ORIGINAL ARTICLE

WILEY

Analysis of England's incident and mental health nursing workforce data 2015–2022

Samuel Woodnutt (ID) | **Simon Hall** | **Paula Libberton** | **Matt Flynn** (ID) | **Francesca Purvis** | **Jasmine Snowden** (ID)

School of Health Sciences, University of Southampton, Southampton, UK

Correspondence
Samuel Woodnutt, School of Health Sciences, University of Southampton, Southampton, Hampshire, UK.
Email: s.woodnutt@soton.ac.uk

Accessible Summary

What is known on the subject?

- Mental health services report adverse incidents in different ways and the relationship between adverse incidents and the workforce is uncertain. In England, there are national datasets recording all incidents and workforce statistics though there is no peer-reviewed evidence examining recent trends.

What this paper adds to existing knowledge?

- Although there has been an overall increase in the number of mental health nurses, more are working in the community and the number of nurses relative to adverse incidents has decreased. There have been service-provision changes but the role of mental health nurses has not significantly changed in this period, and we can therefore assume that their current practice is saturated with risk or increased reporting. To help understand the relationship between nurses and incidents, we need to transform how incidents are recorded in England.

What are the implications for practice?

- English mental health services report greater levels of patient-related factors such as self-harm or aggression rather than missed or erroneous care. This makes it difficult to understand if a rise in incident frequency is linked to reporting behaviour, patient risk, unsafe/ineffective care or other reasons and therefore planning workforce deployment to improve care quality is problematic.

Abstract

Introduction: There is a paucity of empirical data examining incidents and mental health nurses and the relationship between the two remains uncertain.

Aim: Comparison of English national data for incidents and nursing workforce to examine recent trends.

Method: Descriptive analysis of two national datasets of incidents and workforce data for England between 2015 and 2022.

Results: A 46% increase in incidents was found; the leading causes are self-harm and aggressive behaviour. Despite the rise in adverse incident reporting, a 6%

increase in mental health nurses was found, with more nurses in community settings than hospitals.

Discussion: Current services are incident reporting at greater concentrations than in previous years. Patient-related behaviour continues to be most prominently reported, rather than possible antecedent health services issues that may contribute to reporting. Whilst staffing has increased, this does not seem to have kept pace with the implied workload evident in the increase in incident reports.

Implications for Practice: Greater emphasis should be placed on health service behaviour in reporting mechanisms. Self-harm and aggression should continue to be considered adverse outcomes, but causal health service factors, such as missed care, should be present in pooled reporting to help reduce the occurrence of adverse outcomes.

KEYWORDS
mental health nursing, quality of care, seclusion and restraint, self-harm, staffing levels, staffing/resources, statistical methods

1 | BACKGROUND

The relationship between the mental health nursing workforce and patient safety lacks clarity (Baker et al., 2009; Thibaut et al., 2019). It remains unknown how nurse staffing configurations affect care in mental health settings. We know that there are some relationships: that an increased volume of staff is correlated with lower levels of adverse incidents (Cook et al., 2020), or that more registrants on shift is correlated with less reports of aggression (Staggs, 2015, 2016) and restrictive practices (Williams & Myers, 2001). However, there is an overall lack of empirical evidence (Brimblecombe, 2023; Thibaut et al., 2019), and associations that are identified are mixed, contradictory or statistically weak (Woodnutt, 2022).

In somatic settings, such as general or district hospitals, there is wide recognition and supporting evidence that the volume and skill composition of the nursing workforce makes positive differences to the experience, quality and outcomes for both recipients of care and the staff supporting them (Griffiths et al., 2016, 2020). Mortality is associated with lower nurse staffing levels—particularly when care has been incomplete (Ball et al., 2014; Griffiths et al., 2018). Such evidence has established not only a causal relationship but a conceptual model that is supported by statistical analysis (Dall'Ora et al., 2022), with some implementation in policy and guidance (Griffiths et al., 2016).

In comparison, the impact of staffing compliment and skill mix on the outcomes for people receiving mental health care is much less clear. There is regional variation in staffing volume and implementation at international, local and granular levels. Culturally different approaches to care are evident across hospitals, health services and countries (Bak et al., 2015; Bowers et al., 2004; Kalisova et al., 2014). There are conflicting results suggesting that a greater volume of registrants is correlated with both an increase (Fukasawa et al., 2018) and a decrease in restrictive practices (Kodal et al., 2018; Williams & Myers, 2001). Whilst it would seem that a

high volume of staff is correlated with reduced length of hospital stay, there remains a risk that greater restriction is used in order to achieve this (Fukasawa et al., 2018).

There is also a developing narrative around patient preference and experience of care (Cutler et al., 2020, 2021). However, no studies have indexed staffing inputs against consumer preference or quality of life with quantitative analysis (Woodnutt, 2022). Currently, most outcomes examined as variables have been risk-related—such as the frequency of seclusion, restraint, aggression or violence or self-harm. A recent 'empty' systematic review by (Moyo et al., 2020) also showed that there is no existing evidence measuring staffing against other care quality markers such as readmission rates.

At the current time, there are no established causal relationships between staffing and patient outcomes in mental health services though recent complex statistical modelling has reduced bias in analysis. Cook et al. (2020) measured the deviation in staffing volume from required to actual in their modelling, and Feyman et al. (2023) included error correction to limit bias from more staff attending a ward or unit post-incident; both studies found more staff availability reduced incidents. While these models are valuable, and reduce confounding within large datasets, the analysis is cross-sectional in nature and without manipulation of conditions or variables. Statistically speaking, we do not know the precise differences that mental health nurses make to care—though the evidence to date suggests that more highly qualified, more experienced, substantive staff improve the safety of care for patients.

Therefore, further work examining risk-related and workforce data is needed. In the UK, national databases of incidents and workforce data are kept—including all National Health Service (NHS) incident reporting and rostering systems. These datasets are in the public domain and published by NHS England (incident data) and NHS Digital (workforce). Due to the size of the available data, the mechanisms used to report incidents (Wood et al., 2023) and workforce (through routine data collection), NHS services provide

the majority of mental health care for England and services' broad allegiance to the World Health Organization guidance on service configuration (World Health Organization, 2022), this represents a reasonably generalisable sample which is of international relevance.

2 | METHODS

2.1 | Aims

The aim of this descriptive review of incident and mental health nurse staffing data was to ascertain what the recent, if any, patterns were. There were three research questions used to inquire:

1. What incidents are the current nursing workforce reporting?
2. What, if any, changes to incident reporting occurred during the COVID-19 pandemic?
3. Where are the current workforce located?

2.2 | Design

The design of this study was a descriptive analysis of two national datasets from England, dating 2015–2022. This period was chosen as 2015 was when incident reporting changed to England-only (away from archived records)—and thus to avoid the risk of conflation with other reported incidents.

For incidents, the National Patient Safety Agency (NPSA) collates all NHS reported incidents and collates these into incident categories, publishing quarterly reports (NHS England, 2022). All incidents from mental health settings were included in the analysis. A composite value comprising all incidents categorized as conflict, containment and error were created by merging the values for self-harm, aggression/violence, medication error, transfer, treatment or procedure, documentation and consent or confidentiality.

For workforce data, registered nurses working within mental health settings in the NHS expressed in quarterly volumes from the National Workforce Dataset (NWD) were included (NHS Digital, 2022). For the workforce, the overall staffing level of registered nurses (merging data from community and hospital-based settings), and separate categories for community and non-community-based registered nurses. There has been a recent and detailed review of workforce composition using the same dataset by Brimblecombe (2023); therefore no further disambiguation of the nursing workforce was included as these data are already available in a peer-reviewed format.

2.3 | Definitions

This study takes definitions of conflict and containment from the work of Len Bowers (Bowers, 2006). Specifically, conflict refers to any incident that results in patient harm with respect to their interaction with staff or their own symptoms of mental ill-health. For example, self-harm or aggression/violence are considered as types of conflict in psychiatric care. Containment refers to the actions staff perform in order to limit the freedoms of patients, normally in response or to prevent episodes of conflict. This includes incidents such as the use of sedation, restraint or seclusion (the forced confinement and isolation of a patient from being able to associate with others (Department of Health and Social Care, 2017)). Conflict and containment are thought to have a correlative relationship; internally (with other incidents of the same type) and externally (between incident types) from both a patient and service perspective (Bowers, 2006; Bowers et al., 2015). The error refers to all other reported incidents which are reasonably within the control of staff or the health workforce: treatment or procedure, transfer, medication errors, documentation and consent or confidentiality.

For this study, 'conflict, containment and error' refers to a composite value that includes self-harm, aggression, medication, treatment or procedure, care implementation, documentation, clinical assessment and transfer.

2.4 | Data sources

Two datasets were downloaded from NHS-run websites in September 2022 and merged in Microsoft Excel, then converted to a csv file. This was then imported into the R Studio environment using version 4.2.2 of the R language, and version 2022.07.02+576 of R Studio using macOS.

The tidyverse (version 1.3.2) and ggplot2 (version 3.3.6) packages were used to arrange and visualize the data. The data cover quarterly reports from March 2015 to March 2022, totalling 29 quarters of reports. This made a list of 29 columns (one for each quarter), with workforce data attributed to one quarter as represented in the published reports. The data had a total of 27 rows, representing all 15 incident categories, and all 12 staffing categories. The only splitting of staffing data was based on the location of their work: as community-based or hospital-based registered nursing staff. Non-registered nursing staff were not included in the analysis.

The specific workforce data were registered nurses working within community mental health settings and registered nurses working in 'other' settings (inpatient or hospital-based mental health settings). Incident data included all incident types.

2.5 | Data analysis

Regression or other inferential analysis was not possible; while there is a high volume of overall incidents and staffing data, these represent quarterly reporting quantities and as such total data points ($n = 29$ quarters/data points per category) would make inferential analysis invalid.

Ethical approval was not applied given that the data are within the public domain and freely available to the general public via the NPSA and NWD websites. No patient or service-identifiable data is included in these datasets.

3 | RESULTS

We observed that incidents and nurse staffing both increased in the 7-year sample period. However, the increase in reported incidents was far steeper than the increase in staffing volume. We also observed a steep migration to the community presence of registered nurses in mental health settings; where there was a reduction in the presence of hospital-based mental health nurses. There was also a significant rise in frequency of self-harm reports, and this far outweighed changes in other incident categories. Changes to infection control incidents were observed during peak COVID-19 pandemic months, though these 'spikes' flattened at the cessation of peak infection in society. The largest per cent change to any incident category was 'clinical assessment' (denoting issues that arose with inaccurate, incomplete or missed assessment).

3.1 | Incident reporting

Total reported incidents increased by 46%, with 51,592 recorded in the first quarter of 2015, and 75,872 reported in the first quarter of 2022. Self-harm was the most frequently reported incident category across all incident types. Overall, incident reporting increased in most categories with significant increases in self-harm, transfer, treatment or procedure and clinical assessment. We also observed a marginal decrease in aggression. See Table 1 and Figure 1.

3.2 | Infection control, self-harm and the Covid-19 pandemic

Given the presence of the COVID-19 pandemic since 2020, a comparison between self-harm and infection control was undertaken. Self-harm reports increased across the peak months of the pandemic, with the largest percentage changes coinciding with United Kingdom (UK) national restrictions (lockdowns). Slight stabilization was noticed in self-harm rates towards the end of the reporting period. Infection control incidents rose sharply and coincided with the periods preceding or following restrictions to the public being put in place by the UK government, however, ended the period on a decreasing trend. See Table 2 and Figure 2.

3.3 | Self-harm and staffing

We observed a rise of 6% in total registered mental health nursing staff (Q1 2015 = 36,543, Q1 2022 = 38,886, difference: 2343) in comparison to the 95% increase in self-harm reports. For every incident of self-harm at the start of the study period, there were 2.85 nurses in employment compared to 1.6 at the end. Changes to overall staffing and self-harm reports can be seen in Figure 3.

3.4 | Conflict, containment and error and staffing

We observed a significant rise in reporting of conflict, containment and error across the study period (63%, Q1 2015 = 34,831, Q1 2022 = 56,654) in comparison to the 6% increase in staffing volume. Therefore, for every incident of conflict, containment or error there were 1.04 nurses in employment at commencement, compared to
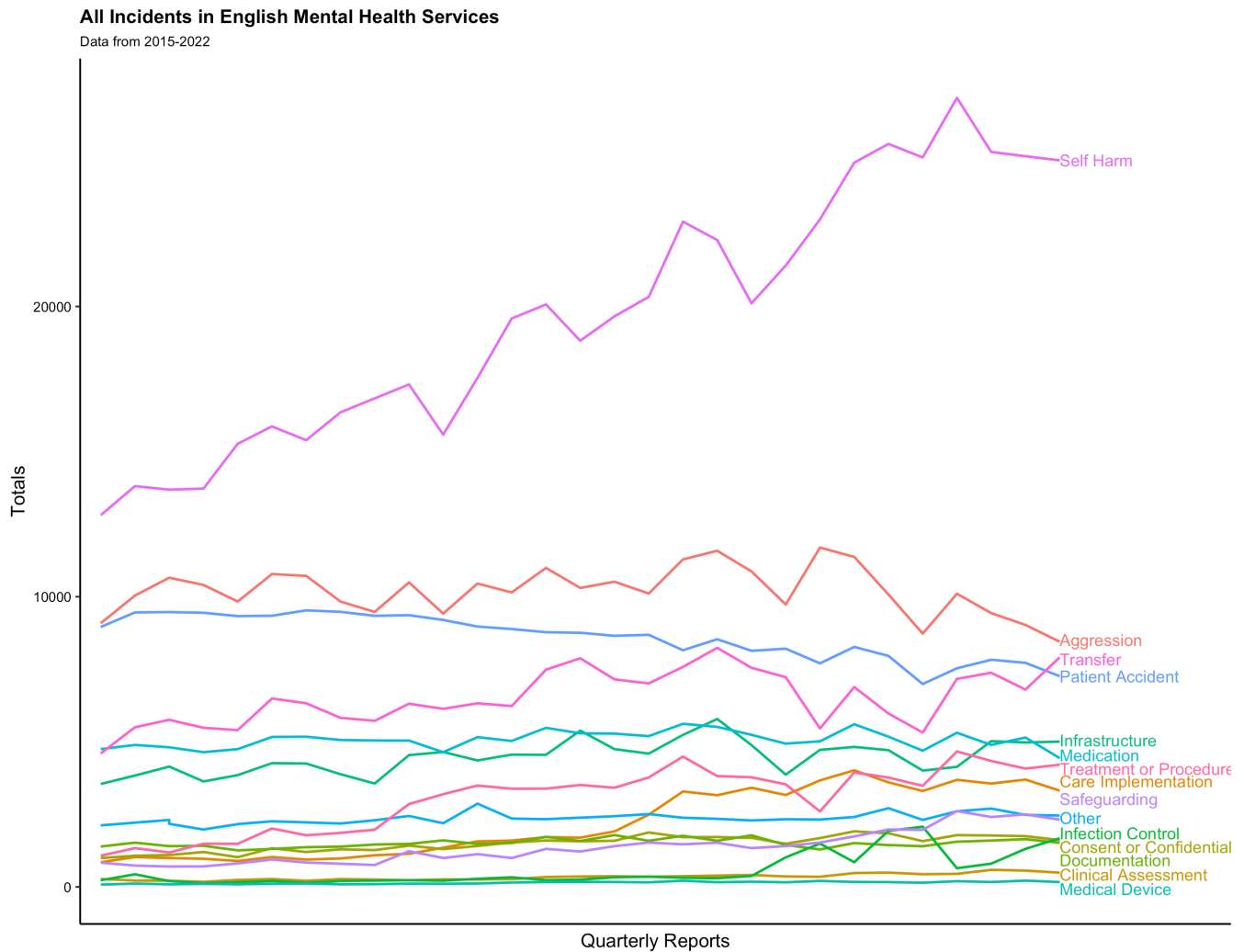
Incident category	Q1 2015	Q1 2022	Difference	% Change
Self-harm	12,809	25,037	12,228	95%
Aggression	9085	8449	−636	−7%
Patient accident	8956	7260	−1696	−19%
Transfer	4596	7910	3314	72%
Medication	4749	4438	−311	−7%
Infrastructure	3547	5007	1460	41%
Treatment or procedure	1076	4211	3135	291%
Documentation	1392	3318	1926	138%
Consent or confidential	994	2316	1322	132%
Care implementation	851	1614	763	90%
Safeguarding	835	1520	685	82%
Clinical assessment	273	1677	1404	514%
Infection control	229	490	261	113%
Medical device	79	167	88	111%
Other	2121	2458	337	16%
Total	51,592	75,872	24,280	46%

TABLE 1 Incident reports at the start and end points of the study period.

FIGURE 1 All incident categories plotted across 2015–2022.

0.69 at period end. Changes to conflict, containment and error and staffing can be seen in Figure 4.

3.5 | Location of staffing

We observed a significant shift in staffing availability within inpatient services to community settings. Non-community mental health nurses decreased by 12% (Q1 2015 = 21,575, Q1 2022 = 19,023) whereas community mental health nurses increased by 33% (Q1 2015 = 14,968, Q1 2022 = 19,863). Changes to staffing locations and conflict, containment and error can be seen in Figure 5.

4 | DISCUSSION

We observed a significant increase in the reporting of incidents over the period of 2015–2022 where reporting increased by 24,280 incidents (a 46% change). We also observed a marginal increase in the number of nurses (2343) in employment over this period (a 6% change). However, whilst incident reporting (and the associated workload burden) has significantly increased there has been significant industrial unrest in the nursing workforce (Mahase, 2022a, 2022b; Rimmer, 2023) which can be viewed as a result of continued austerity measures (Paton, 2022) leaving, at times, 20% of nursing posts unfilled. Despite this observed increase for this period, there is also concern that governmental plans to recruit to fill vacancies and increase the workforce are overly optimistic (Brimblecombe, 2023).

We also observed significant changes to infection control incidents during the COVID-19 pandemic, but these rises were met with the rise in self-harm reports and coincided with UK national restrictions. Finally, we observed that the overall concentration of incidents has increased and that registered mental health nurses are managing care that involves significantly more incident reports than in previous years. Incidents of containment (such as seclusion and restraint) seem to be missing from national reporting given the assumption that nurses will likely respond to self-harm and aggression with actions to limit patient freedoms and thus lower risk. The rise in reports of self-harm is concerning as this may reflect increased reporting given its steep trajectory.

TABLE 2 Self-harm and infection control reports during peak COVID-19 pandemic quarters.

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022
Self-harm reports (% change to previous quarter)	21,410 (6%)	23,002 (7%)	24,957 (9%)	25,603 (3%)	25,138 (−2%)	27,191 (8%)	25,236 (−7%)	25,179 (−0.2%)	25,037 (−0.5%)
Infection control reports (% change to previous quarter)	1018 (170%)	1493 (47%)	851 (−43%)	1930 (127%)	2075 (8%)	644 (−69%)	589 (−9%)	563 (−4%)	490 (−12%)

Regardless of whether incidents are more likely to occur, the data show that today's mental health nurses are spending significantly more time reporting incidents as part of their workload than in previous years and that there is a lower ratio of nurses available for incidents compared to 2015. Nurses are now more likely to be based in community settings, and care seems to have migrated in that direction over the last 7 years.

However, results from our synthesis should be interpreted with caution and we note six overt limitations. First, while there is a high volume of recorded incidents and staff this only represents quarterly values and as such the dataset is small from an individual data-point perspective. Second, NHS trusts internally and externally categorize and report incidents differently, which creates ambiguity in the data. Third, individual staff members have different incident reporting habits, and these can correlate with their age, gender, stature and level of experience (Schlup et al., 2021). Fourthly, overall incident reporting has increased and this may be related to improvements in learning culture and staff education over the same period (Archer et al., 2020). Fifth, we did not include bed-occupancy data in the analysis; this is known to affect the safety and quality of care within wards (Degli Esposti et al., 2022), and have an association with readmission rates (Friebel et al., 2019). Finally, our analysis focused on nursing numbers and not other roles that contribute to inpatient psychiatric care (NHS England, 2015). This limits the interpretation of findings as, although nurses are heavily involved in incident reporting and management, other roles (such as Health Care Assistants or Nursing Assistants) also contribute a signification amount to incident monitoring.

4.1 | Incident reporting in mental health services—An outdated paradigm?

Our descriptive review concurs with previously published commentary on patient safety—that the paradigm of incident reporting in mental health services needs to be updated (Quinlivan et al., 2020). In comparison to somatic data, mental health service data is weighted towards patient-related behaviour; with leading incident categories of self-harm and aggression (45% of all incidents in Q1 2022 (NHS England, 2022)). In somatic care, a much higher proportion of incidents (68%, Q1 2022) reflects the behaviour of the health workforce, where the leading cause of incidents centres around care delivery (NHS Digital, 2022). Mortality or ill-health causes do not feature in somatic incident data whereas this is the leading incident cause in mental health services. In essence, there is less pooled data in mental health services that capture the decisions that the health workforce is making—but there is more data reflecting the outcome on the health of patients.

Somatic data suggests a different paradigm of incident reporting: that health workforce error is something that could reasonably be prevented and should not occur. The ostensible paradigm of mental health incident reporting is that patient-related harming behaviour is something that is reasonably preventable, and, therefore, should
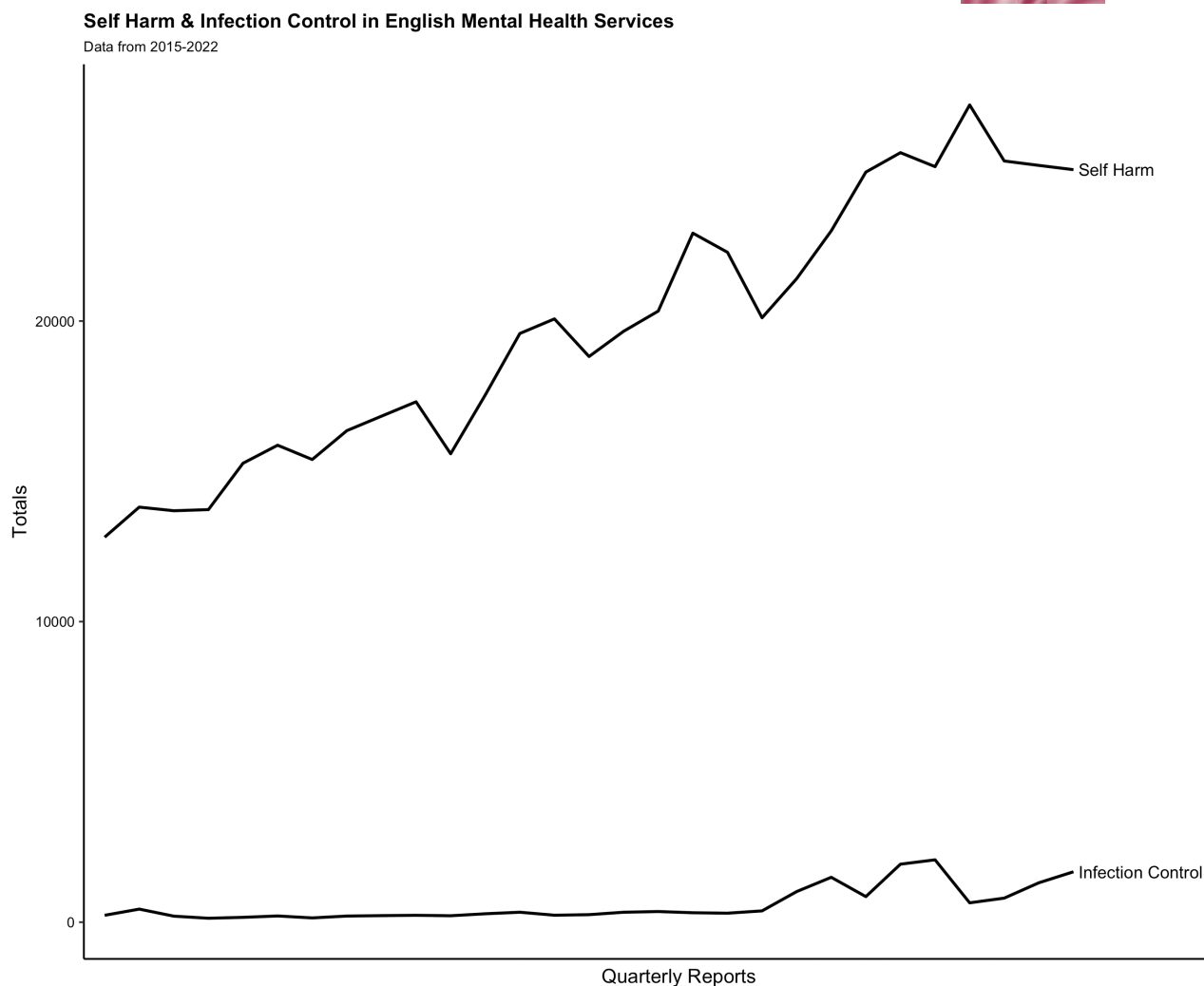
Self Harm & Infection Control in English Mental Health Services

Data from 2015-2022

FIGURE 2 Self-harm and infection control reports 2015–2022.

not occur. This paradigm is suggestive of containment; that mental health nurses should be able to contain and reduce risk through their actions, and not need to report this—similar to how a general nurse would not report physical observation or routine medicine administration as an adverse incident. However, this is significantly problematic—as containment or coercion can lead to paradoxical harms such as feelings of abuse (Askew et al., 2019), trauma (Sweeney et al., 2018) or nosocomial (iatrogenic) suicide (Borecky et al., 2019; Ward-Ciesielski & Rizvi, 2021). What is needed is a greater systematic understanding of care, workforce and safety to inform how services can monitor and report patient safety incidents. The concern is that there are missing narratives in the reporting of outcomes, and as such harm may occur to patients, through incomplete or erroneous care, that is not currently being monitored. For example, if a patient has an episode of aggression and this is reported as such in the current process, it is not clear from pooled data if this is related to the staffing available (whether the compliment was sufficient) or reflective of the quality of the care provided. With current pooling, we are only able to see the frequency of aggression or self-harm, and not the potential antecedent causes that could be analysed for future reduction or harm minimization based upon pattern recognition.

Using incident data as a sample, it is reasonable to assume that there are greater levels of self-harm being experienced in all areas of English society. This is troubling if the presumption is that self-harm can reasonably be prevented—and therefore reporting its occurrence rather than workforce-related antecedents continues to be the hegemonic paradigm of patient safety. Clear examples of containment were missing from the incident categories (although is likely contained in the free-text data in most reporting systems, though not pooled nationally); this is of grave concern given the negative outcomes associated with containment. There are also differing views on self-harm management with respect to harm minimization and the promotion of service-user autonomy (Davies et al., 2022). Under this paradigm, self-harm could be considered as 'an outcome' and therefore a clearer separation of the factors increasing or decreasing risk could be more clearly monitored (rather than monitoring self-harm frequency as an incident type which seems to be the current process). Existing incident monitoring systems commonly require a category for the incident type (e.g. self-harm) followed by free-text which allows reporters to note possible antecedents to the incident. Unfortunately, this data is not pooled nationally and only the categories are reported.
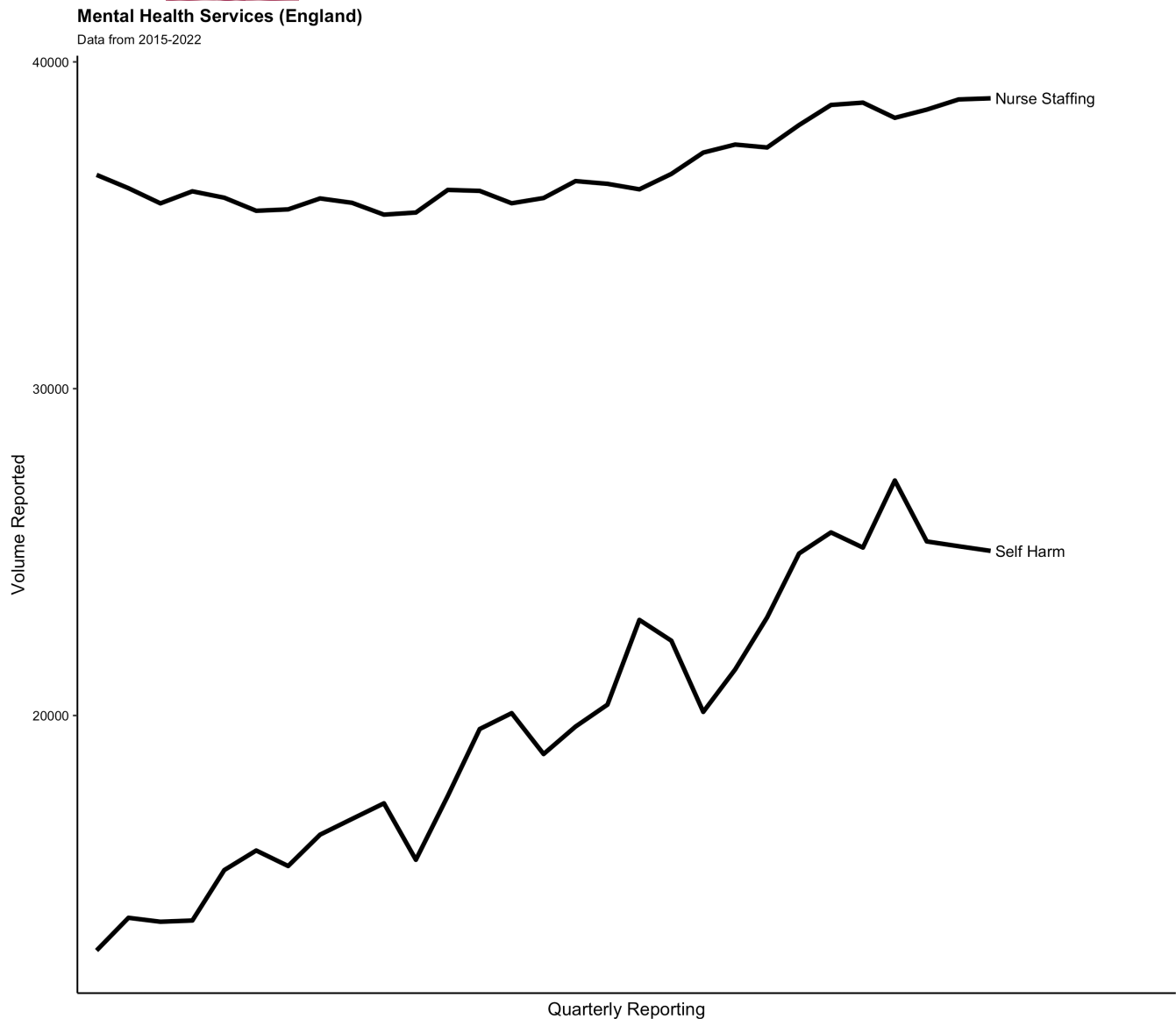
Mental Health Services (England)
Data from 2015-2022

FIGURE 3 Self-harm and staffing changes over time.

Considering the above example of self-harm, it may clarify patient safety monitoring if incidents were monitored from an antecedent, rather than outcome, perspective (as seems to be the case in somatic care).

The changes observed in nursing numbers could be thought of as a declining trend when considered relative to the volume of incident reports. We observed that although there are more nurses in employment, the ratio of nurse-to-incident has declined and a greater volume of incidents are being reported.

A limitation of this analysis is that it did not incorporate other professional groups where broader, strategic reconfiguration may have influenced outcomes. In Australia, there seems to have been service migration away from nurses and towards psychologists where the latter number 95.3 full-time equivalent (FTE) in comparison to 90.2 FTE nurses per 100,000 people (Australian Institute of Health and Welfare, 2019). A possible explanation for this could include reform/changes to the pre-registration training for nurses in Australia, where this became generic and across all fields of nursing several years ago (Happell & Platania-Phung, 2005). However, whilst no such changes have occurred in the UK, there is ample commentary and concern that the skills of mental health nurses seem marginalized in current educational standards from the Nursing and Midwifery Council (Haslam, 2023; Warrender, 2022, 2023; Warrender, Connell, et al., 2024; Warrender, Ramsay, & Hurley, 2023).

4.2 | Using existing evidence to inform a new incident reporting and workforce paradigm

The incomplete, partially obscured landscape of workforce and safety evidence poses a unique challenge for policy writers and implementers. In comparison to physical care evidence, mental health staffing data currently requires several layers of
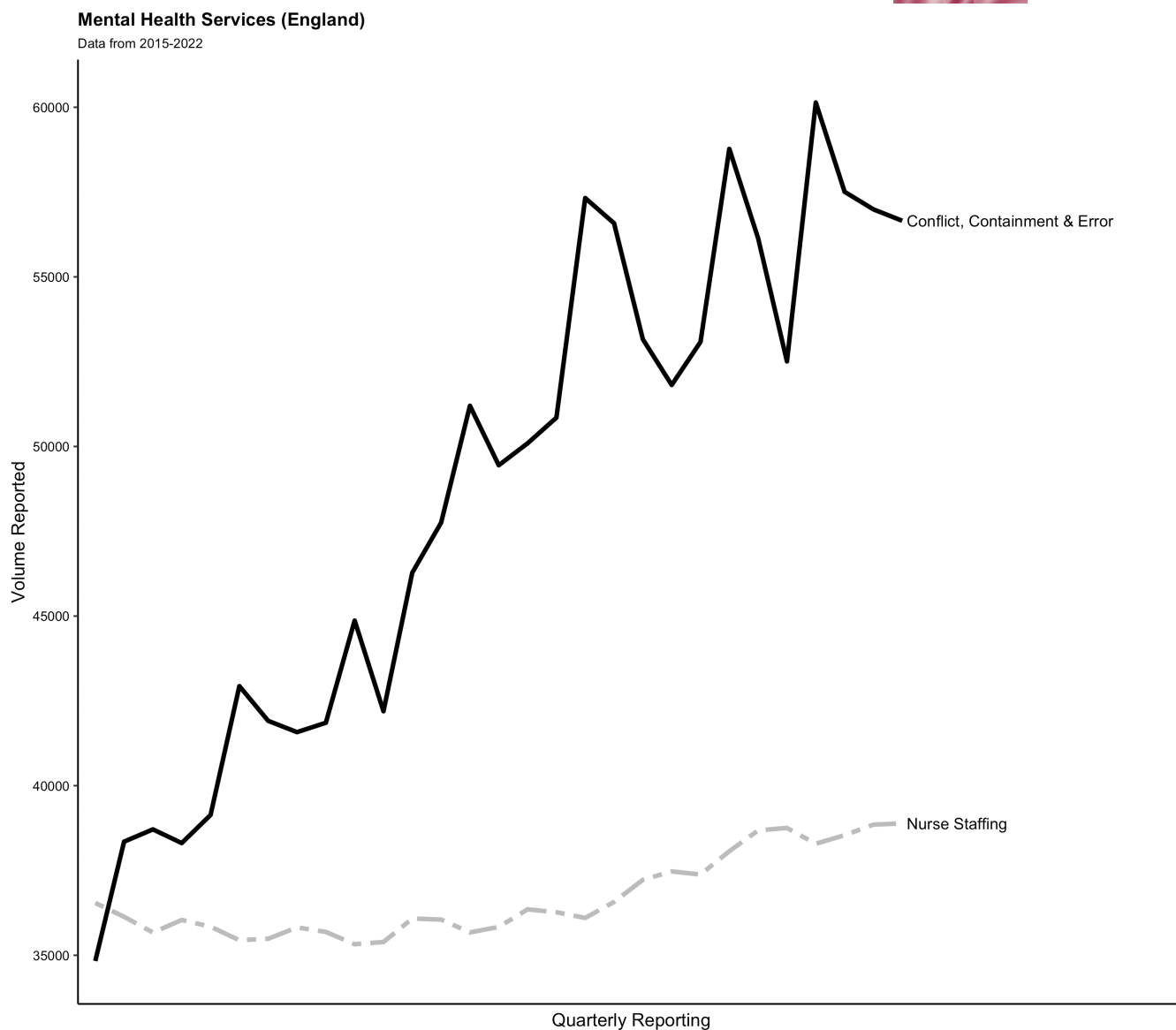
Mental Health Services (England)

Data from 2015-2022

FIGURE 4 Conflict, containment and error and staffing changes over time.

translation. Increasing existing staff-to-patient ratios may lead to a mixture of outcomes: greater levels of restriction but a lower length of stay (Fukasawa et al., 2018), or manipulating the gender representation of a shift may alter restrictive practices (Doedens et al., 2017, 2021; Janssen et al., 2007). At the current time, there are no universal rules that can be implemented to uphold patient safety and staff effectiveness. In the UK, there are locally agreed staffing levels, and it is more common for staffing levels to fluctuate onwards on the basis of the needs of specific patients (e.g. people that are allocated continuous surveillance). However, large dataset studies such as Cook et al. (2020) demonstrate degrees of resilience in shifts that are 'short-staffed' questioning the approach of only changing staffing levels based upon the allocation of increased observation.

There is also a lack of consideration of the needs of staff—and if additional support would help them be able to deliver more effective care. Lack of adequate staffing in mental health services has been associated with burnout (Jenkins & Elliott, 2004); yet UK hospital staff are managing increased acuity evidenced by increased use of detentions under The Mental Health Act (Mahase, 2022c) alongside rises in incident reporting. The well-being and resilience of staff members' emotional states does not currently factor into workforce guidance in the UK, moreover suggesting staffing levels need to be proportionate to the risk of the patients (NHS England, 2015). However, workforce stressors continue to include inadequate resources to perform the nursing role (Foster et al., 2021). Therefore, burnout or compassion fatigue could be associated with staff mechanically engaging in care thus inhibiting caring interactions and ameliorating feelings of personal safety for patients (Cutler et al., 2020, 2021).

Caution should be taken against implementing staffing policy without the involvement of people using the service. What is clear from qualitative evidence (Askew et al., 2019; Cutler et al., 2020, 2021), and obvious in recent undercover footage documentaries
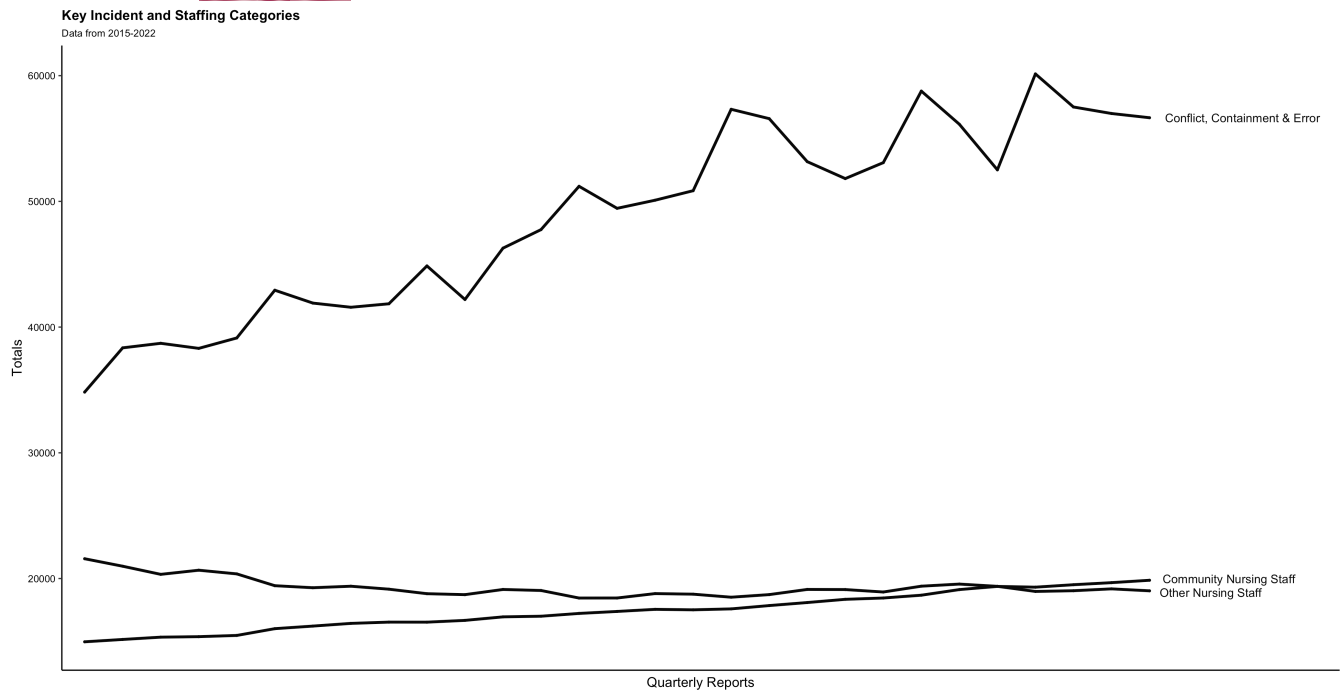
FIGURE 5 Conflict, containment and error and location of staffing over time.

filmed in England (Ashurst, 2022; Evans, 2022) is that it is not simply a matter of staff volume. There is an as-yet undefined aspect of *who* is on the ward and what the prevailing culture of the shift, ward, hospital or health system is that likely influences staffing responses, the reporting of incidents and ultimately the experiences of patients.

Challenges involved in trying to isolate and limit bias from variables around staffing and incidents remain. Increases in staffing levels may precede or succeed incidents of patient harm. Ostensibly binary or universal outcomes in mental ill health are actually more complex upon further inspection; length of stay is significantly skewed by social circumstances and familial support (Crossley & Sweeney, 2020; Tulloch et al., 2011); readmission rates are influenced by provision and availability of community support. Risk assessment of patients is influenced by their environs and what they have access to. It is difficult to assume that a lower length of stay is better—as it is more difficult to consider a comparison with other cases given the numerous moving and co-dependent aspects involved in one person's care. Readmission may be influenced by social factors more than a failure in the admission and discharge process.

5 | CONCLUSION

Overall incident reporting increased by 46% with self-harm reporting increasing by 95% over the same period. There were marginal increases in nurses (6%) who have migrated towards community settings. Data suggest that most mental health services are saturated with greater levels of risk or incident reporting activity, and

the nurse-to-incident ratio has decreased. The COVID-19 pandemic and the imposition of national restrictions seem correlated with increased rates of self-harm reports. A shift in the paradigm of incident reporting and monitoring in mental health is necessary to modernize mental health care. Patient-related behaviour is most prominently reported, rather than possible antecedent health services issues that may contribute towards this. Containment is under-reported.

6 | IMPLICATIONS FOR PRACTICE

Work needs to be undertaken to refine the paradigm of incident reporting in policy, research and education. Self-harm and aggression could be considered as 'outcomes' and health service antecedents could replace them as causes of incidents. Somatic care incident data demonstrates this—as leading causes of incidents are not causes of mortality or illness. How we conceptualize mental ill health is central; upholding the epistemic rights of people accessing mental health services is paramount to protecting their safety. Without accurate incident reporting mechanisms, it is difficult to ascertain the precise impact that mental health nurses have on their practice and patients.

7 | RELEVANCE STATEMENT

This study explores the mental health nursing workforce and incidents and considers the relationship between the two alongside a discussion of the overall paradigm of incident reporting.

AUTHOR CONTRIBUTIONS

All authors have fully met the criteria of authorship, having engaged in the conception and design of the study, acquisition of data or analysis and interpretation of data. Drafted the article/revised it critically for important intellectual content, and given final approval of the version submitted. Samuel Woodnutt designed the study and acquired the data, computed this in the R program and plotted the tables/graphs. Simon Hall, Paula Libberton, Matt Flynn, Francesca Purvis and Jasmine Snowden reviewed the data and assisted with the interpretation and drafting of all versions of the manuscript.

CONFLICT OF INTEREST STATEMENT

The authors have no conflict of interest to declare.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available online for:Incidents (NHS England) at: https://www.england.nhs.uk/patient-safety/national-patient-safety-incident-reports/Workforce (NHS Digital) at;https://digital.nhs.uk/data-and-information/publications/statistical/nhs-workforce-statistics.

CONSENT

Patients were not involved so no patient consent was required.

ETHICAL CONSENT

Not applied for/necessary as this is a descriptive analysis of publicly available data.

ORCID

Samuel Woodnutt https://orcid.org/0000-0001-6821-3158
Matt Flynn https://orcid.org/0009-0005-7354-7490
Jasmine Snowden https://orcid.org/0000-0001-5290-4587

REFERENCES

Archer, S., Thibaut, B. I., Dewa, L. H., Ramtale, C., D'Lima, D., Simpson, A., Murray, K., Adam, S., & Darzi, A. (2020). Barriers and facilitators to incident reporting in mental healthcare settings: A qualitative study. *Journal of Psychiatric and Mental Health Nursing*, 27(3), 211–223.

Ashurst, A. (2022). Reflecting on BBC Panorama's documentary undercover hospital: Patients at risk. *Nursing and Residential Care*, 24(10), 1–3.

Askew, L., Fisher, P., & Beazley, P. (2019). What are adult psychiatric inpatients' experience of seclusion: A systematic review of qualitative studies. *Journal of Psychiatric and Mental Health Nursing*, 26(7–8), 274–285.

Australian Institute of Health and Welfare. (2019). *Mental Health Workforce*. Australia. https://www.aihw.gov.au/getmedia/6975aa54-246d-426e-9e33-fec8ec7ce105/Mental-health-workforce-2019.pdf.aspx

Bak, J., Zoffmann, V., Sestoft, D. M., Almvik, R., Siersma, V. D., & Brandt-Christensen, M. (2015). Comparing the effect of non-medical mechanical restraint preventive factors between psychiatric units in Denmark and Norway. *Nordic Journal of Psychiatry*, 69(6), 1715–1725.

Baker, J. A., Bowers, L., & Owiti, J. A. (2009). Wards features associated with high rates of medication refusal by patients: A large multi-centred survey. *General Hospital Psychiatry*, 31(1), 80–89.

Ball, J. E., Murrells, T., Rafferty, A. M., Morrow, E., & Griffiths, P. (2014). 'Care left undone' during nursing shifts: Associations with workload and perceived quality of care. *BMJ Quality & Safety*, 23(2), 116–125.

Borecky, A., Thomsen, C., & Dubov, A. (2019). Reweighing the ethical tradeoffs in the involuntary hospitalization of suicidal patients. *The American Journal of Bioethics*, 19(10), 71–83.

Bowers, L. (2006). On conflict, containment and the relationship between them. *Nursing Inquiry*, 13(3), 172–180.

Bowers, L., Alexander, J., Simpson, A., Ryan, C., & Carr-Walker, P. (2004). Cultures of psychiatry and the professional socialization process: The case of containment methods for disturbed patients. *Nurse Education Today*, 24(6), 435–442.

Bowers, L., James, K., Quirk, A., Simpson, A., Stewart, D., & Hodsoll, J. (2015). Reducing conflict and containment rates on acute psychiatric wards: The Safewards cluster randomised controlled trial. *International Journal of Nursing Studies*, 52(9), 1412–1422.

Brimblecombe, N. (2023). Analysis of changes in the national mental health nursing workforce in England, 2011–2021. *Journal of Psychiatric and Mental Health Nursing*, 30, 994–1004.

Cook, R. M., Jones, S., Williams, G. C., Worsley, D., Walker, R., Radford, M., & Leary, A. (2020). An observational study on the rate of reporting of adverse event on healthcare staff in a mental health setting: An application of Poisson expectation maximisation analysis on nurse staffing data. *Health Informatics Journal*, 26(2), 1333–1346.

Crossley, N., & Sweeney, B. (2020). Patient and service-level factors affecting length of inpatient stay in an acute mental health service: A retrospective case cohort study. *BMC Psychiatry*, 20(1), 1–9.

Cutler, N. A., Sim, J., Halcomb, E., Moxham, L., & Stephens, M. (2020). Nurses' influence on consumers' experience of safety in acute mental health units: A qualitative study. *Journal of Clinical Nursing*, 29(21–22), 4379–4386.

Cutler, N. A., Sim, J., Halcomb, E., Stephens, M., & Moxham, L. (2021). Understanding how personhood impacts consumers' feelings of safety in acute mental health units: A qualitative study. *International Journal of Mental Health Nursing*, 30(2), 479–486.

Dall'Ora, C., Saville, C., Rubbo, B., Turner, L., Jones, J., & Griffiths, P. (2022). Nurse staffing levels and patient outcomes: A systematic review of longitudinal studies. *International Journal of Nursing Studies*, 134, 104311.

Davies, J., Pitman, A., Bamber, V., Billings, J., & Rowe, S. (2022). Young peoples' perspectives on the role of harm reduction techniques in the management of their self-harm: A qualitative study. *Archives of Suicide Research*, 26(2), 692–706.

Degli Esposti, M., Ziauddeen, H., Bowes, L., Reeves, A., Chekroud, A. M., Humphreys, D. K., & Ford, T. (2022). Trends in inpatient care for psychiatric disorders in NHS hospitals across England, 1998/99–2019/20: An observational time series analysis. *Social Psychiatry and Psychiatric Epidemiology*, 57(5), 993–1006.

Department of Health and Social Care. (2017). *Code of practice: Mental Health Act 1983*. https://www.gov.uk/government/publications/code-of-practice-mental-health-act-1983.

Doedens, P., Maaskant, J. M., Latour, C. H. M., Meijel, B. K. G., Koeter, M. W. J., Storosum, J. G., Barkhof, E., & de Haan, L. (2017). Nursing staff factors contributing to seclusion in acute mental health care—An explorative cohort study. *Issues in Mental Health Nursing*, 38(7), 584–589.

Doedens, P., ter Riet, G., Vermeulen, J., Boyette, L. L., Latour, C., & de Haan, L. (2021). Influence of nursing staff characteristics on seclusion in acute mental health care—A prospective two-year follow-up study. *Archives of Psychiatric Nursing*, 35(5), 491–498.

Evans, N. (2022). Abuse of patients: What you can do to help end bad practice. *Mental Health Practice*, 26(2), 6–8.

Feyman, Y., Figueroa, S. M., Yuan, Y., Price, M. E., Kabdiyeva, A., Nebeker, J. R., Ward, M. C., Shafer, P. R., Pizer, S. D., & Strombotne, K. L.

(2023). Effect of mental health staffing inputs on suicide-related events. *Health services research*, *58*(2), 375–382. https://onlinelibrary.wiley.com/doi/full/10.1111/1475-6773.14064

Foster, K., Roche, M., Giandinoto, J. A., Platania-Phung, C., & Furness, T. (2021). Mental health matters: A cross-sectional study of mental health nurses' health-related quality of life and work-related stressors. *International Journal of Mental Health Nursing*, *30*(3), 624–634.

Friebel, R., Fisher, R., Deeny, S. R., Gardner, T., Molloy, A., & Steventon, A. (2019). The implications of high bed occupancy rates on readmission rates in England: A longitudinal study. *Health Policy*, *123*(8), 765–772.

Fukasawa, M., Miyake, M., Suzuki, Y., Fukuda, Y., & Yamanouchi, Y. (2018). Relationship between the use of seclusion and mechanical restraint and the nurse-bed ratio in psychiatric wards in Japan. *International Journal of Law and Psychiatry*, *60*, 57–63.

Griffiths, P., Ball, J., Drennan, J., Dall'Ora, C., Jones, J., Maruotti, A., Pope, C., Recio Saucedo, A., & Simon, M. (2016). Nurse staffing and patient outcomes: Strengths and limitations of the evidence to inform policy and practice. A review and discussion paper based on evidence reviewed for the National Institute for Health and Care Excellence Safe Staffing guideline development. *International Journal of Nursing Studies*, *63*, 213–225.

Griffiths, P., Recio-Saucedo, A., Dall'Ora, C., Briggs, J., Maruotti, A., Meredith, P., Smith, G. B., Ball, J., & the Missed Care Study Group. (2018). The association between nurse staffing and omissions in nursing care: A systematic review. *Journal of Advanced Nursing*, *74*(7), 1474–1487.

Griffiths, P., Saville, C., Ball, J., Jones, J., Pattison, N., Monks, T., & Safer Nursing Care Study Group. (2020). Nursing workload, nurse staffing methodologies and tools: A systematic scoping review and discussion. *International Journal of Nursing Studies*, *103*, 103487.

Happell, B., & Platania-Phung, C. (2005). Mental health issues within the general health care system: The challenge for nursing education in Australia. *Nurse Education Today*, *25*(6), 465–471.

Haslam, M. B. (2023). The erosion of mental health nursing: The implications of the move towards genericism. *British Journal of Mental Health Nursing*, *12*(1), 1–6.

Janssen, W., Noorthoorn, E., Linge, R., & Lendemeijer, B. (2007). The influence of staffing levels on the use of seclusion. *International Journal of Law and Psychiatry*, *30*(2), 118–126.

Jenkins, R., & Elliott, P. (2004). Stressors, burnout and social support: Nurses in acute mental health settings. *Journal of Advanced Nursing*, *48*(6), 622–631.

Kalisova, L., Raboch, J., Nawka, A., Sampogna, G., Cihal, L., Kallert, T. W., Onchev, G., Karastergiou, A., del Vecchio, V., Kiejna, A., Adamowski, T., Torres-Gonzales, F., Cervilla, J. A., Priebe, S., Giacco, D., Kjellin, L., Dembinskas, A., & Fiorillo, A. (2014). Do patient and ward-related characteristics influence the use of coercive measures? Results from the EUNOMIA international study. *Social Psychiatry and Psychiatric Epidemiology*, *49*, 1619–1629.

Kodal, J. S., Kjær, J. N., & Larsen, E. R. (2018). Mechanical restraint and characteristics of patient, staff and shifts in a psychiatric ward. *Nordic Journal of Psychiatry*, *72*(2), 103–108.

Mahase, E. (2022a). Nurses vote to strike over pay, as other health workers are balloted. *BMJ: British Medical Journal (Online)*, *379*, o2740.

Mahase, E. (2022b). Nurses' strike: Government must act to avoid "stalemate for foreseeable future". *BMJ: British Medical Journal (Online)*, *379*, o3022.

Mahase, E. (2022c). *Poorer access to community mental health services may have led to rise in detentions*. British Medical Journal Publishing Group.

Moyo, N., Jones, M., Kushemererwa, D., Pantha, S., Gilbert, S., Romero, L., & Gray, R. (2020). The Association between the mental health nurse-to-registered nurse ratio and patient outcomes in psychiatric inpatient wards: A systematic review. *International Journal of Environmental Research and Public Health*, *17*(18), 6890.

NHS Digital. (2022). *NHS Workforce Statistics—October 2022 (Including selected provisional statistics)*. https://digital.nhs.uk/data-and-information/publications/statistical/nhs-workforce-statistics/october-2022#resources

NHS England. (2015). *New NHS safe staffing framework for mental health wards published*. https://www.england.nhs.uk/2015/06/mh-safe-staffing/

NHS England. (2022). *National patient safety incident reports up to June 2022*. https://www.england.nhs.uk/publication/national-patient-safety-incident-reports-up-to-june-2022/

Paton, C. (2022). Toxic cocktail: A hangover from austerity, the pandemic, Brexit and barely sorted social care. In *NHS reform and health politics in the UK: Revolution, counter-revolution and covid crisis* (pp. 175–186). Springer.

Quinlivan, L., Littlewood, D. L., Webb, R. T., & Kapur, N. (2020). Patient safety and suicide prevention in mental health services: Time for a new paradigm? *Journal of Mental Health*, *29*(1), 1–5.

Rimmer, A. (2023). *NHS leaders urge nurses' union to reconsider escalation of strike action*. British Medical Journal Publishing Group.

Schlup, N., Gehri, B., & Simon, M. (2021). Prevalence and severity of verbal, physical, and sexual inpatient violence against nurses in Swiss psychiatric hospitals and associated nurse-related characteristics: Cross-sectional multicentre study. *International Journal of Mental Health Nursing*, *30*(6), 1550–1563.

Staggs, V. S. (2015). Injurious assault rates on inpatient psychiatric units: Associations with staffing by registered nurses and other nursing personnel. *Psychiatric Services*, *66*(11), 1162–1166.

Staggs, V. S. (2016). Deviations in monthly staffing and injurious assaults against staff and patients on psychiatric units. *Research in Nursing & Health*, *39*(5), 347–352.

Sweeney, A., Filson, B., Kennedy, A., Collinson, L., & Gillard, S. (2018). A paradigm shift: Relationships in trauma-informed mental health services. *BJPsych Advances*, *24*(5), 319–333.

Thibaut, B., Dewa, L. H., Ramtale, S. C., D'Lima, D., Adam, S., Ashrafian, H., Darzi, A., & Archer, S. (2019). Patient safety in inpatient mental health settings: A systematic review. *BMJ Open*, *9*(12), e030230.

Tulloch, A. D., Fearon, P., & David, A. S. (2011). Length of stay of general psychiatric inpatients in the United States: Systematic review. *Administration and Policy in Mental Health and Mental Health Services Research*, *38*, 155–168.

Ward-Ciesielski, E. F., & Rizvi, S. L. (2021). The potential iatrogenic effects of psychiatric hospitalization for suicidal behavior: A critical review and recommendations for research. *Clinical Psychology: Science and Practice*, *28*(1), 60.

Warrender, D. (2022). Though noble, NMC's standards are an assault on mental health nursing. *Mental Health Practice*, *25*(6), 5.

Warrender, D. (2023). "You can't have your cake and eat it": Future nurse standards and subsequent dilution of mental health nurse education. *British Journal of Mental Health Nursing*, *12*(2), 1–2.

Warrender, D., Connell, C., Jones, E., Monteux, S., Colwell, L., Laker, C., & Cromar-Hayes, M. (2024). Mental health deserves better: Resisting the dilution of specialist pre-registration mental health nurse education in the United Kingdom. *International Journal of Mental Health Nursing*, *33*, 202–212. https://doi.org/10.1111/inm.13236

Warrender, D., Ramsay, M., & Hurley, J. (2023). Mental health nurse education: A contemporary view in the debate between generic and specialist approaches. *Mental Health Practice*, *26*(4). https://doi.org/10.7748/mhp.2023.e1663

Williams, J. E., & Myers, R. E. (2001). Relationship of less restrictive interventions with seclusion/restraints usage, average years of psychiatric experience, and staff mix. *Journal of the American Psychiatric Nurses Association*, *7*(5), 139–144.

Wood, D., Robinson, C., Nathan, R., & McPhillips, R. (2023). The practice of incident reporting and management: Current challenges and opportunities for mental health trusts in England. *The Journal of Mental Health Training, Education and Practice*, *18*(3), 248–260.

Woodnutt, S. (2022). Safe staffing in mental health services: Current evidence and next steps. *International Mental Health Nursing Research Conference 2022*. University of Oxford.

World Health Organization. (2022). Mental health atlas 2020: Review of the Eastern Mediterranean Region. https://iris.who.int/handle/10665/365880.