The Effect of Patient Complaints on Physicians in European and Commonwealth Countries with Public Healthcare Systems: A Scoping Review and Ethical Analysis

Erica Monteferrante, Karena D. Volesky, Julien Brisson, Harvey H. Sigman and Maude Laliberté

Résumé de l'article
Les bioéthiciens défendent depuis longtemps les droits des patients en délibérant sur ce que les médecins doivent ou ne doivent pas faire pour le bien-être des patients. Une partie de ce plaidoyer a consisté à remettre en question un modèle médical paternaliste où les médecins sont considérés comme des figures d'autorité irréprochables. Par l'intermédiaire des bureaux d'ombudsman, les patients peuvent déposer des plaintes qui peuvent conduire à un examen détaillé, par un médecin légiste, de la conduite et des décisions des médecins. Des recherches antérieures indiquent que les plaintes peuvent avoir des conséquences graves et étendues sur les médecins. Nous avons effectué une revue de la littérature afin d'explorer et d'évaluer l'étendue de la littérature quantitative et qualitative examinant l'impact des plaintes sur les médecins dans les pays européens et du Commonwealth. Nous avons systématiquement recherché dans les bases de données électroniques (CINAHL, MEDLINE et PsycInfo) et dans la littérature grise les recherches primaires qui ont recueilli des informations directement auprès des médecins sur au moins un impact potentiel des plaintes officielles. Après avoir passé en revue les titres et résumés de 14 913 enregistrements et examiné 137 textes complets, 25 études ont été retenues. Ces 25 études font état de plusieurs répercussions potentielles, notamment sur la relation patient-médecin (3 études), la médecine défensive ou l'évitement (14 études), l'anxiété (8 études), la dépression (8 études), l'identité du médecin (5 études) et la colère (5 études). En général, les impacts évalués dans les études incluses étaient négatifs. Bien que la littérature existante couvre un éventail d'impacts possibles, peu d'études ont évalué les mêmes impacts par différentes méthodes, et dans différentes régions et contextes. Les résultats de cette revue de la littérature suggèrent que les processus de plaintes peuvent avoir des impacts négatifs sur les médecins.
The Effect of Patient Complaints on Physicians in European and Commonwealth Countries with Public Healthcare Systems: A Scoping Review and Ethical Analysis

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Abstract
Bioethicists have long advocated for patients’ rights by deliberating on what physicians should or should not do for the well-being of patients. Part of this advocacy has involved challenging a paternalistic medical model where physicians are seen as authoritative figures above reproach. Through ombudsperson offices, patients can submit complaints that may lead to medical examiners conducting detailed examinations of physicians’ conduct and decision-making. Prior research indicates that complaints can have serious and broad effects on physicians. We conducted a scoping review to explore and evaluate the extent of the quantitative and qualitative literature examining the effects of complaints on physicians in European and Commonwealth countries. We systematically searched electronic databases (CINAHL, MEDLINE and PsycInfo) and grey literature for primary research that collected information directly from physicians on at least one potential effect of formal complaints. After screening the titles/abstracts of 14,913 records and reviewing 137 full-texts, 25 studies were included. The 25 studies reported on several potential effects, including the patient-physician relationship (3 studies), defensive medicine (14 studies), anxiety (8 studies), depression (8 studies), one’s identity as a physician (5 studies), and anger (5 studies). Generally, the effects evaluated in the included studies were negative. Although the existing literature covered a range of possible effects, few studies assessed the same effects via different methods, and in different regions and contexts. The findings of this scoping review suggest that complaints processes can have negative effects on physicians.

Keywords
complaints, ombudsman, medical examiners, physicians, psychological impact, scoping review

Mots-clés
plaintes, ombudsman, médecins légistes, médecins, impact psychologique, revue de cadrage

INTRODUCTION
The complaints process allows patients to express their dissatisfaction with the quality of care by filing a complaint with the ombudsperson of the healthcare establishment; medical complaints are then transferred to the local medical examiner for further examination. The intent of this process is not to address legal or malpractice issues, but rather to drive quality improvement, for example, as stated in Quebec’s Act Respecting Health Services and Social Services (1). Yet, in the pursuit of improving quality of care, complaints can have different effects on the healthcare professional that is the subject of the complaint. The potential effects of patient complaints on physicians should be of concern for bioethics, notably if complaints
have a negative effect on the medical practice of physicians, such that physician-patient relationships suffer, or that the quality of care to patients is compromised. However, just as importantly, the field of bioethics must adopt a critical stance on its canonical subjects of study (2). Historically, one of the main objectives of bioethics has been to advocate for patient rights (e.g., a patient’s ability to complain about physicians). Since physicians hold positions of significant power, bioethicists have often critiqued physician practices in the name of patient well-being (3), a classic example being the critique of medical paternalism (4). The field of bioethics should not, however, ignore the fact that physicians may be subjected to direct criticism by patients through complaints processes. Nor should it be assumed that the repercussions of patients’ complaints are necessarily positive or neutral. The current study invites bioethicists to examine the physician-patient relationship from a different angle, by considering the range of effects (positive, neutral, and negative) that patient complaints may have on physicians.

Prior research indicates that complaints can have a range of negative practice-related and psychological effects on physicians, including practicing defensive medicine (5), and experiencing depression (6). Two reviews have attempted to systematically synthesize evidence on the effects of the complaints process on physicians (7,8). Most recently, a systematic review conducted by Baines (8) searched several international databases for records published in English from 2007 to 2017 that described the impact of patient complaints and compliments on physicians’ medical performance. Baines concluded that patient complaints can positively or negatively affect medical performance (8). In an earlier study, Nash et al. (7) searched MEDLINE in 2003 to find records that assessed the psychological impact of complaints and negligence suits, and they found that adjustment disorder and depression were frequently reported by physicians.

Although prior reviews provide insight into the effects of complaints on physicians, these studies are limited in a number of ways: they are restricted to records published many years ago, they do not provide a reproducible search that makes use of multiple databases and sources (i.e., the grey literature), and they do not cover the range of effects that complaints can have on physicians. For example, Baines (8) focused on the impact of complaints on medical performance and included only six studies. Further, we found that no other scoping review that had documented the effects of complaints on physicians. We thus aimed to quantify and describe the extent of the evidence on the possible impacts of complaints on physicians’ practices and psychological well-being, by conducting a scoping review and ethical analysis.

METHODS

The reporting of this scoping review and its methods follows the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) (9). We performed a systematic search of the academic and grey literature to identify quantitative and qualitative studies on the effect of complaints on the practices and/or psychological well-being of physicians.

Information sources and search strategy

Three electronic health-related databases – CINAHL, MEDLINE and PsycInfo – were searched on February 17th, 2021 without date or language restrictions (Supplemental Table 1. Academic literature search strategy). Grey literature was collected up to March 15th, 2021 by targeting relevant websites using a combination of search terms within those websites to obtain records (Supplemental Table 2. Grey literature search strategy). We also manually searched the reference lists of included studies. The academic and grey literature searches, including the choice of databases and websites, were developed with the assistance of a Librarian with expertise in conducting systematic searches. For feasibility and to increase the comparability of the findings, the grey literature search was restricted to countries with public healthcare systems, such as, Australia, Canada, New Zealand, and European countries. Records published in languages other than English or French were translated with the free web-based software DeepL.

Eligibility criteria and study selection

To be included, records had to represent original research (i.e., reviews, editorials, etc. were excluded), and collect quantitative or qualitative data from physicians on at least one potential impact of the formal complaints process on physicians. The method by which the data were collected had to be outside of the formal complaints process. For example, an analysis of physicians’ responses to written complaints were not eligible, since doing so is part of a confidential process. The effect of malpractice lawsuits on physicians, as well as the legal analysis of medical complaints were out of the scope of this study. We excluded conference abstracts on the basis that they would not contain sufficient information. The initial and full-text reviews of the academic and grey literature were performed by KV and EM, respectively. The initial screen of the academic literature was performed using the Rayyan web application (10). Records deemed relevant by KV and EM were then assessed by JB to confirm eligibility.

Data extraction and analysis

A standardized form used to collect data was piloted on five studies. The data extracted included: year of publication, location, healthcare context, types of physicians included, method of data collection, number of survey participants, response rate, number interview participants, contextual details on the complaint process, as well as whether the study reported1 on the potential impact of complaints on 1) patient care (e.g., patient-physician relationship and others), 2) medical practices

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1 The study assessed that effect, or in the case of qualitative studies that a participant reported that effect, not necessarily that the complaint is associated with said effect.
(e.g., defensive medicine which includes caution/avoidance, desiring to or actually leaving medical practice, imposed leave of absence, and other), and 3) physicians’ psychological well-being (e.g., confidence, identity as a physician, stress, voluntary stress leave, anxiety, fear, anger, depression, suicidal thoughts / ideation, and others). The specific results for each potential positive or negative effect were also extracted. Some studies included physicians and other healthcare professions such as nurses; in these instances, we extracted the data specifically related to physicians. EM and JB each extracted half of the records, then verified each other’s extracted data. Discrepancies were resolved through discussion amongst EM, JB, and KV.

RESULTS

Overview

After reviewing 14,913 record titles/abstracts and 137 full-texts, 21 studies were eligible, and from the references of those studies, we identified another 4 studies that met the eligibility criteria (Figure 1). Although 5,945 records from the grey literature were screened, this search did not yield any eligible records. The 25 studies included 22 unique study populations: Bourne (6,11) sampled the same physicians, as did three of Cunningham’s studies (12-14). Most studies were conducted in Europe (64%) and sampled a mixture of general practitioners and specialists (64%) (Table 1). Questionnaires were employed by most (68%) studies, the median number of physicians sampled was 453 and ranged from 35 to 7,926 (6,15). The median response rate for questionnaires was 60% and ranged from 8% to 85% (6,16). Ten studies (40%) used interviews, and the median number of interviewees was 17 and ranged from 10 to 51 physicians (17,18).

![Figure 1. Flow chart of record selection from the academic and grey literature searches](image)

We tabulated how many and which studies reported on different possible effects that complaints can have on patient care, medical practices, and the psychological well-being of physicians (Table 1). We had initially included "imposed leave of absence" but no study reported on this potential effect. Of the 15 possible effects listed in Table 1, the one most often reported on was practicing defensive medicine, which includes avoidance / caution.

Effects on medical practice: defensive medicine

Defensive medicine refers to deviating or otherwise practicing medicine differently from a physician’s normal or typical practice (19). This approach may be adopted with the intent of decreasing the likelihood of patients filing complaints. Some studies have suggested that defensive medical practice is associated with being unable to provide quality care to patients (20), and a loss of trust in patients as a result of going through the complaints process (21). Ortashi (19) describes defensive medicine as a departure (in general terms) from a physician’s normal practices, Zeeman (20) characterizes defensive medicine as exercising “hypervigilance in patient care”, while Verhoef (22) describes it as “provid[ing] care more cautiously” following the incidence of a patient complaint and is fuelled by the fear of future complaints. Several authors agree that this kind of vigilance includes, e.g., referring to other specialists early, ordering tests they would consider extraneous or done out of an abundance of caution (6,11,15,21,23-25). In another study (26), 98% of physicians reported that they changed their medical
practice in ways that would reduce the possibility of having a patient file a complaint against them. These changes involved ordering more diagnostic tests, increasing referrals to specialists, and increased follow-ups with patients (26). In a study with physician respondents (6), 85% of 2257 physicians with a recent complaint and 80% of 3889 physicians with a past complaint reported changing the way they practiced medicine because of the complaint. Even observing a colleague’s experience with a complaint prompted 73% of the 1780 physicians with no previous complaint experience to change their practice to be more defensive.

**Effects on physicians’ psychological well-being**

In their descriptions of the psychological effects of complaints, studies assessed effects ranging from stress (15,17-18,20,23,27-28) and anger (6,12,17,22,25) to anxiety (6,11,17-18,20,25,27,29) and suicidal ideation or thoughts of self-harm (6,23,25). Other psychological effects included self-confidence issues (12,17,20,23-25,27-28), which in part affected their sense of identity as a physician (18,25,27,30-31). For example, in one study, 72% of physicians reported anger as an effect on physicians' psychological well-being. Other psychological effects included:

- **Identity as physician** (18,25,30-31)
- **Self-confidence** (12,17,20,23-25,27-28)
- **Stress** (15,17-18,20,23-27-28)
- **Voluntary stress leave** (6,23)
- **Anxiety** (6,11,17-18,20,25,27,29)
- **Fear** (17,20,31)
- **Anger** (6,12,17,22,25)
- **Depression** (6,11,12,15,17,23,25,33)
- **Suicidal thoughts / ideation** (6,23,25)

In one interview, a physician mentioned contemplating suicide in their description of the negative impact of the complaint (25).

### Table 1. Summary of study characteristics

| Characteristics, N = 25 | Number (%) | References |
|-------------------------|------------|------------|
| **Year of publication** |            |            |
| Before 2000             | 4 (16%)    | (25-27,33) |
| 2000 to 2014            | 12 (48%)   | (12-19,24,28-29,34) |
| 2015 or later           | 9 (36%)    | (6,11,20-23,30-31,35) |
| **Region**              |            |            |
| Australia / New Zealand | 8 (32%)    | (12-17,24,28) |
| Canada                  | 1 (4%)     | (35)       |
| Europe, excluding UK    | 5 (20%)    | (20-22,31,34) |
| United Kingdom          | 11 (44%)   | (6,11,18-19,23,25-27,29-30,33) |
| **Types of physicians included** |            |            |
| General practitioners (GPs) | 5 (20%)   | (17,25-26,30,33) |
| Mixture of GPs and Specialists | 16 (64%) | (6,11-14,16,18-19,21-24,27-29,31) |
| Other                   | 3 (12%)    | (15,20,34) |
| Not reported            | 1 (4%)     | (35)       |
| **Data collected from** |            |            |
| Questionnaires          | 15 (60%)   | (6,11-16,19-21,23,26,28,33-34) |
| Interviews              | 8 (32%)    | (17,18,22,25,29-31,35) |
| Questionnaires and interviews | 2 (8%)    | (24,27)   |
| **Reported on the effects on patient care** |            |            |
| Patient-physician relation | 3 (12%) | (17,21,23) |
| Other effect on patient care a | 5 (20%) | (6,17-18,20,23) |
| **Reported on the effects on medical practices** |            |            |
| Defensive medicine      | 14 (56%)   | (6,11,15,17-26,29) |
| Desire to leave practice / leaves practices | 4 (16%) | (12,15,23,25) |
| Other effects on medical practices b | 6 (24%) | (6,11,15,17,20,25) |
| **Reported on the effects on physicians’ psychological well-being** |            |            |
| Self-confidence         | 8 (32%)    | (12,17,20,23-25,27-28) |
| Identity as physician   | 5 (20%)    | (18,25,27,30-31) |
| Stress                  | 7 (28%)    | (15,17-18,20,23-27-28) |
| Voluntary stress leave  | 2 (8%)     | (6,23)     |
| Anxiety                 | 8 (32%)    | (6,11-17,18,20,25,27,29) |
| Fear                    | 3 (12%)    | (17,20,31) |
| Anger                   | 5 (20%)    | (6,12,17,22,25) |
| Depression              | 8 (32%)    | (6,11,12,15,17,23,25,33) |
| Suicidal thoughts / ideation | 3 (12%) | (6,23,25) |
| Other effects on physicians’ psychology c | 11 (44%) | (6,15,17,20-23,25,28,31,33) |

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a Other effects on patient care included: inability to provide quality care to their patients, practicing poorer medicine, acting against their professional judgement, increased likelihood to abandon patient procedures, and increased likelihood to make mistakes.

b Other effects on medical practice included: offering more limited service, lowered sense of collegiality, and lowered quality of medical training.

c Other effects on physicians’ psychology included: negative impact on personal life, fear, discomfort and insecurity, and sleeplessness.
DISCUSSION

In quantifying and describing the evidence on the effects of complaints on physicians’ practices and psychological well-being, we identified 25 studies based on 22 study populations. These studies suggested that the physicians whose patients filed a complaint against them adopted more defensive practices, and that the complaints process tended to have a negative effect on their psychological well-being. Here, we explore the potential implications of the compiled data through an ethical analysis.

Bioethicists have played an influential role in questioning the power relations at play in patient-physician interactions, in part by encouraging patients to voice problematic aspects of their interactions with physicians (36,37). Formal complaints processes such as those carried out by ombudsman offices, through the medical examiners, provide a way for patients to voice their discontent regarding a physician and thereby exercise agency in their healthcare decisions (1). The availability and accessibility of a mechanism by which patients can voice complaints against their physician allows respect for the principle of autonomy, for example, by challenging the authoritative positions of physicians vis-à-vis patients. The ombudsman office and the medical examiners are meant to be an impartial and independent body to examine situations involving healthcare and services (1), and complaint processes are meant to drive quality improvement by remedying problematic situations. However, most of the studies we reviewed suggested that complaints tended to have negative effects on physicians. These fell into two main categories: medical practice (including patient care) and psychological well-being. Notably, negative effects can be interrelated in that the physician’s psychological well-being may affect their medical practice, or conversely, changes to their medical practice may influence their psychological well-being.

The practice of defensive medicine originates from a heightened concern for protecting the interests of the physicians (e.g., avoiding liability) rather than adopting more careful or cautious practice for the benefit of the patient (5). It has been suggested that defensive medicine does not improve patient care or medical practice, as physicians who adopt such practices do so out of fear of repercussions rather than concern for patient well-being (5). Several studies framed defensive medicine as damaging to physicians and potentially harmful to patients (11,18,26,29). Other studies (15,24) acknowledge that defensive medicine involves positive and negative components, which may be complementary to reflexive medical practices. One study described defensive practices, such as offering more explanation or taking more detailed notes, as beneficial (26). This conclusion was substantiated by a questionnaire of 1279 physicians (21), where 62% reported that receiving a complaint resulted in writing more detailed documentation, and 44% of respondents started sharing more information with their patients.

It is possible that because of their involvement in a complaints process, physicians request referrals more judiciously or ask for testing that may have been warranted in the first place.

Aside from reporting defensive medical practices, the included studies reported on psychological effects of complaints, where anxiety (6,11,17-18,20,25,27,29), self-confidence (12,17,20,23,25,27-28), depression (6,11,12,15,17,23,25,33), and stress (15,17-18,20,23,27-28) were listed most often. One of the possible effects of complaints that was added upon reviewing the extracted data was how complaints could affect the perceived identity of physicians who are the subject of complaints. Several studies suggested that physicians did not anticipate being the subject of a complaint (27,31), and thus they were surprised. Physicians, understandably, see themselves as professionals motivated to care for patients, something that is anchored in core ethical values and their codes of ethics (38). For this reason, receiving an unanticipated complaint made some physicians reconsider or call into question their role as caring professionals, creating the belief that they were not fulfilling their role as physicians, and straying from their professional code of conduct to “first, do no harm” (39). While the ability of patients to complain about their physician should be safeguarded, further ethical reflection should be conducted so that the complaint process is structured in a way that minimizes ‘harm’ to physicians. Interestingly, bioethics has long been interested in addressing the harm caused to patients, given the power differential with physicians (3), but much less attention has been given to whether and how patients could potentially harm physicians, and even less in a complaints process.

Mulcahy (27) and Cunningham (17) suggest that physicians experience negative psychological effects of complaints because they tend to be unaware of how the complaint’s process works, meaning that they may not know what to expect or how to react or cope when a patient files a complaint. To this point, several studies (6,15-16,20-21,23) recommended that mechanisms be offered to physicians to support them through the complaint process, such as in-depth explanations of the complaints process during their medical training and as needed. Offering support to physicians facing a complaint is important; while physicians have a professional obligation to first do no harm (40), the negative psychological effects that physicians reported can be damaging to their sense of identity and potentially to their ability to deliver optimal patient care.

Although we did not employ date restrictions in the database searches, we did not observe any notable changes in the main conclusions based on publication date. In their survey of general practitioners, Ashworth and Armstrong (33) found that the fear of a patient filing a complaint is a source of stress. Similarly, 30% of doctors surveyed by Summerton (26) noted that the potential of a patient complaint or lawsuit was a source of worry. Mulcahy (27) and Jain (25) found that the complaints process had an overwhelmingly negative effect on doctors’ well-being. Findings from these older studies are consistent with the rest of the articles reviewed in our sample; more recent studies also detail the overall negative effects that physicians perceive when they are involved in a patient complaint process.

Even among countries with comparable healthcare systems, heterogeneity in the complaints systems can arise from the length of time complaints take to resolve, if / how complaints are filtered by ombudsperson offices, and whether the process is
Definitions of stress, depression, and anxiety varied across studies. Some studies used the terms ‘stress’, ‘depression’, and ‘anxiety’ in their categorization of the negative psychological effects of complaints on physicians, but we noticed that these terms were not used consistently. For example, while at least one study measured or quantified depression in terms of a validated psychological measure or against the criteria for clinical depression in the DSM-V (41), other researchers listed it simply because physicians mentioned it while referring to prolonged sadness and apathy. This lack of precision is problematic because employing different meanings of these terms makes it more difficult to accurately measure and understand what the precise effects of complaints are on physicians. Data heterogeneity means that these psychological experiences may not yet be understood and so could benefit from a phenomenological analysis (42-43). For example, the direct responses that physicians have to the complaints could provide valuable insights into the potential consequences of those complaints; however, this was outside of the scope of our review.

The current study’s findings uncovered a complex set of potentially negative effects of the complaints process on physicians themselves, which could translate into negative repercussions for patients. Generally, the findings suggested that being the target of a patient complaint can negatively affect the quality of care delivered across the health care system. Indeed, defensive medicine can disrupt patient care, in particular for those patients perceived as being more likely to file a complaint. The interconnectedness of defensive medical practices and their consequences highlights the array of competing interests that leads to contradictory outcomes to the intended purpose of improving the quality of care. These findings are consistent with complexity theory, a general framework that analyzes the nature and interactions within health care systems (44-46). Complex systems are characterized by multiple interrelated elements that self-regulate through their interactions (44-46) – these interactions are uncertain, and their outcomes produce unpredictable results (45-48).

Instead of criticizing physicians in the name of patient well-being, it is helpful to examine the organizational features and relational interactions that generate these patterns. The complaints process is an important feature of improving the quality of care within the Quebec Integrated Health and Social Services Centre (IHSSC). Yet, a minority of patients are known to make complaints that are considered ‘trivial’, ‘vexatious’, ‘frivolous’ or ‘in bad faith’ (1). As such, legislators in Quebec have enshrined in the Act Respecting Health Services and Social Services the possibility for complaints commissioners and medical examiners to reject such types of complaints (1). There is also ongoing discussion about querulousness and abusive or unreasonable individuals in the public healthcare system (49). Some patients also have unrealistic expectations from their physician, or from the health care system in general, reinforcing that fact that administrative procedures of the complaints process can also generate tensions within the IHSSC. Accordingly, these should be examined to target improvement initiatives (50). One federal initiative, Choosing Wisely Canada (51), is based on the notion that overtreatment (stemming in part from defensive medical practices) does more harm than good, for both patients and physicians. This harm can be characterized, for example, in terms of less than favourable clinical outcomes and resources that are not used optimally across the medical system or IHSSC. Other similar initiatives would ensure that ombudspersons and medical examiners continue to be perceived as independent third parties, maintaining impartiality in the eyes of both patients and physicians. Such neutral or unbiased treatment would reinforce the role of ombudspersons and medical examiners as advocates for healthcare users.

The findings of this review underscore that there may be lessons to learn or to integrate into improving complaints processes. Such improvements depend on several variables, including positive, negative, or neutral effects of complaints on physicians, and the values promoted by physicians in their professional affiliations. In so doing, the complaints process could be restructured to improve the quality of care for patients. For example, the fact that the physician is a moral agent (52-57) may need to be considered in improving complaints processes. The topic of physicians as moral agents has been addressed most notably in the context of futile or end-of-life care (58) in which the patient makes requests outside of normal standards of care. Similar topics for which patient requests may be at odds with the values espoused by physicians and their professional associations (59-62) could inform complaints processes and their potential outcomes.

Gaps in the literature
Few studies asked about or reported on the potential positive effects that complaints can have on physicians (16,25). Since a goal of the complaints process is to improve the quality of patient care, the lack of measures about potentially positive effects may provide an incomplete portrait of the situation. Additionally, some effects such as practicing defensive medicine may or may not be positive depending on the specific context / case; for example, it is possible that before the complaint, the physician
was overly confident in a way that led to sub-optimal patient care. Reported positive effects of complaints on physicians were minimal, thus more research is needed to understand if and how complaints can have positive effects on physicians and patient care.

Despite the included studies’ focus on negative effects of complaints, the data were rich. Included surveys used large sample sizes and measured several different potential effects. Nonetheless, the total of 25 studies that we identified is still a small number. In this sense, the literature may be inadequate in size and in scope to draw firm conclusions on the impact of complaints on physicians. Specifically, the heterogeneity in complaint systems and in the definitions of the potential effects such as anxiety and depression make a meta-analysis based on the existing literature unfeasible. In terms of study characteristics: low response rates of physicians sampled and selection bias means that the figures reported by study authors may not provide an accurate description of the impact of the complaints process on physicians, which may explain why no articles reported positive effects of complaints on physicians.

Limitations
For both comparability and feasibility, we restricted this review to certain geographic areas, which may have excluded relevant records. However, the academic literature search was not restricted to any region and only two studies were excluded due to sampling physicians based in Japan and the United States (63-64). Additionally, since the grey literature search did not produce any eligible records, it is possible that extending the grey literature search to additional regions would not produce more records. Independent review was not carried out during the record selection stage; however, all studies identified as eligible were reviewed by another author to confirm eligibility and extracted data were verified. Finally, as a scoping review, this study cannot draw definitive conclusions on the impact of complaints on physicians, hence the discussion presented in the conclusion must be interpreted with caution.

CONCLUSION
We investigated the effects of complaints on physicians via a scoping review. Overall, the 25 studies included in our review revealed that physicians reported practicing more defensive medicine and experiencing psychological effects, which they perceived as negative or potentially detrimental to their ability to provide the best possible patient care. Existing formal complaint processes should thus consider how they can lessen the burden and potential detrimental effects of complaints on physicians. From a bioethics perspective, this scoping review helps provide a different outlook on the possible types of ethical analyses of the physician-patient relationship. The classic approach in bioethics has been to advocate for patient autonomy (e.g., promoting the right to make complaints against doctors), which is a response to the now-antiquated paternalistic model of medicine. Nonetheless, it is essential for bioethics to consider the potentially harmful effects that patient complaints may have on physicians and thus their ability to carry out their ethical obligation to provide optimal, patient-centred care.
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### SUPPLEMENTAL TABLE 1. ACADEMIC LITERATURE SEARCH STRATEGY

**CINAHL**

(MH "Physicians") AND (MH "Patient Satisfaction") OR "complaint" OR dissatisfaction OR grievance"

**MEDLINE® ALL**

((complaint* or dissatisfaction* or grievance*) adj8 (doctor* or physician*).ab,kw,ti.

**PsycInfo**

1. exp Physicians/
2. exp Clinicians/
3. doctor*.mp.
4. physician*.mp.
5. clinician*.mp.
6. 1 or 2 or 3 or 4 or 5
7. exp Dissatisfaction/
8. exp Health Complaints/
9. complaint*.mp.
10. dissatisfaction*.mp.
11. grievance*.mp.
12. 7 or 8 or 9 or 10
13. 6 and 12

No date or language restrictions were placed on the above searches. The searches were performed on February 17th, 2021.
## SUPPLEMENTAL TABLE 2. GREY LITERATURE SEARCH STRATEGY

| Study population | Website | Search equation | No. of results | No. Eligible |
|------------------|---------|-----------------|----------------|-------------|
| **AUSTRALIA**    |         |                 |                |             |
| College of General Practitioners | https://www.racgp.org.au/ | (impact* or effect*) and complaint* | 1,170 | 0 |
| Government Dept of Health Medical Association | https://www.health.gov.au/ | | 1,230 | 0 |
| Medical Association (New South Wales) | https://www.amansw.com.au/ | | 1,010 | 0 |
| Royal Australasian College of Surgeons | https://www.surgeons.org/ | | 211 | 0 |
| **CANADA**       |         |                 |                |             |
| Canadian Medical Association | https://www.cma.ca/ | (impact* or effet*) AND plainte* | 7 | 0 |
| Doctors, British Columbia | https://www.doctorsofbc.ca/ | | 9 | 0 |
| Doctors, Alberta | https://www.albertadoctors.org/ | | 9 | 0 |
| Doctors, Saskatchewan | https://www.sma.sk.ca/ | (impact* or effect*) and complaint* | 8 | 0 |
| Doctors, Manitoba | https://www.doctorsmanitoba.ca/ | | 7 | 0 |
| Ontario Medical Association | https://www.oma.org/ | (impact* or effect*) and complaint* | 3 | 0 |
| New Brunswick Medical Society | https://www.nbms.nb.ca/ | | 1 | 0 |
| Doctors, Nova Scotia | https://www.nlm.ca.nl.ca/ | | 8 | 0 |
| Canadian Medical Protective Association | https://www.cmipa-acpm.ca/ | (impact* or effect*) AND complaint* | 8 | 0 |
| **Quebec**       |         |                 |                |             |
| Royal College of Physicians and Surgeons of Canada | https://www.royalcollege.ca/ | | 141 | 0 |
| College of Physicians and Surgeons of British Columbia | https://www.cpsbc.ca/ | | 8 | 0 |
| College of Physicians & Surgeons, Alberta | https://cpsa.ca/ | | 8 | 0 |
| College of Physicians & Surgeons, Saskatchewan | https://www.cps.sk.ca/ | | 9 | 0 |
| College of Physicians & Surgeons, Manitoba | http://www.cpsm.mb.ca/ | (impact* or effect*) and complaint* | 8 | 0 |
| College of Physicians & Surgeons, Ontario | https://www.cpsdo.on.ca/ | | 9 | 0 |
| College of Physicians & Surgeons, Nova Scotia | https://www.cpsns.ns.ca/ | | 8 | 0 |
| College of Physicians & Surgeons, Prince Edward Island | https://www.cpspei.ca/ | | 4 | 0 |
| College of Physicians & Surgeons, Newfoundland & Labrador | https://www.cpsnl.ca/ | | 3 | 0 |
| Health & Social Services Network, Northwest Territories | https://www.hss.gov.nl.ca/en | | 8 | 0 |
| College of Family Physicians, BC | https://www.cfp.ca/ | | 9 | 0 |
| Ombudsman Association | https://www.patientsafetyinstitute.ca/ | (impact* or effect*) and complaint* | 96 | 0 |
| NEW ZEALAND                              | URL                                      | Results |
|-----------------------------------------|------------------------------------------|---------|
| Medical Association                     | https://www.nzma.org.nz/                 | 8 0     |
| Royal Australasian College of Physicians| https://www.racp.edu.au/                 | 289 0   |
| Royal New Zealand College of General Practitioners | https://www.rnzcp.org.nz/                  | 8 0     |

| UNITED KINGDOM                          | URL                                      | Results |
|-----------------------------------------|------------------------------------------|---------|
| Health Ombudsman                        | https://www.ombudsman.org.uk/            | 9 0     |
| National Health Service                 | https://www.nhs.uk/                      | 8 0     |
| British Medical Association             | https://www.bma.org.uk/                  | 11 0    |
| General Medical Council                 | https://www.gmc-uk.org/                  | 16 0    |
| Royal College of Physicians             | https://www.rcplondon.ac.uk/             | 15 0    |
| Membership of the Royal Colleges of Physicians of the United Kingdom | https://www.mrcpuk.org/                  | 6 0     |
| Royal College of Physicians and Surgeons of Glasgow | https://rcpsg.ac.uk/                     | (impact* or effect*) and complaint* | 9 0     |
| Royal College of Physicians of Edinburgh | https://www.rcpe.ac.uk/                  | 8 0     |
| Royal College of Surgeons of England    | https://www.rcseng.ac.uk/                | 9 0     |
| Ombudsman Association                   | https://www.ombudsassociation.org/       | 8 0     |
| Ombudsman Association                   | https://www.theioi.org/                  | 1,480 0 |

The above searches were performed up to March 15th, 2021.