Independent report

JCVI statement on spring 2023 COVID-19 vaccinations, 22 February 2023

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The current advice, developed following meetings on 24 January 2023 and 14 February 2023, sets out further detail regarding the spring 2023 booster programme.

The primary aim of the COVID-19 vaccination programme continues to be the prevention of severe disease (hospitalisation and mortality) arising from COVID-19. Older persons, residents in care homes for older adults, and those who are immunosuppressed continue to be at highest risk of severe COVID-19.

Advice

As a precautionary measure, JCVI advises that an extra booster vaccine dose in spring 2023 should be offered to:

- adults aged 75 years and over
- residents in a care home for older adults
- individuals aged 5 years and over who are immunosuppressed, as defined in tables 3 or 4 in the COVID-19 chapter of the Green Book (https://www.gov.uk/government/publications/covid-19-the-green-book-chapter-14a)

The spring booster dose should be offered around 6 months after the last vaccine dose, although operational flexibility around the timing of the spring dose in relation to the last vaccine dose is considered appropriate. More information on operational flexibility will be provided in the ‘Green Book: immunisation against infectious disease’.

In addition, JCVI’s interim advice remains that people at higher risk of severe COVID-19 are expected to be offered a booster vaccine dose in autumn 2023 in preparation for winter 2023 to 2024 (reference 1).

Considerations

Autumn 2022 booster programme effectiveness

Available data from the UK and internationally over the course of the pandemic demonstrates that older people are more likely to experience severe disease if infected by SARS-CoV-2. Data on hospital admissions in the UK is consistent with the clinical risk being highest in those aged 75 years and older (reference 2 and figure 1). Since mid-July 2022, the dominant circulating variants have been Omicron BA.4 and BA.5, with Omicron BQ.1 increasing from January 2023 (reference 3).

Figure 1: monthly hospital admission rate by age group for new COVID-19 positive cases reported through SARI Watch
Data on hospital admission rates in the UK is consistent with the clinical risk being highest in those aged 75 years and older. Hospital admissions for all ages have occurred in waves since December 2021, with the most recent peak in December 2022.

By 20 January 2023, 82.5% of people aged 75 years and over had received a booster dose in the 2022 autumn booster programme (week 4 in reference 2).

The incremental effectiveness against hospitalisation of the autumn 2022 bivalent booster vaccine in those aged 50 years and older was approximately 47% at 10 weeks post-booster vaccination. This was on top of at least 6 months of waned protection from previous vaccination. This is based on data from 5 September 2022 to 25 December 2022 (reference 4). These vaccine effectiveness estimates are consistent with those arising from other countries and indicate a continued benefit from booster vaccination (reference 5).

**Protection for the most vulnerable**

As COVID-19 isolation measures have ceased in the UK, and population immunity against milder, non-severe infection wanes within a few weeks of the last vaccine dose, elimination of the SARS-CoV-2 virus from the population is not anticipated.

To protect the most vulnerable in the population against becoming seriously unwell with COVID-19, JCVI’s view is that the provision of a spring booster dose for these people is a proportionate response in 2023. JCVI will continue its rolling review of the vaccination programme and will provide further details regarding the autumn 2023 COVID-19 vaccination programme in due course.
As the transition away from a pandemic emergency response continues, future COVID-19 vaccination programmes are expected to include greater consideration of cost-effectiveness analyses, in common with other routine UK immunisation programmes.

Vaccine products for spring 2023 booster programme


The following vaccines are advised for use in all adults aged 75 years and over:

- Pfizer-BioNTech mRNA (Comirnaty) bivalent vaccine authorised for adults. Dose: 30 micrograms
- Moderna mRNA (Spikevax) bivalent vaccine authorised for adults. Dose: 50 micrograms
- Sanofi/GSK AS03-adjuvanted monovalent beta variant (VidPrevtyn Beta) booster vaccine authorised for adults. Dose: 5 micrograms (spike protein)

Operational flexibility may be exercised in the choice of vaccine product when offering vaccination to persons aged less than 75 years who are residing in a care home for older aged persons.

The following vaccines are advised for those aged 5 years and above who are immunosuppressed:

- aged 5 to 11 years: Pfizer-BioNTech mRNA (Comirnaty) monovalent or bivalent vaccine paediatric formulation. Dose: 10 micrograms
- aged 12 to 17 years: Pfizer-BioNTech mRNA (Comirnaty) bivalent vaccine authorised for persons aged 12 years and older. Dose: 30 micrograms
- aged 18 to 74 years:
  - Pfizer-BioNTech mRNA (Comirnaty) bivalent vaccine authorised for adults. Dose: 30 micrograms
  - Moderna mRNA (Spikevax) bivalent vaccine authorised for adults. Dose: 50 micrograms

Further considerations

Novavax Matrix-M adjuvanted monovalent wild-type vaccine (Nuvaxovid), dose 5 micrograms (spike protein), may be used as a booster dose for persons aged 12 years and above when alternative products are considered not clinically suitable (see the Green Book (https://www.gov.uk/government/publications/covid-19-the-green-book-chapter-14a)).

The Sanofi/GSK vaccine (VidPrevtyn Beta) is a protein sub-unit vaccine containing the beta spike protein in combination with the AS03 adjuvant. This vaccine has
recently been approved by MHRA for use in adults (https://www.gov.uk/government/news/sanofi-pasteur-covid-19-vaccine-authorised-by-mhra) (aged over 18 years) who have already received an mRNA or adenoviral vector COVID-19 vaccine. In clinical trials, the antibody levels generated against different Omicron sub-variants by VidPrevtyn Beta were comparable to levels generated by COVID-19 mRNA vaccines (reference 6). No major safety concerns were identified. It is suitable for those who are intolerant of mRNA vaccines.

VidPrevtyn Beta has less stringent storage conditions, as compared to the mRNA COVID-19 vaccines, which allows for greater operational flexibility in its use and may improve access to vaccination.

References

5. Early estimates of bivalent mRNA vaccine effectiveness in preventing COVID-19 associated emergency department or urgent care encounters and hospitalizations among immunocompetent adults - VISION network, Nine States, September to November 2022 (https://www.cdc.gov/mmwr/volumes/71/wr/mm715152e1.htm)