

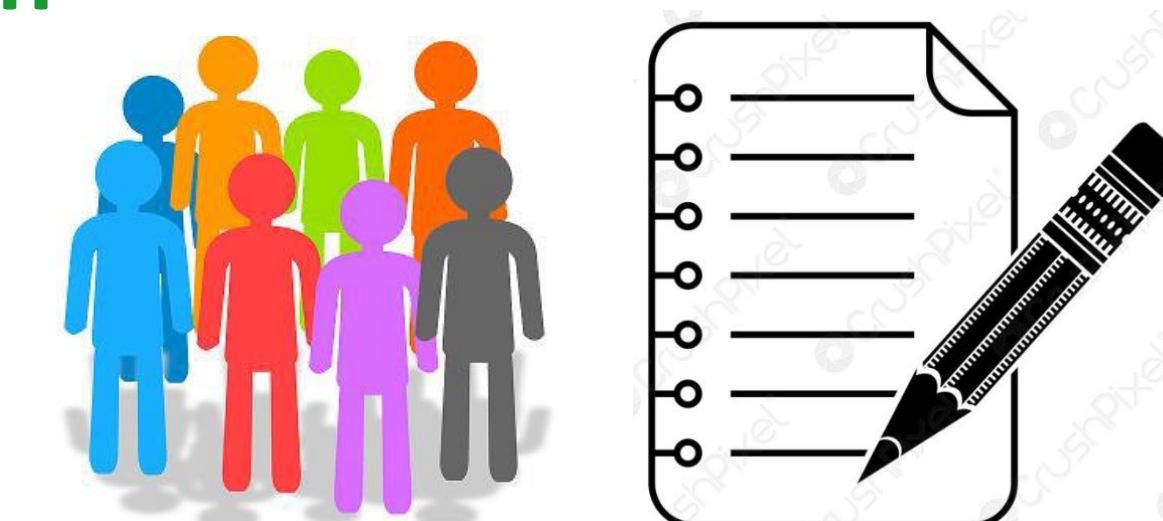
ADVERSE EVENTS REPORTED AFTER ADMINISTRATION OF BNT162B2 AND MRNA-1273 COVID-19 VACCINES AMONG HEALTHCARE-WORKERS

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BACKGROUND AND IMPORTANCE

Since December 2019, the world has faced a new disease known as COVID-19. On March 11, 2020, the World Health Organisation officially declared the COVID-19 pandemic. Given the **health emergency, vaccine development progressed rapidly, but with limited safety data under real-world conditions.**

AIM AND OBJECTIVES

To describe and compare the incidence of **adverse events with the BNT162b2 and mRNA-1273 COVID-19 vaccines**, taking into account the **number of doses and subjects previously positive for SARS-CoV-2 infection.**

MATERIALS AND METHODS

- A retrospective observational study was conducted in a **tertiary hospital** between **March-April 2021.**
- Data were collected through a **questionnaire** sent by email to **hospital staff.**
- Demographics and data regarding the occurrence of **adverse events were collected, indicating which vaccine was administered.**
- **Statistical analysis** was performed using **SPSS software.** Groups were compared using the **chi-square test and Fischer's exact test** when necessary.

RESULTS



- **1249 respondents completed the survey** (25% of all hospital staff). **52%(650) received BNT162b2 vaccine and 48%(599) mRNA-1273.**
- **14402 adverse reactions** were recorded. **6896 were local: 3939 were with mRNA-1273 and 2957 with BNT162b2** (6.6 vs 4.4 reactions per patient); and **7506 systemic: 4460 with mRNA-1273 and 3046 with BNT162b2** (7.4 vs 4.7 per patient).
- The occurrence of **local reactions** was **95.8%** after the **first dose/89.1%** after the **second dose with mRNA-1273 vs 89.7%/82.5%** with **BNT162b2.** For **systemic reactions**, this proportion was **64.3%/93.3% vs. 46.8%/73.2%** (p-value<0.05).
- In terms of severity, **379 patients (63.3%) with mRNA-1273 confirmed a severe reaction vs 222(34.2%) with BNT162b2** and **60 patients (10%) with mRNA-1273 confirmed an urgent reaction vs 33(5.1%) with BNT162b2** (p-value<0.001).
- For both vaccines, there was **no difference in the occurrence of local or systemic reactions between patients seropositive and seronegative for SARS-CoV-2.**

CONCLUSIONS

- The results are consistent with the limited data available so far, confirming that although **these are not particularly serious adverse effects**, they do occur in a **large majority of vaccinated persons** and in greater numbers after administration of the **mRNA-1273 vaccine.**
- The **Hospital Pharmacy Service is a key agent in pharmacovigilance** within the healthcare system and must be aware of the safety profile of new drugs.
- **This study is an essential tool to detect and prevent adverse events.**