

# SYMPOSIUM

## Two-Career Families: Published Data and Personal Reflections

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Women are becoming an increasingly important component of the scientific and medical professions, now making up more than 40% of all graduating medical students, 48% of all Ph.D. graduates in the natural and physical sciences, and 20% of all Ph.D. graduates in engineering in the US (1, 2). These statistics represent a dramatic change in the workforce for industry, educational institutions, and medical care facilities. The National Science Foundation, the American Association of Engineering Studies, and the American Medical Association all predict a shortage of professionals in science and engineering fields in the next decade. Clearly, recognizing the larger contribution of women to this workforce and addressing the issues required to advance their careers lies in the national interest.

Retention of women in careers in science and engineering, whether that career is centered in an academic institution, in industry or in a private business, may, in fact, be a bigger challenge than shepherding them through medical or graduate school. To successfully meet this challenge, we need to address the reasons why women choose not to continue careers in the sciences or engineering. Many of these reasons (e.g., family care issues, schedule flexibility, lack of role models) are common to both sexes, but are often more of a problem for women. Women who embark on a professional career are often either a single parent or an integral component of a two-career family and this often poses unique challenges to both partners that have not traditionally been encountered by more senior male colleagues, mentors, or bosses. We believe that approaching this challenge from the viewpoint of two-career families may provide new

insight into retaining both males and females in productive and satisfying lifestyles.

Many of the challenges faced by female graduates remain the same as those faced by women, including me, three decades ago. For instance, according to studies conducted by the Wellcome Trust, women compose less than 7% of all professors among faculties of American medical colleges and the number of women serving as principal investigator on clinical research grants funded by the NIH is even smaller (<http://www.wellcome.ac.uk/en/1/hme.html>). In a recent article entitled, "Where Have All the Young Girls Gone?", Nancy Andrews, director of the Harvard-MIT combined M.D./Ph.D. program, notes that women physician-scientists have several serious concerns, including the lack of flexibility in adjusting lifestyle, the fear of not being promoted unless they are better than their male colleagues, the lack of encouragement from mentors, and the lack of role models (3). Catherine De Angelis, Editor of the *Journal of the American Medical Association*, takes the mentoring issue a step further, emphasizing the importance of senior women faculty who will enlist the assistance of their male mentors as well as their department heads and college deans to promote programs that support, train, and mentor women in academic medicine (4). Males who are members of a two-career family may be among the first to be able to serve in this mentoring role.

To address these issues that are being encountered by two-career couples, we have developed a program of luncheon discussions (Table I) for postdoctoral fellows and junior faculty in both basic science and clinical departments at the University of Iowa. These topics are discussed in an informal discussion/roundtable setting on a weekly basis throughout the academic year. The focus is on two-career couples and career development and leadership issues faced by all physicians, scientists, and engineers in an academic environment. Several key discussions are led by two-career

**Table I. Leadership Development: Special Needs of Two-Career Couples in Academic Medicine**

Discussion topic	Discussion leaders	Mentoring experience
Academic medicine "101"	Professor of Pediatrics	Graduate students
Two-career families	Council member national research society	M.D. fellows
	Professors of Pediatrics & Internal Medicine	Graduate students
	Division Directors	Medical students
		Post M.D. fellows
		Postdoctoral fellows
		Junior faculty
Stress management at work and at home	Assoc Prof of Pediatrics	Residents
Balancing personal and professional lives	Private practice physician	Post M.D. fellows
	Professor of Medicine and Neuroscience	Graduate students
	Director of Vector core	Postdoctoral fellows
Time management "101"	Professor of Ob-Gyn	M.D. fellows
	Dean of Faculty	Junior faculty
Networking	Professor of Anatomy	Graduate students
	Department Head	Postdoctoral fellows
	President of national research society	Junior faculty
Team building	Assoc Professor of Anatomy	Graduate students
		Postdoctoral fellows
How to read a budget	Hospital CEO	Graduate students
		Postdoctoral fellows
Choosing a career in clinical research	Assoc Prof of Psychiatry	Medical students
	Director of Doris Duke	Post M.D. fellows
	Clinical Fellowship Program	
Choosing a career in bench research	Professor of Biochemistry	Graduate students
	Director, Medical Student Training Program	Postdoctoral fellows
Interviewing for two academic positions at one institution	Head, Pediatrics	Medical students
	Assoc Prof, Pediatrics	Residents
		Post M.D. fellows
		Junior faculty
		Mid career faculty
		Senior faculty
Negotiation	Professor of Radiology	Post M.D. fellows
	Department Head	Junior faculty
Is there such a thing as a part-time career?	Professor of Fam Medicine	M.D. residents
	Department Head	Junior faculty
Panel discussion on leadership styles	Dept Head, Anatomy	Medical students
	Dept Head, Surgery	Graduate students
	Dept Head, Radiology	Residents
	Dept Head, Family Med	Postdoctoral fellows
		Post M.D. fellows
		Junior faculty
		Mid career faculty
Panel discussion on leadership opportunities	Director, Clin Research	Medical students
	Dean of Students	
	Hospital CFO	
Community involvement	Physician	M.D. partners
	Candidate, US Congress	Medical science lobbyists

couples; of the remaining discussions outlined in Table I, more than half are led by women faculty, department chairs, deans, and a female CEO. This increases the visibility of women as leaders, role models, and mentors in the fields of science and medicine. The discussion series also highlights the challenges that Department Chairpersons and Deans encounter in hiring two-career faculty simultaneously at an academic institution.

While not able to provide the entire syllabus for this discussion series, we would like to highlight some of the discussion regarding two-career families. One advantage that two-career couples have in 2003, compared with 1973,

is the wide acceptance of nontraditional families. Lifestyles can include traditional marriages, same sex couples, or singles; the variations upon this theme multiply with the number of children, their legal and biological relationship to the parent(s), and whether the couple shares a single domicile or commutes on weekends. However, setting ideals and goals as a couple and family plus being willing to sacrifice both at work and at home to realize these ideals is fundamental. This requires successful collaboration for a two-career couple and teamwork for a family that is more intense than the collaboration and teamwork that builds a successful research or clinical program. Thus, the teamwork

and networking discussions are experienced in a new context. Two-career couples who have experienced this challenge have shared their stories online at the *Science* magazine web site ([www.nextwave.org](http://www.nextwave.org)).

There is no doubt that being part of a two-career family is a more prevalent theme for women scientists and engineers than for men, because very few male spouses/fathers are willing to serve as full-time homemakers. Also, surprisingly, over the past three decades, there has been little shift/drift in child-rearing responsibilities, with most women continuing to shoulder more of these responsibilities. We have found this one of the most difficult social stigmas to change, but have found (to his surprise and her delight), that men can cook and change diapers and that such shared parenting provides a real reward for the children who not only spend more quality time with their father, but also see a new role model. We believe this early mentoring of young children by their fathers and mothers is essential to changing the working environment for two-career families. In addition, this encourages both members of a two-career couple to develop work "smart" skills rather than "workaholic" lifestyles that have penetrated so deeply into professional careers in science, medicine, and engineering. The end result can be a better lifestyle for each individual involved in a two-career relationship.

Children raised by a two-career couple must share in both the goals and the struggles of the family unit. We never have been able to design all experiments to be completed before the kids' soccer game started, nor were we ever able to arrange night and weekend and holiday call schedules to have both parents available for all school, church, and social events for each child. This means the children must often sacrifice this parental support. Put in a positive context, if both parents are open and honest with the children in terms of when they can, and more importantly, when they cannot attend an important function, this provides an opportunity for children to learn to gain independence and to support each other.

Adequate care for children while parents are away is

difficult for any family, but perhaps more so for a dual-career couple. The total number of business trips can be double that of other families, making the experience of being a single parent more likely for both members of the couple. We have been fortunate to discover that children love to travel; in fact, this has been one of the greatest family activities in our two careers. Our children are world travelers and consequently, more interested in geography and current events. More importantly, we believe these experiences have given them and us a better understanding of other cultures and, hopefully an ability to work effectively at local, national, and international levels to bring the benefits of science, medicine, and engineering to people all over the world.

A world view of science, engineering, and medicine must begin in our communities; all of us are privileged to have advanced educational opportunities. Two-career couples have an advantage here also in that they can begin a community commitment with an N of 2. Whether that community is the institution or company in which you work, your child's school, your local neighborhood, you tackle the State and Federal government, or you contribute to an international effort in science, medicine, or peace, we believe this will enhance the strength of your personal relationship, the intellectual, emotional, and spiritual growth of your family, and contribute greatly to a satisfying lifestyle.

Being a two-career couple and family has been challenging, at times very frustrating, but in the end very rewarding both personally and professionally for us. We wish you good luck in your careers.

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