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Experience feedback committee in emergency medicine: a tool for security management

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ABSTRACT

Objective Emergency departments are high-risk structures. The objective was to analyse the functioning of an experience feedback committee (EFC), a security management tool for the analysis of incidents in a medical department.

Methods We conducted a descriptive study based on the analysis of the written documents produced by the EFC between November 2009 and May 2012. We performed a double analysis of all incident reports, meeting minutes and analysis reports.

Results During the study period, there were 22 meetings attended by 15 professionals. 471 reported incidents were transmitted to the EFC. Most of them (95%) had no consequence for the patients. Only one reported incident led to the patient's death. 12 incidents were analysed thoroughly and the committee decided to set up 14 corrective actions, including eight guideline writing actions, two staff trainings, two resource materials provisions and two organisational changes.

Conclusions The staff took part actively in the EFC. Following the analysis of incidents, the EFC was able to set up actions at the departmental level. Thus, an EFC seems to be an appropriate security management tool for an emergency department.

INTRODUCTION

Considerable attention has been drawn to patient safety since the publication of several studies that reported rates of adverse events ranging between 4% and 16% of hospitalised patients.[1–4] These events were associated with permanent impairment, including death, in 14–41% of cases. Of these events, 27–51% were considered preventable, that is, were the result of medical error and would not have occurred with standard medical care.[5] In emergency departments (EDs), similar rates of adverse events or errors have been observed[6–9] but with a higher proportion of preventable events (53–80%[3 6 8 9]). EDs are high-incident-risk structures, as they treat patients presenting with diverse diseases of extreme severities and for whom historical information is often lacking.[10 11] Moreover, professionals in EDs experience irregular workloads, crowding,[11 12] disrupted sleep cycles, and numerous interruptions in their work.[13] Fortunately, the majority of errors do not result in adverse outcomes for patients. Indeed, in their study describing errors in a busy ED, Fordyce *et al*[7] reported that 7 out of 346 errors (2%) result in a significant adverse outcome.

Several methods of error prevention in EDs have been developed. These methods have focused on teamwork and on reducing the number of drug errors thanks to the intervention of pharmacists or the use of computerised order entry systems.[14] Ten years ago, specific structures, called experience feedback committees (EFCs), were created to analyse errors or near-miss events within a medical department. Originating from civil aviation security systems, the method has been adapted to healthcare facilities in France with the help of Air France Consulting.[15 16] An EFC is a multidisciplinary team representing the diversity of the functions encountered in the medical unit. The EFC members meet regularly to examine reported incidents related to their medical unit. They choose priority incidents that need to be analysed and propose corrective actions. The main principles of the method are that patient safety must be managed within a medical team, the team must focus on near-miss events, and the actions must concern latent factors that have the potential to cause an adverse event.[17]

The objective of the study was to describe the functioning of the EFC in an ED, to discuss its contribution to the management of quality and patient safety and to evaluate whether such a system would be feasible in any ED setting.

METHODS

Study design

This was a descriptive study based on written reports of the ED EFC from its inception in November 2009 until May 2012.

Setting

The study was conducted in a 1347-bed acute-care university hospital in France, including 20 beds for the ED. The ED has an annual patient volume of 80 000–90 000 visits.

The hospital has a voluntary internal reporting system for adverse events and near-misses. The incidents are reported to the central safety unit, from the health surveillance department, in a standardised written document. This safety unit is independent of the EFCs and comprises a medical doctor, a pharmacist and a quality engineer. They receive all of the hospital's reported incidents. They classify them and analyse the most serious incidents or those involving several hospital units, and they notify the different vigilance units when necessary. A vigilance unit is a medical unit that is in charge of a particular risk such as blood products (haemovigilance), medicines (pharmacovigilance) or medical devices. They gather all the incidents concerning the different medical departments managing an EFC and send them the incident reports before the meetings. At the time of

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this study, 21 medical departments, including the ED, were managing an EFC. A particularity of the ED's EFC in comparison with other EFCs in the other departments was that staff could also report incidents directly to the EFC via a simpler form through an allocated box in the unit (such incidents were not systematically reported to the central safety unit).

In this setting, the EFC is supposed to follow the procedure set up in accordance with the method proposed by Air France Consulting.[18] The EFC is composed of diverse professionals and the meetings are conducted according to a standardised plan: (1) reading the list of incidents reported in the previous month, (2) choosing a priority incident to analyse during the following month, (3) choosing the professional responsible for the analysis, (4) listening to the analysis report from the previous month, (5) choosing corrective actions, and (6) monitoring ongoing actions. The analysis is performed during the month following the EFC by a designated person. The person in charge of the analysis analyses the incident according to the ORION method.[17] This method has six main steps.

Step 1 Collecting data. The professional responsible for the analysis collects relevant information concerning the incident using debriefing meetings, interviews, document analysis or any other necessary means.

Step 2 Describing the chronological facts occurring before, during and after the incident. From each fact mentioned, the professional has to determine whether guidelines for good practice exist at the department, hospital or national level and if there is a gap between the facts and these guidelines. Chronological facts, existing guidelines and identified errors have to be described.

Step 3 Describing the causes of errors (ie, gaps between guidelines and facts) that are sought in different areas: political, organisational, working conditions, team functioning, procedures, actors and the patient.

Step 4 Looking for and describing the latent factors that could have contributed to the occurrence of the errors. These latent factors are sought in the same areas as the causes of errors. However, their links to the incident are less tangible.

Step 5 Setting up corrective actions. The aim is to reduce the risk of adverse events by correcting latent factors contributing to them.

Step 6 Writing a report of the analysis.

Data collection

All written documents from the EFC of the ED were analysed. For the purposes of this study, reported incidents were classified according to the department that had reported the incident, the type of incident and the consequence for the patient using the International Classification for Patient Safety.[19] Written reports from meetings were analysed using a standardised procedure that followed the steps of an EFC analysis (as described above). Analysis reports were analysed using a standardised procedure that followed the steps of the ORION method. The analysis of all documents was performed by two independent investigators. Differences in rating were discussed until a consensus was reached.

Statistical analysis

Qualitative data are reported as numbers and percentages. Quantitative data are reported as medians and IQR.

RESULTS

The EFC was set up based on a call for volunteers among the staff with the obligation of having one or two participants for each professional category. Once the multidisciplinary team was constituted, several training sessions were held to teach professionals about the culture of safety and the method to follow. Report templates were provided to the committee. Volunteers committed to participating in the EFC for at least one complete year. At the end of each year, a new call for volunteers was made to replace those who decided to stop.

The committee set up 22 meetings during the study period. A total of 15 medical and paramedical professionals participated in the EFC (table 1). The median number of attendants was 8 (IQR 6–9) per meeting. Minutes were taken for all meetings. Priority events were chosen, analysis reports were presented and actions were decided in more than half of the meetings (table 1). In 13 meetings there was no monitoring of the previous actions (59.1%).

A total of 471 reported incidents were transmitted to the EFC (table 2). Among them, 101 reports (21.4%) were communicated directly to the EFC through the devoted box. A median number of 14 incidents (IQR 10–18) were discussed per meeting. Incidents were mainly (68.2%) reported by a professional of the department, and 84% of incidents occurred within the department. Reported incidents were mainly about clinical administration (including incidents in patient identification, patient transfer, admission, discharge) and lack of resources (including beds and staff availability). The majority of incidents had no clinical consequence for the patient (95.1%, table 2). In five cases, the incident led to moderate harm. This included one delay of care for a patient suffering from a cerebral infarction and four patient falls. One patient fell from a stretcher and broke his nose, one patient fell into a puddle of urine and broke his femur, one patient fell because of a seizure and broke his shoulder, and one patient fell over the bed guardrail and suffered from neurological sequelae. One event led to severe harm

Table 1 Main functioning characteristics of the experience feedback committee of the emergency department

Participants %		N=15
Nurses	4	26.7
Physicians	3	20.0
Head nurses	2	13.3
Hospital porters	2	13.3
Secretary	1	6.7
Quality engineer	1	6.7
Auxiliary nurse	1	6.7
Social worker	1	6.7
Median number of participations per participant (IQR 25–75)	12	(4–16)
Median number of participants per meeting (IQR 25–75)	8	(6–9)
Meetings	N=22	%
Writing of minutes	22	100.0
Listening to the events reported during the previous month	21	95.5
Choice of a priority event to analyse during the following month	14	63.6
Listening to the analysis report from the event analysed in the previous month	13	59.1
Decision of actions	12	54.6
Follow-up of previous actions	9	40.9

Table 2 Characteristics of the events reported during the experience feedback committee meetings

Characteristics	N=471	%
Incident type		
Clinical administration	151	32.1
Resources/organisational management	107	22.7
Clinical process/procedure	62	13.2
Behaviour	52	11.0
Medical device/equipment	30	6.4
Documentation	22	4.7
Infrastructure/building/fixtures	12	2.5
Patient accidents	10	2.1
Healthcare-associated infection	9	1.9
Medication/IV fluids	6	1.3
Nutrition	4	0.8
Blood/blood products	3	0.6
Oxygen/gas/vapour	3	0.6
Degree of harm		
None, without care modification	407	86.4
None, with care modification	41	8.7
Mild	16	3.4
Moderate	5	1.1
Severe	1	0.2
Death	1	0.2
Report provider		
Staff from the emergency department	321	68.2
Staff from another department	150	31.8
Place of the event		
In the emergency department	398	84.5
In another department	73	15.5

Table 3 Characteristics of the analysis reports and of the corrective actions

Analysis reports	N=12	%
S6: Written reports	10	83.3
Oral reports	2	16.7
S1: Description of the data collection method	10	83.3
Individual interviews	10	100.0
Collective debriefing	10	100.0
Files	6	60.0
Area visits	4	40.0
S2: Description of the chronology of facts	9	75.0
S2: Description of existing recommendations	3	25.0
S2: Error identification	7	58.3
S3 and S4: Identification of contributing or latent factors	11	91.7
Management	2	18.2
Organisation and procedures	11	100.0
Working environment	7	63.6
Teamwork	7	63.6
Technical processes	6	54.5
Professionals	4	36.4
Patients	3	27.3
Corrective actions		
S5: Proposed actions	N=23	
Staff training	6	26.1
Writing procedures	8	34.8
Organisational changes	5	21.7
Increasing resource materials	4	17.4
Decided actions	N=14	
With a professional in charge	8	57.1
From the ED	7	87.5
From another department	1	12.5
With a defined deadline	6	42.9

ED, emergency department.

for a patient who fell because of a defective stretcher. This fall caused a subarachnoid haemorrhage and cardiac arrest. One incident was judged as contributing to a patient's death: the patient was hospitalised in a corridor while suffering from pulmonary insufficiency. An optimal surveillance was consequently not possible.

Fourteen priority incidents were chosen for investigation, including six related to patient transfer or discharge, four to patient identification errors, three to organisational problem and one to accidental blood exposure. Two chosen incidents were finally not investigated. Among the 12 analyses performed, 10 ended with a written report and in two cases the report was made orally (table 3). The written reports showed that the ORION method was often followed. The chronology of facts, identification of gaps and identification of contributing or latent factors were described in 60% of cases. However, the description of existing recommendations was made in only one quarter of the cases.

Of the 23 proposed corrective actions, the committee decided to implement 14 ones. The action most commonly performed was written guidelines (n=8; see box 1).

Box 1 Decided corrective actions

Guideline writing
- Blood exposure accident
- Inpatient transfer
- Checklist for inpatient transfer
- Patient discharge
- User manual for the computerised medical record
- Patient medical record management
- Admission in the short-term hospitalisation unit
- Care process in examination and care area

Organisational changes
- Change of patient identity label storage
- Stop the transfers to the ED

Training
- Rules for inpatient transfers in the hospital
- Use of computerised medical records

Resource materials
- Provision of care kit for blood exposure accident
- Implementation of an alert system in the computerised medical record

DISCUSSION

The study shows that the EFC of the study ED is routinely functioning. The staff took an active part in the procedure and the initiative seems to be well integrated into the department's routine. Following the meetings, corrective actions were decided and set up. These results suggest that the EFC method can be used as a tool to involve healthcare professionals in patient safety management in emergency units.

Thanks to the ORION method, the EFC used a structured and systemic safety approach to analysing incidents. The principle is to choose only one event per meeting in order to analyse it thoroughly. The choice is based either on the gravity of the event or on the frequency of occurrence. Such an approach, like the protocol of the Association of Litigation and Risk Management (ALARM), aims to identify the latent factors that have contributed to an incident so as to set up error-reduction strategies.[20] Adverse events are a result of various factors, and therefore analyses of clinical incidents should focus on the system's vulnerabilities[21–23] rather than on individual errors. In this study, system vulnerabilities were most frequently identified as the potential factors of occurrence of events. Nevertheless, we observed some differences in the way the committee conducted their analyses compared to the guidelines. The analysis did not always follow all the steps of the ORION method. These deviations from the method were probably due to the novelty of this activity in the department, and we cannot exclude a lack of training for the participants as another contributing factor. Indeed, formal training was offered at the start but it involved the professionals who participated initially. Additional training was not requested by the team and not proposed afterwards. Nevertheless, we believe that regular training is necessary to ensure good-quality meetings and event analysis and to ensure formal training for new participants. Consequently, we believe that regular formal training sessions must be part of the establishment of an EFC. Another explanation to the deviations from the method could be that the method is too complicated or too time-consuming to be performed completely by professionals who already have a significant clinical workload. Perhaps steps 4 and 5 could be combined, since it is often difficult to distinguish between a contributing and a latent factor. A mean of one action every 2 months was decided, which was deemed satisfactory. However, monitoring the actions was mentioned in the subsequent written reports in only eight cases (out of the 14 actions decided). In six cases, we did not find written information on whether or not the actions were monitored. Most of the actions concerned organisational aspects of care (eg, an incident during an inpatient transfer led to revising the inpatient transfer guidelines and to writing a checklist). This is in accordance with the aim of the method. Indeed, while mortality and morbidity conferences that are also performed in the ED usually focus on medical practices,[24 25] the EFC uses a system-wide approach that allows organisational failures to be detected. In most of the cases, these failures do not have an effect on the patient but could potentially do so, which is why it is important to identify the failures and prevent them.[26]

One of the principles of an EFC is to gather all categories of professionals who are involved in the unit. This is one of the major differences with mortality and morbidity conferences, where most often only residents and senior physicians attend.[27 28] In the ED, professionals from different clinical areas were part of the committee and participated in the analysis and setting up of actions. Multidisciplinary meetings reinforce interprofessional collaboration and communication and they allow all core business partners to be involved in patient safety. Moreover, Kauffman *et al*[29] suggested that a multidisciplinary approach contributes towards identifying system vulnerabilities more easily.

Also, the EFC can only function properly if professionals report near-misses or adverse events. Several barriers to incident reporting have been identified such as time constraints, complex forms, fear of punishment, shame, a lack of education and a lack of feedback.[30–32] However, it is not the objective of the EFC to treat all near-misses or adverse events. In this study, a median number of 14 incidents were reported and discussed per meeting, which is a sufficient number to choose an incident of interest. Less than 5% of incidents had a consequence for the patient. This is what is expected by an EFC, as adverse events are preferentially analysed in the morbidity and mortality conference. The objective of the EFC was to preferentially analyse the near-misses as they can potentially cause harm. Finding the causes to the near-misses makes it possible to set up corrective actions before an adverse event actually occurs.

This study had several limitations. First, the functioning of an EFC depends on people who are involved, and this study was performed in only one department. Studying another team in a different context could have other results. Second, we were not able to measure the impact of the EFC on patient safety. However, we suppose that corrective actions against identified vulnerabilities improve patient safety. Also, we suppose that the EFC has an impact of safety culture on all the professionals in the committee.

In conclusion, this study showed that all categories of professionals can take part in an EFC in order to develop actions aiming to increase patient safety. Also, we showed that the recommended way of conducting the EFC was not always followed, suggesting that we should focus on training attendees and devising a way to simplify the method for care professionals who are always short of time. However, corrective actions were taken which proves that the EFC was a success.

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