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# Admitting privileges and hospital-based care after presenting for abortion: A retrospective case series

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**Objective:** To examine the pathways of care for abortion patients transferred or referred to emergency departments (EDs) or hospitals before and after abortion-providing physicians obtained hospital admitting privileges.

**Data Sources:** This case series was based on retrospective chart review at three abortion clinics in which physicians had obtained admitting privileges in the previous 5 years.

**Study Design:** We identified patients who were transferred or referred to a hospital or ED. Patients were grouped according to the pathway by which their care was transferred or referred to the ED/hospital.

**Principal Findings:** Both before and after admitting privileges, the majority of patients were referred to a hospital before the abortion was attempted and most were for suspected ectopic pregnancy or to perform the abortion in a hospital. Direct ambulance transfer from the facility to the ED/hospital was the least common pathway. We observed few changes in practice from before to after admitting privileges. Preexisting mechanisms of coordination and communication facilitated care that was tailored for the specific patient.

**Conclusions:** We did not find evidence that physician admitting privileges influenced the pathways through which abortion patients obtain hospital-based care, as existing mechanisms of collaboration between hospitals and abortion facilities allowed for management of patients who sought hospital-based care.

## KEYWORDS

abortion, admitting privileges, emergency department, hospital, United States

## 1 | BACKGROUND

Between 2011 and 2014, nine United States (US) states passed laws requiring that physicians who provide abortion care obtain hospital admitting privileges. These laws require abortion-providing physicians to obtain admitting privileges at a hospital, often within a specified distance from the facility. Similarly, eight states have passed laws

requiring that abortion facilities have formal transfer agreements with a local hospital.<sup>1</sup> Admitting privilege laws and hospital transfer agreement laws differ in that the former applies to individual physicians and the latter applies to the facility as a whole, yet they are similar in that many barriers exist to obtaining them. Some states, such as Texas, claim that hospital admitting privileges are needed to improve continuity of care for abortion patients and serve as a credentialing

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qualification of physicians to improve patient safety.<sup>2</sup> However, when physicians in Texas sought admitting privileges from hospitals, they were often denied or ignored, for reasons unrelated to their personal qualifications. These included needing to complete a minimum number of surgeries in the hospital per year or because the hospital did not want to be affiliated with an abortion-providing facility.<sup>3</sup>

Ultimately, in June 2016, the US Supreme Court ruled in *Whole Woman's Health v. Hellerstedt* that Texas' admitting privileges law was unconstitutional. The basis of the argument against requiring admitting privileges was 2-fold: (a) When clinicians are unable to obtain admitting privileges, facilities may be forced to close, which places a burden on women seeking abortion and (b) abortion is safe, with very low rates of complications, and there is no evidence that requiring admitting privileges would make it any safer.<sup>4,5</sup> Indeed, when admitting privilege requirements cause abortion facilities to close, women have to travel further to obtain care.<sup>6,7</sup> Traveling further delays abortion care and compounds emotional and financial burdens for women.<sup>8</sup> Nevertheless, as of October 2018, two states still have admitting privilege laws in effect (North Dakota and Utah), and all eight states still have transfer agreement laws in place.<sup>1</sup>

There is limited evidence about the impact of hospital admitting privileges on patient safety for procedures in outpatient settings in general and for abortion patients specifically.<sup>9</sup> This is because adverse events from abortion are rare<sup>5</sup> and large detailed datasets are required to make quantitative estimates. The few studies that have examined hospital admitting privileges in relation to patient safety have used reports of adverse events from office-based surgery procedures and lack consistent denominators.<sup>10-12</sup> While it is not possible to draw conclusions from these studies, the analyses of these adverse event data did not find a pattern that would indicate that lack of hospital admitting privileges contributes to adverse events. Thus, the evidence remains unclear.

Admitting privileges could plausibly be associated with less fragmented care for patients who need hospital-based care. However, no research to date has explored how admitting privilege requirements impact care for patients presenting for care at abortion facilities. We used a case series study design to describe pathways of patient care, methods of communication between abortion facilities and hospitals, and treatment outcomes for transferred or referred patients when a physician does and does not have admitting privileges. While a case series design cannot prove or disprove any effects of admitting privileges, it can be used in an exploratory way to put forth hypotheses and describe the nature of abortion-related hospital-based care.

## 2 | METHODS

We approached abortion care facilities in states where an admitting privileges law had been passed at least six months but not more than 5 years before. Forty-five facilities in nine states met these requirements; 36 were assessed for eligibility. Requirements for inclusion were that none of the abortion-providing physicians at the facility

had hospital admitting privileges before the law passed in the state, at least one physician obtained privileges after the law passed, and the facility had adequate documentation of patients with known contact with an ED or hospital. Twenty-nine of the 36 facilities assessed were determined to be ineligible because they already had at least one physician with admitting privileges at their facility before the law passed. Four facilities were unable to participate due to ongoing litigation. Three facilities in three states met the criteria and agreed to participate in the study (See Figure 1). This study was approved by the institutional review board of the University of California, San Francisco (UCSF) (IRB #15-18318).

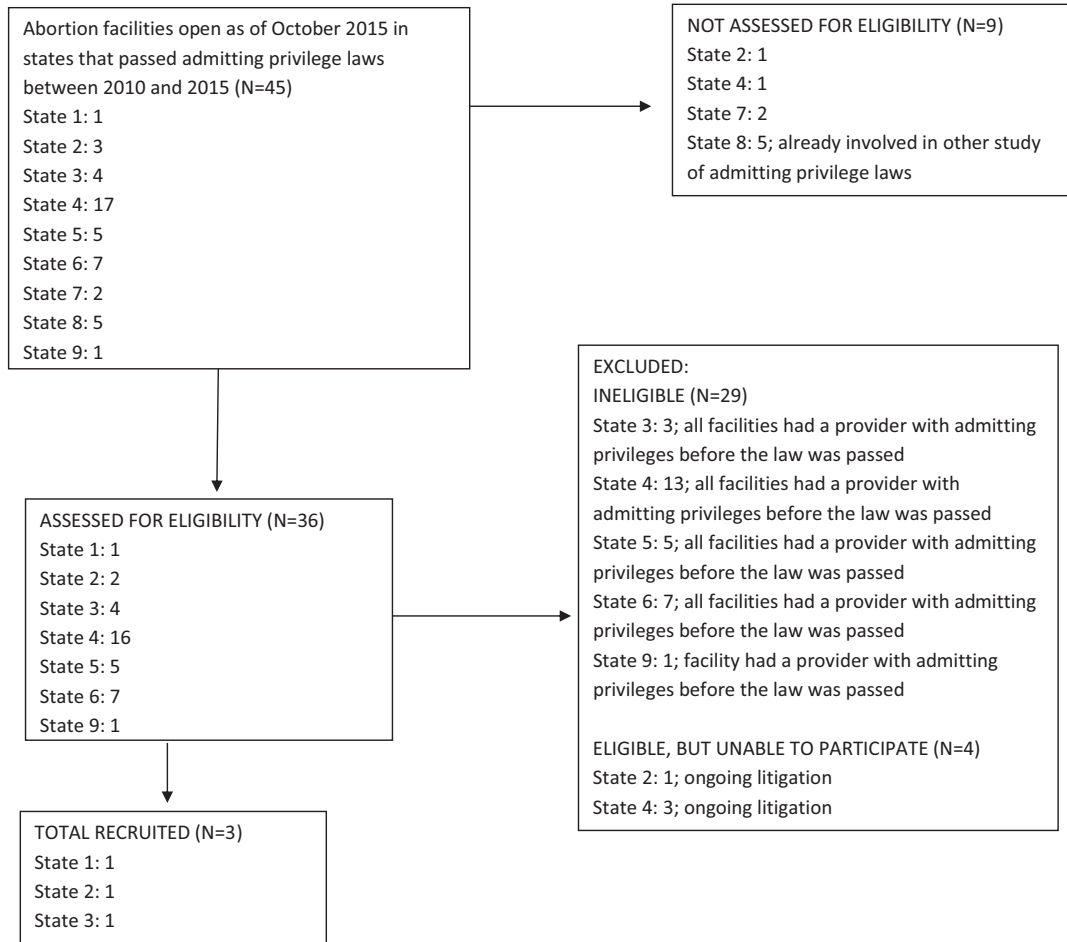
We undertook a retrospective medical chart review from the three participating facilities and abstracted information for patients who had any known contact with a hospital or ED during the initial evaluation prior to, during, or following an abortion. Cases were included up to 5 years before and up to 5 years after the abortion-providing physician received admitting privileges. Facilities did not necessarily contribute equal amounts of time before and after receiving admitting privileges: There were 128 months preadmitting privileges and 73 months postadmitting privileges (Figure 2).

All three facilities provided medication abortion and first-trimester aspiration abortion. (We use the more medically accurate term aspiration abortion to refer to what is commonly called surgical abortion<sup>13</sup>). Two provided second-trimester dilation and evacuation procedures. The facilities provided abortion care up to <14 weeks, 16 weeks, and <22 weeks from the woman's last menstrual period.

The director of facility 1 reported a preexisting relationship with the hospital at which their providers subsequently obtained admitting privileges. They had previously sent all of their patients to that hospital for bloodwork in the period before they began to conduct the bloodwork themselves in-clinic. In addition, a maternal fetal medicine specialist at that hospital regularly evaluated patients referred from the facility. Directors of facilities 2 and 3 did not have a relationship with any specific physicians at local hospitals. At facility 2, the physician with admitting privileges joined the facility after the law had passed but had already had privileges at the local hospital in their capacity as a primary care provider before joining. At facility 3, the physicians with admitting privileges were able to obtain them locally after the law was passed.

Eligible patient charts were identified at the three facilities through a combination of several methods. Facility staff reviewed all complication tracking logs and identified charts of patients who were referred or transferred to an ED or hospital at any point before, during, or after their abortion. Next, they cross-checked with any other logs that recorded referrals, transfers, or patient visit outcomes and identified patients referred or transferred to an ED or hospital. They then reviewed all call-back logs for which patients called the facility postabortion and were referred to an ED or hospital. Finally, at one facility that had electronic medical records (EMR), facility staff identified any faxes sent or received from a hospital regarding former patients that might be related to additional treatment at a hospital.

All charts obtained through the above methods were reviewed for eligibility by two of the coauthors (Cartwright and Belusa). A chart



**FIGURE 1** STROBE diagram: Facilities screened for eligibility

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Facility 1		Pre-Admitting Privileges				Post-Admitting Privileges			
Facility 2				Pre-Admitting Privileges		Post-Admitting Privileges			
Facility 3		Pre-Admitting Privileges				Post-Admitting Privileges			

**FIGURE 2** Timing of data collection, by pre vs postadmitting privileges [Color figure can be viewed at wileyonlinelibrary.com] Notes: Facility 2 did not open until early 2013; Facility 3 closed for reasons unrelated to admitting privileges in late 2015.

was eligible for inclusion if the patient was referred, transferred, and/or admitted to an ED or hospital for any reason (ie, whether or not the reason was abortion-related). All available information from each eligible patient chart was entered directly into a secure online form developed by the UCSF research team in RedCap. Additionally, we requested and received the total patient load for all months of observation from each facility.

For this analysis, we focused on the pathways to hospital-based care before and after receiving admitting privileges. We used the term referral to describe any scenario in which the patient took themselves to a hospital or ED. This may have

involved the abortion facility contacting the hospital ahead of time, the abortion facility directing the patient to go to the nearest hospital or ED without contacting the hospital first, and other times, the patient may have self-referred. We used the term transfer only in cases in which the patient was directly transferred from the abortion facility to a hospital by ambulance. In accordance with the PAIRS Framework<sup>14</sup>—a framework for categorizing abortion-related adverse events and morbidities—immediate incidents were defined as occurring at the initial abortion appointment, during the procedure, or while the patient was recovering in the facility. Delayed incidents were

defined as occurring after the patient left the facility and up to 4 weeks after the procedure. The PAIRS Framework also guided the categories and definitions used for reporting key data about cases meeting inclusion criteria including the incidents in each case, diagnoses, treatments received at the ED or hospital, hospital admission (defined as an inpatient overnight hospital stay), and clinical outcome (see Figure S1).

### 3 | RESULTS

The three facilities provided 13,693 abortions in the 128 months prior to obtaining admitting privileges and 8,609 abortions in the 73 months afterward. A total of 46 patients met inclusion criteria of having hospital contact after seeking abortion care, 22 before and 24 afterward. Of these 46 patients, over half (26) were cases in which an abortion was not initially attempted at the abortion facility because of suspected ectopic pregnancies (21), and five because the patients had medical conditions requiring hospital-based abortions. After ectopic pregnancy was ruled out in 3 of the 21 patients, they then returned to the facility for aspiration abortions with no incidents. Median gestation was 7 weeks 6 days before admitting privileges and 8 weeks 9 days

after. For those who had abortions, most were aspiration abortions (Table 1).

Among the 46 cases, four pathways of care between the abortion facility and ED or hospital emerged based on immediate transfer or referral or delayed referral and whether the abortion-providing facility had direct communication with the ED or hospital (Table 2). The following four pathways were identified: (a) immediate transfer by ambulance from the abortion facility to an ED either during the abortion procedure or postabortion initiated by an emergency phone call; (b) immediate referral from the abortion facility to the local ED/hospital where the abortion facility called ahead to the ED to inform them that the patient was being referred and to expect them or provided the patient a referral form and told them to go directly from the facility to the ED; (c) delayed referral from the abortion facility to an ED/hospital either when the patient called the facility with concerns postabortion or the facility called the patient after receiving test results (in these cases, the abortion facility did not call the ED directly on behalf of the patient—though the patient may have had an “emergency letter” or referral form provided by the facility); and (d) delayed self-referral by the patient to an ED/hospital (in these cases, the facility was not contacted until the patient had already presented at the ED).

	Preadmitting privileges (N = 22)	Postadmitting privileges (N = 24)
Number of facility service months included	128	73
Total number of abortion patients during service months	13,693	8,609
Median patient age	29.0	27.5
Patient race/ethnicity		
White	13	14
Black	3	3
Native American	–	1
Asian	2	2
Hispanic	2	2
Multiracial	1	2
Not available in chart	1	0
Median gestation in weeks <sup>a</sup>	7.6	8.9
Type of abortion		
Medication abortion	1	5
Aspiration/dilation & evacuation <sup>b</sup>	8	9
Abortion not attempted at facility before transfer or referral	14	12
Abortion performed at hospital or by private physician	1	2
Abortion not performed <sup>c</sup>	12	8

**TABLE 1** Characteristics of patients transferred or referred to an emergency department (ED) or hospital, pre and postadmitting privileges

<sup>a</sup>Three cases missing gestation preadmitting privileges, one case missing postadmitting privileges.

<sup>b</sup>Includes both first- and second-trimester procedures that were performed at abortion facilities after ectopic pregnancies were ruled out at ED/hospital visits.

<sup>c</sup>Transfer/referral occurred before abortion was attempted.

**TABLE 2** Reasons for patient transfer/referral by pathway to care, pre and postadmitting privileges

Reason for transfer/referral	Preadmitting privileges (N = 22)	Postadmitting privileges (N = 24)
Pathway 1: Facility directly transferred care by ambulance		
Hemorrhage	1	1
Vasovagal response <sup>a</sup>	1	-
Inadequate pain control	-	1
Pathway 2: Facility immediately referred patient by referral form or called hospital		
Ectopic pregnancy/suspected ectopic pregnancy <sup>b</sup>	9	9
Placenta accreta/suspected placenta accreta <sup>c</sup>	-	3
Continuing treatment for preexisting medical conditions	-	1
Inadequate cervical dilation and pain control	-	1
Pathway 3: Facility referred patient by phone for delayed incident after initial visit		
Suspected ectopic pregnancy	3	-
Heavy bleeding	1	2
Chest pain	-	1
Pathway 4: Patient self-referred for delayed incident and subsequent patient-facility or hospital-facility communication transpired		
Suspected ectopic pregnancy	1	-
Missed ectopic pregnancy <sup>d</sup>	2	-
Postabortion bleeding	-	2
Suspected retained products of conception	2	-
Postabortion pain	2	2
Confirmation of complete abortion	-	1

<sup>a</sup>Vasovagal response is a reflex of the involuntary nervous system that causes the heart to slow down, blood pressure to drop suddenly, and the blood vessels to dilate.

<sup>b</sup>Ectopic pregnancy is a pregnancy implanted outside of the uterine cavity.

<sup>c</sup>Placenta accreta is a serious pregnancy condition that occurs when blood vessels and other parts of the placenta grow too deeply into the uterine wall and can result in hemorrhage upon placental removal.

<sup>d</sup>Missed ectopic pregnancy is a pregnancy implanted outside of the uterine cavity but not discovered or suspected at the time of the abortion visit.

Both before and after admitting privileges, most cases (24 out of 46) were referred to an ED/hospital due to suspected ectopic pregnancies. In both time periods, most of the 46 cases fell into Pathway 2, where the facility directly referred the patient to a hospital by calling ahead or with a referral form (Table 2).

### 3.1 | General findings by pathway

We describe general findings by pathway below. Clinical details of each case are described in Table 3.

#### 3.1.1 | Pathway 1 (ambulance transfer)

There were four emergency ambulance transfers. Among these, two occurred before and two occurred after providers had admitting privileges. Among those occurring before admitting privileges, one patient was transferred to the hospital where she was admitted after a severe vasovagal response during cervical dilation, before the aspiration abortion had begun. The facility provider spoke to hospital physicians to communicate about the case. The patient received observation care only at the hospital and was discharged with stable

vitals and subsequently obtained an abortion. In the other case, the patient experienced hemorrhage immediately after the aspiration abortion. Direct communication between the hospital and abortion-providing physician occurred during her observation at the ED and she was discharged later the same day. The patient reported being "shamed" by hospital staff and felt she received poor treatment at the hospital. She then presented at another hospital near her home 2 days later and received additional treatment (methergine\* and uterine reaspiration).

For the postadmitting privileges cases, both were taken to the hospital where the providers had admitting privileges (which were also the main hospitals in the area) and in both cases, it was the hospital-based physician (not the abortion provider) who admitted and managed care of the patient. In one case, the abortion provider spoke with the ED physicians, reviewed the patient's clinical notes, and consulted on whether she could be discharged following observation overnight. In the 2nd transfer case that occurred postadmitting privileges, the patient had had an aspiration abortion 4 days prior and returned to the facility due to abdominal pain. She was diagnosed with an intrauterine blood clot and prepared for reaspiration in the facility, but was transferred by ambulance during the

**TABLE 3** Pathways of care, treatments at emergency department (ED) or hospital, hospital admissions, and outcomes for abortion patients transferred or referred to an ED or hospital, preand postadmitting privileges

Case	Pathway	Abortion attempted at facility pretransfer or referral?	Transfer/referral immediate or delayed? <sup>a</sup>	Reason for transfer/referral and final diagnosis (if different)	Treatment at ED/Hospital	Hospital Admission	Outcome
Preadmitting privileges							
1	1	Yes (aspiration)	Immediate	Hemorrhage	Uterine reaspiration <sup>b</sup> ; uterotonic medication	Yes	Resolved (treatment of incomplete abortion by hospital physician)
2	1	No	Immediate	Other (vasovagal response during cervical dilation)	Observation care, ultrasound with no evidence of perforation <sup>c</sup>	Yes	Resolved (completed abortion by private OB/GYN)
3	2	No	Immediate	Suspected ectopic pregnancy <sup>d</sup>	Serum hCG	Unknown	Unknown
4	2	No	Immediate	Suspected ectopic pregnancy	Salpingectomy <sup>e</sup>	Unknown	Resolved
5	2	No	Immediate	Suspected ectopic pregnancy	Unknown	Unknown	Unknown
6	2	No	Immediate	Suspected ectopic pregnancy	Unknown	Unknown	Unknown
7	2	Yes (aspiration)	Immediate	Suspected ectopic pregnancy	Salpingectomy	Unknown	Resolved
8	2	No	Immediate	Suspected ectopic pregnancy	Transvaginal ultrasound, serum hCG <sup>f</sup>	Unknown	Unknown
9	2	No	Immediate	Suspected ectopic pregnancy	Medical management of ectopic pregnancy	Unknown	Unknown (patient to do follow-up serum hCG near home)
10	2	No	Immediate	Suspected ectopic pregnancy	Medical management of ectopic pregnancy	Unknown	Unknown (patient to follow-up with primary physician)
11	2	No	Immediate	Suspected ectopic pregnancy or missed abortion <sup>g</sup>	Unknown	Unknown	Unknown
12	3	No	Delayed	Suspected ectopic pregnancy	Unknown	Unknown	Unknown
13	3	No	Immediate	Suspected ectopic pregnancy; confirmed intrauterine pregnancy	Serum hCG and serial ultrasounds one week apart	No	Resolved (completed aspiration abortion at original facility)
14	3	Yes (medication abortion)	Delayed	Retained products of conception, hemorrhage	Uterine aspiration; blood transfusion	Yes	Resolved
15	3	No	Delayed	Suspected ectopic pregnancy; confirmed completed spontaneous abortion	Serum hCG and serial ultrasounds	No	Resolved
16	4	No	Delayed	Suspected ectopic pregnancy	Salpingectomy	Unknown	Resolved
17	4	Yes (aspiration)	Delayed	Suspected retained products of conception	Observation care	Unknown	Resolved

(Continues)

TABLE 3 (Continued)

Case	Pathway	Abortion attempted at facility pretransfer or referral?	Transfer/referral immediate or delayed? <sup>a</sup>	Reason for transfer/referral and final diagnosis (if different)	Treatment at ED/Hospital	Hospital Admission	Outcome
18	4	No	Delayed	Missed ectopic pregnancy	Salpingectomy	Unknown	Resolved
19	4	Yes (aspiration)	Delayed	Abdominal pain and postabortion bleeding	Uterine reaspiration for possible retained tissue	Yes	Resolved
20	4	Yes (aspiration)	Delayed	Suspected retained products of conception; Postabortion Infection	Uterine reaspiration; non-IV medication; IV antibiotics	Yes	Resolved
21	4	Yes (aspiration)	Delayed	Missed ectopic pregnancy	Salpingectomy	Yes	Resolved
22	4	Yes (aspiration)	Delayed	Postabortion pain	Uterine reaspiration for possible retained tissue	No	Resolved
Postadmitting privileges							
23	1	Yes (aspiration)	Immediate	Hemorrhage	Observation care, ultrasound with no retained products of conception nor active bleeding	Yes	Resolved
24	1	Yes (aspiration)	Delayed	Inadequate pain control and poor visualization	Unknown	Unknown	Unknown
25	2	No	Immediate	Suspected placenta accreta <sup>h</sup>	Abortion attempted; postabortion hysterectomy for uncontrolled bleeding	Yes	Resolved (abortion performed at out-of-state university hospital)
26	2	No	Immediate	Suspected cesarean scar ectopic pregnancy	Surgical excision of cesarean scar ectopic pregnancy, tubal ligation	Yes	Resolved
27	2	No	Immediate	Suspected placenta accreta	Observation care, transvaginal ultrasound	No	Continued pregnancy
28	2	No	Immediate	Suspected ectopic pregnancy; confirmed dermoid cyst <sup>i</sup>	Observation care, ultrasound	No	Unknown (patient had appointment at hospital to remove cyst)
29	2	No	Immediate	Suspected ectopic pregnancy; confirmed missed abortion	Uterine aspiration	Yes	Resolved
30	2	No	Immediate	Suspected placenta accreta	Patient left before being evaluated	No	Unknown
31	2	Yes (aspiration)	Immediate	Hospitalized prior to abortion for gastroparesis, type 1 diabetes mellitus, and hyperemesis	Admitted to hospital after abortion for ongoing treatment of preexisting medical conditions	Yes	Resolved
32	2	No	Immediate	Inadequate cervical dilation and poor pain control	Vaginal cervical ripening agent, uterine aspiration, antibiotics	Yes	Resolved (patient spontaneously delivered at hospital and was treated for retained placental tissue)

(Continues)



TABLE 3 (Continued)

Case	Pathway	Abortion attempted at facility pretransfer or referral?	Transfer/referral immediate or delayed? <sup>a</sup>	Reason for transfer/referral and final diagnosis (if different)	Treatment at ED/Hospital	Hospital Admission	Outcome
33	2	Yes (aspiration)	Immediate	Suspected ectopic pregnancy	Unknown	Unknown	Unknown
34	2	No	Immediate	Suspected ectopic pregnancy	Unknown (referred to patient's OB/GYN for preoperative appointment)	No	Unknown
35	2	No	Immediate	Suspected cervical ectopic pregnancy or incomplete spontaneous abortion; confirmed incomplete spontaneous abortion	Ultrasound confirming completed spontaneous abortion	No	Resolved
36	2	No	Immediate	Suspected ectopic pregnancy	Serum hCG, ultrasound confirming intrauterine pregnancy	No	Resolved (completed aspiration abortion at original facility)
37	2	No	Immediate	Ectopic pregnancy	Salpingo-oophorectomy, <sup>b</sup> treatment for sexually transmitted infection	Yes	Resolved
38	2	No	Immediate	Suspected ectopic pregnancy	Serum hCG, ultrasound confirming intrauterine pregnancy	No	Resolved (completed aspiration abortion at original facility)
39	3	Yes (medication abortion)	Delayed	Hemorrhage	Blood transfusion	Yes	Resolved
40	3	Yes (medication abortion)	Delayed	Postabortion bleeding	Uterine aspiration	Yes	Resolved
41	3	Yes (aspiration)	Delayed	Chest pain; confirmed gastroesophageal reflux disease (GERD)	Medication for GERD	No	Resolved
42	4	Yes (medication abortion)	Delayed	Confirmation of complete abortion	Urine and serum pregnancy testing	No	Unknown
43	4	Yes (aspiration)	Delayed	Postabortion pain and suspected postabortion infection; confirmed retained products of conception	Uterine reaspiration, antibiotics	Yes	Resolved
44	4	Yes (aspiration)	Delayed	Postabortion bleeding; postabortion infection	IV antibiotics, ultrasound confirmed no retained products of conception	Yes	Resolved

(Continues)

TABLE 3 (Continued)

Case	Pathway	Abortion attempted at facility pretransfer or referral?	Transfer/referral immediate or delayed? <sup>a</sup>	Reason for transfer/referral and final diagnosis (if different)	Treatment at ED/Hospital	Hospital Admission	Outcome
45	4	Yes (medication abortion)	Delayed	Postabortion pain	Pain medication	Unknown	Resolved
46	4	Yes (medication abortion)	Delayed	Postabortion bleeding; retained products of conception	Uterine aspiration; blood transfusion	Yes	Resolved

Notes: Pathway 1: Facility transferred care by ambulance; Pathway 2: Facility directly referred patient by referral form or called hospital; Pathway 3: Facility referred patient by phone after visit; Pathway 4: Patient self-referred but subsequent patient-facility or facility-hospital-facility communication transpired.

<sup>a</sup>Immediate incidents occurred at the initial abortion appointment, during the procedure or while the patient is recovering in the facility. Delayed incidents occurred after the patient left the facility and up to 4 weeks after the procedure.  
<sup>b</sup>Uterine reaspiration is a repeat abortion using a suction aspiration procedure.  
<sup>c</sup>Perforation is a puncture or hole in the uterus made by an instrument during an aspiration procedure.  
<sup>d</sup>Ectopic pregnancy is a pregnancy implanted outside of the uterine cavity.  
<sup>e</sup>Salpingectomy is the surgical removal of one or both fallopian tubes.  
<sup>f</sup>hCG is a hormone produced by the placenta after implantation. It is the hormone detected by most pregnancy tests.  
<sup>g</sup>Missed abortion is early fetal loss diagnosed by ultrasound or a blood test and before there is bleeding or other symptoms of miscarriage.  
<sup>h</sup>Placenta accreta is a serious pregnancy condition that occurs when blood vessels and other parts of the placenta grow too deeply into the uterine wall and can result in hemorrhage upon placental removal.  
<sup>i</sup>Dermoid cyst is an abnormal ovarian growth containing epidermis, hair follicles, and sebaceous glands, derived from residual embryonic cells.  
<sup>j</sup>Salpingo-oophorectomy is surgery to remove the ovaries and fallopian tubes.

procedure due to poor visualization and inadequate pain control. The transfer occurred so that the reaspiration could be completed at a hospital for better visualization. The facility provider submitted transfer paperwork to the hospital where they had admitting privileges and care was managed by hospital-based physicians.

3.1.2 | Pathway 2 (Direct referral of patient)

Among the 46 cases, 23 patients were referred by direct phone call or referral form from the abortion facility to the ED—nine before admitting privileges and 14 afterward. Most cases in this pathway (18 of 23) were suspected ectopic pregnancies that the abortion facility identified when the patient first presented for the abortion. These were referred for confirmation if the pregnancy could not be visualized in the uterus and for treatment since two of the three abortion facilities did not treat ectopic pregnancies onsite. In four of these cases (one before and three after admitting privileges), patients were referred to a hospital closer to the patient’s home according to patient preference, and not an ED close to the abortion facility. For one of the suspected ectopic pregnancy referrals after admitting privileges, the patient was ultimately diagnosed with a dermoid cyst. The patient appeared to have not been told that she was not pregnant after being assessed at the hospital because she reported that when she asked the hospital staff if she was still going to be able to terminate her pregnancy, they told her that they were not an abortion facility so they could not answer those questions. She continued seeking an abortion despite not needing one; when she called the abortion facility again for an appointment, the facility staff explained that she was not pregnant and thus did not need an abortion and that her care had been transferred to an obstetrician-gynecologist at the hospital for removal of her dermoid cyst. Additionally, there were three cases of suspected placenta accreta, all after admitting privileges, which were referred for management in a hospital setting. For two of these cases, patients were referred to hospitals out of state—where the abortion facility staff knew of hospital-based physicians with the required skills and willingness to perform the abortions.

We also observed several examples of collaboration between facilities and hospitals to facilitate care of patients desiring abortion—we summarize two examples here, both of which occurred after admitting privileges. In the first case, a pregnant patient hospitalized for poorly controlled type 1 diabetes, gastroparesis, and severe hyperemesis (two gastrointestinal disorders) requested an abortion. The physician at the hospital near the patient’s home communicated directly with the abortion facility to coordinate transfer of care to the facility, 89 miles away from where the patient was hospitalized. After the abortion was completed by one of the facility physicians, a second physician at the abortion facility admitted the patient to a different nearby hospital where the physician had admitting privileges for continued monitoring of her other health conditions. This is also the only case we identified among all 24 postadmitting privilege cases where an abortion provider with privileges admitted a patient into a hospital. In the second case of collaboration between facilities and hospitals, a woman was diagnosed at an abortion facility with a cesarean scar ectopic pregnancy. Care was transferred to a physician at a nearby hospital, who had become a “trusted” physician and was willing and able to

provide abortions for more complex patients. Complete hospital records were present in her chart. The patient was driven to the hospital by a friend and the abortion facility physician transferred her care to the hospital physician. The patient was admitted and another hospital physician performed a laparotomy,<sup>†</sup> hysterotomy,<sup>‡</sup> removal of the pregnancy, and a tubal ligation during the hospital stay.

### 3.1.3 | Pathway 3 (Referral by phone)

Pathway 3 was most often used for delayed concerns and was the pathway to care for 7 of the 46 patients, four before admitting privileges and three afterward. In these cases, patients were either called by the facility for a delayed referral after test results were received or when symptoms occurred after the abortion, the patients called the abortion facility staff, who then recommended that the patient go to their closest ED. In three cases, patients had blood drawn at the facility due to suspected ectopic pregnancies, but it had to be sent out for human chorionic gonadotropin (hCG) testing. When the facility received the results, they called the patients and told them to go to their closest ED for assessment (this only occurred before admitting privileges, as in the postadmitting privileges period, all three facilities could perform bloodwork within the facility). Among the four calls from patients to the facilities, three were for bleeding concerns after a medication abortion. Local hospitals were often closer than the abortion provider—one patient lived 160 miles from the abortion facility. In these cases, the abortion facility did not call the hospital ahead of the patient, but in one case, occurring before admitting privileges, the facility advised the patient to take an “emergency letter” with her to the hospital that had been provided by the abortion facility at the initial appointment. This pathway also captured one patient after admitting privileges who was referred for care when the incident was unrelated to the abortion: The patient called the abortion facility complaining of chest pain after an aspiration abortion. The patient was advised to go to the ED where she was diagnosed with gastroesophageal reflux disease and treated.

### 3.1.4 | Pathway 4 (Self-referred)

Pathway 4 captures patients who self-referred to an ED, and abortion facility staff only learned about the self-referrals because they subsequently communicated with either the hospital staff or the patient. A total of 12 of the 46 patients were referred this way (seven before and five after admitting privileges); however, there are likely to be additional patients who self-referred to an ED or hospital unbeknownst to the abortion facility. In 8 of these 12 cases, the patient experienced postabortion bleeding, cramping, or pain. In one case occurring after admitting privileges, a medication abortion patient who lived 230 miles from the abortion facility had no adverse event, but went to a nearby ED 14 days after her abortion seeking a routine follow-up ultrasound to confirm that her abortion was complete. The patient called the facility from the ED reporting that the ED would not provide her an ultrasound. The ED physician informed the abortion facility staff that he was going to do a quantitative hCG

test and the facility staff reiterated that an ultrasound is common procedure after medication abortion. The discussion revealed the ED physician’s misunderstandings about abortion facility practices regarding their recommendations for follow-up care and ended abruptly. Ultimately, the ED requested a doctor’s order from the abortion facility before providing the patient with an ultrasound. In an additional three cases, all before admitting privileges, the patients self-referred for suspected ectopic pregnancies that were diagnosed only after the patient left the facility.

## 4 | DISCUSSION

This case series demonstrates that patients who obtain hospital-based care after presenting for an abortion do not fit neatly into a single pathway to care. Most who receive hospital-based care after presenting for an abortion are not directly transferred from an abortion facility. Instead, most of the patients in our study were referred to a hospital either at the initial visit (because of a suspected ectopic pregnancy or, more rarely, a need for hospital-based abortion care) or self-referred to a hospital after the initial visit. Among the 46 cases, 20 were delayed referrals occurring after the patient left the abortion facility. The pathways through which abortion patients obtained hospital-based care did not appear to differ after the physicians obtained admitting privileges. Thus, we did not find evidence that requiring abortion providers to obtain hospital admitting privileges influences the pathways through which abortion patients obtain hospital-based care.

Based on the data and notes that we obtained from patient records, we observed few qualitative differences in provider behavior pre- and postadmitting privileges for immediate incidents, suggesting that obtaining admitting privileges does not appear to change the subsequent care patients received in a hospital setting. One could argue that admitting privileges could facilitate coordination of care between abortion clinics and hospitals and therefore the rate of referrals would go up. However, even after obtaining admitting privileges, the need for hospital-based care was low. When emergency care in a higher level setting was needed in four cases, an ambulance was called to transfer care immediately to a hospital, and facility staff and/or the physician coordinated with the hospital by phone both before and after obtaining privileges. Even after admitting privileges, the hospital-based physician conducted the initial assessment and admitted patients to the hospital even where abortion providers had admitting privileges.

The structure of emergency departments and the specific treatment needs of patients underscore that admitting privileges do not ensure that an abortion provider can give the most prompt and efficient care nor give specialized care when it is needed. For example, in two of three cases of suspected placenta accreta (all three of which were immediately referred and occurred after admitting privileges), the abortion-providing physicians referred the patients to out of state hospital-based physicians with the requisite skills to manage these complexities. Most women received high quality care from hospital health care workers who are capable of managing urgent incidents in early pregnancy and have more regular practice at managing complex cases, including high-risk patients or those

with concurrent or pre-existing conditions. Thus, changing practice so that abortion-providing physicians admit and manage their patients at hospitals does not appear to be necessary for high-quality patient care.

Similarly, provider admitting privileges did not appear to have any impact on the care patients received for delayed referrals, when they self-referred or when they presented for care at a hospital far from the abortion facility. Instead of going to the hospital where the provider had admitting privileges, patients often sought follow-up care at their closest hospital because they needed care outside of regular facility hours or would have to travel long distances to the original abortion facility. This finding is consistent with previous research that demonstrates that the further abortion patients live from a provider the more likely they are to visit an ED for follow-up care than the original abortion provider after an abortion.<sup>15</sup> Laws that require abortion providers to obtain and maintain hospital admitting privileges appear to have been developed based on assumptions that all abortion-related incidents involve direct hospital transfers (what we call Pathway 1), but our findings suggest most abortion-related hospital-based care involves other pathways to care where having admitting privileges would not be applicable. Likewise, requiring abortion facilities to have transfer agreements with nearby hospitals would also not impact most patients who required hospital-based care.

We also found that preexisting lines of communication and coordination between abortion facilities and hospitals enabled patients to receive care tailored to her specific case, with the hospital able to take into consideration the patients' plans to terminate their pregnancies. For both transfers and referrals, continuity of care was evident when abortion providers took an active role in calling hospitals before the patient arrived, in order to provide clinical information and advocate for the best course of action for their patient. In some cases, such lines of communication were facilitated when abortion facilities already had existing collaborative relationships with the ED physicians and/or the obstetricians and gynecologists on the hospital staff. Additionally, in some instances when abortion facilities preemptively asked patients to sign releases of records from other providers (including hospitals), and then devoted staff time to obtain any records, it allowed abortion facilities to confirm patient outcomes. Open communication and close coordination of care can and often does occur in the absence of admitting privileges.

Conversely, stigma around abortion and abortion providers allows abortion care in most communities to be isolated to abortion facilities and separated from other reproductive health care.<sup>16-18</sup> This marginalization could affect communication between the abortion facility and hospital and may negatively impact patient care and outcomes. Delays in or inappropriate care can also occur if women self-refer to hospitals that have institutional policies that restrict or prohibit abortion.<sup>19,20</sup> Efforts to allow broader religious and moral exemption claims by health care providers may further compound this problem, in both religiously affiliated and public hospitals, if health care workers refuse to treat women who need abortion-related care.

Abortion facilities will always need to collaborate with hospitals for specialized/complex care. Many of the cases referred for hospital follow-up were not directly related to the abortion, but were

for suspected ectopic pregnancy. Previous research has noted that the system of care for ectopic and suspected ectopic pregnancies is fragmented<sup>21,22</sup> and that patients often receive care at sites other than where the ectopic pregnancy was first suspected or diagnosed. At early gestations, inability to identify an intrauterine pregnancy is not a reason to delay abortion care. Clinical guidelines recommend that in such cases, the patient be given an abortion and followed up until resolution of the pregnancy is verified.<sup>23,24</sup>

This study adds case series data to the literature on the nature of hospital-based care after presenting for an abortion. However, it is limited in its ability to demonstrate causal relationships. A case series design can only put forth hypotheses and does not make conclusions about the utility of admitting privileges or their effects on safety. It cannot be used to draw inferences regarding treatment effect. Additionally, because cases were selected based on logs that the clinics maintained and include only those cases of hospital-based care that they were aware of, some cases are probably missing. We are likely missing additional cases of self-referrals (Pathway 4) which may not be reported to the abortion provider. While we provided the number of patients seen during the observation months, we did not feel it appropriate to calculate or compare estimates of the frequency of hospital transfers or referrals.

There are opportunities for EDs and hospitals to improve the postabortion care they offer. In some cases, the EDs did not provide postabortion care in line with best practices. There may be other hospital-specific barriers to postabortion care provision, including lack of training for clinicians and problems with insurance billing (especially if it could be construed that the hospital provided an abortion outside of their institutional policy).<sup>25</sup> To truly improve the care patients receive at hospitals subsequent to presenting for an abortion, hospitals should have the capability of providing high-quality postabortion care, especially as some patients will seek follow-up care far from the abortion facility or without notifying the original abortion provider.

## 5 | CONCLUSION

In the specific circumstances of the cases described in this case series, physician admitting privilege laws did not appear to impact the ways in which abortion patients received hospital-based care. Admitting privileges and transfer agreements are not applicable when patients seek delayed follow-up care far from the original abortion provider. Preexisting mechanisms of communication and coordination appear to safeguard continuity of care. Building trusted relationships before a transfer or referral is needed may contribute to the quality of care received at hospitals in these situations. EDs and hospitals can also assess their internal procedures for providing postabortion care and provide values clarification to reduce stigma of abortion providers and patients.

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## CONFLICT OF INTEREST

None.

## AUTHOR CONTRIBUTIONS

UDU, VG, EB, and AFC led the conceptual design of the study. EB and AFC led the collection of the data. UDU and AFC conducted the data analysis and interpretation, drafted the manuscript, and revised the paper for important intellectual content. EB, VG, and SCMR contributed to the analysis and interpretation of the data and reviewed the manuscript for important intellectual content. All authors critically reviewed the paper drafts, gave final approval for the published draft, and are accountable for all aspects of the work.

## ENDNOTES

\* Methergine is a medication used to prevent and control bleeding from the uterus after abortion.

† Laparotomy is an incision into the abdominal cavity, for diagnosis or in preparation for surgery.

‡ Hysterotomy is an incision in the uterus.

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## SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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