Title: COVID-19 Mandatory Vaccination-Ethical and Human Rights Considerations

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COVID-19 Mandatory Vaccination – Ethical and Human Rights Considerations

Introduction

The COVID-19 pandemic has led to a dramatic loss of human life worldwide, has resulted in significant stress on healthcare systems, as well as devastating social and economic disruption, and presents an unprecedented challenge to public health. High vaccination rates can reduce cases, hospitalisations, and deaths and this has prompted consideration of how best to achieve the very high vaccination coverage needed for optimal control of SARS-CoV-2. Research conducted by WHO Europe and the European Centre for Disease Prevention and Control, found that from December 2020 to November 2021, at least 470,000 lives were directly saved through COVID-19 vaccination. Studies have shown that people who had received three doses of a COVID-19 vaccine were 93.4% less likely to die of the infection compared to the unvaccinated. National data reported by the Health Protection Surveillance Centre (HPSC) indicates that unvaccinated individuals were four times more likely to be hospitalised with laboratory confirmed COVID-19 than fully vaccinated individuals and were 11 times more likely to be admitted to ICU with COVID-19 than fully vaccinated individuals. High vaccination coverage in a population also reduces the spread of the virus and can help prevent new variants from emerging.

In this context, mandatory COVID-19 vaccination policies are being introduced in some countries whilst others are actively contemplating the need for a vaccine mandate in certain workplace settings e.g. healthcare. On February 6th 2022, Austria became the first European country to introduce mandatory vaccination for all adults, with the exception of pregnant women, those who have contracted the virus within the past 180 days and those with medical exemptions. Checks of a person’s vaccination status will begin from mid-March, with sanctions ranging from €600-€3,600. Austria has one of the lowest vaccination rates in western Europe, with approximately 69% of its population fully vaccinated against COVID-19. Italy, Greece and the Czechia have passed laws making vaccination obligatory for all residents in at-risk age groups; those aged over 60 years in Greece and Czechia and those aged over 50 years in Italy. Other countries such as Australia, Belgium, Canada, Croatia, Czech Republic, Finland, France, Germany, Greece, Hungary, Italy, Latvia,

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3 Available at: Microsoft Word - COVID-19_VacStatus_EpiReport_20211213_v1.0 (hpsc.ie), accessed 8th February 2022.
New Zealand, Poland, UK and the US have introduced or plan on introducing a vaccine mandate for health and social care workers.

Mandatory vaccination policies can be ethically justified when it can be demonstrated that they are necessary and proportionate to protect the health of the public. However, such policies represent a considerable interference with individual liberties and autonomy and the magnitude of the public good must be balanced against the countervailing rights of individuals as well as against competing public goods e.g. public trust. The aim of this paper is to explore the complex ethical and legal issues raised by mandatory vaccination.

**Vaccine Mandates – Ethical Considerations**

Mandatory vaccination policies, despite their name, do not compel a person to be vaccinated through the use of force, rather they impose individual negative consequences for non-vaccination. The scale and type of consequence for non-compliance, as well as accepted exemptions, vary. Typically, such policies make vaccination a pre-condition of accessing services or attending certain public spaces such as educational facilities and the workplace. Failure to comply may also attract financial penalties in the form of fines and, more rarely, criminal conviction. Vaccine mandates in relation to childhood vaccines have been introduced in a number of countries, with varying degrees of success⁴.

Governments have moral and legal responsibilities to safeguard their populations, both collectively and individually. Under the European Convention of Human Rights, States have a positive obligation to take measures for the protection of health⁵. Realising population immunity is a collective enterprise, which gives rise to tensions between individual and collective responsibility and rights. Mandatory vaccination has long been controversial predominately because of ethical concerns regarding coercion and the impact on an individual’s right to personal autonomy and bodily integrity. In essence, autonomy is a right to self-determination; it recognises the right of individuals to govern their own behaviour. The right to bodily integrity is seen as enhancing and giving a special strength to an autonomy claim.

Autonomy however is not absolute. The philosopher John Stuart Mill⁶ argued that the State may only properly interfere with the actions of an individual in order to prevent harm to others, the so called “harm principle”. Claims to the effect that vaccination should be mandatory are typically grounded in considerations about the harm, or risk of harm, that non-

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⁴ Vanderslott S & Marks T. Vaccine 2021;39(30):4054-62
⁵ Vavříčka and others v. the Czech Republic Applications nos. 47621/13 §288 Available at: VAVŘIČKA AND OTHERS v. THE CZECH REPUBLIC [coe.int], accessed on 9th February 2022
⁶ According to Mill, “the only purpose for which power can be rightfully exercised over any member of a civilised community, against his will, is to prevent harm to others”. (*Liberty*, XVIII: 223; cf. *Liberty*, XVIII: 292)
vaccination presents to other people (both in terms of onward transmission of infection, and over-burdening of the healthcare system).

The “duty to vaccinate” can be understood in a moral as well as a legal sense in that individuals should accept the collective responsibility to avoid preventable harm and act for the benefit of others, including those who cannot be vaccinated e.g. those for whom the vaccine is not indicated or is contra-indicated. The ‘clean hands principle’ (moral principle that prohibits people from participating in the collective imposition of unjust harm or risk of harm) and the duty of easy rescue (when I could do something that entails a small cost to me and a significant benefit to others, I have a moral duty to do it) are both relevant in this context. Furthermore, when considering mandatory vaccination policies, it is important to consider the question of fairness and justice. Justice is an ethical principle which at its heart is concerned with what we owe to each other and ensuring that the benefits and burdens are fairly shared by all members of society. It could be argued that mandatory vaccination, in which there is a collective responsibility to realise immunity (albeit imposed by the State) ensures a fair distribution of the burden of being vaccinated. This tackles the problem of the “free-rider”, those who choose not to be vaccinated but instead rely on population immunity, thereby eschewing the burden while receiving the benefit. Those with a medical contraindication against vaccination would be justifiably exempted from the mandate on the basis of equity concerns, which recognises that people contribute according to their capacity to do so.

From an ethical perspective, public health interventions such as vaccine mandates which limit individual freedom require strong justification and evidence that the measure will achieve the intended goal, in this case avert a grave threat to public health resulting in significant harm; that a mandate is proportionate to the anticipated benefit, and that no less restrictive measure would be effective.

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7 The philosopher Peter Singer provided perhaps the most famous characterisation of the duty of easy According to Singer, “if I am walking past a shallow pond and see a child drowning in it, I ought to wade in and pull the child out. This will mean getting my clothes muddy, but this is insignificant, while the death of the child would presumably be a very bad thing”. Singer, Peter. 1972. Famine, affluence, and morality. Philosophy and Public Affairs 1 (3): 229–243

8 This draws on the philosopher Rawls’ theory of justice as fairness. In his book, A Theory on Justice, Rawls provides an account of social justice through the social contract approach.

9 Fairness construed as equity in this way is the basis of progressive taxation; people are not subject to the same rate but rather are taxed in line with what they can afford to contribute.

The World Health Organisation (WHO) has highlighted some key ethical considerations which should be explicitly evaluated by policy makers in the context of a mandatory vaccination requirement, either at a general population level or in specific sectors.11

1. **Necessity and proportionality**
   The principle of “least infringement”12, is a central pillar of public health ethics and gives rise to the principle of least restrictive alternative (PLRA). This requires that the policy that entails the least intrusion on personal rights and freedoms, capable of achieving the public health goal, should be implemented. “Mandatory vaccination should only be considered if it is necessary for, and proportionate to, the prevention of significant risks or morbidity and mortality and/or promote significant and unequivocal public health benefits”13.

2. **Sufficient evidence of vaccine safety**
   Data should be available that demonstrate that the vaccine(s) being mandated have been found to be safe in the populations in whom they are intended to be used. The WHO has pointed out that there should be specific consideration of whether vaccines authorised for emergency or conditional use meet an evidentiary threshold for safety sufficient to justify a mandate. Even when vaccines are considered sufficiently safe, vaccine-related harm can still happen and the WHO considers that a non-fault compensation scheme would have to be in place if mandatory vaccination were to be introduced.

3. **Sufficient evidence of vaccine efficacy and effectiveness**
   Data on efficacy and effectiveness should be available to demonstrate that the vaccine(s) are efficacious in the populations for whom vaccination is to be mandated and that the vaccine is an effective means of achieving the public health goal, be that interrupting transmission chains or preventing serious disease and/or protecting capacity of the healthcare system.

4. **Sufficient supply**
   A vaccine mandate cannot be considered unless it can be demonstrated that supply of the vaccine(s) in question are sufficient and reliable and are freely and easily available for all those encompassed by the mandate.

5. **Public trust**
   The impact of mandating COVID-19 vaccination on public confidence and trust needs to be carefully considered. The WHO point out that use of coercive power by Governments

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could undermine voluntariness and have unintended negative consequences in terms of vaccination generally and adherence to other public health measures. This is particularly pertinent for vulnerable or marginalised populations who have been historically disadvantaged and subject to structural inequalities. The extent to which mandatory vaccination policies accommodate exemptions, e.g. on grounds of conscientious objection, may also impact public trust. If too widely construed, they could undermine the protection from harm afforded by vaccination or could be used by some individuals to “free-ride” the public good of population immunity.

6. **Ethical process of decision making (reasonable attempts made to reach groups)**

   In coming to any decisions regarding mandatory vaccination, transparency and step-wise decision making is critical. Human rights obligations not to discriminate or disproportionately disadvantage vulnerable populations must be respected and reasonable efforts must be made to engage with relevant stakeholders and those affected by a vaccine mandate.

The WHO Regional Director for Europe, Dr. Hans Kluge, has cautioned against implementing COVID-19 vaccine mandates, unless every other feasible option to promote uptake of vaccines has been exhausted. Dr. Kluge pointed to the adverse impact such mandates could have on public confidence and trust and their potential to exacerbate existing social inequalities.

**Vaccine Mandates – Human Rights Considerations**

Mandatory vaccination may potentially interfere with a number of human rights, including the right to liberty, to work, to education, bodily integrity, privacy, freedom of movement, freedom of assembly, freedom of religion, and the right to equal treatment. Interference with any of these rights can be justified on the basis of harm to others or for the protection of health, however international human rights law requires that any such interference must be prescribed by law, necessary in a democratic society and be in accordance with the legal principle of proportionality.

Thus, a mandatory vaccination requirement, at a minimum, would have to be based on clear legal authority set out in legislation, and its provisions would have to be formulated with sufficient precision to enable the citizen to foresee the circumstances in which the law would or might be applied. The citizen must also have adequate access to the law in question. To meet the necessity test there would need to be a pressing social need such as protection of health and/or the healthcare system and the necessity for a restriction would have to be

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15 The Sunday Times v United Kingdom (1979) 2 EHRR 245
“convincingly established”\(^\text{16}\). In other words, there would need to be evidence to support the proposition that mandatory vaccination could achieve the legitimate aim in a proportionate manner. There are different tests for establishing proportionality\(^\text{17}\) but the European Court of Human Rights (ECtHR) generally seeks to establish if a State has struck a “fair balance between the demands of the general interest of the community and the requirements of the protection of the individual’s fundamental rights”\(^\text{18}\). For mandatory vaccination to be deemed proportionate, the vaccine would have to be safe and effective and the risk of side effects or vaccine damage would have to be low, while at the same time the risk of infection and the resulting harm would have to be high.

The ECtHR has only referred to mandatory COVID-19 vaccination in decisions rejecting three requests\(^\text{19}\) for interim measures against COVID-19 compulsory vaccination legislation in France and Greece. There is, however, relevant jurisprudence on the issue of mandatory vaccination in which principally Article 8 was engaged. Article 8 of the European Convention of Human Rights (ECHR) protects the “right to respect for private and family life,” which has long been interpreted as ensuring “freedom from interference with physical and psychological integrity”\(^\text{20}\). In the 1998 case Boffa and others v. San Marino\(^\text{21}\), the ECtHR upheld a San Marino statute enforcing childhood mandatory vaccination because of “the need to protect the health of the public and of the persons concerned”. In 2012 in Solomakhin v. Ukraine\(^\text{22}\), the Court reiterated that mandatory vaccination is a legitimate interference with Article 8 of the ECHR insofar as it is enforced by law, pursues “the legitimate aim of the protection of health”, and is “necessary in a democratic society”.

The position re mandatory vaccination has been most recently addressed by the ECtHR in the case of Vavřička and Others v. the Czech Republic\(^\text{23}\), where parents had refused to comply with a statutory obligation to vaccinate their children against nine childhood diseases, resulting in the imposition of fines and prohibited access to childcare facilities. The Court held

\(^{16}\) Autronic judgment of 22 May 1990, A 178, §61; Weber judgment of 2 May 1990, A 177, §47; Barthold judgment, §58.

\(^{17}\) The European Union has formulated a four-stage proportionality test (1) there must be a legitimate aim for a measure; (2) the measure must be suitable to achieve the aim, potentially with a requirement of evidence to show it will have that effect; (3) the measure must be necessary to achieve the aim, and there cannot be any less onerous way of doing it; and (4) the measure must be reasonable, considering the competing interests of the different groups at hand.


\(^{19}\) Application number 41950/21 (Abgrall and 671 Others v. France), lodged by 672 full-time and voluntary members of French Department of Fire and Emergency Services and members working in hospitals.

Application no. 43375/21 (Kakaletri and Others v. Greece), lodged by 24 applicants, of whom 18 are independent doctors and six are employed in public medical institutions.

Application no. 43910/21 (Theofanopoulou and Others v. Greece), lodged by six public-sector employees working in public medical institutions [doctors/a nurse/paramedic]


\(^{22}\) Solomakhin v. Ukraine [Application no. 24429/03]

\(^{23}\) Available at: Grand Chamber judgment Vavricka and Others v. Czech Republic - obligation to vaccinate children against diseases that were well known to medical science (1).pdf, accessed on 10th February 2022
that even if vaccination is never actually administered, the negative consequences arising from non-vaccination represents an interference with Article 8. The Court recognised that the Czech policy pursued the legitimate aims of protecting health as well as the rights of others, noting that vaccination protects both those who receive it and also those who cannot be vaccinated for medical reasons and are therefore reliant on herd immunity for protection against serious contagious diseases. It is worth noting that in all cases before the Court on mandatory vaccination, the Court has accepted that the measure pursued a legitimate aim in that it sought to protect the health and rights of others. In assessing mandatory vaccinations’ necessity in a democratic society, the Court has noted that States have a wide margin of appreciation (MoA) as “in matters of health-care policy, it is the domestic authorities who are best placed to assess priorities, the use of resources and social needs.”

The Court has also explicitly stated that mandatory vaccination does not constitute an interference with Article 9 of the ECHR which protects freedom of thought, conscience and religion. It is worth noting that while exemptions for medical reasons are widely provided for where there is an imposition of a vaccine requirement, legal systems vary in their approach to the provision of exemptions on the grounds of religious beliefs, e.g. refusal to take a vaccine because it is constituted of foetal material and freedom of conscience, e.g. use of animal testing in the development of a vaccine.

Given the lack of consensus among Member States in respect of mandatory vaccination against COVID-19, it is likely that the ECtHR would grant States a wide MoA and, based on previous jurisprudence, it is reasonable to speculate that it would find that mandatory vaccination against COVID-19 pursues a legitimate aim and meets a pressing social need. In determining proportionality, a number of factors might be deemed relevant, including the effectiveness and durability of the vaccine(s) in question against severe disease and/or onward transmission of infection; the risks attendant to the vaccine as well as contracting SARS-CoV-2, and the probability of both. The relative novelty of both the virus and the accelerated review procedures of the current COVID-19 vaccines may mean that previous case law may not be directly applicable to a legal duty to vaccinate against COVID-19.

The Council of Europe Resolution 2361 (2021) which references Articles 8 and 9 of the European Convention on Human Rights provides that Member States must ensure that citizens are informed that “vaccination is not mandatory and that no one is under political, social or other pressure to be vaccinated if they do not wish to do so.” Further Member

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24 Ibid, §285
25 In Boffa and 13 others v San Mario, the Commission stated that the term “practice” does not cover each and every act, rather, an act needs to be central to the expression of that religion or belief. They further pointed out that the legal obligation to be vaccinated applied to everyone irrespective of their religion. The Court reaffirmed its position Vavricka and Others v. Czech Republic underlining that not every conviction attracts the protection of Article 9.
States should “ensure that no one is discriminated against for not having been vaccinated, due to possible health risks or not wanting to be vaccinated”\(^{27}\).

At the national level, individual rights of autonomy, bodily integrity and privacy have been recognised as unenumerated rights under Article 40.3 of the Irish Constitution. In recognition of these rights, an adult can consent to or refuse medical treatments and interventions and cannot be treated without providing consent\(^{28}\). Constitutional rights are not absolute and may be infringed upon in the interest of the common good\(^{29}\). In the matter of A Ward, Hamilton CJ observed “in the case of contagious diseases, the claims of the common good might well justify restrictions on the exercise of a constitutionally protected right to refuse medical treatment”\(^{30}\). However, any such interference must be justified and proportionate. Two primary tests are relevant in this regard. The first is the proportionality test\(^{31}\) which requires that the provision, e.g. mandatory vaccination, must be (i) rationally connected to the objective and not arbitrary, unfair based on irrational considerations (ii) impair the right as little as possible and (iii) be such that their effects on rights are proportional to the objective. The second test is the rationality test which considers whether the “balance contained in the impugned legislation is so contrary to reason and fairness to constitute an unjust attack on some individual’s constitutional right”\(^{32}\).

Mandatory vaccination requirements are being legally challenged in a number of countries including the UK, USA, Canada, New Zealand, Australia, France, Italy and South Africa. Cases are being brought against the State and private employers making vaccination a condition of employment. While the Quebec and Ontario Superior Courts of Justice and the New Zealand Courts have upheld vaccine mandates set by employers, the US Supreme Court blocked a vaccine mandate for workers at large private companies, while they separately ruled that a more limited vaccine mandate could stand for staff at government-funded healthcare facilities.

**Vaccine Mandates for the General Population**

In applying the aforementioned ethical and legal principles, the question is whether a general vaccine mandate for the adult population could achieve its objective and be considered necessary and proportionate given the current epidemiological situation and the effectiveness of available vaccines against the predominant circulating variant Omicron.

The aim of the national vaccination programme is “to build on the public health response to COVID-19 to date through the efficient provision of safe and effective vaccines to the

\(^{27}\) Ibid, section 3.2
\(^{28}\) In the matter of A Ward of Court (withholding medical treatment) (No. 2) [1996] 2 IR 100 (SC)
\(^{29}\) Ryan v Attorney General [1965] IR 294
\(^{30}\) Op cit A Ward of Court at 124
\(^{31}\) Heaney v Ireland [1994] 3 IR 593 p607
\(^{32}\) Tuohy v Courtney [1994] 3 I.R 1 at 47
population and, in doing so, to reduce serious illness and death as a consequence of COVID-
19⁴³.

The five EU authorised COVID-19 vaccines all showed a very good safety profile in clinical trials
before receiving recommendations of approval from the EMA. Since licensing, the EMA, other
regulatory agencies and other international bodies have been continuously monitoring the
post-authorisation safety of COVID-19 vaccines. Despite the occurrence of rare adverse
events including thromboembolic events accompanied by thrombocytopenia, myocarditis
and pericarditis, the overall benefits of authorised COVID-19 vaccines in preventing COVID-
19 outweigh the risks of side effects.

COVID-19 vaccines have proven highly efficacious in clinical trials and highly effective in the
real world. Unvaccinated individuals are at a much greater risk of being hospitalised or dying
from COVID-19 compared to vaccinated individuals⁴⁴. There is evidence that those who have
completed the primary series of vaccination and have breakthrough infections face a
significantly lower risk of developing severe disease or requiring hospitalisation in comparison
to those who are unvaccinated⁴⁵. Studies assessing vaccine effectiveness show that there is a
decline in vaccine effectiveness against infection, symptomatic infection and hospitalisation
for COVID-19 vaccines that correlate with time since completion of primary vaccination⁴⁶.
Booster doses can restore protection against infection and severe disease at least in the short
term⁴⁷. Effectiveness of COVID-19 vaccines against transmission is rather more modest,
wanes substantially over time and is less for Delta than for Alpha⁴⁸.

While vaccines continue to elicit high levels of protection against severe COVID-19, substantially lower COVID-19 vaccine effectiveness has been estimated against Omicron
infection and symptomatic disease after primary vaccination compared to the Delta variant⁴⁹.
Emerging evidence also indicates that vaccine effectiveness against infection by the Omicron
variant is decreasing with time after both primary series and after a booster dose⁵⁰. This is
off-set to some extent by the fact that Omicron infection generally causes less severe disease

⁴³ Government of Ireland. National COVID-19 Vaccination Programme: Strategy. Available at:
108854_babc7d1b-cb10-49db-8dd0-0c7408dea162.pdf, accessed on 10th February 2022.
⁴⁶ ECDC. Technical Report 1st September 2021. Interim public health considerations for the provision
of additional COVID-19 vaccine doses. Available at: Interim public health considerations for the provision
of additional COVID-19 vaccine doses (europa.eu), accessed on 13th February 2022.
⁴⁸ UK Health Security Agency (UK HSA). The effect of vaccination on transmission of COVID-19 A rapid review
Available at: PHE document (koha-ptfs.co.uk), accessed on 13th February 2022.
⁴⁹ UK Health Security Agency (UK HSA). SARS-CoV-2 variants of concern and variants under investigation in
England, Technical Briefing 34: UK HSA; 2022. Available at:
⁵⁰ CDC. Morbidity and Mortality Weekly Report. Available at: Waning 2-Dose and 3-Dose Effectiveness of
mRNA Vaccines Against COVID-19–Associated Emergency Department and Urgent Care Encounters and
Hospitalizations Among Adults During Periods of Delta and Omicron Variant Predominance — VISION Network,
10 States, August 2021–January 2022 | MMWR (cdc.gov), accessed on 13th February 2022
than infection with prior variants\textsuperscript{41}. Studies into how well the vaccines prevent transmission of the Omicron variant are still underway.

As of February 6\textsuperscript{th} 2022, 95.2% of the adult population in Ireland have received two doses of a COVID-19 vaccination, while 71.4% have also received a third or booster dose of vaccine\textsuperscript{42}. Ireland has the highest share of adults who are fully vaccinated against COVID-19 in the European Economic Area (EEA) as of February 10\textsuperscript{th} 2022\textsuperscript{43}. Ireland is emerging from a fifth wave of infection driven by Omicron which has resulted in less severe disease and available vaccines continue to offer good protection against morbidity and mortality; the stated objective of the vaccination programme. The level of immunity in the population is increasing due to the ongoing booster vaccination programme and natural infection, making high levels of serious disease or unsustainable demands on healthcare unlikely. In such circumstances, it would be difficult to justify a population wide vaccine mandate on the basis of necessity or proportionality.

It is also highly questionable whether a more limited mandatory vaccination policy, as instituted in Greece and Italy for example, targeting those most at risk of severe disease e.g. older persons, would be a proportionate response given the vaccine uptake rates in those aged over 70 years are 99%, and over 97% in those aged 50-69 years. Thus, there is little to gain in terms of additional protection in mandating vaccination for this group. Vaccine uptake, although somewhat lower in younger age groups, are still impressive, with almost 90% of all those aged between 20-29 years having received two doses of vaccine\textsuperscript{44}. While deaths from COVID-19 are predominantly in the elderly, rare and sometimes serious effects of the vaccines are mostly in the young, making the risk-benefit ratio more finely balanced for younger people which likely explains the lower rates of vaccination. Imposing a legal duty to be vaccinated on all adults, even those at lower risk of severe disease, would not seem reasonable and would strain the concept of solidarity given that COVID-19 vaccines are only partly effective in reducing transmission.

Of the five percentage of the population who remain unvaccinated, a portion of those will not have been able to receive a COVID-19 vaccine because of a clinical contra-indication. Authorisation and availability of new vaccines using different platforms, including Nuvoxavid, may offer these individuals the possibility of becoming vaccinated against COVID-19. For those who choose to remain unvaccinated, it is important not to consider them as a homogenous group. Vaccine hesitancy and anti-vaccination sentiments differ substantially between different demographic subgroups. A wide variety of reasons may underpin a vaccine refusal including the perceived risks of COVID-19, and of novel vaccines for which there is

\textsuperscript{41} ECDC. Rapid Risk Assessment 27\textsuperscript{th} January 2022. Assessment of the further spread and potential impact of the SARS-CoV-2 Omicron variant of concern in the EU/EEA, 19th update. Available at: Assessment of the further spread and potential impact of the SARS-CoV-2 Omicron variant of concern in the EU/EEA, 19th update (europa.eu), accessed on 13\textsuperscript{th} February 2022

\textsuperscript{42} HPSC. COVID-19 Vaccination Uptake in Ireland Weekly Report Week 5 2022 (week ending Sunday 6th February 2022) Available at: PowerPoint Presentation (hpsc.ie), accessed on 10\textsuperscript{th} February 2022

\textsuperscript{43} Statista. Available at: • Full COVID-19 vaccination uptake in Europe 2022 | Statista, accessed on 13\textsuperscript{th} February 2022.

\textsuperscript{44} Op cit HPSC
limited long-term safety data, or the perceived protective effect of previous infection. Misinformation on COVID-19 vaccines propagated by organised groups and through social media channels has further exacerbated the situation. Depending on the particular individual context, a vaccine refusal could be considered to fall within the realm of reasonable disagreement.

European research indicates that COVID-19 vaccine uptake is strongly linked to ethnicity, socioeconomic status and level of educational attainment\(^\text{45}\). Economic situation is the strongest predictor of vaccine refusal with those in the lower quartiles of income distribution more likely to refuse an offer of vaccination. Analysis of the socio-demographic differences between unvaccinated and vaccinated adults in Ireland by the Economic Social Research Institute (ESRI) Behavioural Research Unit for the National Public Health Emergency Team (NPHET) in December 2021 reflect European findings. Women, individuals under 40 years of age, those with lower educational attainment, unemployed individuals, those who fall in the DEF social grade, those living in Connacht-Ulster and non-Irish nationals are over-represented amongst the unvaccinated segment of the population. Levels of trust can also vary across different groups in society. Vaccine hesitancy related to COVID-19 vaccines among people from some minority ethnic backgrounds has been linked to a lack of trust resulting from systemic racism and discrimination, historical abuses such as the Tuskegee syphilis study, underrepresentation of minorities in vaccine research, and negative experiences in the healthcare system\(^\text{46}\).

A vaccine mandate is unlikely to significantly increase uptake amongst those who remain unvaccinated, and may even trigger distrust in Government, increase polarisation and anti-vaccination sentiment more generally. Many countries which have introduced or are considering the introduction of vaccine mandates for COVID-19 have experienced public opposition and civil unrest. Moreover, a vaccine mandate would likely disproportionately penalise the most disadvantaged in society and serve to exacerbate existing social inequalities. While concerns regarding the free-rider aspect are understandable, attaching blame to those who remain unvaccinated for not protecting themselves or indeed others against COVID-19 is not productive, and fails to recognise that decisions regarding vaccine uptake are shaped by social and cultural factors. A proportion of the population will persistently reject vaccination on the basis of a personal belief, even in the face of negative social or economic impacts. It also needs to be acknowledged that implementing mandates is logistically complex, expensive and time consuming. As WHO has noted, vaccine mandates for general adult populations are rare\(^\text{47}\) and there is limited experience in enforcing them. Identifying those who remain unvaccinated raises privacy and data protection issues, while providing for exemptions in any legislation poses the challenge of distinguishing objections.


\(^{46}\) Razai M S, Osama T, McKechnie D G J, Majeed A. BMJ 2021; 372 :n513

\(^{47}\) Op cit WHO, p.3
from mere preferences. As noted by WHO the absence of a vaccine compensation scheme also poses an obstacle to introducing a legal duty to be vaccinated.

**Vaccine Mandates for Healthcare Workers**

A number of countries have introduced COVID-19 vaccine mandates for health and social care staff with the aim of reducing SARS-CoV-2 transmission to patients as well as maintaining the capacity of the healthcare system to function (see Appendix 1). High uptake of COVID-19 vaccines in healthcare workers (HCWs) is important for their protection and the protection of those they care for, but also because HCWs are an important source of information about vaccines for others in society. In healthcare settings, the risks and impacts of COVID-19 are substantial. Healthcare workers are at high risk of infection and can transmit the virus to their patients whose underlying condition increases their risk of serious disease or death from COVID-19. Superspreading COVID-19 events in healthcare settings have been documented globally. The HPSC has documented that 31% of COVID-19 outbreaks reported from 27th June 2021 to 5th February 2022 were in healthcare or residential settings. Thus, a COVID-19 vaccine mandate in HCWs could be deemed to be more necessary and proportionate than for the general adult population.

It could be argued that mandatory vaccination of HCWs is a justifiable limitation on a HCWs autonomy as it ensures the fulfilment of certain professional and ethical responsibilities. In the case of HCWs, a legal duty to be vaccinated could be grounded in their moral duties of beneficence and non-maleficence. Maximising the uptake of safe and effective vaccines could facilitate a HCW’s obligation to “do no harm” and to exercise their “duty to care”; foundational principles of healthcare ethics. It has been argued that the low risk posed by COVID-19 vaccines and the risk to patients posed by a HCWs unvaccinated status means a HCW has a moral obligation to accept vaccination as part of the “duty of easy rescue”.

It has been pointed out that while HCWs can choose whether or not to be immunised (albeit there may be negative consequences for choosing to remain unvaccinated), patients do not choose to get sick and can not choose whether the person caring for them is vaccinated or not.

It is important to note that appeals to the commitment to do no harm extend beyond the individual HCW to healthcare institutions and systems, who have a legal and moral obligation to protect HCWs and patients from healthcare-acquired infections. Employers have a legal obligation under the Safety, Health and Welfare at Work Act 2005 to do all that is reasonable to protect the health of their employees and maintain a safe place of work. Employees have reciprocal legal duties to do their best to protect their own health and safety as well as that

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49 Parker M, Bedford H, Ussher M, Stead M. BMJ 2021; 374 :n1903

50 Bradfield OM, Giubilini A. Journal of Medical Ethics 2021;47:467-472.
of their co-workers. A failure by healthcare institutions to assist HCWs in the fulfilment of their duties to do no harm by providing a safe working environment and adequate personal protection equipment weakens appeals to such duties in the justification of a vaccine mandate.

In addition to affecting vaccine uptake, mandatory vaccination policies may have other consequences that require consideration. The British Medical Association considers that a COVID-19 health vaccine mandate is “a blunt instrument to tackle a complex issue”51. The risk that a vaccine mandate might result in an increase in vaccine hesitancy and a loss of trust needs to be considered. Health and social care workers, like the general population, are not immune to vaccine concerns or susceptibility to misinformation. A study examining vaccine attitudes and behaviours among health and social care staff in the UK found that employer pressure to get vaccinated resulted in increased district and vaccine hesitancy amongst employees52. Thus, a vaccine mandate which could undermine trust between HCWs and their employers and further serve to negatively impact existing low morale and fatigue experienced by HCWs as a result of dealing with the pandemic over the last two years. The pandemic has exacerbated shortages in healthcare staffing which on the one hand underlines the importance of HCWs being protected through vaccinated but one also needs to consider that a legal duty to be vaccinated may also impact staff shortages if individual HCWs decide not to comply with the mandate and can no longer be employed within the healthcare sector. In November 2021, the UK Health Secretary announced that all NHS staff (subject to a small number of exceptions) would have to be vaccinated as a condition of employment by April 1st 2022 and legislation was laid before Parliament in January 2022 to that effect. Staff had until February 3rd to receive at least one dose of a COVID-19 vaccine. While almost 130,000 staff came forward to be vaccinated, it was estimated that about 5% of NHS staff would miss the February deadline53. Difficulties in establishing the vaccination status of HCWs, defining face-to-face and frontline healthcare workers and providing for conscientious objection were also reported. On January 31st 2022, the Health Secretary announced he was launching a consultation on ending the requirement for HCWs to be vaccinated54.

Data on uptake among HCWs in hospitals is estimated based on COVAX data and Human Resources estimates; due to limitations around accuracy of information relating to hospital staff vaccinated and hospital staff working on site, meaningful data in respect of the percentage COVID-19 vaccine uptake by HCWs is not readily available. In October 2020, SARS-CoV-2 seroprevalence among HCWs of two Irish hospitals was 15 and 4.1%, respectively. By April 2021, this had increased to 21 and 13%, respectively55. The Health Information Quality Authority (HIQA) has previously advised NPHET on developing policy for HCWs who do not

53 Iacobucci G. BMJ2022;376:o269.
avail of COVID-19 vaccination, based on a review of international policy and guidance. HIQA advised that policy should be based on an intervention ladder approach, where interventions deployed become progressively more restrictive. One starts with provision evidence-based information and subsequently, utilise one-to-one conversations, testing and/or additional PPE; with mandatory vaccination sitting at the top of the ladder as the most intrusive step.

In line with this advice, the HSE has adopted a policy of establishing the vaccination status of HCWs, offering them information and support in respect of receiving a vaccine and if staff remain un-vaccinated (or have not contracted SARS-CoV-2 in the previous nine months), an individual risk assessment is completed to ascertain the levels of risk posed by the HCW remaining unvaccinated. Depending on the risk-benefit ratio, a HCW can be subject to redeployment within the healthcare system. It has been argued that this kind of conditional COVID-19 vaccination policy where a HCW’s role (as distinct from job) is conditional upon vaccination is more proportionate and is ethically justifiable. Redeploying staff within the system may reduce staffing in some services, but mandatory vaccination can have the same effect.

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58 Op cit Bradfield OM
Conclusions and Recommendations

Given the high levels of immunity in the population as a result of vaccination and natural infection, and in light of vaccine waning and vaccine escape in the context of Omicron as well as the improving epidemiological situation, it would be difficult to justify a population wide vaccine mandate on the basis of necessity or proportionality. The successes Ireland has already achieved in relation to COVID-19 has been largely based upon trust and transparency rather than penalties and enforcement. It is vital that continued efforts be made to engage, listen with respect, communicate effectively, and offer practical and targeted support to those who have yet to be vaccinated, given the direct benefit COVID-19 vaccination offers in terms of reducing the risk of severe disease, hospitalisation and death.

The current HSE policy in relation to unvaccinated health care workers is in line with the principle of least restrictive alternative advocated by the WHO. Mindful of the potential adverse consequences of introducing a vaccine mandate for this group, any change in policy would have to be informed by a more complete understanding of COVID-19 vaccine uptake in HCWs, both in health and social care settings. Less intrusive measures must first be shown to be ineffective before more intrusive measures should be considered. Thus, continued exploration of why some HCWs have not taken up the offer of a COVID-19 vaccine as well as an evaluation of the effectiveness of the current measures in place should be undertaken prior to any change in policy. In this regard, and particularly related to future preparedness, continued efforts should also be made to improve and strengthen vaccination information systems such that there is a close to real-time understanding of vaccine uptake amongst this group.
<table>
<thead>
<tr>
<th>Country</th>
<th>Mandatory Vaccination</th>
<th>Details</th>
</tr>
</thead>
</table>
| Austria | ✓                     | - The government introduced a vaccine mandate for those over 18 which came into effect from 3 February 2022. Exemptions are made for those who are pregnant as well as those who cannot receive a vaccine for medical reasons.  
- Every household is to be informed of the new law via post by March 15. After this date, police will start monitoring people’s immunisation status and issuing fines of €600, rising to up to €3,600 in cases of noncompliance. |
| Belgium | ✓                     | - Health care workers will have until 1 April to get fully vaccinated before vaccination becomes mandatory for staff.  
- The rule was brought into place on 1 January 2022.  
- When the obligation comes into force on the 1 April 2022, all unvaccinated health care workers will be dismissed. This includes nurses, doctors, pharmacists, physiotherapists and all other workers in the health care sector. |
| Denmark | ×                     | - No mandatory vaccination. |
| Finland | ✓                     | - The government approved a vaccine mandate for social and healthcare staff who are working with high-risk groups on 28 December 2021. The mandate will remain in effect until the end of 2022.  
- Only those who are fully vaccinated or those who have recovered from the virus within the past six months are allowed to work closely with patients in high-risk groups.  
- The government have stressed that the vaccine mandate does not mean forced vaccinations. Under the terms of the amendment, the responsibility will be on the employer to assign other tasks to those who do not want to take the vaccine. |
| France  | ✓                     | - Mandatory vaccinations are in place for all professions working with the vulnerable since 15 September 2021:  
  o all staff (including administrative) of health establishments, medico-social establishments (EHPAD, USLD, independent residences, disability structures with or without accommodation and including non-medicalized), social establishments attached to a health establishment (LHSS, LAM, CSAPA, CAARUD, CLAT, CEGGID).  
  o home helpers working with people dealing with APA or PCH, in home services or as employees of private employers.  
  o personnel of medical transport companies (including taxis with agreements). |
<table>
<thead>
<tr>
<th>Country</th>
<th>Vaccine Mandates</th>
</tr>
</thead>
</table>
| Germany  | • MPs in Germany passed a law on December 10 making COVID vaccines mandatory for healthcare staff.  
         | • The vaccine mandate means that everyone who works in hospitals, retirement and nursing homes must be vaccinated or have recovered from COVID in order to work. Personnel from facilities for the disabled, day clinics, medical offices, emergency services or socio-educational centres are also affected by the mandate.  
         | • Healthcare staff will have until March 15 to prove they have been fully vaccinated or risk being suspended from work. |
| Greece   | • Vaccine mandates are in place for all of those over the age of 60. Those who are unvaccinated have to pay a fine of €100.  
         | • Vaccines are mandatory for all staff in healthcare (health, administrative, support) of private and public health structures (diagnostic centres, rehabilitation centres, clinics, hospitals, PHC structures, etc.).  
         | • Health care professionals who aren’t fully vaccinated against COVID-19 by March 31 will be fired from the National Health System (ESY).  
         | • Greeks who were vaccinated seven months ago and have not received a booster shot against COVID-19 have had their vaccine certs made invalid. Therefore, for many health professionals, a booster is necessary in order to be considered fully vaccinated. |
| Italy    | • Vaccine mandates are in place for all of those aged over 50.  
         | • From February 15, anyone 50 or older will be checked to see if they have a “super green pass” before they are allowed enter their workplaces. That certification is reserved to those who are fully vaccinated or who have recently recovered from COVID-19.  
         | • Anyone working in universities must be vaccinated.  
         | • Vaccines have been made mandatory for all school staff, police and the military since 15 December. |
Vaccines are mandatory for health professionals who perform their services in health facilities, social and health structures, social welfare structures, pharmacies and para-pharmacies and in professional offices, and can only be avoided in the event of an established health hazard due to particular documented clinical conditions.

- Failure to vaccinate in the health settings mentioned above leads to suspension, with consequences in terms of pay.

<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxembourg</td>
<td>x</td>
<td>No mandatory vaccination.</td>
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<tr>
<td>Netherlands</td>
<td>x</td>
<td>No mandatory vaccination.</td>
</tr>
<tr>
<td>Portugal</td>
<td>x</td>
<td>No mandatory vaccination.</td>
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<tr>
<td>Spain</td>
<td>x</td>
<td>No mandatory vaccination.</td>
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<tr>
<td>Sweden</td>
<td>x</td>
<td>No mandatory vaccination.</td>
</tr>
<tr>
<td>UK</td>
<td></td>
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<tr>
<td>England</td>
<td>x</td>
<td>No mandatory vaccination. Plans have been removed.</td>
</tr>
<tr>
<td>Wales</td>
<td>x</td>
<td>No mandatory vaccination.</td>
</tr>
<tr>
<td>Scotland</td>
<td>x</td>
<td>No mandatory vaccination.</td>
</tr>
</tbody>
</table>

19
<table>
<thead>
<tr>
<th>Country</th>
<th>Requirements and Notes</th>
</tr>
</thead>
</table>
| Northern Ireland | - No mandatory vaccination.  
                  | - Plans were announced for a public consultation on mandatory COVID-19 and flu vaccination for new recruits to the health and social care workforce in Northern Ireland. |
| Canada           | Mandatory vaccination for:  
                  | - **All federal public servants in the Core Public Administration.** Contractors and subcontractors who work on government property must also comply with this policy. There are no exceptions for employees who work remotely.  
                  | - **Federally regulated air, rail, and marine transportation sectors:**  
                  | o Airlines and airports, and other organizations who have employees who enter restricted areas of airports, such as concession and hospitality workers.  
                  | o Federally regulated railways, and their rail crew and track employees.  
                  | o Marine operators with Canadian vessels that operate with 12 or more crew.  
                  | - **Passengers:**  
                  | o Air passengers flying on domestic, transborder or international flights departing from airports in Canada.  
                  | o Rail passengers on VIA Rail and Rocky Mountaineer trains. |
| US               | - Many states in the US require mandatory vaccinations for healthcare workers as well as those working in high-risk congregate care facilities.  
                  | - In many of these states, those health care workers who are not vaccinated are required to submit to regular testing.  
                  | - Some of these states include California, Maine, Massachusetts, Pennsylvania, New York, New Jersey & Rhode Island among others. |
| New York (example)| Still in place as of 9/2/22 but may be removed.  
                  | Mandatory for:  
                  | - **All State workers,** e.g., staff at hospitals and long-term care facilities (LTCF), including nursing homes, adult care, and other congregate care settings.  
                  | - State employees who do not get vaccinated will be required to be tested for COVID-19 on a weekly basis.  
<pre><code>              | - **The Key to NYC:** those aged 12 and older are required to show identification and proof they have received at least one dose of a COVID-19 vaccine for: |
</code></pre>
<table>
<thead>
<tr>
<th><strong>New Zealand</strong></th>
<th><strong>Mandatory vaccinations for the:</strong></th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>Health and Disability sector:</strong></td>
</tr>
<tr>
<td></td>
<td>o Health practitioners</td>
</tr>
<tr>
<td></td>
<td>o Workers who work in close proximity to health practitioners providing services to members of the public (for example, reception and administration staff in general practice, shop assistants in community pharmacies)</td>
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<tr>
<td></td>
<td>o Workers employed or engaged by certified providers, which includes workers at a facility providing hospital care, rest home care, residential disability care or fertility services (for example, anyone working in a hospital setting such as laundry staff, orderly, administration staff, or rest home staff like kitchen and cleaning staff)</td>
</tr>
<tr>
<td></td>
<td>o Care and support workers who are employed or engaged to carry out work that includes going to the home or place of resident of another person (including those living in the home or place of residence of a family member) to provide care and support services funded by the Ministry of Health, a DHB or ACC.</td>
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<tr>
<td></td>
<td><strong>Corrections sector:</strong></td>
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<tr>
<td></td>
<td>o All staff who work in prisons</td>
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<tr>
<td></td>
<td>o Health care staff working in prisons</td>
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<td></td>
<td>o Psychologists working in prisons and the community</td>
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<tr>
<td></td>
<td>o Many contracted providers and people who provide services in prisons</td>
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<tr>
<td></td>
<td>o All other regulated professions currently registered under the Health Practitioners Competence Assurance Act regulations.</td>
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<tr>
<td></td>
<td><strong>Education sector:</strong></td>
</tr>
<tr>
<td></td>
<td>o Workers over the age of 12 years who carry out work at or for an affected education service (including as a volunteer worker or an unpaid worker) and who either:</td>
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<tr>
<td></td>
<td>o May have contact with children or students while carrying out the work</td>
</tr>
</tbody>
</table>
Will be present at the affected education service at a time when children or students are also present.

It is now mandatory for Fire and Emergency New Zealand workers in certain roles to be vaccinated and have received their booster vaccination because of the work they carry out. Including:

- Operational firefighter roles
- Operational support units
- Group, District and Region managers
- Community Risk Managers
- Community Readiness and Recovery Advisors
- Risk Reduction Advisors
- Maori Liaison Roles
- Urban Search and Rescue roles.

- It is mandatory for Police employees in certain roles to be vaccinated and receive a booster.
- It is also mandatory for all New Zealand Defence Force staff to be fully vaccinated against COVID-19.

Mandatory booster information
There are different mandated dates for when booster vaccinations are required for the workforces covered by the Vaccinations Order. These are:

- Border and MIQ workforces, if eligible for a booster, are required to have this by 15 February 2022
- Health and Disability workforces, if eligible for a booster, are required to have this by 15 February 2022
- Education, Corrections, Police, Defence, and Fire and Emergency workforces, if eligible for a booster, are required to have this by 1 March 2022
- Note that workers covered in Schedule 2 part 10 of the Vaccinations Order and currently not covered by this mandate – this includes:
  - workers at a food and drink business or service
  - workers who carry out work at gyms
  - workers who carry out work at permitted event, regardless of whether the work is carried out before people arrive at, or leave, the permitted event
  - workers at close-proximity business or service
  - workers who carry out work for a tertiary education provider at tertiary education premises that are located in an area described in Part 1 of Schedule 7 of the COVID-19 Public Health Response (Protection Framework) Order 2021.
The Vaccinations Order mandates that a booster dose is required by six months (183 days) from the end of the primary vaccination course.

<table>
<thead>
<tr>
<th>Country</th>
<th>Vaccine mandates exist for:</th>
</tr>
</thead>
</table>
| **Australia**            | **Residential aged care workers:**  
|                          |   - Full time, part-time and casual staff employed or engaged on behalf of the residential aged care facility (RACF) (such as agency staff working onsite) including:  
|                          |     - Direct care workforce (nurses; personal care workers; allied health professionals, and allied health assistants)  
|                          |     - Administration staff (reception; management; administration)  
|                          |     - Ancillary staff (food preparation; cleaning; laundry; garden; maintenance)  
|                          |     - Lifestyle / social care (music/art therapy); Transport drivers collecting residents from RACFs for outings  
|                          |   - Volunteers engaged by the RACF  
|                          |   - Students on placement; and  
|                          |   - Medical practitioners who attend and provide care to residents.                                                                                                                                |

| **Western Australia**    | **Mandatory vaccination for:**  
|                          | **Group 1 industries and occupations:** Occupations in which high risk is sufficient due to high transmission, vulnerability, or necessity to avoid catastrophic risk to safety of the community. Workers in this group must have had their third dose within one month of becoming eligible.  
|                          |   - Hotel quarantine workers – all  
|                          |   - Port workers - exposed workers only  
|                          |   - Residential aged care workers  
|                          |   - Healthcare and health support workers in public and private hospitals and public healthcare facilities  
|                          |   - Tier 1 facilities - highest risk units, wards, departments in hospitals, COVID testing and community vaccination clinics  
|                          |   - Police staff working in mission critical areas  
|                          |   - Cross-border freight (road and rail) workers - high and extreme risk locations only  
|                          |   - Healthcare and health support workers in public and private hospitals and public healthcare facilities  
|                          |   - Tier 3 facilities – private health care facilities, premises occupied by Department of Health, health service providers  
|                          |   - Primary and community health workers- GPs, private nurses, pharmacies, dental centres, allied health, private pathology  
|                          |   - FIFO, onsite regional, mission critical mining/resources sector |
Further mandates:
- Border and air transport
- Remaining residential and non-residential community care services not captured by previous mandates including in relation to:
  - Disability
  - In home and community aged care work
  - Homelessness
  - Drug and alcohol services
  - Family and domestic violence
  - Child protection
  - Aboriginal peoples
  - Corrections
  - WA Police not already mandated
  - Fire and Emergency Services (excluding volunteers)
  - Abattoirs and meat processing

**Group 2 industries and occupations:** Occupations deemed critical to the ongoing delivery of critical services to the community. Workers in this group must have had their third dose within one month of becoming eligible.
- Specific cohorts of critical workers working in the following premises/locations or roles:
  - Supermarket, grocery, bakery and food distribution centres
  - Restaurant, pub, bar, café or fast food
  - Department stores
  - Hardware store
  - Child-care or family day care provider
  - School or boarding school (teachers and other support staff)*
  - TAFEs and colleges of vocational education
  - Financial institution
  - Critical infrastructure and services necessary for the health, safety or welfare of the community, any person, animal or premises
    - Veterinary clinic
    - Utilities - power, gas and water, public and private
    - Security provided to critical providers/workplaces only
    - Government regulators
<table>
<thead>
<tr>
<th>Northern Territory</th>
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</thead>
<tbody>
<tr>
<td><strong>Mandatory vaccination for:</strong></td>
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<tr>
<td>- Workers who are likely to come into contact with people who are at risk of severe illness from COVID, work with Aboriginal people, or who work with people who cannot be vaccinated due to age or a contraindication to all vaccines, work with:</td>
<td></td>
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<tr>
<td>- Children</td>
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<tr>
<td>- In customer-facing roles</td>
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<tr>
<td>- Vulnerable people</td>
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<tr>
<td>- In Aboriginal communities and community services sector</td>
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<tr>
<td>- Workers who are at an increased risk of contracting COVID-19 or who work in a high risk setting where there is a known risk of COVID-19 transmission or outbreak:</td>
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<td></td>
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<tr>
<td>- people who are at risk of contracting COVID-19 because they may come into contact with a person or thing that poses a risk of infection during the course of their work.</td>
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<tr>
<td>- people who work in high-risk settings where COVID-19 transmission or an outbreak may occur</td>
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<tr>
<td>- Workers who perform work in essential infrastructure, food or essential goods security or supply, or logistics in the Territory</td>
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<tr>
<td>- Volunteers</td>
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<tr>
<td>- Residential aged care workers</td>
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<tr>
<td>- Quarantine workers</td>
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<tr>
<td>- Freight transport workers</td>
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<td></td>
</tr>
</tbody>
</table>
• Detailed list is available here.

Source:

Austria
https://www.theguardian.com/world/2021/nov/19/austria-plans-compulsory-covid-vaccination-for-all

Belgium

Denmark
https://en.coronasmitte.dk/vaccination

Finland
https://yle.fi/news/3-12249108

France
https://www.gouvernement.fr/info-coronavirus/vaccins#vaccination_obligatoire
Reaction: France mandatory vaccine plan covers 1.5m workers in 70 jobs (connexionfrance.com)

Germany
https://www.rki.de/SharedDocs/FAQ/COVID-Impfen/gesamt.html?sessionid=8C100AD8F7872B43652E7D5304AC8930.internet082
https://www.euronews.com/2021/12/10/germany-introduces-mandatory-vaccination-for-healthcare-workers

Greece
https://www.euronews.com/2022/01/17/covid-in-europe-greece-begins-fining-those-over-60-who-are-unvaccinated
https://news.gtp.gr/2022/02/02/greeces-vaccination-certificates-invalid-from-feb-7-without-booster/

Italy
https://www.theguardian.com/world/2022/jan/05/italy-makes-covid-vaccinations-compulsory-for-over-50s
https://www.euronews.com/2022/01/06/covid-in-europe-italy-introduces-mandatory-vaccination-for-the-over-50s

Luxembourg
Australia


US

https://www1.nyc.gov/site/doh/covid/covid-19-vaccines-keytonyc.page
