

A large, stylized graphic of a globe in the background, composed of thick, orange, curved lines that form a grid-like pattern. The globe is partially obscured by a dark grey horizontal band at the bottom of the page.

## **Practical considerations for COVID-19 vaccination in the Middle East**

---

**Fact sheet for COVID-19 vaccinations**

For more information, visit [www.touchinfectiousdiseases.com](http://www.touchinfectiousdiseases.com)

# COVID-19 vaccines have been studied in Middle Eastern populations

Real-world data from the Middle East have demonstrated the efficacy of COVID-19 vaccines

Efficacy is shown across vaccine types<sup>4</sup>

**Saudi Arabia<sup>1</sup>**  
(Longitudinal real-world study)



N=3,000 participants (n=1,500 received **BNT162b2**, **ChAdOx1-S** or **mRNA-1273** ± boosters; n=1,500 control)

- Reduced risk of hospitalization following infection in vaccinated vs unvaccinated group (5% vs 19%;  $p < 0.0001$ )

**Qatar<sup>2</sup>**  
(Retrospective cohort study)



N=384,246 (n=192,123 matched cases received two doses of **BNT162b2** or **mRNA-1273**)

- Low rate of breakthrough infection (<1%)
- Strong protection against hospitalization and death

**UAE<sup>3</sup>**  
(Retrospective cohort study)



N=2,199,772 health records (n=1,099,886 adults vaccinated with **BBIBP-CorV** matched 1:1 to unvaccinated adults)

- VE against:
  - Hospitalization: 80% ( $p < 0.001$ )
  - Death: 84% ( $p < 0.001$ )

Overall efficacy against BA.5/Omicron<sup>4</sup>

	Infection	Severe disease
<b>BBIBP-CorV</b> (Sinopharm)	35%	53%
<b>AZD1222/ChAdOx1</b> (AstraZeneca)	36%	71%
<b>BNT162b2</b> (Pfizer BioNTech)	44%	72%
<b>CoronaVac</b> (Sinovac)	24%	37%
<b>Ad26.CoV2.S</b> (Johnson & Johnson)	33%	57%
<b>mRNA-1273</b> (Moderna)	48%	73%

Data not Middle East specific

## Special populations warrant additional considerations



### Immunocompromised

- Immunocompromised people face an increased risk of severe disease or death after COVID-19 infection<sup>5,6</sup>
- Response to COVID-19 vaccines is lower in this group<sup>5,6</sup>
- **A full course of vaccinations and booster doses is important<sup>5,6</sup>**



### Pregnancy

- COVID-19 infection increases risk of adverse outcomes in pregnant women (e.g. stillbirth, caesarean delivery, preterm birth)<sup>7</sup>
  - Vaccination does not increase the risk of adverse outcomes<sup>8</sup>
- Maternal vaccination protects against hospitalization of infants  $\leq 6$  months of age<sup>9</sup>
- **The WHO recommends that all pregnant women receive COVID-19 vaccination<sup>10</sup>**



### Children

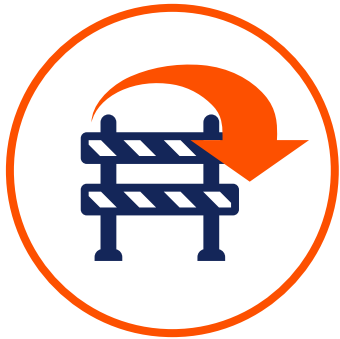
- COVID-19 disease is mostly asymptomatic or mild in children, but may be more severe in those with comorbidities<sup>11</sup>
- Potential risk of long-term complications in unvaccinated children<sup>11</sup>
- Vaccination can help reduce time lost in activities such as attending school<sup>11</sup>
- **The CDC recommends children  $\geq 6$  months of age receive COVID-19 vaccination<sup>12</sup>**



### Comorbid disease

- People with comorbidities (e.g. obesity, diabetes and heart disease) may be at a higher risk of adverse outcomes,<sup>13</sup> such as CV events<sup>14</sup>
- **The CDC recommends vaccination for people with comorbidities that put them at higher risk of adverse outcomes<sup>15</sup>**

## Barriers to vaccination can be overcome with effective communication



Lack of trust in vaccines:<sup>16</sup>

Lack of perceived risk from infection:<sup>16,17</sup>

Safety concerns:<sup>17</sup>



Misinformation must be proactively addressed<sup>22</sup>

- **Misinformation leads to misconceptions** that can be worsened by social media<sup>22</sup>
- **Clear and meaningful communication is needed:**<sup>23</sup> Leverage trusted individuals and relationships to share accurate information<sup>24</sup>
- **Leadership is important:** Encourage leaders to share consistent messages about the benefits/risks of vaccination<sup>22</sup>
- **Utilize social media** to share evidence-based information<sup>24</sup>
- **Pre-emptively debunk misinformation** to inform the population early<sup>24</sup>

Barriers should be addressed to encourage vaccine uptake

**Engage the community through clear, tailored and consistent messaging**<sup>16</sup>

**Highlight continued need for protection in at-risk populations**

- E.g. immunocompromised individuals, people with comorbid conditions or elderly people who may not feel the vaccine is needed<sup>16</sup>

**Ensure patients recognize the benefits and risks to reduce concerns**<sup>18</sup>

- Reported AEs are mostly mild and non-serious<sup>19,20</sup>
- Low incidence of CV AEs and benefits outweigh the risks<sup>21</sup>



HCWs play a central role in ensuring confidence in the COVID-19 vaccines<sup>22,24</sup>

- **HCWs are trusted sources of information:**<sup>24</sup> Their recommendation is a key driver of uptake<sup>18</sup>
- **HCWs should be encouraged to engage** with the community to share accurate information<sup>18</sup>
- **Local HCWs** with established community links can leverage existing connections to build trust<sup>16,24</sup>

## Abbreviations & references

### Abbreviations

AE, adverse event; CDC, Centers for Disease Control and Prevention; CV, cardiovascular; HCW, healthcare worker; UAE, United Arab Emirates; VE, vaccine effectiveness; WHO, World Health Organization.

### References

1. Kamal SM, et al. *Viruses*. 2023;15:326.
2. Abu-Raddad LJ, et al. *N Engl J Med*. 2022;386:799–800.
3. Al Kaabi N, et al. *Nat Commun*. 2022;13:3215.
4. Healthdata. Available at: [www.healthdata.org/covid/covid-19-vaccine-efficacy-summary](http://www.healthdata.org/covid/covid-19-vaccine-efficacy-summary) (accessed April 2023).
5. Galliche S, et al. *Clin Microbiol Infect*. 2022;28:163–77.
6. Lee ARYB, et al. *Br Med J*. 2022;376:e068632.
7. Pathirathna ML, et al. *Healthcare (Basel)*. 2022;10:203.
8. Kontovazainitis C-G, et al. *J Perinat Med*. 2023;doi:10.1515/jpm-2022-0463.
9. Halasa NB, et al. *N Engl J Med*. 2022;387:109–19.
10. WHO. Questions and answers: COVID-19 vaccines and pregnancy. Available at: [who.int/publications/i/item/WHO-2019-nCoV-FAQ-Pregnancy-Vaccines-2022.1](http://who.int/publications/i/item/WHO-2019-nCoV-FAQ-Pregnancy-Vaccines-2022.1) (accessed April 2023).
11. Zimmermann P, et al. *Arch Dis Child*. 2022;107:e1.
12. CDC. COVID-19 Vaccination for children. Available at: [www.cdc.gov/vaccines/covid-19/planning/children.html](http://www.cdc.gov/vaccines/covid-19/planning/children.html) (accessed April 2023).
13. Afshar ZM, et al. *Rev Med Virol*. 2022;32:e2309.
14. Tereshchenko LG, et al. *Am J Cardiol*. 2022;179:102–9.
15. CDC. People with certain medical conditions. Available at: [www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html](http://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html) (accessed April 2023).
16. Collins J, et al. *BMJ Glob Health*. 2021;6:e006951.
17. Abuhammad S, et al. *PLoS One*. 2022;17:e0271625.
18. Thomson A, Watson M. *Vaccine*. 2016;34:1989–92.
19. Almohaya AM, et al. *Vaccine*. 2022;40:477–82.
20. Zeitoun A, et al. *J Pharm Policy Pract*. 2023;16:24.
21. Hana D, et al. *Curr Probl Cardiol*. 2022;47:101077.
22. Al Naam YA, et al. *Public Health Pract (Oxf)*. 2022;3:100258.
23. Schoch-Spana M, et al. *Vaccine*. 2021;39:6004–12.
24. UNICEF. Vaccine misinformation management field guide. 2020. Available at: <https://vaccinemisinformationguide/> (accessed April 2023).

The guidance provided by this practice aid is not intended to directly influence patient care. Clinicians should always evaluate their patients' conditions and potential contraindications and review any relevant manufacturer product information or recommendations of other authorities prior to consideration of procedures, medications, or other courses of diagnosis or therapy included here.

Our practice aid coverage does not constitute implied endorsement of any product(s) or use(s). touchINFECTIONOUS DISEASES cannot guarantee the accuracy, adequacy or completeness of any information, and cannot be held responsible for any errors or omissions.