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Family Planning Training in US Family Medicine Residencies

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BACKGROUND AND OBJECTIVES: Family planning is among the most common services family physicians provide. Evidence that family doctors are not offering the broadest range of these services prompted this study of family planning training in family medicine residency programs.

METHODS: This study was a cross-sectional survey of program directors and chief residents at US family medicine residencies accredited by the Accreditation Council for Graduate Medical Education (ACGME). The survey was adapted from the instrument used by Steinauer et al in 1995.

RESULTS: Didactic and clinical training in most contraception methods is common, but large gaps remain, especially with regard to implant, diaphragm, tubal ligation, and vasectomy. Didactic or clinical training in pregnancy options counseling is available in most programs; however, it should be universal to comply with ACGME requirements. Despite an even split in attitudes toward abortion within family medicine, training remains uncommon.

CONCLUSIONS: Family medicine residency programs are not offering training in the broadest range of family planning methods, and abortion training is uncommon. To address these gaps, family medicine educators need to work to increase training in all methods of contraception, including newer and procedural methods, and consider strategies for offering abortion training to interested residents.

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Though nearly 100% of family physicians prescribe oral contraceptives, only 39% offer IUDs, one of the most effective contraceptive methods, and only 66% provide emergency contraception, compared to 89% and 93% of obstetrician-gynecologists, respectively.⁵ A recent study of family physicians found that only 24% of respondents had inserted IUDs in the previous year and that the more IUDs inserted during residency, the more likely respondents were to insert currently.⁶

We wondered if gaps in family planning training might be impacting practice, despite a growing consensus that this is an essential component of family medicine residency training. The Accreditation Council for Graduate Medical Education (ACGME) Review Committee (RC) requirements for family medicine include family planning, contraceptive management, and pregnancy options counseling.⁷ In 2008, the Society of Teachers of Family Medicine (STFM) Group on Hospital and Procedural Training issued a consensus statement that by graduation all residents must be able to independently perform IUD insertion and should be exposed to and have an opportunity to train in uterine aspiration.⁸

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Contraception and family planning are among the most common services family physicians provide. When surveyed in 2006–2008, 99% of ever heterosexually active women ages 15–44 reported ever using contraception, and 62% of reproductive-aged women said they were currently using contraception.¹ Despite the high prevalence of contraceptive use, 49% of all pregnancies in the United States

in 2001 were unintended.² Of these unintended pregnancies, 42% ended in abortion, which is one of the most common surgical procedures among reproductive-aged women in the United States.^{2,3} Twenty-one percent of women seeking private-sector family planning care visit a family physician, and evidence suggests they are not being offered the broadest range of family planning services or the most effective counseling.^{4,6}

Limited research at individual medical schools has shown that students planning to go into family medicine believe abortion should be included in residency training, and many are considering becoming abortion providers.^{9,10}

Few studies have reported on the extent and content of family planning training in family medicine residencies. All data have indicated gaps in family planning education. A number of publications have reported on regional and national abortion training;¹¹⁻¹³ other reports covered regional training in contraception only.^{14,15} To our knowledge, only one prior national survey, which used data collected in 1995, has reported on full-spectrum reproductive health training.¹⁶ The purpose of the current study is to update this prior study and include methods of contraception and abortion that were not available at that time. In addition to identifying changes in training since 1995, we sought to determine the current availability of family planning training in family medicine residencies throughout the United States, as reported by program directors and chief residents, to evaluate respondents' attitudes toward abortion training and provision in family medicine, and to assess chief residents' intent to provide abortion.

Methods

This study was a cross-sectional survey of program directors and chief residents at US family medicine residencies, including military residencies and programs in Puerto Rico, accredited by the ACGME. As of November 2007, there were 462 accredited programs.¹⁷ A master list of 454 programs and program directors was compiled from publicly available data on the American Academy of Family Physicians (AAFP) and Fellowship and Residency Electronic Interactive Database (FREIDA) Web sites. Based on previous national surveys of family medicine residencies, we anticipated a response rate of approximately

60%, or 295 programs.^{13,14,18} The study was exempted from review by the Montefiore Medical Center Institutional Review Board.

Survey Instrument

The 10–20 minute survey was adapted from the instrument used by Steinauer et al, including additions to reflect advances in reproductive health technologies¹⁶ (Table 1). The survey was piloted with physician colleagues. Participants were asked a series of questions about didactic and clinical training in reproductive health at their program. Program directors were asked whether residents in their program received clinical training in various topics; chief residents were asked if they personally had received that training. Both program directors and chief residents were asked a series of questions to assess their opinions on abortion in family medicine, and chief residents were asked about their future intentions to provide abortions. The survey concluded with demographic questions.

Procedures

Data collection began in November 2007. Program directors' e-mails were collected from FREIDA. When unavailable, residency program coordinators were contacted and asked for the program director's and, if available, the chief resident's e-mail addresses. Program directors and chief residents received an e-mail introducing the project, including a unique link to an online secure survey hosted by Key Survey. The

Table 1: New Methods Since 1997

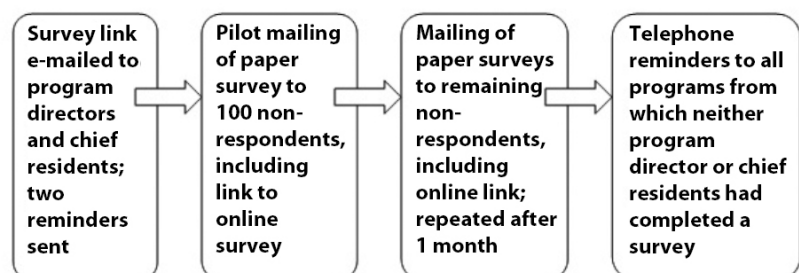
Contraceptive ring (NuvaRing®)
Contraceptive patch (OrthoEvra®)
Hormonal implant (Implanon®)
Hormonal IUD (Mirena®)
Emergency contraception as Plan B®
Medication abortion

program directors were also asked to provide the e-mail of the chief resident; if there was more than one chief resident, they were instructed to select the one whose last name appears first alphabetically. Two reminder e-mails were sent to those participants who did not complete the survey. After 6 months, a low response rate (20%) prompted the mailing of paper surveys (Figure 1). Mailings containing both surveys were addressed to the program director; the program director was asked to distribute the chief resident survey. Data collection concluded in August 2008.

Statistical Methods

Descriptive summaries of survey data included reporting frequencies and percentages for categorical variables. Chi-square goodness of fit tests were used to assess whether program and respondent characteristics were significantly related to survey responses. All tests were conducted with alpha set at .05. Data analysis was conducted using SPSS version 16.0 for Windows (SPSS, Chicago).

Figure 1: Data Collection Process



Results

Response Rate

The survey response rate was 54%, with 245 of 454 programs responding (Table 2). (We were unable to match four chief resident surveys to a residency program, due to missing unique links. As a result, they are counted in the chief resident response rate and included in data analysis (n=98) but not included in the overall program response rate, regional response rates, or chief resident/program director overlap number, as these required matching each response to a residency program (chief resident n=94). In effect, our reported number of responding programs may be a slight undercount.) These programs were represented by 220 program directors (48% response rate) and 98 chief residents (22% response rate), with an overlap of 69 programs from which surveys were collected from both sources and could be identified. At least half of programs in each region responded: 58% for the Northeast (n=50), 50% for the South (n=50), 58% for the West (n=51), and 53% for the Midwest (n=69). (Regional data were not

Table 2: Response Rates

	n	%
Number of programs that responded (n=454)	245	54
Number of individual responses		
Number of program directors' responses (n=454)	220	48
Number of chief residents' responses (n=454)	98	22

collected for the first 92 respondents. We made elections for these respondents based on the location of the residency program by census regional demarcations. The only exception was Puerto Rico, which we included in the Southern regional count.)

Family Planning

The vast majority (more than 80%) of program directors report didactic training is available for most methods of family planning (Table 3). (In the few instances when respondents did not elect a response on the paper survey and instead wrote in comments, the election was left blank, and the respondent was excluded from analysis/denominator for that variable.) Among these, nearly

all programs offer didactic training in oral contraceptive pills (OCPs) (99.5%) and DMPA injection (97.7%), with less training for implant (33.3%), diaphragm use (67%), tubal ligation (68.9%), and vasectomy (75.3%). Methods with more moderate gaps in training, such as IUDs, are included in table format. Chief residents' report of the availability of didactic training was similar to that of program directors. However, chief residents report markedly less availability of training for diaphragm use (36.7%) compared to that reported by program directors (67%). Less substantial but notable differences were reported for training for the ring, the patch, emergency contraception, tubal ligation, and vasectomy, with 7%

Table 3: Contraception—Didactic Training

	Program Director (n=220)*		Chief Resident (n=98)**	
	n	%	n	%
Condoms/spermicide	194	88.2	81	82.7
Diaphragm	146	67.0	36	36.7
Oral contraceptive pills	219	99.5	97	99.0
Ring	195	88.6	80	81.6
Patch	203	92.3	81	82.7
Emergency contraception	200	90.9	81	82.7
DMPA injection*	125	97.7	58	95.1
Copper IUD insertion	180	81.8	81	82.7
Hormonal IUD insertion	190	86.8	82	83.7
Implant insertion	73	33.3	34	34.7
Tubal ligation	151	68.9	58	59.2
Vasectomy	165	75.3	65	66.3

* Occasionally "n" was slightly smaller due to a few invalid responses. Notably, DMPA injection was added to the survey midway through data collection. For DMPA injection: program director n=128.

** For DMPA injection: chief resident n=61.

to 9.7% fewer chief residents reporting training.

Patterns of clinical experience for family planning methods were very similar to those of didactic training (Table 4). According to program directors, residents in most programs have opportunities to get clinical exposure in the use of OCPs (99.5%) and DMPA (98.4%), but many fewer programs provide clinical experience in diaphragm use (67.6%), implant (26%), tubal ligation (58.7%), and vasectomy (72.1%). Chief residents report less clinical experience in these areas than program directors report clinical training availability. While this is similar to findings for reports of didactic training, the gaps are much larger for clinical experience.

Abortion and Pregnancy Options Counseling

Didactic training or clinical experience in pregnancy options counseling is available in most programs. Nearly all (96.8%) of program directors report that either didactic training or clinical experience in options counseling is available. Somewhat fewer (84.7%) chief residents report either the availability of didactic training or receiving clinical experience in options counseling.

Availability of abortion training was measured in several ways. First trimester abortion training is not available in most programs (Table 5) according to program directors (51.4%) and chief residents (63.9%). Although there was a large discrepancy between program directors' (41.8%) and chief residents' (26.8%) reports of the availability of optional abortion training, less than 10% of both sources report that their programs offer routine training in first trimester abortions (Table 5). Of those who reported optional training, a higher percentage of program directors (62%) than chief residents (46%) described this training as one that a resident would need to organize as opposed to an established rotation. There are also significant regional differences in the availability of abortion training. According to

program directors, residencies in the West (75%) and Northeast (69%) are more likely to offer abortion training than those in the Midwest (42%) and the South (22%) ($P<.001$). Program director data also demonstrated that programs with a religious affiliation are significantly less likely ($P=.041$) to have abortion training available.

Program directors and chief residents were also asked if residents/they received clinical training in specific abortion methods. Clinical training is more available for medication abortion, although there are differences in the reports from chief residents and program directors. Unlike most other reproductive health training, chief residents (38.8%) report more clinical experience in medication abortion than program directors (31.8%) report availability of clinical training. Chief resident and program director reports are nearly identical for clinical training in manual (20.4%, 21.5%) and electric (17.3%, 16.5%) vacuum aspiration.

More than one third of program directors (33.6%) and chief residents (39.8%) report that residents/they receive clinical experience in some abortion method. Chief resident reports of clinical experience in any abortion method were not significantly related to personal political affiliation (when comparing liberals vs. conservatives), religious affiliation of their residency program, or region, although a noticeably larger percent of residents in the South and Midwest report no clinical experience is available for any method. Female chief residents were significantly more likely to report clinical experience in at least one abortion method compared to men ($P=.005$).

Less than 30% of both program directors and chief residents somewhat or strongly agree that first trimester abortion training should not be included in family medicine residencies, and approximately half of both program directors (55.9%) and chief residents (47.9%) somewhat or

Table 4: Contraception—Clinical Experience

	Program Director (n=220)*		Chief Resident (n=98)**	
	n	%	n	%
Condoms/spermicide	196	89.1	87	88.8
Diaphragm	148	67.6	31	31.6
Oral contraceptive pills	219	99.5	98	100.0
Ring	188	85.5	66	67.3
Patch	204	92.7	78	79.6
Emergency contraception	191	87.2	73	74.5
DMPA injection*	125	98.4	57	91.9
Copper IUD insertion	178	80.9	70	71.4
Hormonal IUD insertion	190	87.6	76	77.6
Implant insertion	56	26.0	20	20.4
Tubal ligation	128	58.7	58	59.2
Vasectomy	155	72.1	55	56.1

* Occasionally "n" was slightly smaller due to a few missing responses. Notably, DMPA injection was added to the survey midway through data collection. For DMPA injection: program director n=127.

** For DMPA injection: chief resident n=62.

Table 5: Clinical Training (Except Where Noted) in Options Counseling, Miscarriage Management, and Abortion

	Program Director (n=220)*		Chief Resident (n=98)*	
	n	%	n	%
Options counseling (either didactic or clinical)	213	96.8	83	84.7
Didactic training	190	86.4	61	62.2
Clinical training	206	93.6	78	79.6
Miscarriage management: expectant management	216	98.2	84	85.7
Miscarriage management: medical management	198	90	71	72.4
Miscarriage management: aspiration management	133	61	42	42.9
Medication abortion	70	31.8	38	38.8
Manual vacuum aspiration (MVA)	47	21.5	20	20.4
Electric vacuum aspiration (EVA)	36	16.5	17	17.3
MVA or EVA	51	23.2	22	22.4
MVA, EVA, or medication abortion	74	33.6	39	39.8
Is training in first trimester abortion routine (ie, scheduled for everyone), optional (ie, available but not required), or not available to residents in your program?				
Routine	15	6.8	9	9.3
Optional	92	41.8	26	26.8
Not available	113	51.4	62	63.9

* Occasionally, "n" was slightly smaller due to a few invalid responses.

strongly agree that abortion training is within the scope of family medicine (Table 6). Among chief residents, only a small proportion plan on providing medication (18.4%) or aspiration abortions (9.2%).

Notable Changes From 1995

Note that in the 1995 survey, the researchers differentiated between "clinical instruction" and "clinical experience;" we chose to combine these categories and asked program directors about their residents' receiving "clinical training" and chief residents about their receiving "clinical experience/teaching." In addition, the earlier study used the phrase "first trimester therapeutic abortion: vacuum aspiration," whereas we asked

about "abortion: manual vacuum aspiration" and "abortion: electric aspiration," because we have found the term "therapeutic" to be confusing to residents.

In comparing our findings to those collected in 1995, we primarily focused on comparing the reports of chief residents, because more of their data were included in the 1997 manuscript. In 1995, nearly all chief residents reported receiving oral instruction (93%), clinical instruction (99%), and clinical experience (100%) with OCP. Training in OCP remains universal. Since 1995, training in copper IUD insertion has doubled from 34% of chief residents receiving clinical experience then to 71.4% receiving clinical experience today.

The availability of abortion training along with resident clinical experience with abortion has increased, primarily due to the advent of medication abortion. In 1995, 15% of chief residents reported clinical experience in first-trimester abortion, compared to 39.8% today or 22.4% if excluding those with medication abortion experience only. Of program directors, 48.6% now report that abortion training is available as routine or optional, compared to 29% of residency programs in 1995. (The 1997 article reported this data on the "program level," noting that at programs where questionnaires were returned from both the program director and the chief resident, the program director survey was interpreted. We

Table 6: Attitudes to Abortion in Family Medicine

	Program Director (n=220)*		Chief Resident (n=98)*	
	n	%	n	%
Family medicine residency programs should not include first-trimester abortion for residents.				
Strongly agree	46	20.9	19	19.6
Somewhat agree	18	8.2	9	9.3
Neutral	54	24.5	19	19.6
Somewhat disagree	29	13.2	21	21.6
Strongly disagree	73	33.2	29	29.9
Providing first-trimester abortions is within the scope of family medicine.				
Strongly agree	71	32.3	31	31.6
Somewhat agree	52	23.6	16	16.3
Neutral	33	15.0	11	11.2
Somewhat disagree	26	11.8	15	15.3
Strongly disagree	38	17.3	25	25.5
Do you personally plan to provide medication abortions?				
Certainly yes			5	5.1
Probably yes			13	13.3
Undecided			8	8.2
Probably not			28	28.6
Definitely not			44	44.9
Do you personally plan to provide aspiration abortions?				
Certainly yes			3	3.1
Probably yes			6	6.1
Undecided			6	6.1
Probably not			17	17.3
Definitely not			66	67.3

* Occasionally, "n" was slightly smaller due to a few missing responses.

reported data exclusively from the program directors here, as there was some difficulty matching all of the respondents to residency programs, as noted previously.) Chief residents' intent to provide abortions has increased, with 18.4% certainly/probably planning to provide medication abortions, and 9.2% certainly/probably planning to provide aspiration abortions, compared to 5% of chief residents in 1995.

Discussion

According to our findings, didactic and clinical training in OCPs appear to be nearly universal among family medicine residencies, with DMPA injections a close second. Didactic and clinical training in most other contraception methods is common, but large gaps still remain, especially with regard to Implanon, diaphragm use, tubal ligation, and vasectomy. (It should be noted that implant was a relatively new product

at the time of this survey, so the gap in training may reflect this new status.) Although the gaps in clinical training in IUD insertions are more moderate, these are especially important as didactic training alone cannot prepare residents to provide these services. Didactic training or clinical experience in pregnancy options counseling is available in most programs; however it should be universal to comply with ACGME requirements. Despite an even

split in positive and negative attitudes toward abortion within family medicine, training in abortion care, especially routine training, remains low.

Overall, fewer chief residents reported clinical experience compared to program directors' reports of the availability of clinical training in most areas of family planning, with the exception of medication abortion. Similarly, fewer chief residents reported that abortion training was available at their program. This was due to differing accounts of the availability of optional training, which may be explained by perceptions of the availability of training when an elective is not established, as our data suggest. Correlations were found to be significant between program director data on abortion training and both region and religious affiliation of institution, as well as between chief resident reports of abortion training and gender of respondent. Finally, our findings demonstrate increases in copper IUD and abortion training, as well as chief residents' intent to provide abortion care, since 1995.

Our findings reveal critical gaps in training that must be remedied in order to train the next generation of family medicine providers to provide comprehensive family planning within the patient-centered medical home. Long-acting reversible and non-reversible contraception options are especially effective in preventing pregnancy and should be made more widely available. Our data suggest that gaps in contraception practice among family physicians may be related to gaps in training. For instance, IUDs are underutilized by family physicians and represent a moderate gap in family medicine training, especially when compared to training and practice regarding OCPs and DMPA injections. Our finding that gaps in training include newer contraceptive methods, as well as those requiring procedural training, suggests a need to update family medicine training to keep up with the changing world of family

planning. Given the varied community settings of family doctors, family doctors are in an ideal position to reduce the high rates of unintended pregnancy by providing a full range of contraception options. In addition, for women with unintended pregnancies, abortion care is an option and, since it is within the scope of family medicine, all family medicine residents should be provided with the option to train in abortion.

There are several limitations to our study. Most significantly, because we did not achieve a higher response rate, our data may not be fully representative of the target population of all U.S. family medicine residency programs. Our response rate may have been impacted by the controversial nature of these topics, specifically whether those with more negative views toward family planning may have been less likely to participate. Similarly, our response rate from program directors was much higher than from chief residents, and so differences may reflect sample differences rather than actual differences. Additionally, chief residents were asked whether they personally received clinical experience/teaching in the different methods and procedures, whereas program directors were asked about whether their residents receive clinical training in those areas (for didactic training the questions for chief residents and program directors were identical). As a result, we did not conduct significance testing on the differences between these groups, but rather provide descriptive statistics comparing the groups. Future researchers might consider conducting a phone survey of a representative sample of programs to achieve a higher response rate and perhaps a more representative sample. In addition, it might be interesting to collect data from a sample of residents, as opposed to solely chief residents, and ask about future intentions toward providing comprehensive family planning.

Despite these limitations, our findings demonstrate that family

medicine residency programs are not offering training in the broadest range of family planning methods possible and that abortion training remains limited. To address these gaps, family medicine educators should work to increase training in all methods of contraception, including newer and procedural methods, and consider strategies for offering abortion training to interested residents.

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