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Driving and Psychotropic Medications: What Do Psychiatrists and Service Users Really Know?

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Abstract

Aims
We ascertained the level of psychotropic medication use among drivers from a sample population and examined whether psychiatrists and mental health service users are sufficiently informed about the effects of medications on driving ability and about drug-driving legislation and guidelines in Ireland.

Methods
This cross-sectional survey included a convenience sample of 50 service users aged 18 and over who presented to the acute psychiatric unit in Portlaoise, Laois-Offaly Mental Health Services (LOMHS) for urgent psychiatric assessment, along with a survey of 37 doctors working with LOMHS.

Results
Almost half of surveyed service users (46%) reported that they currently drive, with the majority of these (78%) driving most days. Sixty-one percent (61%) of drivers reported taking psychotropic medication, with 64% of these taking more than one medication. Of 17 doctors who returned questionnaires, 8 (47%) reported that driving and medication use is a common concern in their practice, while only 1 (6%) had received training in relation to assessing medical fitness to drive. Overall, 94% (16) of clinicians and 54% of service users (rising to 71% for service users who drive and take medication) expressed a need for more information about this topic.

Conclusion
In this sample, the majority of mental health service users who drive do so while taking prescribed medications and they are unclear on the implications. Furthermore, there are significant deficits in training for psychiatrists in the area of assessing medical fitness to drive. Therefore, considering the potential serious risks involved, there is a clear need for more information and training about this topic for both clinicians and service users alike.

Introduction

For most people, driving represents freedom and independence. Nevertheless, it remains one of the most dangerous activities that many people perform on a daily basis. According to data from the Centres for Disease Control and Prevention (CDC), unintentional injury is the leading cause of death in the US for people aged between 1 to 44 years[1], and motor vehicle accidents are the leading or second leading cause of such injuries, depending on age[2]. In the Republic of Ireland, between 158 and 193 people lose their lives[3] and approximately 7000 to 9000 more are injured[4] each year as a result of road traffic accidents.

Overall, relatively little is known about driving with mental health conditions: the available literature is small, disjointed and generally of low quality and further large-scale controlled longitudinal studies are needed in order to expand the evidence base for medical fitness to drive (MFTD) recommendations[5]. When focusing specifically on the impact of medications on driving, multiple studies have reported an increased risk of motor vehicle accidents with the use of benzodiazepines[6], and it is known that some other psychotropic medications, e.g. sedating antidepressants[6] and opioids[7] also have a potential to endanger driving safety. To add to this, a large case–control study in the Netherlands by Ravera[6] found a statistically significant association between increased traffic accident risk and the exposure or chronic use of SSRIs, which has to be explored further.

It is important to note that it can be difficult to clearly separate the impact on driving caused by medication and the condition itself for which the drug is being used and that there is also an individual variability of medication effects depending on the person's tolerance, genetics, interactions with other consumed substances etc[7]. Additionally, the majority of the studies have analysed the effects of broad medication groups, whereas it is possible that individual drugs within these groups may differ in their driver-impairing potential[7].

In Ireland, the latest published annual report by The Medical Bureau of Road Safety revealed that 72% of 1133 specimens from drivers were positive for illicit and/or prescribed drugs, with benzodiazepines being the second most prevalent (21%) drug class confirmed, after cannabis (62%)[8]. Although driving under the influence of drugs has been a statutory offence in Ireland since 1961, it was only since April 2017 that new preliminary roadside drug testing was introduced (for the presence of cannabis, cocaine, opiates and benzodiazepines), prompting discussion about the use of psychotropic medications and driving.

We conducted this study to estimate the level of psychotropic medication use among drivers from a sample population and, secondly, to determine whether psychiatrists and mental health service users are sufficiently informed about the effects of medications on driving ability and about drug-driving legislation and guidelines in Ireland.

Methods

Participants of this cross-sectional survey included a convenience sample of 50 service users along with 37 doctors working with Laois-Offaly Mental Health Services (LOMHS). All respondents signed a participant consent form and completed a questionnaire which had been developed for this study. Service users aged 18 or older were included in the study if they presented to the acute psychiatric unit in Portlaoise, LOMHS, for urgent assessment or admission between March to May 2018 and were able to provide informed consent. Inclusion of participant service users was limited by the working hours and other clinical responsibilities of the research NCHD (S.V.), e.g., service users who presented out of hours or during the time when S.V. was on leave could not be included. All Consultant Psychiatrists and NCHDs working in LOMHS during the study period were included. Ethical approval was granted by the Midlands Research Ethics Committee. Data was analysed using Microsoft Excel 2013 program.

Results

The age of the surveyed service users varied between 18 and 67, and 31 (62%) were female. Twenty-five (50%) of service users reported having a current driving licence or learner permit and 23 (46%) reported that they currently drive, with the majority of these (18; 78%) driving most days. Fourteen (61%) of drivers reported taking psychotropic medication, with 9 (64%) of these taking more than one medication. The most common medication groups used by drivers were antidepressants (12; 52%) and anxiolytics (8; 35%), followed by hypnotics and antipsychotics (each used by 4 (17%) of drivers), and mood stabilizers (2; 9%).

Seventeen out of 37 doctors returned questionnaires (response rate 45.9%). Eight (47%) of clinicians reported that driving and medication use is a common concern in their practice, while only 1 (6%) had received training in relation to assessing patients' medical fitness to drive. Up to 8 (47%) of clinicians were unaware of particular aspects of drug-driving legislation/guidelines (see Figure 1).

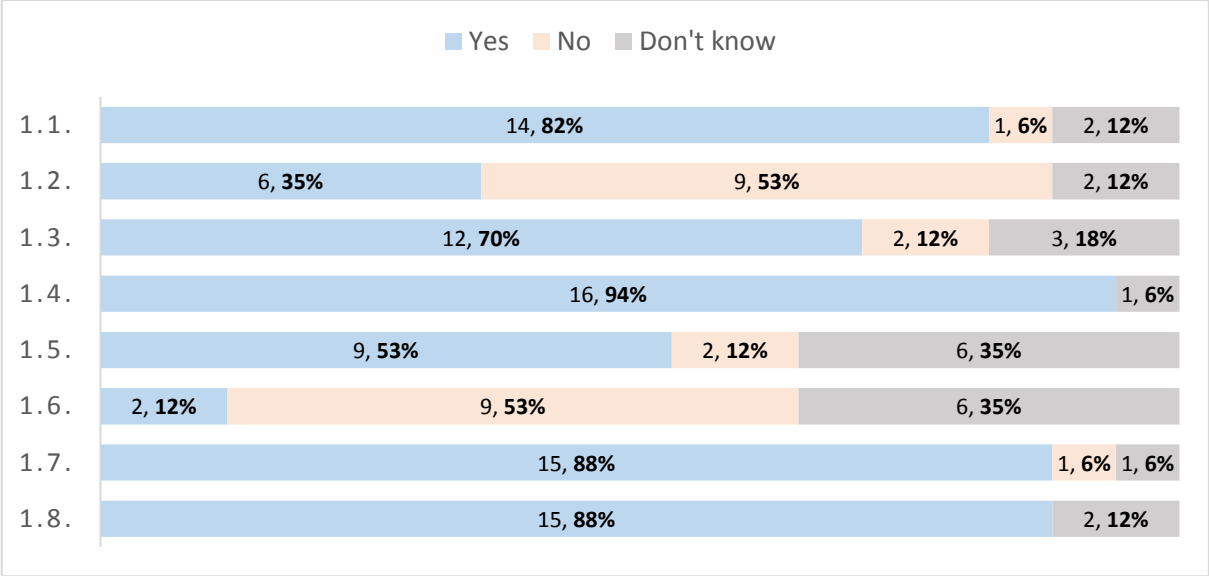

Figure 1. Psychiatrists' answers to the following questions (absolute value and percentage):

1.1. *All medications which are acting on central nervous system can potentially impair driving performance.*
1.2. *If patient is taking psychotropic medication for which he/she has a valid prescription, then he/she cannot be prosecuted for drug driving.*
1.3. *Psychiatrists working in Ireland should routinely consider their patients' fitness to drive.*
1.4. *Psychiatrists working in Ireland have an ethical obligation to advise their patients regarding potential impact of psychotropic medication on their driving ability and whether it is appropriate and safe for them to continue driving.*
1.5. *Psychiatrists working in Ireland have a legal obligation to advise their patients regarding potential impact of psychotropic medication on their driving ability and whether it is appropriate and safe for them to continue driving.*
1.6. *Psychiatrists working in Ireland must always inform National Driver Licence Service (NDLS) if they have any concerns that their patient's driving ability might be negatively affected by psychotropic medication.*
1.7. *It is patient's duty to notify National Driver Licence Service (NDLS) if they have been advised by their health professional to cease driving.*
1.8. *It is patient's duty to notify their insurance provider if they have been advised by their health professional to cease driving.*

The majority of service users (41; 82%) and doctors (11; 65%) reported that the introduction of roadside drug testing had not as yet impacted their life or clinical practice respectively, but 6 (12%) of service users and 4 (23%) of psychiatrists reported that they were not aware of the changes in legislation. Two (12%) of psychiatrists reported that their clinical practice had changed after the introduction of roadside drug testing, e.g., they now advise patients not to drive while taking benzodiazepines and patients sometimes look for more information, prescription copies or supporting letters regarding their driving. Overall, 16 (94%) of clinicians and 27 (54%) of service users (rising to 10 or 71% for service users who drive and take medication) expressed a need for more information about this topic.

Discussion

The proportion of service users who hold a driving licence or learner permit was found to be 50% in the sample population of this study, which is a significantly lower rate in comparison to Irish general population: based on the Census 2016 data on the Ireland's population aged 15 and above (3,755,313)[9], and the Road Safety Authority's statistics from 2016 on the number of current full driving licences (2,570,871)[10] and learning permits (249,657)[11], we can estimate that at least 75% of people in Ireland who have reached the minimum age for driving hold a driving licence or learner permit. The results may have been skewed by the selection method and demographics of the sample, e.g. the largest group in this sample was young females aged 18-29. Furthermore, as the study was conducted in an acute psychiatric setting, participating service users may be more likely to have mental health difficulties in the more severe range. However, a study by Brunnauer[12] looked at the driving status of 1497 psychiatric inpatients in Germany and concluded that 67% reported to have a valid driver's licence, with 77% using their cars regularly.

Regarding the prevalence of psychotropic medication use among service users who drive, the 61% rate found in this study may be an underestimate: for some service users this was their first contact with mental health services and, following assessment, they received a prescription for psychotropic medication, which was not reflected in this study.

This study confirms that there is a clear need for education and training for psychiatrists on the assessment of medical fitness to drive (MFTD). Ryan et al[13] surveyed 299 experienced Occupational Physicians and Psychiatrists in UK and Ireland about fitness to drive and found that the professional opinion among them is highly variable and differs from the current Irish and UK guidelines. In contrast, a study by Kahvedžić et al[14] demonstrated a high level of awareness of the national MFTD Guidelines among Irish general practitioners (GPs) following an extensive educational programme in traffic medicine, which possibly could be adapted to psychiatry. Other acceptable forms of educational supports according to surveyed GPs would be resource packs for continuous medical education, small group learning, MFTD software or an online moodle[14].

Service users also reported a need for more information about this topic, indicating that psychiatrists in Ireland may be doing poorly in relation to giving or documenting driving advice. In one study, none of the audited clinical notes had specific documentation about driving, which only improved to 7% on re-auditing[15].

This study had some limitations, including a small sample size selected from an acute assessment setting, a low response rate for the psychiatrists surveyed and potential for bias due to the use of self-report questionnaires. However, considering that the topic of psychotropic medication use and driving has been understudied in Ireland to date, this study provides interesting data and demonstrates the need for further research in this area. It would be useful to expand future research projects by incorporating details on psychiatric diagnosis and specific medications (including analysis of any differences in the impact of long-acting versus short-acting benzodiazepines).

In conclusion, the majority of mental health service users who participated in this study drive while taking prescribed psychotropic medications and most are unclear on the implications. Furthermore, there are significant deficits in training for psychiatrists in the area of assessing medical fitness to drive. Therefore, considering the potential serious risks involved, there is a clear need for more information and training about this topic for both clinicians and service users alike.

Declaration of Conflicts of Interest:
The authors have no conflict of interest to declare.

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