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Medical education on fitness to drive: a survey of all UK medical schools

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► Appendix is published online only at <http://postgradmedj.com/content/vol84/issue998>

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ABSTRACT

Aim: To identify the extent to which medical aspects of fitness to drive (FTD) are taught within UK medical schools.

Methods: A survey of all 32 UK medical schools. In-depth interviews with a range of staff at two medical schools; telephone survey of 30 schools.

Results: Two thirds of schools reported specific teaching on medical aspects of FTD but few covered it in any depth or in relation to specific medical conditions. Only one school taught FTD in relation to elderly medicine. FTD was an examination topic at only 12 schools.

Conclusion: Teaching on FTD is inconsistent across UK medical schools. Many new doctors will graduate with limited knowledge of medical aspects of FTD.

There are a number of medical conditions which may have a significant impact on the ability to drive, including neurological, cardiovascular and psychiatric disorders and diabetes.¹ In addition, elderly drivers form an important subgroup of potentially at-risk drivers as morbidity increases with age.² However, previous studies have suggested a lack of knowledge among doctors regarding the FTD of their patients.³⁻⁶ King *et al* surveyed hospital doctors and general practitioners to assess knowledge of the laws and recommendations regarding FTD for particular medical conditions.⁷ They found that doctors had poor basic knowledge of FTD, concluding that this topic should receive more attention in undergraduate and postgraduate medical education. Morgan found that junior doctors tended to have a poor understanding of General Medical Council (GMC) guidelines regarding patient confidentiality and of general driving regulations.⁸ More recently, Ormerod and Heafield reported that knowledge of FTD among the medical profession and medical students remains inadequate.⁹ In Israel, Steier *et al* also reported poor awareness of the medical restrictions on FTD among physicians, recommending that FTD be included in medical education programmes.¹⁰

The UK Department for Transport (DfT) is aware that doctors do not routinely advise patients of how their medical condition may affect driving fitness or of their obligation to notify the Driver and Vehicle Licensing Agency (DVLA) regarding certain conditions. Consequently, as part of a larger study commissioned by the DfT into the knowledge of health professionals regarding FTD, all UK medical schools were surveyed to examine the extent of tuition on this topic. The objectives of this study were to identify whether UK medical schools offer specific teaching on FTD, if it is

examined, and to determine whether there is uniformity of teaching across schools.

METHODS

A survey of all UK medical schools was carried out throughout 2005 and 2006.

Questionnaire development

A structured questionnaire was devised using the results of a qualitative study conducted at two medical schools, one long established and one newly established. A synopsis of information from the qualitative survey is shown in box 1. The questionnaire (supplemental appendix 1) incorporated a number of open ended questions and covered the inclusion of medical aspects of FTD in the curriculum; areas or modules where FTD was specifically taught; when it was taught; and whether it was examined.

Participants

All 32 UK medical schools were involved. Of these, 19 schools were established before 1975 and deemed "older"; the 13 established after 1975 were "newer" schools.

The websites of each medical school were used to identify staff with a senior managerial or coordinating role within medical education. These personnel were contacted in order to determine the most appropriate person to interview regarding the school curriculum. Potential interviewees were then telephoned to either conduct the short interview there and then or to arrange a suitable time for future interview. Telephone interviews were conducted by researchers (NG and VdS) using the questionnaire. Questions were mostly open ended and interviewees were asked to expand on their answers where appropriate.

Data analysis

The data were analysed using SPSS v.14. Frequency counts were used to measure teaching and examination of FTD within modules and medical specialties. The χ^2 test was used to compare tuition and examination of FTD between old and new medical schools.

RESULTS

Personnel at all 32 UK medical schools were interviewed. Full details of the curriculum were not available for all schools. At the time of the survey, some of the newer medical schools (Brighton and Sussex, Hull-York, and Swansea) had not yet developed the curriculum for the final

Box 1: Qualitative study

In 2005, an in-depth study was carried out in one long established medical school (Birmingham) and one newly established medical school (Warwick). Using information taken from the respective medical school websites, those having a senior management/coordination role for the undergraduate medical course were contacted. Typically the role would be that of Dean, Course Co-ordinator, Course Director and/or Director of Medical Education. All interviews were conducted by telephone using a semi-structured interview schedule. Interviewees were asked if fitness to drive (FTD) was covered in undergraduate medical training and teaching and if so, the *extent* to which it was covered and the methods used to teach it. Following these interviews, teaching leaders in five specific areas (cardiovascular medicine; elderly medicine; diabetes; neurology; and psychiatry) were also interviewed. Tuition and teaching on FTD was reported as follows:

Medical school 1 (established)*FTD taught in modules on:*

- ▶ Medical ethics and law (routinely taught and examined)
- ▶ Cardiovascular medicine (routinely taught, sometimes examined)
- ▶ Neurology/epilepsy (routinely taught, sometimes examined)

FTD not taught or examined:

- ▶ Diabetes
- ▶ Psychiatry
- ▶ Elderly medicine

FTD taught during clinical placements—dependent upon clinical cases encountered

Students receive training on FTD in years 1 and 2 on patient confidentiality and are given copies of the GMC guidelines on confidentiality issues and DVLA guidelines on medical aspects of fitness to drive

Medical school 2 (new)*FTD taught in modules on:*

- ▶ Diabetes (routinely taught, possibly examined)
- ▶ Neurology/epilepsy (routinely taught, sometimes examined)
- ▶ Clinical pharmacology (sometimes taught, not examined)
- ▶ Social science (sometimes taught, not examined)
- ▶ Neurobiology (sometimes taught, not examined)

FTD not taught or examined:

- ▶ Cardiovascular medicine
- ▶ Psychiatry
- ▶ Elderly medicine

FTD taught during clinical placements—dependent upon clinical cases encountered

degree years. Two medical schools (Durham and St Andrews) taught undergraduates during the early part of medical training, with the final years of their course being completed elsewhere.

Of the 32 medical schools, 21 (65.6%) reported specific teaching on medical aspects of FTD within their curriculum. In

an open ended question, interviewees were asked to outline the topic areas or specific modules in which FTD would be covered. Across the 32 schools, a wide range of areas or modules which may include FTD teaching were reported (fig 1). Those areas most likely to involve FTD were: neurology, particularly in

Figure 1 Topic areas where fitness to drive is taught and number of medical schools offering tuition in each area.

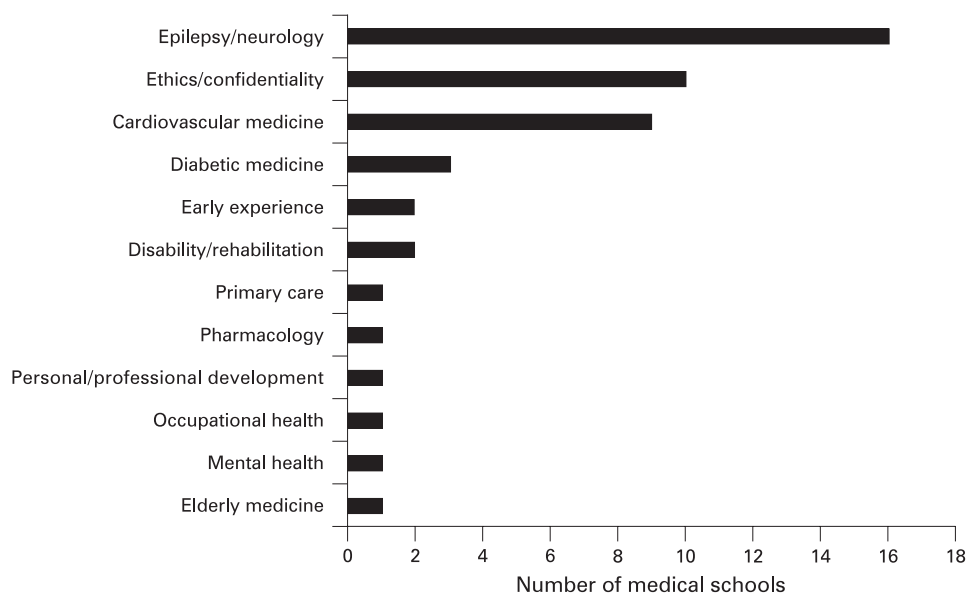


Table 1 The teaching of fitness to drive (FTD) in relation to specific topic areas

Topic	FTD taught (number of schools)	FTD possibly taught (number of schools)	FTD not taught (number of schools)
Elderly care	1	1	30
Diabetes	3	1	28
Cardiovascular	9	2	21
Psychiatric	3	2	27
Neurological	15	2	15

relation to epilepsy; medical ethics and patient confidentiality; and cardiovascular medicine. Least likely were elderly medicine; mental health; and occupational health. Only 10 medical schools taught FTD in relation to two or more topic areas.

Interviewees from all medical schools were then specifically asked if tuition on FTD was provided in relation to five key areas: neurology; cardiovascular medicine; diabetes; psychiatry; and elderly medicine (table 1).

Of the schools offering FTD tuition, most were unable to quantify the extent to which FTD was taught and only four schools gave a specific number of lectures or tutorials. Three of these schools reported just one lecture, the fourth reported one lecture and one tutorial. Only five schools claimed to offer teaching of FTD in any great depth. Twelve schools (38%) reported that they included FTD in examinations, although seven others suggested that FTD could *possibly* be an examination topic. The academic year in which these examinations might occur varied between schools.

Three-quarters of "older" (pre-1975) schools (14) offered some specific teaching on FTD compared to half of the "newer" schools (7), but this difference was not significant. There were no differences with regard to examination of FTD.

DISCUSSION

There was wide variation in the depth and breadth of teaching on FTD across medical schools. Only 21 of the 32 schools offered any specific FTD tuition to medical students. The majority of schools reported some teaching of FTD through self guided study, lectures/tutorials and/or clinical placements. However, only four schools were able to quantify the extent of FTD tuition, and for many schools FTD coverage was reported to be brief, inconsistent, or impossible to determine. One third of medical schools examined students on FTD issues.

Previous research has consistently reported poor awareness of medical aspects of FTD among medical practitioners, and investigators have called for FTD to be included in medical training.⁷⁻⁹ The findings of the present study suggest that most medical students do not receive routine training on FTD at medical school and that newly qualified doctors will continue to have limited knowledge of FTD.

Appropriate education of doctors on medical aspects of FTD and DVLA guidelines is in the interests of both patients and doctors. GMC guidelines state that it is a doctor's duty to advise patients whose FTD is in doubt,¹¹ and King *et al* highlight that doctors should be aware that they could be liable for prosecution if they fail to advise their patients accordingly.⁷ The UK licensing system is dependent upon the driver's self declaration of any medical condition which can adversely affect

What is already known on the subject

- ▶ Department for Transport figures show that 72% of the adult population hold a driving licence.
- ▶ Medical practitioners have poor knowledge of the Driver and Vehicle Licensing Agency (DVLA) medical rules on fitness to drive (FTD), and previous research has shown that patients are not routinely advised about how their medical condition may impair their driving.

What this study adds

- ▶ UK medical schools offer varying degrees of tuition on medical aspects of fitness to drive.
- ▶ In most schools, FTD is not taught in relation to specific medical conditions or in relation to elderly medicine.
- ▶ Medical aspects of FTD are examined by approximately one third of schools.
- ▶ Newly qualified doctors will differ in their knowledge of FTD depending upon where they were taught and the medical cases they encountered during clinical placements.

FTD, and it is therefore good practice for doctors to alert patients if their medical condition could affect driving. A recent DFT publication provides a useful list of medical conditions which are "clinical red flags" for potentially impaired driving.¹²

In the UK, there are currently over 33 million driving licence holders, and the proportion of older drivers is increasing.¹⁵ In the over 70 age group, 50% now hold a driving licence compared to 15% in 1975. However, only one medical school claimed to cover FTD issues within the field of elderly medicine. While old age is not in itself a bar to safe driving, the prevalence of medical conditions which can affect FTD is higher among older people.¹⁰ It is therefore recommended that issues relating to FTD are taught within the specialty of elderly medicine.

Limitations

There are difficulties in gaining an accurate assessment of the coverage of FTD for each medical school. The staff we interviewed were those who, according to course managers and coordinators, were best able to address our questions. However, even these individuals might not have complete knowledge of the curriculum. As was highlighted by some schools, much of students' learning is self driven or independent from the planned course content. It was also difficult to quantify the extent to which FTD might be covered in clinical placements. However, where staff were unsure, they mostly suspected that FTD coverage was not extensive. This suggests that FTD is of low priority for many medical schools, as indicated by the few schools which examine students on this topic.

Future work should be directed towards harmonising FTD tuition and examination across all medical schools.

Conclusions

Although the 1992 King study called for improvements in medical education, our own survey found that medical training on FTD remains inadequate. We suggest that this important

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issue receives universal coverage by UK medical schools, as knowledge of FTD among new doctors appears to be dependent upon the school they attended and the nature of their clinical placements.

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Competing interests: None.

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