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The Healthcare Complaints Analysis Tool: development and reliability testing of a method for service monitoring and organisational learning

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ABSTRACT

Background Letters of complaint written by patients and their advocates reporting poor healthcare experiences represent an under-used data source. The lack of a method for extracting reliable data from these heterogeneous letters hinders their use for monitoring and learning. To address this gap, we report on the development and reliability testing of the Healthcare Complaints Analysis Tool (HCAT).

Methods HCAT was developed from a taxonomy of healthcare complaints reported in a previously published systematic review. It introduces the novel idea that complaints should be analysed in terms of severity. Recruiting three groups of educated lay participants (n=58, n=58, n=55), we refined the taxonomy through three iterations of discriminant content validity testing. We then supplemented this refined taxonomy with explicit coding procedures for seven problem categories (each with four levels of severity), stage of care and harm. These combined elements were further refined through iterative coding of a UK national sample of healthcare complaints (n= 25, n=80, n=137, n=839). To assess reliability and accuracy for the resultant tool, 14 educated lay participants coded a referent sample of 125 healthcare complaints.

Results The seven HCAT problem categories (quality, safety, environment, institutional processes, listening, communication, and respect and patient rights) were found to be conceptually distinct. On average, raters identified 1.94 problems (SD=0.26) per complaint letter. Coders exhibited substantial reliability in identifying problems at four levels of severity; moderate and substantial reliability in identifying stages of care (except for 'discharge/transfer' that was only fairly reliable) and substantial reliability in identifying overall harm.

Conclusions HCAT is not only the first reliable tool for coding complaints, it is the first tool to measure the severity of complaints. It facilitates service monitoring and organisational learning and it enables future research examining whether healthcare complaints are a leading indicator of poor service outcomes. HCAT is freely available to download and use.

INTRODUCTION

Improving the analysis of complaints by patients and families about poor healthcare experiences (herein termed 'healthcare complaints') is an urgent priority for service providers[1–3] and researchers.[4 5] It is increasingly recognised that patients can provide reliable data on a range of issues,[6–12] and healthcare complaints have been shown to reveal problems in patient care (eg, medical errors, breaching clinical standards, poor communication) not captured through safety and quality monitoring systems (ie, incident reporting, case review and risk management).[13–15] Patients are valuable sources of data for multiple reasons. First, patients and families, collectively, observe a huge amount of data points within healthcare settings;[16] second, they have privileged access to information on continuity of care,[17 18] communication failures,[19] dignity issues[20] and patient-centred care;[21] third, once treatment is concluded, they are more free than staff to speak up;[22] fourth, they are outside the organisation, thus providing an independent assessment that reflects the norms and expectations of society.[23] Moreover, patients and their families filter the data, only writing complaints when a threshold of dissatisfaction has been crossed.[24]

Unlocking the potential of healthcare complaints requires more than encouraging and facilitating complaint reporting (eg, patients being unclear about how to complain, believing complaints to be ineffective or fearing negative consequences for their healthcare),[3 25] it also requires systematic procedures for analysing the complaints, as is the case with adverse event data.[4] It has even been suggested that patient complaints might actually *precede*, rather than *follow*, safety incidents, potentially acting as an early warning system.[5 26] However, any systematic investigation of such potential requires a reliable and valid tool for coding and analysing healthcare complaints. Existing tools lag far behind established methods for analysing adverse events and critical incidents.[27–31] The present article answers recent calls to develop reliable method for analysing healthcare complaints.[4 5 31 32]

A previous systematic review of 59 articles reporting healthcare complaint coding tools revealed critical limitations with the way healthcare complaints are analysed.[26] First, there is no established taxonomy for categorising healthcare complaints. Existing taxonomies differ widely (eg, 40% do not code safety-related data), mix general issues with specific issues, fail to distinguish problems from stages of care and lack a theoretical basis. Second, there is minimal standardisation of the procedures (eg, coding guidelines, training), and no Healthcare Complaints Analysis Tool (HCAT) has been thoroughly tested for reliability (ie, that two coders will observe the same problems within a complaint). Third, analysis of healthcare complaints often overlooks secondary issues in favour of single issues. Finally, despite the varying severity of problems raised (eg, from parking charges to gross medical negligence), existing tools do not assess complaint severity.

To begin addressing these limitations, the previous systematic review[26] aggregated the coding taxonomies from the 59 studies, revealing 729 uniquely worded codes, which were refined and conceptualised into seven categories and three broad domains (http://qualitysafety.bmj.com/content/23/8/678/F4.large.jpg). The overarching tripartite distinction between clinical, management and relational domains represents theory and practice on healthcare delivery. The 'clinical domain' refers to the behaviour of clinical staff and relates to the literature on human factors and safety.[33–35] The 'management domain' refers to the behaviour of administrative, technical and facilities staff and relates to the literature on health service management.[36–38] The 'relationship domain' refers to patients' encounters with staff and relates to the literatures on patient perspectives,[39] misunderstandings,[40] empathy[41] and dignity.[20] These domains also have an empirical basis in studies of patient–doctor interaction, where the discourses (or 'voices') of medicine, institutions and patients are evident,[41 42] and clashes between the 'system' (clinical and management domains) and 'lifeworld' (relational domain) are observed.[43–45] Although the taxonomy developed in the systematic review[26] is comprehensive and theoretically informed, it remains a first step. It needs to be extended into a tool, similar to those used in adverse event research,[20–22] that can reliably distinguish the types of problem reported, their severity and the stages of care at which they occur.

Our aim is to create a tool that supports healthcare organisations to listen[46] to complaints, and to analyse and aggregate these data in order to improve service monitoring and organisational learning. Although healthcare complaints are heterogeneous[47] and require detailed redress at an individual level,[48] we demonstrate that complaints and associated severity levels can be reliably identified and aggregated. Although this process necessarily loses the voice of individual complainants, it can enable the collective voice of complainants to inform service monitoring and learning in healthcare institutions.

METHOD

Tool development often entails separate phases of development, refinement and testing.[49 50] We developed and tested the HCAT through three phases (for which ethical approval was sought and obtained) with the following aims:

1. To test and refine the conceptual validity of the original taxonomy.
2. To develop the refined taxonomy into a comprehensive rating tool, with robust guidelines capable of distinguishing problems, their severity and stages of care.
3. To test the reliability and calibration of the tool.

Phase 1: testing and refining discriminant content validity

Discriminant content validity examines whether a measure (eg, questionnaire item) or code (eg, for categorising data) accurately reflects the construct in terms of content, and whether a number of measures or codes are clearly distinct in terms of content (ie, that they do not overlap).[51] To assess whether the categories identified in the original systematic review[26] conceptually subsumed the subcategories and whether these categories were distinct from each other, we followed a six-step discriminant content validity procedure.[51] First, we listed definitions of the problem categories and their associated domains. Second, we listed the subcategories as the items to be sorted into the categories. Third, we recruited three groups (n=58, n=58, n=55) of non-expert, but educated lay participants from a university participant pool (comprising students from a range of degree programmes across London who were paid £5 for 30 min) to perform the sorting exercise. Fourth, participants sorted each of the subcategories into one of the seven problem categories and provided a confidence rating on a scale of 0–10. In addition, we asked participants to indicate whether the subcategory item being sorted was either a 'problem' or a 'stage of

care'. Fifth, we analysed the data to examine the extent to which each subcategory item was sorted under their expected category and participants' confidence. Finally, we used this procedure to revise the taxonomy through three rounds of testing.

Phase 2: tool development through iterative application

To broaden the refined taxonomy into a comprehensive tool, we first incorporated coding procedures established in the literature. To record background details, we used the codes most commonly reported in the healthcare complaint literature,[26] namely: (1) who made the complaint (family member, patient or unspecified/other), (2) gender of the patient (female, male or unspecified/other) and (3) which staff the complaint refers to (administrative, medical, nursing or unspecified/other). To record the stage of care, we adopted the five basic stages of care coded within adverse event reports,[52] namely: (1) admissions, (2) examination and diagnosis, (3) care on the ward, (4) operation and procedures and (5) discharge and transfers. To record harm, we used the UK National Reporting and Learning System's risk matrix,[53] which has a five-point scale ranging from minimal harm (1) to catastrophic harm (5).

Next, we aimed to (1) identify the range of severity for each category and identify 'indicators' that covered the diversity of complaints within each category, both in terms of content and severity; (2) evaluate the procedures for coding background details, stage of care and harm and (3) establish clear guidelines for the coding process as explicit criteria have been linked to inter-rater reliability.[54] We used an iterative qualitative approach (repeatedly applying HCAT to healthcare complaints) because it is suited for creating taxonomies (in our case indicators) that ensure a diversity of issues can be covered parsimoniously.[55] Also, through experiencing the complexity of coding healthcare complaints, this iterative qualitative approach allowed for us to refine both the codes and the coding guidelines.

We used the Freedom of Information Act to obtain a redacted (ie, all personally identifying information removed) random sample (of 7%) of the complaints received from 52 healthcare conglomerates (termed 'Trust') during the period April 2011 to March 2012. This yielded a dataset of 1082 letters, about 1% of the 107 000 complaints received by NHS Trusts during the period. This sample reflects the population of UK healthcare complaints with a CI of 3 and a confidence level of 95%.

The authors then separately coded subsamples of the complaint letters using HCAT, subsequently meeting to discuss discrepancies. Once sufficient insight had been gained, HCAT was revised and another iteration of coding ensued. After four iterations (n= 25, n=80, n=137, n=839), the sample of complaints was exhausted, and we had reached saturation[56] (ie, the fourth iteration resulted in minimal revisions).

Phase 3: testing tool reliability and calibration

To test the reliability and calibration of HCAT, we created a 'referent standard' of 125 healthcare complaints.[57] This was a stratified subsample of the 1081 healthcare complaints described in the previous section. To construct the referent standard, the authors separately coded the letters and then agreed on the most appropriate ratings. Letters were included such that the referent standard comprised at least five occurrences of each problem at each severity level (ie, so it was possible to test the reliability of coding for all HCAT problems and severity levels). Because healthcare complaints often relate to multiple problem categories (and some are less common than others), it was impossible to have a completely balanced distribution (table 1). These letters were all type written (either letters or emails), digitally scanned, with length varying from 645 characters to 14 365 characters (mean 2680.58, SD 1897.03).

To test the reliability of HCAT, 14 participants with MSc-level psychology education were recruited from the host department as 'raters' to apply HCAT to the referent standard. We chose educated non-expert raters because complaints are routinely coded by educated non-clinical experts, for example, hospital administrators.[26] There are no fixed criteria on the number of raters required to assess the reliability of a coding framework,[58 59] and a relatively large group of raters (n=14) was recruited in order to provide a robust test of reliability and better understand any variations in coding. Raters were trained during one of two 5 h training courses (each with seven raters). Training included an introduction to HCAT, applying HCAT to 10 healthcare complaints (three in a group setting and seven individually) and receiving feedback. Raters then had 20 h to work independently to code the 125 healthcare complaints. SPSS Statistics V.21 and AgreeStat V.3.2 were used to test reliability and calibration.

Table 1 Distribution of Healthcare Complaints Analysis Tool problem severity across the referent standard

	Not present (rated 0)	Low (rated 1)	Medium (rated 2)	High (rated 3)
Quality	81	10	22	12
Safety	73	5	24	23
Environment	101	6	10	8
Institutional processes	86	10	18	11
Listening	99	5	11	10
Communication	96	7	14	8
Respect and patient rights	88	19	13	5

First, we used Gwet's AC1 statistic to test among raters the inter-rater reliability of coding for complaint categories and their underlying severity ratings (not present (0), low (1), medium (2) and high (3)).[60 61] This test examines the reliability of scoring for two or more coders using a categorical rating scale, taking into account skewed datasets, where there are several categories and the distributions of one rating occurs at a much higher rate than another[62] (ie, 0 s in the current study because the majority of categories are not present in each letter). Furthermore, quadratic ratings were applied, in order that large discrepancies in ratings (ie, between 0 and 3) were treated as more significant in terms of indicating poor reliability than small discrepancies (ie, between 2 and 3).[60] Gwet's AC1 test was also applied to test for inter-rater reliability in coding the stages of care complained about. Although Gwet's AC1 is the most appropriate test for the data, we also calculated Fleiss' κ because this is more commonly used and provides a more conservative test (because it ignores the skewed distribution). Finally, because harm was rated as a continuous variable, an intraclass correlation (ICC) coefficient was used to test for reliability. To interpret the coefficients, the following commonly used guidelines[60 63] were followed: 0.01–0.20=poor/slight agreement; 0.21–0.40=fair agreement; 0.41–0.60=moderate agreement; 0.61–0.80=substantial agreement and 0.81–1.00=excellent agreement.

Second, we tested whether the 14 raters applied HCAT to the problem categories in a manner consistent with the referent standard (ie, as coded by the authors). Gwet's AC1 (weighted) was calculated by comparing each rater's coding of problem categories and severity against the referent standard and then calculating an average Gwet's AC1 score. The average inter-rater reliability coefficient (ie, across all 14 raters) was then calculated for each problem category in order to provide an overall assessment of calibration. Again, Fleiss' κ was also calculated in order to provide a more conservative test.

RESULTS

Phase 1: discriminant content validity results

The first test of discriminant content validity revealed large differences in the correct sorting of subcategories by participants (range 21%–97%, mean=76.19%, SD=19.35%). There was overlap between 'institutional issues' (bureaucracy, environment, finance and billing, service issues, staffing and resources) and 'timing and access' (access and admission, delays, discharge and referrals). The 'humaneness/caring' category was also problematic, with subcategory items often miscategorised as 'patient rights' or 'communication.' Finally, participants would often classify subcategory items as a 'stage of care'.

Accordingly, we revised the problematic categories and subcategories twice. During these revisions, we removed reference to stages of care (ie, subcategory items 'admissions', 'examinations' and 'discharge'), we merged 'humaneness/caring' into 'respect and patient rights' and in light of recent literature that emphasises the importance of listening,[64 65] we created a new category 'listening' (information moving from patients to staff) as distinct from 'communication' (information moving from staff to patients). Also, we reconceptualised the management domain as 'environment' and 'institutional processes', which proved easier for participants to distinguish. The third and final test of discriminant content validity yielded much improved results, with subcategory items being correctly sorted into the categories and domains on average 85.65% of the time (range, 58%–100%; SD, 10.89%).

Phase 2: creating the HCAT

Applying HCAT to actual letters of healthcare complaint revealed that reliable coding at the subcategory level was difficult. However, while the raters often disagreed at the subcategory level, they agreed at the category level. Accordingly, the decision was made to focus on the reliability of the three domains and seven categories, with the subcategories shaping the severity indicators for each category. This decision to focus on the macro structure of HCAT is consistent with the overall aim of HCAT to identify macro trends rather than to identify and resolve individual complaints.

To develop severity indicators for each category, we iteratively applied the refined taxonomy to four samples (n=25, n=80, n=137, n=839) of healthcare complaints. These sample sizes were determined by the necessity to change some aspects of the tool. The increasing sample sizes reveal that fewer changes were required as the iterative refinement of the tool progressed. Rather than applying an abstract scale of severity, we identified vivid indicators of severity, appropriate to each problem category and subcategory, which should be used to guide coding. Figure 1 reports the final HCAT problem categories and illustrative severity indicators.

The coding procedures for background details, stage of care and harm proved relatively unproblematic to apply. The only modifications necessary included adding an 'unspecified or other' category for stage of care and a harm category '0' for when no information on harm was available.

Resolving disagreements about how to apply HCAT to a specific healthcare complaint led us to the development of a set of guidelines for coding healthcare complaints (box 1). The final version of the HCAT, with all the severity indicators and guidelines, is freely available to download (see online supplementary file). Figure 2 demonstrates applying HCAT to illustrative excerpts.

Phase 3: reliability and calibration of results

The results of the reliability analysis are reported in table 2. On average, raters applied 1.94 codes per

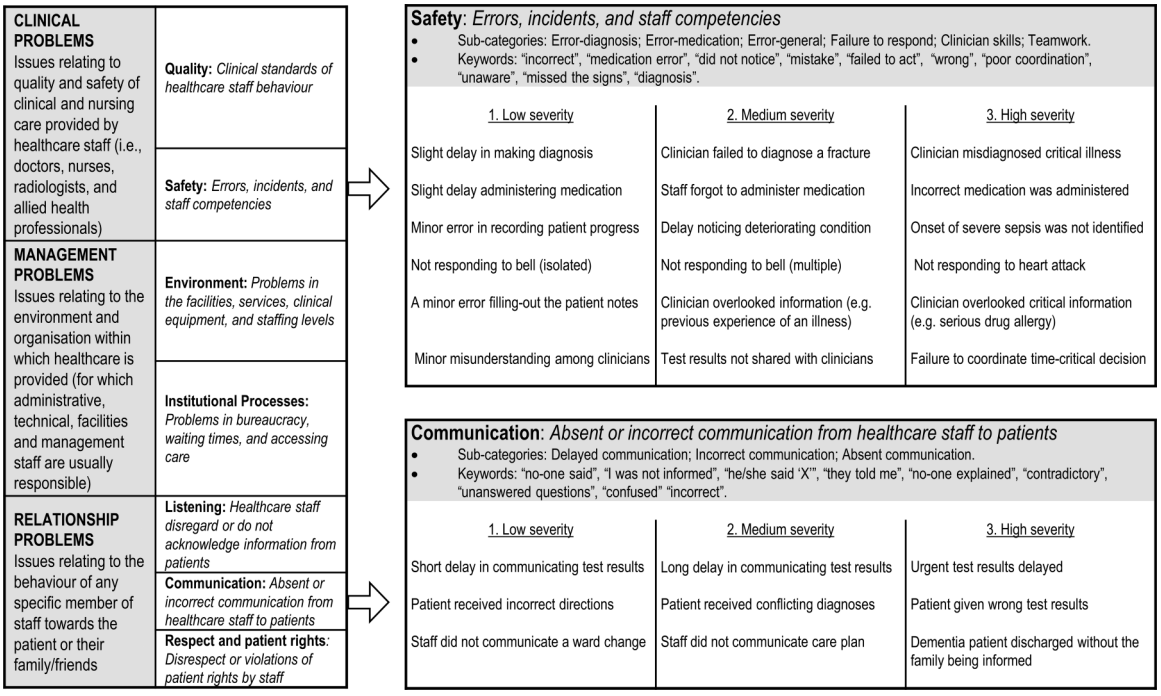

Figure 1 The Healthcare Complaints Analysis Tool domains and problem categories with severity indicators for the safety and communication categories.

letter (SD, 0.26). The Gwet's AC1 coefficients reveal that the problem categories, each with four levels of severity, were reliably coded (ie, with substantial agreement or better). Safety showed least reliability (0.69), and respect and patient rights showed most reliability (0.91). Additional analysis using Fleiss' κ (which takes no account of the skewed data) found moderate to substantial reliability for all problem categories and severity ratings (0.48 (listening)–0.61 (safety, respect and patient rights)). The most significant discrepancies between Gwet's AC1 and Fleiss' κ occur on the items with the largest skew (ie, listening), thus underscoring the problem with Fleiss' κ and our rationale for privileging Gwet's AC1. For stages of care, one showed substantial agreement (care on the ward), three showed moderate agreement (admissions, examination and diagnosis, operation or procedure) and one had only fair agreement (discharge/transfer). Demographic data were coded at substantial reliability or higher. The ICC coefficient also demonstrated harm to be coded reliably (ICC, 0.68; 95% CI 0.62 to 0.75).

The results of the calibration analysis are reported in table 3. Gwet's AC1 scores show raters, on average, to have substantial and excellent reliability against the referent standard. Fleiss' κ scores show substantial agreement (0.62–0.67). Further analysis revealed some raters to be better calibrated (across all categories) against the referent standard than others.

Finally, exploratory analysis indicated that the length of letter (in terms of characters per letter) was negatively associated with reliability in coding for listening ($r=0.266$, $p<0.01$), communication ($r=0.211$, $p<0.05$) and environment ($r=0.202$, $p<0.05$). It was not associated with reliability in coding for respect

Box 1 The guidelines for coding healthcare complaints with Healthcare Complaints Analysis Tool

- Coding should be based on empirically identifiable text, not on inferences.
- No judgement should be made of the intentions of the complainant, their right to complain or the importance they attach to the problems they describe.
- Each hospital complaint is assessed for the presence of each problem category, and where a category is not identified, it is coded as not present.
- Severity ratings are independent of outcomes (ie, harm) and not comparable across problem categories.
- Coding severity should be based on the provided indicators, which reflect the severity distribution within the problem category.
- When one problem category is present at multiple levels of severity, the highest level of severity is recorded.
- Each problem should be associated with at least one stage of care (a problem can relate to multiple stages of care).
- Harm relates exclusively to the harm resulting from the incident being complained about.

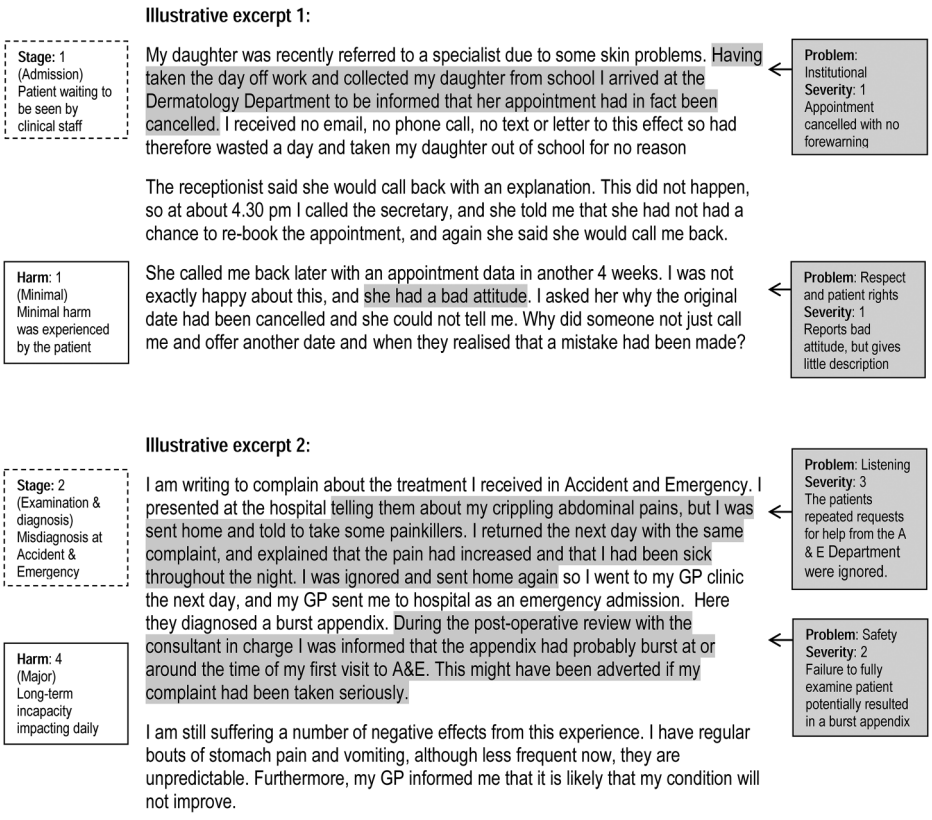

Figure 2 Applying Healthcare Complaints Analysis Tool to letters of complaint (excerpts are illustrative, not actual). GP, general practitioner.

and patient rights, institutional processes, safety or quality. Furthermore, there was no relationship between the number of codes applied per letter and the length of the letter.

DISCUSSION

The present article has reported on the development and testing of a tool for analysing healthcare complaints. The aim is to facilitate organisational listening,[46] to respond to the ethical imperative to listen to grievances[66] and to improve the effectiveness of healthcare delivery by incorporating the voice of patients.[4] Many complainants aim to contribute information that will improve healthcare delivery,[67] yet to date there has been no reliable tool for aggregating this voice of patients in order to support system-level monitoring and learning.[4 5 25] The present article establishes HCAT as capable of reliably identifying the problems, severity, stage of care, and harm reported in healthcare complaints. This tool contributes to the three domains that it monitors.

First, HCAT contributes to monitoring and enhancing clinical safety and quality. It is well documented that existing tools (eg, case reviews, incident reporting) are limited in the type and range of incidents they capture,[13 68] and that healthcare complaints are an underused data source for augmenting existing monitoring tools.[1 2 4]

The lack of a reliable tool for distinguishing problem types and severity has been an obstacle.[5 26] HCAT provides a reliable additional data stream for monitoring healthcare safety and quality.[69]

Second, HCAT can contribute to understanding the relational side of patient experience. Nearly, one third of healthcare complaints relate to the relationship domain,[26] and a better understanding of these problems, and how they relate to clinical and management practice, is essential for improving patient satisfaction and perceptions of health services.[4 67] These softer aspects of care have proved difficult to monitor,[70–72] and again, HCAT can provide a reliable additional data stream.

Third, HCAT can contribute to the management of healthcare. Concretely, HCAT could be integrated into existing complaint coding processes such that the HCAT severity ratings can then be extracted and passed onto managers, external monitors and researchers. HCAT could be used as an alternative metric of success in meeting standards (eg, on hospital hygiene, waiting times, patient satisfaction). It could also be used longitudinally as a means to assess clinical, management or relationship interventions. Additionally, HCAT could be used to benchmark units or regions. Accumulating normative data would allow for healthcare organisations to be compared for deviations (eg, poor or excellent complaint profiles), and

Table 2 Reliability of raters (n=14) coding 125 healthcare complaints

	Gwet's AC1	95% CI	Fleiss' κ	95% CI
HCAT problem categories				
Quality	0.72	0.65 to 0.80	0.50	0.41 to 0.58
Safety	0.69	0.61 to 0.76	0.61	0.54 to 0.69
Environment	0.85	0.88 to 0.94	0.60	0.51 to 0.70
Institutional processes	0.81	0.75 to 0.86	0.58	0.49 to 0.66
Listening	0.86	0.82 to 0.91	0.48	0.52 to 0.70
Communication	0.81	0.76 to 0.86	0.52	0.44 to 0.61
Respect and patient rights	0.91	0.88 to 0.95	0.61	0.52 to 0.70
Stages of care				
Admissions	0.45	0.47 to 0.67	0.45	0.35 to 0.55
Examination and diagnosis	0.57	0.49 to 0.65	0.57	0.50 to 0.65
Operation or procedure	0.58	0.47 to 0.68	0.57	0.47 to 0.67
Care on the ward	0.66	0.47 to 0.67	0.66	0.47 to 0.67
Discharge/transfer	0.38	0.25 to 0.50	0.45	0.35 to 0.55
Complainer				
Patient	0.90	0.86 to 0.94	0.90	0.86 to 0.94
Family member	0.89	0.84 to 0.94	0.86	0.81 to 0.92
Patient gender				
Male	0.92	0.88 to 0.96	0.85	0.79 to 0.92
Female	0.89	0.85 to 0.94	0.88	0.84 to 0.93
Complained about				
Medical staff	0.63	0.60 to 0.70	0.63	0.56 to 0.69
Nursing staff	0.64	0.57 to 0.70	0.64	0.56 to 0.70
Administrative staff	0.62	0.54 to 0.70	0.62	0.54 to 0.70

p<0.001 for all tests.
HCAT, Healthcare Complaints Analysis Tool.

this would facilitate interorganisational learning (eg, sharing practice).[73]

Across these three domains, HCAT can bring into decision-making the distinctive voice of patients, providing an external perspective (eg, in comparison with staff and incidents reports) on the culture of healthcare organisations. For example, where safety culture is poor (and thus incident reporting likely to be low), the analysis of complaints can provide a benchmark that is independent of that poor culture.

Table 3 Average calibration of raters (n=14) against the referent standard

	Average Gwet's AC1	Range	Fleiss' κ	Range
HCAT problem categories				
Quality	0.79	0.59 to 0.88	0.62	0.45 to 0.77
Safety	0.76	0.69 to 0.83	0.68	0.49 to 0.78
Environment	0.89	0.73 to 0.94	0.67	0.49 to 0.78
Institutional processes	0.84	0.73 to 0.89	0.63	0.58 to 0.072
Listening	0.89	0.82 to 0.94	0.62	0.52 to 0.077
Communication	0.86	0.72 to 0.93	0.62	0.41 to 0.76
Respect and patient rights	0.91	0.87 to 0.94	0.65	0.51 to 0.72

p<0.001 for all tests.
HCAT, Healthcare Complaints Analysis Tool.

Finally, one of the main innovations of HCAT is the ability to reliably code severity within each complaint category. To date, analysis of healthcare complaints has been limited to frequency of problem occurrence (regardless of severity). This effectively penalises institutions that actively solicit complaints to improve quality; it might be that the optimum complaint profile is a high percentage of low-severity complaints, as this would demonstrate that the institution facilitates complaints and has managed to protect against severe failures.

Future research

Having a reliable tool for analysing healthcare complaints paves the way for empirically examining recent suggestions that healthcare complaints might be a leading indicator of outcome variables.[4 5] There is already evidence that complaints predict individual outcomes;[74] the next question is whether a pattern of complaints can predict organisation-level outcomes. For example: Do severe clinical complaints correlate with hospital-level mortality or safety incidents? Might complaints about management correlate with waiting times? Do relationship complaints correlate with patient satisfaction? If any such relationships are found, then the question will become whether healthcare complaints are leading or lagging indicators.

Limitations

One limitation of the current research is that the inter-rater reliability, despite being moderate to substantial, has room for improvement. For example, the reliability of applying the listening, communication and environment categories was moderately associated with length of letter, indicating the need to improve how these categories are applied to longer and potentially more complex letters. This highlights the challenge of attempting to analyse and learn from complex and diverse written experiences. Healthcare complaints report interpretations of patient experiences and HCAT, in turn, interprets and codifies these experiences. This complexity results in inevitable variability in how complaints are understood and coded, especially for the relationship problems, such as listening and communication (which showed the weakest reliability using Fleiss' Kappa). In order to improve reliability, future research might have healthcare professionals code the letters (eg, for comparing clinical vs non-clinical rater groups). Also, given that HCAT has only been tested on complaints from the UK, further research is needed to assess its application in other national contexts.

A second limitation is that HCAT was not tested for reliability at the subcategory level; instead, we focused on the seven overarching problem categories. To make HCAT a tool that can be applied universally, we have had to reduce the specificity of the problems that it aims to reliably identify. The rationale is that it is more useful to measure severity reliably for these seven categories than have unreliable and unscaled measurements of fine-grained problems. Nonetheless, the problem categories are underpinned by more specific subcategory codes (on which the indicators are based) that could be used by healthcare institutions while retaining the basic structure of HCAT (three domains and seven categories). This would ensure that data would be comparable across institutions.

A final limitation is that the data used in the present analysis, despite coming from a range of healthcare institutions, do not include general practice (GP) complaints (because these are not handled by the NHS Trusts in the UK). Accordingly, using HCAT for GP care, a specialist unit or a specific cultural context might require some adaptation. In such cases, we recommend preserving the HCAT structure of three domains and seven categories, which we hope will prove to be broadly applicable, and instead adding appropriate severity indicators within the relevant categories.

Conclusion

Historically, healthcare complaints have been viewed as particular to a patient or member of staff.[4] Increasingly, however, there have been calls to better use the information communicated to healthcare services through complaints.[1 4 5] HCAT addresses these calls to identify and record the value and insight in patient reported experiences. Specifically, HCAT provides a reliable and theoretically robust framework through which healthcare complaints can be monitored, learnt from and examined in relation to healthcare outcomes.

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Healthcare Complaints
Analysis Tool

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Healthcare Complaints Analysis Tool
version 3, 2015

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CONTENTS

INTRODUCTION

This manual provides instructions on how to use the Healthcare Complaints Analysis Tool (HCAT) to analyse complaints from patients and families regarding poor healthcare experiences. HCAT enables organisational listening [1] through aggregating individual healthcare complaints so that patient concerns can facilitate service monitoring and organisational learning.

Why analyse healthcare complaints?

Healthcare complaints are often written with the aim of contributing to the improvement of services [2]. However, the tools for harnessing the potential of these insights have been limited [3-6]. Yet, we know that utilising patient experiences has the potential to enhance the quality and safety of healthcare delivery [7-12]. For example, "low-level" problems in caring for patients and following procedures have been shown to precede adverse events and wide-spread failures in healthcare delivery [13]. Identifying these low-level problems is important for ensuring the resilience and safety of healthcare systems [5], and the monitoring of patient experience is an additional way through which risks to patient safety can be identified [15]. More specifically, analysing letters of complaints to healthcare institutions ("healthcare complaints") made by patients and families is a potentially useful way to assess healthcare safety and quality [3-6].

Healthcare organisations can learn from letters of complaint because patients and their families are sensitive to, and able to recognise, a range of problems in healthcare delivery. Specifically, patients and their families process a huge amount of data, observing and evaluating all healthcare interactions [16]. Indeed, they have privileged access to information on continuity of care [17, 18], communication failures [19], dignity issues [20] and patient centred care [21]. Moreover, once treatment is concluded, patients and their families are relatively free to speak up about their experiences without fear of repercussions [22]. Finally, because patients and their families are outside the given healthcare organisation they provide an independent assessment of that organisation that is grounded in the changing norms and expectations of society [23].

What are healthcare complaints?

"Healthcare complaint" refers to an expression of grievance and dispute, typically written and communicated through a letter by a patient or their family, about the receipt of healthcare [24, 25]. Healthcare complaints are usually written to a healthcare organisation (or regulator) after a threshold of dissatisfaction with care has been crossed [26], are typically written by patients or families on behalf of patients [27], and are often written with the intention of improving future service provision [2]. Although the frequency of healthcare complaints relative to healthcare episodes is low, the total number of complaints can be substantial [6]. For example, the UK National Health Service (NHS) receives over 100,000 annually [28]. Complaints can focus on diverse problems (eg, car parking, prescribing errors), describe different types of harm (eg, physical,

emotional), and have different underlying aims (eg, resolving upset, creating change, preventing future issues) [6]. The problems raised in a patient letter of complaint are often not identified by traditional systems of healthcare monitoring (eg, incident reporting systems, retrospective case reviews) [29, 30]. However, methodologies for researching patient complaints are poor, and there is a need for systematic and rigorous analytical tool for analysing healthcare complaint letters [3-6, 31, 32].

What is The Healthcare Complaints Analysis Tool (HCAT) for?

HCAT is the first standardised tool for analysing healthcare complaints in a rigorous and conceptually meaningful way. It is also the first tool that can reliability assess problem severity. The tool has been developed equally by Dr Alex Gillespie and Dr Tom Reader at the London School of Economics and Political Science. The tool is based on an empirically derived and theoretically guided framework through which information in a healthcare complaint can be reliably codified and assessed.

HCAT is designed to support healthcare institutions and national or international monitoring institutions. Results from HCAT can be used to: 1) systematically characterise the general and specific problems reported by patients within a particular healthcare institution; 2) differentiate between high and low-performing healthcare institutions (eg, in terms of the severity of problems reported); 3) identify healthcare institutions with especially high risk profiles (eg, in terms of patients reporting severe safety problems); 4) encourage learning and the sharing of information between institutions, and; 5) provide longitudinal data on complaint trends (eg, to test the effect of an intervention to improve patient experience).

 Support of varying degrees is available for using HCAT, and those interested should contact the authors, Dr Alex Gillespie and Dr Tom Reader.

OVERVIEW: THE HEALTHCARE COMPLAINTS ANALYSIS TOOL (HCAT)

The Healthcare Complaints Analysis Tool (HCAT) is an analytical tool for codifying and assessing the problems highlighted by patients and their families or advocates in letters of complaint. The categories and sub-categories for analysing complaints have been developed through a systematic review of the academic patient complaint literature [6], collaboration with relevant specialists, in-depth analyses of healthcare complaints, pilot studies, and reliability testing [33].

At the centre of HCAT is a coding taxonomy which can be used to distinguish the types of problems raised in healthcare complaints. The taxonomy consists of a three-level hierarchy of "domains", "problem categories", and exemplar "problem indicators" covering 36 sub-categories (for which reliability testing is ongoing). Table 1 outlines the core coding taxonomy. Using the taxonomy, analysts identify and code the types of problems reported by patients in a letter of complaint. Analysts then assess the severity of the problems reported in the letter of complaint, identify where in the care process problems were experienced, and report on the level of harm experienced by patients.

Table 1. HCAT Domains and problem category definitions

CLINICAL PROBLEMS	
Issues relating to quality and safety of clinical and nursing care provided by healthcare staff (ie, doctors, nurses, radiologists, and allied health professionals)	**Quality:** Clinical standards of healthcare staff behaviour
	Safety: Errors, incidents, and staff competencies

MANAGEMENT PROBLEMS	
Issues relating to the environment and organisation within which healthcare is provided (for which administrative, technical, facilities and management staff are usually responsible)	**Environment:** Problems in the facilities, services, clinical equipment, and staffing levels
	Institutional Processes: Problems in bureaucracy, waiting times, and accessing care

RELATIONSHIP PROBLEMS	
Issues relating to the behaviour of any specific member of staff towards the patient or their family/friends	**Listening:** Healthcare staff disregard or do not acknowledge information from patients
	Communication: Absent or incorrect communication from healthcare staff to patients
	Respect and patient rights: Disrespect or violations of patient rights by staff

Each of the domains, and the problems that underlie them, are conceptually distinct: "Clinical problems" relate to the literature on human factors and safety [7, 34, 35]; "management problems" relate to the literature on health service management [36-38], and; "relationship problems" relate to the literatures on patient perspectives [39], including issues of communication [40], dignity [20], and patient rights [41]. Underlying each category is a number of sub-categories. These sub-categories can be used to classify the specific types of problems being identified within each complaint category (eg, to support organisational learning). However, although these sub-categories are based on a systematic review of the literature [6] and iterative coding [33], the reliability for the use of sub-categories is yet to be ascertained.

Who can use HCAT?

HCAT is free to use. It has been designed to be used by clinical staff (eg, nursing, medical staff), non-clinical staff (eg, administrative, patient experience), and healthcare researchers (eg, health psychologists, risk specialists). HCAT has been tested for reliability and accuracy [33]. The results show that educated users, provided they have been trained with the present manual and practiced with some sample complaints, will be able to analyse healthcare complaints in a similar and consistent manner.

Prior to using HCAT, assessors should:

- understand what a healthcare complaint is
- understand the utility and purpose of analysing complaints
- be familiar with the three-level hierarchy of "domains", "problem categories," and "indicators"
- know how to use the indicators to identify a problem category and severity
- understand how to apply the coding framework to analyse a patient letter of complaint
- understand what a "stage of care" is, and how to code it
- understand the meaning of patient harm
- undergo a calibration exercise whereby they use HCAT on pre-coded example letters (contact the authors for details on this training).

General guidelines

The purpose of HCAT is to support the analysis and aggregation of information on the types of problems experienced by patients and families (as reported in letters of complaint).

The purpose of HCAT is not to: 1) assess the veracity of issues raised by patients; 2) detail the specific clinical problems experienced by patients; 3) focus on the competencies of specific members of healthcare staff, or; 4) support the management of an individual letter of complaint.

When using HCAT, the information reported in a healthcare complaint should be taken at face value, and evaluated in a way that is non-judgemental of either patients or healthcare staff. From the perspective of patients, information provided in a letter of complaint usually reflect an upsetting or concerning experience, and whilst the system makes assessments of the types and severity of those experiences (in comparison to the range of problems raised by many patients), no judgement is made about the

intentions of the complainant, their right to complain, or the importance attached by the complainant to the issues they describe (ie, both low and high severity complaints can provide crucial information on safety-related issues). Conversely, because healthcare complaints are written from the perspective of patients and families, relatively little insight can be provided on the perspective of healthcare staff who feature in a complaint (eg, on the wider system pressures influencing their behaviour), and thus the behaviour of specific staff members or groups is not examined.

The coding process should be strictly empirical, that is, focused on the actual words used in the letter of complaint (rather than extrapolation or interpretation). Central to the utility of HCAT is the fact that it is reliable (ie, that two people will code the same letter similarly). This reliability is achieved, in part, by requiring coders to focus on the text within each complaint (not judgements or inferences). To facilitate sticking closely to the text, assessors should become familiar with the type of words that indicate each of the main problem categories (reported below).

A STEP-BY-STEP GUIDE

The data entry for HCAT is most appropriately done via a computer, however, it can also be done using pen and paper. The following guide will, for ease of reference, assume that the pen and paper recording sheet at the end of this document is being used.

Coding a healthcare complaint using HCAT involves four-phases (A-D), each of which are described in the sections below (see table 2 for a summary).

Table 2. Four phases for coding a healthcare complaint

A. Identifying the presence of problem categories (and, if required, sub-categories) within the letter of complaint using the coding taxonomy, and assessing their severity
B. Specifying the stages of care at which problems occurred
C. Indicating the level of harm arising from the reported problem
D. Providing descriptive information about the letter of complaint

Section A: Identifying problems and assessing severity

The first stage in coding a healthcare complaint using HCAT is the identification of problems contained with a letter of complaint, and an assessment of their severity. The healthcare complaint coding taxonomy identifies three distinct domains (clinical, management and relationship) of healthcare complaint, comprising seven problem categories and 36 sub-categories.

To facilitate the identification of problems within a healthcare complaint, exemplar indicators have been developed for each. These are specified in greater detail in figures A1-A3 on the following pages, and are to be used to guide: 1) the identification of problem categories in a patient letter of complaint, and; 2) the assessment of problem severity.

Severity ratings should be independent of outcomes (ie, harm). The severity ratings are not comparable across problem categories. Rather severity ratings should be based on the indicators provided in the following pages. These severity indicators, which are based on the 36 sub-categories, were developed through iterative coding of a UK national sample of healthcare complaints (n = 1081), which entailed mapping severity for each problem category, and thus identifying independent severity distributions within each problem category and sub-category.

To analyse a healthcare complaint, the following steps should be undertaken:

1 Read through the letter of complaint without coding anything

2 On second reading, identify the problem category (and, if required, sub-category) being complained about using the problem definitions and the keywords.

3 For each problem category identified, use the severity indicators in figures A1-A3 to determine the severity level. The indicators are exemplars of (1) low, (2) medium, and (3) high severity problems for each problem category.

i. If a problem category is not identified and attributed at severity score, it is automatically rated as 0 (not present).

ii. If one problem category is present at multiple levels of severity, only the highest level of severity should be recorded.

iii. If one event (eg, surgical complication) relates to multiple problem categories (ie, safety, communication) then all relevant problem categories should be recorded.

iv. Should further analysis be required, problems categories may also be coded in terms of the sub-categories that comprise them. Although each sub-category has an indicator at each severity level, the reliability of coding severity at this fine-grained level has yet to be established.

4 Use SECTION A on the HCAT form, at the end of this manual, to record the problem and severity coding.

A1. Clinical Problems. Issues relating to quality and safety of clinical and nursing care provided by healthcare staff (ie, doctors, nurses, radiologists, and allied health professionals)

Quality: Clinical standards of healthcare staff behaviour • Sub-categories: Neglect – Hygiene & personal care; Neglect – Nourishment & hydration; Neglect – general; Rough handling & discomfort; Examination & monitoring; Making & following care plans; Outcomes & side effects. • Keywords: "not provided", "was not done", "did not follow guidelines", "poor standards", "should have", "not completed", "unacceptable quality", "not successful".		
1. Low severity	**2. Medium severity**	**3. High severity**
Delay changing dirty bedding	Patient dressed in dirty clothes	Patient left in own waste in bed
Isolated lack of food or water	Nothing to eat or drink for one day	Patient dehydrated/ malnourished
Wound not dressed properly	Seeping wound ignored	Infected wound not tended to
Rough handling patient	Patient briefly without pain relief	Force feeding baby, resulting in vomiting
Patient monitoring delayed	Patient not monitored properly	Discharge without sufficient examination
Patient not involved in care plan	Aspect of care plan overlooked	Failing to heed warnings in patient notes
Patient left with some scarring	Patient required follow-up operation	Patient left with unexpected disability
Safety: Errors, incidents, and staff competencies • Sub-categories: Error – diagnosis; Error-medication; Error – general; Failure to respond; Clinician skills; Teamwork. • Keywords: "incorrect", "medication error", "did not notice", "mistake", "failed to act", "wrong", "poor coordination", "unaware", "missed the signs", "diagnosis".		
1. Low severity	**2. Medium severity**	**3. High severity**
Slight delay in making diagnosis	Clinician failed to diagnose a fracture	Clinician misdiagnosed critical illness
Slight delay administering medication	Staff forgot to administer medication	Incorrect medication was administered
Minor error in recording |patient progress	Delay noticing deteriorating condition	Onset of severe sepsis was not identified
Not responding to bell (isolated)	Not responding to bell (multiple)	Not responding to heart attack
A minor error filling-out the patient notes	Clinician overlooked information (eg, previous experience of an illness)	Clinician overlooked critical information (eg, serious drug allergy)
Minor misunderstanding among clinicians	Test results not shared with clinicians	Failure to coordinate time-critical decision

A2. Management Problems. Issues relating to the environment and organisation within which healthcare is provided (for which administrative, technical, facilities and management staff are usually responsible)

Environment: Problems in the facilities, services, clinical equipment, and staffing levels • Sub-categories: Accommodation; Preparedness; Ward cleanliness; Equipment; Staffing; Security. • Keywords: "not available", "shut", "not enough", "dirty", "shortages", "broken", "poor equipment", "soiled", "used before", "poorly signed".		
1. Low severity	**2. Medium severity**	**3. High severity**
Noisy ward surroundings	Patient was cold and uncomfortable	Fleas, bed bugs, rodents
Patient bed not ready upon arrival	Patient placed in bed in corridor	Patient relocated due to bed shortage
Dirt and cigarette ends on main floor	Blood stains in bathroom	Overflowing toilet, faeces on floor
Parking meter not working	A temporary malfunction in an IT system	Medical equipment malfunctioned
Midwife repeatedly called away	Specialist not available	Severe staff shortages
Argument between patients	One patient bullying another patient	Patient assaulted by another patient
Institutional Processes: Problems in bureaucracy, waiting times, and accessing care • Sub-categories: Delay – access; Delay – procedure; Delay – general; Bureaucracy; Visiting; Documentation. • Keywords: "delayed", "postponed", "cancelled", "lost", "not admitted", "administrative problems", "not referred", "confused notes", "more paperwork", "unaware of me".		
1. Low severity	**2. Medium severity**	**3. High severity**
Difficulty phoning healthcare unit	Waited in emergency room for hours	Unable to access specialist care
Non-urgent medical procedure delayed	Medical procedure delayed	Acute medical procedure delayed
Phone calls not returned	Complaint not responded to	Emergency phone call not responded to
Appointment cancelled and rescheduled	Chasing departments for an appointment	Refusal to give appointment
Visiting times unclear	Visiting unavailable	Family unable to visit dying patient
Patient notes not ready for consultation	Patient notes temporarily lost	Another patient's notes used as basis for consultation

A3. Relationship Problems. Issues relating to the behaviour of any member of staff towards the patient or their family/friends

Listening: Healthcare staff disregard or do not acknowledge information from patients • Sub-categories: Ignoring patients; Dismissing patients; Token listening • Keywords: "I said", "I told", "ignored", "disregarded", "battled to be heard", "not acknowledged", "excluded", "uninterested" and "not taken seriously".		
1. Low severity	**2. Medium severity**	**3. High severity**
Staff ignored question	Staff ignored mild patient pain	Staff ignored severe distress
Patient's dietary preferences were dismissed	Patient-provided information dismissed	Critical patient-provided information repeatedly dismissed
Question acknowledged, but not responded to	Patient anxieties acknowledged, but were not addressed	Patient pain acknowledged, but no follow through on pain relief
Communication: Absent or incorrect communication from healthcare staff to patients • Sub-categories: Delayed communication; Incorrect communication; Absent communication. • Keywords: "no-one said", "I was not informed", "he/she said 'X'", "they told me", "no-one explained", "contradictory", "unanswered questions", "confused", "incorrect".		
1. Low severity	**2. Medium severity**	**3. High severity**
Short delay communicating test results	Long delay communicating test results	Urgent test results delayed
Patient received incorrect directions	Patient received conflicting diagnoses	Patient given wrong test results
Staff did not communicate a ward change	Staff did not communicate care plan	Dementia patient discharged without the family being informed
Respect and patient rights: Disrespect or violations of patient rights by staff • Sub-categories: Disrespect; Confidentiality; Rights; Consent; Privacy. • Keywords: "rude", "attitude", "humiliated", "disrespectful", "scared to ask", "embarrassed", "inappropriate", "no consent", "abused", "assaulted", "privacy".		
1. Low severity	**2. Medium severity**	**3. High severity**
Staff spoke in condescending manner	Rude behaviour	Humiliation in relation to incontinence
Private information divulged to the receptionist	Private information divulged to family members	Private information shared with members of the public
Staff member lost temper	Patient intimidated by staff member	Patient discriminated against
Unclear information for consent	Consent was obtained just prior to a procedure, giving no discussion time	Do-not-resuscitate decision without obtaining consent
Lack of privacy during discussion	Lack of privacy during examination	Patient experienced miscarriage without privacy

Section B: Specifying the stages of care complained about

The second stage in coding a healthcare complaint is the specification of the stages of care to which a patient's poor healthcare experience refers. **Only code stages when a problem category is identified within that stage of care**. Healthcare complaints can focus on a single event within one stage of care (eg, an operation), or to multiple events that occur across an entire institution. Within HCAT, five generic stages of care are identified (and a sixth "other" category). These stages have been drawn from research on patient "journeys" through healthcare systems [42, 43]. The stages of care are listed in table 4.

Table 4. Stages of care

1. Admissions:	This refers to when a patient arrives at healthcare unit, and is admitted to a unit or ward. For example, when initially receiving treatment at an accident and emergency unit, being referred to a clinician, or first arriving to receive care.
2. Examination and diagnosis:	This refers to when a patient is examined and diagnosed by clinical staff. For example, when being examined by an acute care ward, receiving a pre-operative diagnosis, or being assessed by a radiology team.
3. Care on the ward:	This refers to when patients are receiving clinical or nursing routine care (eg, food, water, washing, medication, wound dressing), being assessed and monitored by healthcare staff, and post-operative recovery.
4. Operation / procedures:	This refers to the operations and medical procedures performed on patients by healthcare staff. For example, when patients undergo surgery, give birth, receive emergency care, or undergo a routine procedure (eg, insertion of a tracheotomy).
5. Discharge / transfers:	This refers to patients being discharged from the healthcare unit. For example, when patients are discharged from hospital after a surgical procedure, or are transferred from an intensive care unit to a high dependency unit.
6. Unspecified or other	Where it is not possible to determine the stage of care, or it does not fit into the above categories

For the letter of healthcare complaint, indicate in SECTION B of the HCAT form (at the end of this document) which stages of care the problems identified in Section A referred to. All stages of care can be selected if the complaint refers to them all. In the case that it is not possible to determine the stage of care, please indicate "other".

Section C: Level of harm reported in the complaint

The third stage in coding a healthcare complaint is to specify the level of harm experienced and reported in the letter of complaint. Harm is rated on the National Reporting and Learning System [44] used in the UK to classify harm reported in critical incidents outlined in table 5.

Indicate in SECTION C of the HCAT form the level of harm experienced by patients. Assessments of harm should focus on the overall harm **caused to patients by the problems raised in the letter of complaint**. For example, if the patient dies, but the complaint is about dignity after death, then the harm relates only to the consequences of the lack of dignity.

It is important to note that harm is independent from problem severity. For example, a patient describing a severe safety problem (eg, a medication error) may not have experienced harm due to the error being identified.

Table 5. Patient harm

0. N/A	No information on harm is reported
1. Minimal harm	Minimal intervention or treatment required (eg, from a bruise or graze)
2. Minor harm	Minor intervention required to ameliorate harm (eg, from a sprain, anxiety)
3. Moderate harm	Significant intervention required to ameliorate harm (eg, from a grade 2-3 pressure ulcer, healthcare acquired infection)
4. Major harm	Patent experienced, or faces, long-term incapacity (eg, from a dislocation, fracture, haemolytic transfusion, wrong medication side effect, post-traumatic stress)
5. Catastrophic harm	Death or multiple/permanent injuries (eg, wrong-site surgery, paralysis, permanent or chronic mental health problems)

Section D: Descriptive details

The final stage in coding a healthcare complaint is to specify basic descriptive details in relation to the complaint. These are defined in table 6. Record these details in SECTION D of the HCAT form.

Table 6. Hospital complaint details

1. Who made the complaint?	Indicate whether the complaint was made by a patient, family member, lawyer, or other third-party
2. What is the gender of the patient?	Indicate whether the patient complaining (or being complained on the behalf of) is male or female
3. Which staff groups does the complaint refer to?	Report whether staffing group or groups complained about are Administrative, Healthcare assistants, Medical Staff, Nursing Staff, Pharmacists, Physiotherapists, or unspecified/other

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HEALTHCARE COMPLAINTS ANALYSIS TOOL (HCAT) CODING FORM

Instructions	A. Use the manual to identify severity ratings for each problem category (from 0, not evident, to 3, high severity) B. Please indicate the stage(s) of care to which the letter refers C. Categorise the level of harm experienced by patients D. Please provide descriptive information on the complaint			**Reference number**
(A) Domain	**Category**	**Severity (0-3)**	**(B) Stages of Care**	**Tick relevant stages**
CLINICAL PROBLEMS Issues relating to quality and safety of clinical and nursing care provided by healthcare staff (ie, doctors, nurses, radiologists, and allied health professionals)	**Quality:** *Clinical standards of healthcare staff behaviour*		1. Admissions	
	Safety: *Errors, incidents, and staff competencies*		2. Examination & diagnosis	
MANAGEMENT PROBLEMS Issues relating to the environment and organisation within which healthcare is provided (for which administrative, technical, facilities and management staff are usually responsible)	**Environment:** *Problems in the facilities, services, clinical equipment, and staffing levels*		3. Care on the ward	
	Institutional Processes: *Problems in bureaucracy, waiting times, and accessing care*		4. Operation & procedures	
RELATIONSHIP PROBLEMS Issues relating to the behaviour of any specific member of staff towards the patient or their family/friends	**Listening:** *Healthcare staff disregard or do not acknowledge information from patients*		5. Discharge & transfers	
	Communication: *Absent or incorrect communication from healthcare staff to patients*		6. Unspecified or other	
	Respect and patient rights: *Disrespect or violations of patient rights by staff*			
	Unspecified/other			
(C) Please indicate the level of harm reported by the patient (1) negligible to (5) catastrophic (use 0 for N/A or unspecified) =	**(D) Please provide further details of:** **1. Who made the complaint?** ☐ Family member ☐ Patient ☐ Unspecified/other **2. Gender of patient?** ☐ Female ☐ Male ☐ Unspecified/other **3. Which staff group(s) does the complaint refer to?** ☐ Admin ☐ Medical ☐ Nursing ☐ Unspecified/other			

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