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# The impact of education on the knowledge and documentation of Driving and Vehicle Licensing Agency (DVLA) driving restrictions by doctors

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**Key Points**
- Doctors' knowledge regarding DVLA driving restrictions for medical conditions is poor. Documentation of advice in medical notes is also inadequate.
- A simple educational tool, based on the published DVLA driving restrictions, significantly improved doctors' awareness of medical restrictions to driving.
- Education had minimal impact on improving documentation of advice given to patients.
- More regular education, care pathways, labels and patient leaflets, as well as use of the electronic patient record may improve the levels and quality of documentation.


## Abstract

*The impact of education on the knowledge and documentation of Driving and Vehicle Licensing Agency (DVLA) driving restrictions by doctors.*

*Introduction: Despite its importance for road safety and medical liability, knowledge of DVLA restrictions in medicine and their documentation is poor. We surveyed a range of doctors for their knowledge of DVLA guidelines. We then assessed the impact of an educational tool.*

*Method: Doctors from Foundation Year 1 (F1) to Specialist Registrars (SpR's) and General Practitioners (GP's) were surveyed twice with identical questionnaires (Round 1 and 2). The questionnaire assessed their knowledge of DVLA restrictions relevant to 12 common medical conditions. An informative handout was dispensed to doctors between rounds.*

*A simultaneous retrospective notes audit studied the same cohort of doctors. Actual documentation of advice given to patients was compared to that declared by the doctors in the questionnaire. All audit rounds were compared and statistically analysed to identify the impact of education on different conditions and grades of doctors.*

*Results: A standard was set at 100% for doctors informing patients appropriately and documenting discussion, as set out by the General Medical Council. 120 doctors were audited in round 1 and 52% completed Round 2. Awareness of relevant medical conditions was better than that for restriction duration. An educational tool improved awareness for medical conditions particularly in F2 doctors to SpR's. Education did not improve documentation, which was poor in both rounds.*

*Conclusions: A single educational intervention improves the awareness of DVLA restrictions, but not their documentation. We suggest more regular education, care pathways, labels and patient leaflets, as well as use of the electronic patient record to prompt documentation.*



## Keywords

*DVLA, Driving, Patients, Restrictions, Educational intervention.*


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## Abbreviations

DVLA, =Driver and Vehicle Licensing Authority


## Keywords

DVLA; driving; patients; restrictions: educational intervention


## Introduction

The Driver and Vehicle Licensing Agency (DVLA) provide clear guidance to doctors regarding medical conditions necessitating a restriction in driving.[1] The Secretary of State for Transport, acting through the medical advisers at the DVLA, sets the medical standards required to hold a valid UK driving licence.[1,2] The 1988 Road Traffic Act states: "it is the duty of the licence holder to notify the DVLA of any medical condition which could impair their ability to drive safely".[3] However, the General Medical Council (GMC) also states that a doctor should take steps to ensure their patients understand their responsibility to inform the DVLA where appropriate, and failing this should inform the DVLA directly.[4] Failure to inform patients in this manner has led to doctors being prosecuted for negligence.[5]

Doctors have been shown to have poor knowledge of DVLA medical standards.[5-8] This trend has been reproduced across most specialities.[8-12]. Documentation of advice regarding DVLA restrictions is also poor,[9,12] and the importance of ongoing undergraduate and postgraduate education in order to improve both knowledge and documentation is recognised.[7,9,10]

## Audit Objectives:

1. To establish whether doctors know whose responsibility it is to inform the DVLA when necessary.
2. To record awareness of which medical conditions carry a DVLA driving restriction and


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the duration for which the restriction applies.
3. To compare knowledge between different grades of hospital doctor and between hospital doctors and general practitioners (GP's).
4. To test the efficacy of using the published DVLA restrictions as a teaching intervention for doctors and to see which doctors respond best to this.
5. To audit documentation of DVLA advice in medical records.

## Methods

Junior doctors working at the Royal Hampshire County Hospital (RHCH), local general practitioners (GPs) and GP registrars (GPSpRs) from the Wessex Deanery were surveyed on two separate occasions (Round 1 and Round 2). This involved asking every doctor from all general medical, surgical and Emergency Medicine teams at the RHCH to complete the questionnaire through attending departmental teaching sessions and accessing doctors in the clinical work place. Attendance at the regional GPSpR teaching sessions allowed access to the GPSpRs for their assessment. These were face-to-face encounters to ensure the questionnaire was completed and at the same time allow the educational handout to be given to the doctor.

Twelve conditions commonly causing road traffic accidents were selected from DVLA guidelines for Group 1 license holders, published in February 2008.[1] The questionnaire was anonymous and assessed the doctors' knowledge of basic DVLA principles and restrictions surrounding these conditions. An educational handout was then given to each doctor completing a questionnaire, which summarized the guidelines. The questionnaire was then repeated in the identical fashion 2 months later.

| | Round 1 | Round 2 |
|---|---|---|
| F1 | 21 | 10 |
| F2/SHO/ST | 44 | 23 |
| GPVTS | 6 | 6 |
| SpR/middle grade | 13 | 5 |
| GP SpR | 23 | 12 |
| GP | 13 | 6 |
| TOTAL | 120 | 62 |

**Figure 1.** Demographics of doctors surveyed.

Simultaneously in the RHCH, medical notes from the same cohort of doctors in the Medicine and Emergency departments (ED) were retrospectively reviewed. We searched for all events in ED involving a fit or seizure, and all discharges from the cardiology ward after troponin positive myocardial infarction (MI) over a period of one month before the audit. We recorded whether DVLA advice was documented in the medical notes of patients before discharge for these two important conditions. A second review of notes was undertaken 2 months after distribution of the educational handout to determine the impact of the educational intervention.

The two audit rounds were compared using statistical analysis (Chi square and Z-test)

## Results

120 doctors were surveyed in total. 52% of those surveyed in Round 1 returned completed questionnaires in Round 2 after receiving the educational intervention.

There was a range of experience from Foundation Year 1 (F1) to fully qualified GP's.

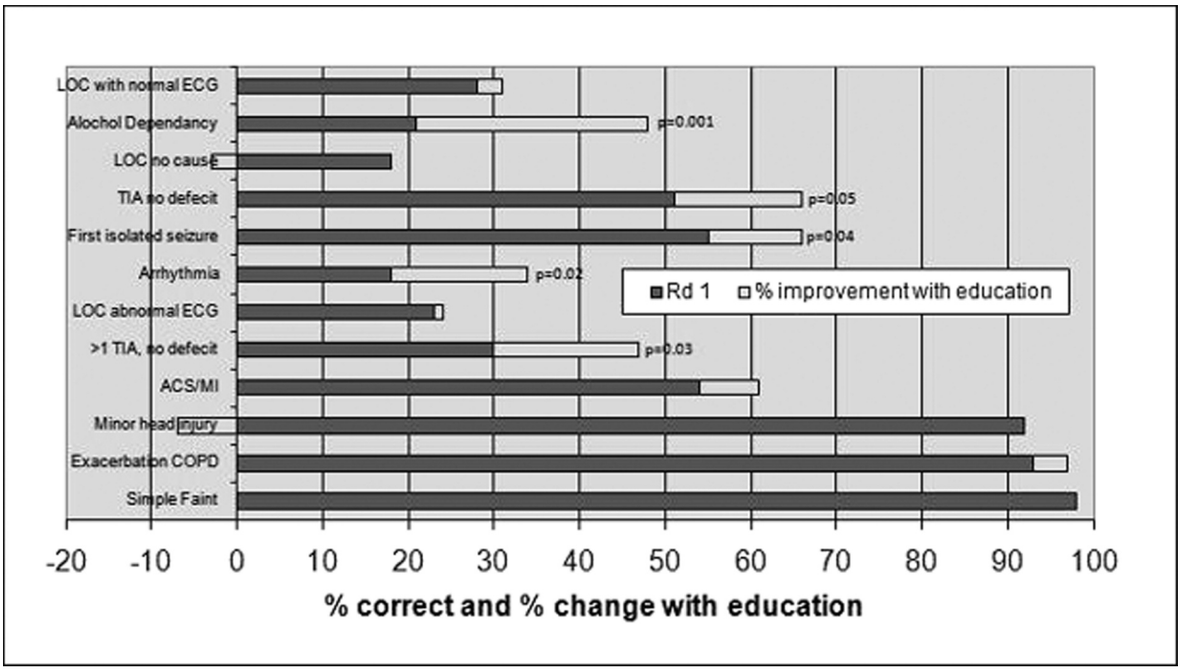



**Figure 2.** Average score for specific knowledge of length of DVLA driving restriction relevant to specific conditions in Rd 1. The % improvement in average score with educational intervention is demonstrated (eg. Rd 1 to 2), with a p-value shown where statistically significant improvement in scores.

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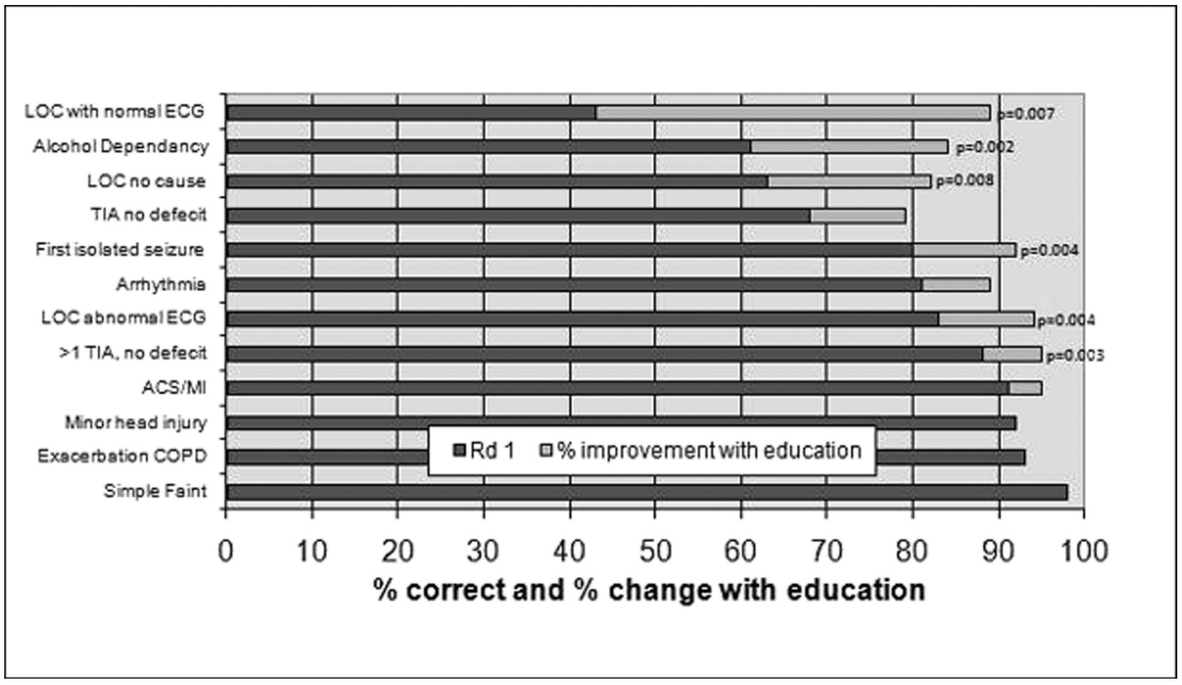



**Figure 3.** Average score for awareness of a DVLA driving restriction applying to a specific conditions in Rd 1. The % improvement with educational intervention is demonstrated (eg. Rd 1 to 2), with P value shown where there was statistically significant improvement in scores.

A standard was set at 100% for doctors informing patients appropriately and documenting discussion, as set out by the General Medical Council.[3]

94% of doctors recognized their duty to inform patients of relevant DVLA restrictions. However, only 60% of doctors knew that it was the patient's legal duty to inform the DVLA of their condition. These findings were consistent between Rounds 1 and 2.

Knowledge of the specific duration of restrictions for different medical conditions was poor (Figure 2). On average, correct answers were given 48% of the time. This improved to 56% ($p < 0.05$) after education. There was no clear pattern for this initial knowledge or improvement.

Doctors were aware which conditions had a driving restriction attached 73% of the time, although they may have been unsure as to their exact duration (Figure 3). There was an improvement with education to 86% ($p < 0.01$), particularly where initial awareness was poor.

Initial knowledge of DVLA restrictions tended to be better with higher levels of seniority, (Figures 4 & 5). Following education, all doctors demonstrated an improvement in their awareness (Figure 5). Improvement was most marked and statistically significant in Foundation Year 2 (F2) doctors, SpRs, and GPs. Doctors' knowledge of specific driving restriction duration was poor in both rounds but education significantly benefitted F2 doctors and GPs (Figure 4).

80% of doctors claimed to have documented DVLA advice in the notes in Round 1, with an improvement by a further 14% after education in Round 2. However, these claims were not confirmed by the audit of notes. Only 6% of patients discharged from A&E with a diagnosis of seizure had DVLA advice documented in the notes. This improved to only 11% in Round 2. Similarly, only 13% of discharged cases with a troponin positive MI from the medical directorate had DVLA advice documented by a doctor in the notes. This improved to 41% ($p = 0.06$) in Round 2.

## Discussion

Although nearly all doctors audited recognized their responsibility to inform patients of DVLA restrictions when necessary, this audit provides further evidence that doctors' knowledge is poor and falls short of the standard set by the GMC. This disparity is worrying given the medico-legal impact for both patient and doctor. Patients are poorly compliant with DVLA restrictions,[13] and this highlights the importance of the doctor's role in communicating and reinforcing these. This audit also provides some evidence that a simple targeted educational intervention could improve doctors' knowledge, which could theoretically contribute to a reduction of road traffic accidents for this patient group.

The number of doctors audited was restricted by the number of junior doctors available at the hospital. We were keen to see people face-to-face to ensure that they completed the questionnaire seriously and could at the same time be given the educational handout. The number included in Round 2 was lower than hoped as the rotation of junior staff between different jobs and antisocial shifts meant that it was not possible to see more of those who had completed the questionnaire in Round 1.

A single educational intervention does appear to improve doctors' knowledge of relevant driving restrictions, but not the exact duration of restriction (Figures 2 & 3). In Round 1, 95% of doctors were aware of the DVLA website and its provision of further information. We therefore suggest doctors should consider consulting the DVLA website if

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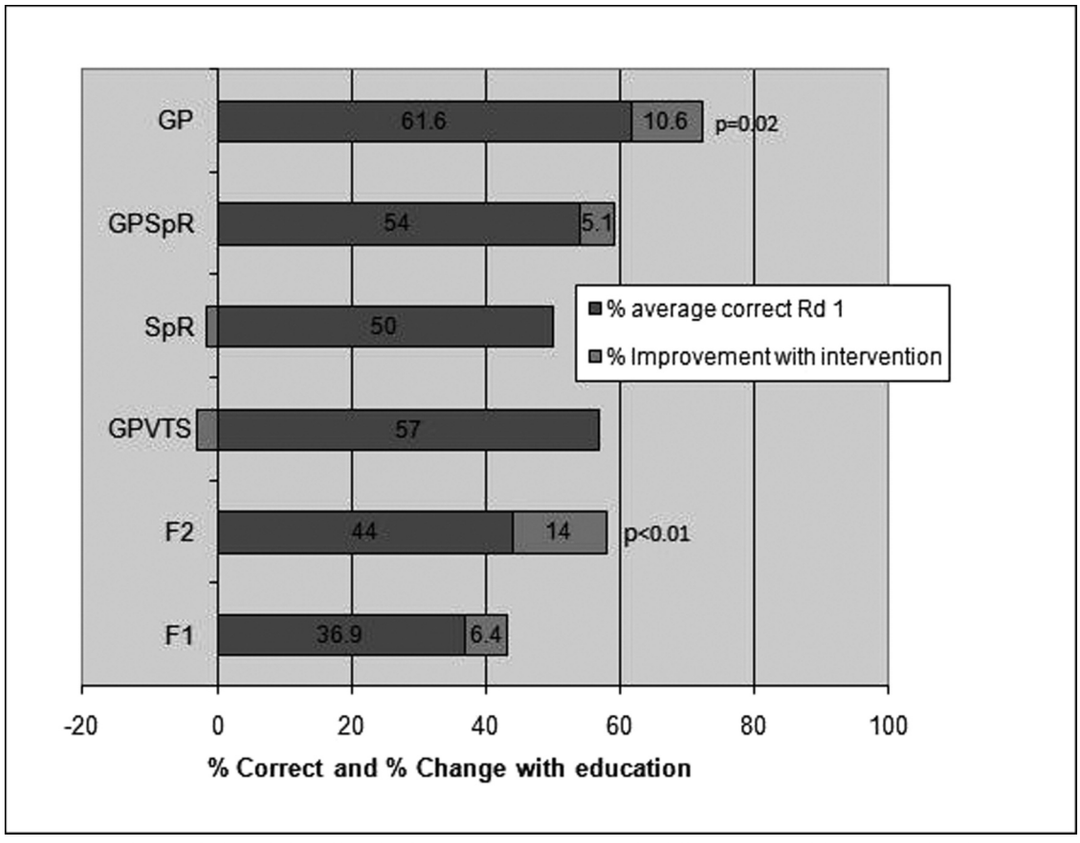



**Figure 4.** Average score for specific knowledge of length of DVLA driving restriction for different groups of doctors in Rd1. The % improvement with educational intervention is demonstrated (eg. Rd 1 to 2), with P value shown where statistically significant improvement in scores.

unsure about details once a medical condition has been recognized as carrying a restriction.

Doctors' knowledge surrounding a number of important common medical conditions is lacking. We feel that doctors should be aware of these without having to consult guidelines, for example, loss of consciousness, arrhythmias, transient ischemic attacks and seizures. Worryingly, only 80% of doctors knew that a first epileptic seizure or solitary fit requires a driving restriction.

Education is key at both undergraduate and postgraduate level if doctors' knowledge of the DVLA driving restrictions is to improve. Our audit suggests that a simple one-off educational intervention, as applied in this audit, has a significant impact, particularly for junior grade doctors. This is extremely relevant as these doctors are likely to be discharging patients on a day-to-day basis. Interestingly, F1 doctors did not seem to respond as well to the educational intervention. The underlying reason is uncertain; it may be that they have been more familiar with different educational methods or they may be saturated with other information in their first year of working as doctors. Regardless of these factors, education in relation to the DVLA guidance must be ongoing and should be part of the annual induction process for new doctors.

This audit supports previous studies showing that doctors are generally poor at documenting advice regarding DVLA driving restrictions.[12] In our hospital, this was most prevalent in the ED. In contrast, within the Medical department where care pathways exist for acute coronary syndrome, clinical nurse specialists documented DVLA advice in 87% of cases in Round 1 and 69% of cases in Round 2. Sharing responsibility with other healthcare professionals, by using care pathways for specific conditions, appears to improve documentation. As a consequence, for these conditions the Trust would be less vulnerable to medico-legal action. Care pathways have also been shown to be effective for patients presenting with acute stroke.[14]

Even if a care pathway is not suitable for all DVLA advice, stickers targeting a particular condition have been demonstrated to be effective.[12,14] Quick reference guides and patient information leaflets could also be used to good effect. However, this may not be practical for such a wide range of conditions and would add another layer of paperwork.

The future is likely to involve electronic patient record systems. Ideally, software could perform as a prompt to ensure doctors give DVLA advice. For example, when inputting a diagnosis of seizure, a pop-up DVLA warning box could appear. This could then link to an advice leaflet which could be printed out and automatically logged as having been given to the patient. Systems like this are already available in GP practice software. They provide a safeguard to ensure this important information is documented and communicated to patients.

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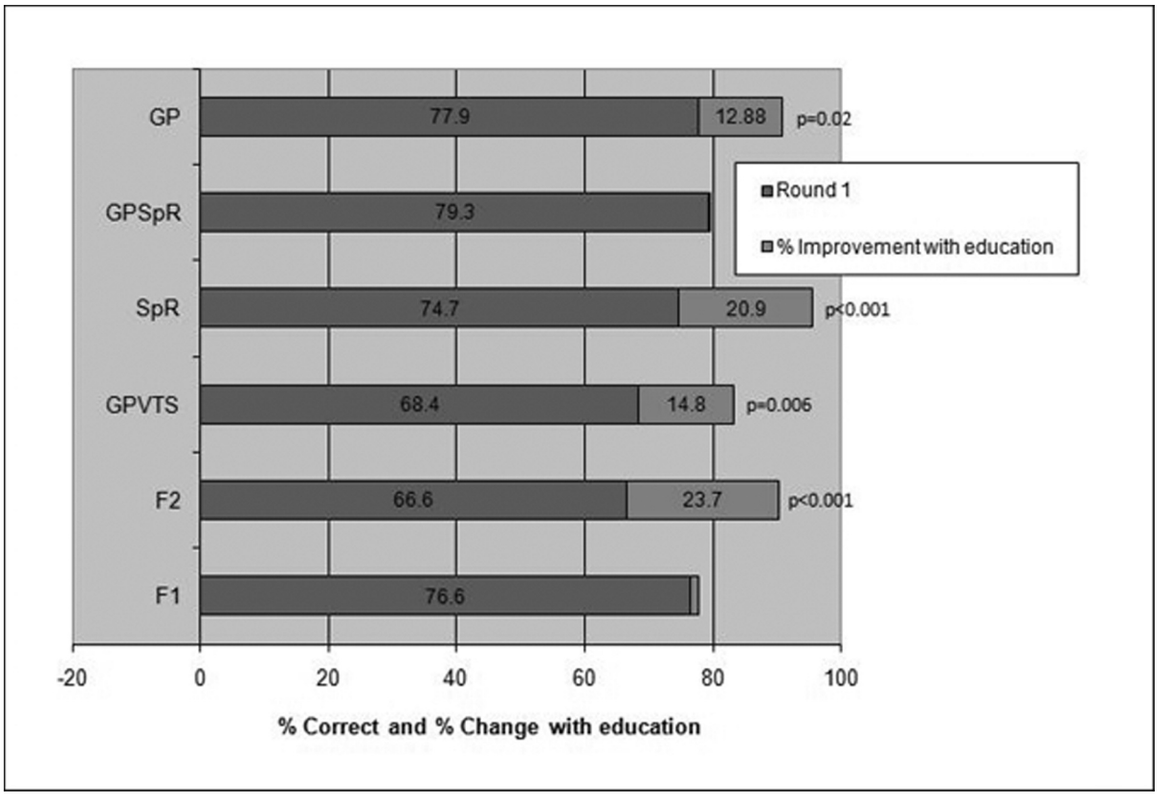



**Figure 5.** Average score for awareness of DVLA driving restriction for different groups of doctors in Rd 1. The % improvement with educational intervention is demonstrated (eg. Rd 1 to 2), with P value shown where there was statistically significant improvement in scores.

## Conclusion

Doctors' knowledge regarding DVLA driving restrictions for medical conditions is poor. Documentation of advice in medical notes is also inadequate. However, a simple educational tool, based on the published DVLA driving restrictions, significantly improved doctors' awareness of medical restrictions to driving. Unfortunately, education had minimal impact on documentation.

A broad and consistent approach is needed to ensure that DVLA guidance is provided and documented. This should include regular education at undergraduate and postgraduate levels, and the use of care pathways, stickers and provision of leaflets and handouts. The future would ideally embrace using the electronic patient record to provide reminders and facilitate documentation of DVLA guidance.

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