

## COVID-19 vaccination and risk assessment

The UK COVID-19 vaccination programme has been very successful. Over 42 million individuals have received one dose and over 32 million a second dose to complete their vaccine course<sup>1</sup>. All those aged over 18 are now eligible for vaccination. In the health and social care sector a majority of staff have received one vaccine but there are wide disparities, e.g. only 44% of care homes in London are currently meeting the minimum level of staff uptake (one dose in 80% of staff) to reduce the risk of outbreaks in these high-risk care settings<sup>2</sup>. Occupational Health professionals should continue to encourage the uptake of COVID vaccine to protect individuals and populations.

At the outset of the pandemic, employers were advised to carry out individual and environmental risk assessments to inform policies and deployment decisions which reduce the risk of exposure to coronavirus in the workplace. The Faculty of Occupational Medicine published an initial consensus Risk Reduction Framework, primarily aimed at NHS staff but the principles of the framework, consideration of the workplace, the workforce and the individual worker can be extrapolated to other sectors<sup>3,4</sup>.

Tools to assist assessment of an individual's vulnerability to COVID-19 have been developed. Covid-Age is intended for use as part of an occupational health assessment and has been incorporated into the guidance from the Scottish government<sup>5</sup>. The CMO's clinical tool Q-COVID is currently only available to clinicians who have an NHS email address but the DHSC is trying to make it more widely accessible to occupational physicians<sup>6,7</sup>.

Following the successful rollout of the vaccination programme, the Faculty recommends that COVID risk assessment should be updated to take account of the vaccination status of the individual. It may be possible to alter or remove some of the restrictions put in place for an individual following earlier pre-vaccination risk assessment. Whilst it remains a matter for employers and employees to carry out the risk assessment and agree a risk management plan, the Faculty recommends that the following factors are taken into consideration:

- Hierarchy of control: remains the guiding principle. Vaccination is an element of personal protection and should be considered as a part of the overarching risk management plan to reduce risks of exposure to COVID -19. Adequate ventilation, use of effective face coverings, appropriate social distancing, limiting duration of human contact time, regular hand hygiene and asymptomatic testing as advised by government must continue regardless of vaccination status.
- Vaccine efficacy: Authorised vaccines have shown excellent efficacy in trial and real world experience, particularly in reducing risks of severe disease, hospitalisations and mortality from COVID-19, including the Delta variant<sup>8</sup>. However, no vaccine is 100% protective. There is also evidence that vaccination reduces the risk of asymptomatic transmission by up to 50%<sup>9</sup>.
- Individual vulnerability: The extent of an individual's vulnerability to COVID should be balanced against the protection conferred by the vaccine. For example, those classed as clinically extremely vulnerable have a much higher risk of an adverse outcome if they become infected.
- Immunosuppression: There is currently no evidence about the response to COVID-19 vaccine in immunosuppressed individuals; they may not make a full immune response to vaccination.
- Schedule:<sup>10</sup> Specific immunity develops in most individuals following vaccination but there is a delay of 2 or 3 weeks. Evidence indicates that whilst one dose produces some immunity, the second dose is required to maximise this. This is of particular importance in those at higher risk, especially in the CEV group or immunosuppressed. There is as yet very limited evidence about the duration of immunity following vaccination and it is likely that further doses to boost immunity and possibly to cover new variants of the virus will be required.

### References:

1. <https://coronavirus.data.gov.uk/details/vaccinations>
2. <https://www.gov.uk/government/news/everyone-working-in-care-homes-to-be-fully-vaccinated-under-new-law-to-protect-residents>
3. <https://www.fom.ac.uk/covid-19/update-risk-reduction-framework-for-nhs-staff-at-risk-of-covid-19-infection>
4. <https://www.nhsemployers.org/covid19/health-safety-and-wellbeing/supporting-staff-health-and-safety/risk-assessments-for-staff>
5. <https://www.gov.scot/publications/coronavirus-covid-19-guidance-on-individual-risk-assessment-for-the-workplace/>
6. <https://digital.nhs.uk/coronavirus/risk-assessment>
7. <https://digital.nhs.uk/coronavirus/risk-assessment/clinical-tool>
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The Faculty is grateful to the following members of the working group who contributed to this document, having monitored and reviewed this question since the start of the COVID-19 vaccination programme:

**Dr Anne de Bono**

**Dr Ali Hashtroudi**

**Prof Harj Kaul**

**Dr Paul McGovern**

**Dr Elizabeth Murphy**

**Dr Shriti Pattani**

**Dr Tamsin Radford**

21st June 2021

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