The Risks of the Frontline: COVID-19 Infections Among Healthcare Workers in Midwest Ireland

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INTRODUCTION

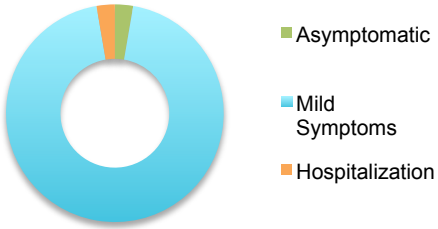
Since the onset of the coronavirus pandemic in 2019, caused by the novel SARS-CoV-2, healthcare workers (HCWs) have continued to work in high-risk environments and are among the largest groups in danger of developing COVID-19 infection. Despite high vaccination uptake, post-vaccination infection remains an ongoing issue. This study aimed to collect data regarding COVID-19 infection in fully vaccinated healthcare workers to better quantify this risk.

METHODS

Data was collected through a voluntary online questionnaire distributed to HCWs employed in University Hospital Limerick in Ireland in March 2022. Data included age, gender, profession (doctor/nurse), grade (Consultant, Registrar/Senior House Officer (SHO)/Intern/Ward Nurse/Clinical Nurse Manager (CNM)), COVID-19 vaccination/booster dose status, post-vaccine COVID-19 infection, diagnostic modality used and severity of symptoms.

RESULTS

- 83 HCWs participated
- Mean age 36.86 ± SD 9.8 (range of 25-62)
- 62.7% females, 37.3% males
- 91.6% doctors, 8.4% nurses
- 38.6% registrars, 22.9% SHOs, 18.1% interns, 12% consultants, 6% ward nurses and 2.4% Clinical Nurse Managers (CNMs)
- 100% fully vaccinated with two doses, 86.7% had third booster dose
- 44.6% reported Covid-19 infection post-vaccination
- 29 tested positive with PCR, 7 with rapid antigen testing and 1 with both PCR and antigen



- 94.5% had mild symptoms of infection. 2.7% were completely asymptomatic, 2.7% required hospital admission due to the severity of symptoms
- Data analysis found more cases of COVID-19 infection in HCWs without a third booster dose, with a significant p-value of <0.05
- Consultants followed by interns had the highest rate of Covid-19 infection
- No statistically significant relationship between number of doses and severity of infection was found

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DISCUSSION

COVID-19 vaccination has led to a significant reduction in the severity of COVID-19 infection, as demonstrated by the high rate of mild or asymptomatic infection found amongst fully vaccinated HCWs in this study. However, HCWs remain at high risk of contraction due to daily close patient contact, leading to increased sick leave and staffing issues. The possibility of severe infection in some individuals also continues to pose a significant concern. Face masks among other PPE, hand hygiene, and regular cleaning routines are still needed to minimize the likelihood of transmission.

CONCLUSION

This study highlights the importance of compliance with recommended precautionary measures to reduce transmission of infection and in the efficacy of vaccination in the reduction of symptom severity.

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