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Impact of the COVID-19 Pandemic on Obstetricians/Gynecologists

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Abstract

Objective: To assess the impact of the coronavirus disease 2019 (COVID-19) pandemic on obstetricians/gynecologists (OB/GYNs).

Participants and Methods: A 49-item survey was distributed to OB/GYNs through the websites and electronic mailing lists of professional OB/GYN organizations. The survey was open from June 22, 2020, through November 22, 2020. Of the 122 initiated surveys, 89 were completed (73.0% completion rate); 72 respondents answered at least one open-ended question and were included for qualitative analysis.

Results: Respondents reported policy changes, limited personal protective equipment availability, patient compliance with safety protocols and personal protective equipment use, staff shortages, and concerns about COVID-19 exposure as primary stressors related to the pandemic. Respondents felt that the pandemic had a negative professional impact on their relationships with patients and colleagues. Workplace and pandemic stressors resulted in feelings of anxiety and frustration; physical effects were also reported. Some respondents indicated that they were considering early retirement or leaving the profession as a result of the pandemic, which suggests that OB/GYNs may be at increased risk for burnout.

Conclusion: The COVID-19 pandemic will have important long-term effects on OB/GYN well-being and workforce retention. Proactive support for OB/GYNs is needed to combat burnout and counteract workforce attrition. Implementing peer support programs that promote healthy emotional processing following adverse events may mitigate these feelings and reduce OB/GYN burnout.

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On March 11, 2020, coronavirus disease 2019 (COVID-19) was declared a pandemic by the World Health Organization. Many obstetricians/gynecologists (OB/GYNs) lacked initial clear guidance on how to adapt their practice.[1,2] Early in the pandemic, elective procedures—including tubal ligations, in vitro fertilization cycles, and pregnancy termination—were canceled or postponed to minimize patient volume and conserve personal protective equipment (PPE).[3-5] Institutions changed safety and visitor policies, including patient limits on support persons, masking requirements, and/or the reuse and conservation of PPE.[6,7] Practice changes were not uniformly applied in all areas of medicine, and some generated substantial concern regarding the safety of the OB/GYN workforce: the Centers for Disease Control and Prevention recommendations appeared to discourage the use of N95 respirators during the second stage of labor, which was later designated as an aerosol-generating procedure.[7] Early evidence also suggested increased risk of adverse pregnancy outcomes and worse COVID-19 morbidity and mortality with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in pregnancy.[8-11]

Concerns about the "parallel pandemic" on health care workers' health and well-being,[12,13] including subsequent burnout and workforce attrition, have been raised by the medical community.[12-16] Obstetricians/gynecologists in particular have been faced with unique dilemmas as neither entirely elective nor entirely frontline physicians. We developed a survey exploring the experiences of OB/GYNs during the COVID-19 pandemic. The following qualitative analysis examines OB/GYNs' descriptions of experiences coping with pandemic-related workplace stress,

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support mechanisms, and personal and professional impacts of the pandemic.

PARTICIPANTS AND METHODS

Survey Development

The research team, composed of members with expertise in OB/GYN, second victim syndrome, peer support programs, bioethics, and mixed methods research, developed a survey designed to collect quantitative and qualitative data on the experiences of OB/GYNs during the COVID-19 pandemic. The 49-item survey contained both fixed and open-ended questions describing OB/GYN practice changes, personal and professional impact, and support needs related to the COVID-19 pandemic based on early reports in the literature and leveraging the experiences and expertise of the research team.

Data Collection

Invitations to complete the anonymous, online survey were distributed via the email membership lists of the Society of OB/GYN Hospitalists, Society for Maternal-Fetal Medicine, and local chapters of the American College of Obstetricians and Gynecologists. Additionally, the survey link was posted on the website of the Society for Academic Specialists in General Obstetrics and Gynecology and the Society for Maternal-Fetal Medicine. A statement introduced the survey by informing participants that by continuing they consented to the aggregate use of their responses for research purposes. The survey was open from June 22, 2020, to November 22, 2020. Because of the online method of distribution, it is unknown how many individuals saw the invitations, and thus a response rate cannot be determined.[17] Mayo Clinic's Institutional Review Board declared this study exempt from review and waived the written consent requirement.

Data Analysis

Two researchers (K.A.R., J.R.) initially developed a codebook to identify and organize themes within the qualitative responses according to standard qualitative methodology. The team used NVivo 12 software (QSR International) to facilitate coding the open-ended survey responses.[18] Additional refinement of the codebook occurred following initial consensus coding of 19.4% of the responses (14 of 72). The finalized codebook was applied to all responses; 55.6% of responses (40 of 72) were evenly divided for independent coding, and the remainder (44.4% [32 of 72]) were coded to consensus to ensure accuracy and consistent application of the codebook. The two researchers met weekly to review coded content and resolve any discrepancies.[19,20] Descriptive statistics were used to analyze participant demographic characteristics and fixed responses. A 7-point Likert scale, with 7 indicating strongly disagree, 1 indicating strongly agree, and 4 indicating neutral, was used to assess agreement and disagreement with statements designed to explore the degree to which participants were impacted by COVID-19 as is standard in survey methodology.[21] Likert score means over and under the neutral mark of 4 were considered agreement and disagreement with the corresponding statement, respectively.

RESULTS

Of the 122 initiated surveys, 89 participants completed survey questions and were included for analysis (73.0% completion rate); 72 participants completed at least one open-ended question and were included for qualitative analysis. Demographic characteristics of the sample are presented in Table 1. Responses from related fixed-response questions are provided for additional context. In accordance with the Standards for Reporting Qualitative Research, direct quotes from participant responses are included here.[22] Quotes have been minimally edited for readability.

Stressors in Health Care Settings

Most respondents described increased stress and anxiety resulting from community events and practice changes. Stressors included lack of or inadequate PPE; patient and visitor noncompliance and/or frustration with masking or other safety protocols; increased burdens and responsibilities related to COVID-19 protocols; and staff shortages due to early retirement, physician reassignments due to underlying comorbidities, and mandatory quarantines.

> [COVID-19] *Cases are higher now than ever before, but public/patients all proceed as though nothing is happening. Patients are increasingly frustrated with restrictions.*
>
> —Respondent 99, obstetrics, female

TABLE 1. Demographic Characteristics of the Study Participants

Variable	No. (%) of participants
Specialty (n=72)	
Obstetrics	36 (50.0)
Gynecology	1 (1.4)
Both	35 (48.6)
Subspecialty (n=65)	
Maternal-fetal medicine	19 (29.2)
Hospitalist (OB and GYN)	38 (58.5)
Laborist (OB only)	5 (7.7)
Minimally invasive gynecology	1 (1.5)
Outpatient OB/GYN (only)	1 (1.5)
Urogynecology and reconstructive pelvic surgery	1 (1.5)
Practice type (n=72)	
Faculty/university practice (academic)	23 (31.9)
Direct hospital employee (nonacademic)	14 (19.4)
Independent contractor	13 (18.1)
Single-specialty private practice	5 (6.9)
Solo private practice	4 (5.6)
Multispecialty private practice	3 (4.2)
Locum tenens	1 (1.4)
Other	9 (12.5)
Practice size (n=70)	
Small group (<10)	33 (47.1)
Medium group (10-49)	19 (27.1)
Large group (≥50)	18 (25.7)
Completed medical school (n=72)	
<5 y before survey	2 (2.8)
5-14 y before survey	19 (26.4)
≥15 y before survey	51 (70.8)
Completed residency (n=71)	
Currently a resident	1 (1.4)
<5 y before survey	5 (7.0)
5-14 y before survey	22 (31.0)
≥15 y before survey	43 (60.6)
Completed fellowship (n=69)	
Currently a fellow	3 (4.3)
<5 y before survey	8 (11.6)
5-14 y before survey	5 (7.2)
≥15 y before survey	8 (11.6)
Did not complete a fellowship	45 (65.2)
Time in current position (n=65)	
<5 y	30 (46.2)
5-14 y	22 (33.8)
≥15 y	13 (20.0)
Gender (n=69)	
Female	55 (79.7)
Male	14 (20.3)

Continued on next page

The number of patients I take care of in labor has increased as so many OB docs at the hospital where I practice stopped doing deliveries due to fear of exposure to the Corona virus.

—Respondent 33, OB/GYN, female

Many respondents expressed concerns about their own risk of COVID-19 exposure, especially from noncompliant or asymptomatic patients.

Constant stress about potential asymptomatic positive patients for COVID and potential impact on my ability to work if exposed.

—Respondent 16, OB/GYN, female

Patients come for care and even nonurgent visits despite having symptoms. Patient partners lie about symptoms to gain entry to labor and delivery.

—Respondent 99, obstetrics, female

Risk of exposure extended to concerns that, as essential health care professionals, OB/GYNs were at greater risk for COVID-19–related morbidity and mortality and may also expose family members or other vulnerable groups. These fears were especially heightened among physicians who were working while pregnant or those who had family members with comorbidities.

Wrote instructions for my funeral and a letter to my kids. Pretty heady stuff!

—Respondent 109, obstetrics, female

I was pregnant during the initial parts of the pandemic and struggled with my responsibilities at work and concern for myself and unborn child. I was worried about potential health impacts as well as the possibility of being admitted long-term without access to my spouse or other child at home.

—Respondent 120, OB/GYN, female

Feelings of stress and anxiety were often compounded if participants felt that hospital administrators were unsupportive or indifferent to the safety of their staff or were hesitant to enact new safety protocols in response to public health guidelines.

Lack of consistency from administration to limit visitors in an attempt to attract patients for delivery due to numbers being

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low, which increased risks for staff.
—Respondent 79, OB/GYN, female

In March, the hospital administration did not want us to wear masks because they thought it would frighten patients.
—Respondent 56, obstetrics, female

Personal and Professional Impacts

Respondents felt that the pandemic had negatively impacted their emotional health and ability to cope with both workplace and everyday stressors. They also reported lower tolerance of stressors among their team members, which required additional emotional resources to manage.

I am much more stressed about life outside of work as well as work, which limits my recovery from work stress.
—Respondent 16, OB/GYN, female

The pervasive level of anxiety among both patients and providers I believe has contributed to a rising rate of cesarean section (…) the ability of nurses, midwives and physicians to tolerate anxiety over concerning tracings was tapped out. I reached the point I just could[n't] *spend any more energy in calming people down.*
—Respondent 34, obstetrics, female

Respondents were asked to select any emotional or physical responses they have experienced regarding their work and COVID-19 (Table 2). Anxiety (54 of 79 [68.4%]), frustration (52 of 79 [65.8%]), and anger (26 of 79 [32.9%]) were the most common emotional responses; sleep disturbances (36 of 79 [45.6%]) and extreme fatigue (21 of 79 [26.6%]) were the most common physical responses.

Respondents stated that family (76 of 77 [98.7%]), coworkers (56 of 77 [72.7%]), and friends (51 of 77 [66.2%]) were the most important sources of emotional and mental support. Some physicians commented that the mechanisms they used to cope with workplace stress, such as travel and socializing, were no longer available because of COVID-19 restrictions.

TABLE 1. Continued

Variable	No. (%) of participants
Race/ethnicity (n=69)	
Caucasian or White	50 (72.5)
African American or Black	8 (11.6)
Asian	5 (7.2)
Hispanic or Latino/a	4 (5.8)
Other	2 (2.9)
Primary practice location (n=68): Arkansas (1); California (7); District of Columbia (1); Florida (4); Georgia (1); Illinois (3); Iowa (1); Louisiana (1); Maryland (1); Massachusetts (1); Michigan (1); Minnesota (2); Missouri (1); Nevada (1); New Jersey (3); New Mexico (1); New York (3); North Carolina (1); Ohio (5); Oklahoma (2); Oregon (1); Pennsylvania (2); South Carolina (1); Texas (12); Virginia (4); Washington (5); Wisconsin (2)	

GYN, gynecology; OB, obstetrics.

We have missed important events, social activities, and travel plans that keep me sane in this profession.
—Respondent 120, OB/GYN, female

Lots of stay at home, stores and restaurants closed imposed a very frugal life. I save a lot of money. All my pleasure spending is gone.
—Respondent 24 (specialty and gender not provided)

Burnout among colleagues was reported in response to staffing shortages and heightened stress and anxiety from the pandemic. A few respondents stated that they were considering leaving the medical profession as a result.

I see a huge amount of burnout. This has been terrible for health care workers.
—Respondent 123, obstetrics, female

I used to enjoy going to work. I loved what I do. I am now considering if this is what I want to continue to do and I've been in practice 23+ years.
—Respondent 43, obstetrics, male

Other professional impacts included loss of a personal connection/rapport with patients and coworkers, loss of confidence in clinical skills, and inability to focus on professional development or research activities.

Very difficult to establish a rapport while wearing a mask. Very stressed at professional

TABLE 2. Physical and Emotional Responses Related to Work and COVID-19

Response type (n=79)	No. (%) of participants
Emotional	
Anxiety	54 (68.4)
Frustration	52 (65.8)
Anger	26 (32.9)
Depression	20 (25.3)
Lack of confidence	18 (22.8)
Self-doubt	18 (22.8)
Extreme sadness	17 (21.5)
Grief	9 (11.4)
Physical	
Sleep disturbances	36 (45.6)
Extreme fatigue	21 (26.6)
Difficulty concentrating	18 (22.8)
Repetitive/intrusive memories	8 (10.1)
Tachycardia	5 (6.3)
Tachypnea	3 (3.8)
Cardiac dysrhythmia	1 (1.3)
None of the above	7 (8.9)

COVID-19, coronavirus disease 2019.

and personal isolation due to social distancing.

—Respondent 82 (specialty and gender not provided)

I am more concentrated on clinical work rather than other professional endeavors (research, etc.) and I am looking to retire as early as financially possible.

—Respondent 123, obstetrics, female

Those in residency and fellowship positions commented that lower patient volumes limited learning opportunities and case exposure.

Reduced access to research resources during fellowship, lower volume of patient experiences to learn from and keep up skills, more limited auxiliary staff to assist in patient care.

— Respondent 120, OB/GYN, female

Finished residency with less gyn[ecology] *case numbers.*

—Respondent 116, obstetrics, female

Some respondents noted, or described, the unequal burdens of the pandemic on women, particularly those navigating childcare, school closures, and care for elderly relatives.

I have stopped working to care for elderly parents…. I placed my family's needs above my own….It [COVID-19] *has completely derailed my professional career, and threatens the life of my family.*

—Respondent 56, obstetrics, female

Had to reorganize our entire home for my husband and I to work from home and HS-[high school] *and college-age kids educate from home.*

—Respondent 16, OB/GYN, female

In their fixed responses, respondents rated concerns about the impact of the pandemic on their family's physical and emotional health higher than their concern for themselves, as documented by higher mean scores (Table 3). This factor supports many comments that focused primarily on family, rather than professional, concerns.

Concern for health of my older family members. I worry about the emotional health of younger kids being away from school and friends and developing an unhealthy fear of social interaction.

—Respondent 62 (specialty and gender not provided)

My husband has been out of work since March 2020. He's bored and follows me around, comes to my practice so as not to spend his days alone. My daughter who recently had a baby is frightened of the potential Covid19 impact on her family and is frightened to leave her house. Not healthy!

—Respondent 39, OB/GYN, female

Respondents also discussed a general sense of disappointment and loss of trust in public health and government leadership in response to the COVID-19 pandemic, especially if they felt the pandemic or public health guidelines were politicized.

I have been very disappointed in the confusing and changing recommendations of the national public health officials and the politicization of the public health messages which I feel is going to harm public health for many years and will keep many qualified professionals from seeking

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a public health career in the future.
—Respondent 44, obstetrics, male

I am most concerned that we do not have a national response or plan. I am frustrated that covid has become a political issue and not remained a public health issue.
—Respondent 81, OB/GYN, female

Development of Resiliency Measures

Many respondents described feeling proud of their professional response to the pandemic, especially those who were able to provide a high standard of care and/or adapt their practice to changing guidelines. This change included offering telemedicine and caring for COVID-19–positive patients.

Rapidly developed competency in safely treating Covid 19 patients.
—Respondent 54, OB/GYN, female

I am proud of the time I put in working during the height of the pandemic when many others were home. My anxiety about COVID actually decreased after beginning week-long inpatient shifts.
—Respondent 95, obstetrics, female

Respondents ranked the value of their profession and its contribution to the COVID-19 pandemic highly in their fixed responses (Table 4). Physicians who were involved in shaping their hospital/clinic's COVID-19 response or who volunteered to care for COVID-19–positive patients emphasized feeling positive about these experiences.

[I feel proud] *To have participated in useful dissemination of covid related information to the clinicians who are employed by the Ob hospitalist company I work for.*
—Respondent 7, OB/GYN, male

I have been able to be a constant at the hospital for my patients and for patients whose doctors stopped doing deliveries with the pandemic.
—Respondent 33, OB/GYN, female

Some respondents described the implementation of new habits or strategies to help them cope and develop resiliency in response to pandemic stressors.

I had anxiety initially, but decided to be the healthiest person I could be and harnessed that into an exercise program which I think has had a large impact on me—I've had very little anxiety or difficulty coping since April.
—Respondent 28, OB/GYN, female

[It has been helpful] *Being able to discuss personal responses to Covid-19 with family and coworkers. Finding on-line activities my extended family can enjoy including weekly National Theatre Live productions.*
—Respondent 35, obstetrics, female

One participant described how she used the COVID-19 pandemic as a learning opportunity for her family.

I approached it with the intention of modeling resiliency for my children. I am proud that we were able to survive remote learning from March until summer. I am proud that we discussed difficult emotions as a family and that it is ok to have them and talk about them.
—Respondent 81, OB/GYN, female

A few respondents described positive impacts of the pandemic, such as developing life perspective and opportunities to demonstrate their clinical and research abilities.

It has given me the opportunity to shine. I received a promotion during this time.
—Respondent 84, OB/GYN, female

To appreciate I can still work when so many are unable to.
—Respondent 66, OB/GYN, female

DISCUSSION

This survey provides an important perspective on OB/GYNs' experiences coping with the COVID-19 pandemic. Nearly all respondents described a pandemic-driven increase in workplace stressors. Many comments reflect early uncertainty and concern about virus transmission, PPE shortages, patient adherence to safety guidance, and inconsistent policy rollout. Longer-term impacts included disruption to the patient-physician relationship, loss of professional development, and

TABLE 3. COVID-19–Related Concerns for Family and Self[a]

Variable	Agree or strongly agree (No. [%])	Neutral (No. [%])	Disagree or strongly disagree (No. [%])	Mean ± SD[b]
Since March 1, 2020, I have been concerned about:				
My				
Physical health (n=81)	49 (60.5)	10 (12.3)	22 (27.2)	4.8±2.0
Physical safety (n=81)	39 (48.1)	14 (17.3)	28 (34.6)	4.4±2.0
Mental health (n=81)	44 (54.3)	12 (14.8)	25 (30.9)	4.5±2.1
Food/housing security (n=81)	3 (3.7)	12 (14.8)	66 (81.5)	1.9±1.3
Emotional health (n=81)	46 (56.8)	9 (11.1)	26 (32.1)	4.4±2.1
Financial security (n=81)	16 (19.8)	14 (17.3)	51 (62.9)	2.7±1.8
Job security (n=80)	15 (18.8)	12 (15.0)	53 (66.2)	2.8±1.8
Family's				
Physical health (n=81)	61 (75.3)	10 (12.3)	10 (12.3)	5.5±1.8
Physical safety (n=81)	48 (59.3)	18 (22.2)	15 (18.5)	4.8±2.0
Mental health (n=81)	54 (66.7)	13 (16.0)	14 (17.3)	5.0±2.0
Food/housing security (n=81)	8 (9.9)	10 (12.3)	63 (77.8)	2.1±1.5
Emotional health (n=81)	53 (65.4)	13 (16.0)	15 (18.5)	5.0±1.9
Financial security (n=81)	19 (23.4)	8 (9.9)	54 (66.7)	2.8±2.0
Job security (n=81)	35 (43.2)	3 (3.7)	43 (53.1)	3.4±2.3

[a]COVID-19, coronavirus disease 2019.
[b]Means over 4 indicate agreement with the survey item.

inability to access prior coping mechanisms. Despite these challenges, some also identified adaptive mechanisms and development of new professional skills and opportunities.

Physicians commonly reported anxiety and frustration, sleep disturbance, and extreme exhaustion related to the COVID-19 workplace. These feelings and experiences are known risk factors for long-term stress

TABLE 4. Impact of COVID-19 Pandemic on Professional Value and Collaboration

Variable	Agree or strongly agree (No. [%])	Neutral (No. [%])	Disagree or strongly disagree (No. [%])	Mean ± SD[b]
My specialty meets an important health care need (n=79)	75 (94.9)	1 (1.3)	3 (3.8)	6.7±1.0
My work is personally fulfilling (n=79)	72 (91.1)	3 (3.8)	4 (5.1)	6.2±1.1
My institution values my specialty (n=79)	60 (75.9)	6 (7.6)	13 (16.5)	5.5±1.1
I have the resources I need to be safe (n=78)	55 (70.5)	11 (14.1)	12 (15.4)	5.3±1.5
I feel that my work is an important part of the COIVD-19[a] response (n=79)	67 (84.8)	8 (10.1)	4 (5.1)	6.0±1.3
I have felt an increased sense of connection to my medical community (n=79)	43 (54.4)	19 (24.1)	17 (21.5)	4.9±1.8
Since March 1, 2020, I have experienced the following changes in my professional collaboration:				
Increased collaboration with internal colleagues (n=79)	46 (58.2)	24 (30.4)	9 (11.4)	4.9±1.7
Increased collaboration with external colleagues (n=79)	41 (51.9)	21 (26.6)	17 (21.5)	4.6±1.8
Participation in data collection on COVID-19[a] (n=79)	47 (59.5)	9 (11.4)	23 (29.1)	4.6±2.2
Increased contact with my professional society (n=79)	29 (36.7)	18 (22.8)	32 (40.5)	3.9±2.0

[a]COVID-19, coronavirus disease 2019.
[b]Means over 4 indicate agreement with the survey item.

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injury (ie, burnout) and are also associated with second victim responses.[23,24] Respondents felt that the use of PPE depersonalized and inhibited interactions with patients and coworkers, which may be relevant factors in short-term coping. Given high patient volumes and increased exposure to high-acuity, emotionally charged events, OB/GYNs are at high risk of burnout, with an estimated 40% to 75% experiencing some degree of professional burnout before the pandemic.[25,26] Physicians described burnout in colleagues, and a few seriously considered leaving their current position. To minimize OB/GYN workforce loss,[27] interventions to mitigate workplace stressors and provide emotional and psychological support to affected physicians are necessary.

The burdens of the pandemic on female physicians require note, especially given the shifting demographic characteristics of the OB/GYN workforce—59% of practicing OB/GYNs and 87% of residents are female—and the higher risk of burnout among female physicians.[28-30] Female respondents were more likely than male respondents to describe family concerns and home management efforts, including higher burdens in dual-physician households.[31] Practice interruption, reduction in patient services, and quarantine measures also impacted professional development and maintenance of clinical skills, particularly among trainees.[32,33] One-fifth of survey respondents reported self-doubt and lack of confidence.

State and regional variation in COVID-19 cases has created unequal burdens on medical and hospital systems and variable levels of occupational exposure for OB/GYNs. In our findings, respondents from states experiencing surges in the spring/summer of 2020 (eg, New York, New Jersey, California, Texas) were more likely to report clinic shutdowns, practice changes, and greater concerns about physical and emotional health. Nevertheless, all respondents described some degree of pandemic-related personal or professional impact. Physicians will continue to experience different levels of workplace stress as local cases peak due to the emergence of highly transmissible SARS-CoV-2 variants and as vaccination rates lag in some regions. Personal concerns about exposure risk may be mitigated by comparatively high rates of vaccination among health care workers,[34] although misinformation about COVID-19 and vaccination, asymptomatic transmission, and high morbidity among unvaccinated pregnant patients remain of concern.[35-37]

The collective trauma, stress, and personal and professional losses experienced by many OB/GYNs suggests an urgent need for improved long-term physician support. Support needs identified by respondents include increased access to PPE, improved emotional and professional support, and consistent directives from hospital administration. Respondents also expressed a desire for more consistent and rigorous responses from government and public health officials. While some immediate concerns have improved, participants reported an ongoing need for emotional and psychological support. Peer support programs, like those designed to address second victim experiences, may be useful resources in processing COVID-19 emotions and experiences.[38] Some existing programs have shifted or expanded their programs to meet this need.[39] Institutional investment in new programs designed to foster resiliency may also reduce burnout and prevent workforce loss.[40] Physician responses suggest that involvement in policy discussions, continuity of high-quality patient care, and prioritizing self-care all contributed to increased resilience among providers.

STRENGTHS AND LIMITATIONS

Strengths of this study include data collection concurrent with the summer/fall 2020 period of the COVID-19 pandemic, giving OB/GYNs the opportunity to provide real-time responses. Retrospective responses on the early pandemic response may have been subject to recall bias; data collection also occurred prior to vaccine availability. Since most respondents were OB/GYN hospitalists and maternal-fetal medicine physicians, survey findings may not be generalizable to all OB/GYNs. Limited sample size prevented comparative statistical analysis based on geographic differences in SARS-CoV-2 transmission; experiences are likely to differ based on regional COVID-19 prevalence prior to data collection. Future research directions should include the longitudinal collection of

data exploring physician well-being, long-term coping strategies, and burnout over the course of the COVID-19 pandemic. Nonclinical staff, such as those in environmental services and clinical support staff, have also been impacted and should also be included in these assessments and implementation of support strategies.[39]

CONCLUSION

As essential health care workers, OB/GYNs have been exposed to workplace stressors that threaten personal well-being, their profession, and professional longevity. Health care institutions should proactively offer comprehensive support to OB/GYNs affected by the COVID-19 pandemic.

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Abbreviations and Acronyms: **COVID-19**, coronavirus disease 2019; **OB/GYN**, obstetrician/gynecologist; **PPE**, personal protective equipment; **SARS-CoV-2**, severe acute respiratory syndrome coronavirus 2

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