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## SARS-CoV-2 antibody screening in healthcare workers in a tertiary centre in North West England



With interest, we read the recently published SARS-CoV-2 antibody serosurvey in 316 healthcare workers (HCW) of the University Hospital Essen, Germany showing low overall seroprevalence (1.6 %) of SARS-CoV-2 despite including 244 HCW with daily contact to known or suspected SARS-CoV-2 positive patients [1]. A recent hospital-wide SARS-CoV-2 antibody serosurvey in HCW in a tertiary center in Belgium [2] showed 6.4 % prevalence of IgG antibodies and that neither being directly involved in patient care (DIPC) nor working in COVID-19 unit increased the odds of being seropositive. On the contrary, we conducted a SARS-CoV-2 antibody serosurvey in HCW in a tertiary centre in North West England (Salford Royal NHS Foundation Trust) and we found that all positive cases were observed in DIPC HCW.

In brief, we used a fully automated CE marked chemiluminescent immunoassay (SNIBE, Shenzhen, China) [3] and the analysis was performed by Medical Diagnosis Ltd, in conjunction with Affinity Biomarker Labs.

In total 281 HCW from the renal (242) and biochemistry (39) departments were tested between 4th and 6th May 2020. 205 (73 %) were females, 55 (19.6%) were of black, Asian or minority ethnic origin (BAME), 25 (8.9%) did not declare ethnicity and 195 (69.4 %) were DIPC. A history of symptoms compatible with SARS-Cov-2 was reported by 103 (36.7 %). Amongst the 22 (7.8 %) HCW with previous SARS-Cov-2 PCR nasopharyngeal swabs, 2 were positive, 12 were negative, and 7 did not disclose the result.

Positive SARS-Cov-2 IgG was detected in 17 (6 %) HCW and 6 (35.3 %) had been asymptomatic. All IgG positive cases were in DIPC HCW (17 out of 195; 8.7%). Six of 55 (10.9 %) BAME HCW were IgG positive versus 10 of 201 (5 %) Caucasian HCW ( $p = 0.120$ ) whereas 6 of 75 (8 %) males were IgG positive versus 11 of 205 (5.4%) females ( $p = 0.384$ ). One IgG positive HCW did not disclose ethnicity.

Our findings do not support the suggestion [4] that asymptomatic infection rates in HCW in England most likely reflect general community transmission rather than hospital exposure. Increased exposure in our DIPC HCW compared to serosurveys from Germany [1] and Belgium [2] may be explained by the difference in personal protective equipment (PPE) recommendations between Public Health England and the European Centre for Disease Control (fluid repellent surgical mask and plastic apron bare below elbows versus FFP2/3 and long sleeved

gown respectively when caring for patients with suspected/confirmed COVID-19 and not performing aerosol generating procedures) [5] and perhaps the increased infection risk related to renal patients. Based on our experience enhanced PPE is justified for DIPC HCW in renal services.

### Declarations of Competing Interest

Affinity biomarkers Labs conducted the analysis of the antibody tests at no charge. None of the authors has any other conflict of interest in relation to this manuscript.

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