demonstrating that this rate depends not only on the disease and the total number of cases, but also on the population and health care provided. Additional questions on the transmission of SARS-CoV-2—such as how often asymptomatic transmission occurs and how long the virus lives on surfaces—still remain to be answered. The authors propose that examination of seroprevalence among asymptomatic patients and further study of virus persistence and inactivation are needed to answer these questions.

In regards to pregnant women specifically, it is still unknown if pregnant women are more severely affected than the general population. While preliminary results suggest that pregnant women are not at an increased risk of severe disease, the numbers of pregnant women studied have been small, and comparison is needed with a nonpregnant population of similarly aged women, rather than with the general population infected with COVID-19. It is also unknown if intraterine or perinatal transmission occurs. No evidence of transmission to the neonate has been observed; however, there have only been a small number of pregnancies infected with COVID-19 reported. In addition, these women were nearly all infected in the third trimester and delivered by cesarean section; it is still unknown what the effects are for women infected in the first or second trimester of pregnancy. Further questions remain about transmission after delivery, including the necessity of temporarily separating mothers and their newborns and whether or not COVID-19 can be transmitted through breast milk.

Overall, this commentary argues that additional information regarding these questions is critically needed to inform COVID-19 related guidance and policies, particularly for pregnant women. The authors list certain well-supported recommendations for obstetricians and their pregnant patients, including avoiding contact with ill persons, covering coughs and sneezes, and frequently washing hands. They also recognize that data are limited and recommendations are rapidly changing, suggesting that obstetricians stay up to date on local and national data. This commentary highlights the importance of evidence-based policy during times of turmoil and encourages obstetricians to continue staying informed and being strong advocates for their patients.

As adverse obstetric outcomes become less frequent in high-income countries, the ability to demonstrate significant effects of new interventions becomes more challenging. This is because many study designs do not have adequate statistical power to validate rare outcomes attributed to a specific intervention. The aim of this study was to report the incidence of relevant obstetric outcomes from existing literature and based on this data, to calculate sample sizes needed for tentative future randomized clinical trials (RCTs) to ensure the quality of scientific findings.

This study was based on data retrieved from 2008 to 2015 from the Danish Medical Birth Registry. Researchers used 2 populations for their analysis: A total population (n = 465,919), representing all deliveries in Denmark, was used to report the incidences of 16 relevant obstetric outcomes. A study population (n = 381,567), representing all intended vaginal deliveries at term for singleton pregnancies not including stillbirths and homebirths, was used to calculate 14/16 outcomes, excluding stillbirth and preterm delivery <37 weeks gestational age. The outcomes used to calculate sample sizes were neonatal mortality, Apgar score <7 at 5 minutes, and emergency cesarean delivery. The sample sizes were designed to detect risk reductions of 25% and 50%, at the 5% level, with a power of 80% and 90%, respectively. Sample sizes for tentative RCTs to compare 2 proportions of equal-sized groups were calculated, as were sample sizes for tentative cohort studies to compare 2 proportions of unequal-sized groups.

The authors found that most of the adverse outcomes selected for this analysis occurred at a low incidence. Only 3 of the 16 outcomes in the total population had an incidence >10%: induction of labor (21.6%), oxytocin augmentation of labor (21.6%), and emergency cesarean delivery (12.2%). In the study population, the incidence of neonatal mortality occurred at 0.05% [95% confidence interval (CI): 0.04-0.06], Apgar scores <7 at 5 minutes at 0.58% (95% CI: 0.55-0.60), and emergency cesarean delivery at 10.5% (95% CI: 10.4-10.6).

On the basis of these data, the researchers found that the incidence of the outcome measured affected the sample size needs. Using neonatal mortality as a very rare outcome in a tentative RCT comparing 2 proportions of equal-sized groups, with an expected risk reduction of 50% and power of 80%, a sample size of 195,036 deliveries is required. Using Apgar score <7 at 5 minutes as a rare outcome in tentative studies, with the same expected risk reduction and power, a sample size of 16,254 deliveries is required. Using emergency cesarean delivery as a more common outcome in tentative studies, with the same expected risk reduction and power, a sample size of 818 deliveries is required. In addition, an expected lower risk reduction (25% rather than 50%) increased sample sizes but changing the power from 80% to 90% had a small impact on sample size. Finally, study design in cohort studies affected the calculated sample size, with larger sample sizes required to compare a small proportion of unequal-sized groups (ie, exposed vs. nonexposed groups).

In conclusion, outcome incidence, changes in risk reduction, and study design affect the required sample size to achieve adequate statistical power in obstetric research. To achieve these large sample sizes, international collaborations, multicenter studies, or alternative study designs may be considered.

**Incidences of Obstetric Outcomes and Sample Size Calculations: A Danish National Registry Study Based on All Deliveries From 2008 to 2015**

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