

## Short report

# Prolonged mental health sequelae among doctors and nurses involved in patient safety incidents with formal complaints and lawsuits

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We evaluated the presence of prolonged mental health sequelae in the aftermath of a patient safety incident and the impact of a formal complaint or lawsuit on these mental health sequelae in 19 hospitals and 2635 nurses and doctors. Of 2635 respondents, 983 (37.3%) reported a complaint and 190 (7.2%) reported a lawsuit. In both doctors and nurses prolonged mental health sequelae reflecting a stressor-related disorder were highly prevalent, each well over 20% overall. They were consistently more prevalent in case of a formal complaint or lawsuit. Lawsuits showed 2-, 3- and 4-fold increases in prevalence of mental health sequelae.

## Introduction

Healthcare professionals involved in a patient safety incident may suffer mental health sequelae, which may in turn jeopardize patient care.<sup>1,2</sup> If such problems last for more than 1 month after an incident, this may be indicative of a stressor-related disorder according to DSM-5 criteria.<sup>3</sup> The duration of provider mental health sequelae after patient safety incidents has however, received surprisingly little attention in previous research on this subject. In addition, prior findings from qualitative and quantitative research suggest that complaints and lawsuits may have a profound impact on healthcare professionals.<sup>4–6</sup> The differential impact of formal complaints or lawsuits on mental health sequelae has remained largely unquantified. A better understanding of the duration of symptoms and providers' experiences with complaints or lawsuits would contribute to ameliorating existing peer support programs for providers involved in patient safety incidents.

The aim of this study is to evaluate the presence of prolonged mental health sequelae among doctors and nurses involved in a patient safety incident and evaluate the impact of a formal complaint or lawsuit on these mental health sequelae.

## Methods

### Study design

Multi-center cross sectional surveys of doctors and nurses.

### Setting

This study was conducted at 19 hospitals in the Netherlands that participate in the 'Peer Support Collaborative'. This collaborative supports hospitals in how to implement an institutional program to support healthcare providers in the aftermath of a patient safety incident. A first wave of data collection was conducted in April 2016–June 2016 in 10 hospitals. A second wave of data collection

was conducted in February 2017–March 2017 in nine hospitals. Of note, in the Netherlands, lawsuits allow complaints against healthcare providers via a public hearing focusing on fitness for practice but without resorting to financial compensation to the plaintiff. Imposed measures (warning, reprimand, fine to the state, suspension) are however, published in Dutch newspapers with name, profession and place of residence.

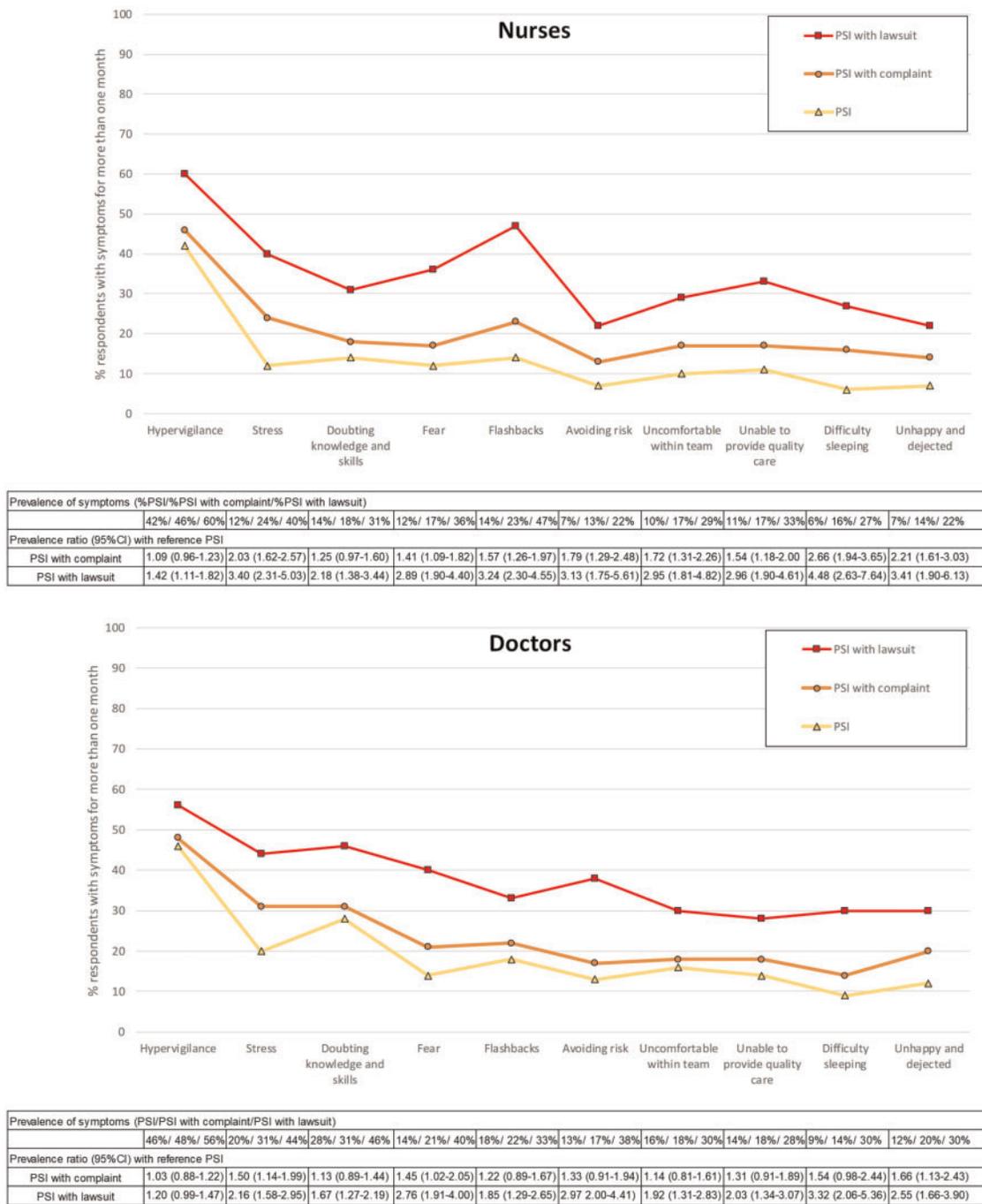
### Study measures

All doctors and nurses working in direct patient care in these hospitals were invited via email to participate in this study. The questionnaire asked about participants' demographics, their involvement in a patient safety incident, whether or not the incident was followed by a formal complaint, a lawsuit or neither and whether any of the following symptoms occurred: avoiding risks, difficulty sleeping, doubting knowledge and skills, fear, flashbacks, hypervigilance, stress, unable to provide quality care, uncomfortable within team, unhappy and dejected. Symptoms were selected based on a literature research,<sup>7</sup> expert opinion and worded to closely match with DSM-5 criteria for stressor-related disorder. Duration of the symptoms was measured as 'never', 'less than 1 month', '1 month', '2–6 months', '6–12 months' and 'more than 1 year'.

This study did not require ethical approval according to Dutch law. Participants were aware that returning the questionnaire implied consent.

### Statistical analysis

We present findings for participants who were involved in a safety incident, who indicated whether or not the incident was followed by a formal complaint or lawsuit and who reported on the duration of symptoms related to the incident. We report for each symptom the percentage of respondents indicating it lasted longer than 1 month, and the prevalence ratios across incidents with complaints, lawsuits or neither. Prevalence ratios are less prone to overestimating associations than odds ratios.<sup>8</sup>



**Figure 1** Duration of mental health sequelae lasting longer than 1 month among doctors and nurses involved in patient safety incidents that were followed by a lawsuit

## Results

Of 2635 respondents (953 doctors, 1682 nurses), 1462 (55.5%) reported no formal complaint nor lawsuit, 983 (37.3%) reported a complaint and 190 (7.2%) reported a lawsuit. Complaints [ $n=573$  (60%)] and lawsuits [145 (15%)] were much more prevalent for doctors compared to nurses [ $n=410$  (24%) and  $n=45$  (3%), respectively]. Prevalence of mental health sequelae lasting longer than 1 month is high among respondents, and as illustrated in the table in figure 1, complaints and lawsuits show consistently higher prevalence of mental health sequelae among both doctors and nurses. The impact of a lawsuit is more profound than that of a formal complaint, showing in multiple cases clinically relevant and

statistically significant increases in prolonged mental health sequelae. For example, 2-fold (doctors experiencing stress), 3-fold (doctors avoiding risk) and 4-fold (nurses having difficulty sleeping) increases in case of safety incidents with lawsuits are observed. Of note, a majority of mental health sequelae are more prevalent among doctors compared to nurses, regardless of a complaint or lawsuit.

Figure 1 depicts a pooled analysis of the specific duration of mental health sequelae in case of a lawsuit. Symptoms lasting longer than 1 month represent only the tip of the iceberg, as a majority of respondents indicate durations of 2–6 months, 6–12 months or more than 1 year. Hypervigilance is by far the most prevalent symptom, both in terms of lasting longer than 1 month (57%) and lasting longer than 6 months (28%).

## Discussion

While patients are the obvious first victims of safety incidents, this study sheds new light on the onset and continuation of healthcare providers as second victims. Prolonged and extremely prolonged intrusion symptoms, avoidance, negative alterations and alterations in arousal and reactivity, i.e. signs of post-traumatic stress disorder, are highly prevalent among doctors and nurses following a patient safety incident. These mental health sequelae escalate with formal complaints and lawsuits. While these measures are meant to contribute to quality control, as a side effect they seem to induce psychological deterioration among care providers, which may negatively affect patient safety.

Previous research showed that a positive organizational safety culture is associated with lower psychological impact and faster recovery.<sup>9</sup> A survey among doctors involved in complaints investigations found that perceived managerial support and information about rights are positively associated with well-being and reduced defensive practices.<sup>10</sup> One approach to ameliorate such existing support programs is to introduce more dynamic organizational support mechanisms that timely and repeatedly reach providers with an appropriate dose of support given the context of the patient safety incident. Now is the time to initiate longitudinal research that is embedded in organizations' policy that is focused on adequate ways to reliably identify and support health professionals with traits prone to experiencing challenges in coping with patient safety incidents, and prevent and reduce mental health sequelae before they become irreversible and affect patient safety.

This is one of the largest studies on the subject, especially one that quantifies the duration of symptoms related to formal complaints and lawsuits among both doctors and nurses. However, this study is not without limitations. Most importantly, due to the cross-sectional nature of the study however, causal inferences cannot be made. Second, we had no information on the hospital response rates. There is the possibility that non-response bias has occurred. Last, we also had no information on the number of professionals involved in the same complaint or lawsuit, whether these professionals had legal advice, nor on the outcomes of these complaints or lawsuits.

In conclusion, doctors and nurses involved in patient safety incidents experience prolonged mental health sequelae, which is a probable obstacle to patient safety. Our data suggest that formal complaints and lawsuits put an extra layer of stress on healthcare providers. While much progress has been made in several organizations across the globe in providing peer support to healthcare providers in the aftermath of safety incidents, our findings call for more explicit attention to be paid to the needs of healthcare providers. Both the individual health provider as well as the organization are likely to benefit from this.

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*Conflicts of interest:* None declared.

## Key points

- Prolonged mental health sequelae escalate with formal complaints and lawsuits.
- Mental health sequelae were consistently more prevalent in case of lawsuits.
- More explicit attention should be paid to the needs of healthcare providers when involved in formal complaints and lawsuits due to patient safety incidents.

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