

The future of contraception: the future leaders of family planning

Uta Landy, PhD; Philip D. Darney, MD, MSc

The Fellowship in Family Planning (FFP) is a 2 year postgraduate subspecialist training program for obstetrician-gynecologist physicians focused on advanced clinical skills, research, and teaching of contraception and abortion. The fellowship is administered by a national office based at the Bixby Center for Global Reproductive Health in the Department of Obstetrics, Gynecology, and Reproductive Sciences at the University of California, San Francisco (San Francisco, CA). Fellowship expectations include a master's degree in public health or science, a publishable research project, and participation in a family planning focused international placement in a developing country.

Since its inception in 1991 at the University of California, San Francisco, the fellowship has grown to 23 academic teaching hospitals across the country (Figure 1) and has graduated 179 fellows. The majority of graduates hold academic positions (Figure 2) with 22 of our 43 fellowship directors being graduated fellows, whereas others have taken leader-

From the Kenneth J. Ryan Residency Training Program (Dr Landy), Fellowship in Family Planning, Bixby Center for Global Reproductive Health, Department of Obstetrics, Gynecology, and Reproductive Sciences (Dr Darney), University of California, San Francisco, San Francisco, CA.

Received Feb. 15, 2011; revised June 2, 2011; accepted June 10, 2011.

Publication of this article was supported by an educational grant from Bayer Healthcare Pharmaceuticals.

The authors report no conflict of interest.

Reprints: Uta Landy, PhD, National Director, Kenneth J. Ryan Residency Training Program, Fellowship in Family Planning, Bixby Center for Global Reproductive Health, University of California, San Francisco, San Francisco, CA. landyu@obgyn.ucsf.edu.

0002-9378/\$36.00

© 2011 Mosby, Inc. All rights reserved.

doi: 10.1016/j.ajog.2011.06.054

The University of California, San Francisco, initiated a Fellowship in Family Planning in 1991, and since then 23 academic teaching hospitals across the country have adopted the 2 year program model for training obstetrician-gynecologist physicians in a subspecialty focused on contraception and abortion. The program follows a curriculum that includes clinical practice, research, and international work. This review includes information about the Fellowship in Family Planning as well as research opportunities available from academia, independent foundations, and government related sources.

Key words: abortion training, contraception training, Kenneth J. Ryan Residency Training Program

ship positions in nongovernmental organizations (NGOs) such as the World Health Organization, Planned Parenthood (domestically and internationally), and Ipas.

Twenty-seven graduated fellows went on to establish Kenneth J. Ryan Residency Training Programs in abortion and family planning in academic residency programs, and 40 graduated fellows now direct these programs. The Ryan Program is a national initiative focused on formally integrating family planning into obstetrics and gynecology residency programs. Fifty-nine departments of obstetrics and gynecology in the United States and 2 in Canada have established Ryan Residency Training Programs.

Selection of new fellowship sites is based on a proposal and site review documenting compliance with the programmatic objectives outlined in the General and Special Requirements, 2009.¹

Curriculum

Following the standards of the 4 American Board of Obstetricians and Gynecologists (ABOG)-approved fellowships, the learning objectives are outlined in the Guide to Learning, 2008.² According to the guide, "A specialist in family planning is capable of managing complex problems in contraception and pregnancy termination and serves as a leader in the clinical application, research, and

public policy components of contraception and abortion."

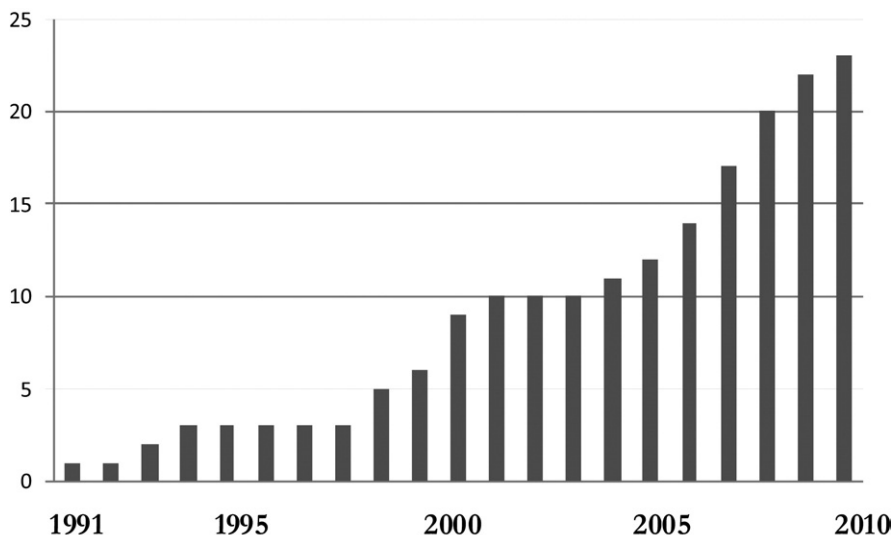
The guide presents a detailed outline of learning objectives, including the following:

- Anatomy
- Physiology of reproduction
- Mode of contraceptives on the reproductive tract and conception prevention
- Clinical competence in long-acting reversible contraception
- Termination of pregnancy
- Sterilization
- Public policy
- International family planning
- Statistics and research design

The fellowship director(s) either provide clinical or research mentorship themselves or when such mentorship includes other expert faculty within or outside the department, the fellowship director is responsible for ensuring that the training is adequate and in compliance with the guide.

At the end of each fellowship year, the fellowship national office collects detailed information from each program concerning the fellows' schedule of clinical and teaching responsibilities related to the subspecialty as well as generalist work, graduate course work, numbers of clinical procedures, teaching opportunities, and mentorship. In addition, the fellowship national office enhances training for the fellows through annual

FIGURE 1
Growth of fellowship programs, 1991-2010 (n = 23)



Landy. *The future leaders of family planning. Am J Obstet Gynecol* 2011.

courses on the psychosocial aspects of providing care and preparing for the global health placement as well as for future research funding and launching an academic career.

Clinical practice

Graduated fellows obtain clinical competence not only in abortion through 24

weeks' gestation for social, medical, and fetal indications and all available methods of contraception, including sterilization, but also in the management of complex cases and complications. The fellowship trains obstetricians-gynecologists to weigh the available evidence for their clinical practice, to incorporate the principles of evidence-based medicine in

their teaching, and to develop the necessary skills to contribute to the body of scientific evidence in the field of family planning.

Research

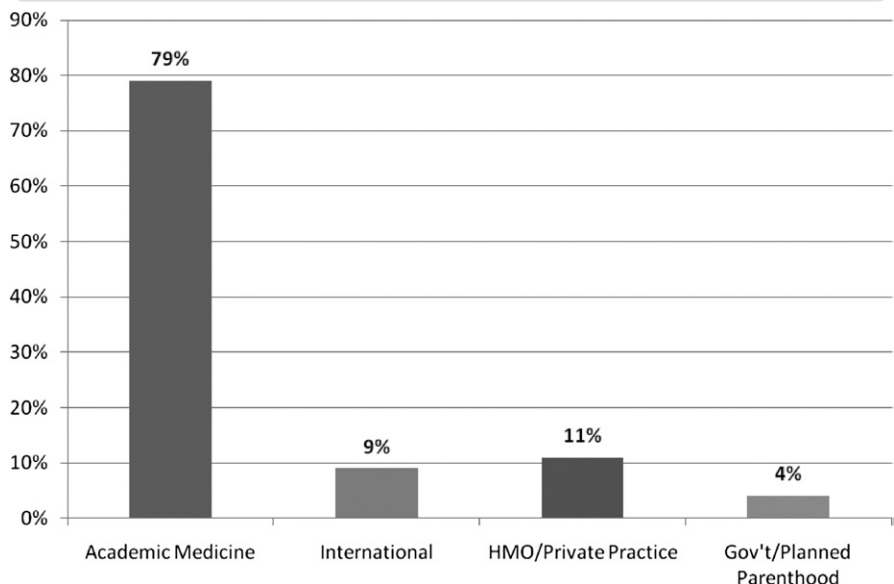
Fellows are required to complete at least 1 project and to produce a publishable manuscript based on their research. Their research interests are assessed at the time of application and interview. Upon matriculation, appropriate program mentors are assigned along with methodological mentors, if required, from other disciplines. Fellows develop their research proposal with the aid of their fellowship director(s) or other expert research mentors.

First-year fellows submit to the fellowship national office a concept paper soon after arriving and a final proposal a few months later. Proposals are critically reviewed and approved by 2 independent members of a panel of international experts in the social, epidemiological, clinical, and basic sciences related to family planning.

Fellows are required to submit a progress report and/or a completed manuscript of their research for graduation. Their study plans and, a year later, results, are presented at the Fellowship Annual Meeting, immediately preceding the Annual Clinical Meeting of American College of Obstetricians and Gynecologists, at which they are critiqued by fellowship directors as well as current and graduated fellows. Fellows' research projects are usually focused on long-acting reversible contraception, as well as postpregnancy contraception, the acceptability of contraceptive methods, and abortion.³⁻⁹

Fellows' research and that of the fellowship community contribute to a growing number of peer-reviewed publications in abortion and contraception, 120 publications in 2008 to 170 in 2010.¹⁰⁻¹⁵ The quality of this research is demonstrated by the presentation from the Journal of 3 of its 4 2010 Pitkin Awards, for promoting and demonstrating excellence in research by academic departments, to papers written by fellowship members.^{5,16,17}

FIGURE 2
Type of postfellowship positions, 2006-2010 (n = 76)



HMO, health maintenance organization.

Landy. *The future leaders of family planning. Am J Obstet Gynecol* 2011.

As an example of the importance of FFP contributions to the contraception literature, a PubMed search of 2010 publications on obesity and contraception showed that 9 of 14 US journal citations were the products of FFP research.^{16,18-25} Between May 2010 and May 2011, FFP published 26 articles in *Obstetrics and Gynecology*, 12 in the *American Journal of Obstetrics and Gynecology*, 66 in *Contraception*, and 82 in other journals. Members of the fellowship contribute to the most frequently used text books in family planning,²⁶⁻²⁹ as well as the chapters dealing with contraception in many general obstetrics-gynecology texts.³⁰⁻³⁶

International work

Fellows are expected to complete an international placement of 3-8 weeks in a developing country to learn about women's health care in a setting with limited resources and the influence of health policy and other cultural perspectives on contraception and abortion.² During placements, fellows become familiar with the public health, legal, and service delivery aspects of contraception, abortion, reproductive health, and the interplay of human immunodeficiency virus/acquired immunodeficiency syndrome and family planning in their host country.

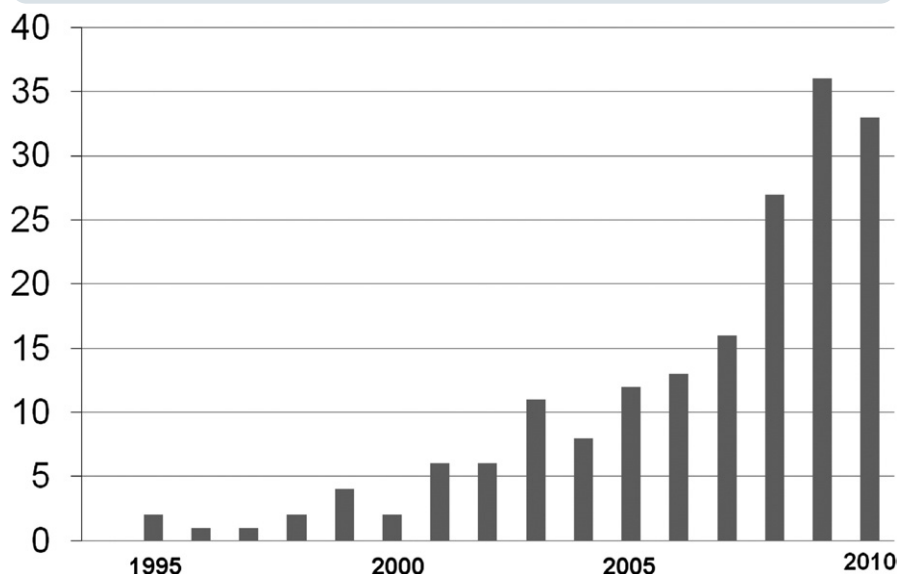
Fellows participate in a variety of activities with NGOs, academic centers, or community hospitals to train clinicians, teach, conduct research, and introduce new technologies. Before approval of the placement, fellows submit a proposal to the fellowship national office detailing the host institution and mentorship and outlining placement objectives. After returning, fellows submit a report describing activities and accomplishments based on proposed objectives. Such interactions help promote cross-cultural exchanges of clinical and technical expertise and cultural sensitivity. These experiences have led to future collaborations and contributed to fellowship international research.³⁷⁻³⁹

Research training opportunities in family planning

The FFP provides training opportunities for not only fellows themselves but also

FIGURE 3

Growth of fellowship applicants, 1991-2010 (n = 180)



Landy. *The future leaders of family planning*. *Am J Obstet Gynecol* 2011.

undergraduates, medical students, and residents in areas that range from reproductive physiology and biochemistry, clinical trial design, and conduct to epidemiology, program management, evaluation, and sociology.

These opportunities have attracted students and residents to a career in family planning, as can be demonstrated by the growing number of applicants to the FFP (Figure 3). Graduated fellows have become nationally recognized clinicians and research leaders. Many have received grants from government agencies such as the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention as well as NGOs such as the Population Council and private foundations such as Gates, Packard, and Hewlett.

Fellows' federal research opportunities in contraception

The NIH offers many opportunities for research in contraception and basic reproductive biology through the National Institute of Child Health and Human Development (NICHD). Specifically, these opportunities are offered through the NICHD's Center for Population Research via its Contraception and Reproductive Health Branch (CRHB). CRHB supports research and

research training programs in reproductive health, epidemiology, and contraceptive technology.

The NICHD/CRHB initiates programs designed to evaluate new contraceptive products and develop new products. Much of this work is developed through the Contraceptive Clinical Trials Network (CCTN). The CCTN comprises 12 centers for female contraceptive research and 2 centers for male contraceptive research. These sites conduct phase I, II, and III trials of oral, injectable, implantable, or topical contraceptive drugs or devices. Several of the FFP sites participate in the network.

The NIH clinical and translational sciences initiative (CTSI) has established CTSI centers at many universities, including several FFP sites. CTSI offers early career investigators career development (K) awards as well as support for study design and data analysis and opportunities for interdisciplinary collaboration. In addition, the obstetrics-gynecology departments of several FFP sites offer Women's Reproductive Health Research (WRHR) postfellowship support. Several graduated family planning fellows are recipients of WRHR awards, which offer up to 5 years of support for early career research.

The NICHD also provides career training and development within NIH-sponsored programs. Institutional training grants support training programs (K awards of various types) in pre- and postdoctoral work. Individuals interested in clinical and research opportunities can refer to the following awards and web sites:

- Types of awards
 - Mentored K awards
 - Loan repayment programs
 - Research project grants
- Resources and information
 - NICHD web site: <http://www.nichd.nih.gov>
 - NICHD web site: funding by NICHD: <http://www.nichd.nih.gov/funding/funding-mechs.htm>
 - NIH web site: welcome to extramural research at the NIH: <http://grants.nih.gov/grants/welcome.htm>
 - NIH career award web site: K kiosk: <http://grants.nih.gov/training/careerdevelopmentawards.htm>

The fellowship has not only created a new generation of family-planning clinicians, researchers, and advocates but has also fostered their growth as academic experts to train future generations of obstetricians and gynecologists in all aspects of family planning. Although the Fellowship in Family Planning has not been approved as a new subspecialty by ABOG and the Accreditation Council for Graduate Medical Education, it includes all the components of the other subspecialties, including the General and Special Requirements and the Guide to Learning. In addition, the family-planning fellowship requires fellows to obtain a master's of public health or master's of science degree and to work, teach, or do research in a low-resource setting abroad and provides opportunities to learn about policy and advocacy.

As the number of graduated fellows who work in academic departments increases, the field of family planning will achieve enhanced recognition as a specialized aspect of obstetrics and gynecology research, training, and clinical practice. In the Fellowship in Family Planning, we see a new generation of expert clinicians, leaders, researchers, and

advocates enhancing family planning in the United States and around the world. Additional information about fellowship resources, programs, and application processes can be found on the web site www.familyplanningfellowship.org. ■

REFERENCES

1. Fellowship in family planning. General and special requirements (internal document). San Francisco, CA; 2009.
2. Fellowship in family planning. Guide to learning (internal document). San Francisco, CA; 2008.
3. Newmann SJ, Dalve-Endres A, Diedrich JT, Steinauer JE, Meckstroth K, Drey EA. Cervical preparation for second trimester dilation and evacuation. *Cochrane Database Syst Rev* 2010; CD007310.
4. Secura GM, Allsworth JE, Madden T, Mullersman JL, Peipert JF. The Contraceptive CHOICE Project: reducing barriers to long-acting reversible contraception. *Am J Obstet Gynecol* 2010;203:115.e1-7.
5. Chen BA, Reeves MF, Hayes JL, Hohmann HL, Perriera LK, Creinin MD. Postplacental or delayed insertion of the levonorgestrel intrauterine device after vaginal delivery: a randomized controlled trial. *Obstet Gynecol* 2010;116:1079-87.
6. Rodriguez MI, Caughey AB, Edelman A, Darney PD, Foster DG. Cost-benefit analysis of state- and hospital-funded postpartum intrauterine contraception at a university hospital for recent immigrants to the United States. *Contraception* 2010;81:304-8.
7. Blumenthal PD, Voedisch A, Gemzell-Danielsson K. Strategies to prevent unintended pregnancy: increasing use of long-acting reversible contraception. *Hum Reprod Update* 2011;17:121-37.
8. Frick AC, Drey EA, Diedrich JT, Steinauer JE. Effect of prior cesarean delivery on risk of second-trimester surgical abortion complications. *Obstet Gynecol* 2010;115:760-4.
9. Dehlendorf C, Ruskin R, Grumbach K, et al. Recommendations for intrauterine contraception: a randomized trial of the effects of patients' race/ethnicity and socioeconomic status. *Am J Obstet Gynecol* 2010;203:319.e1-8.
10. Langston AM, Rosario L, Westhoff CL. Structured contraceptive counseling—a randomized controlled trial. *Patient Educ Couns* 2010;81:362-7.
11. Eisenberg DL, Stika C, Desai A, Baker D, Yost KJ. Providing contraception for women taking potentially teratogenic medications: a survey of internal medicine physicians' knowledge, attitudes and barriers. *J Gen Intern Med* 2010;25:291-7.
12. Hou MY, Hurwitz S, Kavanagh E, Fortin J, Goldberg AB. Using daily text-message reminders to improve adherence with oral contraceptives: a randomized controlled trial. *Obstet Gynecol* 2010;116:633-40.
13. Perriera LK, Reeves MF, Chen BA, Hohmann HL, Hayes J, Creinin MD. Feasibility of telephone follow-up after medical abortion. *Contraception* 2010;81:143-9.
14. Sufrin CB, Tulsky JP, Goldenson J, Winter KS, Cohan DL. Emergency contraception for newly arrested women: evidence for an unrecognized public health opportunity. *J Urban Health* 2010;87:244-53.
15. Lewis RA, Taylor D, Natavio MF, Melamed A, Felix J, Mishell D Jr. Effects of the levonorgestrel-releasing intrauterine system on cervical mucus quality and sperm penetrability. *Contraception* 2010;82:491-6.
16. Westhoff CL, Torgal AH, Mayeda ER, et al. Ovarian suppression in normal-weight and obese women during oral contraceptive use: a randomized controlled trial. *Obstet Gynecol* 2010;116(2 Pt 1):275-83.
17. Kaunitz AM, Bissonnette F, Monteiro I, Lukkari-Lax E, Muysers C, Jensen JT. Levonorgestrel-releasing intrauterine system or medroxyprogesterone for heavy menstrual bleeding: a randomized controlled trial. *Obstet Gynecol* 2010;116:625-32.
18. Edelman AB, Cherala G, Stanczyk FZ. Metabolism and pharmacokinetics of contraceptive steroids in obese women: a review. *Contraception* 2010;82:314-23.
19. Lopez LM, Grimes DA, Chen-Mok M, Westhoff C, Edelman A, Helmerhorst FM. Hormonal contraceptives for contraception in overweight or obese women. *Cochrane Database Syst Rev* 2010;CD008452.
20. Hastings-Tolsma M, Clark L, Nodine P, Teal S. Sterilization decision making among medically at-risk obese pregnant women. *Qual Health Res* 2010;20:743-54.
21. Steiner AZ, Stanczyk FZ, Patel S, Edelman A. Antimüllerian hormone and obesity: insights in oral contraceptive users. *Contraception* 2010;81:245-8.
22. Murthy AS. Obesity and contraception: emerging issues. *Semin Reprod Med* 2010; 28:156-63.
23. Westhoff CL, Torgal AH, Mayeda ER, Pike MC, Stanczyk FZ. Pharmacokinetics of a combined oral contraceptive in obese and normal-weight women. *Contraception* 2010;81:474-80.
24. Segall-Gutierrez P, Taylor D, Liu X, Stanczyk F, Azen S, Mishell DR Jr. Follicular development and ovulation in extremely obese women receiving depo-medroxyprogesterone acetate subcutaneously. *Contraception* 2010; 81:487-95.
25. Paulen ME, Zapata LB, Cansino C, Curtis KM, Jamieson DJ. Contraceptive use among women with a history of bariatric surgery: a systematic review. *Contraception* 2010;82: 86-94.
26. Speroff L, Darney PD. A clinical guide for contraception. Philadelphia, PA, London: Lippincott Williams and Wilkins; 2010.
27. Hatcher R, Trussell J, Kowal D. Contraceptive technology, 19th ed. New York, NY: Thomson Pdr; 2008.

- 28.** Paul M, Lichtenberg S, Borgatta L, Grimes D, Stubblefield P. Management of unintended and abnormal pregnancy: comprehensive abortion care: Blackwell Publishers; 2009.
- 29.** Ziemann M, Hatcher R, Cwiak C, Darney P, Creinin MD, Stosur HR. A pocket guide to managing contraception. Tiger, GA: Bridging the Gap Foundation; 2010.
- 30.** Benfield N, Darney PD. Contraceptive Implants. Hoboken, NJ: Wiley-Blackwell; 2011.
- 31.** Cansino C, Creinin M. Women 35 years and older: safety issues. Hoboken, NJ: Wiley-Blackwell; 2011.
- 32.** Rapkin A, Sonalkar S. Hormonal contraception and mood. Hoboken, NJ: Wiley-Blackwell; 2011.
- 33.** Reeves MF, Schwartz JL. Vaginal barriers: diaphragm, cervical cap, and female condom. Hoboken, NJ: Wiley-Blackwell; 2011.
- 34.** Teal SB. Postpartum contraception. Hoboken, NJ: Wiley-Blackwell; 2011.
- 35.** Russo JA, Nelson AL. Hirsutism and acne. Hoboken, NJ: Wiley-Blackwell; 2011.
- 36.** Renner R-M, Jensen JT. Progestin-only oral contraceptive pills. Hoboken, NJ: Wiley-Blackwell; 2011.
- 37.** Cansino C, Melgar JL, Burke A. Physicians' approaches to post-abortion care in Manila, Philippines. *Int J Gynaecol Obstet* 2010;109:216-8.
- 38.** Cremer M, Jamshidi RM, Muderspach L, Tsao-Wei D, Felix JC, Blumenthal PD. Digital camera assessment for detection of cervical intraepithelial neoplasia in rural El Salvador. *Int J Gynaecol Obstet* 2005;91:42-6.
- 39.** Lathrop E, Telemaque Y, Goedken P, Andes K, Jamieson DJ, Cwiak C. Postpartum contraceptive needs in northern Haiti. *Int J Gynaecol Obstet* 2011;112:239-42.