

ORIGINAL RESEARCH

Otolaryngology residents' experiences of pregnancy and return to work: A multisite qualitative study

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Abstract

Objectives: A paucity of literature exists about childbearing during otolaryngology residency. Pregnancy is a common part of many physician life cycles, but the timing of residency and the rigors of surgical training amplify the challenges. This study was designed to understand the experiences of childbearing otolaryngology residents and support them during this major life event. Unique challenges include long training, shortage of role models, combination surgical and clinical work, and higher rates of infertility.

Study Design: Qualitative research. IRB exempt.

Setting: United States.

Methods: To capture modern perspectives, 16 current and former otolaryngology residents that experienced pregnancy and childbirth during residency in all four geographic regions of the United States in the past 10 years were recruited to participate in individual structured qualitative interviews.

Results: Although there was significant training program and personal anxiety reported by childbearing otolaryngology residents, many surgeons experienced healthy pregnancies and postpartum recoveries with minimal disruption to clinical productivity and minimal disruption to their training programs. Multiple recurring themes were identified among the participants spanning the entire childbearing process: increased incidence of pregnancy complications and preterm labor, pregnancy stigma from leadership and coresidents, scheduling logistics regarding call and parental leave, and challenging transitions back to clinical work while navigating breastfeeding and childcare.

Conclusion: There are actionable recommendations that programs can address to make childbearing during residency accessible and acceptable. Understanding these challenges is an important step to encouraging childbearing residents to prosper in academic otolaryngology, increasing the diversity at the highest levels of the field.

Level of Evidence: 4.

KEYWORDS

diversity, gender, otolaryngology, parity, pregnancy, surgery, surgical workforce, women, workforce

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1 | INTRODUCTION

Otolaryngology residents continue to become more diverse.¹ Residents are entering training later in life due pursuing professional experiences between levels of training like research or additional degrees. Therefore, more residents are approaching the biological end of their childbearing years during residency. Pregnancy at the “advanced maternal age” of 35 poses fertility concerns, increased complications, and the need for closer monitoring.² There is a paucity of research on childbearing during otolaryngology residency. One qualitative study of three subjects discussed the need for pre-emptive policies to help with concerns about breastfeeding, childcare, parental leave, and call coverage over a decade ago.³ These themes are not always encompassed in large qualitative papers from other specialties. The limited literature from similar specialties describes familiar challenges: small class sizes result in difficulties with clinical coverage and call scheduling. As appreciation grows for the importance of diversity in otolaryngology, it is important to recognize that family planning plays a role in medical student choice of specialty and training program.

Parental leave policies in residency vary greatly.^{4,5} Despite a strong push in graduate medical education (GME) literature for parental leave and breastfeeding policies, a third of general surgery programs and half of otolaryngology programs do not have any in place.^{5,6} Additionally, there is concern from program directors that becoming a parent negatively affects trainees.⁵⁻⁷ The insufficient leave and work load was concerning to trainees as a factor negatively impacting their or their baby's health. A third of general surgery residents considered leaving residency and would discourage childbearing medical students from going into surgery.⁸ In plastic surgery, there is also a lack of leave policies⁹ and higher than general population rates of infertility, elective abortions, and pregnancy complications.¹⁰ Neurosurgeons also experience similar barriers to pregnancy and delay childbearing until later in their careers.¹¹ When comparing pregnant residents to attendings, orthopedic surgeons describe five-fold increased risk of preterm birth with longer work hours, and almost half the parental leave and breastfeeding duration.¹²

Family planning is an important component of recruitment and retention in otolaryngology.^{13,14} Trainees that enter residency after additional life experiences or degrees are even more valuable to academic otolaryngology, but it is not biologically feasible for older individuals to delay childbearing beyond residency. One in four American physicians experience infertility and wishes they had attempted conception earlier.¹⁵ Fertility begins to decline for females in the mid-twenties with rapid decline after the age of 35 due to hormonal changes and decreased egg quality and number. Assisted reproductive technology (ART) options like in-vitro fertilization become less successful with age.¹⁶ A study of Urologists showed that ART was needed at 10 times the national rate.¹⁷

This qualitative study, the largest of its kind in the otolaryngology literature to date, aimed to identify and document modern challenges that otolaryngology residents encounter when pregnant and in the postpartum period.

2 | METHODS

2.1 | Study design

This study followed the Standards for Reporting Qualitative Research¹⁸ as a qualitative design with semi-structured interviews and thematic analysis of transcripts. University of Washington IRB exemption.

2.2 | Study participants and sampling

All 16 subjects were current and former otolaryngology residents that had been pregnant and given birth during residency within the past 10 years. Purposeful geographical sampling and snowball methods were used to include participants from all four major regions of the United States (two west, four east, five south, and five mid-west) and training programs of different sizes (2–5 residents per year). Many potential participants (11) contacted for participation chose not to be involved due to fear of retaliation from their programs or the field. We robustly protected confidentiality by not reporting specific programs, timing of childbirth, or potentially identifying stories.

2.3 | Interview guide and data collection

An interview protocol was developed based on themes identified in the literature regarding childbearing in surgery, medicine, and other professions.^{1-4,6-10,12,15,19} Questions were included regarding pregnancy, postpartum period, maternity leave, and return to work exploring several topics: overall experience; timing; scheduling (getting to prenatal appointments, clinical coverage for maternity leave, maternity leave policies); return to work (childcare, sources of support, breastfeeding, pumping at work); reaction of colleagues and faculty; challenges; positive enabling factors; role models; lessons learned; and recommendations for improvements. The script was pilot tested with two surgeons and revised using collaborative discussion and as needed in an iterative process. Verbal consent was obtained from participants at the beginning of the interview after a discussion of the objectives, confidentiality, use of recording, and plans for deidentified transcription.

2.4 | Data analysis

Data analysis was completed in a similar fashion to previously published literature using standard thematic coding and qualitative analysis of transcribed interviews.¹³ Dedoose qualitative software package (v8) was utilized for analysis and coding of the transcripts. A codebook was developed from the first three interviews, confirmed, and then utilized and revised to code the additional interviews. The authors reviewed the full coded and compiled interviews to agree on emergent themes, meeting regularly to ensure the reliability of the coding process. Thematic saturation was achieved after 10 interviews, with additional interviews included to ensure geographic diversity.

3 | RESULTS

The 16 women were interviewed from 14 unique training programs. The findings were categorized into issues relating to program culture, childbearing, parental leave, transition back to clinical work, and policies and scheduling (Table 1).

3.1 | Program culture: Pregnancy stigma

Many participants announced their pregnancy to program leadership with trepidation and reported mixed reactions. Respondents described feelings of “violating norms” and worried about being perceived as “selfish.” Respondents were concerned that the pregnancy would increase their coresidents clinical and call responsibilities. Many respondents felt that their pregnancy negatively affected their reputation within the department. Residents often looked to role models like previous residents, attendings, and family members who had experienced pregnancy during residency. Those with role models reported fewer feelings of selfishness and guilt.

“I remember people talking about discrimination and I [thought] ‘Oh, that’s a nice concept, but that does not apply to me, I’ve never experienced this before. ‘And then I got pregnant and everything changed. Everyone, whether or not they say it, looks at you differently. I feel

TABLE 1 Common themes experienced by otolaryngology residents who have given birth

1. Program leadership was sometimes openly unsupportive when a resident provided the news of their pregnancy. Many felt their leadership thought less of them for their pregnancies
2. Residents experienced less anxiety when there was an official policy on parental leave available for them to reference in advance. Residents preferred to organize and drive their own scheduling and coordinate how their call was made up among their peers. Although most participants made up their call and took limited parental leave that included their annual vacation, there is no data to support that this approach is optimal
3. Most study respondents had healthy babies and completed their residency with minimal impact to the program or coresidents. Yet, 37.5% of residents in this study experienced miscarriages or complications in the process. This sample may not be representative of more complex pregnancy experiences and does not encompass residents who were never able to have a baby
4. Barriers to a healthy postpartum period include small programs with complex call/clinical coverage, lengthy surgical cases disrupting breast milk pumping, and an underrepresentation of child-bearers in leadership leading to lack of role models and lack of detailed knowledge of the rigors of breast milk expression. These barriers caused increased anxiety at the individual, residency, and faculty level
5. Residents with access to a stay-at-home partner or full-time family support were highly represented in this study (likely self-selected) and were able to return to work more quickly with fewer concerns about childcare

like automatically there is an implication that you are less, that you’ll do less, that you’ll be there less, that you’re not as serious as you were, you’re not as good as you were ... I was met with a lot of hostility.”

“The program director’s response was very positive, congratulatory and told me that we can be flexible with the needs that I had.”

“He [said], ‘we’ll see how this one goes’ ... very demeaning, very not supportive, no congratulations, no anything.”

“It depends on the attending. Some of them were fantastic, but I think they were all—in the back of their minds, they’re all concerned that you’re going to be a bad surgeon because you’re missing three weeks of residency.”

3.2 | Program culture: Policies and scheduling

In most programs, there was no official departmental policy on pregnancy and parental leave, which would have helped to establish a “family-friendly” culture. When not guided by policy, residents preferred scheduling their parental leave and call coverage internally among the residents. Most residents chose to front-load call so that the overall perceived burden on coresidents was minimized. Barriers to scheduling included the small nature of the residency call pools.

“I prefer...having the flexibility to discuss what my personal needs were with the other residents and decide amongst ourselves.”

“Someone paved the way ahead of me, so five to six weeks off was already an accepted maternity leave. That was very helpful ... the residents were in charge of the schedule. That was huge.”

3.3 | Pregnancy and complications

During the first trimester of pregnancy, many residents worked for weeks with nausea and fatigue prior to making peers and leadership aware of their pregnancy. Most residents were able to organize prenatal healthcare appointments around clinic and call schedules. Multiple residents (4 of 16) had miscarriages or other complications (3 of 16), including severe infection or premature rupture of membranes and delivery. Respondents did not feel pregnancy affected their academic or clinical performance.

“The worst memory I have is just holding about five or six pagers trying to respond to all of them while I’m eight or nine months pregnant and I became dehydrated at one point and was having premature contractions and I basically fainted on the floor.”

"I had premature rupture of membranes at 34 weeks with my [second] ... I miscarried my first."

"The nausea is real. Fatigue is real. I just didn't really think about it. Same thing with the swollen feet, I just got bigger clogs. At one point, I had flip flops under shoe covers."

3.4 | Parental leave: Limited time away

Residents mostly had six or fewer weeks of parental leave, typically comprised of sick leave combined with saved vacation time. The six-week time restriction occurred because the American Board of Otolaryngology - Head and Neck Surgery (ABOHNS) only allowed 6 weeks away during an academic year, or the time had to be made up at the end of residency, delaying graduation. Residents frontloaded their call schedules during pregnancy, made up call that would otherwise be scheduled during their parental leave, and saved vacation time to use for parental leave to minimize the impact on their peers and avoid delaying graduation. This approach made the rest of the year more challenging due to higher call volume and lack of vacation time. Some pregnant residents did experience postpartum mood symptoms, which led to thoughts of dropping out of otolaryngology.

"We had three weeks of vacation and three weeks of sick leave each year.... So I took five weeks with the knowledge that then if I needed another week at some point during the year for sick leave that I would have at least a little wiggle room."

"I really got a bad course of what I realize in retrospect was like postpartum depression. I recognized that all I wanted to do was quit and I hated surgery. ... [I had] about six weeks of this postpartum depression. ... I woke up one morning and was completely fine again."

3.5 | Return to clinical work: Challenges of breastfeeding

The most universally challenging part of childbearing during residency was breastfeeding, including insufficient pumping facilities and time. Some experiences were so traumatizing that future pregnancies did not include plans for breastfeeding. There was a significant lack of knowledge on the part of coresidents and attendings about time required to pump breastmilk and the health dangers of delaying milk expression.

"It was a rare case ... I didn't feel like I could comfortably leave. Right after that, I got terrible mastitis. I had a breast abscess. I had to have incision and drainage two different times. I had to pack the wound for six weeks. It was awful, so breastfeeding came to an end."

"I think people don't realize how much time is involved in pumping. It's not just the pumping. It's cleaning the pump parts and finding a place to store - we cover two hospitals, so where are you going to put your breast milk? You need a fridge. You can't lug around the pump. We're like homeless people. ... Logistically, it's just almost impossible."

"I would have to finish what I was doing, get up, go [to the pump facility], wait for however long, then pump which takes 20 minutes, 15 if you're savvy, and then throw myself together and come out. And do that three times a day, who has an hour three times a day? Nobody."

3.6 | Return to clinical work: Challenges of childcare

The time demands of residency require childcare coverage, including nights and weekends. Many of the residents had stay-at-home spouses, support from other family members, and/or full-time nannies. Daycare facilities were largely insufficient due to limited hours of operation and long enrollment wait times. Emergency childcare provisions were lacking. Unlike prenatal appointments, coordinating medical appointments for the infant was challenging.

"My husband works from home, has a very flexible job so that he can pick up and drop off. We use daycare and we have a hospital-associated daycare. He does all of the pickup and drop off and doctor's appointments for the kids and stuff that otherwise would be very challenging for me to do."

"My husband stayed home full-time. He quit his job."

"My parents...retired and moved across the country and watched her."

"We had a live-in nanny...our only option because of middle of the night calls."

4 | DISCUSSION

The geographically and programmatically diverse residents in this study experienced pregnancy and early parenthood during otolaryngology residency. This time was challenging but rewarding (Table 1). There are multiple barriers including program culture, policies and scheduling, limited parental leave, breastfeeding logistical difficulties, and childcare availability. Our results were echoed in general surgery residents who experienced pregnancy stigma and needed more lactation and childcare resources.¹⁹ Unique to otolaryngology are small

program sizes limiting coverage options, lengthy surgical cases, and underrepresentation of childbearing leaders in the field. Based on the findings of this study, we recommend some immediately actionable items (Table 2).

Women otolaryngologists have the unfortunate distinction of the highest infertility rate (29%) among all surgical specialties, almost triple the national average. They delay having their first child until after residency training at higher rates than any other surgical specialty.² Prior studies have shown that half of surgical residents experience obstetrical complications including miscarriages.^{21,22} Although most residents in this study had healthy pregnancies and children, some had complications and miscarriages. Expectant otolaryngology residents are a high-risk cohort when designing new policies surrounding protected time for fertility treatments, care after pregnancy loss, prenatal care, call scheduling, clinical scheduling, parental leave, return to work, and breastfeeding.²³⁻²⁶

Lack of a formal parental leave policy, pregnancy stigma, and the potential need to alter fellowship training plans due to parental leave had been previously associated with higher rates of professional dissatisfaction.²⁷ However 42% of Otolaryngology program directors report having an official written maternity leave policy.⁵ Proactively discussing departmental policies and educating faculty can normalize

TABLE 2 Actionable improvements to otolaryngology training to improve resident birthing and perinatal experiences

1. Understand that sharing the news of pregnancy with program leadership is stressful. Develop a culture in which the announcement is greeted with congratulations and support from the program. Share in the resident's joy and separate concerns about scheduling logistics from the initial discussion
2. Identify role models within the resident cohort, faculty, or alumni and acknowledge that many successful otolaryngologists previously gave birth during training without sacrificing their clinical acumen and surgical skills
3. Ensure adequate policies exist to arrange call and leave,²⁰ which include flexibility for individual input from the resident and their coresidents
4. Strategize to provide breaks from clinic and surgery for breast milk pumping. Ensure availability of appropriate breast pumping and milk storage facilities. Purchase and provide "wearable pumps" that can be used in the OR
5. Organize educational modules or didactic time for issues that disproportionately affect childbearing individuals (infertility, assistive reproductive technology, miscarriages, pregnancy termination, pregnancy or postpartum complications, and breastfeeding challenges). This information should be a part of wellness professional development that is sponsored at a departmental and institutional level. It is important to specifically include departmental education about the timing needed to pump and store breast milk and the health dangers to lactating individuals if milk expression is inappropriately delayed
6. Advocate for institutional childcare resources including emergency childcare for nights, weekends, and for sick children
7. Develop processes to support affected coresidents, as one of the greatest concerns expressed by the participants in this study was being a burden to colleagues

the process of pregnant residents requiring individualized accommodations.²⁸ Improved parental leave and breastfeeding accommodations have been shown to reduce burnout.²⁹ Residencies should strive to provide inclusive training environments by promoting a culture that encourages basic human life cycle events.^{30,31} Program directors in Otolaryngology express concern that pregnancy will be a burden to coresidents and trainees will have difficulty completing training successfully,⁵ but previous studies of residents from a variety of specialties have shown no negative association between childbearing and program attrition, board pass rates, or case numbers.³²⁻³⁴ None of the participants in this study required delayed graduation.

Almost all participants in our study reported difficulty finding time and space to pump breastmilk, consistent with prior studies.^{32,34} Lactation facilities are rarely available near operating rooms.²² The most important factors cited by residents to improve breastfeeding experience are increased parental leave, time at work to breastfeed, decreased duty hours, and improved access to space and equipment for pumping and storage.^{25,35} Of note, physicians at all levels of training experience similar breastfeeding challenges, so policy changes need to happen at a higher level.³⁶ Newer wearable pumps can be used to express breastmilk in clinic or the OR hands free. Departments should provide funding for devices to support continued work during breastmilk expression for those who find this physiologically possible.

The regulating bodies of GME are acknowledging the need for better policies surrounding childbearing during training. For example, the Accreditation Council for GME Common Program Requirements now mandate that programs provide "clean and private facilities for lactation that have refrigeration capabilities, with proximity appropriate for safe patient care."²⁵ Residents in otolaryngology were unable to take the 12 weeks of unpaid, job-protected leave mandated by the Family and Medical Leave Act without extending training.³⁷ The American Board of Medical Specialties (ABMS) recently updated its policy on parental leave, necessitating a policy change from the ABOHNS. Starting July 2021 ABMS member boards are charged to allow "a minimum of 6 weeks of time away from training for purposes of parental, caregiver and medical leave at least once during training, without exhausting all other allowed time away from training and without extending training."²⁰ There will likely be widespread benefits as this replaces the previous ABOHNS policy that allowed for a maximum of 6 weeks off in a given year before training had to be extended.

This qualitative study was designed to understand experiences of pregnancy in otolaryngology residency and as such has certain limitations. Multiple potential participants who were approached for this study chose not to be involved due to fear of retaliation. Their experiences, which may have been particularly difficult, were not captured. To protect participant confidentiality, we have not reported certain potentially identifying data such as year in residency and age, providing less context. Similarly, we did not include quotes with potentially identifying events, some of which were quite concerning. This study did not include participants who desired but were unable to have a child, the experiences of adoptive parents, or experiences of non-

birthing parents. This paper is generalizable to female residents looking to give birth during residency, especially those in small surgical residencies. Some identified issues would be naturally absent in larger residencies with coverage redundancy or those with higher ratio of clinic or inpatient care time. To truly study diversity in the highest ranks of Otolaryngology, future work can use quantitative methodologies, a larger cohort, and focus on intersectional issues of race, ethnicity, or sexual orientation during major life events in residency.

In conclusion, otolaryngology residents experience many challenges during pregnancy. Progress has been made towards improving experiences of childbearing residents, but there is still much work to be done.³⁸⁻⁴⁰ With appropriate support, otolaryngology residents should be able to have a healthy perinatal experience with no impact on board pass rates, case volumes, or competency. Actionable changes similar to those recommended in this manuscript are available in the broader surgical literature and are achievable for all programs, even smaller Otolaryngology programs.⁴¹ In order to recruit and retain the best and most diverse applicant pool, leadership must embrace a cultural commitment towards an inclusive and understanding environment.

AUTHOR CONTRIBUTIONS

Eve Champaloux, MD, PhD—conception and design, data capture and analysis, drafting of manuscript.

Anne Starks Acosta, MSc—qualitative design, methodology, data analysis, revision of manuscript.

Stacey T Gray, MD—conception and design, interpretation of data analysis, revision of manuscript, supervision.

Tanya Meyer, MD—conception and design, data capture and analysis, drafting and revision of manuscript, supervision.

Regan W. Bergmark, MD—conception and design, data capture and analysis, drafting and revision of manuscript, supervision.

CONFLICTS OF INTEREST

The authors declares there is no potential conflicts of interest.

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