Safeguard or mollycoddle? An exploratory study describing potentially harmful incidents during medical student placements in Aboriginal communities in Central Australia

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ABSTRACT

Objective: To assess the number and characteristics of potentially harmful incidents occurring during placement of medical students in remote Aboriginal communities in the Northern Territory.

Design, participants and setting: A retrospective audit of medical students' files from Northern Territory General Practice Education placements in Central Australia for the period from January 2006 to December 2007.

Main outcome measures: Number and type of potentially harmful incidents.

Results: A total of 163 placements were undertaken. Of these, 98 (60%) had adequate documentation to determine whether an incident had occurred. There were 28 cases (17%) where potentially harmful incidents were judged to have occurred. Most incidents fell under several descriptive categories, but clinical supervision, professional practice and administrative issues were most common.

Conclusions: One in six students experienced a potentially harmful incident during remote area placement in 2006–2007. While acknowledging the exploratory nature of this investigation and the major educational benefits that clearly arise from these placements, our findings indicate problems with clinical supervision and administration.

MJA 2011; 194: 497–500

Through its Rural Undergraduate Support and Coordination Program (RUSC), Northern Territory General Practice Education (NTGPE) is responsible for 2–8-week elective placements undertaken by medical students from around Australia in remote Aboriginal communities in the Northern Territory (Box 1). Most students report high levels of satisfaction with their experience (unpublished data, NTGPE, 2006), and these placements are highly sought after.[1]

Although RUSC students are drawn from Australian universities and placed within Australia, there are similarities between the remote Australian context and international electives in developing countries. These include physical isolation and a challenging environment; communities with health beliefs and norms different to mainstream Australian culture; higher rates of poverty, poor housing, unemployment and violence; and health problems that are different in their presentation, prevalence and severity. Models of health care provision are also different: government and Aboriginal community-controlled primary health care clinics are the norm, staffed by remote area nurses and Aboriginal health workers. A doctor may not be on-site or available for clinical care and supervision. Services are often understaffed and underresourced, with difficult access to secondary or tertiary care.

The literature on international electives suggests they promote the uptake of general practice; encourage doctors to work in public health and with underserved populations; and provide benefits to students' personal and professional development.[2-4] However, there are also concerns about the risks, which include important ethical issues for patients as well as students.[5] If students work beyond their experience and are "expected to diagnose and treat patients without direct supervision from a qualified doctor",[6,7] patients may be placed at risk. This raises difficult questions. Is some care better than no care?[8] Is the student the "most qualified" health care worker present to fulfil the patient's right to quality care? The personal safety of the student is also crucial; in remote locations, students are at greater risk of accidents, infectious diseases, personal violence and even political threats.[9]

We therefore aimed to assess the number and characteristics of potentially harmful incidents occurring during placement of medical students in remote Aboriginal communities in the NT.

METHODS

We conducted a retrospective file audit of all RUSC student placements in Central Australia for a 2-year period from January 2006 to December 2007. Sources of information included the written notes in students' files such as the application form, teleconference notes, debrief notes and any other file and action notes. Students were ideally debriefed weekly by group teleconference, and at the end of their placement by a medical educator and program administrator. However, debrief attendance was variable, and students were not specifically asked about adverse experiences. While NTGPE staff were aware of some incidents that had not been recorded in the files, anecdotal or verbal recall was not regarded as sufficient for this study.

Ethics approval was obtained from the Central Australian Human Research Ethics Committee.

Definition of incident and case selection

We used an educational institution-based definition of a "critical incident"[10] to

1 Northern Territory General Practice Education (NTGPE) Rural Undergraduate Support and Coordination Program (RUSC) process

Student applies to NTGPE RUSC	Accepted to NTGPE RUSC program, which arranges the following	Community placement
• May have been pre-screened by university • Placement learning objectives set by university • University elective, compulsory rural rotation or John Flynn Scholarship placement	• Liaison with community clinic • Transport to and from community • Accommodation • 3-day pre-placement medical and cultural orientation in Alice Springs • Resources including information technology and clinical manuals	• Weekly teleconference • End-of-placement debrief and feedback to NTGPE • Clinic supervisor provides feedback on student to university

2 Descriptors for potentially harmful incidents

Descriptor	Types of incidents
Clinical	
Supervision	Related to clinical supervision of the student by a doctor, remote area nurse or an Aboriginal health worker, and to direct patient care and clinical activity, including history taking, diagnosis and management
Patient-related	Critical illness, complaint, adverse outcome, death or suicide of a patient
Professional practice	Competency and professional skills of health professionals in the team
Professional attitude	Ethical and appropriate behaviour, as expected by the relevant professional standards, towards colleagues, students and patients
Other	Staff shortages, turnover and burnout
Non-clinical	
Administrative	Transport and accommodation, communication with Northern Territory General Practice Education, telephone access
Trauma	Motor vehicle accidents, animal bites, adverse weather events, assault
Interpersonal	Personality clashes; bullying by health staff, patients or other students
Cultural	Aboriginal culture — transgressions of dress or behaviour; racism
Other	Riot in community, feral dogs

3 Number of student placements and incidents recorded, by year and sex

	2006			2007			
	Total	Male	Female	Total	Male	Female	Total
Placements	97	28 (29%)	69 (71%)	66	18 (27%)	48 (73%)	163
Incidents recorded	18	4 (22%)	14 (78%)	10	3 (30%)	7 (70%)	28

develop a student placement-specific definition of an incident as: an event, or the threat of one, which may

- cause, or is likely to cause, significant physical and/or emotional distress or harm to the student experiencing or witnessing the event
- be regarded as outside the normal range of experience of the persons affected
- threaten, disrupt or prevent the ordinary functioning of the student placement.

Two subgroups were identified:

- *Clinical*: events related to medical or clinical work by the student or other clinicians, or to patient morbidity and mortality (eg, accidental, avoidable or traumatic deaths or suicides; near-misses; needle-stick injuries; lack of supervision judged necessary for student competence; improper or negligent practice).
- *Non-clinical*: events outside the direct medical, patient-related work of the student or clinic (eg, motor vehicle accidents; physical or verbal assault; bullying or harassment; extreme weather conditions; cultural transgressions; culture shock).

The principal investigator (A P) obtained all the hard-copy student files for the study period. She systematically checked all files, coded demographic data, and noted whether a potential or actual incident had occurred during the placement, and if there was sufficient information recorded to make such a judgement.

Face validation of cases was achieved by independent file review by two other staff (M V and H T N), who assessed whether the identified case met the agreed definition of an incident. Broad descriptors were developed to categorise the cases by common themes (Box 2). The three reviewers independently recorded which descriptors they thought best applied to each case. There was no discussion of which descriptors were applied by each reviewer, and each descriptor could therefore be applied multiple times to a case.

RESULTS

A total of 163 placements were identified (97 in 2006 and 66 in 2007). Of these, 98 (60%) had sufficient documentation to determine whether an incident had occurred.

A total of 31 files with possible critical incidents were identified on initial screening. After face validation by the three investigators, six needed review; three were discarded, leaving a total of 28 identified cases (17% of all placements). There was a preponderance of female students placed, and this was proportionately represented in the incidents (Box 3).

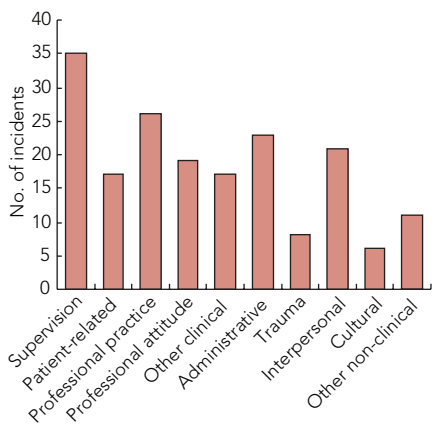
Thematic analysis of the 28 cases found that clinical supervision, professional practice and administration were the key issues causing distress for the students (Box 4). A small sample of cases is described in Box 5.

DISCUSSION

This study suggests that, during the 2-year audit period, potentially distressing incidents occurred in at least 17% of medical student placements in remote Aboriginal communities in Central Australia. In 2006, from the 75 anonymous feedback forms completed by the cohort of 97 students, 64 (85%) rated their overall placement as above average or excellent, and 61 (81%) believed it had increased their interest in rural practice, while only four (5%) considered the placement below average or poor, and three (4%) reported less interest in rural practice as a result (unpublished data, NTGPE, 2006). Thus, there were many more students who experienced critical incidents than those who rated the placement poorly, suggesting that a "distressing" incident does not necessarily lead to an overall negative placement and may in fact be a powerful learning experience.

This retrospective audit has several limitations. The large number of files with inadequate documentation and the reliance on

4 Frequency of descriptors for 28 critical incident cases,* 2006–2007



* Each case could have more than one descriptor applied, and each descriptor could be applied more than once (ie, by two or three reviewers). ◆

5 Examples of potentially harmful incidents occurring during medical student placements in Central Australia*

Clinical

A 22-year-old female student in her third year of a 6-year course, placed at a remote Aboriginal medical service (AMS) community clinic, reported being worried about standards of clinical care she observed; for example, no hand washing between seeing patients with infected sores (no water available); not recording vaccine details; no sharps bins for needles. She also felt the staff were not interested in teaching but used students as workforce. She had interpersonal problems with one remote area nurse in particular (eg, being expected to drive out to a house to be first on call for an after-hours case, yet not being called for interesting after-hours cases in the clinic). She thought that the staff were "burnt out" and that it was "medically boring" and "very slack compared with other placements". She was "turned off remote health" by her placement experience. This feedback was confirmed by another student who was placed with her at the same community.

A 24-year-old female student in her final year of a 5-year degree, placed at a remote AMS community clinic, reported at a weekly teleconference that a baby had died from a respiratory infection and that she had had a "massive day today"; "Wednesday was one of the worst days of my medical career to date". She had quite a degree of emotional distress and shock, with concerns about clinical competence of staff and clinic systems. She received considerable support and continued at the clinic. By the end of the placement, several weeks later, she reported being very positive about her placement experience, and that it was a "fantastic placement and great learning [experience]".

Non-clinical

A 25-year-old female student in her final year of a 5-year course was involved in a road ambulance rollover accident while returning from transporting a patient to the local district hospital. The road was unsealed, it was dark and it had been raining. Fortunately, there were no major injuries among the four people in the car, who had all been wearing seatbelts. They were able to alert the hospital and, after some hours, an ambulance arrived to retrieve them. Contributing factors were that an unlicensed driver had been driving, and that the vehicle's wheels were not locked to engage them in four-wheel drive mode. This incident was not advised to Northern Territory General Practice Education (NTGPE) until some time after the event; the student had participated in the clinic's internal review and debriefs.

A 32-year-old female student in her final year of a 4-year postgraduate course reported that she was not picked up when she arrived at the community at 3 am on the bus from Alice Springs. She was fortunate that a passer-by helped her get to the nearby hospital, where she spent the night. She found the student accommodation to be dingy and dirty, and she moved herself to a share house with local police. She also mentioned other administrative issues with NTGPE, included phone calls not being returned, and that she felt unsupported by NTGPE. While on the placement, she became sick with a respiratory illness and did not seek care until quite unwell. She had some concern about supervision by locum doctors in the hospital. However, she commented that, overall, the placement "has increased [my] interest in rural/remote [general practice]" and it was a "good placement medically".

* De-identified details of other incidents are available for teaching purposes on request from NTGPE (see http://ntgpe.org). ◆

self-reporting by students increases potential bias. The primary feedback noted was from students and NTGPE staff, rather than supervisors, clinic staff or patients. The interviewers' own experiences, both of the clinical context and in counselling skills, may inform how they interpret and attach significance to feedback. The number of descriptors and the brevity of their explanations may have led to a lack of clarity for the reviewers and a wider spread of descriptors. Multiple descriptors applicable to a case may also be interrelated: for example, clinical supervision is dependent on functional interpersonal relationships, appropriate professional practice, and professional attitudes.

Good supervision promotes professional development, but we found that the quality of clinical supervision appears to be a major concern. Complex patients with multiple morbidities; major traumatic events; lower health and language literacy; clinics characterised by understaffing, high staff burnout and turnover; and some recruitment practices (eg, appointment of short-term locums) all make it difficult to develop and maintain supervisory and teaching quality. Clinical workloads can be high and students seen as a valuable "pair of hands" and left to see patients on their own. The tension between service delivery demands and teaching may result in the teaching role being seen as a low priority. Clinics are staffed by interprofessional teams; non-medical staff may supervise medical students, and there may be a lack of clarity in roles, commitment or confidence in supervising across professional disciplines. Students may not value the roles of remote area nurses or be reluctant to accept their authority as supervisors, and have attitudes perpetuating the traditional hierarchical medical–nursing divide. Lack of training and skills in clinical supervision, compounded by remoteness and difficulty in attending training, may hamper the professional development of supervisors. These factors suggest that students require particularly careful clinical supervision to protect patients' and students' safety and promote ethical practice.

Personal qualities such as resourcefulness, self-confidence and cross-cultural skills will aid students in making the most of their elective. However, a "medical tourist" attitude may undermine the learning component and lead to mismatched expectations. Some students may be experiential learners and "keen to have a go"; they may appreciate a lack of supervision as it allows them to do more, but they may lack insight into their own capabilities and have "strategies to appear as competent as possible".[11,12] All these attitudes and perceptions can challenge the inexperienced supervisor.

A review from the United Kingdom recognised the value of more structured approaches to medical electives to maximise learning and minimise the risks.[13] Strategic planning can address some of the challenges of clinical education[14] in the primary care and remote Aboriginal community setting, and should be applied to student electives. Immediate strategies can include organisational systems for risk management; staff and student commitment to processes such as ethical practice; feedback and debriefs; and employing staff who are familiar with local conditions. Establishing more intimate partnerships with communities, universities and clinics with stable staffing, developing rigorous standards for selection of supervisors, and resourcing interprofessional training in clinical education are some longer-term practical strategies.

While student placements are attractive and have demonstrated positive outcomes, they demand due consideration be given to safeguarding students, supervisors and, most importantly, patients. This is timely

given the increasing burden of clinical education that is being placed on community-based health services and general practice, and in rural and remote Australia.

ACKNOWLEDGEMENTS

We gratefully acknowledge the Royal Australian College of General Practitioners (RACGP) Research Foundation for its support of this project, which was funded by an RACGP/APHCRI (Australian Primary Health Care Research Institute) Indigenous Health Award. We also acknowledge the medical students, Aboriginal communities and clinicians who participate in the NTGPE student placement program.

COMPETING INTERESTS

None identified.

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REFERENCES

1 Smith JD, Wolfe C; RhED Consulting. NT review of medical education and training: final report. Darwin: NT Department of Health and Community Services, 2007. http://www.health.nt.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/6/92.pdf (accessed Dec 2010).
2 Imperato PJ. A third world international health elective for US medical students: the 25-year experience of the State University of New York, Downstate Medical Center. *J Community Health* 2004; 29: 337-373.
3 Ramsey AH, Haq C, Gjerde CL, Rothenberg D. Career influence of an international health experience during medical school. *Fam Med* 2004; 36: 412-416.
4 Haq C, Rothenberg D, Gjerde C, et al. New world views: preparing physicians in training for global health work. *Fam Med* 2000; 32: 566-572.
5 Pinto AD, Upshur RE. Global health ethics for students. *Dev World Bioeth* 2009; 9: 1-10.
6 Radstone SJ. Practising on the poor? Healthcare workers' beliefs about the role of medical students during their elective. *J Med Ethics* 2005; 31: 109-110.
7 Banatvala N, Doyal L. Knowing when to say "no" on the student elective [editorial]. *BMJ* 1998; 316: 1404-1405.
8 Bhat SB. Ethical coherency when medical students work abroad. *Lancet* 2008; 372: 1133-1134.
9 Tyagi S, Corbett S, Welfare M. Safety on elective: a survey on safety advice and adverse events during electives. *Clin Med* 2006; 6: 154-156.
10 Charles Sturt University critical incident management handbook. September 2006: 11. http://www.csu.edu.au/division/facilitiesm/services/docs/critical-incident-management-hbook.pdf (accessed Dec 2010).
11 Kilminster SM, Jolly BC. Effective supervision in clinical practice settings: a literature review. *Med Educ* 2000; 34: 827-840.
12 Shah S, Wu T. The medical student global health experience: professionalism and ethical implications. *J Med Ethics* 2008; 34: 375-378.
13 Dowell J, Merrylees N. Electives: isn't it time for a change? *Med Educ* 2009; 43: 121-126.
14 Gordon J, Hazlett C, Ten Cate O, et al. Strategic planning in medical education: enhancing the learning environment for students in clinical settings. *Med Educ* 2000; 34: 841-850.

Provenance: *Not commissioned; externally peer reviewed.*

(Received 7 Dec 2010, accepted 13 Mar 2011) ❑

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