



# INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES



[www.hrmars.com](http://www.hrmars.com)

ISSN: 2222-6990

## Herd Immunity Against Covid-19: Considerations for Compulsory Vaccination for Employees in Malaysia

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### Abstract

With the emergence of COVID-19, the health of human being around the world was affected largely. The number of infected cases due to COVID-19 is increasing worldwide and more people died because of the disease. One of the clusters for COVID-19 infections is at the workplace. Hence, vaccination is essential to reduce the rising number of infected cases in Malaysia. This paper intended to achieve several objectives, firstly, to examine the issues and challenges arising in mandating the COVID-19 vaccine as a condition for work and secondly, to analyse the mandatory vaccination practice in other jurisdictions. This paper adopts a doctrinal approach with references to case law, legislation, current issues and practices in other jurisdictions. Finally, this paper provides suggestions to implement compulsory vaccination at the workplace in forming herd immunity against COVID-19.

**Keyword:** Workplace, Herd Immunity, Employee, Vaccination, COVID-19

### Introduction

The number of infected cases has been alarming the nation lately when it hit 9020 cases per day on 29<sup>th</sup> May 2021 (Ministry of Health, 2021). In Malaysia, the number of cases was increasing in a daily basis, as well the number of death due to the COVID-19 pandemic. As reported by the Ministry of Health (MOH), the average number of infected cases in Malaysia is 7631 were positive COVID-19 and the largest number of deaths are 98 deaths per day, from the start of the pandemic till 31<sup>st</sup> May 2021. The Malaysian government has responded to the rising number of COVID-19 cases by implementing preventive measures such as wearing face masks, maintaining physical or social distance, and enhancing sanitisation with the aim to reduce the number of infected cases including introducing a standard of procedure in dealing with COVID-19 cases at the workplace. In the present pandemic situation, the economy is most affected by the closure of industries during the implementation of different types of Movement Control Order (MCO). The COVID-19 pandemic has led to an unprecedented

impact in all countries, including Malaysia especially after the enforcement of MCO throughout the country. The world population at all levels, has been affected dramatically in terms of daily activities. The implementation of MCO 1.0 has caused the majority of economic sectors to close and minimal operation for essential services. While the implementation of MCO 2.0 has given some rooms for some industrial players to commence their business as usual.

A significant number of studies have shown that the COVID-19 pandemic crisis and the implementation of restricted movement orders and closure for international borders and travelling have severely affect the economy (Mohammed et al., 2021; Cotula, 2021; Feyisa, 2020; Kanitkar, 2020). For example, in Malaysia, a total of 204 tourism and hospitality agencies have ceased their business since the MCO was implemented between March and October 2020 (Ibrahim & Muzamir, 2020). The Malaysian Human Resources Minister revealed that 99,696 Malaysians lost their jobs from March until November 2020 (Tan et al., 2020). The trend is worrying, particularly with the increasing number of suicide cases in amid COVID-19 due to hardships and several other factors (Rahman, 2021). Therefore, industry players have called on the government to remove such restrictions. However, the rising number of infected cases among workplace cluster are quite disturbing since 24 November 2020 with 119 workplace clusters (Osman, 2021). The MOH indicated that daily cases related to workplace continue to ramp up, and the key sources of transmission of the deadly virus are mostly from factories and construction sites (Bernama, 2021).

Table 1 shows COVID-19 infection cases through various cluster categories in 2020 and 2021. There are distressing escalating numbers of infections especially in regard to the workplace. According to the MOH, the workplace cluster is the highest among the rest of the clusters in Malaysia. Almost 53.10% (1162 workplace clusters) were reported since the existence of COVID-19 (Ministry of Health, 2021). With reference to Table 1, the number of workplace clusters cases from January 2021 till May 2021 is 79,002, and these new clusters accumulated within five months period compared to 53,743 cases of workplace clusters in 2020 (for 11 months duration). Undoubtedly, the number of workplace clusters cases are increasing tremendously and causing disruption to the well-being of the public (Ministry of Health, 2021).

Table 1

*COVID-19 Cases According to Clusters in 2020 and 2021 as of 31 May 2021*

| <b>Cluster Category/Year</b> | <b>2020</b> | <b>2021</b> |
|------------------------------|-------------|-------------|
| Workplace                    | 53,743      | 79,002      |
| Community                    | 9,908       | 24,309      |
| Education                    | 785         | 11,790      |
| High Risk Group              | 1,631       | 2,113       |
| Detention Centre             | 19,039      | 7,981       |
| Religious                    | 4,693       | 7,800       |
| Import                       | 2,000       | 43          |

Sources: Adopted from MOH

The Director-General of Health, Tan Sri Dr. Noor Hisham Abdullah said that it is alarming the nation with the total number of 287 workplace clusters since 1<sup>st</sup> April 2021 till 26<sup>th</sup> May 2021 (Bernama, 2021). He also alleged that the trend of infected cases seems not decreasing at workplace with the implementation of MCO 3.0. The manufacturing sector recorded 62

clusters from 115 clusters since 12<sup>th</sup> May 2021 to 26 May 2021 (Bernama, 2021) The MOH reported that there are 1085 workplace clusters from 25<sup>th</sup> January 2020 till 26<sup>th</sup> May 2021, with 129, 322 cases. Among the reported cases, Selangor has recorded the highest workplace clusters with 74 clusters (25.78%), next Johor with 53 clusters (18.47%) and next Penang with 31 clusters (10.80%). To conclude, these numbers seem to be worrying as the COVID-19 virus are spreading super-fast in Malaysia, and it should be noted that the cases were arises from workplace (Ministry of Health, 2021). The government aims to curb the pandemic with the vaccination, so the economic sectors won't be affected and the order of MCO could be lifted. Therefore, the need to be vaccinated seems to be important in the employment sector. The compulsory vaccination programme at workplace could help in reducing the number of cases, thereby the public could lead a normal life without any disturbance (Ministry of Health, 2021).

Currently, many studies and literatures are focusing on the acceptance and mandating COVID-19 vaccine to healthcare personnel (Qattan et al., 2021; Shekhar et al., 2021; Gur-Arie et al., 2021; Kaplan et al., 2021; Hughes et al., 2021; Bowen, 2020). However, limited studies have discussed on mandating compulsory vaccination for employees in other sectors. Therefore, with the alarming numbers of cases involving workplace, compulsory vaccination for employees must be highlighted in other to achieve herd immunity in our nation and subsequently reduce the numbers of infection cases at workplace. This study adopts a doctrinal approach in analysing legal doctrine such as case law, legislation and current issues. "Employees" in this study refers to anyone person who is working in the private sector. Therefore, this article intended to reach the following objectives:

1. to examine the issues and challenges arising in mandating the COVID-19 vaccine as a condition for work.
2. to analyse the mandatory vaccination practice in other jurisdictions

### **The Role of Vaccines in Preventing Infectious Diseases**

Vaccination is a modern technology medicine which was used to boost the immune system and prevent infectious diseases as well to stay healthy. Vaccines have been introduced since the year 1770 to prevent infectious diseases caused by animals in the United States (Khan & Zulkifli, 2018). The use of vaccines has become a norm among people around the world to prevent disease. In Malaysia, it has become a routine practice to give immunisation to all children from birth, by referring to the vaccination schedule which is known as National Immunisation Programme (NIP). Besides, there are few vaccines for adult immunisation were included in NIP. However, it was not commonly a practice among adult to take vaccination due to lack of awareness of the benefit of immunisation among adults (Lim et al., 2014). As an adult, immunizations are important to protect and boost their body's immune systems. Once, the adult attains a certain age, their body's immune systems will be decreasing and subject to certain diseases (Lim et al., 2014). Therefore, vaccination is important to be taken by all age groups to stay fit and healthy.

In the current pandemic situation, the government has introduced the COVID-19 vaccine for all Malaysians. The implementation of COVID-19 vaccines has been scheduled from February 2021 to February 2022 in three phases. The vaccines are given for free to all Malaysian and non-Malaysian citizen with the aim to ensure safe lives and curb the pandemic. Besides, the government is encouraging everyone to register vaccination programme as soon as possible however, there is no compulsion in taking the vaccines. The government was promoting the benefit of vaccine intake among citizens to prevent COVID-19 infections, boosting the immunity system, protect against severe illness, give protection to unborn and

newborn babies, and also to lead a new normal lifestyle. According to Thompson Reuters, positive development can be seen in the country which has vaccinated 600, 000 of its residents. The positive development can be seen in the decline of the number of new cases and the effectiveness of vaccination in reducing 94% of infections of COVID-19 cases (Thompson Reuters, 2021). Table 2 shows total COVID-19 cases, active cases, recovery, death and vaccination in Malaysia. As of 10<sup>th</sup> July 2021, 3,314,871 have received a complete dose of COVID-19 vaccines while 7,435,877 have received their first jabs. With 6,067 death and 84,041 active cases, vaccination programme is vital to reduce the infection rate and increase herd immunity against the virus.

Table 2

*Total cases, active cases, recovery, death and vaccination in Malaysia, as of 10<sup>th</sup> July 2021*

|                                       |           |
|---------------------------------------|-----------|
| <b>Total Case</b>                     | 827,191   |
| <b>Active Case</b>                    | 84,021    |
| <b>Total Recovered</b>                | 737,103   |
| <b>Total Death</b>                    | 6,067     |
| <b>Received First Dose of Vaccine</b> | 7,435,877 |
| <b>Completed Vaccination</b>          | 3,314,871 |

Source: Department of Statistics Malaysia.

According to National Council for the Islamic Religious Affairs, the use of COVID-19 vaccines is permissible (*harus*) because the usage of vaccines is to protect mankind from dangerous diseases (Department of Islamic Development Malaysia, 2021). The use of vaccines is regulated and complied with the following laws such as, the Poisons Act 1952 (Act 366) and its regulations, the Sale of Drugs Act 1952 (Act 368) and its regulations, the Drugs and Cosmetic Control Regulations 1984, and the Infectious Disease Prevention and Control Act (Act 342). Moreover, the government has secured 66.7 million doses of COVID-19 vaccines from five vaccines manufacturers through COVAX Facility (National COVID-19 Immunisation Programme, 2021). The vaccines are Pfizer-BioNTech, AstraZeneca, Sinovac, CanSino Biologist and Sputnik V, the latter two yet to be received by the government. The vaccines were given to people according to priority and importance in three phases, namely, first: front liner, healthcare employees (public and private), defence, security personnel and essential services; second: senior citizens, high-risk groups with chronic diseases and people with disabilities; and third: adult citizen and non-citizen who attained the age of majority, with the priority of zones (Ministry of Health, 2021).

### **A Constitutional View on Mandatory Covid-19 Vaccination for Employees**

A successful vaccination approach has been the use of mass immunisation. In addition to individual protection, mass vaccination efforts also aim for herd protection, and this includes lowering the number of vulnerable hosts down below the level at which the virus might spread to the entire population (Singh & Upshur, 2020). COVID-19-related limitations would lead to an increase in the general population's compliance with potential future vaccinations. It was believed that unemployment and job instability are strong indicators of accepting COVID-19 immunization (Dror et al., 2020). However, a study found several rumors and conspiracy theories that might undermine the faith of communities in the COVID-19 vaccination (Islam et al., 2021). The dissemination of these rumors on numerous social media

platforms carries the potential to be misconstrued as reliable information. To achieve herd immunity against COVID-19 the rumor and conspiracy beliefs must be quelled.

Mandatory vaccination policies have been found to generate high vaccination levels. Nevertheless, a mandatory vaccination policy for adults should almost always be the "final resort." Vaccination requirements are more generally accepted when there is an urgent threat due to continuous poor vaccine uptake arising from voluntary policies, notably in hospital and educational environments (Gur-Arie et al., 2021). Similarly, Largent et al (2020) suggested before contemplating such requirements, public health efforts should be focused on making COVID-19 vaccinations more accessible and increasing adoption. Mandates should be utilised only if COVID-19 remains uncontained and voluntary vaccination acceptance is low (Largent et al., 2020). On the hand, mandatory vaccination should be thoroughly examined, especially in sectors linked with a higher risk of developing COVID-19, such as healthcare professionals, transportation crew, teachers and retails as well food and beverage employees, legislative action and the development of reliable worldwide public policies should come before the release of an effective and safe COVID-19 vaccine (Falezeko et al., 2021). In Italy, mandatory vaccination is a subject of contention due to unresolved differences of opinion and the need to achieve a balance between individual freedom and public health. To prevent losing belief in vaccination, the law should be supported by a vigorous communication effort to the public (D' ancona, 2021).

In Malaysia, the Government has powers to contain the spread of infectious diseases, particularly through the Prevention and Control of Infectious Diseases Act 1988. Since the COVID-19 cases rose, several regulations have been introduced under the main legislation including:

- i. Prevention and Control of Infectious Diseases Act (Measures within the Infected Local Areas) (Movement Control) Regulations 2021
- ii. Prevention and Control of Infectious Diseases Act (Measures within the Infected Local Areas) (Conditional Movement Control) Regulations 2021
- iii. Prevention and Control of Infectious Diseases Act (Measures within the Infected Local Areas) (Recovery Movement Control) Regulations 2021
- iv. Prevention and Control of Infectious Diseases Act (Compounding of Offences) (Amendment) Regulations 2021

Section 11(3) of the Prevention and Control of Infectious Diseases Act 1988 accords wide powers to any authorised officer, including the Royal Police Malaysia and the Volunteers Department of Malaysia (RELA) to direct any person or class or category of persons living in an infected local area to be subjected to other measures considered necessary to control the infectious disease. The act of these officers shall be lawful including using such force, with or without assistance, as may be necessary and employing such methods as may be sufficient to ensure compliance with any direction issued under the law. Nevertheless, this previous provision did not mandated the government or any other person to infringe international human rights and the Government is bound to respect the fundamental liberties in Part II of the Federal Constitution.

With respect to imposing a mandatory vaccination on employees, one must understand that employees in Malaysia are protected not just by the Employment Act 1955 and other employment-related legislation, but their fundamental human rights are guaranteed by the Federal Constitution. As the Federation's supreme law, fundamental liberties are among the key elements of this Constitution, including personal liberty (Article 5), prohibition of forced labor (Article 6), equality (Article 8) and freedom of movement (Article 9). Malaysia has also

embraced quite a few international conventions related to these fundamental liberties, including the Universal Declaration of Human Rights (UNDHR). Any person is regarded as an autonomous person who is protected by these fundamental rights. The term "human rights" was mentioned seven times in the United Nations Charter, upholding the protection of human rights as the entity's guiding principle and subsequently advocating human rights from the perspective of international law. Additionally, it highlights the importance of having a decent and healthy quality of living in a community, as well as how a government may achieve it by giving adequate resources to individuals, as mentioned in Articles 22 and Article 25 of the UNDHR.

Nonetheless, when it comes to constitutional concerns, the court is more likely to resort to the constitution than to any other international treaties. Despite Lord Jennings' famous remark, "Conventions are the flesh that covers the dry bone of the law," conventions are just political practices that might not be enforceable in the judiciary system (Shad, 2008) which was reflected in the case of *Government of Kelantan v Government of Federation of Malaya*, {[1963] MLJ 355} where limited judicial remedies available for any violation of any convention. Other laws that safeguard human rights include the Criminal Procedure Code, the Evidence Act, and the Courts of Judicature Act (Faruqi, 2008).

Concerning mandatory COVID-19 vaccination for employees, the question is whether the government or employer has the authority to enforce forced vaccination against their will. Article 5 of the Federal Constitution states that no one's liberty may be taken away unless by law. This protection under this clause is not limited to rights following his arrest or imprisonment but encompasses a broader range of protections for a person's liberty from any intrusion (Khan et. al., 2021). Thus, the notion of life and personal liberty in Article does not confine itself to the right to travel and the freedom from wrongful detention; it encompasses a larger element of life, including the right to live with dignity and necessity. Deprivation of livelihood is tantamount to deprivation of life, according to the ruling in *Lembaga Tata tertib Perkhidmatan Awam v. Utra Badi*, {[2000] 3 MLJ 281}. The Court of Appeal ruled in *Tan Teck Seng v Suruhanjaya Perkhidmatan Pendidikan & Anor*, {[1998] 3 MLJ 289} that the term "life found in Article 5 does not refer to mere existence." It includes all aspects that are a part of life itself, as well as those that contribute to the overall quality of life, whereby, Gopal Sri Ram in this case urged judges, as interpreters to take a liberal approach in executing the real purpose of the Federal Constitution's architects. Therefore, the term "life" in Article 5(1) should be given a broad and liberal interpretation.

Moreover, *Francis Carolie v Union territory of Delhi*, {1981 AIR 746, 1981 SCR (2) 516} has elaborated the meaning of life includes the right to life with dignity and including that all go within it. While 'life' is interpreted in the case of *Tan Tek Seng v Suruhanjaya Perkhidmatan Pelajaran*, {[1996] 1 MLJ 261} as 'inclusive any limbs of life which cannot be deprived from any person. The case of *Bandhua Mukti Morcha v. Union of India & Ors.*, {(1997) 10 SCC 549}, further interpreted that the right to life and access to a quality of life shall include the protection of health. Mandatory vaccination programmes entail a compromise between constitutional rights and state authority to regulate conduct (Reiss & Weithorn, 2015). In *Jacobson v. Massachusetts*, {197 U.S. 11 (1905)}, the Court ruled that the authorities might limit an adult citizen's liberty in such a way that he could be compelled to vaccinate in order to prevent the spread of a life-threatening infectious illness. The Court went on to say that personal rights can be limited in order to preserve the general good since all members of society have a duty to one another and no one can jeopardize the general welfare.

Article 8 of the Federal Constitution advocates for equality before the law and equal protection under the law, with no discrimination against a citizen merely on the basis of religion, race, offspring, birthplace, or gender under any legislation. This clause establishes the principles of equal treatment and protection, as well as the prohibition of discrimination. The Court in *Datuk Haji Harun Idris v Public Prosecutor*, {[1977] 2 MLJ 155} decided that the rights under Article 8 are not absolute and are nevertheless subject to the law. This judgment, therefore, enables the law to discriminate against any person, or employee in the context of this discussion, on the basis of public welfare, in order to protect the community from a contagious disease that may be avoided via vaccination. All rights granted by the Federal Constitution are subject to limits. The rights granted to a citizen shall be considered by the court based on the facts and circumstances of each case (Khan et al., 2021).

In this context, one liberty may be infringed in the view of protection of the whole community due to the reason that the vaccines' purpose is to maintain herd immunity and to protect the population from communicable diseases. Thus, each member of the community, is dependent on another for health and security (Gostin, 2002). It is not an option to compromise public health and herd immunity. Vaccination hesitancy and refusal will significantly reduce, the community's protection level, the herd immunity effect is lost and the risk of disease transmission increases (Malone & Hinman, 2003).

According to Faruqi (2008), one assumption made in political discourse about the notion of human rights is that "human rights have a threshold weight against community goals and cannot be sacrificed because of utilitarian calculations of general public interest." Despite international and national laws that have acknowledged human rights protection and the constitutional implications of violations, some of these rights are not individual. Some collective rights may be exercised by a specific group of individuals. These collective rights, however, could not simply trump individual basic rights. Whereas the UDHR empowers the person as a self-contained entity, these freedoms and liberties are not absolute. Moreover, the European Convention on Human Rights (ECHR) judgement no. 116 (2021) of April 8 2021 established the principle of mandatory vaccination, specifying the requirements that national law must adhere to the principle of non-interference in the private life of the individual (Khan et al., 2021).

### **Imposing Mandatory Vaccines for Employees**

Keeping the workplace safe and healthy are vital to protect employees, employers as well as third parties. Many employers may view that vaccine is a way to have a safer workplace and can mitigate their economic losses while maintaining their workforce. International Labour Organization (ILO) promotes decent work where safe and healthy working conditions are fundamental. Malaysia is a member state of ILO and currently refers to ILO guidelines and standards relevant to the COVID-19 pandemic and recovery. In the matter of mandatory vaccination for employee, ILO do not impose vaccination as a condition for work. Therefore, it depends on the nation's regulatory framework and policy to impose a mandatory vaccination (International Labour Organization, 2021). Currently, the Malaysian government does not impose vaccination to citizens and has no plan to make vaccines compulsory. In Malaysia, Ministry of Health and the Department of Safety and Health have released a Safe Work Procedure for Prevention of COVID-19 at Workplace for employers and industry with the objective to prevent the spread of COVID-19 among employees. However, the requirement for the vaccination of employees is not mentioned in the existing guideline. Employers are expected to follow the guideline and improve the company's policy on safety

and health at workplace. Additionally, it is the employee's responsibility to adhere to the standard of procedure at the workplace as part of employer and employees' duties provided under the Occupational Safety and Health Act 1994 (OSHA). The ministerial guideline must be read with OSHA as part of the action plan to prevent the spread of COVID-19 at the workplace (Wahab & Razak, 2021).

The question arises as to whether imposing vaccination on employees can be considered one of the employer's duties under OSHA. Section 15 of the OSHA provides that it shall be the duty of every employer to ensure, so far as is practicable, the safety, health and welfare at work of all his employees. In the context of COVID-19, it is the responsibility of the employer to require every employee to be vaccinated in order to prevent the COVID-19 infection among employees at the workplace. In selected industries such as healthcare, restaurants, education, child and elderly care, vaccination is compulsory as there is a direct threat or risk to employees and a third party if vaccination of employees is not taken. Therefore, taking into consideration the high risk imposed by COVID-19 and how the virus can easily spread to people, employer should make it compulsory for employees to be vaccinated. In the case of *Jabatan Kesihatan dan Keselamatan Pekerjaan v Sri Kamusan Sdn Bhd [2015] ILR 421*, the employer was charged under section 15(1) of the OSHA for the death of its employee. In this case, the employee fell off a tractor while performing his job at the factory. The appellant contended that the employer had failed to manage the condition of tractor causing and as a result, the employee use and fell off the tractor. The High Court affirm the trial court's decision to discharge and acquit the employer from the case. It was held by the court that for an offence under section 15(1) of the OSHA to be sustained it must be shown that the accused party was an employer of the deceased employee at the material time, that the employee was exposed to risk to the health and safety in performing his duty at the workplace, the deceased employee was at work at that material time, and there was a causal nexus between the employer's breach and the risk to the deceased employee's safety. In this case however, according to the office record, the deceased employee was not working at the material time when incident happened and what the deceased employee did was not an activity that could be described as part of the job scope. Furthermore, it was found the employer had not only taken all the reasonable steps and due diligence to ensure the safety of the workers at the workplace but had also taken precaution of the foreseeable danger by putting up warning signage at the plantation. It can be observed from this case that the duty of employer to impose mandatory vaccination to the employee is important as part of the employer's action to show that he has taken the reasonable steps and due diligence to ensure the safety of the employees at the workplace against being infected of COVID-19 disease.

Additionally, Section 17 of the OSHA imposes the duty to the employer to ensure that as so far as practicable that his employees are not exposed to risks to their safety and health. Therefore, this responsibility applies to the COVID-19 situation as most of the COVID-19 clusters are from the workplace such as offices, construction sites, factories and employees' hostels. In order to recover the nation's economy, working from home for a long term can no longer be an option especially if the job requires employees to perform work at a site or office where it involves human interactions and physical activities. Therefore, it is the duty of the employer to impose vaccination as one of the protective measures under OSH to prevent COVID-19 disease. The failure of employers to ensure their employees are vaccinated will subject the employers to be punished under Section 19 of the OSHA which it states that on conviction the employer will be liable to a fine not exceeding fifty thousand ringgit or to imprisonment for a term not exceeding two years or to both. Apart from the provisions under

the OSH, the common law also imposes a duty on the employer to provide a safe system of work and a safe place of work. This principle can be found in the case of *Abdul Rahim bin Mohamad v Kejuruteraan Besi dan Pembinaan Zaman Kini [1999] 5 CLJ. 85* where it stated that 'at common law, a master is under a duty, arising out of the relationship of master and servant, to take reasonable care for the safety of his workpeople in all the circumstances of the case so as not to expose them to unnecessary risk. Among these duties are: (a) the provision of proper and suitable plant and appliances; and (b) the provision and maintenance of a reasonable safe system of working'. From this case, it can be concluded that any injury arising from the employer's failure to provide a safe place of work may expose them to a civil claim for negligence. In the context of this study, the failure to exercise the required degree of care that a reasonably prudent person would exercise in like circumstances.

Additionally, OSHA covers the responsibility of the employees where under Section 24 of the OSHA states that it shall be the duty of every employee while at work to take reasonable care for the safety and health of himself and of other persons who may be affected by his acts or omissions at work and to comply with any instruction or measure on occupational safety and health instituted by his employer. Failure to perform this duty and if found guilty of an offence will make the employee liable to a fine not exceeding one thousand ringgit or to imprisonment for a term not exceeding three months or to both. Section 24 of the OSHA can be extended on the context of this discussion where the employees have the duty to be vaccinated to prevent spreading COVID-19 disease at the workplace. This is because vaccination is deemed to be one of the effective methods to prevent persons from being infected by the disease at the workplace and it is the duty of the employee to take reasonable care for safety and health of himself and other persons at the workplace. In case where an employee failed to be vaccinated, the employee is in breach of duty under Section 24 of the OSHA and therefore could be subjected to punishment for the omission of such act.

### **Practices in Other Countries**

Vaccines have shown to be excellent strategies for limiting life-threatening infectious disease, with an estimated around 3 million fatalities avoided annually. These strategies may be a credible alternative, since their efficacy has been established in a variety of circumstances (Gualano et al., 2019). For over the centuries, the United States government had mandated the vaccination with the aim to protect public health goals. The landmark case of *Jacobson v Massachusetts, {197 U.S. 11 (1905)}* is the leading authority of compulsory vaccination and public health laws, where the court emphasise that the personal liberties of an individual does always not absolute and can be restricted in a way of protecting the welfare of society from any danger, as well the state police have legitimate power in exercising compulsory vaccination with the intention to prevent contagious disease. The decision of *Jacobson* was upheld in the case of *Prince v. Massachusetts, {321 U.S. 158 (1944)}*, the Supreme Court has decided that religious freedom "does not include liberty to expose the community or the child to communicable disease" (Rothstein et al., 2021). For over 115 years, the *Jacobson* case has been the precedent in protecting public health and the side-lined of it would cause a major peril to public health and vaccine mandatory (Parmet, 2021).

With the emergence of the COVID-19 pandemic and the introduction of the vaccine, the US government were intended to require the public to take vaccination under Emergency Use Authorization (EUA) after the approval by Food and Drug Administration (FDA), however, the provision of Food, Drug and Cosmetic Act stated that the required conditions of a EUA include informing individuals that they can accept or refuse a EUA product, and of any consequences

of refusal. This provision does not state anything about the employer and states, indirectly it allowed workplace mandates, which is supported by the guidance from Equal Employment Opportunity Commission (EEOC) stating that 'any vaccines approved under EUA can be mandated under the same terms as other vaccines.' Therefore, the majority of private sector employers would like to compel existing and prospect employees to be vaccinated before back to employment (Rothstein et al., 2021; Costello, 2020). The employer intended to provide a safer place for their employees to work and for their customers to shop. The employer in the hiring end were entitled to set the criteria, requirements and condition in the employment contract as long it does not violate US law. Before employer mandate the COVID-19 vaccines, they should ensure that it is not violating an individual medical condition under American Disabilities Act and religious belief under Title VII of the Civil Rights of Act 1964 (Ayers, 2020). Thus, the employer should aware that they cannot compel an employee to take vaccines, if the employee refuses on the ground of disabilities and religious belief.

Moreover, in Australia there is separate legislation which is public health legislation that acts independently and is responsible at the State and Territories level for the matters of vaccines mandatory (Kevat et al., 2021). The Biosecurity Act 2015 is a federal legislation applicable in Australia that focus on taking certain measure to prevent or reduce any biosecurity risk or threats to the Australian. Section 51 of the Biosecurity Act 2015, states that Health Ministerial is allowed in specifying several biosecurity measures to be taken by specified classes of persons, including requiring certain behaviours or practices and Section 92 of the said Act, mentioned that human biosecurity control order may require any individual to receive a specified vaccination. Besides, in Victoria Territories, a specific legislation were applicable for public health order, namely Section 117 of the Public Health Order and Wellbeing Act 2008 (Vic) indicates that the Chief Health Officer may make an public health order requiring a person to receive specified prophylaxis (including vaccination), if the believes that person is exposed to or likely to contract an infectious disease which may risk the public health and Section 8 of the Health Services Amendment Act 2020 (Vic) stated that Secretary may direct health service to require persons employed or engaged by them to be vaccinated against or prove immunity to specified diseases. In Western Australia, Section 184 of the Public Health Act 2016 (WA) states that for emergency management purposes, an emergency officer may direct a person, or class of persons, to undergo medical treatment or be vaccinated.

Yet, there is no mandatory vaccination in other sectors due to some general complications that arose recently; first, the initial launch of vaccination has been slower than predicted; and second, the recommendation made by the federal government that citizens under 50 years old should take Pfizer vaccine rather than AstraZeneca (Byrners, 2021). Indirectly, this has caused difficulties in implementing mandatory vaccination at workplace due to government recommendations, as well give a notion to vaccine hesitancy. In addition, the guidance in Fair Work Ombudsman, clearly stated that the employer can't require their employees to be vaccinated, because COVID-19 vaccination is voluntary as per Australian Government policy. While, the guidance in Safe Work Australian relates to Work, Health and Safety law stated that the employer has a duty to eliminate or minimize the risk of exposure to COVID-19 at the workplace by taking all reasonable steps to ensure employees are not exposed to risk, and if the situation is not able to control, so the employer can require vaccination as a way to control the exposure of COVID-19 risk. Therefore, in certain states, the government has ordered vaccine mandatory at workplace according to industries and risk of exposure. The government in Western Australia have made vaccine mandatory for hotel

quarantine workers since 8<sup>th</sup> May 2021 under the public health order and consider the first state to impose vaccines mandatory under the public health order (Bell, 2021). Besides, Queensland is the only state mandates their healthcare personnel to be vaccinated against COVID-19. Alliance Airlines based in Brisbane has imposed a mandatory vaccination policy for all their workers, including contractors and employees who work in the airline industry to be vaccinated.

Article 32 of the Italian Constitution regarding mandatory treatments, the Italian Republic provided for mandatory free vaccinations for health professionals through Law of 28 May 2021 no. 76 for the containment of the COVID-19 epidemic to protect public health and to promote public health. Furthermore, vaccination for the prevention of such infection is a prerequisite for practising medicine and performing job duties. The Italian government has made the mandatory vaccination against COVID-19 for healthcare personnel, and whoever refuses to take the vaccines, will be given two options; to be transferred to duties that do not spread the virus or to be suspended for a year without pay (Paterlini, 2021). It is supported by the Decree-Law No. 4/20201 has been published in the Italian Official Gazette under Section 4 introduces “the compulsory vaccination against COVID-19 for healthcare professionals and operators and provides a detailed procedure for its operation and sanctions in case of non-compliance”. Moreover, among all the European countries, Italy is the first to make mandatory vaccination for healthcare personnel after taking into consideration the worst and hardest situation faced during the COVID-19 pandemic (Fрати et al., 2021). Even though Article 32 of the Italian Constitution stated that cannot force or compel any individual to undertake any medical treatment without a specific statutory law, the recent case of *Italian Constitutional Court No. 5/2018* becomes a benchmark case for compulsory vaccines, because the court held that a statutory law dealing with compulsory vaccination for teenagers was compatible with Article 32 of the Constitution (Matteucci, 2021). The reasoning for the judgment was to protect and balance the individual’s right to health and the interest of public health in society. Apart from Italy, Table 3 shows several European countries that decided to take similar strategies as Italy in making the vaccine mandatory for healthcare workers (Peruch et al., 2022).

Table 3

*Countries with mandatory COVID-19 vaccination for healthcare workers*

| Country | Legislation  | Come into force   |
|---------|--|-------------------|
| France  | Law 2021/1040, Articles 12–13  | 15 September 2021 |
| Germany | Infection Protection Act, Article 20a  | 15 March 2022     |
| Greece  | Law 4829/2021, Article 206   | 12 July 2021      |
| Hungary | Government Decree 449/2021 (VII.29.)<br>Amendments to the COVID-19 Infection | 15 September 2021 |
| Latvia  | Control Law  | 1 October 2021    |
| Poland  | Dz. U. z 2022 r. poz. 340  | 1 March 2022      |

In Saudi Arabia, the Minister of Commerce stated that “the coronavirus vaccine is not mandatory in Saudi Arabia” (Saudi Gazette, 2021). However, the Ministry of Interior of Saudi Arabia said there would be some restrictions to access certain facilities and services in states, for instance, government or private entities, government or private educational institutes,

using public transport, entering any economic, commercial, cultural, entertainment or sporting activity, and entering any cultural, scientific, social, or entertainment event (Godinho, 2021). Besides, the Ministry of Human Resource and Social Development of Saudi Arabia requires the employees from the public and private sectors to take COVID-19 Vaccination as a condition to attend the workplace, and the ministry will update on the mechanism of decision and the implementation dates.

It should be noteworthy that the above discussion clearly indicates that the implementation of vaccines mandatory gives more interest to public health, with the intention to prevent the spread of contagious diseases among citizens. The employer should examine all aspects such as medical condition, disabilities and religious ground before including vaccination conditions to enter the workplace, as it could violate the statutory law. If the employee refused to be vaccinated on those mentioned grounds, then the employer should find an alternative way to accommodate the employee, as well as prevent the spread of COVID-19, particularly at their workplace.

### **Recommendation**

Proactive steps must be taken in order to curb the spread of COVID-19 in Malaysia. One of the ways is to impose vaccination on employees at the workplace. ILO recommends that social dialogue and consultations between employers and workers are essential before deciding to impose compulsory COVID-19 vaccine at workplace (International Labour Organization, 2021). Vaccination requirements by employers may be a subject of negotiation in collective bargaining between employers and employees and to be inserted in the collective agreement for it to be legal effect (Rothstein et al., 2021). A mandatory vaccination as a condition for work however must not result in issues of discrimination at the workplace. Employees without vaccination should be given the option to perform their work from home (depending on the nature of work) or be given personal protective equipment and tools when performing work at the worksite.

Apart from that, the employer must work with the government in achieving herd immunity by ensuring employees get their vaccines. The employer must educate employees about the benefits of vaccination and provide platforms to help employees get access to vaccination such as providing incentives for employees with vaccination. According to ILO, the mandated vaccination shall not involve any expenditure for the employees. Besides that, the employer should take a proactive approach in educating their employees about the importance of vaccination for a safe working environment as well as provides some financial inducement, and indirectly it will uplift the confidence to be vaccinated (Yeoh & Pua, 2021). Employers might create awareness of vaccines importance such as inviting vaccinated employee to share their reasons and journey, giving regular updates on vaccines, appreciating vaccinated employees by providing some benefits, and initiate a communication channel with employees to provide a safe workplace and another safe environment outside workplace.

In addition, the authority could amend the existing statutory law for mandating vaccination at workplace with the objective of preventing the risk of spreading contagious disease, as well as protecting the interest of public health in the society. The employer should include a vaccination policy as a requirement in employment to provide a safe system of work with relation to duty under Section 1(1) of OSHA. However, the requirement of vaccination policy should be subject to individual medical conditions and disabilities, to ensure the vaccine does not cause any harm to them. The authority and employer should create a social trust with the public and employees, by delivering correct public health information about

the vaccines and how it will ensure the well-being of citizens consistently. The authority should avoid providing unwanted and confusing information, which could reduce the trust of the public. The authority should also provide a channel to assist and address the vaccine-hesitant individual concerns for refusing the vaccines. The initiative could be fruitful in encouraging more public to be vaccinated. Mandatory vaccination is legitimate in the view of protecting the community from vaccine-preventable diseases, no exemptions should be given unless a medical reason is provided. Nevertheless, the government must strike a reasonable balance between the necessity to provide effective prevention and the right to self-determination of those who do not desire to receive health care (Khan et al., 2021).

## Conclusion

The development of COVID-19 vaccines is a key to controlling the spread of coronavirus, although they may not be 100 percent effective especially in dealing with new virus variants. It must be understood that it is critical to achieve herd immunity and surpass the threshold rate by vaccinating all levels of the community. The successful implementation of the COVID-19 vaccine hinges upon the vaccine acceptance rate. Vaccine hesitancy or refusal has a greater risk to increase virus transmission especially at workplace. With the current pandemic situation, vaccine mandates should be the priority of the state in preventing the risk of COVID-19. The health authority is an expert and knows what the best for society is, and their concern would be more on protecting the public interest rather than causing harm. Considering some other critical sectors in the country, which are important for the economy, mandating compulsory vaccination may be needed to optimise vaccination across the community and reduce infection rates.

Further, the authority should play an imperative role in mandating COVID-19 vaccines at workplace with the purpose to protect the interest of public health in the society. A mandatory COVID-19 vaccine at workplace is highly recommended to be implemented immediately to reduce the risk of disease exposure at a large place. Immunisation regulations for employees may aid in getting high vaccination coverage. Herd immunity generated by high vaccination rates has proven to keep epidemics of certain illnesses at bay, benefitting the community overall and especially the individual vaccinated person. In the view of thousands of infection cases daily, especially at workplace, vaccine refusal raises not just the individual risk of disease, but also the threat to the entire community. The risk to the community increases when an employee living in the community, refuses to be vaccinated.

This study is significant as it gives theoretical and practical contributions. Theoretically, this study has expanded the area of employment law in discussing the duty of the employer to impose vaccination at the workplace. Additionally, this study practically significant as it provides framework for the employer and the government in imposing vaccination to the workers with the aim to minimize COVID-19 cases rising in the workplace.

## References

- Ayers, A. A. (2020). Can Employers Mandate the Covid-19 Vaccine? *The Journal of Urgent Care Medicine*, 25-27.
- Bell, J., (2021). Mandatory COVID-19 vaccine direction for WA hotel quarantine workers comes into force. *Human Resource Director Australia*. <https://www.hcamag.com/au/news/general/mandatory-covid-19-vaccine-direction-for-wa-hotel-quarantine-workers-comes-into-force/254505>

- Bowen, R. A. (2020). Ethical and organizational considerations for mandatory COVID-19 vaccination of health care workers: a clinical laboratorian's perspective. *Clinica Chimica Acta; International Journal of Clinical Chemistry*, 510, 421-422.
- Byrners, M. (2021). Mandatory Workplace Vaccination: The Current State of Play, *Swaab*. [https://www.swaab.com.au/publication/mandatory-workplace-vaccination-the-current-state-of-play?utm\\_source=Mondaq&utm\\_medium=syndication&utm\\_campaign=LinkedIn-integration](https://www.swaab.com.au/publication/mandatory-workplace-vaccination-the-current-state-of-play?utm_source=Mondaq&utm_medium=syndication&utm_campaign=LinkedIn-integration)
- Costello, M. M., (2020). Employer Mandates for COVID 19 Vaccination. *International Research Journal of Pharmacy and Medical Sciences*, 3(6), 48.
- Cotula, L. (2020). Towards a political economy of the COVID-19 crisis: Reflections on an agenda for research and action. *World Development*, 105235. <https://doi.org/10.1016/j.worlddev.2020.105235>
- COVID: Workplace clusters are increasing - Dr Noor Hisham. (2021). BERNAMA. [https://www.bernama.com/en/general/news\\_covid-19.php?id=1965816](https://www.bernama.com/en/general/news_covid-19.php?id=1965816)
- D'Ancona, F., D'Amario, C., Maraglino, F., Rezza, G., & Iannazzo, S. (2019). The law on compulsory vaccination in Italy: an update 2 years after the introduction. *Eurosurveillance*, 24(26), 1900371. <https://doi.org/10.2807/1560-7917.ES.2019.24.26.1900371>.
- Department of Islamic Development Malaysia, (2021). *Saranan kepada Rakyat Malaysia untuk Mendaftar dan Mengambil Vaksin Covid-19*. <https://www.islam.gov.my/en/>
- Dror, A. A., Eisenbach, N., Taiber, S., Morozov, N. G., Mizrahi, M., Zigran, A., Srouji, S., & Sela, E. (2020). Vaccine hesitancy: the next challenge in the fight against COVID-19. *European journal of Epidemiology*, 35(8), 775-779.
- Faruqi, S. S. (2008). Document of Destiny: The Constitution of the Federation of Malaysia. *Star Publications (Malaysia) Berhad*. 763-774.
- Feleszko, W., Lewulis, P., Czarnecki, A., & Waszkiewicz, P. (2021). Flattening the curve of covid-19 vaccine rejection—An international overview. *Vaccines*, 9(1), 44.
- Feyisa, H. L. (2020). The World Economy at COVID-19 quarantine: contemporary review. *International Journal of Economics, Finance and Management Sciences*, 8 (2), 63-74.
- Frati, P., La Russa, R., Di Fazio, N., Del Fante, Z., Delogu, G., & Fineschi, V. (2021). Compulsory Vaccination for Healthcare Workers in Italy for the Prevention of SARS-CoV-2 Infection. *Vaccines*, 9(9), 966. <https://doi.org/10.3390/vaccines9090966>
- Godinho, V. (2021). Saudi says vaccination needed to use public transport, enter government and private offices, *Gulf Business*. <https://gulfbusiness.com/saudi-says-vaccination-needed-to-use-public-transport-enter-government-and-private-offices/>
- Gostin, L. O. (2002). Public health law in an age of terrorism: Rethinking individual rights and common goods. *Health Affairs*, 21(6), 79-93.
- Gualano, M., Olivero, E., Voglino, G., Corezzi, M., Rossello, P., Vicentini, C., Bert, F., & Siliquini, R. (2019). Knowledge, attitudes and beliefs towards compulsory vaccination: a systematic review. *Human Vaccines & Immunotherapeutics*, 15(4), 918–931. <https://doi.org/10.1080/21645515.2018.1564437>
- Gur-Arie, R., Jamrozik, E., & Kingori, P. (2021). No jab, no job? Ethical issues in mandatory COVID-19 vaccination of healthcare personnel. *BMJ Global Health*, 6(2), e004877. <https://doi.org/10.32890/uumjls2021.12.2.6>

- Hughes, K., Gogineni, V., Lewis, C., & Deshpande, A. (2021). Considerations for fair prioritization of COVID-19 vaccine and its mandate among healthcare personnel. *Current Medical Research and Opinion*, 37(6), 907-909.
- Ibrahim, M. I., & Muzamir, M. Y. (2020). "PKP buat 204 syarikat, hotel 'gulung tikar.'" *Berita Harian*. <https://www.bharian.com.my/berita/nasional/2020/11/757273/parlimen-pkp-buat-204-syarikat-hotel-gulung-tikar>
- International Labour Organization. (2021). *ILO Standards and COVID-19 (coronavirus)*, International Labour Standards Department. [https://www.ilo.org/global/standards/WCMS\\_839726/lang--en/index.htm](https://www.ilo.org/global/standards/WCMS_839726/lang--en/index.htm)
- Islam, M. S., Kamal, A. H. M., Kabir, A., Southern, D. L., Khan, S. H., Hasan, S. M., & Seale, H. (2021). COVID-19 vaccine rumors and conspiracy theories: The need for cognitive inoculation against misinformation to improve vaccine adherence. *PloS one*, 16(5), e0251605.
- Kanitkar, T. (2020). The COVID-19 lockdown in India: Impacts on the economy and the power sector. *Global transitions*, 2, 150-156.
- Kaplan, A. K., Sahin, M. K., Parildar, H., & Adadan Guvenc, I. (2021). The willingness to accept the COVID-19 vaccine and affecting factors among healthcare professionals: A cross-sectional study in Turkey. *International Journal of Clinical Practice*, e14226.
- Kevat D., Panaccio D., Pang S.C., Dean J., Farmer C.C., & Mahar P.D., (2021). Medicolegal Considerations of Mandatory COVID-19 Vaccination in High-Risk Workers, *The Medical Journal of Australia*. <https://www.mja.com.au/journal/2021/medicolegal-considerations-mandatory-covid-19-vaccination-high-risk-workers>
- Khan, N. J. M., & Zulkipli, Z. N. (2018). Compulsory Vaccination for Children in Malaysia: Legislation and Realisation. *Yuridika*, 33(3), 402-416.
- Khan, N. J. M., Ghazali, F., & Shukor, S. F. A. (2021). Compulsory vaccination for children: Violation of human rights? *UUM Journal of Legal Studies*, 12 (2), 115-140.
- Largent, E. A., Persad, G., Sangenito, S., Glickman, A., Boyle, C., & Emanuel, E. J. (2020). US public attitudes toward COVID-19 vaccine mandates. *JAMA Network Open*, 3(12), e2033324-e2033324.
- Lim, V. K. E. L, Adnan, A., Chang, K. M., Isahak, I., Sani, N. M., Ariffin, L., Chidambaram, S. K., & William, T. (2014). Guidelines for Adult Immunisation, 2<sup>nd</sup> Edition. *Malaysian Society of Infectious Diseases and Chemotherapy*. <https://www.Adult-Immunisation-Guideline-2nd-Edition-2014.pdf>
- Malone, K. M., & Hinman, A. R. (2003). Vaccination mandates: The public health imperative and individual rights. *Law in Public Health Practice*, 262-84.
- Matteucci, S. C. (2021). Italy: between mandatory and conditional Covid-19 vaccination policies. Lac19 Blog Symposium, <https://lexatlas-c19.org/covid-19-vaccination-in-italy-between-compulsory-and-conditional-policies-2/>
- Ministry of Health, Malaysia. (2021). *Covid-19 Malaysia*. <http://covid-19.moh.gov.my/>
- Mohammed, T., Mustapha, K. B., Godsell, J., Adamu, Z., Babatunde, K. A., Akintade, D. D. & Koh, S. C. L. (2021). A critical analysis of the impacts of COVID-19 on the global economy and ecosystems and opportunities for circular economy strategies. *Resources, Conservation and Recycling*, 164, 105169.
- National Covid-19 Immunisation Programme, The Special Committee for Ensuring Access to Covid-19 Vaccine Supply (JKJAV), 18 February 2021, [https://www.vaksinCovid.gov.my/pdf/National\\_COVID-19\\_Immunisation\\_Programme.pdf](https://www.vaksinCovid.gov.my/pdf/National_COVID-19_Immunisation_Programme.pdf)

- Osman, M. S. (2020). "Cegah Kluster Tempat Kerja." *Astro Awani*.  
<https://www.astroawani.com/berita-malaysia/cegah-kluster-tempat-kerja-274659>
- Parmet, W. E. (2021). Roman Catholic Diocese of Brooklyn v. Cuomo — The Supreme Court and Pandemic Controls. *New England Journal of Medicine*, 384(3), 199–201.  
<https://doi.org/10.1056/nejmp2034280>
- Paterlini, M. (2021). Covid-19: Italy makes vaccination mandatory for healthcare workers. *BMJ*, 373, n905. <http://dx.doi.org/10.1136/bmj.n905>
- Peruch, M., Toscani, P., Grassi, N., Zamagni, G., Monasta, L., Radaelli, D., Livieri, T., Manfredi, A., & D'Errico, S. (2022). Did Italy Really Need Compulsory Vaccination against COVID-19 for Healthcare Workers? Results of a Survey in a Centre for Maternal and Child Health. *Vaccines*, 10(8), 1293. <https://doi.org/10.3390/vaccines10081293>
- Qattan, A. M. N., Alshareef, N., Alsharqi, O., Al Rahahleh, N., Chirwa, G. C., & Al-Hanawi, M. K. (2021). Acceptability of a COVID-19 Vaccine Among Healthcare Workers in the Kingdom of Saudi Arabia. *Frontiers in Medicine*, 8. <https://doi.org/10.3389/fmed.2021.644300>
- Rahman, A. H. (2021). "468 kes bunuh diri bagi tempoh Januari hingga Mei tahun ini – PDRM", *Astro Awani*. <https://www.astroawani.com/berita-malaysia/468-kes-bunuh-diri-bagi-tempoh-januari-hingga-mei-tahun-ini-pdrm-306084/>
- Reiss, D. R., & Weithorn, L. A., (2015). Responding to the childhood vaccination crisis: Legal frameworks and tools in the context of parental vaccine refusal. *Buffalo Law Review*, 63(63), 881.
- Rothstein, M. A., Parmet, W. E., & Reiss, D. R. (2021) Employer-Mandated Vaccination for COVID-19 *American Journal of Public Health*, 111(6), 1061-1064.
- Shekhar, R., Sheikh, A. B., Upadhyay, S., Singh, M., Kottewar, S., Mir, H., Barrett, E., & Pal, S. (2021). COVID-19 Vaccine Acceptance among Health Care Workers in the United States. *Vaccines*, 9(2), 119. <https://doi.org/10.3390/vaccines9020119>
- Singh, J. A., & Upshur, R. E. G. (2021). The granting of emergency use designation to COVID-19 candidate vaccines: implications for COVID-19 vaccine trials. *The Lancet Infectious Diseases*, 21(4), e103–e109. [https://doi.org/10.1016/s1473-3099\(20\)30923-3](https://doi.org/10.1016/s1473-3099(20)30923-3)
- Tan, T., Carvalho, M., Sivananthan, H., & Rahim, R. (2020, December 09). "Nearly 100,000 Malaysians have lost jobs since start of MCO, says HR ministry", *The Star*. <https://www.thestar.com.my/news/nation/2020/12/09/nearly-100000-malaysians-have-lost-jobs-since-start-of-mco-says-hr-ministry>
- Thompson Reuters. (2021). "Saudi Arabia to make COVID-19 vaccinations mandatory for all workers." *Alarabiya News*.  
<https://english.alarabiya.net/coronavirus/2021/05/07/Saudi-Arabia-to-make-COVID-19-vaccinations-mandatory-for-all-workers->
- Wahab, H., & Razak, S. S. A. (2021). Pengurusan keselamatan dan kesihatan pekerjaan: Kewajipan majikan dan pekerja dalam menangani COVID-19. In Aziz, A. R. A., Wahab, M. N. B. A., Yudof, S. N. M. & Rani, A.A. (Eds.), *COVID-19 dari Perspektif Sains Sosial Implikasi dan Solusi* (pp. 181-200). Penerbit Universiti Malaysia Pahang, Malaysia
- Yeoh, L., & Pua, W. J. (2021). "Compulsory Covid-19 vaccination for employees?" *Malay Mail*. <https://www.malaymail.com/news/what-you-think/2021/05/10/compulsory-covid-19-vaccination-for-employees-leonard-yeoh-and-pua-jun-wen/1972975>