Is clinical expertise a conflict of interest in research?

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Abstract

Purpose: Doctors who research and provide abortion care have had their work characterized as a conflict of interest. We investigated whether surgeons who perform medical procedures other than abortion also routinely conduct research on that procedure and whether they disclose this as a relevant “conflict of interest.”

Method: We conducted a two-step literature review of five medical procedures—abortion, rhinoplasty, Mohs micrographic surgery, transurethral resection of the prostate, and laminectomy. We identified articles published between June 2011 and May 2012, and we calculated the proportion of articles authored by clinicians who also perform that procedure as well as the percentage that reported clinical care as a conflict of interest. We then screened conflict of interest statements on publications on said procedures from the same journals between 2012 and 2019 and calculated the proportion of publications that reported clinical work as a conflict of interest.

Results: We identified 135 publications that met inclusion criteria. We calculated that 100% of publications on rhinoplasty, transurethral resection of the prostate, and Mohs included a clinician who performs that procedure. Seventy-five percent of publications on laminectomy and 78% of publications on abortion included a clinician. None of the reviewed research articles included a disclosure that the authors also performed the procedure. From 2012 to 2019, there were 1,903 published articles on these procedures. None included a conflict of interest that disclosed clinical work as a conflict of interest.

Conclusion: Although abortion providers publish as clinician-researchers at rates similar to surgeons in other areas of medicine, they alone face accusations that their clinical expertise is a potential conflict of interest. This stigmatizing practice could have wide-ranging consequences including delegitimization of the scientific method and peer review process broadly.

Keywords

abortion, academic medicine, authorship, clinical experience, gynecology, laminectomy, Mohs, rhinoplasty, stigma, transurethral resection of the prostate

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Introduction

An estimated one in four American women will have an abortion in their lifetime, and there were 862,320 abortions in 20171,2—nearly three times the number of patients who underwent appendectomy, a surgical procedure considered commonplace.3 Despite abortion being common in the United States, there is little public discussion of abortion as a routine and safe medical procedure. Rather, anti-abortion discourse frames abortion as socially deviant, ethically problematic, and dangerous for women’s health.4 This contributes to an ongoing cycle of stigmatization and silence, wherein abortion prevalence is misperceived as low and abortion providers are mis-portrayed as illegitimate.4,5
Abortion care providers often report fear of disclosing their profession, social isolation, discrimination or violence, internalized stigma, feelings of judgment from patients and members of the medical community, and that their abortion work "taints" other kinds of clinical care they provide.\(^6\),\(^7\) Here, we consider how abortion stigma also taints the research conducted by abortion providers.

The delegitimizing of abortion research and clinicians who provide abortion care in their roles as clinician-scientists has been demonstrated in the lay press, in politics and legislative proceedings, and even within academic medicine, for well over a decade.\(^8\) One of the earliest examples of attempts to delegitimize research conducted by abortion caregivers occurred in the wake of the publication "Fetal pain: a systematic multidisciplinary review of the evidence" in the *Journal of the American Medicine Association (JAMA)*.\(^9\) The article was a multidisciplinary review synthesizing available scientific literature on fetal pain perception. The authors concluded that there was little evidence for neurologic capacity for pain perception prior to 30 weeks of gestation. When the study’s findings reached the media, anti-abortion news sites quickly refuted the evidence and its legitimacy.\(^10\) Criticism was focused on two of the authors—one, a lawyer and medical student who previously worked with NARAL Pro-Choice America and the other, an obstetrician/gynecologist whose scope of work includes providing abortions and serving as medical director of an abortion care center. Critics claimed their co-authorship of the paper presented a conflict of interest (COI) that rendered the study results invalid, despite the fact that this was a review article of the current literature (not original findings) and had gone through *JAMA*’s rigorous peer review process.

Although the fetal pain research team included authors from varying disciplines, the anti-abortion media published particularly sensationalistic rhetoric regarding the abortion care provider. One National Right to Life representative likened abortion provider-researchers to "opera-tors of slaughterhouses" who cannot offer an objective expertise, and labeled the conclusions as "ethically disturbing." *JAMA*’s editor-in-chief responded by explaining that while she "wishes the authors would have disclosed their abortion-related work," it would not have influenced the journal’s decision to publish the review and did not influence the study’s conclusions.\(^11\)

A 2011 article, "Effectiveness and acceptability of medical abortion provided through telemedicine," published in 2011 by *Obstetrics and Gynecology*, was similarly criticized and delegitimized.\(^12\) The study analyzed clinical data, prevalence of reportable events, and satisfaction data from self-administered patient questionnaires, and the authors highlighted both strengths and limitations of medication abortion delivered via telemedicine. For example, they reported women were more likely to recommend the telemedicine method to a friend, but there was a sub-group of women (younger, nulliparous, lower educational status) who would have preferred an in-person visit with their provider, and women receiving medication abortion via telemedicine were less likely to obtain long-acting contraception than patients presenting for care in-person. Nevertheless, anti-abortion media outlets attacked the article as heavily biased, and one site ran the headline “Predictably Study Undertaken by Pro-abortionists Celebrate Webcam Abortions.”\(^13\) Reporters described the study’s lead author, Dr. Grossman, as having "impeccable pro-abortion credentials" (including his role as a obstetrician-gynecologist at the University of California in San Francisco—a so-called "hotbed of abortion activism") and concluded he is "not exactly an impartial observer. . . Grossman’s mission statement might read 'extend chemical abortion everywhere in the known galaxy.'” Shortly thereafter, Texas proposed its first telemedicine abortion ban, and several states quickly followed suit.\(^14\),\(^15\) Currently, 18 states have legislation prohibiting telemedicine delivery of medication abortion.\(^16\)

Recently, in response to the preliminary injunction blocking the US Food and Drug Administration’s (FDA) risk evaluation and mitigation strategy restrictions for mifepris-tone use (one of two medications used for medication abortion) during the coronavirus disease 2019 (COVID-19) pandemic, Senator Ted Cruz of Texas sent a letter (co-signed by 19 other US senators) to the FDA commissioner describing current direct-to-consumer telemedicine abortion research protocols as “highly suspect” and requiring a “serious examination of ethical practices,” despite the fact that these research studies (some of which have been ongoing for several years) follow standard Institutional Review Board (IRB) review and regulation.\(^17\)

These critiques of abortion provider-researchers, spanning at least 15 years, raise the question of whether this perceived COI so often described in the anti-abortion media, and sometimes legitimized even by academic journal leadership, is unique to abortion or shared with other physician-scientists who publish on other surgical procedures. We conducted a two-part study to answer this question. We also discuss the implications for academic medicine and clinician-researchers if clinical expertise is considered a source of bias or a COI in research.

**Methods**

**Literature search and inclusion criteria**

We conducted a two-part analysis of five medical procedures—abortion, laminectomy, Mohs micrographic surgery,
rhinoplasty, and transurethral resection of the prostate (TURP). First, we estimated the proportion of academic journal articles in a 1-year period authored by clinicians who also perform that procedure as part of her or his scope of practice. Second, we assessed if clinical expertise is listed on journal disclosure forms as a potential COI over a 9-year time period.

To accomplish the first analysis, we examined articles published in academic medical journals on the five procedures and reached out to corresponding authors to determine if any authors performed the procedure studied in the article. We then calculated a “care-provision authorship rate” for each type of procedure. We chose the four comparison procedures (laminectomy, Mohs surgery, rhinoplasty, and TURP) because of their important similarities to or differences from abortion. We chose rhinoplasty because it is often considered elective, and the patients who choose rhinoplasty and doctors who perform it are stigmatized.18 We chose TURP because it is a surgical procedure involving the genito-urinary tract, a stigmatized area of the body.19 Mohs is an outpatient surgery to treat skin cancer that often occurs in patients with modifiable behavioral risk factors such as sun exposure.20 Finally, we also wished to consider if procedures performed by “high status” surgeons also published research on procedures they performed, so we included laminectomy, which requires a neurosurgeon or orthopedic surgeon who specializes in spinal surgery.21

We performed a keyword search via PubMed for each procedure. The search criteria were articles published from US institutions between 6 January 2011 and 6 January 2012 in JAMA, New England Journal of Medicine (NEJM), and the two top journals in each surgical procedure’s field, as determined by impact factor (see Figure 1). 2011 was a year in which we began to see a dramatic rise in TRAP and other anti-abortion law.22,23 Thus, we considered this year particularly meaningful and chose to explore the authorship landscape starting with this time period. Articles were excluded if they did not describe original research or did not provide analysis of original research, and we limited our analysis to the research conducted within the United States, because stigma is culturally constructed and specific. After this first analysis established that indeed authorship by someone with clinical expertise is common (for details, see the “Results” section), we conducted a second analysis of COI disclosures in these same journals between 1 January 2012 and 31 December 2019, to determine if clinical expertise was ever listed as a COI. Articles were identified via a PubMed search, which specifically allowed us to search COI disclosure statements from each article.

The IRB of University of Michigan reviewed and approved this study and deemed it exempt.

Data collection and analysis
In the first part of the study (the in-depth examination of articles) for the non-abortion surgical procedures, we contacted the corresponding author of each publication up to three times via email during a 3-month period. We asked authors whether they or any of the contributing authors have ever performed the procedure studied. We also reviewed the included articles for COI disclosures by authors who provided the procedure being researched. A lack of response after three contact attempts resulted in a non-response data point.

We used the same search criteria to identify abortion-related publications, but we used a modified protocol to identify abortion caregivers. Due to the highly politicized nature of abortion provision and the threats of harassment and violence that abortion providers endure, we did not want to ask article authors to identify the names of those who provided abortion care. We were concerned that asking for this information would generate reluctance to participate, under-reporting of abortion provision, or feelings of danger among our subjects. Therefore, a member of our team who is part of the relatively small abortion provision community (L.H.) reviewed the abortion publications to identify which ones included at least one author known to provide abortion care in her or his practice. For any publications where it was unclear whether any of the authors performed abortion, we contacted the authors via email.

We then calculated rates of “care-provision authorship” for each procedure as a percentage of publications with at least one author who performs the procedure. We initially excluded non-response data from these calculations and subsequently performed sensitivity analyses to calculate possible ranges of authorship based on extremes of non-responders (that is, if all non-responders had no author who performed the procedure studied, and if all non-responders had an author who did perform the procedure studied). Finally, we reviewed the disclosures and COI statements of each article and calculated the percentage of articles that included clinical care or performance of the researched procedure as a COI.

For the second portion of the study, we queried PubMed for any article on the five procedures studied published in the journals identified in part 1 of our study between 1 January 2011 and 31 December 2019. We then used the PubMed search feature to specifically screen each COI section for the procedure name (abortion, laminectomy, Mohs surgery, rhinoplasty, and transurethral resection of the prostate), as well as the terms “clinical,” “work,” “provide,” and “practice.”

Results
The literature search for the first part of the analysis found 268 total publications and 135 publications that met inclusion criteria for research articles on abortion, laminectomy, Mohs surgery, rhinoplasty, and transurethral resection of the prostate for the 1-year study period (see Figure 1). Response rates ranged from 50% (for articles on laminectomy) to 94%
Figure 1. Flow diagram of the systematic literature review process to calculate care-provision authorship for initial articles on rhinoplasty, Mohs surgery, TURP, laminectomy, and abortion. Adapted from Moher et al.24
Neill et al.

Table 1. Authorship and COI disclosure rates.

| Procedure     | In-Depth Review | COI Review |
|---------------|-----------------|------------|
|               | Number of articles reviewed (2011–2012) | Possible authorship rate, including non-responders (all articles) (%) (sensitivity analysis) | Number of articles published from 2012 to 2019 that report clinical work as a COI |
| Rhinoplasty   | 16              | 87.5–100  | 379           |
| Mohs          | 46              | 45.7–100  | 543           |
| TURP          | 8               | 87.5–100  | 205           |
| Laminectomy   | 8               | 37.5–87.5 | 159           |
| Abortion      | 57              | 70.0–78.9 | 617           |

COI: conflict of interest; TURP: transurethral resection of the prostate. Column five displays our sensitivity analysis, incorporating non-responders into authorship rates, if either none or all of the non-responders had an author who performed the procedure studied.

(for articles published on abortion), as shown in Table 1. Of the respondents, 100% of publications on rhinoplasty (n = 14 of 14), TURP (n = 21 of 21), and Mohs (n = 7 of 7) included a clinician who performs that procedure. Seventy-five percent of publications on laminectomy (n = 3 of 4) included a clinician-author, and 74% of publications on abortion (n = 42 of 57) included a clinician who also performs the procedure studied. Response ranges, wherein we re-calculated the rates by imputing all non-responses with “yes” and then all non-responses with “no,” are also shown in Table 1. Each of these articles was individually reviewed, and none included disclosure of clinical care as a COI.

For the second part of the analysis, we identified 1903 articles published on abortion, laminectomy, Mohs surgery, rhinoplasty, and transurethral resection of the prostate between 1 January 2012 and 31 December 2019 in the same journals utilized for our individual article review. Of these articles, none included a COI statement about clinical care provision.

Discussion

In the first part of this study, we established that research publications on surgical procedures commonly include at least one author who also performs the procedure being studied—in fact, it appears to be a norm. After establishing this, we examined a larger collection of journal disclosure forms and in an 8-year period found no instance in which clinical expertise was listed as a COI.

Critics of abortion research often assume that abortion providers cannot perform unbiased research because they perform the procedure being studied—that a relationship between clinical care and research constitutes a de facto COI. This stance neglects that, as we found, academic physicians commonly conduct research in their area of clinical expertise. We found that publications on abortion in academic medical journals are written by authors who perform abortion at rates similar to publications on rhinoplasty, Mohs surgery, laminectomy, and transurethral resection of the prostate. In fact, we found fewer abortion publications include contributing authors who perform the procedure than publications on other surgical procedures. This is likely due to the socially contested nature of abortion, since social scientists and others also study abortion and make important contributions to the scientific literature, which may not be the case for other procedures. Furthermore, none of the academic papers included in this study disclosed a COI between the role of authors as both researchers and clinical providers of the procedures.

If research conducted by abortion providers—that is, clinician-researchers—is regarded as suspicious, inherently biased, or altogether invalid, then what are the consequences? For one, the increased scrutiny of abortion clinician-researchers undermines the larger scientific process upon which medical and scientific advancements rely by suggesting the peer review process is ineffective. Arguing that scholarship published by abortion clinician-researchers is inherently biased (e.g. by requiring a COI statement) suggests that the scientific peer review processes is unreliable or regularly enables the dissemination of inaccurate, low-quality research. Requiring disclosure of abortion care provision as part of the publication process may also put some clinician-researchers at risk of discrimination and violence. If abortion researchers are asked to provide special disclosure regarding the medical care they provide, then this standard likely should be applied uniformly across all clinician-researchers publishing on procedures they perform. Otherwise, this perpetuates the stereotype of abortion providers as different from other care providers, morally dubious, unskilled, and lacking
academic rigor despite data documenting that abortion providers are trained in academically rigorous institutions and that abortion is a very safe procedure.  

Another possibility is that abortion research becomes the domain of non-experts in abortion care. One such example is a paper published by a family medicine and palliative care–trained physician in the *Annals of Pharmacotherapy* that presented a small case series of women who took mifepristone early in their pregnancies and then underwent abortion “reversal” with progesterone supplementation.  

The study was methodologically flawed; the initial mifepristone dose was not reported, which could have a significant impact on pregnancy continuation, and the doses of progesterone supplementation were not standardized. Without this information, it is not possible to discern whether these outcomes were actually mifepristone failure, and the conclusion that these were cases of progesterone-mediated abortion reversal is erroneous. Unfortunately, some states have implemented policy based on this flawed report, now requiring patients to be informed that medical abortion with mifepristone may be able to be reversed. Neither the American College of Obstetricians and Gynecologists nor the Society of Family Planning endorses this practice. In fact, this practice—not completing the medication abortion by omitting misoprostol, with or without progesterone supplementation—may be unsafe. A randomized trial of mifepristone antagonization with progesterone was stopped early due to higher than expected rates of hemorrhage among study participants.  

Ultimately, the delegitimization of abortion clinician-researchers and the relegation of empirical inquiry to non-experts may result in the dissemination of misinformation and patient harm.  

This delegitimizing of abortion research conducted by clinical experts is not limited to the publication process, but may also extend into the policies and structures of federal research funding, academic tenure, and promotion. For example, the National Institutes of Health (NIH), which funds more biomedical research than any other entity, will not provide funding to any work that discards or destroys (or more confusingly, results in the “death or injury of”) human embryos (National Institutes of Health Office of Intramural Research, n.d.). The obvious effect is that research involving human embryos, including clinical studies on abortion and other reproductive health topics, such as infertility, is limited. Downstream human resources consequences may result: Funding from the NIH is highly coveted, and acting as a principal investigator on NIH-funded grants is often a requirement for promotion, tenure, and other professional advancements in academic medicine. Because the current federal funding policy excludes clinical abortion research and institutions reward this academic milestone, aspiring clinician-researchers may be dissuaded from pursuing work in abortion. This has the potential to become a repeating cycle that limits both careers in abortion research and ultimately knowledge production and patient care.  

This study has several limitations. In selecting articles for in-depth review of authorship and COI statements, we only drew from two high-impact journals that apply to the broader medical community (*The New England Journal of Medicine* and *JAMA*) and two high-impact or high-relevance journals in each field. Thus, we did not review all available articles relevant to these procedures during the study time period. It is possible that different journals may require the disclosure of clinical care as a COI. However, we are unaware of such a practice. In addition, our assessment of COI statements from articles published from 2012 to 2019 utilized PubMed’s search function, which specifically allows one to search the text within COI statements. Thus, if clinical care as a COI had been noted in, for example, section “Discussion” but not the COI statement, our screening method would miss that disclosure. We also only utilized the articles we reviewed in-depth (2011-2012) to determine rates of clinician-authorship; it is possible that trends in authorship have changed over time. Still, we believe that the articles reviewed and screened here are reasonably representative of the medical literature, that they demonstrate authoring research on procedures one performs is standard in academic medicine, and that it is not common practice to disclose this clinical expertise as a COI in one’s research.  

This study showed that articles published on abortion are authored by clinicians who perform the procedure at rates similar to articles published on laminectomy, Mohs surgery, rhinoplasty, and transurethral resection of the prostate. In fact, it is the norm that research on medical procedures includes authors who perform the procedures being studied. Performance of the procedure is never listed as a COI on journal disclosure forms. Calls for abortion caregivers to disclose their clinical work or that their research work is inherently untrustworthy relies on stigmatizing stereotypes, not norms of clinical research.  

The current publication indeed includes co-authors who provide abortion care as part of their scope of medical practice. While (ironically) we chose to disclose that here, we do not do so for the purposes of identifying a COI, but rather to make the point that we feel it is crucial to investigate the procedure we perform, including the ways in which stigma impacts research in this arena. The perpetuation of stigma and violence against abortion providers, barriers to funding and promotion for abortion clinician-researchers, and the negative effects these phenomena have on the scientific evidence available on abortion and family planning topics affect not only provider career tracks but also ultimately the accessibility of services and quality of care for our patients. The framing of abortion clinician-researchers as illegitimate or dubious should ring the alarm for all of us aiming to perform high-quality scientific research, regardless of our specialty or our procedure of expertise.
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