

# Quantitative and qualitative analysis of exception reporting at a district general hospital

## Abstract

**Background/Aims** Exception reporting is a function by which junior doctors report when their work has varied from expected. This study analysed the reporting at the authors' hospital.

**Methods** The authors analysed 204 reports submitted across 12 months to investigate the nature and pattern of the exception reports.

**Results** The majority of reports (86%) were for 'hours and rest', 5% for education and 9% for both. On average doctors reported an additional 1.32 hours of work per report. The most common response was time off in lieu, but 13% of reports were never responded to. Qualitative analysis showed the most common reasons for reporting were 'work outside of rostered hours', 'workload' and 'staffing issues'. Over 10% of the reports discussed an educational issue.

**Conclusions** The data were not specific and there was fewer than one report per junior doctor in the period analysed. It is therefore unlikely that the reports submitted represent the additional work done by junior doctors at the hospital. Guardians should investigate local attitudes to exception reporting and educate both seniors and juniors on the importance of submitting accurate exception reports.

**Key words:** Education; Exception report; Exception reporting; Hours and rest; Junior doctor; Training

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## Introduction

Exception reporting was a new function of the 2016 junior doctor contract in England (NHS Employers, 2018). The British Medical Association (2020a) states it is a mechanism to 'flag up if your actual work varied significantly or regularly from your work schedule'. The main aim is to address issues in real time, but also to highlight those departments that are overstretched (Kimpton and Hole, 2019; British Medical Association, 2020a). Reports can be submitted for work done outside of the rostered hours, education issues, lack of breaks, safety issues or lack of supervision (British Medical Association, 2020a). Online tools are used by each trust to record breaches (Kirwan and McCarten, 2017). A guardian of safe working is employed at each hospital to oversee the exception reporting process (NHS Employers 2019).

When reports are accepted by the doctor's supervisor, the doctor is compensated with time off in lieu or pay if they have worked outside their rostered hours (Hassan and Maggs, 2019). If reports are a result of educational or supervision issues, the doctor's educational supervisor and director of medical education are notified to determine if a work schedule review is required (British Medical Association, 2020c). When a doctor reports a lack of breaks, the guardian of safe working records this and fines the department if breaks are missed over 25% of the time (NHS Employers, 2019; British Medical Association, 2020b). Reports relating to immediate safety concerns have to be submitted within 24 hours of the shift and the director of medical education will also be notified of these (NHS Employers, 2019). If the work pattern has varied significantly or on multiple occasions, a trainee can request a 'work schedule review', which triggers a more detailed review by the doctor's supervisor and can lead to permanent rota or departmental changes (British Medical Association, 2020d).

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An analysis of freedom of information requests sent to 200 trusts by the *Health Service Journal* revealed that there were more than 63 000 reports from 36 000 trainees in a 2-year period since the introduction of the new junior doctors' contract in August 2016. This was an average of 2.1 reports per junior doctor employed on the 2016 contract (Collins, 2019).

After submission it is the supervisor's role to action the exception reports (Kimpton and Hole, 2019). On one hand this can be positive because they often work with and know the junior doctors. However, Hutchinson and Tang's (2020) analysis revealed that 61% of trainees were concerned that exception reporting would reflect badly on their competency. One trainee at a hospital explained: 'I have experienced a culture where exception reporting is strongly discouraged. When one of the registrars found out I had exception reported he said it was entirely the result of poor time management' (Collins, 2019). A survey within Barts Health NHS Foundation Trust found that 29% of junior doctors had been told at some point not to exception report (Kirwan et al, 2018).

Articles have shown that compliance with accurate reporting can be low among trainees. At a district general hospital, 90% of junior doctors did not submit all eligible reports and 43% submitted none (Hassan and Maggs, 2019). Roycroft's (2020) analysis showed that trainees exception reported 1.2% of the times they worked beyond their contracted hours.

Data on the subject are limited as it is a relatively new concept (Hassan and Maggs, 2019), and junior doctors lack knowledge about the 2016 contract (Kirwan and McCarten, 2017). This study investigated the nature and pattern of the exception reports submitted at a district general hospital and aimed to understand the ways in which the junior doctors attempted to mitigate reporting. The results provide evidence to support local investigations into the attitudes to exception reporting and subsequent education of juniors and seniors by the guardians of safe working.

## Methods

The 204 anonymised exception reports submitted from the first Wednesday in August 2018 to the first Wednesday in August 2019 were collated by downloading them from the Doctors Rostering System Four (DRS4) website. The data downloaded were both quantitative and qualitative in nature. The quantitative data were analysed using basic statistical techniques. The qualitative data comprised text written by the junior doctors in response to text boxes entitled 'Description of the exception' and 'Steps taken to resolve the matter before escalation (if any)'. The qualitative data were analysed through content analysis. An inductive approach was used as there is little previous research on the topic (Graneheim et al, 2017). Codes, categories and themes were generated as the text was read (Elliott, 2018). This technique is based on phenomenology theory (Grossoehme, 2014). The codes, categories and themes were assessed and agreed on by a second researcher. They were then applied to the text to interpret the qualitative data.

## Results

### Quantitative results

**Table 1** shows the proportion of exception reports within each category. The majority of reports were made for hours and rest. Although most were agreed to by the clinical supervisor, 13% were never responded to. The most popular action was for trainees to be given time off in lieu. **Table 2** shows the number of hours submitted, time taken for trainees to submit reports and time taken for the reports to be closed. The data in **Table 2** represent 203 reports. One anomalous result was removed because it was unclear how many extra hours the trainee had worked. According to British Medical Association (2020b, c) guidelines, reports should be submitted within 7 days of the date of exception to qualify for payment, otherwise they should be submitted within 14 days.

**Table 3** quantifies the reports that were not responded to with time off in lieu or payment in lieu, their action instead was labelled as 'not applicable'. Half of these reports (26) had not been responded to at the time of analysis. Sixteen reports had been submitted as educational issues (11) or lack of breaks (5) – for these types of reports, time off in lieu or payment would not be appropriate (British Medical Association, 2020a). However, it was

Table 1. The proportion of exception reports within each category		
Report status	Closed	87% (178)
	Open	13% (26)
Grade of the doctors submitting the reports	Reports submitted by foundation year one doctors	70% (143)
	Reports submitted by foundation year two doctors and above	30% (61)
Nature of the exception reports	Hours and rest	86% (175)
	Education	5% (10)
	Both hours and rest and education	19% (19)
Exception type*	Late finish or early start	89% (182)
	Unable to achieve breaks	14% (29)
	Educational issues	10% (20)
	Different to work pattern	6% (13)
	Supervision issue	1.4% (3)
	Safety concern	4.4% (9)
Response	Agreed by clinical supervisor	86% (176)
	Clinical supervisor yet to respond	13% (26)
	Not agreed by clinical supervisor	1% (2)
Action	Juniors given time off in lieu	55% (113)
	Juniors given payment for additional hours	19% (39)
	Payment or time off in lieu 'not applicable'	26% (52)

\*Reports often related to more than one exception type, and therefore the total is greater than 204

Table 2. The number of hours submitted, and time taken for trainees to submit reports and time taken for the reports to be closed		
Number of hours submitted	Total	260.7
	Median	1.0
	Mode	1.0
	Mean	1.32
	Interquartile range	0.8–2.0
Days taken for trainees to submit their reports	Median	2.0
	Mean	5.7
	Minimum	0
	Maximum	49.0
	Interquartile range	0–7.0
Number of days between submission and closure date	Mean	49.33
	Median	16.0
	Minimum	0
	Maximum	341.0
	Interquartile range	2.0–98.0

**Table 3. Reports which were not responded to with time off in lieu or payment in lieu**

Interpreted reason for 'not applicable' status of the reports	Number
Not responded to	26
Educational issues	11
Unclear	8
Lack of breaks	5
Report not agreed or rejected	2
<b>Total</b>	<b>52</b>

**Table 4. Direct quotes submitted to answer the textbox 'description of the exception' and the codes, categories and themes allocated to them**

Direct quotes	Codes	Categories	Themes
'Only junior doctor on the ward for the day due to others on annual leave/on call/nights. Finished 2 hours late due to having to complete ward jobs that needed completing before the weekend.'	<ul style="list-style-type: none"> <li>■ Low staffing levels</li> <li>■ Left ward late</li> <li>■ Preparing for the weekend or bank holiday</li> </ul>	<ul style="list-style-type: none"> <li>■ Staffing issue</li> <li>■ Work outside of rostered hours</li> <li>■ Workload</li> </ul>	Both
'Started half hour early to try and finish on time by preparing notes for ward round. Couldn't finish jobs as no registrar or SHO on team just single F1. Consultant did help.'	<ul style="list-style-type: none"> <li>■ Started early</li> <li>■ Low staffing levels</li> <li>■ Senior support</li> </ul>	<ul style="list-style-type: none"> <li>■ Work outside of rostered hours</li> <li>■ Staffing issue</li> <li>■ Support from seniors</li> </ul>	Both
'Unable to attend protected teaching time as not enough staff to complete day jobs. No SHO and Reg in clinic.'	<ul style="list-style-type: none"> <li>■ Missed protected educational time</li> <li>■ Low levels of staffing</li> </ul>	<ul style="list-style-type: none"> <li>■ Staffing issue</li> <li>■ Educational issue</li> </ul>	Work outside the expected job plan
'Extra hour worked on night shift due to the clocks going back.'	<ul style="list-style-type: none"> <li>■ Clocks went back</li> </ul>	<ul style="list-style-type: none"> <li>■ Work outside of rostered hours</li> </ul>	Work outside the expected job plan
'Myself and CMT1 on ward; another very busy day; two sick patients; many jobs requiring a lot of time including phoning multiple hospitals to liaise with other specialties. Also had to decide and create weekend handover list.'	<ul style="list-style-type: none"> <li>■ Managing unwell patient(s)</li> <li>■ Basic ward jobs</li> <li>■ Preparing for the weekend</li> </ul>	<ul style="list-style-type: none"> <li>■ Workload</li> </ul>	Work within the expected job plan (NB was formally submitted as 'late finish')

CMT1 = core medical trainee; F1 = foundation doctor; Reg= registrar; SHO = senior house officer

difficult to ascertain if any work schedule reviews had been triggered as a result of these reports. It was also unclear from eight reports the reasons why they had not been actioned despite being responded to.

Of the two reports that were not agreed to by the supervisor, the exceptions were submitted as follows:

1. The doctor had been asked to get cover while he went to GP induction at the start of the specialty rotation
2. The doctor had worked an additional hour because of the clocks going back.

### Qualitative results

Table 4 shows some examples of coding of direct quotes that had been submitted to answer the textbox 'Description of the exception'. This illustrates the process by which direct quotes were allocated to codes, categories and themes.

Appendix 1 outlines the codes, categories and themes generated and Table 4 shows the system of allocation. Of the reports allocated to each broad theme, the majority (157; 77%) could be allocated to both themes: 'work outside the expected job plan' and 'work within the expected job plan'. A further 42 (21%) came under the theme 'work outside the

expected job plan' and 4 (2%) fell under the theme 'work within the expected job plan'. However, all four of these reports were officially submitted as 'late finish' on the DRS4 website. One report was omitted from this part of the analysis as they simply wrote 'see exception report above'.

Work outside of the rostered hours and workload were the two most prominent categories, with 156 and 155 reports respectively. Just over half the reports discussed an issue with staffing, often juniors were working alone or in pairs on the ward. A third mentioned all three of these categories. Reports often read along the lines of: 'Only junior doctor on the ward for the day due to others on annual leave/on call/nights. Finished 2 hours late due to having to complete ward jobs that needed completing before the weekend.'

Over 10% of reports discussed an educational issue such as doctors missing their core educational time. One doctor wrote 'Unable to attend protected teaching time as not enough staff to complete day jobs.' There were 20 (10%) reports that stated safety concerns but only nine reports had been submitted formally on the system as a safety concern (Table 1). Of those categorised by the authors as involving a safety issue, half of these were because of a lack of breaks. As an example, one doctor described covering multiple wards and wrote 'I did not get a break for longer than 10 minutes in the 12.5-hour shift.'

Eight reports voiced a lack of senior support and seven the presence of senior support. One doctor wrote 'Consultants made aware; Dr X stepped down to provide a lot of help'. Another report read 'Asked to complete exception report by middle grade who was senior in clinic', although this scenario was in the minority.

Half of the reports described how exception reporting had been mitigated, the rest left no answer in the text box asking for 'steps taken to resolve the matter before escalation (if any)'. Those who said how they mitigated often did this in multiple ways. Most popular was seeking assistance (48), often this was from seniors. Others (44) also informed seniors about issues and 25 rationalised their workload. Further analysis showed the majority (74%) of these doctors escalated their concerns during the shift they later reported. One junior wrote that they had highlighted a rota issue early: 'I informed my consultant of the rota before Thursday and managed to get cover for the ward round in the morning'.

## Discussion

The qualitative analysis revealed that almost all reports came under the theme indicating doctors had been working 'outside their expected job plan'. This demonstrates that there were often factors completely outside the trainee's control, and the issue was not simply always the volume of ward jobs. However, a letter to the *British Medical Journal* makes a case that even if juniors are staying late to do work within the expected job plan, this should still be classified as 'actual work'. They argue that the 'casualties of stressed systems should be reimbursed accordingly' (Kimpton and Hole, 2019).

The majority of reports were submitted for 'hours and rest' (Table 1), as reflected in the qualitative analysis. The doctors were reporting significant overtime worked with on average an additional 1.32 hours per report (Table 2). The qualitative analysis indicates that juniors had a high workload and stayed late because they felt the work needed doing that day. This supports Kirwan et al (2018) who argued that junior doctors need more support in the complexities of the day-to-day job, as technical issues often add significantly to their workload. Staffing issues were discussed by trainees in over half the reports. There were a number of cases where junior doctors were left alone to manage a ward. For seniors this is particularly important as this is often outside the junior doctor's control but could be tackled at a department and trust level. Kirwan et al (2018) highlighted that exception reporting is a key tool to quantify the staffing crisis the NHS faces every day. Their use of work schedule reviews had often resolved rota issues, showing how reports can be used to bring about change (Kirwan et al, 2018).

The qualitative analysis showed a concerning trend that some doctors were unable to access their core teaching because of staffing issues. A review of exception reports by another trust showed 63% of trainees did not know they could report missed educational opportunities (Hutchinson and Tang, 2020). It is therefore likely these reports do not fully represent missed education within the trust.

Over half the reports left the box blank where they were asked to give ‘Steps taken to resolve the matter before escalation (if any)’, and many provided little detail to describe the situation that had led to the report. It could be argued that it may have been beneficial for trainees to have given more detail in the reports to provide more context to supervisors.

In terms of responses to reports, many juniors had to wait far beyond the 14 days expected to receive a response, with a range of 0–341 days (Table 2) (British Medical Association, 2020b, c). Despite this, 86% of reports were agreed to by the supervisor and most were given time off in lieu (Table 1). At the time of analysis, 13% of reports were still requiring a response (Table 1). It was unclear why many of these reports had not been actioned or took significant amounts of time to be actioned (Tables 3 and 4). A review of exception reporting at the Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust found there was a lack of training and difficulty with access (Hutchinson and Tang, 2020). It is possible that one reason for delayed action or inaction in response to the reports at the authors’ trust was a deficit in training given to seniors on the subject.

These results echo Hutchinson and Tang’s (2020) call for more training for staff at a local level. This would help to reduce inconsistencies around what is accepted or rejected, for example working an extra hour because of the clocks going back. Other articles have highlighted potential negative attitudes towards exception reporting (Kirwan and McCarten, 2017; Collins, 2019). However, only two reports within this cohort were officially rejected (1%), which may indicate seniors on the whole sympathised with the reports being submitted.

According to the information held by the authors’ education managers, there were 240 trainees employed at the trust during the year analysed. This means that fewer than one report was submitted per junior doctor. It is unlikely the exception reports submitted are representative of the work juniors did outside their expected work pattern. This is supported by Kirwan et al (2018) who found only 35% of their trainees had submitted a report, and Hassan and Maggs (2019) found that 90% of trainees at their district general hospital did not submit all eligible reports.

Another reason that it is unlikely that these results are representative is because most reports (70%) came from foundation year one doctors. This proportion is very similar to the results of a study at Bart’s Hospital in London (Kirwan et al, 2018). It is also important to note that foundation doctors make up only 16% of the workforce at the authors’ hospital (Appendix 2). One probable reason for this disproportionate number of reports is because foundation year one doctors are the most inexperienced and require more support to carry out their job within expected working hours. Kirwan et al (2018) found spikes in the number of exception reports after junior doctor rotations, something the authors also found in this study. Seniors may need to recognise that junior doctors need more support with the technicalities of working in a new department, especially as the rate of rotation is high during training.

It was difficult to ascertain the exact training grades of those reporting, but the data indicate that only a handful of speciality trainees and registrars reported, despite making up 57% of the cohort (Appendix 2). This could be because they feel better able to deal with the practicalities of the job, but it may also be because they are in a position of seniority and so do not want to admit they have diverted from their normal working pattern as this could be interpreted as incompetence. Previous articles included evidence that trainees have been actively advised not to report by seniors (Collins, 2019; Hassan and Maggs, 2019). The present study did not investigate whether this was happening at a local level. The analysis at Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust highlighted that an inaccessible and unclear reporting system coupled with a lack of training was another barrier to consistent and accurate reporting (Hutchinson and Tang, 2020).

This work only includes reports from a 1-year period at one trust, and further analysis is warranted. The data downloaded from the doctors rostering site were not specific. It was often unclear which speciality, department, rota or shift the reports were linked to. The data required a degree of interpretation, especially around how or whether reports had been actioned. Hutchinson and Tang (2020) similarly found the reporting system had unclear rota options, and also found issues with account access. This may further explain the issues highlighted above with both juniors and seniors engaging with the process.

## Key points

- Data from the doctors rostering site were sometimes difficult to interpret as they were often unspecific and lacked detail.
- However, there are a variety of reasons that a junior doctor exception reports, and these are often outside the trainee's control such as staffing levels.
- Trainees work in a high-pressure environment and sometimes need to sacrifice their educational opportunities to provide care within their hospital.
- It is unlikely that the exception reports submitted are representative of the additional work done by junior doctors.
- Inconsistencies were found in how reports were responded to by senior doctors and often junior doctors were waiting significant amounts of time for responses.
- It would be prudent for local guardians to investigate attitudes within their trust and educate both seniors and juniors on this important issue.

## Conclusions

There are a variety of reasons that a junior doctor exception reports, and they are often reasons outside the trainee's control. They are working in a high-pressure environment and sometimes need to sacrifice their educational opportunities to provide care within their hospital. The data provided from the doctors rostering site were not specific and there was fewer than one report per junior doctor in the period analysed. It is unlikely that the exception reports submitted are representative of the additional work done. Inconsistencies were found in how reports were responded to by senior doctors and often junior doctors were waiting significant amounts of time for responses.

It would be prudent for local guardians to investigate attitudes within their trust and locally educate juniors and seniors on the exception reporting process, to try and improve engagement. When used to its full extent exception reporting can be used to highlight persistent rota issues, educational problems and patient safety concerns. Without engagement from junior doctors, senior doctors and management, its utility is limited.

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### Conflicts of interest

The authors declare that they have no conflicts of interest.

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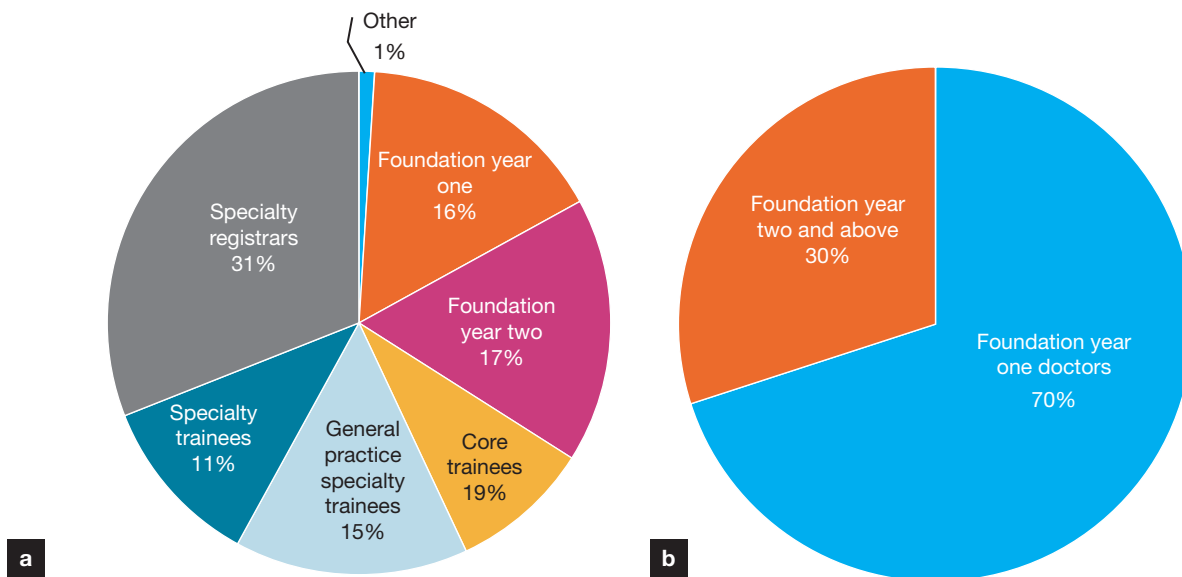
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Appendix 1. Codes, categories and themes developed for the qualitative data			
	Theme	Category	Code
Themes, categories and codes for the 'Description of the exception' text box	Work outside the expected job plan	Work outside of rostered hours	<ul style="list-style-type: none"> <li>■ Left ward late</li> <li>■ Started early</li> <li>■ Clocks went back</li> </ul>
		Lack of senior support	<ul style="list-style-type: none"> <li>■ No consultant for ward round</li> <li>■ Unable to contact a senior</li> </ul>
		Staffing issue	<ul style="list-style-type: none"> <li>■ Low staffing level</li> <li>■ Covering another doctor's work</li> <li>■ Colleague sickness</li> <li>■ Issues with locums</li> </ul>
		Safety issue	<ul style="list-style-type: none"> <li>■ Unsafe environment</li> <li>■ Inadequate breaks</li> <li>■ Duties outside of remit</li> <li>■ Difficulty handing over</li> </ul>
		Educational issues	<ul style="list-style-type: none"> <li>■ Inadequate learning</li> <li>■ Missed induction</li> <li>■ Missed academic time</li> <li>■ Missed protected educational time</li> </ul>
	Work within the expected job plan	Support from seniors	<ul style="list-style-type: none"> <li>■ Senior stepped down</li> <li>■ Senior advised them to exception report</li> </ul>
		Workload	<ul style="list-style-type: none"> <li>■ Managing unwell patient(s)</li> <li>■ End of life care</li> <li>■ Family discussion(s)</li> <li>■ Patient discussion(s)</li> <li>■ Basic ward jobs</li> <li>■ Volume of jobs</li> <li>■ Volume of patients</li> <li>■ Post take ward round</li> <li>■ Team on take</li> <li>■ Jobs were inappropriate to handover</li> <li>■ Preparing for the weekend or bank holiday</li> <li>■ Clinic</li> <li>■ Theatre</li> </ul>
Themes, categories and codes for the 'Steps taken to resolve the matter before escalation (if any)' text box	Action	Workload management	<ul style="list-style-type: none"> <li>■ Prioritised jobs</li> <li>■ Handed over</li> </ul>
		Sought assistance	<ul style="list-style-type: none"> <li>■ Sought assistance from medical student(s)</li> <li>■ Sought assistance from other junior(s)</li> <li>■ Sought assistance from senior(s)</li> <li>■ Sought assistance from other staff</li> </ul>
		Informed seniors	<ul style="list-style-type: none"> <li>■ Informed educational supervisor</li> <li>■ Informed clinical supervisor</li> <li>■ Informed consultant in charge</li> <li>■ Informed rota coordinator</li> </ul>
	No action	No action reported	<ul style="list-style-type: none"> <li>■ No action reported</li> </ul>



**Appendix 2.** Pie charts showing (a) the proportion of different types of junior doctors within the trust (information supplied by the postgraduate education manager) and (b) the proportion of reports submitted according to grade.