


Patient-Reported Monochorionic-Diamniotic Twin Pregnancy Management and Experiences During the COVID-19 Pandemic: A Mixed-Methods Cross-Sectional Survey

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Abstract

Monochorionic-diamniotic (MCDA) pregnancies are high-risk necessitating ongoing screening for serious complications and quick decision-making. COVID-19 pandemic protocols introduced unique challenges to pregnancy management and patient experience. In late 2021, an online, mixed-methods, cross-sectional survey recruited 561 participants who experienced an MCDA pregnancy within five years. Analyses included descriptive and bivariate statistics and thematic analysis. Findings suggest the pandemic did not negatively affect screening/diagnosis for these participants. Care consistent with guidelines was received by most, with care slightly better during the pandemic. Almost 80% (79.0%) received an MCDA diagnosis by gestational week 14 before the pandemic, 87.8% during. Most received biweekly ultrasounds, 88.0% prior to the pandemic, 88.9% during. Experiences were affected in other ways for almost 44% of participants pregnant during COVID-19; in ways likely shared by other high-risk pregnancies. Thematic analysis revealed management during COVID-19 impacted self-advocacy and emotions (eg, alienation, anxiety), made care seem impersonal, and resulted in delayed or canceled appointments. Policies should be considered, so future healthcare disruptions do not impact patients and preserve in-person health care with access to a support person.

Keywords

twins, monozygotic, coronavirus disease 2019, pregnancy, high risk, guidelines

Introduction/Background

Monochorionic-diamniotic (MCDA) twin pregnancies, characterized by two amniotic sacs, but one single, shared placenta, account for approximately one in 300 pregnancies (1). The vascular connections of MCDA twins are associated with multiple complications causing increased mortality rates (2). These vascular complications can be significantly improved through early detection and fetal therapy (2). MCDA twin pregnancies are typically diagnosed between 11 and 13 weeks of gestation (1). It is critical that MCDA pregnancies are diagnosed as early as possible due to the potential complications that can arise as a result of the shared placenta (2). Some of the most common complications observed in MCDA pregnancies include twin anemia-polycythemia sequence (TAPS) and twin-twin transfusion syndrome (TTTS) caused by the connections in the placenta;

selective intrauterine growth restriction/fetal growth restriction (sIUGR/FGR) due to unequal placental sharing; umbilical cord flow issues due to placental sharing and cord insertions; and a rare complication called twin reversed arterial perfusion where one fetus is not formed properly and causes heart issues (1).

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Across international agencies and organizations, clinical guidelines related to MCDA pregnancy management vary considerably. However, to define “care consistent with guidelines” for purposes of this study, we referred to a 2021 review by Nicholas, Fischbein, Ernst-Milner, and Wani of 25 published international guidelines from 13 regions (3). The review found a high level of consensus for pregnancy management to include the following: (1) establish chorionicity as early as possible or by gestational week 14 and (2) biweekly (every 2 weeks) ultrasounds beginning in gestational week 16.

The unprecedented coronavirus disease 2019 (COVID-19) pandemic has presented those experiencing MCDA pregnancies with unique challenges for appropriate pregnancy management. Medical care has necessarily changed as a result of the COVID-19 pandemic. Yet, it is critical that despite pandemic limitations, people experiencing MCDA pregnancies receive appropriate care during their pregnancy to ensure timely screening, diagnosis, and treatment of potential complications such as TTTS, TAPS, and sIUGR/FGR, as timing and frequency of surveillance is related to outcomes (4–6). Recommendations have been mixed as to how to meet the biweekly ultrasound needs for this population. For example, some recommend an altered visit schedule but with extra ultrasound (7), while the UK National Health Service (NHS) recommends that in times of <50% ultrasound staff capacity, biweekly scans be reduced to gestational weeks 19, 23, and 32 (8).

Additionally, Sinaci et al. explain that the COVID-19 pandemic has taken a particularly large toll on people who are enduring high-risk pregnancies (9). These individuals already experience higher levels of anxiety due to the risky nature of their pregnancies, but the stress of having a comorbid condition during the pandemic is especially detrimental to this population (9). High-risk pregnant people require more frequent mental health screening and social and psychosocial support due to their higher susceptibility to COVID-19-related stress (9). The ever-evolving pandemic protocols exemplify this stress, some of which leave these individuals attending prenatal (and sometimes their deliveries) alone. Increased support must be provided to people in this situation to reduce the additional anxieties of the pandemic with the simultaneous emotional toll of high-risk pregnancies.

Research has yet to examine how the COVID-19 pandemic may have influenced patient care for MCDA pregnancies. Therefore, this study attempted to answer the following research questions:

1. Relative to prior to the COVID-19 pandemic, was patient-reported MCDA pregnancy care during COVID-19 consistent with guidelines?
2. How has the COVID-19 pandemic influenced the perception of care among people with MCDA pregnancies?

Methods

A retrospective, mixed-method online survey about MCDA twin pregnancy experiences was targeted toward people who (1) experienced an MCDA pregnancy within the past five years, (2) speak English, and (3) are 18 years of age or older. Responses were gathered from November to December 2021. Participants were recruited through posts made on relevant social media groups, including Facebook and Twitter, devoted to MCDA pregnancy support and information. Posts advertised the survey and included a link to the online, Qualtrics survey. This research was approved by the institutional review board of Northeast Ohio Medical University (protocol number: 21-024). Participants indicated that they “agree to participate in this study” in order to proceed after reading a detailed, online information sheet as the first page of the survey.

Measures

Demographics. Demographic questions included: age, marital status, annual family income, insurance status, education, and country of residence.

Pregnancy Information. Pregnancy information questions included: gestational week of MCDA pregnancy diagnosis, receipt of biweekly ultrasounds after gestational week 16, complications associated with MCDA pregnancy, pregnancy outcome, and gestational week of delivery.

Pregnancy Experiences During COVID-19. A single item asked participants “Do you think your pregnancy management was affected by the COVID-19 pandemic?” with options yes, no, unsure, or choose not to answer. An open-ended prompt asked participants to explain why COVID-19 did or did not impact their pregnancy management.

Data Analysis

Quantitative data were analyzed using Statistical Package for the Social Sciences version 28 and included descriptive statistics such as means, frequencies, and percentages. Bivariate analyses including chi-squared tests and simple logistic regressions were conducted to examine if pregnancy during COVID-19 was related to (1) patient characteristics, (2) patient-reported consistency of biweekly ultrasounds, and (3) MCDA diagnosis by gestational week 14. Participants who selected “Choose not to say” were deleted from bivariate analyses using pairwise deletion. Thematic analyses were performed on the responses to the open-ended items to identify themes and subthemes that emerged in the data. All data were coded by at least one author and independently reviewed by an additional author and coding differences were resolved through consensus.

Results

Participant Characteristics

During November 2021, the survey was advertised to multiple online groups and was viewed by 10,871 individuals and shared 17 times. A total of 793 individuals participated in the study for an estimated response rate of 7.3%. The sample was reduced with the removal of participants for failure to meet the inclusion criteria (n = 16), completing less than half of the survey (n = 153), and for missing data on the question of whether their pregnancy was during the COVID-19 pandemic (n = 63), for a final sample of 561.

The respondents represented 24 countries with the most from the United States (n = 419, 74.7%; see Table 1). The average age at the time of pregnancy was 30.5 years old, with most participants having obtained at least some

college (n = 508, 90.6%) and annual income of at least \$70,000 (n = 369, 65.8%). A large majority of participants were married or in a domestic partnership (n = 496, 88.4%), and most (n = 307, 54.7%) had private insurance during their pregnancy. There were no significant demographic differences between participants who were pregnant pre-COVID-19 (n = 291) and during COVID-19 (n = 270).

Pregnancy Characteristics and Outcomes

Approximately 22% of the total sample reported no pregnancy complications and the average week of delivery was 33.7 weeks (Table 2). There were slight differences in frequency of reported complications among patients pregnant before and during COVID-19, with TTTS the most commonly reported complication before COVID-19 (n = 88, 30.2%) and

Table 1. Participant Characteristics.

	Total sample (N = 561) n (%)	MCDA pregnancy prior to COVID-19 (N = 291) n (%)	MCDA pregnancy during COVID-19 (N = 270) n (%)	P-value
Country				.39
The United States	419 (74.7)	224 (77.0)	195 (72.5)	
Australia	28 (5.0)	13 (4.5)	15 (5.6)	
Canada	40 (7.1)	15 (5.2)	25 (9.3)	
The United Kingdom and Northern Ireland	38 (6.8)	20 (6.9)	18 (6.7)	
Other	36 (6.4)	19 (6.5)	17 (6.3)	
Age				.71
Mean (standard deviation)	30.5 (5.0)	30.5 (4.7)	30.4 (5.2)	
Education				.55
12th grade or less	10 (1.8)	6 (2.1)	4 (1.5)	
High school graduate or equivalent	34 (6.1)	21 (7.2)	13 (4.8)	
Some college (no degree)	125 (22.3)	58 (19.9)	67 (24.8)	
Associate degree	60 (10.7)	36 (12.4)	24 (8.9)	
Bachelor's degree	198 (35.3)	101 (34.7)	97 (35.9)	
Postgraduate degree	125 (22.3)	65 (22.3)	60 (22.2)	
Choose not to say	9 (1.6)	4 (1.4)	5 (1.9)	
Income				.17
\$10,000-\$29,999	46 (8.2)	23 (7.9)	23 (8.5)	
\$30,000-\$49,999	75 (13.4)	44 (15.1)	31 (11.5)	
\$50,000-\$69,999	71 (12.7)	34 (11.7)	37 (13.7)	
\$70,000-\$89,999	87 (15.5)	52 (17.9)	35 (13.0)	
Over \$90,000	233 (41.5)	114 (39.2)	119 (44.1)	
Choose not to say	42 (7.5)	23 (7.9)	19 (7.0)	
Other	7 (1.2)	1 (0.3)	6 (2.2)	
Marital status				.65
Married/domestic partnership	496 (88.4)	254 (87.3)	242 (89.6)	
Single/never married	54 (9.6)	30 (10.3)	24 (8.9)	
Other	9 (1.6)	6 (2.0)	3 (1.1)	
Choose not to say	2 (0.4)	1 (0.3)	1 (0.4)	
Insurance				.96
Private	307 (54.7)	162 (55.7)	145 (53.7)	
Public	146 (26.0)	75 (25.8)	71 (26.4)	
Combined	60 (10.7)	31 (10.7)	29 (10.7)	
None	32 (5.7)	14 (4.8)	18 (6.7)	
Unsure	4 (0.7)	2 (0.7)	2 (0.7)	
Choose not to say	9 (1.6)	5 (1.7)	4 (1.5)	
Missing	3 (0.5)	2 (0.7)	1 (0.4)	

Abbreviations: COVID-19, coronavirus disease 2019; MCDA, monochorionic-diamniotic.

sIUGR/FGR the most common during COVID-19 ($n = 87$, 32.2%). There were significant differences in pregnancy outcomes with significantly greater percentage of double survivors during the COVID-19 pandemic than prior to COVID-19 (94.7% vs 89.3%, respectively).

Care Consistent with Guidelines—Prior to and During the COVID-19 Pandemic

Those pregnant during the COVID-19 pandemic were significantly more likely to report having received their MCDA diagnosis by gestational week 14 (87.8%) than those pregnant prior to the pandemic (79.0%; Table 2). There were no significant differences between pre-COVID-19 and during COVID-19 relative to receipt of biweekly ultrasounds after gestational week 16; 89.0% of those pregnant prior to COVID-19 and 88.9% pregnant during COVID-19 indicated they received biweekly ultrasounds.

We conducted supplemental analyses to explore the additional variables that may have been related to whether care

was consistent with guidelines. We found that receipt of biweekly ultrasounds after gestational week 16 was significantly related to country a participant resided in ($\chi^2 [4, 546] = 18.56, P < .001$) and their insurance status ($\chi^2 [3, 530] = 9.22, P = .03$). Only 76.9% of those in Canada and 74.3% living in other countries reported receiving guideline-consistent ultrasounds compared to 91.9% in the United States. Additionally, participants with public insurance were less likely to report receipt of timely ultrasounds (83.5%) than those with private insurance (93%).

Perceptions of Pregnancy Management During COVID-19

The 270 participants who reported that they were pregnant during COVID-19 were asked whether they perceived their pregnancy care was influenced by the pandemic. While more than half (57.5%) of participants indicated that they did not believe their pregnancy management was affected

Table 2. Pregnancy Characteristics and Experiences.

	Total sample ($n = 561$) n (%)	MCDA pregnancy prior to COVID-19 ($n = 291$) n (%)	MCDA pregnancy during COVID-19 ($n = 270$) n (%)	P-value
Complications*				
None	124 (22.1)	63 (21.6)	61 (22.6)	.61
sIUGR/FGR	163 (29.1)	76 (26.1)	87 (32.2)	.12
TTTS	149 (26.6)	88 (30.2)	61 (22.6)	.04
Umbilical cord flow issues	116 (20.7)	65 (22.3)	51 (18.9)	.30
TAPS	62 (11.1)	35 (12.0)	27 (10.0)	.61
TRAP	1 (0.2)	-	1 (0.4)	-
Unsure	96 (17.1)	48 (16.5)	48 (17.8)	.70
Choose not to say	45 (8.0)	20 (6.9)	25 (9.3)	.30
				.04
Pregnancy outcome				
Two or more survivors	515 (91.8)	260 (89.3)	255 (94.7)	
One survivor	21 (3.7)	16 (5.5)	5 (1.9)	
No survivors	14 (2.5)	11 (3.8)	3 (1.1)	
Other	8 (1.4)	4 (1.4)	4 (1.5)	
Unsure	1 (0.2)	-	1 (0.4)	
Choose not to say	1 (0.2)	-	1 (0.4)	
Gestational week of delivery				
Mean (standard deviation)	33.7 (3.3)	33.6 (3.6)	33.8 (2.9)	.42
Diagnosis of MCDA pregnancy by gestational week 14				
Yes	467 (83.2)	230 (79.0)	237 (87.8)	.01
No	79 (14.1)	51 (17.5)	28 (10.4)	
Missing	15 (2.7)	10 (3.4)	5 (1.9)	
Biweekly ultrasounds after week 16				
Yes	499 (88.9)	259 (89.0)	240 (88.9)	.79
No	56 (10.0)	28 (9.6)	28 (10.4)	
Missing	6 (1.1)	4 (1.4)	2 (0.8)	
Pregnancy management affected by COVID-19				
Yes	-	-	111 (42.5)	-
No	-	-	150 (57.5)	

*Participants could select more than one complication so as the percentage is >100 .

Abbreviations: COVID-19, coronavirus disease 2019; FGR, fetal growth restriction; MCDA, monochorionic-diamniotic; sIUGR, selective intrauterine growth restriction; TAPS, twin anemia-polycythemia sequence; TRAP, twin reversed arterial perfusion; TTTS, twin-twin transfusion syndrome.

by COVID-19, approximately 44% reported their pregnancy management was affected.

Eighty-seven participants who felt that their pregnancy was affected provided open-ended responses in explaining how their care was affected and 65 participants shared how their pregnancy was not affected. Table 3 provides themes, sub-themes, and example quotes from participants. Four common themes emerged from the 87 written responses of participants who felt that their care was impacted by the pandemic. The central theme centered around policies limiting or restricting the presence of their support person/people throughout their pregnancy care process and was reported by 65.5% of responses. The absence of this individual affected participants in terms of their ability to advocate for themselves and their pregnancy and impacted the pregnant person emotionally and leaving them feeling scared and lonely. Subthemes that coincided with this central theme included the difficulties associated with frequent changes in visitor policies and the lack of support. The second theme to emerge focused on medical inaccessibility caused by delays in appointments or the complete cancellation of prenatal visits ($n = 20$, 23.0%). Three subthemes included scheduling changes because of the pandemic, delayed visits, and appointments that were canceled entirely due to COVID-19. The third theme focused on the pandemic's emotional toll on participants ($n = 15$, 17.2%). Participants shared that they felt isolated, anxious, and overwhelmed because of the pandemic protocols. The final theme centered on perceptions regarding the impersonal nature of telehealth appointments or visits ($n = 7$, 8.0%). Specifically, many patients felt telehealth appointments or visits during the pandemic resulted in impersonal care compared to care they might have received outside of the pandemic. Patients reported feeling rushed and did not have enough information about their care.

Three main themes arose among the written responses of 65 participants who reported COVID-19 did not impact their pregnancy management. The most common theme was related to acknowledging COVID-19 protocols but indicating they had little impact ($n = 29$, 44.6%). For example, this group of respondents acknowledged that the visitation policies at their regular medical facilities might have been altered, but they did not feel these affected their overall pregnancy and birthing care experiences. The second most common theme revealed that many of these respondents felt that their accessibility to medical care (ultrasounds and physicians' visits) was not disrupted by the pandemic or protocols, had received in-person care, and had attentive providers ($n = 21$, 32.3%). Finally, several respondents indicated that their pregnancy occurred before the worst of the pandemic reached the United States, so their pregnancy was not affected ($n = 5$, 7.7%).

Discussion

This study presents the first research to examine patient-reported MCDA pregnancy care during the COVID-19 pandemic, as compared with pre-COVID-19, along with

participant perceptions of how the pandemic may have influenced that care. Interestingly, we discovered that pregnancy outcomes were better during the COVID-19 pandemic, with a greater percentage of double survivors during the pandemic than before. Encouragingly, a greater proportion of participants during the pandemic reported having received their MCDA diagnosis by gestational week 14 (as consistent with current guidelines) than participants pregnant prior to the pandemic. Finally, there were no significant differences in reporting receipt of biweekly ultrasounds for those pregnant before or during the pandemic. Overall, these findings suggest that among this sample, most individuals pregnant with MCDA pregnancies received MCDA diagnosis and screening consistent with guidelines, and care may have been even better during the pandemic. These findings are encouraging given MCDA pregnancies require regular screening so that early diagnosis of complications can occur. Complications can advance quickly (10) and earlier diagnosis is associated with improved outcomes (4,11).

Providers and systems may have been extra careful concerning already high-risk pregnancies, such as MCDA pregnancies, during COVID-19. For example, some health systems and countries created a system of triage for pregnancy and pregnancy management, with MCDA pregnancies, recommended to receive altered visit schedules, but with extra ultrasounds (7). The NHS provided recommendations regarding scheduling of ultrasound visits in terms of not only pregnancy risk level, but also based on ultrasound staff capacity (8). It is important to note that supplemental analyses did find some differences in reported receipt of ultrasounds based on country. However, given the lack of consistent, universal guidelines to manage MCDA pregnancies (3), it is not surprising that we saw differences between countries regarding how these challenges have been met.

While patient-reported outcomes and guideline-consistent care remained unchanged or improved during the pandemic, 42.5% of participants pregnant during COVID-19 felt that the pandemic impacted their care in other ways. Specifically, the overwhelming theme centered around not having a support person to help the participant advocate or be there for emotional support, decision making, or birth. Other themes included: medical inaccessibility such as scheduling challenges, delayed visits and canceled appointments, perception of impersonal care, and the emotional toll of COVID-19 protocols, including feelings of anxiety, stress, and isolation. Among those who felt that care was not affected by COVID-19, the primary themes included perception that there was no disruption of care, pregnancy occurring before COVID-19 protocols were in place, and finally feeling that COVID-19 and related protocols had little impact on their pregnancy management.

These experiences were probably not unique to MCDA pregnancies, and likely shared by many experiencing high-risk pregnancies during COVID-19. The American College of Obstetricians and Gynecologists (12) note that modifications to visitor policies should be made considering local and state COVID-19 guidelines, but innovative approaches need to

Table 3. Qualitative Analysis Including Themes and Example Quotations to Item “Do You Think Your Pregnancy Management was Affected by the COVID-19 Pandemic?”

Themes	Count of theme n (%)	Subthemes	Example quotations
Pregnancy management was affected by COVID-19 (87 unique responses)			
Alone in appointments	57 (65.5)	Frequent changes in visitor policies No support	<ul style="list-style-type: none"> • “Because of covid I was unable to have my mom/sisters at appointments with me so I felt like I needed additional support. Also, the hospital didn’t have any in person classes like parenting, breathing, etc.” • “Had to go alone and advocate for myself to have my husband.” • “I couldn’t have anyone with me at any appointments. Only my husband got to be with me when I had them. My son who is eight couldn’t even go. It was very depressing.” • “It was lonely. My husband wasn’t allowed in for the delivery. I welcomed my babies into the world alone and had to wait 4 h to see them.”
Medical inaccessibility	20 (23.0)	Scheduling challenges Delayed visits Canceled appointments	<ul style="list-style-type: none"> • “Yes, greatly. We were in lockdown. My MRI was canceled (hydrocephalus) my husband wasn’t allowed in to the ultrasounds or appointments.” • “Many appointments with OBGYN were over the phone.” • “Kept out of inpatient care as much as possible due to Covid risk.” • “I was delayed care to see the maternal fetal specialist. My husband was unable to attend ultrasounds or appointments and ask questions.”
Emotional toll	15 (17.2)	Anxiety Overwhelmed Stressful Horrifying Isolation	<ul style="list-style-type: none"> • “Appointments I was alone. During a high-risk pregnancy, it made my anxiety very high.” • “Yes. No one allowed to come with you to appointments. Horrifying and stressful. My husband missed the birth of our twins due to covid-19 screening at each level—45 min to get into the damn hospital.”
Impersonal care	7 (8.0)	Telehealth visits Inattentive providers	<ul style="list-style-type: none"> • “I was rushed in and out of appointments so fast I had no time for questions most of the time.” • “It could have been a lot more in depth and personal without a pandemic.”
Pregnancy management was not affected by COVID-19 (65 unique responses)			
COVID protocols had little impact	29 (44.6)	Care unaffected Beneficial	<ul style="list-style-type: none"> • “Aside from wearing masks at appointments and limited visitors, I don’t feel anything else was different.” • “I feel it was pretty normal other than visitation policies.”³Please format this row to include two bullets
No disruption of care accessibility	21 (32.3)	Accessible appointments In-person care Attentive provider	<ul style="list-style-type: none"> • “I don’t feel like the management was affected. I was still seen every two weeks during the pandemic.” • “Thankfully, no. From the get-go, I was assigned a high-risk care team of multiple OBs and MFMs, and they followed the schedules that should happen in a MoDi pregnancy.”
Pregnancy was before COVID-19 protocols were implemented	5 (7.7%)	Standard policies	<ul style="list-style-type: none"> • I gave birth in April 2020 so the majority of my pregnancy was pre covid.”

Abbreviations: COVID-19, coronavirus disease 2019; OBGYN, obstetrics and gynecology; MFM, maternal-fetal medicine; MRI, magnetic resonance imaging; OB, obstetrician; MoDi, monochorionic diamniotic

be taken so that pregnant patients have adequate support. Support becomes vital in high-risk pregnancies when pregnant people are already susceptible to high levels of stress

independent of the pandemic protocols. Additionally, complications associated with MCDA pregnancies, in particular, can develop quickly and require fast decision making

(10,13). Several participants reported that visitation policies impacted their ability to discuss treatment decisions with the partners and missed having that support person there to advocate on their behalf. Research has shown that MCDA patients who report advocating for their care have better pregnancy outcomes (14,15) further highlighting the critical importance of access to a support person.

Limitations

This study is not without limitations. The nonrandom, convenience sample limits the generalizability of the results. The lack of diversity among the respondents (eg, overwhelmingly well-educated, high income, married/in a partnership, and private insurance) results from the convenience sampling. While this composition of respondents is not unusual as this tends to be the mix of respondents to online, pregnancy-related surveys (16–18), we are likely not reaching and surveying those who would be most impacted by disparities in care for both MCDA pregnancies and COVID-19 (19). Although we are not reaching the most at-risk for disparities in care, it is critical to point out that, although a small percentage, we still see patients who are not receiving standard of care for ultrasounds and for whom COVID-19 is impacting pregnancy management. Additionally, supplemental analyses show that those with public rather than private insurance were less likely to receive ultrasound care consistent with guidelines. This raises additional speculative concern for the level of care encountered by populations who traditionally experience health disparities, and further investigation is warranted.

An additional limitation is using self-report to describe pregnancy-related factors rather than patient records. As such, we may be limited by recall bias. However, we ask participants to report information that occurred within the past five years, and research has demonstrated that individuals can accurately recall pregnancy-related information as much as six years after the pregnancy (20). Further, the self-report nature of the study permitted the collection of qualitative data, which reveals the lived experience about the impact of COVID-19 on pregnancy management and cannot be gathered from patient records. Future research should continue to examine the impact on patient experience via more in-depth qualitative methods such as focus groups or interviews. Finally, we did not screen for stress or mental health conditions such as anxiety or depression and therefore cannot examine prevalence for this population. Future research should examine these issues among this population.

Conclusion

This research provides encouraging evidence of guideline-adherent care experienced by participants undergoing MCDA pregnancies, both before and during the COVID-19 pandemic. In fact, care appears to have been better during the pandemic, hinting that high-risk pregnancies may have received extra attention during this difficult time. It is

important to note that although patient-reported MCDA diagnosis and screening were mostly adherent to guidelines, not all participants reported this level of care and we found differences by country and insurance status. Room exists to improve and ensure that all individuals experiencing MCDA pregnancies receive an MCDA diagnosis by gestational week 14 and receive biweekly ultrasounds after week 16.

We also discovered that nearly half of all participants perceived that their pregnancy management was affected by the COVID-19 pandemic, and specifically our qualitative findings show that individuals were affected by strict policies that limited support persons, personalized care, and the patient's perceived ability to advocate for themselves. Given what is already known about the high-risk nature of MCDA pregnancy coupled with the benefits of both guideline consistent care and patient advocacy, health systems should consider policies for MCDA patients so that potential healthcare-disrupting events do not impact these patients' ability to receive care diagnosis and screening while permitting the presence of at least one support person.


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Stephanie Ernst is a writer, speaker and advocate for change in the way monochorionic twin pregnancies are diagnosed, monitored and followed up. She is the founder of the TAPS Support Foundation, and raises money to continue research into rare complications of multiple pregnancies, and has an extensive portfolio of written work relating to this topic.

Lauren Nicholas, PhD, is an associate professor in the Department of Social Sciences at D'Youville University. She teaches social epidemiology and several health disparity-related courses to various majors at the university. Dr. Nicholas's research focuses on the complex disparities within delivery and receipt of MCDA antenatal care.