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Violence in health care: the contribution of the Australian Patient Safety Foundation to incident monitoring and analysis

Klee A Benveniste, Peter D Hibbert and William B Runciman

Frustration and anger arising out of illness and pain, psychiatric disorders, alcohol and substance abuse, can affect behaviour and make people verbally or physically violent. The incidence of violence faced by workers in contact with people in distress is so common that it is often considered an inevitable part of the job. Health care workers are at the forefront of this situation.¹

In 1996, the World Health Organization declared violence a leading worldwide public health problem.² Its subsequent publication *World report on violence and health* confirmed that violence had become a global phenomenon of epidemic proportions in all societies.³ In the European Union, for example, an estimated three million workers, or 2% of the labour force, have been subjected to physical aggression and violence at work.³

We already know from a number of studies conducted among health professionals that Australian health care workers frequently experience violence (Box 1). However, collection and aggregation of incident data reported by health professionals from multiple hospitals can reveal information not available from single hospital or single study reports. The purpose of such a patient safety reporting system is “to ferret out and correct vulnerabilities, not to count them”.¹¹

The Australian Patient Safety Foundation (APSF), a non-profit research organisation, has played an important role in developing systems to collect, aggregate, monitor and analyse incidents related to patient safety since its formation in 1988, when it received its first reports of anaesthetic-related events for the Australian Incident Monitoring Study in anaesthesia. In 1998, to re-analyse data from the Quality in Australian Health Care Study,¹² the APSF created a taxonomy and software which became the Australian Incident Monitoring System (AIMS). This involved developing a classification of health care incidents — both adverse events and near misses — an incident being “any event or circumstance which could have led, or did lead, to damage, loss or harm”.¹³

Incident reporting to AIMS has always been voluntary. Reports have been made by all types of health care professionals from a varying number of participating hospitals and other health facilities within Australia and New Zealand. Data are de-identified before aggregation and analysis, and thus cannot be used to determine incidence rates. However, their value lies in understanding the contributing, minimising and preventive factors involved,

ABSTRACT

- Because of growing concern about violence in health care in Australia, we reviewed the relevant data on incidents involving violence collected using the Australian Incident Monitoring System (AIMS).
- Among 42 338 incidents reported from 1 July 2000 to 30 June 2002, 3621 (9% of all incidents) involved patients and physical violence or violent verbal exchange; staff injury was reported in 5% of cases. The proportion was higher in emergency departments (16%, with frequent involvement of mental health problems or alcohol or drug intoxication) and mental health units (28%).
- Contributing factors include changes in our society and in mental health service provision. With the closure of public psychiatric hospitals in the past decade, more patients with mental illness are seeking care in public hospital emergency departments.
- AIMS analysis highlights the importance of understanding the contributing and precipitating factors in violent incidents, and supports a variety of preventive initiatives, including de-escalation training for staff; violence management plans; improved building design to protect staff and patients; and fast-tracking of patients with mental health problems as well as improved waiting times in public hospital emergency services.
- We recommend that a national system be developed to share and compare incident monitoring data, to monitor trends, and to facilitate learning and thinking at all levels — ward, department, hospital, state and national.

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which can then be used in devising corrective strategies and action plans for incidents affecting patient safety.

Violence is one major category of incident classified within AIMS. Because of growing concern about violence in health care in Australia, we reviewed the relevant data collected using AIMS.¹⁴ Here, we present and discuss some of the summary data relating to reported incidents of violence.

What has been reported?

The complete AIMS collection of patient-safety-related incidents from January 1998 to June 2002 contains nearly 80 000 coded reports. The data include contributing factors, action taken and outcome, when available. Among 42 338 incidents reported from 1 July 2000 to 30 June 2002, 3621 (9% of all incidents) involved patients and physical violence (for example, assaults or throwing objects) or violent verbal exchange (abuse or threats) occurred.¹⁴ Staff injury was reported in 5% of cases. Box 2 summarises the key findings.

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1 Experience of violence by Australian health professionals⁴⁻¹⁰

- A survey conducted in 1999 of 266 emergency department nurses in metropolitan and regional hospitals in New South Wales revealed that all had experienced some form of violence at work at least weekly, but over 70% of incidents were not reported to authorities.⁴
- In a 2002 survey of all Tasmanian nurses, 64% of over 2400 respondents had experienced violence in the past 4 weeks.⁵
- In another survey conducted in 2001–2002 of 400 Australian health care workers interviewed to provide baseline data for the “Taskforce on the prevention and management of violence in the health workplace”, three-quarters of the 200 nurses involved had experienced some form of violence in the past 12 months; the highest rate of events per worker was among ambulance officers.⁶
- Exposure to violence is particularly high for nurses in inpatient psychiatric facilities⁷ and remote area nursing.⁸
- Situations of increased risk for medical practitioners include working in emergency departments, treating clients affected by drugs or alcohol, and dealing with high-stress situations in delivery suites, intensive care or coronary care units.⁶
- Violence towards medical practitioners is not confined to hospital services; 73% of rural general practitioners in Western Australia, New South Wales and Victoria reported experiencing some form of aggressive behaviour from patients and 20% had been subjected to physical abuse during their careers as rural doctors.⁹ Urban GPs have reported that providing after-hours care now puts them at increased risk of assault, and some have restricted provision of after-hours care as a result.¹⁰ ◆

Although 9% of reported incidents in all health units involved violence, the proportion was higher in emergency departments (16%) and higher still in mental health units (28%). Incidents in these two areas have their own characteristic patterns of contributing and precipitating factors.

In reports from 12 emergency departments, 16% of all reported incidents (190 of 1214 incidents) involved violence. Mental health problems were patient-related contributing factors for over half of the violent incidents, with alcohol or drug intoxication contributing to more than 25%. The most common staff-related contributing factors were “communication problems” and “insufficient or inadequate [numbers of] staff”. Precipitating factors included dissatisfaction with staff decisions to admit or discharge a patient from hospital, lack of support on discharge, or non-prescription of a patient-requested medication. Weapons used in incidents included hospital equipment, razor blades, scissors and blood-filled syringes.

In reports from 10 mental health services, 28% of all incidents reported (1467 of 5326 reports) involved violence. In violent incidents in which the patient’s status (voluntary or involuntary admission) was known, 79% involved patients who were legally detained. There was often a precipitating factor, such as refusal of privileges.

What are the issues?

Health services are provided in a changing environment where new policies and programs are often needed in response to changing patient demand — such as varying demographic characteristics of patients and the nature of their presenting symptoms —

but these policy changes have to be balanced against the obligation to provide a safe environment for both health professionals and patients.

Mental health services

The violence seen in our health services reflects changes in our society, including changes in mental health service provision. Over the past decade, deinstitutionalisation of patients with mental illness has had an impact on public hospital emergency departments. Between 1998–99 and 2002–03, mental-health-related separations (that is, deaths and discharges) from public acute hospitals increased by 11%, whereas those from public psychiatric hospitals decreased by 24%.¹⁵ Secure rooms have been built in general hospitals to seclude violent patients presenting to public hospital emergency departments. However, psychiatric patients, including prisoners with mental illness, have been detained in public hospital wards that did not have appropriate resources to cope with them, posing a potential risk to other patients.¹⁶ In one incident, an entire ward of a NSW district hospital was closed when an elderly woman inpatient died after being attacked in her bed by a patient with mental illness.¹⁷

In South Australia, the potential risk to emergency staff may increase as the last public psychiatric hospital is scheduled for closure in 2007, and patients with acute psychiatric conditions are to be directed to general hospitals.¹⁸ Such health system changes have major implications for risk management and injury litigation in all acute health services.

Staff protection

Medical practitioners working in psychiatry, emergency medicine, general practice or rural and remote health need to develop protective behaviours, both for their own safety and that of their patients. Since 1992, in South Australia alone, there have been two workplace deaths of psychiatrists associated with patient violence.^{19,20} These and other incidents of violence indicate the importance of staff access to duress alarms, escape routes and back-up support, as illustrated in the incident described in Box 3.

Preventive strategies

AIMS analysis highlights the importance of understanding the contributing and precipitating factors in violent incidents to determine the vulnerability of a health facility. Our review supports a variety of initiatives that are being developed and adopted to reduce violent incidents. These include:

- de-escalation training for staff, and introduction of violence management plans;²¹
- improved design of buildings to enhance safety of staff and patients;²²
- initiatives for emergency department fast-tracking of patients with mental health problems;²³ and
- initiatives to improve waiting times in public hospital emergency services using a clinical initiatives nurse (whose priority will be emergency department patients waiting for care, and their families/carers).²¹

Some hospitals have developed comprehensive aggression management programs to integrate strategies involving environmental design, staff training and team response.²⁴ An Aggression Risk Assessment tool has been developed by Consultation and Liaison Psychiatry at Austin Health in Victoria for use in initial assessment

2 Key findings in 3621 incidents involving patients becoming violent in Australian hospitals and health services, 1 July 2000 – 30 June 2002

Any health care setting

Number of incidents

- 3621 incidents, 9% of all health care incidents ($n = 42\,338$)

Most common contributing factors

- *Patient-related* — mental health conditions, 40% of incidents; dementia, 15%; pathophysiological factors, 13%; confusion, 9%; alcohol or drug intoxication, 6%
- *Staff-related* — “insufficient or inadequate [numbers of] staff”; “communication problems”; “inadequate knowledge or inexperience”
- *System-related* — “security problems”

Most common outcomes

- Change of treatment, over 40%; informing a medical practitioner, 25%; patient transfer, 16%; restraint team called, 15%; police or security called, 15%; staff injury, 5%

Accident and emergency services (reports from 12 services)

Number of incidents

- 190 incidents, 16% of all incidents in this setting ($n = 1214$)

Most common contributing factors

- *Patient-related* — mental health conditions, more than 50% of incidents; alcohol or drug intoxication, more than 25% of incidents
- *Staff-related* — “insufficient staffing”; “communication problems”

Most common precipitating factor

- Dissatisfaction with staff decisions

Mental health services (reports from 10 services)

Number of incidents

- 1467 incidents, 28% of all incidents in this setting ($n = 5326$)

Most common contributing factors

- *Patient-related* — mental health conditions; where admission status was specified, 79% were involuntary admissions

Most common precipitating factor

- Refusal of privileges

3 Incident reported to the Australian Incident Monitoring System (AIMS)

A doctor was interviewing a patient with a psychiatric condition in an interview room of an emergency department. The patient was in a psychotic state and became agitated and violent. The doctor tried unsuccessfully to press the duress alarm, but managed to escape from the room. The patient followed the doctor into the triage section, lunging and pinning the doctor against the wall and tearing clothing. The patient was eventually calmed by other staff and urgent restraint was requested. Security personnel arrived after the patient had been calmed by another doctor. ◆

to collect local data on patient, staffing and system factors that contribute to incidents, and to develop and evaluate local management plans. However, there is currently no national system to aggregate incident monitoring data.

We recommend that a national system be developed to share and compare incident monitoring data, to monitor trends, and to facilitate learning and thinking at all levels — ward, department, hospital, state and national. At all levels, intelligent interrogation of data and imaginative initiatives will be needed to improve care.

Competing interests

The Australian Patient Safety Foundation Inc is a non-profit research organisation that derives income from licensed use of intellectual property, including the Advanced Incident Management System (the latest version of AIMS) software, via a for-profit subsidiary, Patient Safety International, in which Peter Hibbert and William Runciman have a financial interest.

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of patients in a variety of inpatient settings (see Forster et al, page 357).²⁵ The National Health and Medical Research Council has developed a resource manual for rural and remote practitioners.²⁶ Further, the Australian National Institute of Clinical Studies has a program to assist emergency department staff to improve care of patients with mental health conditions — the Mental Health Emergency Care Interface Project.²⁷

Incident analysis: the way forward

AIMS has continued to evolve since an early version was evaluated in November 2002.²⁸ It is now capable of analysing incidents from all sources in health care including investigative analyses, coroners' reports, and mortality and morbidity reviews as well as incident reports. Importantly, it now also allows for consumer complaints.

AIMS is now used on a state-wide basis by the health departments of New South Wales, Western Australia, South Australia and the Australian Capital Territory, as well as by some health facilities in the Northern Territory, Victoria and Queensland. States collect and analyse their own data to aid state-based decision-making. Incident monitoring also has the potential to enable health services

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