

FERTILITY CARE: ESSENTIAL OR NON-ESSENTIAL? LESSONS FROM THE COVID-19 PANDEMIC

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ABSTRACT

At the beginning of the COVID-19 pandemic, in an effort to allocate medical resources towards the anticipated influx of patients infected with the novel virus, many non-essential healthcare services were temporarily paused. The American Society of Reproductive Medicine led the move to halt infertility care in all but the most extreme cases. This cessation of infertility care, compounded by the unknown duration of this recommendation, added to the already high level of stress and anxiety that fertility patients experience and in cases of advanced maternal age or diminished ovarian reserve potentially resulted in suboptimal clinical outcomes. There was vocal disagreement amongst infertility care providers regarding the urgency and essential nature of fertility care and how this balanced with the pandemic. Ultimately there has been a full resumption of fertility care with a new emphasis on fertility preservation. It should be the goal of all professionals in the field of infertility medicine to establish fertility care as essential within the greater field of medicine to assure the protection of their patients in times of future healthcare crisis.

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INTRODUCTION

In the United States, 12.2% of women between the ages of fifteen and forty-nine have utilized infertility services to get or stay pregnant.¹ The nature of infertility treatment as either essential or non-essential came under heavy debate in the medical field at the beginning of the COVID-19 pandemic.² Ample data affirms that stress plays a factor in the success of fertility treatment.³ However, many providers, responding to the guidance of their professional society, paused fertility treatment during the pandemic, adding stress and uncertainty to the fertility process.⁴

Disagreement amongst infertility care providers in the United States led to open debate regarding the essential or non-

1. See *Infertility*, CDC, <https://www.cdc.gov/nchs/fastats/infertility.htm> (last visited June 4, 2022).

2. See Shailin A. Thomas & Arthur L. Caplan, *Are Infertility Treatments ‘Essential’? How To Ethically Determine What Kind of Care Must Go On Amid Covid-19*, STAT (Apr. 30, 2020), <https://www.statnews.com/2020/04/30/infertility-treatments-essential-or-not-during-covid-19-pandemic/>; see also Natalie Lampert, *Fertility Clinics Stay Open Despite Unclear Guidelines*, N.Y. TIMES, <https://www.nytimes.com/2020/05/01/parenting/fertility-clinics-coronavirus.html> (May 4, 2020).

3. Shilpa Prasad, Meenakshi Tiwari, Ashutosh N. Pandey, Tulsidas G. Shrivastav & Shail K. Chaube, *Impact of Stress on Oocyte Quality and Reproductive Outcome*, 23 J. BIOMEDICAL SCI. 36 (2016); Kristin L. Rooney & Alice D. Domar, *The Relationship Between Stress and Infertility*, 20 DIALOGUES CLINICAL NEUROSCIENCE 41, 42 (2018).

4. See Gabriela Weigel, Alina Salganicoff & Usha Ranji, *Potential Impacts of Delaying “Non-Essential” Reproductive Health Care*, KAISER FAM. FOUND. (June 24, 2020), <https://www.kff.org/womens-health-policy/issue-brief/potential-impacts-of-delaying-non-essential-reproductive-health-care/>.

essential nature of fertility treatment.⁵ The World Health Organization reiterates that infertility is a disease and that women should maintain control of their reproductive planning, even during a healthcare crisis.⁶ Many employers recognize the essential nature of fertility treatment and are offering fertility benefits as a means of retaining employees during the pandemic driven worker shortage.⁷

Part I of this Article begins with an examination of non-essential healthcare that was ceased during the beginning months of the pandemic. Part II summarizes through each stage of the American Society of Reproductive Medicine's guidance on treatment during the pandemic. Part III introduces the unique impacts that the pandemic had on both infertility patients and on infertility care providers. This Article concludes in Part IV with the recommendation that fertility care be classified as essential care for all future purposes.

I. PAUSE OF NON-ESSENTIAL HEALTHCARE DURING THE PANDEMIC

In March of 2020, the reality of a global pandemic struck the United States healthcare system in multiple ways. Most notably, hospitals were tasked with preparing for the large volumes of critically ill patients whose influx was predicted to strain the medical system.⁸ The increased case volume during the pandemic spawned discussions of resource allocation

5. See Maria do Carmo Borges de Souza, Hitomi Nakagawa, Paulo Franco Taitson, Emerson Barchi Cordts & Roberto Azevedo Antunes, *Management of ART and COVID-19: Infertility in Times of Pandemic. What Now?*, 24 JBRA ASSISTED REPROD. 231, 231 (2020).

6. WHO, WHO CONSOLIDATED GUIDELINE ON SELF-CARE INTERVENTIONS FOR HEALTH: SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS 140, 5–6 (2019), <https://apps.who.int/iris/bitstream/handle/10665/325480/9789241550550-eng.pdf>.

7. See, e.g., Megan Leonhardt, *Companies Are Scrambling to Get Ahead of the Great Resignation by Beefing Up Fertility Benefits. Here's What They're Offering.*, FORTUNE (Jan. 31, 2022, 3:53 PM), <https://fortune.com/2022/01/31/companies-fertility-benefits-great-resignation/>.

8. See OFF. OF INSPECTOR GEN., DEP'T OF HEALTH AND HUM. SERVS., HOSPITAL EXPERIENCES RESPONDING TO THE COVID-19 PANDEMIC: RESULTS OF A NATIONAL PULSE SURVEY MARCH 23–27, 2020, at 5 (2020), <https://oig.hhs.gov/oei/reports/oei-06-20-00300.pdf> [hereinafter HOSPITAL EXPERIENCES].

including hospital beds, critical care space, personal protective equipment, ventilators, and staff shortages.⁹ Two of the most common responses within the healthcare system were to cancel or postpone non-urgent care and to move as much patient contact to telemedicine as possible.¹⁰ On April 7, 2020, the Centers for Medicare and Medicaid Services (CMS) released guidance on treatment according to level of acuity.¹¹ For all medical treatment and services that are considered low acuity, CMS recommended either postponing or using remote interactions such as telehealth.¹² The American Hospital Association (AHA), citing the tiered framework presented by CMS, gave guidance on elective surgeries.¹³ Both CMS and the AHA recommended leaving the decision in the hands of the local healthcare systems who could best factor the regional resources and COVID-19 outbreak status in their area.¹⁴ The American College of Surgeons used the St. Louis University Elective Surgery Acuity Scale to categorize procedure acuity levels.¹⁵ The St. Louis Scale defines low and intermediate acuity procedures as those that can be delayed safely, meaning

9. See Ezekiel J. Emanuel, Govind Persad, Ross Upshur, Beatriz Thome, Michael Parker, Aaron Glickman, Cathy Zhang, Connor Boyle, Maxwell Smith & James P. Phillips, *Fair Allocation of Scarce Medical Resources in the Time of Covid-19*, 382 NEW ENG. J. MED. 2049, 2050 (2020); HOSPITAL EXPERIENCES, *supra* note 8, at 1–5.

10. See Lisa M. Koonin, Brooke Hoots, Clarisse A. Tsang, Zanie Leroy, Kevin Farris, B. Tilman Jolly, Peter Antall, Bridget McCabe, Cynthia B.R. Zelis, Ian Tong & Aaron M. Harris, *Trends in the Use of Telehealth During the Emergence of the COVID-19 Pandemic – United States, January–March 2020*, CTRS. FOR DISEASE CONTROL AND PREVENTION (Oct. 30, 2020), <https://www.cdc.gov/mmwr/volumes/69/wr/mm6943a3.htm>; Hallie Golden, *US Hospitals Postpone Non-Emergency Procedures Amid Coronavirus Pandemic*, GUARDIAN (Mar. 25, 2020, 3:27 PM), <https://www.theguardian.com/world/2020/mar/25/us-hospitals-coronavirus-pandemic-postpone-elective-surgery-procedures>.

11. See *Non-Emergent, Elective Medical Services, and Treatment Recommendations*, CTRS. FOR MEDICARE & MEDICAID SERVS. (Apr. 7, 2020), <https://www.cms.gov/files/document/cms-non-emergent-elective-medical-recommendations.pdf>.

12. *Id.*

13. *New Information on Elective Surgery, PPE Conservation and Additional COVID-19 Issues*, AM. HOSPITAL ASS'N (Mar. 19, 2020), <https://www.aha.org/system/files/media/file/2020/03/new-information-on-elective-surgery-ppe-conservation-additional-covid-19-issues-3-18-2020.pdf>.

14. *Id.*

15. *COVID-19: Guidance for Triage of Non-Emergent Surgical Procedures*, AM. COLL. OF SURGEONS (Mar. 17, 2020), <https://www.facs.org/covid-19/clinical-guidance/triage>.

postponement of the procedure would not present a substantial risk to the patient.¹⁶ The American College of Surgeons advised that procedures of low and intermediate acuity should be considered for postponement in conjunction with the patient's individual medical needs and the regional status of the pandemic at the time.¹⁷ The United States was not alone in this recommendation; there was a global consensus among healthcare providers that postponing elective and non-essential procedures was appropriate.¹⁸

Throughout the field of medicine there were active discussions about providing non-essential treatment in different specialties, often focused on elective surgery.¹⁹ On April 17, 2020, the American College of Surgeons, the American Society of Anesthesiologists, the Association of periOperative Registered Nurses, and the American Hospital Association released a joint statement titled *Roadmap to Resuming Elective Surgery after COVID-19 Pandemic*.²⁰ This statement acknowledged that, under the guidance of CMS and the U.S. Surgeon General, many non-essential surgical procedures were postponed at the outset of the pandemic.²¹ This statement also recognized that after the first wave of the pandemic, the American healthcare system would potentially experience an overwhelming caseload to catch-up the backlog of postponed

16. *Id.*

17. *Id.*

18. See COVIDSurg Collaborative, *Global Guidance for Surgical Care During the COVID-19 Pandemic*, 107 BRIT. J. SURGERY 1097, 1098 (2020); Gareth Iacobucci, *Covid-19: All Non-Urgent Elective Surgery Is Suspended for At Least Three Months in England*, BMJ (Mar. 18, 2020), <https://www.bmj.com/content/bmj/368/bmj.m1106.full.pdf>.

19. See Ken Wu, Craig R. Smith, Bradley T. Lembcke & Tanira B.D. Ferreira, *Elective Surgery During the Covid-19 Pandemic*, 383 NEW ENG. J. MED. 1787, 1787–90 (2020); Caroline V. Gona, Letter to the Editor, *Cancellation of Elective Surgery During the COVID-19 Pandemic*, 25 E. & CENT. AFR. J. SURGERY 33, 33 (2020); J. Wayne Meredith, Kevin P. High & Julie Ann Freischlag, *Preserving Elective Surgeries in the COVID-19 Pandemic and the Future*, 324 J. AM. MED. ASS'N 1725, 1725–26 (2020). For an example of such discussions in other specialties, see Thomas & Caplan, *supra* note 2.

20. See *Joint Statement: Roadmap for Resuming Elective Surgery After COVID-19 Pandemic*, AM. SOC'Y OF ANESTHESIOLOGISTS (Apr. 17, 2020), <https://www.asahq.org/about-asa/newsroom/news-releases/2020/04/joint-statement-on-elective-surgery-after-covid-19-pandemic>.

21. *Id.*

patients.²² The drafters intended for the joint statement to provide guidance for practitioners regarding when it will be appropriate to resume procedures and how to do so safely.²³ The joint statement relied heavily on the status of the COVID-19 pandemic in different localities, advising practitioners to wait for a fourteen-day reduction in local cases, guidance from local public health authorities, and facility staffing capabilities to determine when non-essential procedures should resume.²⁴ The joint statement goes on to provide guidance on how to resume surgical procedures safely, with an emphasis on COVID-19 testing, appropriate personal protective equipment (PPE) for the healthcare team, case prioritization, and scheduling.²⁵

During the first twelve weeks of the pandemic, it is estimated that more than 28 million surgical procedures were cancelled worldwide.²⁶ To catch up on missed surgeries, surgical volume would have to be increased by twenty percent beyond standard operating levels for forty-five weeks.²⁷ These staggering numbers raised the question of how and when to resume non-essential services while simultaneously working to protect patients from nosocomial infection, practitioners from exposure and potential infection, and the needs of the greater healthcare system during a pandemic.

Concern for patient wellbeing in the face of a novel infectious virus must be considered when resuming operative practices for non-essential care. At this time in the pandemic, it was known that the virus transmitted via aerosol, but

22. *Id.*

23. *Id.*

24. *Id.*

25. *Id.*

26. Hélène Charbonneau, Ségolène Mrozek, Benjamin Pradere, Jean-Nicolas Cornu & Vincent Misrai, *How to Resume Elective Surgery in Light of COVID-19 Post-Pandemic Propofol Shortage: The Common Concern of Anaesthesists and Surgeons*, 39 ANAESTHESIA CRITICAL CARE & PAIN MED. 593, 593 (2020).

27. COVIDSurg Collaborative, *Elective Surgery Cancellations Due to the COVID-19 Pandemic: Global Predictive Modelling to Inform Surgical Recovery Plans*, 107 BRIT. J. SURGERY 1440, 1440 (2020).

it was not yet proven that fomite transmission was insignificant.²⁸ Contracting COVID-19 in the perioperative stage was understood to have a high potential for mortality,²⁹ but the direct effects of COVID-19 on the surgical patient were unknown.³⁰ Some pathological changes in COVID-19 patients were known to lead to negative outcomes among surgical patients.³¹ Negative outcomes included inflammatory responses,³² coagulopathy,³³ and single or multiple organ failure.³⁴ Despite these risks, a resumption of surgical services was deemed appropriate.³⁵

Though healthcare practitioners know that their chosen profession contains some level of inherent risk, appropriate precautions can minimize that risk. Healthcare practitioners with appropriate personal protective equipment (PPE) are at an 11.6% greater risk of testing positive for COVID-19 than the

28. See Knvul Sheikh, Derek Watkins, Jin Wu & Mika Gröndahl, *How Bad Will the Coronavirus Outbreak Get? Here Are 6 Key Factors*, N.Y. TIMES, <https://www.nytimes.com/interactive/2020/world/asia/china-coronavirus-contain.html> (Feb. 28, 2020) (providing key facts surrounding Covid-19, as it was understood in late February 2020, such as the virus's ability to spread through the air, but making no mention of fomite transmission).

29. Ali Aminian, Saeed Safari, Abdolali Razeghian-Jahromi, Mohammad Ghorbani & Conor P. Delaney, *COVID-19 Outbreak and Surgical Practice: Unexpected Fatality in Perioperative Period*, 272 ANNALS OF SURGERY e27, e27 (2020); see Shaoqing Lei, Fang Jiang, Wating Su, Chang Chen, Jingli Chen, Wei Mei, Li-Ying Zhan, Yifan Jia, Liangqing Zhang, Danyong Liu, Zhong-Yuan Xia & Zhengyuan Xia, *Clinical Characteristics and Outcomes of Patients Undergoing Surgeries During the Incubation Period of COVID-19 Infection*, 21 ECLINICALMEDICINE 1, 7 (2020).

30. See Lei et al., *supra* note 29, at 2.

31. See Chuan Qin, Luoqi Zhou, Ziwei Hu, Shuoqi Zhang, Sheng Yang, Yu Tao, Cuihong Xie, Ke Ma, Ke Shang, Wei Wang & Dai-Shi Tian, *Dysregulation of Immune Response in Patients with Coronavirus 2019 (COVID-19) in Wuhan, China*, 71 CLINICAL INFECTIOUS DISEASES 762, 767 (2020).

32. See *id.*

33. See Huan Han, Lan Yang, Rui Liu, Fang Liu, Kai-lang Wu, Jie Li, Xing-hui Liu & Cheng-liang Zhu, *Prominent Changes in Blood Coagulation of Patients with SARS-CoV-2 Infection*, 58 CLINICAL CHEMISTRY & LAB'Y MED. 1116, 1119 (2020).

34. See Tianbing Wang, Zhe Du, Fengxue Zhu, Zhaolong Cao, Youzhong An, Yan Gao & Baoguo Jiang, *Comorbidities and Multi-Organ Injuries in the Treatment of COVID-19*, 395 LANCET e52, e52 (2020); K. Søreide, J. Hallet, J. B. Matthews, A. A. Schnitzbauer, P. D. Line, P. B. S. Lai, J. Otero, D. Callegaro, S. G. Warner, N. N. Baxter, C. S. C. Teh, J. Ng-Kamstra, J. G. Meara, L. Hagander & L. Lorenzon, *Immediate and Long-Term Impact of the COVID-19 Pandemic on Delivery of Surgical Services*, 107 BRIT. J. SURGERY 1250, 1255 (2020).

35. Søreide et al., *supra* note 34, at 1255.

general population,³⁶ while those without access to appropriate PPE are at a 23% greater risk of testing positive for COVID-19.³⁷ In addition, healthcare workers have been found to be seven times more likely to have severe infection than other non-essential workers.³⁸ One research group postulates that there is a unique and increased risk of exposure for all members of the surgical care team, and it should therefore be assumed that the entire operating room is contaminated.³⁹ The researchers recommend an approach to minimize this risk which includes communicating frequently, wearing effective personal protective equipment, adopting COVID-19 specific surgical techniques, and donning and doffing using a buddy system.⁴⁰ The United States Centers for Disease Control offers guidance on the PPE that should be used, and how to use it.⁴¹ A joint statement by British medical societies—including the Association of Anaesthetists, the Centre for Perioperative Care, the Federation of Surgical Specialty Associations, the Royal College of Anaesthetists and the Royal College of Surgeons of England—offered strategies for how to manage surgery in patients previously infected with COVID-19.⁴² The World

36. COPE Consortium, *Risk of COVID-19 Among Frontline Healthcare Workers and the General Community: A Prospective Cohort Study*, NAT'L INSTS. OF HEALTH (May 25, 2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7273299/>.

37. *Id.*

38. *Healthcare Workers 7 Times as Likely to Have Severe COVID-19 as Other Workers*, BMJ (Aug. 12, 2020), <https://www.bmj.com/company/newsroom/healthcare-workers-7-times-as-likely-to-have-severe-covid-19-as-other-workers/>.

39. Gabriel A. Brat, Sean Hersey, Karan Chhabra, Alok Gupta & John Scott, *Protecting Surgical Teams During the COVID-19 Outbreak: A Narrative Review and Clinical Considerations*, ANNALS OF SURGERY, Apr. 17, 2020, at 3.

40. *Id.*

41. See *Personal Protective Equipment: Questions and Answers*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/coronavirus/2019-ncov/hcp/respirator-use-faq.html> (Apr. 9, 2022).

42. K. El-Boghdadly, T.M. Cook, T. Goodacre, J. Kua, L. Blake, S. Denmark, S. McNally, N. Mercer, S.R. Moonesinghe & D.J. Summerton, *SARS-CoV-2 Infection, COVID-19 and Timing of Elective Surgery*, 76 ANAESTHESIA 940 (2021).

Health Organization also published guidelines on the use of PPE during the pandemic.⁴³

When resuming non-essential surgery, factors to be considered must include the current COVID-19 burden on local health systems, and consequently, limited staffing resources. Nurses with experience in either anesthesia or the operating room have skills that are transferable to the critical care nursing necessary for COVID-19 patients.⁴⁴ During times of high COVID-19 infection rates, nurses assigned to surgical teams performing elective procedures, may need to be temporarily re-assigned to care for COVID-19 patients.⁴⁵ In addition to staffing considerations, healthcare systems must consider the financial ramifications of cancelling elective surgeries, which are often very lucrative and a large portion of a facility's anticipated revenue.⁴⁶ According to a 2020 study, elective surgical procedures are responsible for 78% of the total gross surgical revenue, both inpatient and outpatient.⁴⁷ Additional research demonstrates that the need to provide acute care postoperatively to patients receiving elective surgeries is consistent and predictable.⁴⁸ Thus, resuming non-essential surgeries both provides financial stability for individual healthcare entities and allows those entities to engage in contingency planning.

43. World Health Org. [WHO], *Rational Use of Personal Protective Equipment for Coronavirus Disease 2019 (COVID-19)*, WHO Doc. WHO/2019-nCov/IPC PPE_use/2020.1 (Feb. 27, 2020), https://apps.who.int/iris/bitstream/handle/10665/331215/WHO-2019-nCov-IPCPPE_use-2020.1-eng.pdf.

44. Nick Evans, *Elective Care: Catching Up and Staying COVID-Free*, 35 NURSING STANDARD 67, 67 (2020).

45. *See id.*

46. *See id.* at 67–68.

47. Joseph E. Tonna, Heidi A. Hanson, Jessica N. Cohan, Marta L. McCrum, Joshua J. Horns, Benjamin S. Brooke, Rupam Das, Brenna C. Kelly, Alexander John Campbell & James Hotaling, *Balancing Revenue Generation with Capacity Generation: Case Distribution, Financial Impact and Hospital Capacity Changes from Cancelling or Resuming Elective Surgeries in the US During COVID-19*, 20 BMC HEALTH SERVS. RSCH., 1119, 1121–22 (2020).

48. Vijay Krishnamoorthy, Tetsu Ohnuma, Raquel Bartz, Matthew Fuller, Nita Khandelwal, Krista Haines, Charles Scales & Karthik Raghunathan, *Acute Care Resource Use After Elective Surgery in the United States: Implications During the COVID-19 Pandemic*, 30 AM. J. CRITICAL CARE 320, 320–23 (2021).

There are a variety of considerations in stopping and restarting non-essential surgical procedures during a pandemic. Some factors to consider include a patient's desire for the procedure and the healthcare facility's ability to provide the procedure safely, while minimizing risk of COVID-19 transmission to both the patient and the providers. Other systemic factors include drawing resources from the greater healthcare system, the current burdens placed on that healthcare system by the pandemic, and the financial burdens of restricting income to the greater healthcare system. The decision to resume non-essential surgical procedures must be made at the local institutional and provider levels, with input from public health authorities best familiar with the current state of the pandemic in that specific region.

II. FERTILITY CLINIC CLOSURE AND TREATMENT GUIDANCE DURING THE PANDEMIC

On March 11, 2020, Tedros Adhanom Ghebreyesus, the Director-General of the World Health Organization, gave a public speech in which he declared COVID-19 to be upgraded to a pandemic.⁴⁹ He announced that there were more than 118,000 cases in 114 countries and 4,291 people had already died of the coronavirus.⁵⁰ On March 13, 2020, President Donald J. Trump, in White House Proclamation 9994, declared a national emergency in accordance with the National Emergencies Act.⁵¹ On March 17, 2020 the American Society for Reproductive Medicine (ASRM) released an advisory titled "Patient Management and Clinical Recommendations During the Coronavirus (COVID-19) Pandemic," which offered

49. Tedros Adhanom Ghebreyesus, Dir. Gen., World Health Org., Opening Remarks at the Media Briefing on COVID-19 (Mar. 11, 2020), <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>.

50. *Id.*

51. Proclamation No. 9994, 85 Fed. Reg. 15337 (Mar. 18, 2020); *see* 50 U.S.C. § 1621.

guidance on five key issues in the area of fertility treatment during the COVID-19 pandemic:⁵²

- (1) Suspend initiation of new treatment cycles, including ovulation induction, intrauterine inseminations (IUIs), in vitro fertilization (IVF) including retrievals and frozen embryo transfers, as well as non-urgent gamete cryopreservation.
- (2) Strongly consider cancellation of all embryo transfers whether fresh or frozen.
- (3) Continue to care for patients who are currently “in-cycle” or who require urgent stimulation and cryopreservation.
- (4) Suspend elective surgeries and non-urgent diagnostic procedures.
- (5) Minimize in-person interactions and increase utilization of telehealth.⁵³

The ASRM developed a group of reproductive endocrinology and infertility specialists that comprised the Coronavirus/COVID-19 Task Force (Task Force).⁵⁴ This Task Force drafted the guidance document and its subsequent iterations, and released them with the approval of the ASRM

52. AM. SOC'Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC 1 (2020), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforce.pdf>.

53. *Id.* It should be noted that this document and each subsequent update raised the issue of mental health for both providers and patients. *See id.* at 5–7; *COVID-19 Updates and Resources*, AM. SOC'Y FOR REPROD. MED., <https://www.asrm.org/news-and-publications/covid-19/> (last visited June 4, 2022).

54. AM. SOC'Y FOR REPROD. MED., *supra* note 52, at 2; *COVID, Reproductive Health, and Public Policy: Lessons Learned after Two Years of the Ongoing Pandemic*, AM. SOC'Y FOR REPROD. MED., (Mar. 2, 2022), <https://www.asrm.org/news-and-publications/news-and-research/announcements/covid-reproductive-health-and-public-policy-lessons-learned-after-two-years-of-the-ongoing-pandemic-from-the-asrm-covid-19-task-force/> (describing the makeup of the Task Force).

Executive Committee.⁵⁵ The Task Force expressed the competing interests of proactively protecting healthcare systems' needs during a pandemic and the time-sensitive nature of pregnancy.⁵⁶ In addition to treatment and travel for treatment, the guidance document discusses practice management, including laboratory management and the psychological health of both clinic staff and patients.⁵⁷

On March 19, 2020, the European Society of Human Reproduction and Embryology (ESHRE) released its first statement on fertility treatment during the pandemic, which mirrored the guidance from the ASRM.⁵⁸ ESHRE advised caution in proceeding with pregnancy based on the limited knowledge of how COVID-19 infection affects pregnancy.⁵⁹ The guidance document, with recognition of the overloaded healthcare system and an obligation to not add additional stress in that system, echoed the statements from ASRM's Task Force.⁶⁰

At the time of this Article's publication, the Task Force has published twenty updates to its original guidance document.⁶¹ Each update provided guidance based on the scientific knowledge and understanding of the pandemic at that given time, as well as periodic commentary on the essential nature of fertility care.⁶² The remainder of this section details the

55. AM. SOC'Y FOR REPROD. MED., *supra* note 52, at 2.

56. *Id.* at 1–2.

57. *Id.* at 5–7.

58. See *Coronavirus Covid-19: ESHRE Statement on Pregnancy and Conception*, EUR. SOC'Y OF HUM. REPROD. & EMBRYOLOGY (Mar. 19, 2020), <https://www.eshre.eu/Europe/Position-statements/COVID19>.

59. *Id.*; see also Huan Liang & Ganesh Acharya, *Novel Corona Virus Disease (COVID-19) in Pregnancy: What Clinical Recommendations to Follow?*, 99 ACTA OBSTETRICIA ET GYNECOLOGICA SCANDINAVICA 4, 439–42 (2020); David A. Schwartz & Ashley L. Graham, *Potential Maternal and Infant Outcomes from (Wuhan) Coronavirus 2019-nCoV Infecting Pregnant Women: Lessons from SARS, MERS, and Other Human Coronavirus Infection*, 12 VIRUSES 194 (2020).

60. *Id.*; AM. SOC'Y FOR REPROD. MED., *supra* note 52, at 3–7.

61. *COVID-19 Updates and Resources*, *supra* note 53.

62. See *infra* pp. 10–20; see also *COVID-19 Updates and Resources*, *supra* note 53.

individual guidance document updates and concludes with a summary in table format.⁶³

The first update covered the period of time from March 30, 2020 through April 13, 2020.⁶⁴ This update affirmed the five key issues detailed in the original guidance document.⁶⁵ The Task Force relied on emerging scientific data in the literature and on governmental regulations, in addition to guidelines from other medical organizations such as the American Ambulatory Surgery Association and the American College of Surgeons.⁶⁶ The Task Force identified elective surgery as “surgery that can be delayed for a period of time without undue risk to the patient,” and stated that “infertility care is not elective.”⁶⁷ The Task Force also advised that as pandemic restrictions continued, practitioners must work in collaboration with their patients to determine what is urgent versus non-urgent care.⁶⁸

The second update covered the period of time from April 13, 2020 through April 27, 2020.⁶⁹ At the time of this update, there were 1.9 million COVID-19 cases globally, more than 570,000 of which were in the United States.⁷⁰ Further, there were no available antivirals; molecular testing for the presence of the disease was expanding, but serologic testing was not yet available, and vaccines were predicted to be twelve to eighteen months away.⁷¹ The second update again affirmed the five key issues detailed in the original guidance document and also

63. *See infra* pp. 843–845.

64. AM. SOC’Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC: UPDATE #1 (MARCH 30, 2020 THROUGH APRIL 13, 2020) 1 (2020), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate1.pdf>.

65. *Id.*

66. *Id.* at 2.

67. *Id.*

68. *Id.*

69. AM. SOC’Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC: UPDATE #2 (APRIL 13, 2020 THROUGH APRIL 27, 2020) 1 (2020), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate2.pdf>.

70. *Id.*

71. *Id.*

acknowledged that an increasing number of jurisdictions were “appropriately recognizing infertility care as essential services.”⁷² The Task Force again acknowledged the risks of exposure for both staff and patients and urged analysis of the risks and benefits on an individual basis.⁷³

The third update covered the period of time from April 24, 2020 through May 11, 2020.⁷⁴ At the time of this update there were 2.7 million COVID-19 cases globally, and more than 880,000 cases in the United States.⁷⁵ The Task Force reaffirmed their prior statement that fertility care is essential care, but expressed the need for a balance between providing fertility care and the risk of contracting COVID-19.⁷⁶ The third update was the first to give guidance on a gradual and judicious resumption of reproductive healthcare in the United States.⁷⁷ The Task Force advised that local situations be assessed for key criteria.⁷⁸ Local cases should show sustained reduction and hospitals in the area should not be resorting to crisis standards to safely treat the patient population.⁷⁹ Additionally, each individual practice must prepare to limit the risks to patients, staff, and providers.⁸⁰ The third update detailed performance standards and documented risk assessment as well as risk mitigation.⁸¹ It relied on guidance from multiple authorities, including the Center for Disease Control (CDC),⁸² the

72. *Id.* at 1–2.

73. *See id.* at 2.

74. AM. SOC’Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC: UPDATE # 3 (APRIL 24, 2020 THROUGH MAY 11, 2020) 1 (2020), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate3.pdf> [hereinafter ASRM, UPDATE #3].

75. *Id.*

76. *Id.* at 2.

77. *See id.*

78. *See id.*

79. *Id.* at 3. The Task Force suggested that a reduction in cases for a period of at least fourteen days would be considered “sustained.” *Id.*

80. *See id.*

81. *See id.* at 3–6.

82. *Id.* at 4, 8 tbl.1.

Occupational Health and Safety Administration (OSHA),⁸³ and the Society for Assisted Reproductive Technology (SART).⁸⁴ The update also introduced the discussion of PPE.⁸⁵

The fourth update covered the period of time from May 11, 2020 through June 8, 2020.⁸⁶ At that time, there were nearly four million COVID-19 cases globally, over 1.3 million of which were in the United States.⁸⁷ In this update, the Task Force acknowledged the lack of vaccines and treatment for SARS-CoV-2 infection, as well as the unpredictability of the natural ebb and flow of infection rates.⁸⁸ Given the lack of knowledge about how fertility treatment and early pregnancy were affected by SARS-CoV-2 infection, the Task Force, on behalf of the ASRM, encouraged both patient and practitioner participation in research.⁸⁹ In addition, the ASRM added questions on COVID-19 to the Clinic Outcome Reporting System (CORS) that is managed by SART.⁹⁰ The fourth update also offered information on the state of testing for COVID-19, as well as an update on what was known about COVID-19 and pregnancy at that time.⁹¹ Limited information showed that mothers infected with COVID-19 who deliver full term did

83. *Id.*; OCCUPATIONAL SAFETY & HEALTH ADMIN., U.S. DEP'T OF LAB., GUIDANCE ON PREPARING WORKPLACES FOR COVID-19 1 (2020), <https://www.osha.gov/sites/default/files/publications/OSHA3990.pdf>.

84. ASRM, UPDATE #3, *supra* note 74, at 9 tbl.1; SOC'Y FOR ASSISTED REPROD. TECH., SART COVID-19 TOOLKIT 1 (2020), https://www.sart.org/globalassets/__sart/covid-19/tips-for-resuming-care/sart-covid-19-toolkit.pdf.

85. *See* ASRM, UPDATE #3, *supra* note 74, at 6.

86. AM. SOC'Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC: UPDATE #4 (MAY 11, 2020 THROUGH JUNE 8, 2020) 1 (2020), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate4.pdf> [hereinafter ASRM, UPDATE #4].

87. *Id.* at 2.

88. *See id.*

89. *Id.*; *see, e.g.,* Heather Huddleston, *Assessing the Safety of Pregnancy in the Coronavirus (COVID-19) Pandemic*, UCSF CLINICAL TRIALS, <https://clinicaltrials.ucsf.edu/trial/NCT04388605> (last visited Apr. 4, 2022).

90. ASRM, UPDATE #4, *supra* note 86, at 2.

91. *See id.* at 3–6.

well.⁹² Contrarily, mothers infected with COVID-19 who were not yet full term could experience premature labor and early delivery.⁹³ There were no observed instances of vertical transmission from mother to fetus of COVID-19, but it was still believed to be possible.⁹⁴ There was no evidence that indicated how a SARS-CoV-2 infection during the first and second trimesters would affect the mother, fetus, or resulting child.⁹⁵ This is the first guidance document in which the Task Force addressed third-party reproduction, specifically gamete donors and gestational carriers.⁹⁶ Testing for SARS-CoV-2 was limited and gamete transmission information was ambiguous.⁹⁷ Clinics were advised to incorporate additional counseling into their standard practices for donors, carriers, and intended parents.⁹⁸ Finally, this iteration of the guidance document provided an updated PPE chart for different fertility treatments.⁹⁹

The fifth update covered the period of time from June 8, 2020 through July 6, 2020.¹⁰⁰ At that time, there were 6.5 million COVID-19 cases globally, over 1.9 million of which were in the United States.¹⁰¹ This was the first update to address the presence of partners during fertility treatment.¹⁰² The Task

92. See Wissam Shalish, Satyanarayana Lakshminrusimha, Paolo Manzoni, Martin Keszler & Guilherme M. Sant'Anna, *COVID-19 and Neonatal Respiratory Care: Current Evidence and Practical Approach*, 37 AM. J. PERINATOLOGY 780, 780 (2020).

93. See Yangli Liu, Haihong Chen, Kejing Tang & Yubiao Guo, *Clinical Manifestations and Outcomes of SARS-Cov-2 Infection During Pregnancy*, 82 J. INFECT. e9, e9–e10 (2021).

94. See Huijun Chen, Juanjuan Guo, Chen Wang, Fan Luo, Xuechen Yu, Wei Zhang, Jiafu Li, Dongchi Zhao, Dan Xu, Qing Gong, Jing Liao, Huixia Yang, Wei Hou & Yuanzhen Zhang, *Clinical Characteristics and Intrauterine Vertical Transmission Potential of COVID-19 Infection in Nine Pregnant Women: A Retrospective Review of Medical Records*, 395 LANCET 809, 810, 814 (2020).

95. See ASRM, UPDATE #4, *supra* note 86, at 3–5.

96. *Id.* at 6–7.

97. *Id.* at 5.

98. *Id.* at 7.

99. *Id.* at 8.

100. AM. SOC'Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC, UPDATE #5 (JUNE 8, 2020 THROUGH JULY 6, 2020), 1 (2020), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate5.pdf> [hereinafter ASRM, UPDATE #5].

101. *Id.* at 2.

102. See *id.* at 4–5.

Force recommended that only the individual receiving treatment be present in the treatment room, but it advised that other means of participation, such as telephone or video, should be considered for the patient's partner.¹⁰³ This update focused on the resumption of reproductive surgery, including oocyte harvest, in accordance with the Society for Reproductive Surgeons.¹⁰⁴ The Task Force reiterated its previously stated recommendations concerning local disease prevalence, patient and staff PPE, and COVID-19 testing.¹⁰⁵

The sixth updated guidance document covered the period of time from July 10, 2020 through August 10, 2020.¹⁰⁶ At the time, the United States saw a 90% increase in cases from the prior four weeks, bringing cases in the United States to surpass three million.¹⁰⁷ This update again addressed third-party reproduction but focused on new studies that provided information regarding pregnancy and COVID-19.¹⁰⁸ A number of studies cited by the Task Force demonstrated that pregnant women were at greater risk for hospitalization, intensive care unit stay, mechanical ventilation, cesarean section, and ultimately death if determined to be SARS-CoV-2 positive in the late-second or third trimesters.¹⁰⁹ There was still no data on the

103. *Id.*

104. *Id.* at 3.

105. *Id.*

106. AM. SOC'Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC UPDATE #6 (JULY 10, 2020 THROUGH AUGUST 10, 2020), 1 (2020), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate6.pdf>

[hereinafter ASRM, UPDATE #6].

107. *Id.* at 2.

108. *Id.* at 2–5.

109. *Id.*; Matthew J. Blitz, Burton Rochelson, Howard Minkoff, Natalie Meirowitz, Lakha Prasannan, Viktoriya London, Timothy J. Rafael, Shruti Chakravarthy, Luis A. Bracero, Shane W. Wasden, Sarah L. Pachtman Shetty, Orlando Santandreu, Frank A. Chervenak, Benjamin M. Schwartz & Michael Nimaroff, *Maternal Mortality Among Women with Coronavirus Disease 2019 Admitted to the Intensive Care Unit*, 223 AM. J. OBSTETRIC GYNECOLOGY 595 (2020); Sascha Ellington, Penelope Strid, Van T. Tong, Kate Woodworth, Romeo R. Galang, Laura D. Zambrano, John Nahabedian, Kayla Anderson & Suzanne M. Gilboa, *Characteristics of Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status – United States, January 22–June 7, 2020*, 69 MORBIDITY MORTALITY WKLY. REP. 769–775 (2020); Rasha

effects of SARS-CoV-2 infection during the first and second trimesters.¹¹⁰ Vertical transmission remained possible but the data was unclear and conflicting.¹¹¹

The seventh update covered the period of time from August 10, 2020 through September 7, 2020;¹¹² the eighth update

Khoury, Peter S. Bernstein, Chelsea Debolt, Joanne Stone, Desmond M. Sutton, Lynn L. Simpson, Meghana A. Limaye, Ashley S. Roman, Melissa Fazzari, Christina A. Penfield, Lauren Ferrara, Calvin Lambert, Lisa Nathan, Rodney Wright, Angela Bianco, Brian Wagner, Dena Goffman, Cynthia Gyamfi-Bannerman, William E. Schweizer, Karina Avila, Bijan Khaksari, Meghan Proehl, Fabiano Heitor, Johanna Monro, David L. Keefe, Mary E. D'Alton, Michael Brodman, Sharmila K. Makhija & Siobhan M. Dolan, *Characteristics and Outcomes of 241 Births to Women with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Infection at Five New York City Medical Centers*, 136 *OBSTETRICS & GYNECOLOGY* 273–282 (2020); Marian Knight, Kathryn Bunch, Nicola Vousden, Edward Morris, Nigel Simpson, Chris Gale, Patrick O'Brien, Maria Quigley, Peter Brocklehurst & Jennifer J Kurinczuk, *Characteristics and Outcomes of Pregnant Women Admitted to Hospital with Confirmed SARS-CoV-2 Infection in UK: National Population-Based Cohort Study*, 369 *BMJ* 2107 (2020); Reem Matar, Layan Alrahmani, Nasser Monzer, Labib G Debiane, Elie Berbari, Jawad Fares, Fidelma Fitzpatrick & Mohammad H. Murad, *Clinical Presentation and Outcomes of Pregnant Women with Coronavirus Disease 2019: A Systematic Review and Meta-Analysis*, 72 *CLINICAL INFECTIOUS DISEASES* 521–33 (2021).

110. See Blitz et al., *supra* note 109 at 596; Miranda J. Delahoy, Michael Whitaker, Alissa O'Halloran, Shua J. Chai, Pam Daily Kirley, Nisha Alden, Breanna Kawasaki, James Meek, Kimberly Yousey-Hindes, Evan J. Anderson, Kyle P. Openo, Maya L. Monroe, Patricia A. Ryan, Kimberly Fox, Sue Kim, Ruth Lynfield, Samantha Siebman, Sarah Shrum Davis, Daniel M. Sosin, Grant Barney, Alison Muse, Nancy M. Bennett, Christina B. Felsen, Laurie M. Billing, Jessica Shiltz, Melissa Sutton, Nicole West, William Schaffner, H. Keipp Talbot, Andrea George, Melanie Spencer, Sascha Ellington, Romeo R. Galang, Suzanne M. Gilboa, Van T. Tong, Alexandra Piasecki, Lynnette Brammer, Alicia M. Fry, Aron J. Hall, Jonathan M. Wortham, Lindsay Kim & Shikha Garg, *Characteristics and Maternal and Birth Outcomes of Hospitalized Pregnant Women with Laboratory-Confirmed COVID-19 – COVID-NET, 13 States, March 1 – August 22, 2020*, 69 *MORBIDITY MORTALITY WKLY. REP.* 1347–48 (2020).

111. See Gabriela N. Algarroba, Patricia Rekawek, Sevan A. Vahanian, Poonam Khullar, Thomas Palaia, Morgan R. Peltier, Martin R. Chavez & Anthony M. Vintzileos, *Visualization of Severe Acute Respiratory Syndrome Coronavirus 2 Invading the Human Placenta Using Electron Microscopy*, 223 *AM. J. OBSTETRICS & GYNECOLOGY* 2, 275–278 (2020); David Baud, Gilbert Greub, Guillaume Favre, Carole Gengler, Katia Jatton, Estelle Dubruc & Léo Pomar, *Second-Trimester Miscarriage in a Pregnant Woman with SARS-CoV-2 Infection*, 323 *JAMA* 21, 2198–2200 (2020); Lan Dong, Jinhua Tian, Songming He, Chuchao Zhu, Jian Wang, Chen Liu & Jing Yang, *Possible Vertical Transmission of SARS-CoV-2 From an Infected Mother to Her Newborn*, 323 *JAMA* 21, 1846–48 (2020); Koen Grimminck, Lindy Anne Maria Santegoets, Frederike Charlotte Siemens, Pieter Leendert Alex Fraaij, Irwin Karl Marcel Reiss & Sam Schoenmakers, *No Evidence of Vertical Transmission of SARS-CoV-2 After Induction of Labour in an Immune-Suppressed SARS-CoV-2-Positive Patient*, 13 *BMS CASE REP.* 6 (2020); Wissman Shalish, Satyanarayana Lakshminrusimha, Paolo Manzoni, Martin Keszler & Guilherme M. Sant'Anna, *COVID-19 and Neonatal Respiratory Care: Current Evidence and Practical Approach*, 37 *AM J. PERINATOLOGY* 08, 780–91 (2020).

112. *AM. SOC'Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC UPDATE #7*, 1 (2020),

covered the period of time from September 8, 2020 through October 5, 2020;¹¹³ and the ninth update covered the period of time from October 6, 2020 through November 9, 2020.¹¹⁴ These three updates offered no substantial changes nor additional relevant information.

The tenth update was published on November 17, 2020.¹¹⁵ At that time, there were nearly 11 million cases of COVID-19 in the United States.¹¹⁶ In this update, the Task Force addressed clinic management in the face of the current surge while urging clinics to re-evaluate their risk and mitigation strategies.¹¹⁷ It discussed details of the CDC recommendations for isolation and quarantine, as well as the CDC's definition of "close contact."¹¹⁸ In addition, the guidance provided guidelines for previously infected healthcare workers to return to work, addressing both a symptom-based strategy and a test-based strategy.¹¹⁹ It also advocated again for the use of telehealth as a means of protecting both patients and practitioners.¹²⁰ The Task Force addressed the new information regarding COVID-19 illness, fertility care, and pregnancy.¹²¹ Though the evidence was limited, data at the time showed that the COVID-19 virus

<https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate7.pdf> [hereinafter ASRM, UPDATE #7].

113. AM. SOC'Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC UPDATE #8, 1 (2020), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate8.pdf> [hereinafter ASRM, UPDATE #8].

114. AM. SOC'Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC UPDATE #9, 1 (2020), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate9.pdf>.

115. AM. SOC'Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC UPDATE #10, 1 (2020), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate10.pdf>.

116. *Id.*

117. *Id.* at 2.

118. *Id.* at 4.

119. *Id.*

120. *Id.*

121. *Id.*

was not thought to infect gametes or embryos.¹²² Most notably, two meta-analyses found that pregnant women are at significantly increased risk for admission to intensive care units and ventilatory support compared to their age-adjusted non-pregnant peers.¹²³ On December 11, 2020 the Food and Drug Administration (FDA) issued an Emergency Use Approval (EUA) for the Pfizer-BioNTech COVID-19 Vaccine for use in people who are sixteen years of age and older.¹²⁴

The eleventh update to the Task Force's guidance was published on December 16, 2020. It stated that the "Task Force does not recommend withholding the vaccine from patients who are planning to conceive, who are currently pregnant, or who are lactating."¹²⁵ This statement concurred with ASRM's peer societies, including the American College of Obstetrics and

122. See M. Barragan, N. Martin-Palomino, A. Rodriguez & R. Vassena, *Undetectable Viral RNA in Oocytes from SARS-CoV-2 Positive Women*, 36 *HUM. REPROD.* 390 (2020); Yajun Ruan, Binta Hu, Zhuo Liu, Kang Liu, Hongyang Jiang, Hao Li, Rui Li, Yang Luan, Xiaming Liu, Gan Yu, Shengfei Xu, Xiaoyi Yuan, Shaogang Wang, Weimin Yang, Zhangqun Ye, Jihong Liu & Tao Wang, *No Detection of SARS-CoV-2 from Urine, Expressed Prostatic Secretions and Semen in 74 Recovered COVID-19 Male Patients: A perspective and Urogenital Evaluation*, 9 *ANDROLOGY* 99, 100 (2020).

123. John Allotey, Elena Stallings, Mercedes Bonet, Magnus Yap, Shaunak Chatterjee, Tania Kew, Luke Debenham, Anna Clavé Llavall, Anushka Dixit, Dengyi Zhou, Rishab Balaji, Siang Ing Lee, Xiu Qiu, Mingyang Yuan, Dyuti Coomar, Jameela Sheikh, Heidi Lawson, Kehkashan Ansari, Madelon van Wely, Elizabeth van Leeuwen, Elena Kostova, Heinke Kunst, Asma Khalil, Simon Tiberi, Vanessa Brizuela, Nathalie Broutet, Edna Kara, Caron Rahn Kim, Anna Thorson, Ramón Escuriet, Olufemi T Oladapo, Lynne Mofenson, Javier Zamora & Shakila Thangaratinam, *PregCOV-19 Living Systematic Review Consortium. Clinical Manifestations, Risk Factors, and Maternal and Perinatal Outcomes of Coronavirus Disease 2019 in Pregnancy: Living Systematic Review and Meta-Analysis*, *BMJ* 1, 7 (2020); Laura Zambrano, Laura D. Zambrano, Sascha Ellington, Penelope Strid, Romeo R. Galang, Titilope Oduyebo, Van T. Tong, Kate R. Woodworth, John F. Nahabedian III, Eduardo Azziz-Baumgartner, Suzanne M. Gilboa & Dana Meaney-Delman, *Update: Characteristics of Symptomatic Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status – United States, January 22 – October 3, 2020*, 69 *MORBIDITY & MORTALITY WKLY. REP.* 1641, 1646 (2020).

124. AM. SOC'Y OF REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC UPDATE NO. 11 (2020), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate11.pdf> [hereinafter ASRM, UPDATE #11]; see also FDA News Release, FDA Takes Additional Action in Fight Against COVID-19 By Issuing Emergency Use Authorization for Second COVID-19 Vaccine (Dec. 18, 2020), <https://www.fda.gov/news-events/press-announcements/fda-takes-additional-action-fight-against-covid-19-issuing-emergency-use-authorization-second-covid>.

125. See ASRM, UPDATE #11, *supra* note 124.

Gynecology¹²⁶ and the Society for Maternal-Fetal Medicine.¹²⁷ This recommendation was based on the identification of pregnancy as a factor in severe COVID-19 disease¹²⁸ and on the fact that the vaccine does not contain live virus.

On December 17, 2020, the FDA issued an EUA for the Moderna COVID-19 vaccine for people ages eighteen and older.

The twelfth update to the Task Force's guidance was published on January 18, 2021.¹²⁹ By that time, COVID-19 cases in the United States exceeded 24 million.¹³⁰ This guidance addressed long-term effects of COVID-19, new variants of the virus, and a statement of confirmed scientific information that the Task Force termed 'truths' regarding both testing and vaccines.¹³¹ In this document, the Task Force addressed delaying elective surgical procedures after COVID-19 infection, provided information on vaccine hesitancy, and called upon healthcare providers to be leaders by encouraging vaccination.¹³²

126. ACOG, VACCINATING PREGNANT AND LACTATING PATIENTS AGAINST COVID-19 (2020), http://www.aofog.net/pdf/Vaccinating%20Pregnant%20and%20Lactating%20Patients%20Against%20COVID-19%20_%20ACOG.pdf.

127. SMFM, SOCIETY FOR MATERNAL-FETAL MEDICINE (SMFM) STATEMENT: SARS-COV-2 VACCINATION IN PREGNANCY (2020), [https://s3.amazonaws.com/cdn.smfm.org/media/2591/SMFM_Vaccine_Statement_12-1-20_\(final\).pdf](https://s3.amazonaws.com/cdn.smfm.org/media/2591/SMFM_Vaccine_Statement_12-1-20_(final).pdf).

128. Julius Collin, Emma Byström, AnnaSara Carnahan & Malin Ahrne, *Public Health Agency of Sweden's Brief Report: Pregnant and Postpartum Women with Severe Acute Respiratory Syndrome Coronavirus 2 Infection in Intensive Care in Sweden*, 99 ACTA OBSTET. GYNECOL. SCAND. 819, 819(2020); Miranda J. Delahoy et al., *Characteristics and Maternal and Birth Outcomes of Hospitalized Pregnancy Women with Laboratory-Confirmed COVID-19 – COVID-NET, 13 States, March 1 – August 22, 2020*, 69 MORBIDITY MORTAL WKLY. REP. 1347, 1347, 1351–53 (2020); Lakshmi Panagiotakopoulos, Tanya R. Myers, Julianne Gee, Heather S. Lipkind, Elyse O. Kharbanda, Denison S. Ryan, Joshua T.B. Williams, Allison L. Naleway, Nicola P. Klein, Simon J. Hambidge, Steven J. Jacobsen, Jason M. Glanz, Lisa A. Jackson, Tom T. Shimabukuro, Eric S. Weintraub, *SARS-Cov-2 Infection Among Hospitalized Pregnant Women: Reasons for Admission and Pregnancy Characteristics – Eight U.S. Health Care Centers, March 1 – May 30, 2020*, 69 MORBIDITY MORTAL WKLY. REP. 1355, 1355, 1356 (2020).

129. ASRM, TESTING AND VACCINE TRUTHS (2021), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate12.pdf>.

130. *Id.*

131. *Id.*

132. *Id.*

The thirteenth update was published on February 22, 2021.¹³³ At this time, known COVID-19 cases in the United States exceeded 28 million and some estimates suggested actual infections were closer to 100 million people.¹³⁴ The guidance document reiterated previously stated concerns about increased risk for severe disease if COVID-19 infection occurred during pregnancy.¹³⁵ Concerns included increased risk of pre-term labor,¹³⁶ fetal death,¹³⁷ and placental injury.¹³⁸

The fourteenth update to the Task Force's guidance was published on March 23, 2021.¹³⁹ The Task Force used this

133. AM. SOC'Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC, UPDATE #13 (2021), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate13.pdf>.

134. *Id.*

135. *Id.*

136. See John Allotey, Elena Stallings, Mercedes Bonet, Magnus Yap, Shaunak Chatterjee, Tania Kew, Luke Debenham, Anna Clavé Llavall, Anushka Dixit, Dengyi Zhou, Rishab Balaji, Siang Ing Lee, Xiu Qiu, Mingyang Yuan, Dyuti Coomar, Jameela Sheikh, Heidi Lawson, Kehkashan Ansari, Madelon van Wely, Elizabeth van Leeuwen, Elena Kostova, Heinke Kunst, Asma Khalil, Simon Tiberi, Vanessa Brizuela, Nathalie Broutet, Edna Kara, Caron Rahn Kim, Anna Thorson, Ramón Escuriet, Olufemi T Oladapo, Lynne Mofenson, Javier Zamora & Shakila Thangaratinam, *Clinical Manifestations, Risk Factors, and Maternal and Perinatal Outcomes of Coronavirus Disease 2019 in Pregnancy: Living Systematic Review and Meta-Analysis*, *BMJ* (Sept. 1, 2020), <https://www.bmj.com/content/bmj/370/bmj.m3320.full.pdf>.

137. See Elizabeth V. Kingston, *High Rates of Stillbirth and Preterm Delivery in Women with Covid-19 and the Efficacy of ECMO in Pregnancy*, *BMJ* (July 27, 2020), <https://www.bmj.com/content/bmj/370/bmj.m2921.full.pdf>.

138. See J. Justin Mulvey, Cynthia M. Magro, Lucy X. Ma, Gerard J. Nuovo & Rebecca N. Baergen, *Analysis of Complement Deposition and Viral RNA in Placentas of COVID-19 Patients*, 46 *ANNALS DIAGNOSTIC PATHOLOGY* (2020), <https://www.sciencedirect.com/science/article/pii/S109291342030071X?via%3Dihub>; see also Alice Lu-Culligan, Arun R. Chavan, Pavithra Vijayakumar, Lina Irshaid, Edward M. Courchaine, Kristin M. Milano, Zhonghua Tang, Scott D. Pope, Eric Song, Chantal B.F. Vogels, William J. Lu-Culligan, Katherine H. Campbell, Arnau Casanovas-Massana, Santos Bermejo, Jessica M. Toothaker, Hannah J. Lee, Feimei Liu, Wade Schulz, John Fournier, M. Catherine Muenker, Adam J. Moore, Yale IMPACT Team, Liza Konnikova, Karla M. Neugebauer, Aaron Ring, Nathan D. Grubaugh, Albert I. Ko, Raffaella Morotti, Seth Guller, Harvey J. Kliman, Akiko Iwasaki & Shelli F. Farhadian, *SARS-Cov-2 Infection in Pregnancy is Associated with Robust Inflammatory Response at the Maternal-Fetal Interface*, *MEDRXIV* (2021), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7852242/>.

139. AM. SOC'Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC, UPDATE #14 (2021), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate14.pdf>.

document to combat vaccine hesitancy and misinformation.¹⁴⁰ The fifteenth update was published on May 19, 2021,¹⁴¹ and it reiterated the need for vaccination, masking, and testing.¹⁴² The sixteenth update was published on July 23, 2021,¹⁴³ and it provided a summary of reproductive facts with regards to the vaccine.¹⁴⁴ The seventeenth update was published on August 20, 2021,¹⁴⁵ and it provided another summary on vaccination and vaccine hesitancy.¹⁴⁶

The Task Force published its eighteenth update on November 12, 2021.¹⁴⁷ The Task Force used this update to again address vaccination and fertility care.¹⁴⁸ In addition to restating the need to vaccinate pregnant women due to the increased risk of severe COVID-19 during pregnancy, the Task Force overtly stated that, “[t]here are no fertility-related reasons for a vaccine exemption.”¹⁴⁹ In a discussion of requests for medical letters of exemption, the Task Force again reiterated that, “neither infertility nor pregnancy are reasons for exemptions.”¹⁵⁰ This

140. *Id.*

141. Am. Soc’y for Reprod. Med. Press Release, ASMR Covid-19 Task Force Update #15 (May 19, 2021), <https://www.asrm.org/news-and-publications/news-and-research/press-releases-and-bulletins/asrm-covid-19-task-force-update-15>.

142. *Id.*

143. AM. SOC’Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC UPDATE #16, (2021), <https://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate16.pdf>.

144. *Id.*

145. AM. SOC’Y FOR REPROD. MED., PATIENT MANAGEMENT AND CLINICAL RECOMMENDATIONS DURING THE CORONAVIRUS (COVID-19) PANDEMIC, UPDATE #17 (2021), <http://www.asrm.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate17.pdf>.

146. *Id.*

147. Am. Soc’y for Reprod. Med. Press Release, UPDATE No. 18 - COVID-19: Vaccination, Booster Shots and Reproductive Health Care (Nov. 12, 2021), <https://www.asrm.org/news-and-publications/news-and-research/press-releases-and-bulletins/update-no-18-covid-19-vaccination-booster-shots-and-reproductive-health-care>.

148. *Id.*

149. *Id.*

150. *Id.*

update also stated that pregnant and recently pregnant patients should receive the vaccine booster shot on schedule.¹⁵¹

The Task Force published its nineteenth updated guidance document on December 17, 2021.¹⁵² At that time, the Omicron variant was surging, and the United States had seen more than 50 million cases of COVID-19.¹⁵³ The Task Force again addressed the challenges to the American healthcare system and the issue of fertility surgery.¹⁵⁴ It stated that delaying surgical fertility treatment may have negative consequences for a patient's overall fertility outcomes.¹⁵⁵ It also advised that surgical procedures performed in response to pain or bleeding are essential treatment based on the joint statement produced by gynecologic societies.¹⁵⁶ The Task Force highly recommended vaccination and booster shots for all individuals who are pregnant or seeking to become pregnant,¹⁵⁷ in accordance with the ASRM, ACOG, SMFM, and CDC.¹⁵⁸ The nineteenth update concluded with a brief discussion of the current treatments for COVID-19, including monoclonal antibodies and oral antiviral therapy.¹⁵⁹

On April 22, 2022 the Task Force published its twentieth and final update to the guidance document and titled it, "Summary Statement Two Years Out."¹⁶⁰ This update provided no new information but rather reviewed and summarized core recommendations presented over the last two years including

151. *Id.*

152. Am. Soc'y for Reprod. Med. Press Release, UPDATE No. 19 – Awareness of Complexity in Uncertain Times (Dec. 17, 2021), <https://www.asrm.org/news-and-publications/news-and-research/press-releases-and-bulletins/update-no.-19—awareness-of-complexity-in-uncertain-times-covid-19>.

153. *Id.*

154. *Id.*

155. *Id.*

156. *Id.*

157. *Id.*

158. *Id.*

159. *Id.*

160. Am. Soc'y for Reprod. Med. Press Release, ASRM COVID-19 Task Force Issues Update No. 20 (Apr. 20, 2022), <https://www.asrm.org/news-and-publications/news-and-research/press-releases-and-bulletins/asrm-covid-19-task-force-issues-update-no.-20/>

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epidemiology, vaccination and telemedicine use.¹⁶¹ This is followed by a summary of how to continue fertility practice operations in the context of endemic COVID-19 including surveillance, screening, action and staying informed.¹⁶² The conclusion notes that this will be the last scheduled update but that the Task Force will re-convene if necessary.¹⁶³

Table 1
ASRM TASK FORCE GUIDANCE¹⁶⁴

Update Number	Time Period Covered or Date Published	Summary of Update
1	March 30 – April 13, 2020	Affirmed the five key issues and clinical recommendations associated with fertility during the COVID-19 pandemic; stated that infertility care is not elective.
2	April 13 – April 27, 2020	Acknowledged that an increasing number of jurisdictions appropriately recognized infertility care as an essential service.
3	April 24 – May 11, 2020	Expressed the need for balance between providing fertility care and risk of contracting COVID-19; first update to provide guidance on gradual resumption of reproductive services.
4	May 11 – June 8, 2020	Encouraged patient and practitioner participation in research due to lack of knowledge about effects of COVID-19 on fertility treatment and early pregnancy; provided update on current knowledge of effects on pregnancy.

161. *Id.*

162. *Id.*

163. *Id.*

164. *See discussion supra* pp. 831–843.

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| 5 | June 8 – July 6,
2020 | Focused on resumption of reproductive surgery; advised that partners should not be present in treatment room. |
| 6 | July 10 –
August 10, 2020 | Discussed emerging data on negative effects of more severe COVID-19 cases during pregnancy. |
| 7 | August 10 –
September 7,
2020 | No substantial changes. |
| 8 | September 8 –
October 5, 2020 | No substantial changes. |
| 9 | October 6 –
November 9,
2020 | No substantial changes. |
| 10 | November 17,
2020 | Addressed clinic management and urged clinics to re-evaluate risk and mitigation strategies; advocated for use of telehealth; addressed new data regarding COVID-19 and fertility care and pregnancy. |
| 11 | December 16,
2020 | Stated that it does not recommend withholding COVID-19 vaccines from pregnant, soon-to-be pregnant, or lactating patients. |
| 12 | January 18, 2021 | Addressed long-term effects of COVID-19, variants, and confirmed information regarding testing and vaccines. |
| 13 | February 22,
2021 | Reiterated concerns about increased risk for severe disease if infected during pregnancy. |
| 14 | March 23, 2021 | Provided information to counter vaccine hesitancy and misinformation. |

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15	May 19, 2021	Reiterated need for vaccination, masking, and testing.	
16	July 23, 2021	Summarized reproductive facts regarding vaccination.	
17	August 20, 2021	Provided additional information on vaccination and vaccine hesitancy.	
18	November 12, 2021	Explicitly stated that there are no fertility or pregnancy related reasons for vaccine exemption.	
19	December 17, 2021	Discussed negative effects on reproductive outcome if surgical intervention is delayed.	
20	April 22, 2022	Summarized recommendations issued during the prior two years; offered guidance on the provision of fertility care in the context of the continuing pandemic.	

III. IMPACT & PERSPECTIVES ON FERTILITY CLINIC CLOSURES

Fertility clinic closures at the beginning of the pandemic, while recommended by the American Society of Reproductive Medicine (ASRM), had a ripple effect in the field of reproductive medicine. Though the pause on fertility care may have prevented healthcare-acquired infections in patients and clinic staff, it created significant psychological strain¹⁶⁵ and potentially led to negative impacts on treatment outcomes,

165. Olivia Solon, 'Adding Insult to Injury': Couples Struggle with IVF Cancellations Amid Coronavirus Pandemic, NBC NEWS (Apr. 1, 2021, 6:00 AM), <https://www.nbcnews.com/health/health-news/adding-insult-injury-couples-struggle-ivf-cancellations-amid-coronavirus-pandemic-n1173256> (recounting interviews with ten women and some of their partners about the impact of coronavirus-related disruptions in IVF treatment cycles have had on their mental states).

particularly for women of advanced maternal age.¹⁶⁶ Early data from the SART's Clinic Outcome Reporting System indicated that approximately the same number of in vitro fertilization (IVF) cycles were run in 2019 and 2020, leading to the conclusion that cycles may have been delayed but not cancelled.¹⁶⁷ Given the steep increase in women freezing their eggs for fertility preservation during the pandemic,¹⁶⁸ it is also possible that the similar quantity of IVF cycles could simply indicate a shift in fertility clinic clientele. An Italian study with 1,482 participants found that just over one third (37.3%) who were planning to have a child changed their minds in the pandemic in favor of not procreating, while only 11.5% of those who previously did not intend to have a child changed their minds in favor of procreation.¹⁶⁹ It is therefore possible that those whose cycles were cancelled early in the pandemic never completed their fertility treatment, and the patient volume was replaced with fertility preservation patients.

At its most fundamental level, fertility treatment comes with an inherent uncertainty that often leads to anxiety and depression.¹⁷⁰ The uncertainty introduced by the pandemic combined with the pause of fertility care added additional

166. *Covid Delays in IVF Treatment Has Biggest Impact on Women Over 40*, UNIV. OF ABERDEEN (Jan. 20, 2021), <https://www.abdn.ac.uk/news/14623/>.

167. Austin D. Schirmer, Jennifer F. Kawwass & Eli Y. Adashi, *Fertility Care Amidst the COVID-19 Pandemic: The American Experience*, J. OVARIAN RSCH. 1, 2–3 (2021).

168. Eliana Dockterman, *Data Show More Women Are Freezing Their Eggs During the Pandemic, Defying Doctors' Expectations*, TIME (Jan. 13, 2021, 1:52PM), <https://time.com/5927516/egg-freezing-covid-19-pandemic/>; Anne E. Martini, Samad Jahandideh, Ali Williams, Kate Decine, Erica A. Widra, Micah J. Hill, Alan H. DeCherney & Jeanne E. O'Brien, *Trends In Elective Egg Freezing Before and After the COVID-19 Pandemic*, 116 FERTILITY & STERILITY e220, 264 (2021); Mary Plfum, *Egg Freezing Has Boomed During The Pandemic, As Women Opt To Wait Out Family Life*, NBC NEWS (Apr. 24, 2021, 6:00AM), <https://www.nbcnews.com/business/business-news/egg-freezing-has-boomed-during-pandemic-women-opt-wait-out-n1264211>.

169. Elisabetta Micelli, Gianmartin Cito, Andrea Cocci, Gaia Polloni, Giorgio I. Russo, Andrea Minervini, Marco Carini, Alessandro Natali & Maria E. Coccia, *Desire for Parenthood at the Time of COVID-19 Pandemic: An Insight into the Italian Situation*, 41 J. PSYCHOSOMATIC OBSTETRICS GYNAECOLOGY 183, 185–86 (2020).

170. C.M. Verhaak, J.M.J. Smeenk, A. van Minnen, J.A.M. Kremer & F.W. Kraaijaat, *A Longitudinal, Prospective Study on Emotional Adjustment Before, During and After Consecutive Fertility Treatment Cycles*, 20 HUM. REPROD. 2253, 2253 (2005).

layers of uncertainty to an already stressful process. This additional stress was demonstrated in a study that found that 50% of survey respondents had fertility treatments cancelled or postponed, and nearly three quarters of these respondents expressed some level of increased distress.¹⁷¹ Their distress was evidenced by severe sleep disturbances, feeling anxious, mood disturbances, and having depressive thoughts.¹⁷² A similar study found that a number of factors played into the severity of a patient's emotional distress.¹⁷³ More distress was exhibited by older patients and single patients.¹⁷⁴ Additionally, patients who expressed that suspending treatments was unjustified exhibited greater distress and felt a sense of helplessness.¹⁷⁵ The results of yet another study concurred that a sense of loss of control was derived from both the treatment delays of unknown length and the questions these delays raise about the individual's future procreation.¹⁷⁶ The study reported that almost all respondents experienced negative emotions that outweighed positive emotions, demonstrating increased stress, frustration, and worry.¹⁷⁷ In discussions of postponing fertility treatment, some point out that the element of choice was removed from the patient's control.¹⁷⁸ In other words, clinics ceased to offer

171. Harpreet Kaur, Gautham T. Pranesh, & Kamini A. Rao, *Emotional Impact of Delay in Fertility Treatment Due To COVID-19 Pandemic*, 13 J. HUM. REPROD. SCI. 317, 319 (2020).

172. *Id.* at 320.

173. Reut Ben-Kimhy, Michal Youngster, Tamar R. Medina-Artom, Sarit Avraham, Itai Gat, Lilach M. Haham, Ariel Hourvitz & Alon Kedem, *Fertility Patients Under COVID-19: Attitudes, Perceptions and Psychological Reactions*, 35 HUM. REPROD. 2774, 2774–83 (2020).

174. *Id.* at 2777.

175. *Id.*

176. J. Boivin, C. Harrison, R. Mathur, G. Burns, A. Pericleous-Smith & S. Gameiro, *Patient Experiences of Fertility Clinic Closure During The COVID-19 Pandemic: Appraisals, Coping and Emotions*, 35 HUM. REPROD. 2556, 2556 (2020); see also David B. Seifer, William D. Petok, Alisha Agrawal, Tanya L. Glenn, Arielle H. Bayer, Barry R. Witt, Blair D. Burgin & Harry J. Lieman, *Psychological Experience and Coping Strategies of Patients in the Northeast US Delaying Care for Infertility During the COVID-19 Pandemic*, 19 REPROD. BIOLOGY & ENDOCRINOLOGY 1, 2 (2021).

177. Boivin et al., *supra* note 176, at 2556–57, 2561.

178. Nadia Muhaidat, Mohammad A. Alshrouf, Abdulrahman M. Karam & Mohammed Elfalah, *Infertility Management Disruption During the COVID-19 Outbreak in a Middle-Income Country: Patients' Choices, Attitudes, and Concerns*, 15 PATIENT PREFERENCE & ADHERENCE 2279,

fertility care, which prevented each individual patient from factoring for themselves where the crux of the balance is between delaying their fertility care and risking nosocomial infection.

The additional stress that the pandemic added to fertility treatment was managed in a variety of ways by different patients. Some couples sought professional counseling through virtual platforms.¹⁷⁹ Others resorted to social media to share their distress, seeking updates on clinic openings and closings, forming support webinars, and engaging with fellow fertility patients through Instagram Live.¹⁸⁰ A study from the Mayo Clinic found that fertility patients with interrupted care identified an increased need for psychological support.¹⁸¹ Experts in the field confirmed the Mayo Clinic's findings, indicating that patients with delayed treatment experienced both increased anxiety and increased emotional distress as compared to fertility patients who did not experience delays in treatment.¹⁸² They further found that the psychological effects were more significant in patients with longer histories of infertility, and they ultimately concluded that the psychological consequences of postponed fertility care due to the pandemic must not be undervalued.¹⁸³ Another study identified the five most frequently used coping skills by fertility patients whose

2284 (Oct. 5, 2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8502047/pdf/ppa-15-2279.pdf>.

179. Fatemeh Hamidi, Farzaneh Babapour & Zeinab Hamzehgardeshi, *Infertility Distress Management in Couples Treated with Assisted Reproductive Techniques (ART) in COVID-19 Pandemic*, 21 J. REPROD. INFERTILITY 312, 312–13 (2020).

180. See Julie Morgan, Andreia Trigo & Kate Davies, *Assessing the Change in Infertility Patient's Social Media Use During COVID-19 Related to Clinic Closures*, 114 FERTILITY & STERILITY, P-987, P-987 (2020).

181. Karen Dsouza, Minerva Orellana, Alessandra Ainsworth, Kirsten Riggan, Chandra Shenoy & Megan Allyse, *Patient Perceptions of COVID-19 Impact on their Fertility Care*, 5 J. CLINICAL & TRANSLATIONAL SCI. 85, 85 (2021).

182. See Veronica Esposito, Erika Rania, Daniela Lico, Sara Pedri, Alessia Fiorenza, Maria Francesca Strati, Alessandro Conforti, Vincenzo Marrone, Andrea Carosso, Alberto Revelli, Fulvia Zullo, Costantino Di Carlo & Roberta Venturella, *Influence of COVID-19 Pandemic on the Psychological Status of Infertile Couples*, 253 EUR. J. OF OBSTETRICS & GYNECOLOGY & REPROD. BIOLOGY 148, 149–150 (2020).

183. *Id.* at 152.

treatment was on hold during the pandemic.¹⁸⁴ These five skills were, “establishing a daily routine, going outside regularly, exercising, maintaining social connection via phone, social media or Zoom and continuing to work.”¹⁸⁵

For many, the distress of pausing fertility treatments was compounded by the inequitable distribution of clinic closures and durations of closure. The guidelines published by ASRM were merely guidelines.¹⁸⁶ As a professional advisory body, the ASRM has no ability to enforce its guidance in the professional sphere beyond collegial peer-pressure.¹⁸⁷ This inability to enforce the ASRM guidance resulted in significant variability of infertility treatment between clinics and regions. For example, at one extreme, every fertility clinic in the city of Cincinnati ceased providing care entirely for up to twelve weeks at the beginning of the pandemic.¹⁸⁸ At the other extreme were organizations like Reproductive Medical Associates, which operates nineteen fertility clinics in the United States, that declared its facilities would stay open and operate at full capacity.¹⁸⁹ Many found a middle ground of practice. For example, organizations like the Colorado Center for Reproductive Medicine, with ten fertility centers in the United States and two in Canada, opted to continue egg retrievals and gamete and embryo cryopreservation, but paused embryo and sperm transfers.¹⁹⁰ In other words, they continued with fertility preservation but did not perform procedures intended to

184. Seifer, *supra* note 176.

185. *Id.*

186. *See generally* discussion *supra* Part II (noting documents released by ASRM are merely for guidance).

187. *See id.*

188. Alissa Greenberg, *The Pandemic Disrupted Tens of Thousands of IVF Cycles*, PBS: NOVA (May 14, 2021), <https://www.pbs.org/wgbh/nova/article/ivf-covid-pandemic-infertility/>.

189. Natalie Lampert, *Fertility Clinics Stay Open Despite Unclear Guidelines*, NY TIMES, <https://www.nytimes.com/2020/05/01/parenting/fertility-clinics-coronavirus.html> (last updated May 4, 2020).

190. CCRM *Fertility to Remain Open for Select Fertility Treatments as a Commitment to Patient Health and Safety*, CCRM FERTILITY (Mar. 16, 2020), <https://www.ccrmivf.com/news-events/remains-open/>; *Hannam Fertility Centre is a CCRM Network Clinic*, CCRM FERTILITY, <https://www.ccrmivf.com/toronto/> (last visited April 5, 2020).

initiate pregnancy. Some clinics were creative in their methods of providing care. The Center for Human Reproduction categorized certain cases as urgent, specifically women over forty years of age, women with diminished ovarian reserve, and women with impending cancer treatments, and proceeded with their care.¹⁹¹ Additionally, the Center for Human Reproduction initiated an “Online Second Opinion Program” designed to provide review of individual patient cases in preparation for restarting fertility when the pandemic allowed.¹⁹² This varied approach to clinic management during the beginning of the pandemic left many patients wondering why some could access continued fertility care while others could not.¹⁹³

Practitioners have also exhibited varied responses to the initial guidance released by ASRM’s Task Force. Most notable was the formation of the Fertility Providers Alliance (the “Alliance”) to provide an alternative association for fertility specialists.¹⁹⁴ The Alliance, “was established by providers of reproductive medicine on behalf of the tens of thousands of patients [they] collectively serve.”¹⁹⁵ Its “goals are to expand access to care, deliver high quality fertility services, and continuously advocate for [its] patients.”¹⁹⁶ The Alliance is comprised of over 425 fertility care providers, representing nearly fifty medical practices, including the large fertility clinics such as Boston IVF and Reproductive Medicine Associates.¹⁹⁷ The members section of the Alliance’s website has recruiting

191. Norbert Gleicher, *IVF During COVID-19: CHR’s Always-Up-To-Date Guide*, CTR. FOR HUM REPROD., <https://www.centerforhumanreprod.com/blog/ivf-during-covid-19-chrs-always-up-to-date-guide> (last updated Nov. 13, 2020).

192. *Id.*

193. See generally *Fertility Providers Alliance Issues Comprehensive Tool Kit Designed to Help Fertility Practices Navigate Care in a COVID-19 World*, FERTILITY PROVIDERS ALL. (Apr 24, 2020), https://www.fertilityprovidersalliance.com/blogs/fpa_releases_covid_19_toolkit#article (discussing that FPA’s Toolkit was “[d]esigned to be used in conjunction with other resources provided by ASRM”) [hereinafter *Fertility Providers Alliance Tool Kit*].

194. See generally *Our Story Starts with You*, FERTILITY PROVIDERS ALL., <https://www.fertilityprovidersalliance.com/index.html> (last visited Apr. 7, 2022).

195. *Id.*

196. *Id.*

197. *Id.*

statements for fertility provider membership that solicit members of, “the reproductive medicine field to join [its] alliance and help [it] continue to give a stronger voice to [its] patients.”¹⁹⁸ The Alliance also formed a task force to address the issue of fertility center operations during the beginning of the pandemic.¹⁹⁹ Members of this task force include prominent reproductive endocrinologists, such as a co-founder of Boston IVF, the director of NYU Langone Fertility Center, the founder and medical director of Colorado Center for Reproductive Medicine, the co-founder of Shady Grove Fertility, and the chief executive officer of Reproductive Medical Associates.²⁰⁰

On April 2, 2020 the Alliance’s Task Force released the first of two public statements regarding the provision of fertility care during the pandemic.²⁰¹ The Task Force stated that it shared with the ASRM their concerns about the recommendations made in the initial guidance document,²⁰² while simultaneously applauding the ASRM for recognizing infertility as a disease.²⁰³ On April 24, 2020, the Alliance released a second public statement, which included the “FPA Toolkit.”²⁰⁴ The FPA Toolkit is intended to be used alongside resources provided by other national health authorities, and includes general COVID-19 consent forms, general disclaimers, and strategies for practicing ART during COVID-19.²⁰⁵ These documents, along with the press release, show a clear intent on behalf of the

198. *Id.*

199. Anna Louie Sussman, *Is Getting Pregnant “Medically Necessary” Right Now?*, MIT TECH. REV. (May 7, 2020), <https://www.technologyreview.com/2020/05/07/1000473/ivf-covid-fertility-prelude-inception-asrm/>.

200. *Our Story Starts with You*, *supra* note 194.

201. *See FPA Applauds ASRM for Revised Recommendations on Fertility Care During Pandemic*, FERTILITY PROVIDERS ALL. (Apr. 2, 2020), https://www.fertilityprovidersalliance.com/blogs/fpa_applauds_asrm.

202. *See* discussion of ASRM’s initial guidance *supra* pp. 828–830.

203. *See* Norbert Gleicher, *Fertility Providers’ Alliance (FPA) Reframes ASRM’s Reaffirmation of COVID-19 Guidelines*, CTR. FOR HUM. REPROD. (Apr. 6, 2020), <https://www.centerforhumanreprod.com/blog/fertility-providers-alliance-fpa-reframes-asrms-reaffirmation-of-covid-19-guidelines>.

204. *Fertility Providers Alliance Tool Kit*, *supra* note 193.

205. *Id.*

Alliance to guide fertility clinics in providing the full range of reproductive care during the pandemic.²⁰⁶ No further advisories or guidance documents have been released by the Alliance and its website has not been updated since.²⁰⁷

The Alliance wrote an undated public letter to Ricardo Azziz, the then Chief Executive Officer of ASRM and the ASRM Task Force, which was not published on the Alliance website.²⁰⁸ A copy of this letter was published by Dr. Norbert Gleicher, the Medical Director of the Center for Human Reproduction, in his online blog titled, *The Voice*.²⁰⁹ In its letter, the Alliance requested to discuss the ASRM Task Force's Guidance Document.²¹⁰ They provided an agenda comprised of the following three issues, "first, the actual public health burden created by the continuation of fertility care: second, the classification of infertility treatment as 'non-urgent' or elective; and third, the harmful consequences of an indeterminate delay in access to care."²¹¹ The letter went on to discuss details of these three topics, explaining that most fertility care is provided in clinics and independent surgical centers, and therefore, their continued operation would not impact hospital capacity during the pandemic.²¹² Dr. Gleicher goes on to interpret the meaning and intent of the Alliance's letter, denoting a financially driven intent from private sector fertility care.²¹³ He noted that the Alliance was formed, and its task force was created, specifically to counter the ASRM's Task Force and refers to that as, "a quite

206. *See id.*

207. *See The Latest News and Events from the Fertility Providers Alliance*, FERTILITY PROVIDERS ALL., <https://www.fertilityprovidersalliance.com/news.html> (last visited Mar. 17, 2022).

208. *See id.*

209. Norbert Gleicher, *What the "Controversy" Over ASRM COVID-19 Task Force's Recommendation is All About*, CTR. FOR HUM. REPROD. (Apr. 2, 2020), <https://www.centerforhumanreprod.com/blog/what-the-controversy-over-asrm-covid-19-task-forces-recommendation-is-all-about> [hereinafter *What the "Controversy" Over ASRM COVID-19 Task Force's Recommendations is All About*].

210. *Id.*

211. *Id.*

212. *See id.*

213. *Id.*

frightening scam the investor-driven IVF-world is trying to pull off.”²¹⁴ Gleicher also offered his own interpretation of the ASRM’s Task Force Guidance.²¹⁵ He differentiates his clinic as an IVF center that treats older patients (citing that the average fertility patient age is thirty-six, although the Center for Human Reproduction identifies the average fertility patient age as forty-three) and patients with premature ovarian aging.²¹⁶ He interprets his patients’ treatment as urgent because these conditions make a three month delay in treatment due to the ASRM guidance critical for his patients.²¹⁷ He goes on to state that other clinics’ primary populations are younger and therefore would not meet such a qualification.²¹⁸ In a second blog post, Dr. Gleicher acknowledged the tone change between the first and second press releases from the Alliance.²¹⁹ He credited this change to the shift from the identified Alliance representative being the CEO of a large IVF company to being two physicians representing IVF clinics.²²⁰ The sentiment of concern about the financial motivations of investment-driven decision making is neither new nor confined to the bounds of the pandemic.²²¹

Fertility care providers are divided regarding whether treatments should have been paused at the beginning

214. *Id.*

215. *See id.*

216. *Id.*

217. *Id.*

218. *Id.*

219. *See What the “Controversy” Over ASRM COVID-19 Task Force’s Recommendations is All About*, *supra* note 209.

220. *Id.*

221. *See, e.g.,* Alexander Borsa, Joseph Bruch & Sarah S. Richardson, *When Private Equity Firms Invest in Women’s Health Clinics, Who Benefits?*, STAT (Sept. 14, 2020), <https://www.statnews.com/2020/09/14/private-equity-firms-invest-womens-health-clinics-who-benefits/>; Patrick Krause, *Industry Voices—Fertility Clinics Offer Big Potential for Investors and Physician Practices*, FIERCE HEALTHCARE (Sept. 26, 2019, 12:00 PM), <https://www.fiercehealthcare.com/hospitals-health-systems/industry-voices-fertility-clinics-offer-big-potential-for-investors-and>; Alexander Borsa & Joseph Dov Bruch, *Prevalence and Performance of Private Equity-Affiliated Fertility Practices in the United States*, 117 FERTILITY & STERILITY 124, 124–25, 128 (2022).

of the pandemic.²²² The sheer volume of reproductive endocrinologists who endorsed either the ASRM or the Alliance shows the rift in the medical community regarding the urgency and essential nature of different fertility treatments.²²³ Although there is some consensus on fertility preservation for cancer patients,²²⁴ beyond that, there is no agreement.²²⁵ For example, the results of a 2020 study demonstrated that pausing fertility care for one month in the United States would result in 369 fewer live births,²²⁶ while another study concluded that pausing fertility treatment for 180 days did not alter the live-birth rate.²²⁷ From contradicting studies to conflicting professional opinions based on training and experience, it is easy to see how the fertility community fractured into two separate professional societies as the pandemic exposed the unique challenges of providing healthcare during a global public health emergency.

IV. POLICY: FERTILITY CARE IS ESSENTIAL CARE

The COVID-19 pandemic provided many lasting lessons in the field of healthcare, ranging from resource allocation to public health structure and prioritization. The field of infertility medicine is no exception to these lessons learned, the most valuable of which is the need to clarify infertility as a disease and therefore infertility care as essential healthcare. The need to consider infertility care as essential is emphasized by

222. See *What the "Controversy" Over ASRM COVID-19 Task Force's Recommendations is All About*, *supra* note 209.

223. *Id.*

224. See Miriam Dellino, Carla Minoia, Angelo Virgilio Paradisio, Raffaella De Palo & Erica Silvestris, *Fertility Preservation in Cancer Patients During the Coronavirus (COVID-19) Pandemic*, 10 *FRONTIERS IN ONCOLOGY* 1, 3 (2020); Bhawna Sirohi, Tanya Buckshee Rohatgi & Matteo Lambertini, *Oncofertility and COVID-19 – Cancer Does Not Wait*, 14 *ECANCER* 1, 2 (2020).

225. See Andrew Smith, Piotr Gromski, Karema Al Rashid, Kate Tilling, Deborah Lawlor & Scott Nelson, *Population Implications of Cessation of IVF During the COVID-19 Pandemic*, 41 *REPROD. BIOMED ONLINE* 428, 430 (2020).

226. *Id.* at 429.

227. Phillip A. Romanski, Pietro Bortoletto, Zev Rosenwaks & Glenn L. Schattman, *Delay in IVF Treatment Up to 180 Days Does Not Affect Pregnancy Outcomes in Women with Diminished Ovarian Reserve*, 35 *HUM. REPROD.* 1630, 1634 (2020).

the implications of the American Society of Reproductive Medicine's guidance documents.²²⁸ The newly formed Fertility Providers Alliance stresses the same need to classify infertility care as essential.²²⁹ As additional waves of the COVID-19 pandemic or other public health crises befall society, it is the obligation of healthcare systems to recognize the essential role that time plays in the treatment of a fertility patient. Postponing treatment has the potential to undermine the efficacy of that treatment and to result in suboptimal outcomes. These postponements have negative ramifications on the mental health of the patients seeking treatment.²³⁰ Furthermore, postponing treatment raised serious concerns of treatment dropout without return,²³¹ though there is evidence of increased fertility preservation patients.²³²

Within the field of medicine there are a plethora of definitions for essential care. As a result, what qualifies as essential care during a time of crisis varies by perspective. Many of the arguments in favor of postponing non-essential care were founded in the need to protect the greater healthcare system and the ability to respond to the influx of pandemic patients.²³³ Pausing non-essential care that draws from resources which may be re-allocated to treat pandemic patients is logical to preserve those resources.²³⁴ For example, significant medical

228. See AM. SOC'Y FOR REPROD. MED., *supra* note 52, at 2, 6.

229. See *Our Story Starts with You*, *supra* note 194.

230. Jenna M. Turocy, Alex Robles, Daniel Hercz, Mary D'Alton, Eric J. Forman & Zev Williams, *The Emotional Impact of the ASRM Guidelines on Fertility Patients During the COVID-19 Pandemic*, 114 FERTILITY AND STERILITY e63, e63 (2020).

231. Laura C. Gemmell, Zev Williams & Eric J. Forman, *Considerations on the Restriction of Assisted Reproductive Technology (ART) Due to COVID-19*, SEMINARS IN PERINATOLOGY, Nov. 2020, at 1, 1.

232. Beth Zhou, Ammar Joudeh, Milli J. Desai, Brian Kwan, Vinit Nalawade, Brian W. Whitcomb & H. Irene Su, *Trends in Infertility Care Among Commercially Insured US Women During the COVID-19 Pandemic*, JAMA NETWORK OPEN, Oct. 6, 2021, at 1, 3.

233. See, e.g. *COVID-19: Recommendations for Management of Elective Surgical Procedures*, AM. COLL. OF SURGEONS (Mar. 13, 2020), <https://www.facs.org/for-medical-professionals/covid-19/clinical-guidance/elective-surgery/>.

234. See CMS, NON-EMERGENT, ELECTIVE MEDICAL SERVICES, AND TREATMENT RECOMMENDATIONS 1 (2020), <https://www.cms.gov/files/document/cms-non-emergent-elective-medical-recommendations.pdf>.

procedures such as joint replacements, spinal fusions, and bariatric procedures were temporarily paused in most cases because the resources necessary to perform these invasive procedures overlap with the resources necessary to treat the increasing number of COVID-19 patients.²³⁵ These resources included critical care nurse staff, ventilators, and hospital bed space.²³⁶ Infertility care, even at its most invasive stages such as egg harvest or hysteroscopy, does not utilize the same hospital resources.²³⁷ In many cases, private fertility clinics either have their own operating suites or contract with outpatient surgical centers. Even in most academic infertility practices, the operating and recovery rooms are separate from critical care rooms used for high acuity patients. Therefore, it is not necessary to pause fertility treatment to preserve resources in the greater healthcare system.

The practice of infertility, particularly egg harvest procedures, is best analogized to ophthalmic care, which continued in many cases throughout the pandemic.²³⁸ Though the American Academy of Ophthalmology recommended pausing all care that was not urgent or emergent, it left the definition of urgent and emergent to the individual ophthalmologist.²³⁹ Both ophthalmic and infertility care are timely and life altering for the patient receiving the treatment.

235. Krishnamoorthy, et al., *supra* note 48, at 321–22.

236. *Id.* at 322.

237. See, e.g., *In Vitro Fertilization (IVF)*, MAYO CLINIC (Sept. 10, 2021), <https://www.mayoclinic.org/tests-procedures/in-vitro-fertilization/about/pac-20384716> (discussing the process of IVF at an outpatient clinic, with no mention of the utilization of hospital resources); *Hysteroscopy*, MOUNT SINAI, <https://www.mountsinai.org/health-library/surgery/hysteroscopy> (Dec. 3, 2020) (explaining that a hysteroscopy may be done in a hospital, outpatient surgery center, or provider's office, but patients typically go home the same day).

238. See Matthew R. Starr, Rachel Israilevich, Michael Zhitnitsky, Qianqian E. Cheng, Rebecca R. Soares, Luv G. Patel, Michael J. Ammar, M. Ali Khan, Yoshihiro Yonekawa, Allen C. Ho, Michael N. Cohen, Jayanth Sridhar & Ajay E. Kuriyan, *Practice Patterns and Responsiveness to Simulated Common Ocular Complaints Among US Ophthalmology Centers During the COVID-19 Pandemic*, 138 JAMA OPHTHALMOLOGY 981, 985–86 (2020).

239. *Recommendations for Urgent and Nonurgent Patient Care*, AM. ACAD. OF OPHTHALMOLOGY (Mar. 18, 2020), <https://www.aao.org/headline/new-recommendations-urgent-nonurgent-patient-care>.

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In addition, both surgical interventions are minimally invasive, performed under a range of light or twilight sedation, requiring minimal supervision during recovery. Most significantly, with the exception of some academic practices, both cataract surgery and egg harvest are performed at facilities outside a hospital that would not otherwise be used for critical patients. Given that cataract surgery was considered essential and continued throughout the pandemic for many, infertility interventions such as egg harvest should have been treated the same way.

The arguments to pause infertility treatment as non-essential had two origins. The first argument was to protect and preserve limited healthcare resources during a time of crisis with the looming threat of systemic overload. Given the independent nature of infertility care and the lack of overlap with critical care, this argument is not valid. The second argument was concern for the safety of both the patients and practitioners,²⁴⁰ but it stands to reason that if patients receiving care considered to be essential can be treated in a safe environment, all patients can receive care under an umbrella of safety.²⁴¹ Furthermore, given that the next crisis that limits the provision of infertility care may not be a communicable disease but rather a natural disaster or military conflict, it is important to establish that infertility care is essential and should continue.

The lines between essential and non-essential care are poorly defined and blurred by the bias of the party giving the definition. Organizations internal to the field have an inherent bias, hence the fracture between the ASRM and the Alliance. There should be a national governing body, such as the American Medical Association, that determines which areas of healthcare are essential and which are not. This would allow for universal application of rules in a time of crisis, removing some of the ambiguity that caused additional moral distress from the

240. See Boivin, et al., *supra* note 176, at 2557.

241. See Thomas & Caplan, *supra* note 2.

kaleidoscope of treatment practices during the COVID-19 pandemic.

It should be the goal of all professionals in the field of fertility medicine and their professional organizations to establish infertility care as essential medicine within the greater field of healthcare to protect future patients seeking critical and time-sensitive fertility treatment.

CONCLUSION

In the early months of the COVID-19 pandemic, in an effort to protect the larger healthcare system, services deemed to be non-essential were halted with indeterminate duration. The field of infertility medicine was one such area of healthcare, resulting in the temporary pause of fertility treatments for many patients. The inability for many to access fertility treatment added significant psychological strain to an already high-stress process and for women of advanced maternal age or diminished ovarian reserve, potentially led to a suboptimal outcome. Infertility care providers publicly expressed disagreement regarding the status of fertility treatment as essential and thus compounded the distress patients experienced by implementing inequitable and disproportionate pauses in practice. Moving forward all professionals who practice infertility medicine should uniformly present fertility care as essential medicine in the context of the field of healthcare.