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Braatvedt, C., Poole, P., Merry, A., Gorman, D., Reid, P., & Bagg, W. (2014). Fitness to practice of medical graduates: one programme's approach. *New Zealand Medical Journal*, 127(1405), 70-77. Retrieved from http://www.nzma.org.nz/journal/read-the-journal/all-issues/2010-2019/2014/vol-127-no-1405/6351

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ORIGINAL ARTICLE

Fitness to practice of medical graduates: one programme's approach

Claire Braatvedt, Phillippa Poole, Alan Merry, Des Gorman, Papaarangi Reid, Warwick Bagg

Abstract

Aim Doctors must ensure they are fit to practise medicine. There is a relationship between unprofessional behaviour at medical school and in subsequent medical practice. This study describes one programme's Fitness to Practice (FtP) policy and outcomes since inception in 2005.

Method FtP notifications were classified into: health or personal; professional attitudes, or external issues. Seriousness was classified as non-critical, critical or extraordinarily critical. Anonymous data were extracted and analysed from a confidential FtP database.

Results There were 157 FtP notifications involving 132 (5.5%) students. 87.2% were for issues with professional attitudes and 80.3% were non-critical. 17 students received more than one FtP notification. Students in clinical years were over-represented (p<0.0001) as were males (57% vs. 43%: p=0.0286). 96% of students continued the programme after remedial action. Two students were excluded from the programme on FtP grounds. The national regulatory body was notified of nine individual students with the potential for ongoing FtP concerns.

Conclusion Over 9 years, 5.5% of medical students received a FtP notification, with most of these isolated non-critical incidents of a professional nature. A small subset of students had repeated or serious concerns, underscoring the need for a FtP policy in any medical programme.

Doctors have a professional responsibility to ensure they are fit to practise medicine. The Medical Council of New Zealand (MCNZ) requires this in order to be registered. Being fit to practise includes making safe judgements, demonstrating the level of skill and knowledge required for safe practice, behaving appropriately, not risking infecting patients, and not acting in ways that impact adversely on patient safety. Description of the professional responsibility to ensure they are fit to practise medicine. The Medical Council of New Zealand (MCNZ) requires this in order to be registered. Being fit to practise includes making safe judgements, demonstrating the level of skill and knowledge required for safe practice, behaving appropriately, not risking infecting patients, and not acting in ways that impact adversely on patient safety.

In 2003, the Health Practitioners Competence Assurance Act (HPCAA) made it mandatory for the Dean of a medical programme to report to the MCNZ any student he or she believes is unable to perform the functions required for the practise of medicine because of a medical or physical condition.²

There is a relationship between unprofessional behaviour at medical school and subsequent disciplinary action by a medical board. In a retrospective case-controlled US study, Papadakis et al. found that disciplined doctors were three times more likely to have displayed unprofessional behaviour as a student than matched controls.³

Professionalism is now a core pillar of medical education internationally.⁴ However, evidence that this alone ensures professional behaviour in graduated doctors is limited.⁵ Despite the emphasis on professionalism in curricula, there may still be situations that raise concerns over a student's ability to practise medicine safely at graduation. Medical schools have developed policies for identifying and managing such students, but approaches vary and information on outcomes is limited.^{6,7}

Within this context, the University of Auckland introduced a Fitness to Practice (FtP) policy to the medical programme in 2005. The goal of the policy was to identify and, wherever possible, remediate students at risk of being unfit to practise after graduation. Nearly a decade later, we have reviewed our experience with implementing the policy, and described the outcomes for the students involved.

One international medical programme reported that more male than female medical students had problems with professionalism, and that there was a decrease in professionalism issues in the final years of study.⁵

We tested the hypothesis that notifications to our FtP process would be evenly distributed by gender, and by year of study.

Methods

Description of the University of Auckland FtP policy—The FtP policy is communicated verbally to students each year during orientation, and is contained in the guidebooks and on the learning portal: www.mbchb.auckland.ac.nz. The development of the policy was led by a former Head of the School of Medicine, Professor Iain Martin and was approved by the Board of Studies (Medical Programme).

The FtP policy is overseen by a FtP Committee which is a subcommittee of the Board of Studies. It is expected that most referrals will come from a Phase Director, Assistant Dean (Student Affairs) or Head of Department, but any academic member of Faculty or honorary teaching staff may refer a student to the process. Each clinical supervisor report form asks if there are any concerns about fitness to practice. If there are, the supervisor is encouraged to detail the concerns and/or discuss them with the relevant senior academic. In many cases, the senior academic will submit the FtP notification on the referrer's behalf. During their studies, students remain subject to the University's Discipline Committee. Each year, all students must sign to say they have read the programme policies and are aware of the consequences if they are breached.

FtP notifications are classified into three categories defined in the FtP policy as: health or personal issues; professional attitudes, or issues external to the programme. Once a written referral is received, its seriousness is assessed by designated senior academic staff, and then confirmed as non-critical, critical, or extraordinarily critical. Critical reports may be generated as a result of an isolated incident or as an escalation once the student has received three non-critical FtP notifications.

All referrals are actioned, with usual practice being that the student is asked to meet with key faculty staff to discuss. Further action depends on the nature of the incident. Students with non- critical notifications are usually managed internally by key staff soon after the event. Examples of internal remedial action include: acknowledgement of the issue and an acceptance of responsibility by the student; a directive to complete additional work; or counselling on the breach.

Critical or repeated notifications are referred to the FtP Committee for evaluation. The MCNZ is notified of any student with ongoing fitness to practice concerns that are below the threshold for exclusion at the time of graduation. The main purpose of this is to help transition the graduate to the workforce, through provision of adequate support and supervision. Where the nature of the concern is outside the statutory requirements for notification, namely mental or physical health concerns, permission to notify the MCNZ is sought from the student as part of the remediation process.

A hard copy of each FtP notification and subsequent correspondence are kept in a sealed envelope in the student file. If a student receives fewer than three non-critical notifications during the medical programme and all are resolved, these reports are removed from his or her file at graduation. Details of each notification are entered into a secure database, coded by student university ID number. The name of the staff member who submitted the notification, but not necessarily the staff member who initiated the referral is recorded.

Data extraction—The University of Auckland Human Participants Ethics Committee approved access to the FtP database for this study. Access to individual student files was not sought. Before analysis, each student ID number was replaced with a dummy study number by a person external to the research project. If a student had more than one FtP notification, he or she received the same study number for all their FtP entries.

Within each of the three FtP categories, notifications were sub-classified as follows:

Health or personal issues

- Mental health issues
- Physical health issues
- Other issues e.g. substance abuse

Professional attitudes

• Poor attendance: non-attendance at compulsory course requirements.

- Policy non-adherence: non-adherence to compulsory aspects of policy e.g. submitting vaccination certificate or guidebook declaration.
- Plagiarism: plagiarism of other people's work or letting others plagiarise theirs.
- Falsification: falsifying course work.
- Unprofessional behaviour: unprofessional behaviour and non-engagement on clinical attachments.
- Lack of professionalism in relationships: with patients, supervisors, or colleagues.
- Breaches of privacy: inappropriate access to medical files of patients, colleagues, or own medical records; breach of confidentiality.
- Poor communication with staff: not responding to repeated requests from staff or communicating inappropriately with staff.
- Dishonesty: minor theft; cheating in exams.
- Other.

Issues external to the programme

• Other: e.g. charged with drink driving.

Statistical considerations—Summary data and percentages are reported. Analysis was by academic and calendar year rather than longitudinally by cohort. As such the length of time a student was in the programme was not accounted for. Note that as students are selected into Year 2 of the medical programme after either a health sciences first year or prior degree, no Year 1 data are reported. Rather than compare the actual rate of FtP notification between genders or academic years, an estimated predicted number of FTP notifications was used as a comparator. This takes into account that both the number of females and males and the total number of medical students are different each year. Predicted values assume an even distribution of the total observed number of students with FtP notifications by gender and academic year. Categorical data were compared using Chi-squared tests, supplemented by binomial tests, with $P \le 0.05$ deemed statistically significant.

Results

Between 2005 and 2013, there were 157 FtP notifications involving 132 students in Years 2 to 6 of the medical programme. This is 5.5% of the 2382 students who entered the programme over this time. There were 17 students with more than one FtP notification, and the most any student received was five.

Over 75% of the notifications were made by senior staff with programme responsibility, with a further 11.5% by Heads of Departments or campuses. Another 11.5% were made by coordinators of attachments or supervisors. There were 33 individual staff members who submitted a FtP notification.

The majority of FtP notifications were for issues with professional attitudes (n=137, 87.2%). Table 1 shows the frequency and nature of notifications within each category. Each notification relates to a specific incident by a student. Some students had more than one notification and these are detailed in Table 2 and the text below.

Of the 17 students with more than one FtP notification, 10 (58.8%) had at least one which was deemed critical (see Table 2). Only three students had notifications across more than one category (nine individual notifications); the remaining 14 students received all of their notifications within the professional attitudes category. There were five students with more than two FtP notifications (0.2% of the total). Two of the 17 students with more than one notification were excluded from the programme, with the rest being able to continue their programme after engagement with the FtP process.

Table 1. Number of FtP notifications within each category

Health or personal		Professional attitudes		External issues	
Mental health	7	Poor attendance	41	Other	4
Physical health	5	Policy non-adherence	18		
Other	4	Unprofessional behaviour	16		
		Plagiarism	15		
		Falsification	13		
		Professional relationships	9		
		Privacy	8		
		Communication with staff	7		
		Dishonesty	6		
		Other	4		
Total	16	Total	137	Total	4

Table 2. Outcomes for students with more than one FtP notification

Student	Number of FtP notifications	Non-critical	Critical	Resolution	Outcome
1	2	2	0	Internal	Continued
2	2	2	0	Internal	Continued
3	2	2	0	Internal	Continued
4	2	2	0	Internal	Continued
5	2	2	0	Internal	Continued
6	2	2	0	Internal	Continued
7	2	2	0	Internal	Continued
8	2	1	1	Internal	Continued
9	4	3	1	Internal	Continued
10	2	1	1	FtP Committee	Continued
11	2	1	1	FtP Committee	Continued
12	3	2	1	FtP Committee	Continued
13	4	1	1	FtP Committee	Continued
14	4	3	1	FtP Committee	Continued
15	5	3	2	FtP Committee	Continued
16	2	0	2	FtP Committee	Excluded (BOE)
17	2	1	1	FtP Committee	Excluded (FtP & BOE)

Most of the total number of FtP notifications (n=126, 80.3%) were classified as non-critical, with 30 (19.1%) classified as critical and one (0.6%) as extra-ordinarily critical. A small number of the non-critical incidents may have cumulatively resulted in a critical FtP notification for an individual student.

The time trends in the proportion of students with FtP notifications are shown in Figure 1. There was a peak in 2007 during which 13 students received notifications for falsification of the same assignment. Another 10 students that year received notifications for failure to adhere to the policy regarding return of signed declarations or vaccination certificates.

Figure 1. Proportion of total number of students in calendar year with FtP notifications

The distribution of students with FtP notifications by gender is shown in Table 3. There were 23 students in the database where the gender was not recorded. On the basis of those whose gender is known, the number of males was significantly above the predicted value. (χ^2 =4.79, p=0.0286). This difference remains statistically significant if the 23 unknowns are assumed to have the average gender distribution (χ^2 = 4.33, p=0.0374).

Table 3. Students with FtP notification by gender

Gender	Percentage in programme	Predicted number of students with FtP *	Observed number of students with FtP
Males	45.5%	49.6 (39.4 to 59.8)	62
Females	54.5%	59.4 (49.2 to 69.6)	47
Unknown			23

^{*}Predicted mean value assuming notifications are evenly distributed by gender (95% confidence interval).

Over the study period, students in Year 5 had the highest number and proportion of FtP notifications, with students in Years 4 and 5 significantly above the predicted values. (χ^2 =30.22, p<0.0001, see Table 4). Some students received FtP notifications in more than one academic year; therefore, these students are counted twice.

Table 4. Students with a FtP notification by year of programme

Academic Year	Total number of students	Predicted number of students with FtP*	Observed number of students with FtP	Percentage of total number of students
Year 2	1704	30.8 (21.2 to 40.4)	10	0.6%
Year 3	1528	27.7 (18.5 to 36.9)	25	1.6%
Year 4	1570	28.4 (19.1 to 37.7)	38	2.4%
Year 5	1493	27.0 (17.9 to 36.1)	45	3.0%
Year 6	1386	25.1 (16.2 to 34.0)	21	1.5%
Total	7681	139	139	1.8%

^{*}Predicted mean value assuming notifications are evenly distributed by academic year (95% confidence interval)

Most students who had a FtP notification (127, 96%) were permitted to continue with the programme after engagement with the FtP process, although some underwent interim suspension or were required to repeat a year. Thirty three FtP notifications were referred to the FtP Committee. No student in the study was excluded or suspended from the programme without a FtP Committee hearing.

As a result of the FtP Committee hearing, two students were excluded, although one of these was on the basis of separate decisions by both the academic Board of Examiners and the FtP Committee. Two students were suspended, both of whom re-entered the programme at a later stage. Two other students were excluded by the Board of Examiners on academic grounds alone, whilst under monitoring by the FtP Committee. A further two students withdrew voluntarily from the programme on health grounds, and three further students repeated a year on academic grounds, and not as a result of the FtP process.

Since 2005, the FtP Committee has advised the Dean to notify the MCNZ of nine students with a potential future fitness to practise issue. Seven of these had physical or mental health concerns and two had issues with professional attitudes.

Discussion

Since the incorporation of a FtP policy into the Auckland medical programme nearly a decade ago, 5.5% of all medical students who entered the programme have received one or more FtP notifications. Over 80% were for isolated non-critical events, with the overwhelming majority relating to professional attitudes. Most students (96%) progressed to graduation with the majority having no ongoing concerns or limitations. Two students were excluded on FtP grounds and nine had ongoing FtP concerns at a level that required notification to the MCNZ on graduation. There was a modest excess of male students over females with FtP notifications, and higher than predicted numbers of notifications in Years 4 and 5 of a six year programme. Notification rates have remained relatively stable over time.

One strength of the study is that the policy was developed in collaboration with the regulator in NZ. Another is the prospective and systematic nature of data collection. The main limitation is the lack of validation of our system by linkage to the subsequent performance of graduates, or disciplinary action by MCNZ after graduation. Another important limitation is that FtP incidents may well simply be under-reported. There are acknowledged barriers to reporting which include staff being worried about the outcomes of reporting, the lack of self-confidence of some staff members, practical constraints (e.g. limited time), and the tutor-student relationship. Because the initial referrer's name is not always recorded in the database, analysis of reporting thresholds for individual staff is not possible. It remains important to continue to orientate all staff to the FtP policy and processes and encourage dialogue about FtP concerns to ensure FtP incidents are not under-reported.

The incidence of medical students referred to the FtP process is lower than that reported elsewhere but the proportion of students who received a FtP notification is comparable; unlike other programmes, all referrals to the Auckland FtP process result in a FtP notification.^{5,8} The different thresholds for referral and notification by other institutions are not well described. The incidence of student's unprofessional behaviour over a 6-year period at a UK medical school was 15%, with only 3% reaching the threshold for an informal or formal warning.⁵

There were similar results at the University of Queensland where 19% of enrolled medical students were referred to the Personal and Professional Development Committee, but only 5% were interviewed by the committee. A low but steady rate of FtP notifications through any medical programme is probably inevitable. At the time of selection, there is no reliable way to predict all students who are at risk of behaving unprofessionally or developing health problems. 5,4,9

The most frequent concerns in University of Auckland students closely mirror those reported internationally, namely: poor participation or attendance; irresponsibility, or impaired relationships with others in the healthcare or education environment.^{3,7,9} Like others, we found fitness to practice issues arose more frequently in male students.⁵ A Norwegian study by Dahlin et al found much higher

rates of mental health issues amongst medical students than reported here. ¹⁰ However, as only mental health issues that impact on fitness to practice are reported, the true incidence of mental health issues in the Auckland medical programme cannot be determined from this study.

Howe et al reported fewer students with FtP concerns in the later years of their 5-year undergraduate programme. They hypothesised the presence of a learning curve for students as they mature and better understand the behavioural expectations of the school and the profession. This is a plausible hypothesis, but was not supported by our findings. Students in Year 2 had fewer than predicted notifications, perhaps because this is a year with minimal exposure to the challenges and direct observation of clinical settings.

On the other hand we saw an excess in Years 4 and 5. Potential explanations are that students are under increased academic pressure in the clinical years or suffering from burn-out and thus are more likely to resort to unprofessional behaviour. We found the increase was not sustained in Year 6, which might be in keeping with the aforementioned hypothesis of Howe. Better understanding the varying rates of notification over the years of the programme is an area for future study.

International literature highlights the importance of clearly communicating behavioural expectations to students. Students may consider they are placed in a position of double jeopardy by the University's processes. For example, a student who plagiarised an assignment is likely to both fail the assignment and receive a FtP notification. They may also be referred to the University's Discipline Committee. Students are made aware of this, and told why these pathways are necessary. The Auckland FtP policy allows for students with one or two isolated non-critical events to be rehabilitated without further consequence. This is in accordance with the study of Papadakis et al which showed no significant relationship between incidents at this level and risk of subsequent disciplinary action.

Currently the MCNZ is notified of students with significant and ongoing FtP issues once they reach graduation. Employment offers have already been made by this time which limits the capability of the MCNZ or the employing health service to plan appropriate remedial actions. The move in New Zealand towards registration of final year medical students should facilitate the transition between undergraduate and early postgraduate education. Medical students are deemed to be healthcare providers when they become involved in and contribute to the management of patients. It follows then that they too should be fit to practise medicine.

The study opens several areas of future research. We might replicate the study of Papadakis et al by looking back at the student files of practising doctors with fitness to practice concerns.³ However, given that disciplinary cases are relatively rare, it would take years to collate sufficient data. Instead, validating the FtP process might be achieved more quickly by comparing the early postgraduate performance and progression of students with significant or frequent FtP notifications with those who have no such events.

A follow-up study of the nine students in the Auckland programme notified to the MCNZ would be of interest. Future studies using this database may have numbers large enough to include evaluation by cohort or of differences in other demographic measures, such as ethnicity or entry pathway. If differences were found, this may promote targeted student support efforts. Yates et al. found that academic difficulties at medical school were a predictor of subsequent unprofessional behaviour. An analysis of whether there was a relationship between poor academic performance and FtP notifications at our institution would be of interest.

There is also the question of whether professionalism concerns are best dealt with through the FtP pathway, academic processes, or both. We did not specifically address this question, but noted an overlap in a minority of serious cases between the decisions made by the FtP committee and the Board of Examiners. Wilkinson et al found a strong association between professionalism problems, and a student failing the year. ¹³

This study describes the University of Auckland medical programme's system for identifying and managing students with potential future fitness to practise concerns. Over nearly a decade, 5.5% of students who entered the programme received FtP notifications. Most of these were isolated non-critical incidents of a professional nature, with no long term consequences. A very small subset of students had repeated or serious concerns, underscoring the need for a longitudinal process with formal links to the local regulatory body.

Competing interests: Nil.

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Acknowledgment: We thank Kimberley Buckley of the MPD for assistance with data extraction and coding.

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Who wants to be a surgeon? Patterns of medical student career choice

Otis C Shirley, Ben Addison, Phillippa Poole

This study provides a longitudinal view of medical student interest in a surgical career. It showed female and older students are less likely to want a surgical career, but that there is currently enough interest to fill training positions. Work hours and flexibility were reasons students wanted careers other than surgery, whereas the influence of consultants/mentors can encourage a student to pursue surgery.

Agreement of clinical measurements of liver size with ultrasound when performed by medical students

Selena A Hunter, Justin Brimble, Mark Weatherall, Duncan C Galletly

It is important for doctors to locate the lower edge of the liver in patients, so that liver disease can be ruled out. There are four physical examination methods doctors can use to find the lower level, called the "percussion, palpation, ballottement and scratch" techniques. It is unclear which method is the most accurate. Our study compared each of these techniques to the "gold standard" of ultrasound localisation. We showed that there is no difference in accuracy between the four techniques using a statistical method called "bias". "Limits of agreement" statistical testing has shown that all methods are inaccurate, however "palpation" is the most reproducible, meaning it is the most likely to give the same results from different examiners. All methods underestimate the liver span compared to ultrasound examination.

Fitness to practice of medical graduates: one programme's approach

Claire Braatvedt, Phillippa Poole, Alan Merry, Des Gorman, Papaarangi Reid, Warwick Bagg

The University of Auckland introduced a Fitness to Practice (FtP) policy to the medical programme in 2005. The goal of the policy was to identify and, wherever possible, remediate students at risk of being unfit to practise after graduation. Over nearly a decade, 5.5% of students who entered the programme received FtP notifications. Most of these were isolated non-critical incidents of a professional nature, with no long-term consequences. A very small subset of students had repeated or serious concerns, underscoring the need for a longitudinal process with formal links to the local regulatory body.

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