gestational ages. Moreover, because the use of an artificial placenta requires catheterization of umbilical vasculature and a system with sufficiently low resistance so as not to compromise the fetal heart, it seems unlikely that fetuses much below 20 weeks gestation could be adapted to or maintained on an artificial placenta.

Because, from a functional perspective, current artificial placenta-based systems essentially are limited to gas exchange and the delivery of nutrition and medication, it is not possible to use this technology to supplant the role of women in natural pregnancy. As is the case with current intensive neonatal care programs, the high-cost of using this technology similarly will do much to prevent its misuse. The question of legal status is indeed an interesting one; however, it does seem counterintuitive to introduce differential legal status and protections (relative to those currently conveyed to extremely preterm infants) simply on the basis of the application of an alternative means of providing gas exchange, nutrition, and medication.

Last, we are in complete agreement that, based on current publicly available data, there are many more years of work necessary before clinical application of this technology should be considered. We are very much of the view that moves to introduce this technology to the clinic in the near future should be viewed as extremely premature. ■

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Breastfeeding outcomes after assisted conception

Check for updates

TO THE EDITORS: We appreciate Barrera et al[1] for their analysis of breastfeeding outcomes among women who conceived spontaneously compared with women who underwent assisted conception. The authors reported shorter breastfeeding durations in women who conceived via assisted reproductive technologies (ART) compared with spontaneous conception, possibly explained by the greater likelihood of multiples birth and preterm infants that are observed in women who have conceived via ART. However, we find it important to draw attention to several limitations of this study.

First, we contend that the data that were collected from the cross-sectional surveillance system were inadequate in addressing the objective of the study: assessing breastfeeding outcomes. Given the ambiguity behind this phrase, we believe that a prospective cohort design with multiple questionnaires that are administered at different time points spanning the intrapartum and postpartum periods would be more appropriate in elucidating breastfeeding outcomes.

Second, although we acknowledge the predesigned format of the questionnaire, additional information is warranted to analyze clinically relevant factors in breastfeeding cessation. Further clarification is required if breastfeeding cessation originated from the infant or the mother. We propose that additional questions may include (1) exclusivity of breastfeeding, (2) the introduction of formula for nutritional supplementation because it is associated with shorter duration of breastfeeding,[2] (3) maternal intrapartum conditions, and (4) maternal attitudes toward breastfeeding. Open-ended questions that are not restricted to set options could generate a more meaningful classification regarding reasons behind breastfeeding cessation.

Third, despite the authors' intention to disentangle any causal relationships between ART and early breastfeeding cessation by adjusting for possible confounders, we identified several notable factors that were not included in the study design nor the authors' discussion. Early breastfeeding cessation is associated with risk factors that include lower breastfeeding self-efficacy, introduction of a pacifier, and work-related factors such as early return to paid work.[3,4] Furthermore, it is important to acknowledge the lack of

harmonization between breastfeeding policies and support across hospitals where a woman received postpartum care, which could be addressed in future study design.

To our knowledge, there is sparse evidence that reports the association between mode of conception and breastfeeding practices in the United Kingdom. Despite the study's limitations, Barrera et al offered important insights into breastfeeding outcomes in women who conceived via assisted conception that raise the opportunity for intervention and support for breastfeeding in this cohort of women. Further longer term studies are necessary to investigate factors that influence breastfeeding initiation and continuation by mode of conception, taking into account the limitations that we have discussed. ■

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Improving treatment of opioid use disorder in pregnancy: first define the workforce

Check for updates

TO THE EDITORS: As Hollander et al[1] report, the maternity care workforce in the United States has not adapted to care adequately for the growing number of pregnant women with opioid use disorder. We agree that obstetric providers could help fill a gap in opioid treatment during pregnancy, particularly in rural areas. However, we would like to draw attention to the problem of lumping a diverse group of medical specialties and provider types into a broad "primary care" category.

First, this analysis does not differentiate important players in the maternity care workforce. Lumping family physicians with other primary care specialties in an analysis focused on the care of pregnant women with opioid use disorder discounts the contributions of family physicians who provide maternity care. Family medicine is the only 1 of these primary care specialties that is trained in both prenatal care and obstetrics.

Second, lumping all primary care providers, but not all obstetric providers, confuses the issue. "Medical specialty" implies those trained in medicine (ie, physicians); "providers" indicates a broader group of clinicians who practice in a discipline. Certified nurse midwives (CNMs) should be included as obstetric providers, because they are growing in number and their eligibility to obtain a waiver could help to address the care gap. Buprenorphine waiver training is newly available for nurse practitioners (NPs), physician assistants (PAs), and CNMs, although longer and more intensive than for physicians; independent prescribing is limited in some states.[2] A more apt analysis would compare those clinicians (obstetrician/gynecologists, family physicians, and CNMs) who provide obstetrics care with those who do not.

Finally, family physicians provide the majority of rural healthcare, including maternity care.[3] Lumping family physicians with general practitioners, internal medicine, and pediatrics masks their rural impact. In 1 small study, family medicine was the most common specialty to prescribe buprenorphine in rural areas[4]; pediatricians, internists, and obstetricians/gynecologists are less common in these locations.[3]

To expand care for pregnant people with opioid use disorder, we should begin by supporting family physicians, CNMs, NPs, and PAs who are already providing these services in rural and underserved communities. The maternity care workforce, which includes obstetricians/gynecologists, family physicians, midwives, NPs, and PAs, should work together to increase access to adequate high-quality care to pregnant and postpartum women with opioid use disorder in all geographic settings. Increasing the number of maternity care providers with buprenorphine waivers would begin to address access to treatment. ■

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