

**To: Secretary of State, Minister of State for
Care and Mental Health**

From:
Clearance: Richard Cienciala, Deputy
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Delivery and Matthew Henry,
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Date: 20 January 2022

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Vaccination as a condition of deployment: public health evidence and boosters

Issue	This note provides the most recent public health evidence from UKHSA on vaccine effectiveness in relation to vaccination as a condition of deployment (VCOD) policy. It also sets out the initial I&S parliamentary handling advice and options in relation to the future of VCOD policy.
Date a response is needed by Reason	Urgent – a response is needed on 20 January to reflect your position in the note commissioned by No.10 for 24 January.
Recommendation	That you: <ul style="list-style-type: none">- Note the emerging evidence on vaccine effectiveness against spread of Omicron and the implications for current VCOD policy, alongside the latest assessment of operational risks- I&S- Provide a steer on which options you would like exploring further and if there are any you would like to discount at this stage.- Note that we will supply a draft of the final advice for No.10 on Monday 24 January subject to any initial steers following this submission.

Background

1. You received advice on 17 December on the case for extending vaccination as a condition of deployment (VCOD) policy to include boosters. You agreed that the case for extension should be considered in the New Year when we have further data and studies on the effectiveness of the vaccine including in relation to Omicron.
2. Since then you have agreed to update vaccine requirements for certification purposes from the current definition (a completed primary course with no time limit) to reflect the vaccine regime now recommended for all adults based on JCVI advice. This means that a person would be vaccinated for certification purposes if *‘an individual has completed a primary course and is on schedule with subsequent doses’*. You also agreed to the need to reconsider vaccination certification requirements in the four areas where these are currently written into regulations (VCOD, vaccine-or-test certification, self-isolation and inbound travel).

3. On 14 January you also asked for advice on future proofing VCOD in the case of further new vaccines being needed. Number 10 has separately commissioned detailed advice on VCOD 1 and 2 and options relating to them. This commission is attached at **Annex A**.

The updated evidence

Effectiveness of a primary course

4. The Government's focus in pursuing a VCOD policy has first and foremost been to help protect the most vulnerable. The purpose of the VCOD policy is to ensure people working in health and social care are vaccinated against Covid-19, as a means to reducing the transmission of the virus to people receiving health and care services who may face severe health consequences if infected.
5. When DHSC consulted in the summer on the further extension of the VCOD policy (beyond Care Homes) our best available evidence showed that vaccine effectiveness against infection was around 65% against the dominant variant, Delta, after two doses of AstraZeneca and 80% after 2 doses of Pfizer-BioNTech. This was important as individuals who are not infected have no risk of transmission.
6. Moreover, in addition to reducing transmission through reducing the number of infected individuals, an analysis from the ONS Community Infection Survey found that contacts of vaccinated people with COVID had around 65 to 80% reduced odds of testing positive with the Alpha variant and 35 to 65% reduced odds of testing positive with the Delta variant compared to contacts of unvaccinated people with COVID.
7. Since then, Omicron has replaced Delta as the dominant variant and now accounts for almost all SARS-CoV-2 infection in England. The latest evidence of vaccine effectiveness in the context of Omicron is therefore the most relevant.
8. The UK Health Security Agency (UKHSA) continue to review the effectiveness of vaccines at reducing the spread (infection and transmission) and severity (symptomatic disease and hospitalisation) from all strains of Coronavirus including Omicron. UKHSA have conducted a rapid preliminary assessment of protection from Omicron infections (including symptomatic and asymptomatic infections) provided by Covid-19 vaccination and prior infection in the SIREN cohort of NHS workers.
9. These preliminary data indicate some protection against infection: compared to unvaccinated healthcare workers who had not also had a prior infection (those at highest risk), those with 2 doses were 32% less likely to be infected with Coronavirus. This estimate is uncertain as the range of possible vaccine effectiveness is large and includes evidence of no effect. In those who had completed a primary course and had a prior infection, protection against infection increased to 60%. However, these are preliminary estimates and do not account for other factors including time since vaccination.
10. Preliminary evidence from UKHSA shows that the effectiveness of all vaccines against symptomatic infection is lower in all periods against Omicron compared to the Delta variant and wanes rapidly. Vaccine efficacy against mild disease with Omicron largely disappears by 20 weeks after 2 doses. The preliminary data therefore shows that after a relatively short time, a full primary course of an approved vaccine no longer provides the intended longer-term public health protection against the spread of Covid (the specific data is in the table at **Annex B**).

Effectiveness of boosters

11. Initial results show that a booster increases protection against symptomatic and asymptomatic Omicron infections to 62% in those without a prior infection rising to 71% in those with prior infection. There is an additional incremental benefit from each vaccine exposure, even in those who have had prior infection.
12. Two to 4 weeks after a booster dose vaccine effectiveness against symptomatic infection ranged from around 65 to 75%, dropping to 55 to 65% at 5 to 9 weeks and 45 to 50% from 10+ weeks after the booster. In short, it is unlikely that protection against infection will be effective after 3 months.

13. It is worth noting that for those in the general population who have had a booster dose, protection against hospitalisation with Omicron is more durable than protection against infection. After a booster dose, protection against hospitalisation with Omicron is 85 to 90%.

Severity of Omicron

14. The severity of Omicron compared to previous variants is also an important consideration for policies where prevention of the spread of Coronavirus is the primary goal, as the consequences of transmitting the infection to others are less severe if the new variant causes less severe disease.
15. The risk of presentation to emergency care or hospital admission with Omicron is approximately half of that for Delta. The risk of hospital admission from emergency departments with Omicron is approximately one-third of that for Delta.

Prior infection

16. A further consideration is the evidence now available on prior infection. While it is clear that boosters provide a far greater level of protection than a primary course alone, a primary course plus a prior infection provides largely equivalent protection to a primary course plus a booster.
17. The role of prior infection is particularly relevant for health and social care workers because:
 - a. Regular surveillance means they can demonstrate past infection more readily and the scope for gaming a requirement that included prior infection is lower than might be the case in the general population;
 - b. The consequences of not being vaccinated for work are serious (potential dismissal).
18. There are good reasons, as set out in the previous advice on the definition of vaccinated for the purposes of certification not to recognise prior infection including perverse incentives by potentially encouraging infection and gaming of the system through reporting false testing results
19. Vaccines provide a much safer route to immunity than prior infection especially in older and more vulnerable populations. Infection carries significant risks including severe disease and long Covid and no one should seek infections as an alternative to vaccine; but for those who have been infected and vaccinated it is likely to provide additional and more durable protection against infection than vaccine alone.

Summary of implications of evidence and options

20. The evidence set out above means that the cost/benefit case for the current VCOD policy is more finely balanced than before. It is very likely that the effect of VCOD as a means of protecting patients and people with care needs is less than it was against previous variants and the effect of 2 doses will wane significantly over time. While protection against severe disease and hospitalisation is much higher and takes longer to wane, this is not the purpose of VCOD.
21. In addition, Omicron does not represent the same risk to life as Delta did. As such the necessity and proportionality of the policy, specifically in relation to; 1) the interference with workers' rights, and 2) the resulting staff shortages being a greater risk to life than the virus itself, is likely lower/less than when the policy was first developed.
22. While Omicron presents a reduced risk of severe disease and mortality compared to previous SARS-CoV-2 variants, there is no evidence that all future variants may be less severe. Future variants may emerge from any of the lineages in global circulation and could revert to a higher severity signal. In the event that this happens, reintroduction of a VCOD policy in a rapid timeline to combat a new threat would be extremely difficult.
23. However, there is additional benefit from receiving booster vaccination and receiving the primary course is critical to further annual updated vaccines; removing VCOD requirement to undergo a primary course means that updating to a booster or annual vaccination programme could not be implemented.

requirement. There are a number of reasons why uptake of boosters may ultimately be lower including vaccine fatigue, recent infection, questions about efficacy or the milder symptoms associated with Omicron. The DHSC and NHSEI vaccination programmes will continue to monitor this issue closely.

Workforce impacts

33. There are significant workforce capacity risks associated with the two options set out above (“do nothing” and “announce intention to consult”. On the NHS side risks remain significant with the published data showing over 80k NHS staff without a first dose and the latest estimate provided by NHSE&I suggesting there are still over 50,000 in scope NHS workers will not be vaccinated by 3 February. The groups with the highest proportion of unvaccinated workers are admin and clerical, nursing support staff and nurses themselves. NHSE&I has issued a Sitrep to trusts that is due back this Friday with analysis expected early next week. This will provide a fuller picture both on unvaccinated numbers and views on service disruption. More certainty will follow the estimates of unvaccinated against the 3rd Feb deadline. It would be sensible to factor this latest information into your decision making.
34. Workforce impacts should also be considered in the context of current pressures during winter and the impact on NHS performance. Through November and early December 2021, sickness absence rates were averaging around 5.7%. The Omicron wave saw this peak at around 9% - 4 percentage points above normal. We are now past that peak across all regions and the seven day average rate as at 18th January has fallen to 7.4% - still 2½ percentage points above normal.
35. Urgent and emergency care has been under pressure during the wave of Omicron, with ambulance responses (especially category 2 responses) and A&E performance coming under significant pressure. Similarly, pressures have seen non-urgent elective services in some areas paused as a result of staff absences and redeployment during winter, resulting in reduced activity levels. Detailed work is underway to understand the impact on medium-term elective recovery trajectories
36. There is therefore a real risk of service disruption from 1 April if workers cannot be deployed and need to be dismissed. There would also be impacts on the commitments to increase the workforce e.g. 50k nurses. The current estimates of unvaccinated workforce not able to be deployed are similar (or lower) to the estimates made in the DHSC Impact Assessment at the time the decision to proceed with the policy was taken. So that part of the evidence base has not substantially changed. However, those estimates were uncertain and impacts would depend on your confidence in the behaviours of workers in response to continued efforts to encourage take up of the vaccine ahead of the deadlines and the impact of the policy.

In wider care settings uptake rates of the first dose are lower than they were in care homes at the equivalent stage of VCOD1: 87% (using domiciliary care data as of 19 January 2022) compared to more than 90% in care homes (as of 5 September 2021 i.e. 2 weeks ahead of the effective deadline for first doses) though this data, from Capacity Tracker, is subject to a quality check. The best estimate is that there are still some 51,000 unvaccinated staff directly employed in domiciliary care, and perhaps 10,000 more unvaccinated staff in other CQC-regulated settings (Supported Living and Extra Care Housing) and 5,000 unvaccinated agency staff in social care. Projected uptake of first doses in social care is below the estimate we made in the published Impact Assessment, and therefore additional staff exits from social care could exceed 35,000 – perhaps twice the impact from recent temporary Omicron-related staff absence (and with some areas more seriously affected than others due to underlying lower vaccination rates in the community making recruitment of vaccinated staff more difficult as well as underlying workforce trends and increasing unmet demand).

37. This is of particular concern because –

- We do not expect our **I&S** investment through the Workforce Recruitment and Investment Funds to be able to remedy the majority of this impact in addition to existing staff shortfalls, leading to further significant staffing shortage in dom care after April 1st. Unlike in the case of care homes, domiciliary care is at full capacity, with some providers already unable to take on additional work or even handing commissioned work back to the LA due to existing workforce pressures;