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This communication has been published in the middle of the COVID-19 pandemic and is available via expedited publication to assist patients and healthcare providers.

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Protective equipment to use in the vaginal delivery of the pregnant woman with suspected or diagnosed coronavirus disease 2019: delivery table shield



OBJECTIVE: Coronavirus disease 2019 (COVID-19) may be rapidly transmitted by respiratory droplets from patients with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection.¹ Thus, healthcare professionals should be attentive in using personal protective equipment (PPE) during the management of suspected or diagnosed cases. In this study, we describe the use of a novel delivery table shield in the second stage of labor.

STUDY DESIGN: We have designed the delivery table shield by ourselves. Subsequently, we had its plastic component produced by communicating with a manufacturer. Its upper nylon component is used only once for each patient. The mentioned shield poses no barrier for respiration of the mother and provides eye contact between the patient and the physician, thanks to its exclusive design. A 180-micron nylon clotting was used

for covering, and polypropylene random copolymer pipes were used for the table legs.

RESULTS: The photographs that were taken at our simulation center show the application of the delivery table shield (Figure).

CONCLUSION: The Department of Gynecology and Obstetrics, Ankara City Hospital, has played an important role in the management of pregnant patients, right from the initial days of the COVID-19 pandemic. We prepared our algorithms and created flowcharts for cesarean and vaginal deliveries. Although literature data indicate that a significant number of the births in the COVID-19—positive cases were performed with cesarean delivery, vaginal delivery should be primarily considered in multiparous patients with available effacement and dilatation who present to the hospital at the advanced stages of pregnancy.¹ PPE should be appropriately used

FIGURE**Photographs of the delivery table shield**

The delivery table shield suits the delivery table. Its unique design protects the healthcare staff from respiratory droplets during the pushing and second stage of labor. The opening on the posterior side of the delivery table shield provides comfortable respiration for the mother during labor.

Sahin. Delivery table shield in the vaginal delivery of pregnant women with suspected or diagnosed COVID-19. *Am J Obstet Gynecol* 2020.

during these procedures. Several cost-effective methods have been tested with regard to this issue by different disciplines. Lai et al² have designed a carton-made protective shield to be used for intubation and extubation procedures during an operation. In addition, more developed designs such as intubation cabinets or biological safety cabinets have been introduced to clinical practice in various countries, and similar cabinets are currently used at our hospital.³ As one would expect, we all have an important question in our minds: Should we approach all deliveries as if they are COVID-19—positive cases? In a study by Sutton et al,⁴ 13.5% of asymptomatic pregnant women who presented to the hospital for delivery had positive test results for COVID-19. Similar to the study by Sutton et al⁴, another recent study reported positive results for COVID-19 in 13.3% of asymptomatic pregnant patients.⁵ However, there are currently no available data on the number and rate of asymptomatic pregnant patients with COVID-19 in our country. Therefore, we conclude that the use of the delivery table shield and other PPE would be more reasonable only in the suspected or diagnosed cases. We also consider that this shield we have developed can be used against all infectious agents that carry the risk of transmission of respiratory-borne infections as well as the SARS-CoV-2 infection. ■

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Exposure and seroconversion to severe acute respiratory syndrome coronavirus 2 among obstetrical healthcare providers following a contained outbreak



OBJECTIVE: Coronavirus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) which has developed into a global pandemic with vast social, economic, and health consequences. High transmissibility in asymptomatic individuals makes controlling viral spread difficult and poses unprecedented challenges to healthcare systems. At the onset of the pandemic in the United States, 19% of reportable cases were healthcare workers (HCWs) with the majority reporting exposure within the workplace.¹ Although hospital protocols have morphed with increasing available data, there continues to be a variation in screening, testing, and personal protective equipment (PPE) use across the country.

Obstetrical units are an underestimated hotspot in the pandemic, owing to an asymptomatic population, high patient turnover, integrated workstations, and frequent emergencies requiring response from multiple disciplines and expedient transfer to onsite surgical suites. These factors underscore current advocacy from professional obstetrical and anesthesia societies for universal PPE in obstetrical units and the use of N95 masks during vaginal deliveries of infected patients because of suspected aerosolization during this procedure.^{2,3} Therefore, we investigated the exposure and seroconversion to SARS-CoV-2 among obstetrical HCWs in a tertiary care center.

STUDY DESIGN: This prospective cohort study investigated SARS-CoV-2 antibody levels in obstetrical HCWs at a tertiary hospital with approximately 5500 deliveries per year. The study

included HCWs employed in the inpatient obstetrical unit. Written consent was obtained, and blood samples were obtained at 2 time points 4 weeks apart, with baseline collection beginning March 25, 2020, and follow-up on April 23, 2020. Data regarding the demographics, symptoms, previous nasopharyngeal polymerase chain reaction (PCR) results for SARS-CoV-2, and the timing of high-risk exposures were collected through a voluntary written survey.

Immunoglobulin M (IgM) and Immunoglobulin G (IgG) levels in the serum were measured from whole blood samples of all study participants at the 2 time points using a validated SARS-CoV-2 enzyme-linked immunosorbent assay (ELISA) per manufacturer's protocol (Novel Coronavirus COVID-19 IgG ELISA Kit; Epitope Diagnostics Inc, San Diego, CA).⁴ The optical density ratio for positive IgM was >0.201 (negative cutoff value of <0.179) and positive IgG was >0.439 (negative cutoff value of <0.359). The minimal detectable concentration for IgM and IgG was 5 IU/mL. The inter- and intra-assay coefficients of variation were $<15\%$ and $<20\%$, respectively. Participants were considered to have seroconverted if they had a positive result for IgM or IgG. Specimen collection began in accordance with institutional biorepository (Institutional Review Board [IRB] study #2013H0404), and specimen and data analysis continued with additional institutional approval (IRB study #2020H0133).

Of note, an outbreak of SARS-CoV-2 among obstetrical HCWs in our inpatient unit occurred between baseline and follow-up blood collection, with the first positive case on March 26, 2020. Mandatory employee temperature and