Using a Professional Organization, MomDocFamily, to Understand the Lives of Physician-Mothers

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In the US, the percentage of female medical school graduates increased from 27% in 1983 to 48% in 2010.[1] As the number of women in medicine continues to rise, questions about the effects of family on professional life—and vice versa—are emerging for individual physician-mothers as well as for their colleagues, employers, and institutions.

To our knowledge, there are no published assessments of programs explicitly addressing the needs of physician-mothers. One model targeting this segment of the medical workforce is **MomDocFamily (MDF)**.[2] Originally established in 2003 by two physician-mothers in Rhode Island, MDF is a large, primarily regional organization that links physician-mothers from all specialties and stages of medical career. Communication among members occurs mostly on-line via a confidential listserv. Additionally, members self-select to collaborate on group initiatives such as the establishment of lactation facilities and parental leave policies.[3,4]

The objectives of this study were to: 1) evaluate the demographic composition of MDF's membership and members' utilization of the organization; and 2) assess quantitatively and qualitatively the experiences of MDF members as physician-mothers.

Methods

This study was conducted in two phases between July 2009 and July 2010 and approved by the Institutional Review Boards of The Warren Alpert Medical School of Brown University, the Lifespan health care system, and Women and Infants Hospital of Rhode Island.

Surveys

A survey that included 39 questions about demographics, family structure, participation in MDF, and interest in participating in a focus group was developed by the primary investigator, piloted by two other investigators, and then revised. In June of 2009 there were 158 names and email addresses available through MDF's listserv. Thirty-six individuals were eliminated due to lack of correct contact information, having recently left the organization, or having moved out of the Rhode Island/Southern Massachusetts region.* The survey was emailed to the remaining 122 members. Between July and September 2009, each participant who had not yet responded received a maximum of four emails followed by two phone calls.

* MDF began including members from outside this region after the start of this study. Currently, the organization has 279 members representing 31 specialties.

Table 1. Demographics of MomDocFamily members as of June 30, 2009 (n=84).

		%	(No.)
Level of training/career			(84)
	Attending	76.2	(64)
	Fellow	11.9	(10)
	Resident	8.3	(7)
	Medical student	3.6	(3)
Specialty*			(81)
	Primary care	34.6	(28)
	Medicine and pediatric subspecialties	19.8	(16)
	Psychiatry + psychiatric subspecialties	11.1	(9)
	Emerg. medicine (EM) + EM subspecialties	4.9	(4)
	Surgery + surgical subspecialties	4.9	(4)
	Ob/Gyn	12.4	(10)
	Other non-surgical specialties	12.4	(10)
Marital status‡			(83)
	Married	95.2	(79)
	Single	0.0	(0)
	Partnered	3.6	(3)
	Divorced	1.2	(1)
Among Attending Physicians Only	No. of yrs attending phys.‡		(62)
	≤1	9.7	(6)
	2-3	25.8	(16)
	4-6	27.4	(17)
	7-9	21.0	(13)
	≥10	16.1	(10)
	Job description§		(64)
	Clinician	53.1	(34)
	Clinician-educator	54.7	(35)
	Researcher	17.1	(11)
	Academic rank		(44)
	Full Professor	0.0	(0)
	Associate Professor	9.1	(4)
	Assistant Professor	72.7	(32)
	Clinical Instructor	18.2	(8)

	%	(No.)		
Spouse/partner's work status‡		(75)		
Full-time	90.7	(68)		
Part-time	6.7	(5)		
Unemployed	2.7	(2)		
No. of children‡		(83)		
1	42.2	(35)		
2	43.4	(36)		
3	12.1	(10)		
4+	2.4	(2)		
Ages of children‡		(83)		
0-12 mo	14.0	(20)		
13 mo – 4 yrs	48.3	(69)		
5-9 yrs	28.7	(41)		
10-12 yrs	6.3	(9)		
13-18 yrs	2.8	(4)		
Career level at 1st birth‡		(82)		
Pre-med/medical student	8.5	(7)		
Resident	35.4	(29)		
Fellow	22.0	(18)		
Attending	34.2	(28)		
Work status‡		(83)		
Full-time	78.3	(65)		
Part-time	21.7	(18)		
Total hrs working per week‡		(77)		
<40	19.5	(15)		
40	7.8	(6)		
41-59	40.3	(31)		
>60	32.5	(25)		
Providing childcare†:		(82)	OR	95% CI
In the evening / after work:				
Physician-mother	93.9	(77)	6.0	2.2-16.7
Partner/spouse	72.0	(59)		

* This number does not include medical students. Primary care includes pediatrics, internal medicine, medicine/pediatrics, family medicine, and geriatrics; medicine and pediatric subspecialties include gastroenterology, hem./onc., inf. disease (both adult and pediatric), ped. endocrinology, genetics, sleep medicine, neonatology; psychiatric subspecialties include child and adol. psychiatry and those who are triple boarded (peds/psych/child psych); EM subspecialties include sports medicine and ped. emergency medicine; surgical subspecialties include orthopedic surgery; ob/gyn includes general ob/gyn and reproductive endocrinology; non-surgical subspecialties include radiology, neurology, neuroradiology, dermatology, and pathology.

† This person works for a private company.

‡ These questions were not answered by all respondents.

§ These add up to more than 100% since many respondents checked more than one response.

Table 2. Focus group demographics (n=11).

	%	(No.)		%	(No.)
Level of training/career		(11)	No. of children		(11)
Attending	90.9	(10)	*1*	18.2	(2)
Fellow	9.1	(1)	*2*	63.6	(7)
Resident	0.0	(0)	*3*	18.2	(2)
Medical student	0.0	(0)	*4+*	0.0	(0)
Specialty*		(11)	Ages of children		(11)
Primary care	54.5	(6)	*0-12 mo*	13.6	(3)
Medicine and pediatric subspecialties	27.3	(3)	*13 mo – 4 yrs*	50.0	(11)
Surgery + surgical subspecialties	9.1	(1)	*5-9 yrs*	27.3	(6)
Ob/Gyn	9.1	(1)	*10-12 yrs*	9.1	(2)
Work status		(11)	*13-18 yrs*	0.0	(0)
Full-time	63.6	(7)	Career level at 1st birth		(11)
Part-time	36.4	(4)	*Pre-med/medical student*	0.0	(0)
Marital status		(11)	*Resident*	63.6	(7)
Married	100	(11)	*Fellow*	18.2	(2)
Single	0.0	(0)	*Attending*	18.2	(2)
Partnered	0.0	(0)			
Divorced	0.0	(0)			

*Primary care includes pediatrics, internal medicine, medicine/pediatrics, family medicine, and geriatrics; medicine and pediatric subspecialties include gastroenterology, hem./onc., inf. disease (both adult and pediatric), ped. endocrinology, genetics, sleep medicine, neonatology; surgical subspecialties include orthopedic surgery.

Focus Groups

Three focus groups, each with three to five physician-mother participants, were conducted between December 2009 and July 2010 at The Warren Alpert Medical School of Brown University (two) and at Rhode Island Hospital (one). These groups were led using a semi-structured interview guide developed from themes that emerged in qualitative responses to questions in the emailed survey about challenges faced by physician-mothers and MDF's role in supporting its members.

Each 60- to 90-minute focus group was facilitated by the principal investigator, attended by an investigator-observer, and digitally recorded. Written consent was obtained from each participant. Childcare was provided as needed. Focus groups were continued until the themes elicited independently in the discussions became saturated and no new information was shared. The digital recordings were transcribed without identifiable information and then coded.

Investigators and two additional members of the MDF Advisory Board reviewed transcripts of the discussions and agreed on emerging themes until consensus was reached on interpretations and searches for alternative interpretations had been undertaken.

Statistical analysis

Quantitative information was analyzed using SAS version 9.2. Chi-squared tests of associations were used to compare responders and non-responders. Either chi-squared tests or one-way analyses of variance were performed to examine associations between specific personal and professional characteristics of physician-mothers. P-values were considered to be significant with $\alpha < 0.05$. Logistic regression models were used to assess differences in the probability of events occurring such as the provision of childcare by physician-mothers versus their partners/spouses.

Results

Of the 122 eligible MDF members, 84 responded to the survey (response rate 68.9%), 42 by email and 42 by phone. Compared to responders, non-responders were not significantly different with respect to specialty and career level.

Professional and personal characteristics of MDF members

Seventy-six percent of MDF members reported their career level as attending physician. (Table 1) Members represented 28 different specialties, with over one-third working in primary care. Of the attending physicians, 69% reported working in academic medicine. Although 37% of these professionals had been out of training for seven or more years, none reported academic rank to be full professor.

One respondent was divorced while the rest were married or partnered. Eighty-five percent had one or two children, and 91% of children under the age of nine. Two-thirds of respondents reported having their first child during training, 35% during residency. After controlling for specialty, total hours working per week was inversely associated with the number of children per physician-mother (p= 0.0013).

Work-life balance

Eighty-one percent of respondents stated that they work at least 40 hours per week, including 29% of those who reported working part-time. Total hours worked per week was significantly associated with specialty (p = 0.01), as was full-time employment status (p=0.005). Those in non-primary care specialties were more likely to work more hours per week and to be of full-time status.

The majority of households (92%) contained dual working parents, and 21% of respondents reported that their partners and spouses travel frequently (data not shown). Mothers were six times more likely take care of their children after work hours compared to their partners/spouses (odds ratio [OR]: 6.0; 95% confidence interval [CI]: 2.2-16.7).

Challenges facing physician-mothers

A total of eleven MDF members participated in focus groups. (Table 2) Discussions within these groups revealed three common challenges faced by physician-mothers: the impact of lengthy training on fertility decision-making; responsibility for the wellbeing of other people in both their professional and personal roles; and achieving a sense of balance between work and home responsibilities. (Table 3)

Focus group participants found decision-making around fertility significantly impacted by lengthy medical training. Participants described their primary dilemma as waiting until training was complete before having children and thereby potentially risking "fertility problems" versus having children during training, a particularly time-intense period also marked by a relatively low salary and limited control over one's schedule.

Focus group participants cited their responsibility for the wellbeing of others as the primary distinguishing factor between themselves and other working mothers. They described caring for patients as requiring a level of emotional investment similar to that expected at home as parents. Childcare posed another challenge due to the unpredictable and long work hours associated with medicine. Benefits to being both a physician and mother included enhanced empathy for patients, relieved

stress surrounding common childhood ailments, as well as serving as role models to their own children.

Participants commented that the role of physician-mother is more stressful if a partner or spouse has a time-intense job, no matter what the career. Four of the six participants who were married to other physicians explicitly described the support and understanding that comes from being married to someone else in the same field, a key benefit of the two-doctor household.

Regarding the challenge of balancing home and work, participants cited examples from the workplace including unsupportive colleagues and a perceived misalignment in values with some older physician-mothers. Parental leave policies—or lack thereof—were of particular concern for all participants. Compounding factors included pressure from other parents, teachers, and their own children who compared participants to stay-at-home mothers.

Focus group members also acknowledged that medicine enables employment options that provide the possibility of better work-life balance. Four participants held part-time positions in four different specialties and three different work environments, although only one was satisfied with her contract. The others described continued long hours and nights or weekends on-call that had not been reduced on a pro-rated basis to reflect their part-time work status.

All groups expressed that informal mentorship among physician-mothers had been helpful when striving to balance work and home.

MDF participation and suggestions for the future

Although 92% of respondents reported using the organization's listserv for both personal and professional reasons, only 30% reported attending quarterly MDF events. (Table 4) The primary barriers to participation in MDF events posited by focus group participants were time constraints and being overcommitted.

Three recurrent themes emerged from the focus groups about the benefits of MDF participation: a time-saving way to share information; providing guidance in professional development; and helping to reduce any sense of isolation. Participants also commented on the utility of MDF's web-based structure and made suggestions for enhancing it such as providing a list of vetted childcare providers.

Table 3. Challenges faced by physician-mothers based on focus group analysis.

Challenges	Possible Sequelae	Can be Compounded by:	Can be Mitigated By:
A career in medicine requires extensive training	- Delay in starting a family - "Fertility problems", leading to anxiety, feeling of loss of control - Absence during and after childbearing can cause resentment by other trainees.	- Lack of control over schedule - Time-intensive schedule - Unsupportive administration *"It was very clear that…our chair did not want us getting pregnant during residency. And [he] would actually say that."* - Lack of financial resources if parenting while still in training - Potentially lengthened time to conception or infertility	- Acceptable parental leave policies within training programs (for trainees) - Positive informal and formal mentorship - As a mother, experiencing enhanced sense of empathy for patients - Supportive partner/spouse - Extended family
Responsibility for the health and well-being of others - Double the emotional investment *"I think when you're a physician you're taking care of people, so it's not like, "Oh well maybe if I don't do my job as well today because I have to rush out to the kids then some company will lose some money." It's not about that. I think that role of being emotionally invested and having to do it well is something that applies both to being a physician and to being a parent and so it's just - there is only so much you can do, so I think it's... that constant back and forth."*	- Difficult to take sick leave (for self or for children) or leave early for home emergencies - Difficult to utilize childcare facilities with 'normal' working hours *"When we make a decision at work it can be [about] life or death. Versus somebody else [who] misses a deadline, they miss a deadline. I mean… if somebody's having chest pain at 5 o'clock, and we're supposed to be picking somebody up from daycare, we're not leaving. If somebody isn't making a deadline at 5 o'clock, they leave."*	- Unsupportive colleagues - Work environment - Partner/spouse with time-intense job can make it challenging to negotiate priorities *"In theory, [my husband is] very supportive. But, the practicalities are… I think he has a panic attack of, "Well, this is really important and I don't know how to do this and my boss and the job and the client," and [my response is] "But, we have the child, and he's sick and what are we going to do about that," so… I do end up being the one having to think out of the box and [be] more flexible and I have the stress of organizing everything and he tries his best but… It became clearer [as the children got older] that I would have to be the backup person for everything. [And] I think even if I had his job and he had mine, then he would say, "I'm taking care of sick babies," and I would be the one saying, "Well, I guess I can come home from LA and I can try to do a conference call…"*	- Coverage of clinical or other work responsibilities in emergencies by understanding colleagues - Partner who inherently understands the pressure of the workplace, ie. physician-spouse - Partner/spouse who shares equally in household division of labor - Ability to distinguish 'serious' from 'not-so-serious' ailments in own children
Achieving a sense of balance between work and home responsibilities	- Fear that negotiation for (more) time will lead to resentment from colleagues - Shifting priorities to accommodate both roles - Fatigue - Sense of sadness and isolation "*[M]y husband works full time as…a professor. We have this battle as to who's more stressed and who needs to get their work done... but I don't think he understands my work issues and I don't think I necessarily understand the urgency of his work issues. I think if you had a physician-spouse, then you might understand each other's needs a little bit more…"*	- Long hours - Unsupportive work environment, including unsupportive colleagues and inadequate or absent parental leave policies - Difficulty in obtaining acceptable part-time employment - Generation gap with older physician-mothers - Partner/spouse with time-intense job - Imbalanced division of labor - Pressure from non-physician parents, teachers, children, etc. "*[T]here's this whole thing about being involved in the school and baking and doing all that stuff… I'll try to explain to [my physician-husband] why there's this [pressure to bake, etc.], and he's like, "Why do you care, you're working! You know you don't have to do that stuff." But, he doesn't get that same pressure. Nobody's gonna say [to him], "Why didn't you bake cookies?" or think that in their head. It's different when you're a woman because the expectations are different."*	- Choosing a more flexible career path within medicine - Effective negotiation for more acceptable work policies/contract, including parental leave policies, part-time work schedule - Changing work priorities to accommodate family - Informal mentorship to/from other physician-mothers - Experiencing enhanced sense of empathy for patients - Partner who inherently understands the pressure of the workplace, i.e. physician-spouse. - Partner/spouse who shares equally in household division of labor - Recognizing self as role-model for children (especially daughters)

Table 4. Member utilization of MDF and suggestions for future directions.

Survey	% (No.)	Focus Groups	
Why use MDF listserv*		**Benefits of participation in MDF**	Time-saver *Ex: "[MDF] is organized in a way that really suits this lifestyle of MomDocs"* *Ex: "I think [MDF has] been helpful for…really small things to really big things. [T]he small things that I think are helpful are… finding a nanny or, where do you do x, y, and z and you just don't know and you don't have time to talk with all these other moms at the park at 3 pm…"*
Both personal and professional	46.0 (34)		Professional networking/development *Ex: "When I was trying to find a job [knowing] I have to support my family, and I don't know what the salaries are here, I met with a member privately, and she…gave me some tips on negotiation, and I [thought] this is the kind of stuff they should teach you in residency but they don't... It's support, but support in a way that is very business and practical oriented. I know how to nurse... I need more practical help."*
Exclusively personal	46.0 (34)		Reduces sense of isolation *Ex: "The other [way that MDF has been helpful] for me has been just hearing stories… and saying, OK, I'm not alone, I'm not the only one who goes through these crises and has bad days and it's just very, very nice for me to know that there are other people out there… it's just nice to know that somehow I'm not crazy, I have not made a lot of bad decisions, it's just life."*
Exclusively professional	0 (0)	**Obstacles to participation in MDF-sponsored events/initiatives**	Time constraints, already feeling overcommitted
Have not used it	8.1 (6)	**Suggestions for future (from both surveys and focus groups):**	Web materials - Readily accessible email archives - Blog or other private web-based forum to share insights about specific personal and professional topics
Avg. no. MDF events attended per yr†			Mentorship opportunities arranged around specific areas of interest
0	70.5 (55)		Geographically based networking events
1-2	26.9 (21)		
3-4	2.6 (2)		

*Listserv "usage" includes both reading emails as well as actively posting messages.
† There are an average of four MDF events held per year.

Discussion

The current study is among the first to evaluate an organization exclusively devoted to supporting physician-mothers. The mixed-methods design enabled us to assess the organization's demographics and utilization as well as better understand the unique experiences faced by a large group of physician-mothers.

Similar to what has been shown in other studies, the majority of MDF physician-mothers work more than 40 hours per week,[5] have partners or spouses who also work full-time,[6,7] and are more often responsible for childcare than their partners or spouses.[7] These professional and personal pressures resulted in feelings of fatigue and isolation compounded by little to no infrastructure within medical institutions to address (and accommodate for) these challenges.

In our study, 22% of physician-mothers reported working part-time. Part-time employment is increasingly popular among women physicians in clinical and academic settings in order to accommodate family obligations.[8,9] Challenges to part-time work as described by focus group participants include difficulty negotiating fair contracts and negative perceptions by colleagues and supervisors, which is consistent with findings from prior research.[8] Ironically, part-time physicians have been shown to be more productive and cost-effective for employers than their full-time counterparts.[10,11] Although it has been reported that male spouses currently provide more support at home than in previous decades,[6] our study is consistent with other research revealing that physician-mothers still provide the majority of childcare in their homes regardless of their own work schedule.[12,13]

Another salient study finding is the absence of full professors and the low number of associate professors (9.1%) among the respondents in academic medicine despite the high percentage of academic physicians (37%) who had been out of training for more than seven years. While some senior women may have remained hidden in the 30% of MDF members who did not respond to the survey, this lack of female full or associate professors is not unique to MDF.[5,14,15] Increased recognition of a "leaky pipeline" phenomenon among women in academic medicine has led to several proposed solutions including pro-rated tenure time-lines and flexible work schedules.[9,16] Our study findings fully support these initiatives as appropriate steps to address the realities faced by women physicians who are parents.

Our study also highlighted the tangible benefits of a network of physician-mothers who can share strategies and promote one another's professional and personal success. MDF's web-based approach is a time-efficient resource for both professional and personal needs and its on-line community reduces the sense of isolation for busy physician-mothers. The MDF structure promotes informal mentorship linkages between physician-mothers and may be characterized as a peer-mentoring program. Mentorship programs in general have been associated with more scholarly productivity[17] and peer-mentoring models in particular with a heightened sense of empowerment.[18-20] Because peer-mentoring often involves a group of people, pressure on any one individual to fulfill her role may be minimized. This flexibility may be especially accommodating for individuals with time-intense schedules.[21]

A limitation to this study was, ironically, the busy schedules of physician-mothers potentially limiting participation in the survey and/or focus groups. It is reassuring that responders and non-responders did not differ significantly in terms of specialty or career level. Additionally, because this study was an assessment of a specific organization, the characteristics of physician-mothers described here apply only to MDF members who were members in June of 2009.

In conclusion, MomDocFamily is a regional organization that fills critical gaps in the typical support systems available to physician-mothers by providing professional and personal mentoring conducted primarily on-line. This study clarifies prior research

on the unique challenges faced by this key sector of the medical workforce. It also provides suggestions for further development of this groundbreaking organization.

MDF welcomes any medical student or physician who is a mother to join the organization via its website: http://biomed.brown.edu/owims/MomDocFamily.

Acknowledgements

The authors wish to thank the following faculty and staff of The Warren Alpert Medical School of Brown University: Michele G. Cyr, Associate Dean for Academic Affairs; Debra Abeshaus and Kathleen Haslam, The Office of Women in Medicine and Science; Jeffrey Borkan, MD, PhD, Professor and Chair of Family Medicine; Neha Raukar, MD, MS, Assistant Professor of Emergency Medicine. The authors also wish to express their gratitude to MomDocFamily co-founder, Carolyn Blackman, MD.

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Previous Presentations: Earlier versions of this paper were presented at the Society for Teachers in Family Medicine regional conference in Rye Brook, NY on November 1, 2009 and at the national AHEC conference in Las Vegas, NV, on June 22, 2010.

Role of Funding Source: This study was funded in part by a Summer Assistantship Grant provided by Brown University and by a grant from the Northern Rhode Island Area Health Education Center (AHEC). The funding source had no role in the design, conduct, or collection of data; in the analysis or interpretation of the study; or in the decision to submit the manuscript for publication.

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Disclosure of Financial Interest

The authors and/or their spouse/significant other have no financial interests to disclose.

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