

# Hindering patient safety with vaccination fraud: A case study

Irene Auteri PhD, RN<sup>1\*</sup>, Bridget Maley PhD, RN, CNE<sup>2</sup>, James A. Ferguson MD, MPH<sup>3</sup>

<sup>1</sup>Adelphi University College of Nursing and Public Health, USA

<sup>2</sup>Adelphi University College of Nursing and Public Health, USA

<sup>3</sup>Hofstra University Zucker School of Medicine, USA

\*Author for correspondence:  
Email: iauteri@adelphi.edu

Received date: September 19, 2025  
Accepted date: November 03, 2025

Copyright: © 2025 Auteri I. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

## Abstract

**Background:** With recent changes influenced by the US Secretary of Health and Human Services, public confusion around vaccination requirements has become a significant issue. A lack of trust in health institutions creates an environment that vaccination fraud can capitalize on. This case study examines the impact of vaccination fraud on patient safety and professional integrity within nursing. It explores the context of the COVID-19 pandemic and vaccine skepticism, which provided the environment for such ethical and criminal violations to occur. This paper highlights the historical precedent of vaccine hesitancy and its continuation into the modern era, setting the stage for the specific case discussed.

**Case Study:** This document details a case involving one registered nurse and one licensed practical nurse who committed fraud by selling falsified COVID-19 vaccination cards and entering false information into the state's immunization database. Their actions constituted a criminal offense and a severe violation of professional ethics, earning them over \$1.5 million. The nurses were charged with second-degree forgery and offering false instruments for filing.

**Ethical Violations and Principles:** The actions of the nurses are analyzed against the American Nurses Association's Code of Ethics. The case demonstrates a breach of several provisions, including those related to practicing with compassion and respect, the primary commitment to patient care, professional boundaries, and accountability. It also highlights the disregard for core ethical principles such as veracity (truthfulness) and beneficence (doing good), which are fundamental to the nursing profession.

**Discussion:** Nurses, as the largest group in the healthcare workforce, are critical for public health. This case study underscores how vaccination fraud by two nurses compromised the credibility of public health initiatives and erodes public trust in the nursing profession. The findings suggest that factors such as vaccine hesitancy, personal bias, and a desire for wealth can contribute to such violations. This highlights the need for continued ethical education and collaboration among healthcare authorities and policymakers to address these complex issues.

**Conclusion:** Vaccination fraud, particularly when committed by healthcare professionals, severely compromises patient safety by creating a false sense of protection that can have dangerous health consequences. The case provides a powerful example for nurses and all healthcare practitioners to learn from, reinforcing the importance of ethical practice, professional integrity, and the responsibility to advocate for patient safety. It demonstrates how such violations can lead to disciplinary action, legal ramifications, and lasting damage to professional reputation.

**Clinical Relevance:** This case study serves as a critical reminder for all healthcare professionals about the non-negotiable importance of upholding ethical standards and the law and reinforces that personal beliefs must not interfere with professional duties, especially when patient safety is at risk. Upholding professional codes of ethics and principles is essential for maintaining the public's trust and ensuring the integrity of the healthcare system.

**Keywords:** Code of ethics, Fraud, Patient safety, Nurses, Vaccination

## Introduction

On December 31, 2019, World Health Organization's (WHO) Country Office in China picked up a media statement by the Wuhan Municipal Health Commission from their website on cases of 'viral pneumonia' in Wuhan, China. In the weeks, months and years that unfolded after that, COVID-19 came to contour our lives and our world. COVID-19 was a global pandemic causing the development of a vaccination to a world of patients of both hope and skeptics alike. Despite statistics that vaccines prevent disease, fears of harm from vaccine administration continue to threaten patients' safety. The unvaccinated pose a risk to other patients who are unable to receive the vaccine and compromise the concept of herd immunity. The original fabricated study by Wakefield in 1998 that stated MMR vaccinations had a direct connection to autism was not the beginning of anti-vaccine misinformation but certainly increased vaccine hesitancy and debate. The aim of this case study addresses the concern of medical fraud and abuse of patient safety within nursing, using the example of two nurses who committed fraud by selling vaccination cards and subsequently entered false information into their State's mandatory immunization database.

## Background

Long before modern medicine, people used various methods to try to protect themselves from illness and deadly diseases. Early practices included isolation and herbal medicines. Many believed in the supernatural and other spiritual experiments. Edward Jenner developed the smallpox vaccine which engulfed the country in the 1700s. Benjamin Franklin lost his four-year-old son to smallpox in 1736. Franklin wrote about his personal tragedy in his own autobiography:

*"In 1736, I lost one of my sons, a fine boy of four years old, by the small pox, taken in the common way. I long regretted bitterly and still regret that I had not given it to him by inoculation. This I mention for the sake of parents who omit that operation, on the supposition that they should never forgive themselves if the child died under it: my example showing that the regret may be the same either way, and that, therefore, the safer should be chosen" [1].*

When vaccinations first came out as inoculations there was much hesitancy. Benjamin Franklin's brother James Franklin started a newspaper during that time, The New England Courant which was very critical of the new inoculation against smallpox. There was no distinct knowledge of the details of the vaccine, but the writers were highly skeptical of the advocates at that time. As history tends to repeat itself, the COVID-19 vaccine was no different in its cause of speculation of decisions not always based on science. Science is meant to be objective but when reporting it, it is subject to bias and competing interest [2].

In late October 2021, the Pfizer BioNTech COVID-19 vaccine was granted emergency use authorization (EAU) by the US Food and Drug Administration (FDA) and recommended for use by the Centers for Disease Control and Prevention (CDC) in children 5 to 11 years of age [3]. By the end of January 2022, only 22% of US children in this age group were fully vaccinated [4]. As companies, schools, restaurants all required mandated vaccines, more people were skeptical of the vaccine and its side effects.

- The WHO reports that due to Coronavirus (COVID-19), over 760 million cases and 6.9 million deaths have been recorded

worldwide since December 2019, but the actual number is thought to be higher and over 13 billion COVID-19 vaccine doses have been administered as of June 2023 [5].

## Case Study

This case study examines a significant breach of professional ethics and legal standards involving two professional nurses. Nurse A, RN, NP and her employee, Nurse B, LPN were criminally charged for their involvement in a fraudulent scheme.

Between November 2021 and January 2022, the two nurses allegedly sold counterfeit COVID-19 vaccination cards and entered false information into their State Immunization Information System (SIIS). They reportedly charged adults \$220 and children \$85 for these fraudulent documents, amassing more than \$1.5 million in cash.

Prosecutors accused the nurses of creating and selling forged vaccination cards to an undercover detective without administering the vaccine. Nurse A and Nurse B were charged with second-degree forgery, and the NP faced an additional charge of offering a false instrument for filing.

This case exemplifies a serious violation of nursing ethics and legal statutes. According to Black's Law Dictionary, fraud is a knowing misrepresentation of the truth intended to cause a person to act to their detriment [6,7]. The nurses' actions align with this definition, as they used deception for personal gain, jeopardizing public health and undermining the integrity of the healthcare system.

## Upholding Ethical Standards in Nursing

The nursing profession is guided by a foundational commitment to ethical practice [8]. The American Nurses Association (ANA) Code of Ethics and the core ethical principles serve as crucial frameworks that direct professional conduct. Adherence to these doctrines is essential to prevent negative outcomes and ensure patient well-being.

A cornerstone of healthcare ethics is the principle of "first, do no harm" (*primum non nocere*), which directly underscores the paramount importance of patient safety. This commitment to ethical practice is reflected in the high level of public trust placed in nurses. For the 22<sup>nd</sup> consecutive year, nursing has been recognized as the most honest and ethical profession, with 78% of U.S. adults reporting a high degree of confidence in nurses' integrity [[9,10]. This sustained trust highlights the profession's unwavering dedication to its ethical obligations and patient care.

## Violations of the Code of Ethics and Ethical Principals

A violation of the Code of Ethics for nurses, as well as a violation of ethical principles, is any action or inaction that contradicts the moral standards and professional duties expected of a nurse. These codes and principles serve as the foundation for ethical conduct in nursing, ensuring patient safety and trust in the profession [11].

Violations can range from minor infractions to serious misconduct and can have significant consequences, including disciplinary action, loss of employment, or even the revocation of a nursing license [12].

*The Nurse's Code of Ethics* is used by State Boards of Nursing and hospitals to guide practice and address professional integrity,

behavior, and misconduct [9]. This code serves as a guide for nurses' decision-making practice and helps to ensure the trust the public has in nurses is secure. When nurses deviate from the code, they not only break the trust that the public has in nurses but also the trust that coworkers may have with their fellow nurses. There are ten provisions in the *Code of Ethics* and the nurses in this case study violated many of these provisions.

*Provision 1: The nurse practices with compassion and respect for the inherent dignity, worth, and unique attributes of every person.* Provision 1 states that the nurse's primary commitment is to the patient. This includes promoting, advocating for, and protecting the health, safety, and rights of the patient. By engaging in vaccination fraud, a nurse is knowingly misrepresenting a patient's health status, which can lead to severe consequences for both the individual and the community. This action violates the trust essential for a therapeutic relationship, as the patient is relying on the nurse to provide accurate and honest information and care.

*Provision 1.2 Relationships with Patients and Recipients of Nursing Care.* If the nurse cannot develop a trusting relationship with their patients, it will be difficult for individuals to come to the hospital or healthcare setting for care. It also endangers the public by creating a false sense of herd immunity and potentially exposing vulnerable populations to preventable diseases.

*Provision 2: A nurse's primary commitment is to the recipient(s) of nursing care, whether an individual, family, group, community, or population. Provision 2.3 emphasizes that nurses must work within their professional role. Vaccination fraud is a clear deviation from this role:*

- **Misuse of Authority:** *The nurse's role is to provide accurate, evidence-based care. Creating fraudulent documents is a gross misuse of their professional authority and access to medical records systems.*
- **Criminal Activity:** *Vaccination fraud is often a criminal act, involving forgery and misrepresentation. Engaging in criminal behavior is far outside the ethical and legal boundaries of a nurse's professional role.*
- **Harm to Self:** *By participating in such activities, the nurse puts their own license, career, and personal freedom at risk. This self-endangerment is a direct result of stepping outside professional boundaries and acting unethically.*

*Provision 3: The nurse establishes a trusting relationship and advocates for the rights, health, and safety of recipient(s) of nursing care.* When nurses break the law, they are giving a false sense to the individuals they are providing care. This will break down the trust that society has in nurses. Provision 3 states that the nurse establishes a trusting relationship and advocates for the rights, health, and safety of the recipients of nursing care. Vaccination fraud shatters this trust. When nurses engage in fraudulent activities, they are not only breaking the law but also actively misleading patients and the public. This deceptive behavior is a direct breach of the nurse-patient relationship, which is built on honesty and integrity.

By participating in vaccination fraud, a nurse fails in their role as a patient advocate. Instead of protecting a patient's health and safety by promoting evidence-based public health measures, the nurse endangers them and the community. This action prioritizes personal beliefs or financial gain over the well-being of the patient and the wider population.

Vaccination fraud jeopardizes public health by undermining efforts to control the spread of infectious diseases. A nurse's involvement in such a scheme creates a false sense of security, as it leads to inaccurate vaccination rates and makes it difficult to track disease outbreaks. This deception directly harms both the individuals receiving the fake documentation and those they encounter, particularly vulnerable populations like the elderly or immunocompromised. The nurse's actions directly contradict their professional responsibility to protect the health and safety of the community.

The long-term consequences of a nurse engaging in vaccination fraud are significant. It erodes society's trust in the nursing profession, making it harder for all nurses to carry out their duties. When the public questions the integrity of nurses, it harms the profession's ability to effectively advocate for public health and provide quality care. Therefore, vaccination fraud is a profound violation of Provision 3, as it betrays the core ethical obligations of a nurse.

*Provision 4: Nurses have authority over nursing practice and are responsible and accountable for their practice consistent with their obligations to promote health, prevent illness, and provide optimal care.*

#### *Provision 4.1 Responsibility and Accountability for Nursing Practice*

Responsibility and accountability in nursing practice are inseparable concepts. Ethical responsibilities are grounded in the profession's values and goals. Nurses are accountable for fulfilling their ethical responsibilities, which includes choices to take or not take action. Nurses are always accountable for their judgments, decisions, and actions; however, in some circumstances, responsibility may be borne by both the nurse and the institution, organization, or public entity [9,13].

#### *Provision 4.3 Ethical Awareness, Discernment, and Judgment*

Ethical awareness involves understanding that all nursing actions have ethical implications to the extent that they support or detract from nursing goals of providing an ethical good or end [13,14]. Moral identity as a nurse entails the internalization of moral values and virtues, dispositions, obligations, relational maturity, and ethical comportment. Ethical awareness, discernment, and judgment, then, are expressions of the good intrinsic to nursing, its values, virtues, obligations, and ends, with a vision for the health and well-being of patients, for the health and well-being of society, and for the common good.

*Provision 5: The nurse has moral duties to self as a person of inherent dignity and worth including an expectation of a safe place to work that fosters flourishing, authenticity of self at work, and self-respect through integrity and professional competence.*

Vaccination fraud violates Provision 5 of the American Nurses Association (ANA) Code of Ethics by compromising the nurse's commitment to self and others. This provision emphasizes the nurse's duty to promote health and safety and to preserve moral character and integrity.

When a nurse engages in vaccination fraud, they directly violate this provision in several ways:

- **Compromising integrity and moral character:** Vaccination fraud, such as creating or selling fake vaccination cards, is a dishonest act that directly contradicts the nurse's professional integrity and moral character. This deceptive behavior is a severe breach of trust with the public and the healthcare system.

- **Endangering public health and safety:** By facilitating vaccination fraud, a nurse helps undermine public health efforts. They contribute to the spread of preventable diseases by allowing unvaccinated individuals to bypass safety measures. This action directly conflicts with the duty to promote health and safety for both the nurse and the community.
- **Breach of professional competence:** A nurse's competence includes not only clinical skills but also adherence to ethical and legal standards. Engaging in fraud demonstrates a fundamental lack of professional judgment and a failure to uphold the standards of the nursing profession.

*Provision 5.3 Integrity* Personal integrity is an aspect of wholeness of character that requires reflection and discernment; its maintenance is a self-regarding duty. The nurses lacked integrity, choosing to falsify vaccination cards for personal gain. This action demonstrates a failure to prioritize ethical conduct, instead allowing greed and a lack of moral compass to guide their behavior.

*Provision 6: Nurses, through individual and collective effort, establish, maintain, and improve the ethical environment of the work setting that affects nursing care and the well-being of nurses.*

*Provision 6.1* Vaccination fraud directly violates Provision 6 of the **Code of Ethics for Nurses** by undermining the nurse's responsibility to create and maintain an ethical environment. Virtues in nursing and caring practices are learned, habituated attributes of moral character developed in the context of nursing practice, education, and identity formation. These nurses showed a lack of moral character and tarnished the identity of the profession of nursing.

**Compromising public and workplace safety:** By providing fraudulent documentation, the nurse endangers the public and their colleagues by allowing unvaccinated individuals to bypass public health measures. This action directly contradicts the goal of creating a safe and ethical environment.

**Betraying professional integrity:** This act is a gross breach of trust, eroding the public's confidence in the nursing profession. It demonstrates a lack of integrity, which is a core tenet of ethical nursing practice.

**Contributing to a corrupt environment:** Falsifying records for personal gain introduces fraud and deceit into the healthcare system. This not only violates ethical principles but also creates a precedent that encourages dishonesty, making the entire work setting less ethical.

**Ethical principles:** Ethical principles, including autonomy, beneficence, fidelity, justice, nonmaleficence, accountability, and veracity, are fundamental to nursing practice [15]. They serve as a guide to ensure patients receive equitable and respectful care. In this case, the nurse's actions disregarded the principles of veracity and beneficence.

**Veracity,** a core ethical principle in nursing, requires a commitment to truthfulness and accuracy. In this case, the nurses' actions—specifically the falsification of vaccination records and the misrepresentation of data—constituted a clear breach of this principle. This conduct not only jeopardizes patient safety but also erodes public trust in both the individual practitioners and the nursing profession.

**Beneficence** is the ethical principle of promoting good and acting in the best interest of the patient. In nursing, this means a nurse must set aside their personal beliefs to ensure a patient's well-being. By falsifying vaccination documents and entering false information into the state database, the nurses in this case failed to uphold this principle. The nurses' opinion and bias about vaccines took precedence over their professional duty to protect the public health and act in the best interest of the community they served.

## Discussion

As the largest members of the healthcare workforce, nurses are often the first point of contact for patients seeking medical advice. Most healthcare services involve some form of care by nurses. The ANA Code of Ethics guides nurses to make sound judgements that uphold patient well-being and autonomy, while preserving the profession's integrity. These ANA principles ensure nurses consistently act with integrity, respect, and compassion.

As Wakefield in 1998 indirectly linked MMR vaccination to autism in the journal *Lancet*, it fostered a powerful connection between the two in public discourse. Two years later the journal retracted the fraudulent article in 2010, yet it informed two judgments issued by Italian courts in 2012 in the town of Rimini, and in 2014 in Milan [16]. Wakefield's debunked 1998 study had a lasting impact in Italy despite being retracted in 2010. This falsification fueled public concern and distrust in vaccines across Italy and the rest of the world.

Similarly, in a study of healthcare workers' vaccine hesitancy, corruption, and inadequate salaries were identified as key contributors to the circulation of fake vaccination cards in Nigeria [17]. Similarly, at least 300,000 fraudulent COVID-19 vaccination certificates were discovered in France in 2022, resulting in legal action [18]. The WHO has reported vaccination fraud in Mexico [19].

Vaccination fraud committed by nurses compromise the credibility of vaccine initiatives and compromise the public's trust in nurses. These actions carry serious repercussions for the nurse and society at large. The findings of this given case study emphasize vaccine hesitancy is a complex phenomenon influenced by a range of factors that vary greatly. There is a need for further study with the collaboration of healthcare authorities, policy makers and the public.

## Conclusion

With recent changes influenced by the US Secretary of Health and Human Services, public confusion around vaccination requirements has become a significant issue. A lack of trust in health institutions creates an environment that vaccination fraud can capitalize on. Vaccinations have become the focal point in a complex socio-cultural conflict of healthcare among healthcare practitioners. Vaccination fraud, especially when perpetrated by healthcare professionals like nurses, directly and severely hinders patient safety in multiple ethical ways. It creates a dangerous illusion of protection that can lead to devastating health consequences for individuals and communities. Witnessing ethical violations can be a commanding learning experience that reinforces the importance of ethical professional practice in nursing and advocating for patient safety and professional integrity in all health professions.

Vaccination fraud perpetrated by healthcare professionals constitutes a significant ethical malfeasance, fundamentally violating

the nurse's fiduciary duty and directly threatening patient safety. This misconduct, often arising from the complex socio-cultural conflicts surrounding immunization, erodes the public's trust in health institutions and the nursing profession at large. By creating a dangerous illusion of protection, such actions not only jeopardize individual and community health by undermining herd immunity but also represent a profound breach of the core principles of beneficence and non-maleficence. Witnessing these violations serves as a critical learning event, reinforcing the imperative for unwavering professional integrity and patient advocacy.

Mitigating this threat demands a multi-faceted strategy focused on systemic safeguards and professional accountability. Healthcare organizations must implement robust, tamper-resistant documentation and verification systems, coupled with routine audits to ensure record integrity. Concurrently, the profession must champion ongoing ethics education, reflective practice, and competency validation to equip nurses to navigate ethical dilemmas and resist misinformation. This internal focus must be complemented by broader interdisciplinary collaboration between nursing leaders, policymakers, and public health agencies to restore societal trust through transparent communication and concerted efforts to combat vaccine-related disinformation.

### Clinical Resources

- Ulrich B. American Nurses Association 2025 Code of Ethics for Nurses: A Guide and a Moral Standard. *Nephrol Nurs J*. 2025 May-Jun;52(3):209.
- Haddad LM, Geiger RA. Nursing Ethical Considerations. [Updated 2023 Aug 14]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK526054/>.
- Office of Public Affairs: US Department of Justice; Louisiana nurse practitioner convicted of medicare fraud. Available from: <https://www.justice.gov/opa/pr/louisiana-nurse-practitioner-convicted-2m-medicare-fraud>.
- Ulrich B. What's Your Professional Identity as a Nurse? *Nephrol Nurs J*. 2023 Sep-Oct;50(5):377.
- Westrick SJ. Essentials of nursing law and ethics. Jones & Bartlett Learning; 2024.
- Wong V, Hassan N, Wong YP, Chua SYN, Abdul Rahman S, Mohamad ML, Lim S. Nurses' adherence to ethical principles - A qualitative study. *Nurs Ethics*. 2025 Jun;32(4):1162-76.
- Borchert W. Doing the right thing. *Nephrology Nursing Journal*. 2001;28(3):360.
- Yakov G, Halevi Hochwald I, Rashi T, Shachaf S, Sela Y, Halperin O. Nursing professions' distinctive ethical standards: Exploring a code of ethics. *Nursing Ethics*. 2024;32(4):1210-29.

### References

- Franklin B. The Autobiography of Benjamin Franklin: The Journal of John Woolman; Fruits of Solitude; with Introduction and Notes. PF Collier; 1909.
- Wilmshurst P. Fraud in research. *Clin Med (Lond)*. 2002 Mar-Apr;2(2):159-60.
- US Centers for Disease Control and Prevention (CDC). "CDC

- Recommends pediatric COVID-19 vaccine for children 5 to 11 years." 2021 (Accessed November 4, 2021); Available from: [https://archive.cdc.gov/www\\_cdc\\_gov/media/releases/2021/s1102-PediatricCOVID-19Vaccine.html](https://archive.cdc.gov/www_cdc_gov/media/releases/2021/s1102-PediatricCOVID-19Vaccine.html).
- Centers for Disease Control and Prevention. COVID data tracker: COVID-19 vaccinations in the United States. 2021 (Accessed November 4, 2021). Available from: <https://covid.cdc.gov/covid-data-tracker>.
- World Health Organization, Covid-19 Epidemiological Update. February 13, 2025.
- Garner BA. Adventures in Legal Lexicography: How to Effectively Use Legal Dictionaries. *ABAJ*. 2021;107:30.
- Westrick SJ. Essentials of nursing law and ethics. Jones & Bartlett Learning; 2024 Dec 24.
- Wong V, Hassan N, Wong YP, Chua SY, Abdul Rahman S, Mohamad ML, Lim S. Nurses' adherence to ethical principles-A qualitative study. *Nursing ethics*. 2025 Jun;32(4):1162-76.
- American Nurses Association. Code of ethics for nurses with interpretive statements. Silver Spring, MD: American Nurses Publishing; 2015.
- Gallup. Ethics Ratings of Nearly All Professions Down in U.S. 2024, January 22. Available from: <https://news.gallup.com/poll/608903/ethics-ratings-nearly-professions-down.aspx>.
- Ues LV, Pereira LH, Bastos RM, Ribeiro LC, Silva GO, Campos KD, Barreto IS. Ethics in nursing: categorization of legal processes. *Revista Brasileira De Enfermagem*. 2021 Nov 29;75:e20210099.
- Ulrich B. What's Your Professional Identity as a Nurse?. *Nephrology Nursing Journal*. 2023 Sep 1;50(5):377.
- Haddad LM, Geiger RA. Nursing Ethical Considerations. [Updated 2023 Aug 14]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK526054/>.
- Milliken A, Grace P. Nurse ethical awareness: Understanding the nature of everyday practice. *Nursing ethics*. 2017 Aug;24(5):517-24.
- Yakov G, Halevi Hochwald I, Rashi T, Shachaf S, Sela Y, Halperin O. Nursing professions' distinctive ethical standards: Exploring a code of ethics. *Nurs Ethics*. 2025 Jun;32(4):1210-29.
- Rizzi M, Attwell K. Giving Bad Science the Stamp of Approval: Policy and Legal Consequences of a Vaccine Scare in Italy. *Public Health Reviews*. 2024 Feb 14;45:1606756.
- Ali VE, Asika MO, Elebesunu EE, Agbo C, Antwi MH. Cognizance and mitigation of falsified immunization documentation: Analyzing the consequences for public health in Nigeria, with a focus on counterfeited COVID-19 vaccination cards: A case report. *Health Science Reports*. 2024 Feb;7(2):e1885.
- Zucman D, Fourn E, Vallée A. The COVID-19 vaccine health pass fraud in France. *Clinical Microbiology and Infection*. 2022 Apr 21;28(9):1306.
- World Health Organization. Medical Product Alert N°2/2021: Falsified COVID-19 Vaccine BNT162b2. 2021.