Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
Coronavirus disease 2019, reproductive health, and public policy: lessons learned after two years of the ongoing pandemic—the American Society for Reproductive Medicine’s Center for Policy and Leadership

Eve C. Feinberg, M.D., Jennifer F. Kawwass, M.D., Alan S. Penzias, M.D., Sigal Klipstein, M.D., Peter N. Schlegel, M.D., Sean Tipton, M.A., and Catherine Racowsky, Ph.D.

Objective: To describe the experience of the ASRM COVID-19 Task Force over the past 2 years and to discuss lessons learned during the pandemic that can be applied to future public health crises.

Design: Descriptive narrative.

Subjects: None.

Intervention: Creation of the ASRM COVID-19 Task Force in March 2020.

Main Outcome Measures: None.

Results: Effective pandemic management requires a joint effort on the part of physicians, scientists, government agencies, subject area experts and funders.

Conclusion: Reproduction is a fundamental human right that should be protected at all times. Advanced preparation for future pandemics should include appointment of a standing group of experts so that a response is both informed and immediate when a public health crisis arises. This approach will help ensure that the ultimate objective – preserving the safety and well-being of patients and health care workers – is fulfilled. The recommendations put forth in this paper from the ASRM’s Center for Policy and Leadership can be used as a template to prepare for future public health threats. (Fertil Steril® 2022;117:708-12. ©2022 by American Society for Reproductive Medicine.)

Key Words: Covid-19 vaccination hesitancy, pregnancy, infertility, ASRM, public health

El resumen está disponible en Español al final del artículo.
BACKGROUND

Pandemics are a real possibility in the here and now; there is nothing future about them (1)
- Rand Corporation, 2012

The possibility of a pandemic disrupting our way of life seemed remote in late 2019 when reports of an outbreak of the novel coronavirus, severe acute respiratory syndrome coronavirus 2, began to emerge from China. Previously isolated clusters of viruses, including those causing severe acute respiratory syndrome, Middle East respiratory syndrome, and Ebola, exhibited a limited spread before ebbing out of the public consciousness.

What started as another seemingly isolated viral outbreak in China has impacted nearly all individuals in the world in one way or another. A unique set of considerations were present for those interested in conceiving during the viral outbreak. Individuals contemplating pregnancy faced uncertainty surrounding reproductive decision making and the provision of care. Concerns emerged regarding the potential effect of the virus on the chance of conception, and the risk of adverse outcomes for individuals undergoing treatment to enhance the chance of pregnancy, those contemplating pregnancy, and for those pregnant, lactating or in the postpartum period. The absence of data regarding the effect of the virus on reproductive health coupled with the exclusion of pregnant patients from vaccine trials accentuated the hurdles faced by those considering pregnancy. In anticipation, the American Society for Reproductive Medicine (ASRM) rapidly assembled a Coronavirus Disease 2019 (COVID-19) Task Force early in the course of the pandemic. The purpose was to guide its members and those it serves on all aspects of reproduction and the provision of care in the face of emerging, and sometimes conflicting, data.

With uncertainty ahead, the Task Force recommended a pause on fertility treatment. The principal reasons for this recommendation were to help blunt the exponential spread of disease, redirect a declining cache of critical medical supplies, and mitigate risks to patients and staff while identifying effective protective measures. The experience highlighted the importance of reproductive considerations not only during crises but also during times of stability.

Unfortunately, the COVID-19 pandemic is neither the first nor the last of challenges that the world may face (2). To streamline future responses, it is essential to realize that reproduction is a human right that should be prioritized. Reproductive health should be considered early and often in the trajectory of emerging threats to public health. The recommendations detailed below from the experience of the ASRM COVID-19 Task Force over the past two years can be used as a template to prepare for future public health threats.

ASSEMBLE YOUR TEAM

In mid-March 2020, when there was reliable evidence that the novel coronavirus was becoming a true pandemic, ASRM leadership mobilized a national COVID-19 Task Force. At the same time, ASRM reaffirmed the importance of reproduction and disseminated the scientific facts related to the virus, vaccination, and reproduction.

The Task Force included a broad representation of key stakeholders. These included individuals with diverse expertise in all aspects of reproduction and the provision of fertility care, including reproductive endocrinology and infertility specialists, urologists, embryologists, reproductive surgeons, mental health experts, legal experts, ethicists, and both basic and clinical research scientists. Subject matter experts in infectious disease and epidemiology as well as patient representatives were invited to join in these efforts. The composition of the Task Force reinforced the importance of including voices from a wide range of perspectives in the face of the broad spectrum of challenges and uncertainties that emerged as the pandemic unfolded.

Quick and effective action, timely updates, and a focus on both science and patient care were considered paramount. Team members were apolitical in approach and generous in time investments as required, to remain responsive to the ever-changing landscape resulting from the novel coronavirus, severe acute respiratory syndrome coronavirus 2. Over the course of the past two years, the Task Force met regularly, usually monthly plus whenever else was needed, and published revised recommendations on a regular and frequent basis. These updates were written by members with expertise on the topic and then ultimately approved by the Task Force in its entirety. They were made freely available on the ASRM website. When faced with conflicting viewpoints, the Task Force actively sought a wide variety of perspectives and carefully and thoroughly considered these as recommendations were developed. Dissent arose due to disagreement in prioritization coupled with scientific uncertainty. Consensus ultimately was reached through a robust discussion with key stakeholders and consideration of all positions.

From its inception, the Task Force recognized the importance of collaborating with other societies such as The European Society for Human Reproduction and Embryology, the International Federation of Fertility Societies, the Society for Maternal–Fetal Medicine, the American College of Obstetricians and Gynecologists, the National Institutes of Health, the Centers for Disease Control and Prevention, and the United States Food and Drug Administration.

It is highly probable that this pandemic will continue in various iterations and that it will not be our last. The aforementioned description of the creation and work of a Task Force can serve as a model for other societies to aid in their development of a plan of action to ensure quick and efficient team representation in the face of a serious health pandemic. In light of the experience with the COVID-19 pandemic, it has become evident that medical societies are served best when their leadership is proactive in maintaining a pool of experts and stakeholders to function as a “first response” team that can be reconstituted rapidly as needed to combat future threats.

SCIENCE AND DATA SHOULD BE PRIORITIES

Central to the mission of the ASRM COVID-19 Task Force was the recognition that scientific knowledge should be the primary driver of its work and recommendations. This
data–driven focus guided both current practice recommendations and suggestions for new or additional studies to direct future patient care and public health considerations. A bewildering onslaught of confusing nonscientific statements arose that presented unsubstantiated opinions expressed broadly on social media and elsewhere. This noise regarding the effects of COVID-19 on fertility was addressed by the Task Force with a prompt, direct, data-based, and consistent overview of the scientific information available at that time. Task Force guidance was independent of political or social agendas. Most importantly, a broad recognition of the ever-evolving nature of scientific information led to ongoing efforts to release frequent updates that reflected the current level of knowledge.

The unique role of a specialty medical society is to integrate emerging data to guide clinical care with expertise present in its members and bolstered by representative experts. A medical specialty society also has the resources that can provide critical data to guide care. Initially, knowledge gaps will exist. The ASRM, through its Task Force, identified the areas in which new information was needed and guided the types of research studies required to direct future recommendations. Similarly, we recognize the importance of the Task Force to identify the knowledge gaps to better direct future clinical care. Transparency regarding what is known and unknown has been paramount, thereby building trust among the Task Force, ASRM’s members, those it serves, and the society at large.

ADVOCACY

Reproduction is a fundamental human right [2]. This right merits protection at all times and is particularly fragile during periods in human history when external factors risk infringing on it. In the setting of pandemics and other public health crises, there may be a need to shift the balance of care temporarily away from individual patient care needs and toward care that safeguards the community at large. Such a shift may impact the provision of infertility care and create tension between individual and societal needs [3]. However, this acute necessity does not obviate the need to consider the time-sensitive nature of fertility care and work toward its resumption as expeditiously as possible once conditions permit.

In determining which procedures are urgent, it must be emphasized that fertility care is not elective. Delay in care often has dire consequences, particularly for patients with diminished ovarian reserve or those facing gonadotoxic therapy who require fertility preservation within a narrow time horizon. Access to evaluation and testing similarly should be considered time-sensitive, as the results help inform the level of urgency of fertility care.

In balancing societal with individual patient needs, access to care and use of resources must be considered early in the course of a crisis and revisited frequently. The ASRM COVID-19 Task Force fulfilled this role and continues to ensure that appropriate guidance is shared regularly with the physicians, clinics, patients, researchers, and government agencies [4].

An important role for the ASRM is advocacy. Advocacy can be divided broadly into several categories as follows:

**Advocacy for Access to Care**

The ASRM advocates for broad-based and global fertility coverage for all individuals and couples interested in family building. In times of crisis, the most vulnerable members of society are at risk of losing income sources and insurance coverage for fertility care. Special attention should be paid to the fragility of communities and groups for whom discrimination can limit access. Efforts to ensure access to care should be heightened during times of scarcity.

**Advocacy for Research Funding**

The critical nature of basic science and clinical research has been underscored during the current pandemic. Knowledge gained in the areas of placental biology, implantation, and virology has helped inform an understanding of the effects of COVID-19 on fertility, implantation, and early pregnancy.

**Advocacy for Inclusion in Research**

Unprecedented financial and academic resources were used in rapidly developing and distributing safe and effective vaccines against COVID-19. However, the Common Rule, which oversees human subject research, intentionally excludes pregnant patients and those contemplating pregnancy from most types of vaccine research [5]. In the future, the safe inclusion of these groups in well-designed studies would help protect them by research and not disadvantage them by the misdirected desire to protect them from research [6].

**FUNDING—PRESENT AND FUTURE**

Among the many lessons learned during the COVID-19 crisis is that there simply is no replacement for science-led, data-driven, coordinated action. In the United States, the main public health agencies, the Centers for Disease Control and Prevention, the National Institutes of Health, and the United States Food and Drug Administration all play key roles in this effort. The current pandemic has highlighted the awareness of the important work of these institutions and the fact that the funding required to support this critical work must begin well before the next, as yet unforeseen, pandemic arrives.

Government funding for basic and applied research must be robust and steady. Too often research studies do not reflect the diversity of the human population. Research of new drugs and vaccines historically has excluded women in general and those who are pregnant in particular. It is inevitable that women will be exposed to new pathogens, including during pregnancy. It is vital that researchers seek to understand and study how new diseases and new drugs affect all susceptible subgroups of the population, every step of the way. Moreover, the impact of these treatments on the reproductive system must be considered and examined. Safe inclusion of
both women of reproductive age and pregnant women in vaccine and drug development trials during a pandemic is critical for obtaining the knowledge needed to be able to provide preventative and therapeutic options. During a pandemic, society cannot afford to deny such inclusions. Understanding a vaccine’s or drug’s impact on the reproductive system of both sexes cannot simply be an afterthought, it must be at the forefront of research efforts.

BE THE VOICE

The impact of ASRM’s COVID-19 Task Force recommendations was amplified using different media outlets, including the society’s website, news interviews, Op Eds, podcasts, webinars, and social platforms. Specialty societies should not be afraid to speak up on behalf of their members and those they serve. Societies should collaborate with one another when their members have complementary interests and needs. A unified voice among societies can be powerful; however, individual societies should not hesitate to convey their own messaging in the face of differing opinions among societies serving unique patient groups.

The frequent release of Task Force recommendations and updates early in the pandemic reflected the rapidly emerging nature of the crisis. Updates were time stamped with expiration dates to reflect the current state of data and guidance and to alert members to the timing of new updates. Updates were affirmed when guidance remained relevant and new updates were created as data evolved.

The society expanded its website to contain an easily accessible hub for COVID-19–related information that included all Task Force recommendations, podcasts, webinars, and links to relevant literature. The society has used a single point person to collaborate with trusted media sources, and society members were identified who were able to respond rapidly to media requests. Task Force members were encouraged to amplify ASRM’s voice through social media. All messaging was transparent, data-driven, and politically neutral.

BE NIMBLE

During any rapidly evolving novel situation, what is known and unknown shifts over time. As a result, recommendations change as data are gathered. Setting an expectation early in the course of a pandemic that guidelines will change as knowledge is gained will build trust as expert advice evolves over time. As the virus mutates, strategies must be monitored, reassessed, and modified in an ongoing cycle. Such evolution in guidance has the potential to be frustrating, particularly to individuals who are unaware of the scientific premise behind the modifications. Valuable lessons can be learned that ultimately contribute to wider acceptance of rapidly evolving strategies and a decrease in hesitancy in the face of new vaccines and therapies. The organized group must be nimble, humble, transparent, receptive to feedback, and willing to adapt recommendations continuously as the data evolve.

CONCLUSION

Effective pandemic management requires a joint effort on the part of physicians, scientists, government agencies, subject area experts, and funders. Advanced preparation in anticipation of a global health crisis should include appointment of a standing group of experts in their respective fields so that a response is both informed and immediate when a pandemic emerges. This approach will help ensure that the ultimate objective—preserving the safety and well-being of the patients and health care workers—is fulfilled.

Acknowledgments: The authors thank their colleagues on the American Society for Reproductive Medicine COVID-19 Task Force for their expertise, enduring commitment, and their time in staying ahead of the curve in providing guidance and recommendations for preserving the health and safety of patients and health care workers during this pandemic. The American Society for Reproductive Medicine COVID-19 Task Force members are Amanda Adelaye, M.D., Natan Bar-Chama, M.D., Marcell Cedars, M.D., Christos Coutifaris, M.D., Ph.D., Mark Cozzi, M.B.A., Jodie Dionne-Odom, M.D., Kevin Doody, M.D., Eve Feinberg, M.D., Elizabeth Hern, M.B.A., Jennifer Kawwass, M.D., Sigal Klipstein, M.D., Paul Lin, M.D., Anne Malave, Ph.D., Alan Penzias, M.D., John Petrozza, M.D., Samantha Pfeifer, M.D., Catherine Racowsky, Ph.D., Enrique Schisterman, Ph.D., James Segars, M.D., Peter Schlegel, M.D., Hugh Taylor, M.D., and Shane Zouzola, B.S.

F&S

DIALOG: You can discuss this article with its authors and other readers at https://www.fertstertdialog.com/posts/34799

REFERENCES

1. Treherton GF, Nemeth E, Srinivasan S. Threats without threateners? Exploring intersections of threats to the global commons and national security. Available at: https://www.rand.org/content/dam/rand/pubs/occasional_papers/2012/RAND_OP360.pdf.
2. Ethics Committee of the American Society for Reproductive Medicine. Reproductive and infertility care in times of public health crisis: an Ethics Committee opinion. Fertil Steril. In press. http://www.doi.org/10.1016/j.fertnstert.2022.01.016.
3. The American College of Gynecologists and Obstetricians. Global Women’s Health and Rights. Available at: https://www.acog.org/clinical-information/policy-and-position-statements/statements-of-policy/2018/global-womens-health-and-rights#.–text=The%20Right%20to%20Decide%20When,Services%20to%20Make%20These%20Choices. Accessed February 18, 2022.
4. The American Society for Reproductive Medicine COVID-19 Task Force. COVID-19 Updates and Resources. Available at: https://www.asrm.org/news-and-publications/covid-19. Accessed February 18, 2022.
5. United States Department of Health and Human Services. 45 CFR 46—Subpart B—Additional Protections for Pregnant Women, Human. Available at: https://www.hhs.gov/ohrp/regulations-and-policy/regulations/45-cfr-46 common-rule-subpart-b/index.html. Accessed February 18, 2022.
6. Krubiner CB, Faden RR, Karron RA, Little MD, Linyer AD, Abramson JS, et al. Pregnant women & vaccines against emerging epidemic threats: ethics guidance for preparedness, research, and response. Vaccine 2021;39:85–120.
Enfermedad por Coronavirus 2019, salud reproductiva y políticas públicas: lecciones aprendidas después de dos años de la pandemia en curso. Centro de Políticas y Liderazgo de la Sociedad Americana de Medicina Reproductiva.

**Objetivo:** Describir la experiencia del Grupo de Trabajo ASRM COVID-19 durante los últimos 2 años y analizar las lecciones aprendidas durante la pandemia que se puedan aplicar a futuras crisis de salud pública.

**Diseño:** Narrativa descriptiva.

**Sujetos:** Ninguno.

**Intervención (es):** Creación del grupo de trabajo ASRM COVID-19 en marzo de 2020.

**Principales medidas de resultados:** ninguna

**Resultado(s):** El manejo efectivo de una pandemia requiere un esfuerzo conjunto por parte de médicos, científicos, agencias gubernamentales, expertos en el área y financiadores.

**Conclusión(es):** La reproducción es un derecho humano fundamental que debe ser protegido en todo momento. La preparación avanzada para futuras pandemias debe incluir la designación de un grupo permanente de expertos para que la respuesta sea informada e inmediata cuando surja una crisis de salud pública. Este enfoque ayudará a garantizar que se cumpla el objetivo final: preservar la seguridad y el bienestar de los pacientes y los trabajadores de la salud. Las recomendaciones presentadas en este documento del Centro de Políticas y Liderazgo de la ASRM se pueden utilizar como modelo para prepararse para futuras amenazas a la salud pública.