

## Abortion Training in Three Family Medicine Programs: Resident and Patient Outcomes

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**Background:** Three family medicine residency programs in California integrated abortion training into routine gynecology rotations in academic years 2003–2004 and 2004–2005. **Methods:** Forty-six (88%) of 52 eligible residents participated in the abortion training sessions. Of these 46 residents, 39 (85%) chose to perform abortion procedures, and seven residents elected to provide other aspects of patient care only. **Results:** Resident evaluations of the training program were overwhelmingly positive. Moreover, two thirds of the 43 post-training survey respondents reported that the training program increased their interest in providing abortion services, and no resident reported decreased interest. The resident complication rate was 1.0%. In post-procedure surveys completed by 155 patients at two training sites, patients reported a high level of satisfaction with the care they received from the training team. **Conclusions:** These program evaluation results suggest that abortion training can safely be integrated into family medicine residency programs, with a positive reception by both residents and patients.

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The specialty of family medicine is well suited to provide personalized, continuous care to patients throughout their reproductive years. Yet when a patient seeks an abortion, as one in every three women will do before age 45,<sup>1</sup> most family physicians refer the patient to another health care provider.<sup>2,3</sup> This disruption in continuity of care occurs at a critical time for patients, and it occurs despite evidence suggesting that many primary care providers regard early abortion as appropriate for their scope of practice.<sup>4-7</sup>

Because few family medicine residency programs in the United States offer abortion training,<sup>8</sup> inadequate preparation remains an obstacle for family physicians who wish to provide abortion care. To address this situation, three family medicine residency programs in California partnered with the Training in Early Abortion for Comprehensive Healthcare (TEACH) Project at

the University of California-San Francisco (UCSF) to enhance their capacity to provide abortion training. Efforts included faculty development, enhancing on-site training opportunities, and developing collaborative clinical rotations with local Planned Parenthood clinics. This article describes resident and patient outcomes of the collaborative rotations with Planned Parenthood for academic years 2003–2004 and 2004–2005.

### Methods

During academic years 2003–2005, the TEACH collaborative consisted of three family medicine residency programs and five clinics associated with two Planned Parenthood affiliates. TEACH staff at UCSF provided administrative and technical support for the training program, including a uniform curriculum and set of evaluation instruments. The TEACH Project received partial grant funding for its activities, and its evaluation research was approved by the UCSF Human Subjects Institutional Review Board.

### Resident Participation

The rotations aimed to expose residents to various aspects of abortion care, whether or not they planned to perform abortion procedures. Prior to clinical training,

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residents were asked to complete a values clarification exercise to explore their comfort with abortion provision and a Skills Inventory to summarize their prior experience with uterine evacuation procedures. Reviewing this material with residents allowed faculty to tailor the training experience to the residents' individual learning needs.

The residency programs integrated abortion training into routine gynecology rotations that lasted 4–8 weeks. Although the residents were required to participate in the gynecology rotations, they could opt out of any or all components of the abortion training. When this occurred, third-year residents who otherwise would have missed out on the training filled the available sessions.

### Training

The training plan consisted of didactic and clinical components. Didactic sessions were incorporated into the residents' core curricula and included a preclinical orientation and simulation training in manual vacuum aspiration (MVA),<sup>9</sup> presentations on abortion and family planning, and a half-day ultrasound practicum.

Clinical training included 1 day per week at Planned Parenthood sites. One-on-one procedural training consisted of first-trimester vacuum aspirations (primarily MVA) using local anesthesia. Planned Parenthood incorporated medication abortions into separate family planning clinics, so residents' experience with this method was limited. Residents who preferred not to provide abortions had the option of practicing "ancillary" procedures such as administration of cervical anesthesia. Residents also spent approximately 1 hour of each session counseling patients under supervision and participating in pre-procedure ultrasound examinations.

The trainers at Planned Parenthood were experienced abortion providers, and more than 90% were family physicians. Each trainer received an orientation to the training plan and a faculty version of TEACH's *Early Abortion Training Workbook*<sup>10</sup> (available for free download at [www.ansirh.org/trainingworkbook/trainingworkbook.html](http://www.ansirh.org/trainingworkbook/trainingworkbook.html)). Developed by obstetrician-gynecologists and family physicians at UCSF and peer reviewed by an expert Advisory Board, the Workbook consisted of orientation materials and learning objectives, suggested readings from *A Clinician's Guide to Medical and Surgical Abortion*,<sup>11</sup> case-based modules on counseling, pre-procedure evaluation, pain management, early abortion methods, follow-up care, problem management, and office practice issues and evaluation forms.

During 2003–2005, the residency programs also took steps to enhance their on-site training capacity. Efforts included faculty training, increasing resident involvement in options counseling, introducing MVA

for treatment of spontaneous abortion, and developing plans to offer medication abortion in residents' continuity clinics. One program initiated a small-volume, early abortion service in its family practice center where third-year residents could continue to hone their skills.

### Data Collection and Analysis

The TEACH Project used the following evaluation instruments to assess resident satisfaction with the training program, patient safety, and patient satisfaction with the services they received. Although we did not expect residents to reach full competence in abortion care during this single rotation, we evaluated the influence of the training on residents' self-perceived learning and interest in abortion provision. Final checklist evaluations of individual resident performance are not included in this report, because they were used primarily to provide constructive feedback to residents rather than as summative evaluations. The evaluations included case logs, a complication database, a program evaluation, and patient surveys.

**Case Logs.** Each resident kept a log of the aspiration abortions and medication abortions performed at Planned Parenthood. The case logs did not include ancillary procedures, counseling sessions, or ultrasound examinations.

**Complications Database.** One of the participating Planned Parenthood affiliates uses a computerized medical errors database (Doctor Quality Risk Prevention and Management System, Quantros, Inc, <http://www.quantros.com/srm.htm>) to track reported abortion complications by physician. Residents' complications were entered into this database using specific identifiers. Methods of ascertaining complications included post-procedure visits, voluntary reports by patients or health care providers, and available transfer records. According to Planned Parenthood data for 2003–2005, the proportion of patients who kept their scheduled follow-up visits after surgical or medical abortion was 49% and 92%, respectively. When complications were treated off-site, Planned Parenthood staff requested medical records and made at least three attempts to contact patients to assess final outcomes.

We calculated complication rates by dividing the number of resident complications reported in Doctor Quality by the number of abortion procedures reported on residents' case logs. Data from Doctor Quality also allowed us to compare the resident complication rate with that of experienced abortion providers at Planned Parenthood. Because residents provided few medication abortions, we limited our comparative analysis to surgical abortion only.

**Program Evaluation Survey.** Residents who attended Planned Parenthood sites were asked to complete a final program evaluation. This instrument queried residents about their satisfaction with various aspects of the training program, the extent to which they felt they had acquired specific skills, and whether the training program had affected their interest in offering abortion services. Residents were asked to rank various aspects of the training program using a scale from 1 to 3 (1=needs improvement, 2=satisfactory, and 3=excellent). Surveys of residents who attended training sessions on a “fill-in” basis were excluded to reduce potential selection bias on these subjective measures.

**Patient Surveys.** During a 3-month period at two of the Planned Parenthood training sites, we invited each patient to complete a satisfaction survey after the procedure. Patients were asked to rate their satisfaction with various aspects of their care using a 5-point Likert scale (1=not at all satisfied, 2=somewhat satisfied, 3=satisfied, 4=very satisfied, 5=extremely satisfied). Because trainers supervised all resident procedures, this assessment tool measured care by the training team, not the individual resident *per se*.

All data were entered into a secure central database at UCSF. We generated descriptive statistics using Excel software.

## Results

The three residency programs were located in cities in Northern or Central California (Table 1). Programs 1 and 2 were situated in agricultural counties, while Program 3 was located in a large metropolitan area. Programs 1 and 3 had prior experience offering abortion training to residents on an elective basis but not in the context of a required rotation.

Of the 52 residents eligible to participate in the rotation, 46 (88%) attended the Planned Parenthood training sites, two had scheduling conflicts, and four chose not to train at Planned Parenthood. Thirty-nine (85%) of the 46 trainees elected to learn abortion procedures (including two residents who provided only medication abortions), and seven chose only to learn other aspects of patient care, such as counseling, ultrasound, and aftercare (Table 1). Twenty-eight residents completed four or more training sessions. Residents who attended fewer sessions included those who did not perform abortions, residents who “filled in” available sessions, and residents who missed sessions due to holidays or other factors.

Before starting clinical training, 33 residents completed the Skills Inventory that assessed prior experience with uterine evacuation procedures. Approximately one third of the respondents had never performed dilation and curettage (D&C) or uterine aspiration procedures. The proportion of residents who reported any experience with D&C (60%) or electric vacuum aspiration (55%) was about twice as high as the proportion reporting any experience with MVA (30%). Most residents who reported prior experience had performed fewer than 10 of any given procedure. Experience with uterine aspiration procedures was considerably higher for residents from Program 1, which had a prior history of elective abortion training, than for the other two programs.

### *Abortion Procedures and Complication Rates*

In total, the residents performed 1,127 abortion procedures, including 1,068 vacuum aspirations and 59 medication abortions. Residents who attended four or more sessions performed an average of 29 abortions (standard deviation [SD]=12, range=8–62 abortions).

Table 1

Resident Participation by Program

Program	Eligible Residents*	Resident Participation			
		Did Not Participate in Training	Schedule Conflict	Participated With Procedures	Participated Without Procedures
1 Northern California	24	1 (4%)	0 (0%)	20 (83%)	3 (13%)
2 Central California	15	2 (13%)	1 (7%)	8 (53%)	4 (27%)
3 Northern California	13	1 (8%)	1 (8%)	11 (85%)	0 (0%)
All Programs	52	4 (8%)	2 (4%)	39 (75%)	7 (13%)

\* Total number of residents (cumulative) enrolled in a program year for which the abortion training rotation was scheduled. Includes 2 academic years: 2003–2004 and 2004–2005.

The 1,068 aspiration procedures resulted in 11 complications, for a resident complication rate of 1.0%. Complications included three cases of retained tissue, one hematometrium, four mild pelvic infections, two continuing pregnancies, and one suspected uterine perforation that was managed conservatively. The single medication abortion complication was a hematometrium treated on site by vacuum aspiration. Excluding resident data, the surgical abortion complication rate for other Planned Parenthood providers was 0.8% during 2003–2005.

#### *Procedural Confidence and Interest in Abortion Provision*

Forty-three of the 46 residents completed final program evaluations. Forty (93%) respondents reported that the rotation adequately prepared them to counsel patients about pregnancy options, and 38 (88%) felt prepared to counsel patients about contraceptive options. Of the 37 residents who performed aspiration abortions, 34 completed program evaluations. Thirty (88%) of these respondents reported that the rotation had prepared them to “provide first-trimester surgical abortion procedures with confidence.”

The program evaluation survey asked, “Since completing the abortion training rotation, has your interest in or commitment to providing abortion services increased, decreased, or remained the same?” Twenty-

nine (67%) of the 43 respondents reported that their interest had increased, and the rest stated that their interest had remained the same; no resident reported decreased interest.

#### *Resident Satisfaction With the Training Program*

Of the 43 residents who completed final program evaluations, 27 (63%) perceived the length of the training as adequate, and no one reported that the duration of the training was “too long.” Overall, residents were satisfied with the rotation. Opportunities to interact with trainers and clinic staff received the highest rankings (2.9 out of a maximum score of 3), while ultrasound and post-procedure care received the lowest scores (2.5). Didactic teaching, the program syllabus, orientation to the program, and training in specific techniques received scores between 2.5 and 2.9.

In response to open-ended questions (Table 2), residents most commonly reported liking their interactions with clinic staff and trainers. The most common dislikes included inadequate duration of training and the long commute to some training sites. Residents were also asked whether the rotation had influenced their attitudes or opinions about abortion. Of the 29 respondents to the question, 20 indicated that they held a more favorable impression, six felt they had not been influenced, and three commented that they had a “better understanding.”

Table 2

#### Resident Responses to Open-ended Questions on Training Evaluation

<i>Question*</i>	<i># of Respondents to Question</i>	<i>Response (n, %)</i>
What did you like most about the training?	43	<ul style="list-style-type: none"> <li>• Interactions with clinic staff and/or trainers (33, 77%)</li> <li>• Openness to different perspectives/willingness to tailor the training to the individual resident (8, 19%)</li> <li>• Experience with ultrasound (5, 12%)</li> <li>• Opportunity to learn a variety of skills to care for patients through the entire process (3, 7%)</li> <li>• Emphasis on a family medicine approach (2, 5%)</li> </ul>
What did you like least about the training?	37	<ul style="list-style-type: none"> <li>• “Nothing,” “N/A,” “No issues/concerns,” or “All good” (11, 30%)</li> <li>• Not enough sessions/procedures/time (8, 22%)</li> <li>• Long commute to the training site (5, 14%)</li> <li>• Personal concerns regarding abortion (3, 8%)</li> </ul>
Has the abortion training rotation influenced your attitudes or opinions about abortion?	29	<ul style="list-style-type: none"> <li>• Now hold a more favorable impression (20, 69%)</li> <li>• Attitudes/opinions not influenced (6, 20%)</li> <li>• Now have a better understanding (3, 10%)</li> <li>• Surprised by the safety of the abortion procedure or how well patients tolerated it (3, 10%)</li> <li>• Challenged preconceptions about patients who seek abortion services (2, 7%)</li> <li>• Surprised that the experience was fulfilling for them as providers (2, 7%)</li> </ul>

\* Some respondents made multiple comments and may be counted in more than one category.

### Patient Satisfaction

A total of 155 patients completed satisfaction surveys after the procedure. Overall, patient satisfaction was high (Table 3). Approximately 95% of patients were “extremely satisfied” or “very satisfied” with their interactions with the training team, including the physicians’ ability to answer questions in a sensitive way, offer clear explanations, and facilitate patient comfort. Most patients were highly satisfied with the amount of time that they spent with their providers and the level of privacy that they experienced. Waiting time was the single measure that received lower satisfaction ratings.

### Discussion

In this descriptive study, abortion training in three family medicine residency programs proved to be safe and acceptable. A high proportion of residents (75% of those eligible for the rotation) chose to learn abortion procedures. Residents’ satisfaction with training and patients’ satisfaction with the care they received were overwhelmingly positive. Most residents reported that

the rotation enhanced both their skills and interest in abortion provision. The resident complication rate of 1.0% compares favorably with the rate of more experienced providers at Planned Parenthood, as well as with published statistics on abortion morbidity.<sup>11</sup>

Our findings agree with other studies that have evaluated integrated abortion training in obstetrics and gynecology residency programs. In a 5-year analysis of the family planning rotation at UCSF, residents’ cumulative satisfaction rating (4.7 on a 5-point Likert scale) surpassed that of any other third-year rotation.<sup>12</sup> Sankey et al<sup>13</sup> also reported high resident satisfaction with an integrated rotation that included off-site abortion training at a Planned Parenthood clinic. The proportion of residents (60%) who reported enhanced interest in abortion provision after the rotation was similar to that of our study (67%). These findings are in keeping with studies of practicing physicians that show a strong correlation between training during residency and willingness to provide abortion care.<sup>14,15</sup>

The collaborative training model described in this study has benefits and limitations. Because freestand-

Table 3

Patient Satisfaction Survey Results

Measure	<i>Extremely Satisfied</i>	<i>Very Satisfied</i>	<i>Satisfied</i>	<i>Somewhat Satisfied</i>	<i>Not at All Satisfied</i>	<i>No Response</i>
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
The courtesy of the staff	126 (82%)	21 (14%)	5 (3%)	0 (0%)	0 (0%)	1 (1%)
The staff’s flexibility in scheduling my appointment around my needs	79 (52%)	43 (28%)	23 (15%)	5 (3%)	1 (1%)	2 (1%)
Privacy when talking with staff or health professionals	103 (67%)	30 (20%)	13 (8%)	7 (5%)	0 (0%)	0 (0%)
The amount of time I spent in the waiting room today	36 (24%)	16 (10%)	40 (26%)	31 (20%)	27 (18%)	3 (2%)
The amount of time I had to talk with my health professional	85 (56%)	43 (28%)	21 (14%)	4 (3%)	0 (0%)	0 (0%)
My health professional’s ability to answer questions in a sensitive and caring way	117 (76%)	26 (17%)	9 (6%)	0 (0%)	0 (0%)	1 (1%)
My health professional’s ability to explain things clearly	120 (78%)	24 (16%)	8 (5%)	1 (1%)	0 (0%)	0 (0%)
My health professional’s ability to help me feel comfortable talking about my concerns	126 (82%)	19 (12%)	7 (5%)	0 (0%)	0 (0%)	1 (1%)
The chance to ask all of my questions	126 (82%)	19 (12%)	8 (5%)	0 (0%)	0 (0%)	0 (0%)
My health professional’s willingness to explain different options for my care	119 (78%)	25 (16%)	7 (5%)	0 (0%)	0 (0%)	2 (1%)
My health professional’s effort to make my medical services as comfortable as possible	132 (86%)	15 (10%)	6 (4%)	0 (0%)	0 (0%)	0 (0%)
My health professional’s interest in how my life affects my health	109 (72%)	30 (20%)	9 (6%)	4 (3%)	0 (0%)	0 (0%)

ing clinics like Planned Parenthood provide most abortions in the United States,<sup>16</sup> they can offer a high-volume training experience. Patient volume has been identified as a key challenge for family medicine programs attempting to establish on-site abortion training.<sup>17</sup> Planned Parenthood clinics also expose residents to staff and mentors who regard abortion as an integral part of women's health care. In TEACH program evaluations, 77% of residents cited interactions with Planned Parenthood staff and trainers as their favorite aspect of the rotation. On the other hand, Planned Parenthood clinics differ substantially from primary care office settings in which most family physicians are likely to practice. For this reason, the TEACH residency programs supplemented abortion training at Planned Parenthood with curriculum on office practice issues and on-site clinical training opportunities.

### Limitations

This study benefited from a uniform curriculum, teaching methodology, and set of evaluation instruments across the three residency programs. Other strengths included multiple sites, the high resident response rates, and rigorous data collection. The generalizability of our findings, however, may be limited. The relatively high prior procedural experience reported by the residents, as well as the high rate of participation in training, may reflect resident selection into specific programs supportive of abortion training. The limited sample size prevented us from conducting meaningful subgroup or inferential analyses. Although incomplete follow-up rates may result in underreporting of complications, this limitation would apply equally to resident complications and those of other providers at Planned Parenthood.

### Conclusions

Despite these limitations, our findings suggest that abortion training can be integrated into family medicine residency programs with safety and a positive reception by both residents and patients. A collaborative training approach may interest family medicine residency programs seeking to offer abortion training, particularly when on-site training is limited or not feasible.

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### REFERENCES

1. Boonstra HD, Gold RB, Richards CL, Finer LB. Abortion in women's lives. New York: Guttmacher Institute, 2006.
2. Dayringer R, Paiva RE, Davidson GW. Ethical decision making by family physicians. *J Fam Pract* 1983;17(2):267-72.
3. Rosenblatt RA, Mattis R, Hart LG. Abortions in rural Idaho: physicians' attitudes and practices. *Am J Public Health* 1995;85(10):1423-5.
4. Lerner D, Taylor F. Family physicians and first-trimester abortion: a survey of residency programs in southern California. *Fam Med* 1994;26(3):157-62.
5. Raymond E, Kaczorowski J, Smith P, Sellors J, Walsh A. Medical abortion and family physicians: survey of residents and practitioners in two Ontario settings. *Can Fam Physician* 2002;48:538-44.
6. Schwarz EB, Luetkemeyer A, Foster DG, Weitz TA, Lindes D, Stewart FH. Willing and able? Provision of medication for abortion by future internists. *Womens Health Issues* 2005;15(1):39-44.
7. Prine LW, Lesniewski R. Medication abortion and family physicians' scope of practice. *J Am Board Fam Pract* 2005;18(4):304-6.
8. Talley PP, Pergus GR. Abortion training in family practice residency programs. *Fam Med* 1996;28(4):245-8.
9. Paul M, Nobel K. Papaya: a simulation model for training in uterine aspiration. *Fam Med* 2005;37(4):242-4.
10. Paul M, Stewart FH, Goodman S, Wolfe M, and the TEACH Trainers Collaborative Working Group. Early abortion training workbook, second edition). San Francisco: UCSF Center for Reproductive Health Research and Policy, 2004.
11. Paul M, Lichtenberg ES, Borgatta L, Stubblefield P, Grimes DA, eds. A clinician's guide to medical and surgical abortion. New York: Churchill Livingstone, 1999.
12. Steinauer J, Drey EA, Lewis R, Landy U, Learman LA. Obstetrics and gynecology resident satisfaction with an integrated, comprehensive abortion rotation. *Obstet Gynecol* 2005;105(6):1335-40.
13. Sankey HZ, Lewis RS, O'Shea D, Paul M. Enhancing resident training in abortion and contraception through hospital-community partnership. *Am J Obstet Gynecol* 2003;189(3):644-6.
14. Steinauer JE, Landy U, Jackson RA, Darney PD. The effect of training on the provision of elective abortion: a survey of five residency programs. *Am J Obstet Gynecol* 2003;188(5):1161-3.
15. Aiyer AN, Ruiz G, Steinman A, Ho GY. Influence of physician attitudes on willingness to perform abortion. *Obstet Gynecol* 1999;93(4):576-80.
16. Finer LB, Henshaw SK. Abortion incidence and services in the United States in 2000. *Perspect Sexual Reprod Health* 2003;35(1):6-15.
17. Bennett I, Aguirre AC, Burg J, et al. Initiating abortion training in residency programs: issues and obstacles. *Fam Med* 2006;38(6):330-5.