *Halal* one.[345] Once the impure ingredient is completely changed into a fresh chemical that is separate from its origin, vaccines are considered acceptable.[346]

Along with *istihalah*, *istihlak* (mixing) is another method for transforming an impure material into a clean one.[347] The term *istihlak* describes the process of combining two substances until

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[342] Mardian et al., "Sharia (Islamic Law) Perspectives of COVID-19 Vaccines," 4.
[343] Harapan et al., "Religion and Measles Vaccination in Indonesia, 1991–2017."
[344] World Health Organization Regional Office for the Eastern Mediterranean (WHO EM). Statement Arising From a Seminar Held by the Islamic Organization for Medical Sciences on 'The Judicially Prohibited and Impure Substances in Foodstuff and Drugs' (2001). Available at: www.immunize.org/concerns/porcine.pdf
[345] Muhammad Jahangir et al., "Halal Status of Ingredients after Physicochemical Alteration (Istihalah)," *Trends in Food Science and Technology* 47 (January 1, 2016): 78–81, https://doi.org/10.1016/j.tifs.2015.10.011.
[346] Mardian et al., "Sharia (Islamic Law) Perspectives of COVID-19 Vaccines," 4.
[347] Alyasa' Abubakar and Ali Abubakar, "Hukum Vaksin MR: Teori Istihalah Dan Istihlak versus Fatwa MUI," *Media Syari'ah: Wahana Kajian Hukum Islam Dan Pranata Sosial* 23, no. 1 (June 30, 2021): 1, https://doi.org/10.22373/jms.v23i1.8485.

they dissolve, which results in the loss of qualities even while the original component is still there. Thus, the unclean qualities of a dirty product can be defeated by mixing it with a more dominantly clean product.[348]

Not all Ulamas and authority councils that decide if something is Halal embrace the ideas of *istihalah* and *istihlak*. For instance, Al-Qaradawi explains the application of *istihala* and lists three conditions that must be met beforehand before employing impure materials in medical procedures:

1. The medication must be necessary for the patient's survival.
2. A reputable and qualified Muslim physician must endorse the product.
3. No source from an authorized item may be used as an alternate medication.

That is why, the use of Rotateq (a rotavirus vaccine) and BioThrax (an anthrax vaccine), based on this notion of *darura* (necessity), was prohibited by the National Council of Islamic Religious Affairs' 81st Conference of the Malaysian Fatwa Committee in March 2006.[349]

Now, depending on how Islamic law is interpreted, different *fatwa* institutes accept or reject a candidate.[350] All councils, however, concurred that an efficient and secure COVID-19 vaccine is a fundamental requirement or a matter of urgency for the period of the coronavirus pandemic.

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[348] Mardian et al., "Sharia (Islamic Law) Perspectives of COVID-19 Vaccines," 4.

[349] Engku Nuraishah Huda E. Zainudin et al., "Vaccination: Influencing Factors and View from an Islamic Perspective," *International Medical Journal Malaysia* 17, no. 2 (October 18, 2018). https://doi.org/10.31436/imjm.v17i2.997

[350] Rosnan AS et al., "FATWA DEBATE ON PORCINE DERIVATIVES IN VACCINE FROM THE CONCEPT OF PHYSICAL AND CHEMICAL TRANSFORMATION (ISTIHALAH) IN ISLAMIC JURISPRUDENCE AND SCIENCE," *Journal of Critical Reviews* 7, no. 07 (April 1, 2020): 1037–45. https://doi.org/10.31838/jcr.07.07.189.

Consuming a haram product in an emergency is justified by recognition as a *darura*.[351] The Holy Quran states: "He has only prohibited for you carrion, blood, the flesh of swine and that upon which a name of someone other than Allah' has been invoked. Then, whoever is compelled by necessity, neither seeking pleasure nor transgressing, there is no sin on him. Verily, Allah is Most-Forgiving, Very-Merciful."[352]

So, we can say that in its initial phase, the COVID-19 vaccines were acknowledged as being essential or necessary for protecting lives and preserving society.[353]

4.3.5 Islamic Bioethics Perspective on Emergency Used Vaccinations (Clinical Testing/Scientific Experimentation)

However, as we discussed above in the preceding chapter (Ch. 3) mandating the use of COVID-19 vaccinations under emergency measures is both legally and ethically dubious. Because of the fact that these COVID-19 vaccines happened to be in clinical testing and the experimental stages in earlier phases of roll-out.

That is why, many contemporary medical treatments have been met with reservations by Muslim jurists. Muslim jurists have determined against any medical procedure with uncertain efficacy due to the potential of inflicting additional harm. Simultaneously, in certain instances involving incurable illnesses where potential treatment hinges on extensive experimental research, which could expose patients to considerable uncertainty or discomfort, researchers have emphasized the importance of preventing potential harm and upholding patients' rights to decline such risks.

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[351] M. Asrorun Niam Sholeh and Muhammad Helmi, "The COVID-19 Vaccination: Realization on Halal Vaccines for Benefits," *Samarah : Jurnal Hukum Keluarga Dan Hukum Islam* 5, no. 1 (June 30, 2021): 174, https://doi.org/10.22373/sjhk.v5i1.9769.

[352] Al Quran, chapter 2, verse 173.

[353] Mardian et al., "Sharia (Islamic Law) Perspectives of COVID-19 Vaccines," 4.

guided by the principle that preventing harm takes precedence over advancing benefit. This idea is especially relevant when it comes to employing humans as participants in medical experiments to investigate the efficacy of an untested treatment.[354]

Besides, misrepresentations concerning free consent have frequently resulted in violations of patients' and other vulnerable groups' human rights since they did not receive full disclosure of the dangers and advantages of the investigational procedures to which they were committed. Indeed, the entire concept of informed and voluntary consent must be critically reevaluated from the perspective of moral and ethical standards that extend beyond the scope of clinical research. When lives and the worth of people are at risk, there is a definite need for counsel from educated religious and ethical professionals who can give moral analysis rather than just legal judgments (*fatawa*).[355]

The scientific worry that any medicine or healthcare process ought not to be publicly recommended for people without comprehensive tests and research to confirm its efficacy is at the heart of ethical considerations surrounding human experimentation. Avicenna (*Ibn Si'na*, d. 1037), a Muslim philosopher and physician, predicted this feature of experimentation when he said, "The experimentation must be done with [the] human body, for testing a drug on a lion or a horse might not prove anything about its effect on man."[356]

Nonetheless, It is critical to remember that every human experiment has an ethical obligation including the right to be informed, commented on, and sought guidance before agreeing to any scientific technique. The concept of a public good is frequently stressed in Muslim biomedical

[354] David J. Rothman, "Research, Human: Historical Aspects," in Encyclopedia of Bioethics, rev. ed. (New York: Simon & Schuster Macmillan, 1995), 4:2248.
[355] Sachedina, Islamic Biomedical Ethics, 196-97.
[356] Rothman, "Research, Human," 4:2248

research to provide a rationale for medical experimentation aimed at benefiting public health. The societal aspect of such testing, on the other hand, frequently compromises the well-being of the individual participant in the interest of the general good. In the Muslim world, poor health standards have a substantial influence on these evaluations, and there is a societal duty within the Islamic legal-ethical paradigm that qualifies persons to seek cures. The trained medical expert's opinion is critical in Muslim cultural contexts since they are required to take essential actions for treating, reducing pain, and saving lives. This commitment lays a high ethical responsibility on the healthcare practitioner, who is intellectually and traditionally endowed with complete authority over all patient medical decisions. The majority of Muslim jurists support authoritarian medical processes, which have ramifications for experimentation, traditional patient care, and subject selection. In the Muslim world, democratic government has confined health care decisions to a small elite, reducing citizens' capacity to voice their particular desires.[357]

4.4 Pakistan's Response to COVID-19 Pandemic

4.4.1 Public Health Measures

There are two phases to Pakistan's reaction to the pandemic regarding public health initiatives. The opening period, which runs from March 2020 to August 2020, comprises further extreme and comprehensive policies that were gradually implemented and changed with effect over the full area of each province. With a more targeted approach, the second phase, which starts in August 2020, will see variations in the kind, length, and severity of limitations in various regions of each province as a result of the tracking down of COVID-19 "hotspots."[358]

[357] Sachedina, *Islamic Biomedical Ethics*, 197-99.
[358] Isaam et al., "Pakistan: Legal Response to Covid-19," 17

4.4.1.1 Citizens' Personal Mobility Limitations (stay-at-home orders, curfews, etc.)

The sets of limitations, enacted in one way or another by all provincial governments, were collectively known as a "lockdown," which, regardless of the Prime Minister's initial opposition, finally received backing from the Federal Government. As a result, on March 26, 2020, the Federal Government announced broad recommendations urging people not to attend large and small events in public places, stay home if there is no pressing need to leave, and use "digital media sources" (computers and other forms of digital, informational, and communications expertise) to conduct business from home.[359]

4.4.1.2 Restrictions on Traveling Internationally and Domestically

When the NSC agreed to entirely close the western border of Pakistan with Iran and Afghanistan on March 13, 2020, the first limitations on foreign travel were put into effect.[360] A significant stretch of the eastern frontier with India was also shut on March 19.[361] These restrictions were initially planned to last for two weeks, but they ended up continuing for almost the whole month of April 2020.[362] The Pakistan Civil Aviation Authority (hereinafter referred to as CAA) completely suspended all foreign passenger, charter, and cargo flights on March 21 as per orders by the Federal Government.[363] Up to May 30, 2020, this prohibition was frequently

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[359] National Command and Operation Centre, "Guidelines for Social Distancing" (June 1, 2020), https://ncoc.gov.pk/sop/3.%20260320%20Guidelines%20for%20Soial%20Distancing%200601.pdf

[360] Prime Minister's Office, "Press Release: PM chaired the National Security Committee meeting, especially called to review the current status of and Pakistan's response to the Coronavirus," https://pmo.gov.pk/news_details.php?news_id=1066

[361] "COVID-19: Interior Ministry Seals Wagha Border," The Express Tribune, March 19, 2020, https://tribune.com.pk/story/2179433/1-covid-19-interior-ministry-seals-wagha-border.

[362] Newsdesk, "Borders Closure Extended for Two Weeks, Says Interior Ministry," *The News International*, April 14, 2020, https://www.thenews.com.pk/print/643977-borders-closure-extended-for-two-weeks-says-interior-ministry.

[363] Pakistan Civil Aviation Authority (CAA), "Suspension of international inbound flight operations to Pakistan," March 21, 2020, https://caapakistan.com.pk/upload/News/pdf/21032020-1.pdf.

extended.[364] The announcement of the start of foreign flight services in and out from all international airports in Pakistan didn't come until June 19, 2020.[365]

According to the NCOC's recommendations, it was ruled on July 24, 2021, that no Pakistani traveler above the age of 18 would be permitted to fly domestically without a certificate proving that they have received the COVID-19 immunization.[366] Exemptions were given to anyone who was only partly immunized, was a foreigner, or had been clinically recommended against vaccination due to risk elements and had an effective physician's certificate for that use. This limitation went into force on 1 August 2021.[367]

4.4.1.3 Restrictions on Public and Private Activities and Gatherings

It would always be debatable whether or not to restrict public and private meetings for two main reasons. First of all, Pakistan organizes several religious gatherings all year round. Second, political rallies and other comparable displays of mass support are the backbone of political activity in the nation.[368]

The Lahore High Court rejected clearance for one such event when over 100,000 people were anticipated to attend because it would endanger the city's public health. Since the permit had been requested but had yet to be approved by the appropriate agency, the court decided not to become involved. However, it was determined that the right to peaceful assembly was ensured by Article 16 of the Constitution, bound by rational limitations placed in the concern of

[364] CAA, "Extension in suspension of international flights," April 25, 2020, https://caapakistan.com.pk/upload/News/pdf/25042020-1.pdf.
[365] CAA, "News Alert," June 19, 2020, https://caapakistan.com.pk/upload/News/pdf/19062020-1.pdf.
[366] CAA, "Mandatory Requirement of Covid-19 Vaccination for Domestic Air Travel in Pakistan," July 24, 2021, https://www.piac.com.pk/images/Advisories/PCAA-Dom.pdf
[367] Isaam et al., "Pakistan: Legal Response to Covid-19," 19.
[368] Isaam et al., "Pakistan," 20-21.

maintaining the safety of the public, along with the Punjab Infectious Diseases (Prevention and Control) Act, 2020 contained likewise limitations.[369]

4.4.1.4 Closure of Sites and Spaces (such as Schools, Businesses, Services, Gardens, Churches, and Sports Venues)

More discussion and disagreement have resulted from the obligatory closure of sites and offices than from other forms of public health actions. The Federal Government's NSC decided on 13 March 2020 to close every educational institution for three weeks, as well as wedding venues and movie theaters for two weeks. These decisions led to the earliest shutdowns.[370] Following the implementation of these decisions, the provinces assumed control by extending the closing timeframe and mandating the shutdown of more businesses (such as gardens, restaurants, etc.).[371]

4.4.1.5 Physical Distancing

At the national and provincial levels, a focus on physical Distancing has persisted throughout the pandemic. In the outbreak's early phases, the Federal Government released social distancing rules and made people aware of the need to keep a 6-foot space between people.[372]

4.4.1.6 Use of Facemasks and Wearing Personal Protective Equipment (PPE)

Face coverings were then mandated in some situations thanks to the Federal Government. Mandatory guidelines were established regarding this matter, stipulating that facemasks must be

[369] Lahore High Court, "Haris Bin Hassan Jang v Federation of Pakistan etc (Writ Petition No.64211 of 2020) 2020 LHC 3100," December 09, 2020. https://sys.lhc.gov.pk/appjudgments/2020LHC3100.pdf.
[370] Prime Minister's Office, "Press Release: "PM chaired the National Security Committee meeting, especially called to review the current status of and Pakistan's response to the Coronavirus."
[371] Isaam et al., "Pakistan: Legal Response to Covid-19," 22.
[372] Government of Pakistan (GOP). National Command and Operation Centre (NCOC). "Guidelines for Social Distancing (March 26, 2020)," https://ncoc.gov.pk/sop/3.%2026032020%20Guidelines%20for%20Soial%20Distancing%200601.pdf.

worn by individuals at all times whenever they venture outside their residences, including crowded public places, mosques, shopping malls, bazaars, and public transportation like flights, roads, and rails.[373]

4.4.1.7 Isolation of Infected People and Quarantine of Suspected Individuals with Virus

Before the provinces came up with a unified plan for isolation and quarantine, it took quite a while. The initial strategy was hampered by some ambiguity because it was unclear whether people who were showing signs of coronavirus or the ones who had confirmed positive had to be separated themselves at such quarantine facilities or whether they could isolate personally at their residence. Administrations at the provincial scale had established quarantine centers.[374]

The plan, after some early uncertainty, was to promote quarantine and isolation at home. The Federal Government had also released comprehensive instructions in this regard. It encompassed both those who may be exhibiting signs for the first time and individuals who had been in straight interaction with confirmed infection of Covid-19.[375]

4.4.1.8 Vaccination Drive

The laws that apply in the provinces and at the federal level did not mandate vaccinations at the outset. Frontline medical staff was the first to receive vaccinations, and then three groups of elderly individuals aged (i) more than 65, (ii) older than 60, and (iii) above 50. In addition to

[373] GOP, NCOC. "Guidelines for Mandatory Use of Face Mask (December 11, 2020)." https://ncoc.gov.pk/sop/76.%20202012111%20Guidelines%20for%20mandatory%20use%20of%20face%20mask_1705.pdf.

[374] Isaam et al., "Pakistan: Legal Response to Covid-19," 25

[375] GOP, NCOC. "Guidelines for Home Quarantine for Contacts and International Travelers (September 26, 2020)." https://ncoc.gov.pk/sop/66.%202020926%20Guidelines%20for%20Home%20Quarantine%20for%20Contacts%20and%20International%20Travelers_0403.pdf

urging eligible persons to register for vaccinations,[376] the NCOC has published an index of vaccination facilities around the nation where the vaccine has been delivered.[377]

4.4.1.9 Contact-Finding Techniques

At the moment of the first phase of the pandemic, only travelers entering Pakistan were subject to contact tracing.[378] Pakistan has made an effort to put in place a more extensive contact-tracing mechanism to curb the expansion of the virus, while the initial set of limitations was progressively being lifted throughout the nation.[379] The Federal Epidemiology and Disease Surveillance Division of the NIH, which collaborates with provincial tracking entities, took on the responsibility of contacting travelers daily to track any symptoms.[380]

4.4.2 Implementation and Adherence

Per Article 245 of the Constitution and Section 131-A of the Code of Criminal Procedure, 1898 (hereinafter referred to as CRPC), the Federal Government requested help from the military forces during the start of the outbreak in March 2020. Although the deployment strategy was not made public, it was understood that it was intended to enforce the limitations set by the

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[376] GOP, NCOC, "COVID Vaccination in Pakistan," https://ncoc.gov.pk/covid-vaccination-en.php.

[377] GOP, NCOC, "Mass Vaccination Centers (MVCs) & Community Vaccination Centers (CVCs)," https://ncoc.gov.pk/facilities/MVCs_CVCs.pdf.

[378] See eg National Institute of Health (Pakistan), "COVID-19 National Action Plan (Version 2, March 13, 2020)," https://www.nih.org.pk/wp-content/uploads/2020/03/COVID-19-NAP-V2-13-March-2020.pdf; National Institute of Health (Pakistan), "Surveillance Mechanism of 2019-nCoV (January 2020)," https://www.nih.org.pk/wp-content/uploads/2020/01/Surv-Mechanism-2019-nCoV.pdf.

[379] Niha Dagia, "Inside Pakistan's COVID-19 Contact Tracing," The Diplomat, July 1, 2020, https://thediplomat.com/2020/07/inside-pakistans-covid-19-contact-tracing/.

[380] See eg National Institute of Health Pakistan (NIH), "FELTP Pakistan Weekly Epidemiological Report (May 3-9, 2020)," https://www.nih.org.pk/wp-content/uploads/2020/05/19-FELTP-Pakistan-Weekly-Epidemiological-Report-May-03-09-2020.pdf; (NIH), "FELTP Pakistan Weekly Epidemiological Report (September 5-12, 2020)," https://www.nih.org.pk/wp-content/uploads/2020/09/37-FELTP-Pakistan-Weekly-Epidemiological-Report-Sep-05-12-2020.pdf.

provinces.[381] Despite this initial deployment, the provincial governments swiftly took over implementation at the frontline.[382]

Throughout the pandemic, there has been a prevalent assumption that public health initiatives have received little cooperation. This is especially true for rules requiring physical distancing and the wearing of facial coverings, not the least since disobeying these rules carries little to no penalty.[383]

4.5 Human Rights Concerns on Response and Implementation Measures

One of the global effects of the coronavirus challenge was the undermining of fundamental rights, notably human rights.

Zulfiqar Shah, a human rights and labor law professional, while commenting regarding the human rights situation in Pakistan in the wake of the coronavirus pandemic said in one of his blogs that firstly, what constitutes a general emergency and a health emergency should be separated from one another. Countries without independent monitoring and with poor education levels are considerably more likely to have government officials and independent actors exploiting their authority of influence. Because Pakistan's political and military leadership was solely concentrated on the virus, the COVID-19 emergency had claimed primacy over all other matters, and secondly, the media scarcely found time for reporting on other issues than the

[381] Baqir Sajjad Syed and Iftikhar A. Khan, "Troops Deployed to Fight Virus," *DAWN.COM*, March 24, 2020, https://www.dawn.com/news/1543293

[382] Isaam et al., "Pakistan: Legal Response to Covid-19," 26

[383] See eg DAWN.COM, "PM Imran Urges Public to Wear Face Masks, Follow SOPs," *DAWN.COM*, June 8, 2020, https://www.dawn.com/news/1562187; Imtiaz Ali, "PM Imran Calls in Army to Support Police in Enforcing SOPs as Covid-19 Cases Surge," *DAWN.COM*, April 24, 2021, https://www.dawn.com/news/1619906; Mishal Khan, Maheen Rashid, and Adnan Qadir Khan, "The Analytical Angle: Voluntary Compliance with Covid-19 Control Measures Is Crucial Now," *DAWN.COM*, July 28, 2020, https://www.dawn.com/news/1571062/the-analytical-angle-voluntary-compliance-with-covid-19-control-measures-is-crucial-now.

pandemic news. Several significant human rights issues faced the nation when the pandemic hit. These limitations on free speech, association, and assembly were among them.[384] We will address some of these issues one by one below.

4.5.1 Executive's Rule-Making Powers without Legislative Oversight

The COVID-19 pandemic forced the NSC to convene and face a medical catastrophe for the initial time when it was founded on March 13, 2020. The decisions made at this initial meeting became the cornerstone of the central government's pandemic reply.[385] The most important of these was the formation of a National Coordination Committee (hereinafter referred to as NCC) on COVID-19, which was made up of the Federal and Provincial Governments' ministers along with higher military personnel and was tasked with coming up with a plan to stop the virus's spread and lessen its effects. [386]

In reality, the NCOC, which was based in the NDMA, was the actual driving force behind the NCC direction's content. The forum was jointly headed by the Federal Minister for Planning, Development, and Special Initiatives and a top Armed Forces official known as the "chief coordinator," despite the lack of a formal instrument specifying its membership. It comprised officials from the federal as well as provincial governments, prominent bureaucrats, and candidates for the armed forces and spy services, in addition to the Special Advisor to the Prime

[384] Zulfiqar Shah, "Pakistan: COVID-19 and the Human Rights Crisis," The Norwegian Human Rights Fund, n.d., https://nhrf.no/blog/pakistan-covid-19-and-the-human-rights-crisis.
[385] Prime Minister's Office, "Press Release: "PM chaired the National Security Committee meeting, especially called to review the current status of and Pakistan's response to the Coronavirus."
[386] Isaam et al., "Pakistan: Legal Response to Covid-19," 6.

Minister (SAPM) on health. The NCC of the Federal Government on COVID-19, which frequently followed the NCOC's directives in full, was its final supervisor.[387]

This maintained the executive's hegemonic position in the shape of NCC during the legislative course. The most obvious example of the executive's control was the rising tendency to adopt laws without consulting parliament hy issuing ordinances. These ordinances played a substantial role in the executive's reply to the virus at the federal as well as provincial levels.[388] To evade or postpone legislative scrutiny, governments had been charged with misusing their authority to promulgate ordinances for this same reason.[389]

We deduce from above that the executive branch and the nation's army officers, working together beneath the NCC on COVID-19, had largely driven the process of decision-making concerning COVID-19 federal and provincial policies. The NCOC served as the committee's driving force to escape legislative monitoring. What became clear was that, despite the legislators' ability to conduct oversight, they generally chose not to do so out of respect for the coordinated and well-informed efforts being made at the NCOC.[390]

4.5.2 Supreme Court's Intervention about Governments' Unchecked Use of Powers

In addition to serving as the final appellate authority, the Supreme Court (hereinafter referred to as SC) also has "original jurisdiction" (*suo moto* jurisdiction) under Article 184(3) of the

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[387] Ibid . 7

[388] See eg Senate of Pakistan, "the Covid-19 (Prevention of Hoarding) Ordinance 2020 (April 17, 2020)," Promulgated by the President for the Islamabad Capital Territory., https://www.senate.gov.pk/uploads/documents/1615198846_474.pdf.

[389] See eg Ahmed Bilal Mehboob, "Ordinances over the Years," *DAWN.COM*, December 8, 2019, https://www.dawn.com/news/1521058/ordinances-over-the-years; Muhammad Imran, "Parliament: An Ordinance Faculty!," *The Nation*, November 17, 2019, https://www.nation.com.pk/18-Nov-2019/parliament-an-ordinance-faculty; Tribune, "Punjab Assembly Left at Mercy of Ordinances," *The Express Tribune*, March 16, 2021, https://tribune.com.pk/story/2289627/punjab-assembly-left-at-mercy-of-ordinances

[390] Isaam et al., "Pakistan: Legal Response to Covid-19," 10, 11.

Constitution, which grants it the identical authority that a High Court has under Article 199 of the Constitution, provided that it involves a matter of public prominence pertaining to safeguard fundamental rights.[391]

In actuality, the SC's *suo motu* jurisdiction ended up having a significant influence on the early general governmental reaction to the epidemic. During the hearing of an appeal against the Islamabad High Court's (hereinafter referred to as IHC) ruling, the SC directed the Federal and Provincial Governments to submit reports detailing the measures being undertaken to address and overcome the pandemic.[392] Eventually, it overturned the orders of the Islamabad High Court and revoked all bails issued under such circumstances.[393] The court left the broader question of pandemic response pending and changed the appeal to one under Article 184(3) of the Constitution (Suo Motu Case No.1/2020). The court requested urgent legislation to address the challenges raised by the pandemic and ordered the federal government to take the following actions on the same day: (i) establish quarantine centers at Pakistan's entry points on three grounds, which are Taftan, Chaman, and Torkham in the provinces of Khyber-Pakhtunkhwa and Balochistan, respectively; (ii) make sure domestic production of personal protective equipment; and (iii) allocate means for domestic production and availability of ventilators.[394]

Significantly, the apex court also invalidated two executive commands amid these hearings. The earlier of these had been issued by the Punjab government and was intended to forbid cross-

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[391] Dr Imran Khattak v Sofia Waqar, Pakistan Case Law (PCL), 2014 SCMR 122 (Supreme Court) [S]. https://cle.pakistanlaw.com/scmr-supreme-court/2014/122/.

[392] Raja Muhammad Nadeem v. The State and another, Criminal Petition No. 299 of 2020. [Against the order dated 20.03.2020, passed by the Islamabad High Court, Islamabad in Crl.Misc.No.214/2020]. Supreme Court of Pakistan, April 1, 2020. https://www.supremecourt.gov.pk/downloads_judgements/crl.p._299_2020_01042020.pdf

[393] Raja Muhammad Nadeem v. The State and another, Criminal Petition No. 299 of 2020. [Against the order dated 20.03.2020, passed by the Islamabad High Court, Islamabad in Crl.Misc.No.214/2020]. Supreme Court of Pakistan, April 7, 2020. https://www.supremecourt.gov.pk/downloads_judgements/crl.p._299_2020_07042020.pdf

[394] Raja Muhammad Nadeem v. The State and another, Crl P 299 of 2020, [4], [6], [7]

provincial travel; it was overturned.[395] The second was the entire commercial and business lockdown that the Sindh government enforced on Saturdays and Sundays. The court ruled that this restriction was unjustified and invalidated it because it conflicted with the right to independence of trade, commerce, and/or occupation.[396]

The SC had from the beginning instructed all central and provincial government entities to "frame a uniform national policy."[397] The court frequently emphasized consistency in their rulings, along with the value of national legislation and caution that executive orders frequently infringe on basic human rights.[398]

4.5.3 Obstruction to Freedom of the Press and Information

Just previous to the pandemic, Pakistan, which stood at 145 on the World Press Freedom Index in 2020, had a contentious relationship with press freedom.[399] There has been at least one recorded incident where paramilitary troops in the Province of Balochistan arrested and mistreated 2 correspondents who were reporting a quarantine center established in the Chaman

[395] S.M.C. 01/2020 (Suo Moto Action Regarding Combating the Pandemic of Corona Virus [COVID-19]), Supreme Court of Pakistan, April 13, 2020, [5]. https://www.supremecourt.gov.pk/downloads_judgements/s.m.c._01_2020.pdf

[396] S.M.C. 01/2020 (Suo Moto Action Regarding Combating the Pandemic of Corona Virus [COVID-19]), Supreme Court of Pakistan, May 18, 2020 [11] https://www.supremecourt.gov.pk/downloads_judgements/s.m.c._01_2020_18052020.pdf

[397] S.M.C. 01/2020 (Suo Moto Action Regarding Combating the Pandemic of Corona Virus [COVID-19]), Supreme Court of Pakistan, May 04 2020, [13] https://www.supremecourt.gov.pk/downloads_judgements/s.m.c._01_2020_04052020.pdf

[398] S.M.C. 01/2020 (Suo Moto Action Regarding Combating the Pandemic of Corona Virus [COVID-19]), Supreme Court of Pakistan, June 08, 2020, [2]-[3]. https://www.supremecourt.gov.pk/downloads_judgements/s.m.c._1_2020_08062020.pdf

[399] See eg Reporters Without Borders, "Under the military establishment's thumb," *Pakistan*, (Online, 2020) https://rsf.org/en/country/pakistan.

area on Pakistan's joint boundary with Afghanistan.[400] Journalists in Balochistan then protested and demanded that the perpetrators of the event be held accountable.[401]

A day later, several contentious "directives and guidelines" were released by the Pakistan Electronic Media Regulatory Authority (hereinafter referred to as PEMRA), the country's top regulatory body for all types of commercial electronic media.[402] These directions and advice recommended that only licensed medical specialists be allowed coverage on topics associated with coronavirus and that only specialist views from those epidemiologists who were suggested as medical specialists by the Central or Provincial Authorities be requested, in addition to directing media outlets to establish editorial panels assigned with combating the spread of misinformation regarding Covid-19. It was also instructed not to transmit predictions of COVID-19 that were not created by the NCOC. These directions and rules have frequently come under fire for being overly restrictive.[403]

4.5.4 Lockdowns Impact on Labor Class

Before COVID-19, roughly 40 percent of Pakistan's population was reportedly living in poverty. In addition to informal laborers, who account for 73% of the 65 million employees in the nation, the impoverished population also included them. Since they rely on day-to-day basis earnings or per-job wages, which are awarded when the task is completed, these unlicensed, informal

[400] Reporters Without Borders. "Two Pakistani Reporters Tortured for Covering Quarantine Centre on Afghan Border," (Online, June 23, 2020), RSF, n.d . https://rsf.org/en/two-pakistani-reporters-tortured-covering-quarantine-centre-afghan-border.

[401] Saleem Shahid, "Reporters Boycott Balochistan Assembly Session in Protest against Torture of Two Chaman Journalists," *DAWN.COM*, June 24, 2020, https://www.dawn.com/news/1564824/reporters-boycott-balochistan-assembly-session-in-protest-against-torture-of-two-chaman-journalists.

[402] Pakistan Electronic Media Regulatory Authority (PEMRA), "Directives for Media Reporting on Coronavirus," June 25, 2020. https://pemra.gov.pk/uploads/news/Directives_Media_Reporting_CoronaVirus.pdf.

[403] Web Admin, "Pakistan: Directive by Electronic Media Regulator Imposes Restrictions on Coverage of Health Services," *Pakistan Press Foundation (PPF)*, June 26, 2020. https://www.pakistanpressfoundation.org/pakistan-directive-by-electronic-media-regulator-imposes-restrictions-on-coverage-of-health-services/.

laborers had been severely harmed by the lockout. They no longer had employment or income, and they had nothing to eat for many days.[404]

4.5.5 Use of Stun Batons and Other Stern Actions to Enforce COVID-19 SOPs

The use of stun batons by Punjab police and other law enforcement departments against those who disregarded COVID-19-related standard operating procedures (hereinafter referred to as SOPs) was witnessed during the initial coronavirus strike and the subsequent nationwide lockdown.[405]

An incident involving the district government and police utilizing stun batons on city streets to reprimand people who were disobeying COVID-19 SOPs, particularly those who had not put on masks, made headlines in Faisalabad in June 2020. Without masks, those who were mainly riding motorbikes or using motorcycle rickshaws were drawn up facing walls and shocked with stun batons. On condition of anonymity, a police officer said that higher officials were well aware of the usage of stun batons to subdue demonstrators and violators because these tools were purchased and distributed to several agencies on their instructions. He defended the use of shock batons by claiming that they would be useful in forcing people to adhere to SOPs in public areas and in keeping them indoors during the pandemic. Also, the local administration of the city issued a warning to people who leave their houses without masks, threatening stern punishment. Additionally, the authorities closed down stores in various parts of the metropolis for breaking

[404] Zulfiqar Shah, "Pakistan: The COVID-19 Impact and Response," The Norwegian Human Rights Fund, n.d., https://nhrf.no/blog/pakistan-the-covid-19-impact-and-response.

[405] Saleem Mubarak, "Punjab Police Use Stun Therapy on SOP Violators," *DAWN.COM*, June 7, 2020, https://www.dawn.com/news/1561843

SOPs. The traffic police officers sometimes punctured the tires of cars driven by people who weren't wearing masks.[406]

In response to it, Amnesty International (hereinafter referred to as AI) claimed that tools like stun batons allow state agents to deliver unpleasant electric jolts to the body parts of the targets without leaving any visible physical evidence. The renowned human rights organization is waging a global effort to outlaw the practice and trafficking of torture instruments including spike rods, shock belts, stun rods, and collar shackles. It makes the case that nobody should gain an advantage from the misery of others. The AI also urges that the UN's member states work on laws that would permanently put a halt to the trafficking of torture instruments.[407]

There, the Human Rights Commission of Pakistan (hereinafter referred to as HRCP), an independent advocacy body, severely denounced these brutal actions and stated that the UN Convention Against Torture (CAT), to which Pakistan is a signatory, and Article 14 of Pakistan's Constitution were both flagrantly violated. It further said that even if there is no legal penalty for such conduct in Pakistani law, the usage of stun batons and other such tools plainly conveys governmental authorization if the police have them. The practice is equivalent to torture and the excessive application of force, both of which are against international human rights agreements. The employment of regressive tactics by law enforcement to implement COVID-19-related SOPs is not new either; it was well within the knowledge that anybody accused of breaking the first major lockdown would be forced to take on embarrassing positions.[408]

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[406] Mubarak, "Punjab Police Use Stun Therapy on SOP Violators."
[407] Mubarak, "Punjab Police."
[408] Human Rights Commission of Pakistan (HRCP), "Stun Batons to Enforce Covid SOPs Amounts to Torture," *HRCP*, September 30, 2021, https://hrcp-web.org/hrcpweb/stun-batons-to-enforce-covid-sops-amounts-to-torture/

The commission clearly presented its stance that contrary to the regressive practice, under no circumstances, not even during the current COVID-19 pandemic, can torture and other brutal, inhumane, or humiliating methods be acceptable. The emergency must not be taken care of at the price of human rights; the two cannot coexist side by side. The HRCP vehemently urged that the Punjab government and police must look into this incident and punish the responsible officers and district officials accountable for it.[409]

4.5.6 Mandatory Vaccination Dilemma

Dr. Imran Ahmed, an Honorary Associate at the University of New England in New South Wales, Australia, expressed reservations at the start of the coronavirus vaccination campaign in Pakistan through an online published paper. His concerns are that the prospect of coronavirus vaccines relief has not only brought optimism but also alarm over completely novel challenges. Since effective vaccines were found, issues of availability, effectiveness, and side effects have been hotly debated worldwide. As state authorities and public health organizations raced to authorize the emergency use of acceptable vaccine candidates, moral, ethical, and religious questions also surfaced.[410]

He then raised many hypothetical questions which are: What should be the source of the vaccine? In a population, who should receive the vaccination first? What method should be used for distribution? What time frame would be realistic? Should vaccinations be optional or required? Does the vaccination fulfill the requirements set out by your religion for use? How can

[409] HRCP, "Stun Batons to Enforce Covid SOPs Amounts to Torture."
[410] Imran Ahmed, "Pakistan's COVID-19 Vaccination Challenges: Supplies, Trust, Transparency and Co-Operation," *Institute of South Asian Studies*, no. 623 (February 2, 2021). https://www.isas.nus.edu.sg/papers/pakistans-covid-19-vaccination-challenges-supplies-trust-transparency-and-co-operation/.

personal preference and greater public interest be balanced?[411] Some of these questions still need to be debated and answered.

4.5.6.1 Emergency-Used Approval of Vaccines

Midway through January 2021, the DRAP swiftly authorized the Oxford-AstraZeneca vaccine,[412] the SinoPharm vaccine produced with the backing of the Chinese government,[413] and the Sputnik V vaccine manufactured by Russia.[414] This caused several alarms to go off.

The Pakistan Medical Association (hereinafter referred to as PMA) called for inclusion in the state's plan to acquire vaccines, assess their effectiveness, and develop the immunization program in response to the government's vaccination policy.[415] Dr. S.M. Qaisar Sajjad, secretary general of the PMA (Centre), stated that the PMA is interested in finding out the COVID-19 vaccination dose of AstraZeneca. Will it be given once in a lifetime, once a year, or more frequently? He wondered who would benefit from this free vaccination.[416]

He added that the government needs to consider the PMA and other stakeholders in consultation with vaccines' approval. Unfortunately, even the doctor has no idea where to turn for treatment when he is positive. Dr. Qaisar bemoaned the official authorities, saying it is really terrible that

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[411] Ahmed, "Pakistan's COVID-19 Vaccination Challenges."

[412] AP news wire, "The Latest: Pakistan Approves Oxford-AstraZeneca Vaccine Vaccine Cases Vaccine India Pakistan," *The Independent*, January 17, 2021, https://www.independent.co.uk/news/the-latest-pakistan-approves-oxfordastrazeneca-vaccine-india-pakistan-vaccine-vaccine-cases-b1788486.html.

[413] Asif Shahzad, "Pakistan Approves Chinese Sinopharm COVID-19 Vaccine for Emergency Use," *Reuters*, January 19, 2021, https://www.reuters.com/article/health-coronavirus-pakistan-sinopharm/pakistan-approves-chinese-sinopharm-covid-19-vaccine-for-emergency-use-idINKBN29O049.

[414] Ani, "Covid-19: Pakistan Authorises Emergency Use of Russia's Sputnik V Vaccine," *The Times of India*, January 24, 2021, https://timesofindia.indiatimes.com/world/pakistan/covid-19-pakistan-authorises-emergency-use-of-russias-sputnik-v-vaccine/articleshow/80432949.cms

[415] News Correspondent, "PMA on Vaccine: Call to Take Medics Body on Board to Buy Corona Vaccine," *The News International*, January 19, 2021, https://www.thenews.com.pk/print/776499-pma-on-vaccine-call-to-take-medics-body-on-board-to-buy-corona-vaccine

[416] Correspondent, "PMA on Vaccine."

there is no government strategy for immunizing people. He also brought up the issue of how the government would keep the vaccines' cold chain intact.[417]

4.5.6.2 Covid-19 Vaccines' Adverse Event Following Immunization (AEFI) Analysis

Initiated on February 2, 2021, the COVID-19 immunization campaign in Pakistan yielded a total of 39,291 reported adverse drug reactions (hereinafter referred to as ADRs) by September 30, 2021. Notably, the majority of vaccinated individuals experienced adverse events following immunization (hereinafter referred to as AEFI) after their initial dose, typically occurring within a 24 to 72-hour window post-vaccination. Among the reported AEFIs associated with various COVID-19 vaccines, fever or shivering accounted for the highest proportion at 35% of the total. Injection site pain or redness emerged as another prevalent AEFI, contributing to 28% of the overall ADRs. Additionally, instances of headache were reported in 26% of cases, followed by nausea or vomiting at 4%, and diarrhea at 3%.[418]

Among the eight registered COVID-19 vaccines sanctioned by the DRAP, CanSinoBIO exhibited the highest AEFI rate per 1000 individuals at 0.79, followed closely by Sinopharm (0.63) and Oxford-AstraZeneca (0.63). Conversely, Sputnik (0.07) and Pfizer (0.27) reported the lowest AEFI rates. A total of twenty-four ADRs were classified as serious, each subject to a comprehensive investigation by the National AEFI Review Committee.[419] Notably, the overall incidence of AEFI reports in Pakistan ranged from 0.27 to 0.79 per 1000 individuals across various Covid-19 vaccines, marking a notably lower rate compared to the approximate 4 per 1000 observed in the United Kingdom. This discrepancy may be attributed to several factors,

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[417] Ikram Junaidi, "Pakistan Approves Another Covid-19 Vaccine," *DAWN.COM*, January 19, 2021. https://www.dawn.com/news/1602299

[418] Syed Shahzad Hasan et al., "Covid-19 Vaccine Safety and Adverse Event Analysis from Pakistan," *Clinical Immunology Communications* 2 (December 1, 2022): 94. https://doi.org/10.1016/j.clicom.2022.05.003.

[419] Hasan et al., "Covid-19 Vaccine Safety and Adverse Event Analysis from Pakistan."

primarily stemming from an overall deficiency in reported cases, as the national pharmacovigilance system in Pakistan remains in its nascent stages.[420]

4.5.6.3 The Constitutional Limits of Vaccination Campaign

The initial deployment of COVID-19 vaccines faced limitations due to factors such as incomplete data and supply insufficiencies. However, having largely surmounted these constraints, the Government's subsequent imperative became the promotion of maximum vaccination uptake. This impelled the provinces to contemplate a spectrum of punitive and incentivizing measures. Subsequently discussed were four contentious measures proposed and/or implemented by the provinces to enhance vaccination rates, potentially susceptible to legal contentions for their proclivity to impinge upon constitutionally safeguarded fundamental rights.[421] Their analysis suggested that measures inclined towards penalizing unvaccinated individuals, through the revocation of extant privileges, were more likely to run afoul of constitutional protections than those which aimed to confer privileges upon vaccinated individuals, not previously available or withheld before vaccination. The ultimate litmus test for legality seemed contingent on the rational nexus between the measures and the differentiation drawn between vaccinated and unvaccinated individuals.[422]

1. **Blocking sim cards**

One of the prominently publicized propositions in the Punjab province entailed the suspension of sim cards belonging to individuals who declined vaccination, a determination purportedly

[420] Hasan, "Covid-19 Vaccine," 96.
[421] Fatima Mehmood and Isaam bin Haris, "More Carrot, Less Stick: The Constitutional Limits of Pakistan's Vaccination Drive," *Lex-Atlas: Covid-19*, July 28, 2021, https://lexatlas-c19.org/more-carrot-less-stick-the-constitutional-limits-of-pakistans-vaccination-drive/
[422] Mehmood and Haris, "Constitutional Limits of Pakistan's Vaccination Drive."

reached during a convening of the Health Department within the province.[423] The implementation of this measure would effectively entail the deprivation of mobile phone services for unvaccinated individuals.

The proposed measure to block SIM cards for unvaccinated individuals raises several legal concerns. Firstly, provincial authorities may lack the jurisdiction to regulate telecommunications and sim cards, as these fall under the federal legislative domain (Constitution, Entry No. 7 of the Fourth Schedule). Secondly, such sanctions may impinge on the right to education (Article 25A of the Constitution), given the pandemic-driven shift to virtual learning. Additionally, limiting mobile phone access could potentially encroach upon fundamental rights to freedom of speech and expression (Article 19) and information (Article 19A), especially as technology becomes a primary means of expression. While these rights are subject to 'reasonable restrictions,' this measure may face challenges under judicial review, particularly considering the courts' emphasis on proportionality. Lastly, the suspension of sim cards could hinder access to essential health services, including emergency healthcare, potentially violating the right to life (Article 9), exacerbated by the declared public health emergency on both national and global scales.[424]

2. Enabling Entry to Diverse Enclosed Premises

In contrast to various suggestions put forth over time, the authorized statutory body responsible for implementing public health measures in the province of Punjab had directed its directives towards incentivizing vaccinated individuals. This was exemplified by the allowance of entry to shrines, gyms, indoor wedding venues, and indoor dining establishments exclusively for those

[423] Primary & Secondary Healthcare Department. "Mobile SIMS of People Not Getting Vaccinated May Be Blocked. It Was Decided in Cabinet Meeting under the Chair of Minister for Health." *X (Formerly Twitter)*, June 11, 2021, https://twitter.com/PSHDept/status/1403938599413760001.
[424] Mehmood and Haris, "More Carrot, Less Stick: The Constitutional Limits of Pakistan's Vaccination Drive."

who have received full vaccination.[425] Regardless of whether these measures were construed as punitive towards the unvaccinated or rewarding towards the vaccinated, the outcome remained consistent: access to these venues was confined solely to individuals who had completed their vaccination regimen. It should be noted that the onus of enforcing these restrictions lay with the respective establishments, albeit endeavors were being made, particularly in Punjab, to ensure compliance through the establishment of verification counters for vaccination certificates.[426]

The legality of these measures can be scrutinized from both the standpoint of the establishment and the individual. From the establishment's vantage, the restriction may be perceived as an infringement upon the freedom of trade, business, or profession (Article 18 of the Constitution): the exclusion of a specific segment of the population curtails the establishment's liberty to engage in trade or business.[427] From the individual's viewpoint, the restriction on access to these venues may be regarded as discriminatory, thereby constituting a violation of the right to equality (Article 25 of the Constitution). Notably, the equality provision has previously served as a basis for the Supreme Court's annulment of a prior measure, wherein Saturdays and Sundays were designated as days of 'complete lockdown' by the Sindh government, a designation deemed lacking in 'justifiable rational or reasonable classification.'[428]

3. Prohibiting Air Travel for Non-Vaccinated Individuals

The National Command and Operation Center (NCOC), in conjunction with a range of other measures, proposed a comprehensive prohibition on air travel for unvaccinated individuals.

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[425] Government Of The Punjab, Primary And Secondary Health Department, "ORDER," Press release, June 10, 2021, https://pshealthpunjab.gov.pk/Upload/Downloads/3c1f0fuc.xq220210611.pdf.
[426] Imran Gabol, "Punjab to Set up Counters at Public Spots to Check Covid Vaccination Certificates," *DAWN.COM*, July 10, 2021, https://www.dawn.com/news/1634299.
[427] Mehmood and Haris, "More Carrot, Less Stick: The Constitutional Limits of Pakistan's Vaccination Drive."
[428] S.M.C. 01/2020 (Suo Moto Action Regarding Corona Virus [COVID-19]), Supreme Court of Pakistan, May 18, 2020.

effective from August 1, 2021. This prohibition was anticipated to encompass both domestic and international flights, mandating all passengers to furnish an official government-issued certificate affirming their complete vaccination status as a prerequisite for air travel.[429]

Individuals who have not been vaccinated may assert that such a prohibition infringes upon their entitlement to freedom of movement, a right enshrined in Article 15 of the Constitution. In contrast to the legal precedent established under the equality provision, where discriminatory practices can be justifiable based on a 'reasonable classification', a limitation on the right to freedom of movement may only be deemed justifiable if it is both reasonable and serves the 'public interest', as explicitly stipulated in Article 15 of the Constitution.[430]

4. Temporary Halting of Remuneration for Public Servants in the Province of Sindh

On June 3, 2021, the Chief Minister of Sindh issued a directive of significant controversy, instructing the Finance Ministry to withhold the salaries of all Government employees who declined COVID-19 vaccination, effective July 2021.[431] While some accounts suggest that this measure potentially led to an uptick in vaccinations,[432] official data confirming such an effect is absent. Notably, the Chief Minister's directive lacked specificity in clarifying the process by which the salaries of these Government employees would be reinstated upon their choice to undergo vaccination.

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[429] Umar Farooq, "Pakistani Authorities Recommend Banning Air Travel for Unvaccinated," Reuters, July 9, 2021, https://www.reuters.com/world/asia-pacific/pakistani-authorities-recommend-banning-air-travel-unvaccinated-2021-07-09/

[430] Mehmood and Haris, "More Carrot, Less Stick: The Constitutional Limits of Pakistan's Vaccination Drive."

[431] Imtiaz Ali, "Sindh CM Orders Finance Ministry to Stop Salaries of Govt Employees Who Refuse Covid-19 Vaccines," *DAWN.COM*, June 3, 2021, https://www.dawn.com/news/1627300.

[432] Saeed Shah and Waqar Gillani, "In Pakistan, Saying 'No' to COvid-19 Vaccine Carries Consequences," *WSJ*, June 22, 2021. https://www.wsj.com/articles/saying-no-to-covid-19-vaccine-in-pakistan-carries-consequences-11624359601.

The suspension of salaries prima facie raises concerns of a potential infringement upon an individual's right to pursue and maintain a lawful profession or occupation, as safeguarded by Article 18 of the Constitution. The pertinent caveat allowing for potential salary suspension is the phrase 'subject to such qualifications, if any, as may be prescribed by law'. However, the directives issued by the Chief Minister do not meet the criteria of being considered 'law'.[433] Furthermore, the Supreme Court has consistently adopted an expansive interpretation of the right to life (Article 9 of the Constitution), extending it to encompass the right to livelihood and the assurance of secure terms and conditions of service.[434] Therefore, the legality of salary suspensions is subject to scrutiny on multiple grounds.

Consequently, punitive measures may face challenges in securing legal justification unless the penalty demonstrates a logical correlation with the differentiation between individuals who have been vaccinated and those who have not. Within the scope of this thesis, both Measures (1) and (4) appear deficient in establishing such a connection. The thesis author contends that initiatives aimed at promoting vaccination are most suitably enacted through legislative means rather than executive directives.

4.6 Reasons Behind Vaccine Hesitancy in Pakistan

Only 51% of Pakistani children have received all the recommended immunizations for their age, according to the Pakistan Health and Demographic Survey performed in 2017-18.[435]

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[433] Mehmood and Haris, "More Carrot, Less Stick: The Constitutional Limits of Pakistan's Vaccination Drive."
[434] Regional Operation Chief, National Bank of Pakistan, Human Resource Department, Regional Office, Sargodha, etc. v. Mst. Nusrat Perveen, C.P. 2717-L of 2015 (Against the order of Federal Service Tribunal dated 14.09.2015, passed in MP No. 23/2015 in Appeal No. 99(L)CE/2004), Supreme Court of Pakistan, December 23, 2020. https://www.supremecourt.gov.pk/downloads_judgements/c.p._2717_l_2015.pdf.
[435] National Institute of Population Studies - NIPS/Pakistan, "Pakistan Demographic and Health Survey 2017-18," January 1, 2019. https://dhsprogram.com/publications/publication-FR354-DHS-Final-Reports.cfm.

4.6.1 Common Mindset about Earlier Vaccines

Low vaccination rates are a result of issues with vaccine administration as well as public mistrust of vaccinations, the government, and international stakeholders. Vaccine rejection is a complicated phenomenon that is influenced by "histories, politics, and social structures."[436] Additionally, refusals are linked to the government's inability to fulfill other obligations to the populace.[437]

As proven by the demonstrations in opposition to Brown and Muslim migration in Europe and America, white people's propensity to believe that all Muslims tend to be "terrorists," and whites' overall belief that they are "superior" to all other races, they were not entirely off in their assumptions.[438] This "superiority complex," which has roots in colonialism and imperialism, encourages white domination while simultaneously causing "others" to feel lower and humiliated, inciting (sometimes overt) opposition. The us vs. them attitude as it manifests in initiatives of "progress," "development," racial discrimination, colonialism, and the imperial system has been critically scrutinized by anthropology for a long time.[439]

Within this larger geopolitical framework, it is necessary to understand the causes of this localized opposition to vaccination. From this viewpoint, we may comprehend how immunization may be viewed locally as a "political project" rather than a life-saving venture.

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[436] Svea Closser et al., "The Global Context of Vaccine Refusal: Insights from a Systematic Comparative Ethnography of the Global Polio Eradication Initiative," *Medical Anthropology Quarterly*, June 1, 2015, n/a, https://doi.org/10.1111/maq.12229.

[437] Svea Closser et al., "Polio Eradication and Health Systems in Karachi: Vaccine Refusals in Context," *Global Health Communication* 1, no. 1 (January 1, 2015): 32–40, https://doi.org/10.1080/23762004.2016.1178563.

[438] Christian Kaunert, Joana De Deus Pereira, and Mike Edwards, "Thick Europe, Ontological Security and Parochial Europe: The Re-Emergence of Far-Right Extremism and Terrorism after the Refugee Crisis of 2015," in *Routledge EBooks*, 2022, 42–61, https://doi.org/10.4324/9781003239388-4.

[439] See eg Raúl Acosta, Sadaf Rizvi, and Ana João Santos, *Making Sense of the Global Anthropological Perspectives on Interconnections and Processes*, Cambridge Scholars Publishing EBooks, 2010, http://eprints.ioe.ac.uk/16177/

Vaccination opposition arose in Pakistan as early as 1953 when many people opposed the Family Planning Program of the government, which they perceived as a "Western" attempt to reduce their fertility.[440]

4.6.2 COVID-19-Specific Fears and Concerns

Due to apprehension, worry, and panic about a COVID-19 phenomenon that was continually evolving, suspicions and conspiracy theories had surfaced about it not only in Pakistan but all across the world as well.[441]

Another point of consideration is that a key factor in determining whether or not the government's policies can he effective is local views and behaviors. The narrative that COVID-19 and immunization drives are "Western plots" had persisted throughout the nation in great numbers due to the mistrust caused by the alleged "fake" immunization campaign conducted by the US in 2011, aimed at locating Osama bin Laden, as well as the presence of US drones that locals perceive as surveillance devices.[442]

4.6.2.1 Findings of A Cross-Sectional Online Survey

A cross-sectional online survey[443] was undertaken soon after free coronavirus vaccines came to be accessible in Pakistan in 2021. Between July 1 and August 30, 2021, a total of 4,392 individuals aged 18 and above from 7 administrative districts in Pakistan were surveyed. Data were collected using online questionnaires and a straightforward sampling approach. The

[440] Ali, "Constructing and Negotiating Measles: The Case of Sindh Province of Pakistan."
[441] Ali, Sadique, and Ali, "COVID-19 and Vaccination Campaigns as 'Western Plots' in Pakistan: Government Policies, (Geo-)Politics, Local Perceptions, and Beliefs," 7.
[442] Ali, Sadique, and Ali, "COVID-19 and Vaccination Campaigns as 'Western Plots' in Pakistan."
[443] Saadullah Khattak et al., "Assessment of Attitudes and Intentions towards COVID-19 Vaccines and Associated Factors among General Populations of Pakistan: A Cross-Sectional Study," *Vaccines* 10, no. 10 (September 21, 2022): 1583, https://doi.org/10.3390/vaccines10101583.

questions were classified into 3 groups: sociodemographic, medically related, and COVID-19 behaviors. Outcomes showed that 18.69% of the respondents were hesitant, 4.92% were uninterested, and only 76.39% were prepared to receive the COVID-19 vaccination.

The survey's further breakdown revealed that 2250 respondents (50.66%) think that even though the majority of vaccines seem to be harmless, there can be complications that haven't yet been discovered; 38.05% of respondents thought that the COVID-19 vaccine might cause unanticipated issues among various demographic communities; and 1747 respondents (39.78%) had reservations about vaccinations' unidentified long-term effects. Over 1064 respondents (24.23%) disapproved that the authorities encourage immunization for the value of the public's health rather than for financial gain. As opposed to this, 1488 individuals (33.88%) thought COVID-19 vaccination programs were a massive scam.

The survey's results categorically mentioned that "approximately 1384 (31.51%) participants were concerned about the rapidity with which the COVID vaccine is being produced...,"[444] hence proving the cause and effect of emergency used approval of the vaccines and subsequently their low intake as discussed above in chapter no. 3 at length. Similarly, a total of 1044 (23.77%) participants experienced a premature response to previous vaccines and were anxious about the response to the COVID-19 vaccination as well.

Furthermore, a total of 1288 respondents (29.33%) thought that ordinary illness contact is a more efficient way of avoiding infections than vaccination, while 1698 respondents (38.65%) claimed that inherent immunity endured more than COVID-19 vaccination, and lastly, 1140 respondents

[444] Khattak et al., "A Cross-Sectional Study," 8.

(25.96%) concurred that biological contact with the novel Coronavirus offers the most secure and most efficient defense.

This online survey's comparison with other ones conducted around the world affirmed that where a significant majority of the respondents (38.05%) reported a great level of dread regarding the unforeseen effects of the vaccine, there a US research discovered that a particularly common unfavorable attitude about COVID-19 vaccines was significant worry over its uncertain implications.[445] In addition, 48% of participants in a Chinese study deferred vaccination until vaccine efficacy was established.[446] Concerns related to the safety of vaccines have been raised by many scientists. Conclusively, the COVID-19 vaccines may be the subject of suspicion due to the rapid pace of vaccine manufacturing and the questions posed by numerous researchers and medical professionals.[447] Last but not least, when the vaccine was originally made available, 39.78% of trial recipients uttered worry about potential side effects. In a related research, Pogue et al. discovered that 63% of those surveyed were worried about the coronavirus immunization's negative effects.[448]

In the end, Pakistan's survey results concluded that 76.37% of respondents were strongly likely to have received a COVID-19 immunization, which was higher than the rates reported in Canada

[445] Timothy Callaghan et al., "Correlates and Disparities of Intention to Vaccinate against COVID-19," *SciencesDirect*, March 1, 2021. https://doi.org/10.1016/j.socscimed.2020.113638.

[446] Jiahao Wang et al., "Acceptance of COVID-19 Vaccination during the COVID-19 Pandemic in China," *Vaccines* 8, no. 3 (August 27, 2020): 482. https://doi.org/10.3390/vaccines8030482.

[447] Chou and Budenz, "Considering Emotion in COVID-19 Vaccine Communication: Addressing Vaccine Hesitancy and Fostering Vaccine Confidence."

[448] Mamun Kazi Abdul and Farhana Khandaker Murshida, "Knowledge, Attitude and Acceptance of a COVID-19 Vaccine: A Global Cross-Sectional Study," *Social Science Research Network*, January 1, 2020. https://doi.org/10.2139/ssrn.3763373.

(71%), the USA (57%), and in both Turkey and France (49%), but lesser than the documented proportions in Brazil (89%), Italy (81%), and the UK (80%).[449]

4.7 Current Pakistani Epidemic Prevention Laws: Federal and Provincial Laws

On the legal front, Pakistan primarily uses the West Pakistan Epidemic Diseases Act, 1958. As a result of the eighteenth amendment to the Pakistani Constitution and thereafter the delegation of the Concurrent List, health has been delegated to the status of a provincial issue, giving provinces the freedom to enact their own laws in this area. Consequently, the Act of 1958 was enacted by the Punjab government in 2011 as "The Epidemic Diseases (Amendment) Act, 2011."[450] The Epidemic Diseases Act, 2011 only required modifications to its scope of applicability because it was designed to solely cover the territory of Punjab. Punjab didn't see the need for better legislation until coronavirus expanded over the nation in February 2020. The Punjab Infectious Diseases (Prevention and Control) Ordinance (PIDO) was issued on March 27, 2020, by the Governor of Punjab in the format of an "Ordinance" given the critical nature of the scenario and increasing strain on the provincial health infrastructure due to an increase in cases. Thereafter the Punjab Infectious Diseases (Prevention and Control) Act 2020 (hereinafter referred to as PIDA) was adopted as an Act on July 15, 2020, by resolution of the Provincial Assembly, within the constitutional window of ninety days, to prevent it from lapsing.[451]

In 2014, the Sindh government passed the same Act of 1958 as the "Sindh Epidemic Diseases Act, 2014", while the KP government enacted its own new law as the "KP Public Health

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[449] Jovana Stojanovic et al., "Global Trends and Correlates of COVID-19 Vaccination Hesitancy: Findings from the iCARE Study," *Vaccines* 9, no. 6 (June 17, 2021): 661, https://doi.org/10.3390/vaccines9060661.

[450] Sahar, "An Analytical Study to Discuss the International as Well as Local Legal Structure for Prevention of Infectious Diseases and Epidemic Control Measure," 72

[451] Abbas, Sajjad, and Razi, "COVID-19 Pandemic and Legal Response: A Review of Punjab Infectious Diseases Law," 6582-83

(Surveillance and Response) Act, 2017." The said Epidemic Diseases Act, 1958 is still in effect in Baluchistan and the ICT. However, the comparative analysis of all these enacted and implemented laws, except KP's to some extent, reveals that Pakistan's current legislation is not exhaustive and does not address the problems related to the widespread outbreak of prevalent diseases in the country, including the most latest terrifying novel SARS-COV-2, the Covid-19.[452]

4.7.1 Problems and Drawbacks in the West Pakistan Epidemic Diseases Act, 1958 with Suggestions

The West Pakistan Epidemic Diseases Act of 1958, while serving as a legislative framework for managing public health crises at the federal level, presents several notable problems and drawbacks. Below, we will delve into issues and potential proposals and suggestions for improvement analyzed by Ms. Ghina-e-Sahar in a research study titled, "An Analytical Study to Discuss the International as Well As Local Legal Structure for Prevention of Infectious Diseases and Epidemic Control Measures."

1. **Definitional Issues**

In the Epidemic Diseases Act 1958, the absence of a definition clause poses challenges in interpreting key legal terminology. Precise legal definitions for terms such as "affected area," "contamination," "department," "Epidemic diseases," "government," "hazardous material," "health emergency," "immunization." "public health," and "public health emergency" are imperative. Notably, the legislation enacted in KP provides explicit definitions for crucial terms like "affected area," "contamination," "diseases," "hazardous agent," and "public health."

[452] Sahar, "An Analytical Study to Discuss the International as Well as Local Legal Structure for Prevention of Infectious Diseases and Epidemic Control Measure," 72-73.

Furthermore, international legal frameworks adopted in countries like Canada, China, and Malaysia encompass definitions for essential terms including "epidemic," "health emergency," "immunization," and "public health." The World Health Organization's 2005 International Health Regulations (hereinafter referred to as IHRs) similarly offer definitions for "decontamination," "disinfection," "isolation," and "public health." Therefore, it is advisable to amend the current epidemic law at the federal level in Pakistan, aligning it with the proposed recommendation to incorporate explicit definitions for key terms. [453]

2. Special Measures

When there is suspicion of a disease outbreak, the designated individual and agency possess the authority to initiate necessary measures for disease prevention and control, as outlined in Section 2 of the 1958 Act. However, this section merely alludes to 'special measures' without providing specific details on their implementation. Unlike the Act, an examination of legal frameworks in China, Canada, and Malaysia demonstrates a clear delineation of specific measures required for emergency disease management, encompassing vital aspects like movement restrictions, compulsory testing and vaccination, isolation of suspected cases, proper handling of hazardous materials, and undertaking decontamination efforts, among others. For instance, the statute in KP mandates educational institutions to promptly report any irregularities among students. Similarly, regulations in other regions encourage medical research for disease remedies and offer provisions for requisitioning specific facilities to isolate infected individuals. Hence, it is

[453] Sahar, "An Analytical Study," 74

advisable to conduct a thorough review of the 1958 Act to incorporate explicit measures that the government should undertake to curtail the spread of epidemics within the country. [454]

3. Incorporation of Society and Awareness

The Chinese Law for Prevention and Treatment of Infectious Diseases Act, 1989 (Revised in 2004), mandates a strategic approach to societal engagement in managing epidemic diseases. This legislation incorporates extensive provisions, notably in Articles 9 and 10, emphasizing the active participation of society in the prevention and control of infectious diseases. In stark contrast, the Epidemic Diseases Act of 1958 lacks any stipulations regarding civic engagement, volunteerism, or financial contributions to bolster the social welfare of the state's citizens. However, the incorporation of provisions facilitating societal involvement in disease prevention proves to be a valuable and effective strategy in addressing emergency scenarios. [455]

4. Pronouncement of Health Emergency

Specifically, the 2005 IHRs permit the declaration of a health emergency, enabling the designation of a Public Health Emergency of International Concern (PHEIC) according to Article 12 of the Regulations. In Pakistan, the importance of Chapter 3 within the KP Public Health (Surveillance and Response) Act of 2017 lies in its provisions for the declaration of a state of health emergency at the provincial level. These clauses effectively provide the federal government an opportunity to initiate prompt preventive measures through legal means. [456]

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[454] Sahar, "An Analytical Study," 74-75
[455] Sahar, "An Analytical Study," 75-76
[456] Sahar, "An Analytical Study," 76

5. Schedule for Group of Diseases

Numerous infectious and non-infectious diseases, both transmissible and microbial, pose potential health risks to specific communities. However, the existing national epidemic disease law in Pakistan lacks a comprehensive catalog of infectious ailments that may potentially lead to epidemic harm to the population. In contrast, international examples provide a structured approach to categorizing infectious diseases. For instance, China's epidemic law classifies them into three categories: A, B, and C, as specified in Section 3. Similarly, Malaysia's relevant legislation includes a list of contagious illnesses in its First Schedule, while Canada's statute incorporates a definition clause enumerating pathogenic diseases. It is therefore advisable that the 1958 Act in Pakistan be augmented to include, in addition to the definition of epidemic diseases, a list of well-recognized infectious diseases categorized based on the severity of outbreaks and the treatability of these conditions, possibly through an accompanying Schedule.[457]

4.7.2 Critical Analysis of the Punjab Infectious Diseases (Prevention and Control) Act, 2020 (PIDA)

PIDA is divided into six Parts, each of which addresses a different aspect of the Act.

1. Definitional Concerns in Preliminary Part 1

Sections 1 and 2 of Part 1 of PIDA each contain an introduction and definitions. Definitions typically outline a constitutive factor that justifies the application of the relevant legislation. It is typical for legislation governing infectious diseases to include a definition of an 'infectious

[457] Sahar, "An Analytical Study," 76-78

disease', which is its major focus. The authors of PIDA, however, appeared to be satisfied with the absence of a definition for an 'infectious disease,' an 'epidemic,' and a system for classifying infectious illnesses. It is a glaring flaw in the Act that might have a big influence on how response techniques are used.[458]

Although quarantining is a crucial response strategy under the Act, the terms "quarantine" and "quarantine area" have not been described. In reality, it makes no mention of quarantine requirements, practices, etc. either. According to Saqlain et al., the biggest challenges faced in managing COVID-19 are related to quarantine, and this deficiency is having a significant influence on practice.[459] 'Place of retention' is a phrase used in the Act, but it is not defined. A person's confinement is an uncharacteristic action that restricts his liberty of movement, therefore this problem is particularly pertinent in terms of both response measures and human rights concerns.[460]

The PIDA's definitional problems include ambiguity and lack of clarity, in addition to the absence of crucial definitions such as those stated above. For instance, a "medical officer" is given a number of duties and responsibilities by the Act. The term "notified medical officer" has been broadly characterized as an individual who has been officially designated for the Act's purposes through notification by the Secretary under section 2(e) of the Act. The qualifications

[458] Abbas, Sajjad, and Razi, "COVID-19 Pandemic and Legal Response: A Review of Punjab Infectious Diseases Law," 6584-85

[459] Muhammad Saqlain et al., "Is Pakistan Prepared to Tackle the Coronavirus Epidemic?," *Drugs & Therapy Perspectives* 36, no. 5 (March 20, 2020): 213–14. https://doi.org/10.1007/s40267-020-00721-1.

[460] Abbas, Sajjad, and Razi, "COVID-19 Pandemic and Legal Response: A Review of Punjab Infectious Diseases Law," 6585.

of the medical officers in terms of skills, experience, compensation package, scale grade, and academic background have not been defined as eligibility criteria for the issue of notifications.[461]

2. Human Rights Concerns

It should be highlighted that PIDA is an exceptional law that, like previous such laws, is bound to raise questions about its application when the crisis has passed. Jonathan notes that COVID-19 has prompted governments to enact stringent regulations, including limiting people's ability to move about and conduct business and even housing infected people in isolation facilities.[462] The European Group on Ethics in Science and Technologies (EGE) highlighted the considerable risk associated with emergency legislation, which may establish a distinct "normal" characterized by fragmented rights and freedoms in the aftermath of an emergency. These reservations are not unwarranted, and moral worries have been brought up by concerned parties.[463] In light of the aforementioned issues, it is noted that PIDA, an emergency law that is now a Provincial Assembly act, has no mention of the defense of human rights.

A medical professional is permitted, under Section 10(3) of the Act, to initially hold an allegedly infected individual for no more than 48 hours. However, this restriction may be waived and a person may remain in custody for more than 48 hours if, in the judgment of the relevant medical authority, this is necessary. In this situation, there is no time restriction and the patient may be kept for as long as necessary, pending the medical officer's evaluation.[464] According to Pakistan's

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[461] Abbas, Sajjad, and Razi, "A Review of Punjab Infectious Diseases Law," 6858.

[462] Jonathan Pugh, "The United Kingdom's Coronavirus Act, Deprivations of Liberty, and the Right to Liberty and Security of the Person," *Journal of Law and the Biosciences* 7, no. 1 (January 1, 2020), https://doi.org/10.1093/jlb/lsaa011.

[463] EUROPEAN GROUP ON ETHICS IN SCIENCE AND NEW TECHNOLOGIES, *Statement on European Solidarity and the Protection of Fundamental Rights in the COVID-19 Pandemic* (European Commission, 2020), https://research-and-innovation.ec.europa.eu/system/files/2020-04/ege_statement_ege_covid-19.pdf

[464] The Punjab Infectious Diseases (Prevention and Control) Ordinance 2020, Section 10

Constitution's Article 15, such retention principally constitutes an imposition on the liberty of movement. In accordance with Article 15, any constraint on the freedom of movement must be a reasonable restriction enacted by law in the interest of the public. In light of the case law established in Pakistan, it is necessary to determine what would qualify as a "reasonable restriction." A Lahore High Court ruling states that it ought to be "substantive, real, proximate, tangible, and immediate and not remote, conjectural, or far-fetched."[465]

Additionally, it should be observed that in furtherance to the medical officers, the Chief Minister may provide permission as per Section 10(3)(b) of the PIDA for the Secretary of the Provincial Government to authorize retention of more than 48 hours due to "circumstances related to" contagious illnesses. Other than dangers determined by a licensed medical professional, this fails to indicate what such situations may be. The governmental executive arm is represented by the Secretary to the Provincial Government, and he is not allowed to use his power to restrict someone unless he is factually competent, such as based on a medical officer's evaluation.[466]

A medical officer may impose restrictions on those who pose a "significant risk" for up to 14 days, with the possibility of an extension based on the medical officer's opinion. However, under Section 12(3)(b) of the Act, which also contains language similar to Section 10(3)(b), the Secretary has been given the authority to authorize extensions that extend restrictions beyond a 14-day period with the approval of the Chief Minister. Without any realistic restrictions, the Provincial Government's retained rights to extend the retention and restraint duration do not exude reasonableness. Thus, the argument is that the Secretary's executive authority granted

[465] Lahore High Court. *"M/s. Leo Communications (Pvt.) Ltd. etc. Versus The Federation of Pakistan, etc."* (W.P. No. No.2581/2017). https://sys.lhc.gov.pk/appjudgments/2017LHC2716.pdf

[466] Abbas, Sajjad, and Razi, "COVID-19 Pandemic and Legal Response: A Review of Punjab Infectious Diseases Law," 6586

under Sections 10(3)(b) and 12(3)(b) of the Act is unable to be legitimatized as "reasonable" by the intent of Article 15 of the Constitution.[467]

Discrimination against infected people and broadcasting their identities and photographs is a crucial topic that is absent from PIDA's wording. People who have an infectious disease are already more likely to face prejudice because of an unavoidable medical condition. The trauma of experiencing discrimination due to the media's publication of their photographs and coverage of them might be added to the trauma of having a viral illness. Even though Section 27 of the PIDA guarantees the confidentiality of information about infected people, it is crucial that the PIDA expressly forbade treating people with infectious diseases differently, especially in light of the current pandemic's rampant media hype.[468]

3. Approach of Use of 'Reasonable Force' and Police Powers

Section 16 of the Act also offers supplementary authority to a healthcare professional or a law enforcement official, which permits the application of "reasonable force" by a law enforcement officer, in addition to the authority granted according to Sections 10 and 12. The definition of reasonability is not provided in the Act itself. One must examine the case law established by Pakistan's superior courts to comprehend what should be reasonable. In *Maudoodi v. Government of Pakistan*, the Supreme Court made the following observations: "The reasonableness of the mode of application of the restriction, whether such mode be prescribed by the statute or not."[469] Evidently, given this precedent, the Act should have included language defining what constitutes a reasonable use of force. The PIDA established Section 16(4) to

[467] Abbas, Sajjad, and Razi, "A Review of Punjab Infectious Diseases Law," 6587.
[468] Abbas, "Punjab Infectious Diseases Law."
[469] Abul ala Maududi Vs Government of West Pakistan, PLD 1964 SC 673 (Supreme Court of Pakistan 1964)

provide police officers the authority to seize a person in addition to the authority to use reasonable force.[470]

It is claimed that police powers are not implausibly to be abused in the absence of an objective standard for their use under the Act. In light of the police's behavior towards the people and use of aggression, this matter beyond the bounds of the law bas to be investigated. There exist several instances of cops' beatings, maltreatment, and other inhumane actions against people. People were subjected to torture by police in public locations for not wearing masks. In Punjab's second-largest city, Faisalabad, police have reportedly used stun guns on both adults and children. According to reports, stun guns used on victims who weren't wearing masks caused temporary loss of balance, poor muscular control, brain fog, and drowsiness.[471] It should be mentioned that this occurrence in Faisalabad, which was covered by foreign media, happened after PIDA was enacted and became an Ordinance. The PIDA's rules are clouded by the morality dilemma that exists between the idea of using "reasonable force" and the reality on the ground. Police were reportedly fining anyone who violated SOPs in Lahore, the province capital, even though the figures for these fines had not yet been authorized by the appropriate authority.[472]

As the administrative officer of the district, the Deputy Commissioner is authorized by Section 22 of PIDA to give orders to his subordinates or police personnel. To carry out these orders, the Deputy Commissioner, his juniors, or constabularies may: (a) go into any properties; (b) lock up an individual for up to twenty-four hours; and (c) use "reasonable force" to make sure adherence.

[470] Abbas, Sajjad, and Razi, "COVID-19 Pandemic and Legal Response: A Review of Punjab Infectious Diseases Law," 6587

[471] Zubair Qureshi Correspondent, "COVID-19: Police Using Shock Device to Punish Violators of Coronavirus Preventive Measures in Pakistan," *Pakistan – Gulf News*, June 8, 2020, https://gulfnews.com/world/asia/pakistan/covid-19-police-using-shock-device-to-punish-violators-of-coronavirus-preventive-measures-in-pakistan-1.71933319

[472] Rameez Khan, "Police Jump the Gun in Fight against Covid-19," The Express Tribune, June 6, 2020, https://tribune.com.pk/story/2236452/police-jump-gun-fight-covid-19.

By establishing a platform within the executive framework, Any complaint arising from an illegally enforced restriction or limitation appears to have been maintained outside of court cognizance pursuant to the PIDA. Although it might be argued that providing a revision or appellate platform inside the executive framework is a feasible solution during an emergency circumstance like the coronavirus since it is more time-effective given the possibility that judicial remedy would take time. The claim, however, is dubious for two reasons: initially, it breaches the idea of governmental and judicial jurisdiction; and secondly, summary processes can be employed in a regular court of law.[473]

4. Public versus Governmental Responsibility

According to the PIDA's general structure, the Act seems to be more concerned with imposing duties on the people. For instance, the Act does not offer to exchange this obligation with the administration to communicate with and inform the community. instead, the community has been given the responsibility to inform. A deeper examination of Sections 4 through 6, 11, 12 and 14 reveals that the Act appears to lavishly emphasize the levels of obligations placed on the public, occasionally referring to such obligations as duties and other times giving rise to their effects via the authorities designated for officials.[474]

As is clear from Section 26, the PIDA's main design and focus is primarily on reserving broad authority for those operating in under the Act, and shielding them from legal action if a citizen suffers a loss or damages to his personality or property. When considered in the context of instances and past records of police abuses in Pakistan, it appears that the police have been

[473] Abbas, Sajjad, and Razi, "COVID-19 Pandemic and Legal Response: A Review of Punjab Infectious Diseases Law," 6588

[474] Abbas, Sajjad, and Razi, "A Review of Punjab Infectious Diseases Law," 6589

granted a wide range of powers as a means of enforcing the law. The Supplementary Authorities under Section 16 and the clauses regarding Offense and Punishments in Chapter V of the Act make clear the Act's focus on dominance over the masses.[475]

5. Unanswered Queries

A review of the PIDA reveals certain unanswered queries along with the aforementioned problems. The Act gives a medical professional broad discretion in how to treat a patient, which might cause him harm. This discretion might lead to issues if he performs a medical examination incorrectly or declines to do so. The patient who is suffering owing to medical malpractice or lack of care has no recourse. For instance, does he have access to a legal remedy if he receives any harm? The law does not address this concerning issue. Its sole objective is to lessen the COVID-19 pandemic at any cost.[476] There is also an immunity clause no. 26 that shields medical professionals from liability, in addition to the absence of certain safeguards for patients already. This provision states that doctors are exempted from accountability even if they perform their duties carelessly since such proof is difficult to come across, especially in emergencies like the COVID-19 contagion.[477]

Considering the points discussed earlier, it can be asserted that the current PIDA lacks comprehensive provisions regarding the responsibilities of the government during a public health emergency, like COVID-19, raising questions about whether the actions made by government officials would be supported by evidence. The appropriate length of any restrictions and the

[475] Abbas, "Punjab Infectious Diseases Law."
[476] Arwa Arshad, "Panic, Pandemic and Punjab Infectious Diseases Ordinance 2020 - Courting The Law," Courting the Law, April 30, 2020, https://courtingthelaw.com/2020/04/10/laws-judgments-2/new-laws/panic-pandemic-and-punjab-infectious-diseases-ordinance-2020/
[477] Abbas, Sajjad, and Razi, "COVID-19 Pandemic and Legal Response: A Review of Punjab Infectious Diseases Law," 6590.

conditions under which a citizen's privacy has been violated can be determined by the circumstances. Similarly, when drafting PIDA, little thought was given to the economic effects of a pandemic. As an example, will an infected everyday wager who is quarantined receive any assistance, such as a rent reduction or foodstuff for his family members?[478]

4.8 Conclusion

In conclusion, the fourth chapter scrutinizes the mandatory COVID-19 vaccination campaign in Pakistan, considering both Islamic law and domestic legal frameworks. It highlights the historical context of vaccination programs in the country and their alignment with international commitments. Islamic perspectives on pandemics and vaccination, emphasizing hygiene and ethical considerations, are analyzed. The chapter underscores the ethical complexities surrounding vaccine formulations and the need for halal alternatives. Legal and ethical challenges arise from emergency measures for mandatory vaccinations, warranting careful consideration. The chapter also addresses the significant role of the NCC in the pandemic response, with a focus on its impact without legislative oversight.

Moreover, it evaluates the adverse events/reactions of vaccines, emphasizing the need for robust monitoring and reporting mechanisms to address potential concerns. Additionally, the chapter delves into constitutional concerns and limits surrounding mandatory vaccination campaigns, highlighting the importance of balancing public health imperatives with individual rights.

Furthermore, the chapter delves into vaccine hesitancy and the roots of resistance, indicating the need for targeted awareness campaigns. Legal frameworks for epidemic control, notably the

[478] Iftikhar Gillani, "India, Pakistan Grappling with Archaic Epidemic Law," Anadolu Agency, March 31, 2020, https://www.aa.com.tr/en/asia-pacific/india-pakistan-grappling-with-archaic-epidemic-law-/1785977/.

Epidemic Diseases Act of 1958 and the Punjab Infectious Diseases (Prevention and Control) Act, 2020, are evaluated, revealing gaps in definition, response strategies, and human rights protections. Recommendations include amending existing legislation to incorporate precise definitions and provisions for effective epidemic management.

In light of these findings, Pakistan must reevaluate and fortify its legal and ethical framework to effectively respond to current and future pandemics. This encompasses revising legislation to encompass comprehensive definitions and strategies while ensuring the protection of fundamental rights. Additionally, proactive engagement with stakeholders, including religious and medical communities, is crucial for a successful vaccination campaign. Through these measures, Pakistan can enhance its resilience in the face of public health crises.

Chapter 5

Concluding Remarks, Suggestions & Recommendations

5.1 Concluding Remarks

The thesis "Mandatory COVID-19 Vaccination in Perspective of International Human Rights Law and Domestic Laws of Pakistan: An Overview" presents a comprehensive examination of the intricate intersection of international human rights laws, Pakistan's domestic laws, and to some extent Islamic legal frameworks in the context of mandatory COVID-19 vaccination. The structured approach of this thesis, spanning five vital chapters, has provided a robust foundation for the analysis and conclusions drawn.

Beginning with a historical overview of pandemics and vaccines, the research emphasizes the enduring battle between humanity and infectious diseases, underscoring the pivotal role of vaccines in shaping public health outcomes. The exploration of international and regional human rights laws in Chapter 3 has elucidated the complex ethical and legal debates surrounding vaccination policies, offering critical insights into the balance between individual rights and public health imperatives. Chapter 4's meticulous scrutiny of mandatory COVID-19 vaccination in Pakistan, viewed through the prisms of Islamic law and domestic legal frameworks, has shed light on the multifaceted challenges and considerations faced by the nation in navigating this complex terrain.

The thesis, as a whole, is rooted in a careful synthesis of historical, legal, ethical, and cultural perspectives. It is evident that the COVID-19 pandemic has spurred unprecedented advancements in vaccine development and deployment, challenging traditional approval protocols. The ethical and legal implications of mandatory vaccination under Emergency Use Authorizations (EUAs) have ignited debates surrounding informed consent, human rights, and the tension between collective well-being and individual freedoms.

International human rights instruments, including the Nuremberg Code, ICCPR, and the Declaration of Helsinki, establish a framework for respecting individual autonomy in medical interventions. The European legal framework, represented by the ECHR, Oviedo Convention, and the Charter of Fundamental Rights of the European Union, further bolsters the protection of fundamental rights in the context of vaccinations. The European Court of Human Rights provides a legal framework for assessing compulsory medical procedures, emphasizing factors such as legality, legitimate aim, necessity, and proportionality.

In Pakistan, the intersection of Islamic law and domestic legal frameworks has introduced unique considerations in the context of mandatory vaccination. The thesis underscores the need for careful alignment of vaccination campaigns with international commitments and the ethical complexities surrounding vaccine formulations. Legal and ethical challenges arising from emergency measures for mandatory vaccinations necessitate cautious deliberation, particularly in balancing public health imperatives with individual rights.

In summation, this thesis offers a comprehensive exploration of the intricate landscape surrounding mandatory COVID-19 vaccination. The ensuing recommendations serve as a guiding light for policymakers, providing a strategic framework for navigating the complexities

of pandemic response. By heeding these suggestions, Pakistan stands poised to fortify its readiness in the face of present and future public health challenges, achieving a harmonious equilibrium between safeguarding individual rights and advancing public health imperatives.

5.2 Suggestions & Recommendations

In light of the comprehensive analysis presented throughout the preceding chapters, a series of carefully considered suggestions and recommendations emerge, offering a roadmap for policymakers and stakeholders alike. These proposals, grounded in an amalgamation of historical insights, legal expertise, ethical considerations, and cultural awareness, offer a strategic blueprint for navigating Pakistan's response to current and future pandemics, especially in the realm of mandatory COVID-19 vaccination. With a deliberate focus on upholding individual rights, fostering accountability, and fortifying legal and ethical frameworks, the following recommendations are presented as thoughtful strategies to navigate the complex terrain of public health crises. Each suggestion represents a pivotal step towards ensuring a balanced approach that safeguards both collective well-being and fundamental individual rights.

1. **Emphasis on Environmental and Household Cleanliness in Pandemic Response**

In light of Islamic principles advocating for a clean and orderly life, authorities should prioritize educational campaigns promoting environmental and household cleanliness as integral components of pandemic response strategies.

2. **Upholding the Right to Free and Informed Consent in Vaccination Policies**

States Parties, including Pakistan, should adhere to international legal obligations by refraining from imposing COVID-19 vaccination as mandatory on citizens. Furthermore, non-state actors should not be allowed to coerce individuals into receiving the COVID-19 vaccine. This upholds the non-derogable right to free and informed consent in any health-related or biological experimentation.

3. **Comprehensive Testing and Evaluation of Vaccines**

Prior to large-scale deployment, any vaccine provided to the general public must undergo extensive testing. This process should thoroughly assess both potential dangers and benefits associated with the vaccine to ensure its safety and efficacy.

4. **Application of Bioethical Principles in Legislation**

When enacting mandatory COVID-19 vaccination laws, policymakers should integrate the four bioethical tenets of respect for self-determination, kindness, impartiality, and equity to guide decision-making and uphold ethical standards.

5. **Legislative Oversight and Accountability**

Introduce mechanisms for legislative oversight of executive rule-making powers during public health emergencies. This enhances accountability and ensures that measures taken are in line with constitutional limits.

6. **Amending and Updating West Pakistan Epidemic Diseases Act, 1958**

The Federal Government should take proactive steps to amend the West Pakistan Epidemic Diseases Act, 1958, particularly in the context of the Islamabad Capital Territory (ICT). This amendment should encompass precise definitions and provisions aligned with contemporary needs for effectively combating infectious diseases.

7. **Inclusion of Key Definitions in Legislation**

To broaden the application of the above-mentioned law, a fresh provision should be added to the implemented statute, defining key terms such as "Contamination," "Disinfection," "Epidemic Disease," "Hazardous Agents," "Immunization," "Isolation," "Public Health," and "Public Health Emergency."

8. **Provision for Declaration of a "Health Emergency"**

An additional clause should be incorporated into the Epidemic Diseases Act, 1958, allowing for the declaration of a "Health Emergency." This provision would enhance the government's response capabilities in times of crisis.

9. **Need for a Comprehensive and Uniform Public Health Law in Punjab**

The Punjab government should prioritize the development of a comprehensive and uniform public health law. This law should take into account the concerns raised in the thesis, as well as the practical challenges and ramifications the government may encounter when implementing mandated provisions of the Punjab Infectious Diseases (Prevention and Control) Act, 2020.

By implementing these recommendations, Pakistan can bolster its legal and ethical framework, effectively responding to current and future pandemics. This proactive approach encompasses

revising legislation to encompass comprehensive definitions and strategies, while safeguarding the protection of fundamental rights. Additionally, engaging with stakeholders, including religious and medical communities, is crucial for the success of any vaccination campaign. Through these measures, Pakistan can enhance its resilience in the face of public health crises.

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