Blame in primary care incident reports: A cross-sectional mixed methods analysis of the frequency and nature of blame in incident reports

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No competing interests
We have read and understood BMJ policy on declaration of interests and declare that we have no competing interests.
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What this paper adds:

What is already known on this subject
Despite providing 90% of patient contacts in the NHS, primary care lags far behind secondary care in submitting and learning from incident reports. Several authors caution that blame culture is a key issue within the NHS and presents a major obstacle to learning from patient safety incidents.

What this study adds
Our study provides evidence that primary care incident reports are frequently used to attribute blame to others rather than to examine system failures. The extent of blame may be hindering rich opportunities to improve the quality of patient care.

Abstract
Word Count: 274

Objectives –To explore the frequency and nature of blame, a major cultural barrier to learning, within primary care patient safety incident reports from the National Reporting and Learning System (NRLS).

Design A cross-sectional mixed methods study with sequential exploratory analysis of a random sample of primary care incident reports with free text narratives submitted between April 2005 and September 2013.

Setting – NHS primary care settings across England and Wales.

Participants Healthcare professionals, administrative staff, patients, family members, carers, and others involved in submitting patient safety incidents into the NRLS

Main Outcome Measures – Types and frequency of blame attributions evident in incident reports. Associations between the nature of the safety incident (incident type, type of contributory factors, severity of harm of the outcome) and frequency of blame.

Results - Of 2148 incident reports, 975 (45%, 95% Confidence interval 43.2% to 47.5%) attributed blame, with 894 (92%) of these blaming someone other than the reporter. Blame occurred mostly in incidents involving poor communication and co-operation between different clinical teams and was least likely in routinely reported incidents (e.g. pressure ulcers). Blame was more likely to occur where staff or organisational factors contributed to an incident than for incidents where patient or equipment factors were involved. Blame was more likely in incidents where the severity of outcome was no harm.

Conclusions Blaming others is common in primary care incident reporting with relatively little focus on systems failures. This is likely to limit the learning that can be achieved to improve safety for patients in primary care. Clinical staff need better training in human and systems factors to reclaim incident reports as a tool for improving patient safety.

Introduction

Reporters' fear of blame and retribution is a recognised barrier in all safety critical industries that seek to use the analysis of incidents as a method of improvement.[1-9] In healthcare, under-reporting is the norm, although its degree varies; it has been estimated that reporting systems detect 7-15% of hospital adverse events.[10] This represents a major missed opportunity to prevent harm from the multiple sources through which patients are exposed to risk from modern healthcare. The extent of blame attribution in incident reports, that may reflect the healthcare system's culture and its ability to report and learn, is not known.

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Most studies of patient safety have been in hospital populations, yet, in the United Kingdom, primary care services provide 90% of all patient contacts.[11] Whilst primary care lags behind secondary care in generating learning from incident reports,[1] its special context presents additional challenges when it comes to reporting patient safety concerns. A report on whistleblowing in primary care[12] emphasized how difficult it is to report confidentially or anonymously when working in relatively small clinical teams. Also, in some safety incidents, a team member involved may be the potential reporter's direct employer.

The patient safety movement is based on the philosophy that error and harm are almost always the result of poorly designed systems that lead individuals to make mistakes.[2,13-16] In a minority of situations, where there is wilful misconduct or negligence, it is right that individual accountability should be enforced. However, media and the political climate in many countries too often demand that individuals are

held responsible no matter what,[13-15] whilst any opportunity for enlightening the public on the real explanation for serious incidents is lost in the fury of the moment.

We could find no study that had sought to determine the extent and nature of attributions of blame within patient safety incident reports. We set out to examine a sample of such patient safety incidents reported from primary healthcare settings within a publicly funded healthcare system; the aim of our study was to identify and classify the types of statements of blame attribution made within the reports and relate this to the nature of the incidents.

Methods

Data Source

The primary data for this study are taken from the National Reporting and Learning System (NRLS), a database containing 14 million patient safety incident reports from local healthcare organisations in England and Wales. A patient safety incident was defined as: "*any unintended or unexpected incident that could have harmed or did harm a patient during healthcare delivery*."[16] Reporting started on a voluntary basis in 2003 but, since 2010, submitting reports to the NRLS became a mandatory requirement for all incidents that resulted in severe harm or death. Reports contained structured categorical information about geographical location, care setting, patient demographics, and the reporter's perception of severity of harm as well as free-text descriptions of the incident, potential contributory factors, and planned actions to prevent reoccurrence. The database is described in more detail in a study of patient safety-related hospital deaths in England.[17]

Study Population

Criteria for inclusion in the study were that reports contained sufficient description to interpret, were not duplicates, and related to the provision of primary health care in England and Wales. The chosen study period was April 2005 to September 2013, the period when the largest cross-section of primary care data submitted to the NRLS were available (42,729 reports). We combined all incident reports that had resulted in severe harm and death (1,199 reports) with a weighted random sample of incident reports where the outcome was no harm, low harm or moderate harm (12,500) to create a sample of 13,699 reports. The weighting gave priority to reports submitted from 2012 onwards to ensure the sample was current. This study population is described in more detail elsewhere.[22] In a pilot study, we found blame descriptions in 47% (401/857) of patient safety incident reports. In order to estimate the true frequency of blame descriptions within these primary care data with a 95% confidence interval width no greater than 2%, we calculated that a sample size of at least 2043 incident reports was required. We drew a randomly selected sample of 2679 reports (to accommodate for the frequency of duplicates and reports with insufficient detail to interpret) from the 13,699 reports using a random number generator.

Study design

We took a sequential exploratory approach[18] with qualitative, followed by quantitative, analysis, in this mixed-methods study. We conducted a content analysis[19] of primary care incident reports according to the Primary Care Patient Safety (PISA)

Classification System[20]. Then, we scrutinised reports separately for statements of apparent blame and applied a coding framework for blame attribution. We followed this with a descriptive statistical analysis of the frequency of blame categories within these reports.

Data coding

The free-text description, in conjunction with the structured information of each incident report was coded according to Primary Care Patient Safety (PISA) Classification System[21,22]. We coded the *incident type* (e.g. administration, referral or discharge planning), the *contributory factors* that the reporter described as contributing to the incident (e.g. staffing levels, staff knowledge levels or vulnerability of the patient) and the *severity* of the outcome according to the WHO International Classification for Patient Safety definitions[23]. More information on the coding method can be found in the PISA study protocol.[22] At the analysis stage we excluded reports with insufficient free text to interpret and those that described an incident unrelated to healthcare, for example a patient falling in the GP surgery car park. Reports describing pressure ulcers have been excluded in previous work as they typically describe only the outcome rather than an incident type. However, pressure ulcers account for more than one in eight reports in the database so we included these as an 'incident type' to ensure the sample reflected the way incident reporting was actually used.[22]

"Blame" was defined as making a judgement of deficiency or fault by a person or people in the free text. Each report was coded into one of two categories: "blame" or "no blame." Where there was doubt, reports were coded as "no blame." Some reports described incidents in which patients or relatives made a complaint against an

individual and these were included as containing “blame”. Where a reporter described failure of aspects of the system rather than a person, this was coded as “no blame”.

We judged that there were five forms of blame statement (see Box 1) having trialled these in the (separate) pilot sample of 857 patient safety incident reports. Where (infrequently) a report contained more than one type of blame, we coded only the main type of blame. One of us (JC) coded the categories and a random sample of 268 (10%) reports was double-coded (by RW). We discussed discordance, and rectified discrepancies. We calculated a kappa coefficient to determine inter-rater reliability of coding for blame.

Box 1: Categories of blame

Blame focus	Definition	Example
Blames self	**The reporter blames him/herself for the incident**	“Seen as temporary resident inguinal hernia awaiting operation. Was incarcerated (probably) and I acted on his history of this being reducible. I should have admitted him there and then and didn’t. No complaint by patient”
Blamed by another	**A third party individual blames the reporter for the incident**	“The patient was diagnosed as having penile cancer. He had attended the surgery on and off since [date] with urinary symptoms which seemed to respond to antibiotics. He saw every clinical member of the practice and was examined but due to a phimosis a thorough examination was impossible. He was referred for a possible hernia on [date] and to the urology department on [date] He was seen by both specialties within a week and diagnosis was confirmed. There has been a comment made to the family by a consultant that we should have spotted it sooner.”
Blames another	**The reporter blames a third party individual for the incident**	“A terminally ill patient attended A&E in ? ? retention of urine . This patient has a syringe driver in situ with morphine and metoclopromide in. The syringe driver was clearly labelled as per policy but despite this the Dr who saw the patient in A&E took the syringe driver down and left the patient without any analgesia or anti-sickness medication. As a result the patient was in a lot of pain and was only given a small amount of oral analgesia after being in A&E for some hours. TOTALLY UNACCEPTABLE. Medication error critical incident. Complete lack of knowledge demonstrated by the Dr. Inadequate assessment lack of knowledge on behalf of the Dr and failure to listen to the patient as he did question why they were taking the syringe driver down.”
Others blaming others	**A third party blames another third party individual for the incident**	“Patient had an appointment with the Doctor on Monday 9th June. Patient was in discomfort with problems swallowing and indigestion. This lady has an underactive thyroid, Crohn’s disease and takes medication for breast cancer. After a few days she felt very ill and thought it was the medication that had been prescribed on the day of her appointment. The patient

		contacted the practice on 12th June but the practice would / could not provide an appointment that day or indeed for 13th June. The doctor eventually agreed to do another prescription without her seeing her again (stemetil). When the patient went to collect the medication on 12th the pharmacist would not dispense the medication as it was not suitable for people with underactive thyroid and it was for vertigo / nausea / vomiting. The patient could not raise this issue with the practice as it closed Thursday afternoon. The patient added that this is not the first time that something has happened like this but did not elaborate. Going on to say that staff at his practice are rude and unhelpful and that the doctor ' has lost his way and doesn't care about the patients '"
Unknown blame	**Blame identified but target or source of blame unclear.**	"Patient with rheumatoid arthritis on steroids was taken off bone protection medication for 1 year giving a " drug free holiday " to reduce the incidence of atypical fracture (without a review date to re - start) She had been on this medication for 7 years. Stopping this medication was inappropriate."
No blame	**Report does not attribute blame**	"Histology and Cytology. No surname on specimen pot"

Data analysis

We calculated odds ratios and 95% confidence intervals (CI) of the odds of blame attribution (versus no blame attribution) and chi-squared tests to assess the associations between attribution of blame and the following pre-specified variables: the type of incident described, the severity of the harm that occurred (no, low, moderate or severe harm or death), the number of contributory factors described for the incident, the nature of the contributory factor reported to have led to the incident developing. We integrated the quantitative findings with the emerging insights generated from the coding process.

Ethical approval

Aneurin Bevan University Health Board research risk review committee was consulted for ethical approval. As all reporter identifiers are removed before the submission of reports to the NRLS, ethical approval was not required for analysis of this anonymised dataset. (ABHB R&D Ref number: SA/410/13).

Results

The initial random sample of 2679 patient safety incident reports was reviewed against the criteria for inclusion. In all, 531 patient safety incident reports were excluded either because there was insufficient free text (134) or, because they did not involve primary healthcare (397). This left 2148 patient safety incident reports for analysis. The patient safety incident reports came from a range of primary care settings: 1405 from general practice, 644 from community nursing services, and the remainder from community dentistry, mental health and pharmacy services.

We found an attribution of blame statement in 45% (975/2148) of patient safety incident reports (95% confidence interval: 43.2% to 47.5%). Cohen's kappa statistic for inter-rater reliability for coding of blame was calculated at κ=0.81 (95% confidence interval 0.74 to 0.88), indicating strong agreement[24].

Table 1: Frequency of blame attribution

Focus of blame	Number of reports	Percentage of reports rounded to nearest integer (%)
Blames self	**28**	**1%**
Blamed by another	**13**	**1%**
Blames another	**766**	**36%**
Others blaming others	**128**	**6%**
Unknown blame	**40**	**2%**
No blame	**1173**	**55%**
TOTAL	**2148**	**100%**

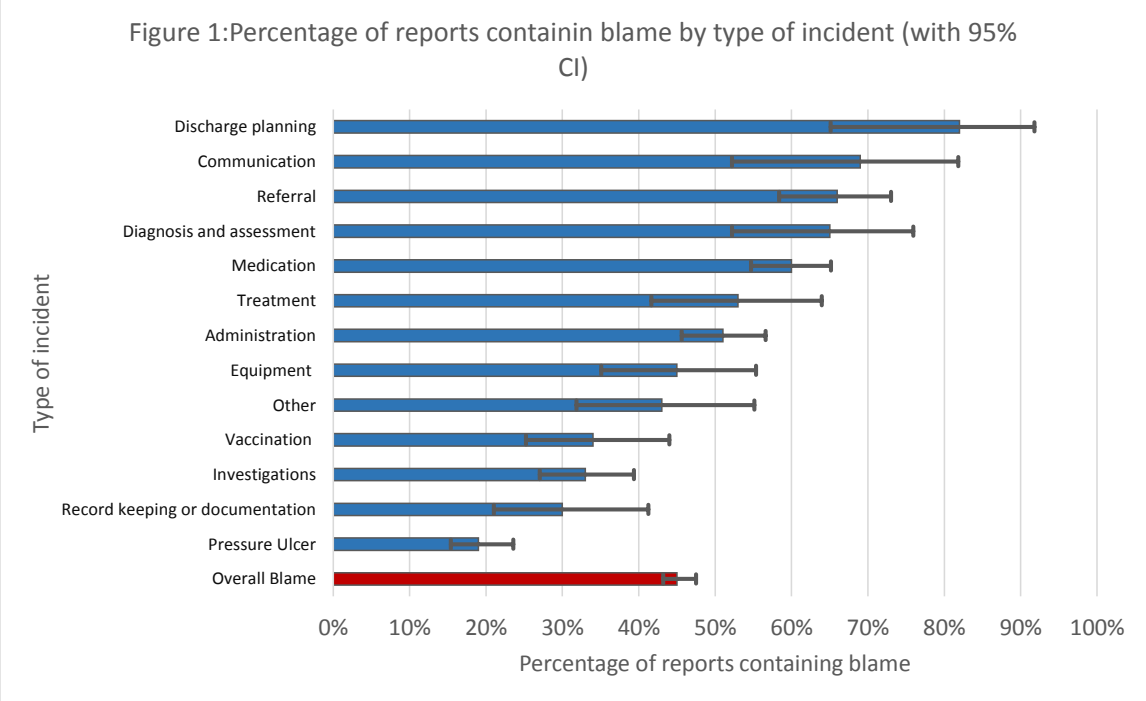
Table 1 shows that where blame was attributed, in 92% of cases (894/975) the reporter blamed someone else or reported another party blaming someone else. Blame was mostly attributed to other healthcare professionals, but in a small number of cases to patients or their relatives. Reports identifying a situation where the reporter blamed themselves were uncommon: 2% (41/975) of reports containing blame.

Along with Figure 1, table 2 shows that the three incident types most likely to be associated with blame were those involving discharge planning, communication problems and referrals. Incident reports involving: record keeping and documentation, pressure ulcers, and investigations were significantly less likely to contain blame than other incidents.

Table 2: Likelihood of blame attribution in different types of incidents.(Odds ratios for odds of blame when incident type is present versus incident type absent).

Incident type	Number of reports	% of total reports containing blame	Odds ratio	95% CI
Discharge planning	33	82%	5.54	2.28 to 13.47
Communication	36	69%	2.78	1.36 to 5.68
Referral	170	66%	2.49	1.80 to 3.47
Diagnosis and assessment	62	65%	2.24	1.32 to 3.79
Medication	417	60%	2.10	1.69 to 2.62
Treatment	77	53%	1.39	0.88 to 2.19
Administration	379	51%	1.34	1.08 to 1.68
Equipment provision	94	45%	0.97	0.64 to 1.47
Other	68	43%	0.89	0.55 to 1.45
Vaccination	100	34%	0.61	0.40 to 0.93
Investigations	251	33%	0.57	0.43 to 0.75
Record keeping and documentation	80	30%	0.50	0.31 to 0.82

Pressure Ulcer	**381**	**19%**	**0.22**	**0.17 to 0.29**



The greater the number of contributory factors the greater the likelihood was of an attribution of blame. Where incident reports described one or more contributory factors, 56% (482/865) attributed blame compared to 38% (493/1282) of reports without contributory factors. Table 3 shows the ratio for the odds of blame for each type of primary contributory factor against the odds of blame in the other three categories. Blame of a person was significantly less likely where equipment failures or patient factors contributed to the incident. Reports where organisational problems were identified as the primary contributory factors, for example low staffing levels or

long waiting lists, were more likely to contain blame of an individual, as were incidents in which staff members had poor knowledge or failed to follow procedures.

Table 3: Blame and contributory factors. Odds ratios comparing odds of blame where contributory factor is present versus odds of blame where an alternative contributory factor is present

Type of contributory factor	Number of reports	% that contain blame	Odds ratio	95% CI
Staff factors *(e.g. staff knowledge, failure to follow protocols)*	**351**	**65%**	**1.90**	**1.44 to 2.51**
Organisational factors *(e.g. staffing level, continuity of care)*	**216**	**62%**	**1.38**	**1.01 to 1.89**
Patient factors *(e.g. frailty, language barrier)*	**263**	**42%**	**0.45**	**0.33 to 0.61**
Equipment factors *(e.g. faulty or missing equipment)*	**35**	**29%**	**0.31**	**0.14 to 0.64**
No contributory factors reported	**1283**	**39%**	-	-
Total for all reports	**2148**	**45%**	-	-

Severity of harm to the patient, ranging from no harm to death was described in 1475 incident reports with 48% (712/1475) of these containing blame. Table 4 shows that reports describing no harm to the patient were significantly more likely to describe blame than those where the patient was harmed. This was also the case for each type of blame attribution (data not presented).

Table 4: Blame and severity of harm. Odds ratios showing odds of blame for each level of harm compared with odds of blame for all other harm levels.				
WHO ICPS Harm Level Classification	**Number of reports**	**% that contain blame**	**Odds ratio**	**95% CI**
No harm	**271**	**59%**	**1.70**	**(1.30 to 2.22)**
Mild	**1028**	**46%**	**0.75**	**(0.60 to 0.94)**
Moderate	**149**	**48%**	**0.97**	**(0.69 to 1.37)**
Severe	**21**	**10%**	**0.11**	**(0.03 to 0.48)**
Death	**6**	**83%**	**5.39**	**(0.628 to 46.24)**
Not reported	**673**	**39%**	**-**	**-**
Total	**2148**	**45%**	**-**	**-**

Discussion

Blame featured in almost half of the patient safety incident reports (975/2148) and was usually directed at others; in 92% of these cases (894/975), blame was attributed to someone other than the reporter. The frequency of blame varied depending on the type of incident described in the report, the type of contributory factors involved and the severity of harm to the patient.

A fear of being held personally accountable is said to explain much of the reluctance of front-line healthcare staff to use formal incident reporting systems to communicate their concerns about unsafe situations that they observe.[2,9,24-27] Whilst previous studies and commentaries in this field of patient safety have described how blame hinders reporting, our study is the first to identify and characterise its use by those making incident reports.

Dixon-Woods and colleagues' work[28,29] advocates the importance of "*soft intelligence*"[29] - the wealth of experiences from front line clinical staff about the reality of the system which can only thrive where staff feel valued and respected.[28] They recognise that historically, despite its potential, incident reporting has failed to provide this soft intelligence or support this ethic. Improvement in patient safety based on learning from incident reports cannot be achieved unless healthcare is free of an atmosphere of blame[2,14,15]. The European Commission's Patient Safety and Quality of Care working group advocates that for improvements to be made, health service managers must "*spread the message of a 'blame-free and non-punitive objective'*" and move on from a *"culture of blame and accountability to focus on learning to prevent errors from happening again, and thereby motivate reporting*."[30] This sentiment is also echoed in the WHO Patient Safety Curriculum[31] for all healthcare professionals.

Whilst this is not a representative sample of all incidents, the extent of blame evident in these reports (975/2148, 45%) by frontline clinical staff, in their descriptions of events that led to patient safety incidents, suggests that progress towards this blame-free and supportive culture is slow. This could have several explanations.

Firstly, it may reflect the outlook and behaviour of those working in a culture in which seeking personal accountability for errors is placed ahead of identifying the scope for learning.[8] Coles *et al*[32] found that hospital clinicians had little confidence that managers would deal with reports in a blame-free way – there was a perception of "heavy-handed retribution" and suggestion from hospital managers that incident reports were being used by reporters to "cover one's own back" in the event of a patient safety incident. We found that 92% (894/975) of reports attributing blame pointed the finger at someone other than the reporter. In addition, the incident types

most likely to involve blame (i.e. incidents involving discharge planning, communication and making referrals) often involved reporters attributing blame to a member of staff in a different department or team from their own. In such circumstances, staff may be doing what they think is expected of them by managers, or they may be fearful of disciplinary action and seek to absolve themselves by blaming others. That culture could prevail within a local organisation or across the health system as a whole. However, the finding that blame was less likely when there has been harm to a patient (with the exception of the very small category of reports about a death) may suggest that staff are aware of the value of more balanced reporting when more serious incidents have occurred.

Secondly, there are many common misconceptions about human factors[33] and staff may not fully realise that most unsafe situations arise from system weaknesses that precipitate human error and also increase the likelihood of its adverse impact. This may reflect that patient safety science does not yet feature strongly in the curricula of education and training programmes for healthcare professionals.[34] Our results show that only 40% of reports (865/2148) described any contributory factors; reporters may be using the language of blame to "explain" incidents rather than considering the human and systems factors at play. These contributory human and systems factors could provide valuable organisational learning. However, if clinical staff do not consider and report them, the "soft-intelligence" they might offer will not be available to maximise learning from the incidents[28,29].

Thirdly, the causation of harm in primary care settings may be different to that encountered in hospitals. Almost all the studies of errors in healthcare have examined secondary care and patient safety in primary care has been much less studied.[16] All

safety incidents are caused by a complex interaction of individual actions and system failures. Usually, the greater weight in interpreting causation is given to system-related factors but it is possible that in primary care, the role of the individual clinician is a stronger influence on the generation of harm and that blame of an individual may therefore be more common when incidents happen. Many decisions and judgments in primary care are made on an individual basis and not always with the checks and balances that a larger team provides, as in hospital-based services[12]. This is particularly so for specific areas of patient safety like diagnostic error which is highly dependent on the actions or omissions of an individual in primary care, and for which we found higher odds of blame than other incidents. However, our previous studies have confirmed the strong role of system factors also in the causation of incidents in primary care[17]. In this respect, primary care does not appear very different to other care settings.

We used a well-established coding method[20], discussion of data extraction, coding and analyses of the reports at weekly meetings, and a high level of coding agreement (Cohen's kappa >0.8) to ensure methodological rigour. This study examines associations with blame attribution and offers new insights into the way incident reports are used. Conclusions of this study should, however, be interpreted with caution: selection bias in reporting is important,[35] rendering this analysis essentially inductive rather than deductive; the quality of incident report analysis is also heavily reliant on the use of non-standardised terminology, subjective interpretation of events during reporting, and the depth of information provided by the reporter.[32,36] Further research should explore the social and cultural influences on reporters' motivations and their understanding of the potential impact of blame. This, and a comparative

analysis of blame in secondary care incident reporting, would enable the effective targeting of interventions to improve the learning from these reports.

Conclusion

This study is the first exploration of the frequency and nature of blame within primary care patient safety incident reports. Improvement in patient safety from incident reporting cannot be achieved unless healthcare culture is free from an atmosphere of blame. However, our analysis shows that reports have often been used to blame other members of staff rather than to offer insight into underlying system factors contributing to incidents. Incident reports reflect the overall culture of blame that clinical staff work in and they need more training in recognising human and systems factors when incidents happen. Recognising these factors would allow better opportunities for system learning, using the wealth of soft intelligence that frontline staff have, and which is essential for the development of resilient, blame-free learning organisations.

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