Driving and hypoglycaemia: questions and answers

Ian Gallen, Stephanie Amiel, Tony Robinson, John McKnight, on behalf of the ABCD Committee

We would like to clarify the Association of British Clinical Diabetologists (ABCD) response to the recent European Union directive on standards for driving in diabetes. These changes have been adopted and, although clarification has been sought regarding severe hypoglycaemia, there are no exceptions to the regulations that have been brought in.

These will have a significant impact on drivers with diabetes treated with insulin (and in some cases sulphonylurea treatment), and for those who complete medical reports for the Driver and Vehicle Licensing Agency (DVLA).

What are the changes?
The most important change is that where a Group 1 driver (car/motorcycle) has had two or more episodes of hypoglycaemia requiring assistance from another person at any time (including when sleeping) in a year, they must inform the DVLA, and be advised not to drive. A Group 2 driver (bus/lorry) with one or more episode(s) of hypoglycaemia requiring the assistance of another person in the previous 12 months must inform the DVLA and be advised not to drive.

What constitutes a reportable hypoglycaemic episode?
Hypoglycaemia requiring assistance from another person at any time of day or night constitutes an episode for reporting purposes. The requirement of assistance would include admission to Accident and Emergency, treatment from paramedics, or from a partner/friend who has to administer glucagon or glucose because the patient cannot do so themselves. It does not include another person offering or giving assistance, in circumstances where the patient was aware of his/her hypoglycaemia and able to take appropriate action independently. It follows that, when filling in the questionnaire, great care is taken to elicit an exact history of each episode, and it would be sensible to chart this information carefully in the patient’s records. Primary care teams should consider referral to the specialist team for patients who have suffered a single hypoglycaemic attack requiring assistance, where a second episode might result in loss of employment.

What about patients who do not tell you about hypoglycaemia?
Many patients do not inform their doctor about hypoglycaemia. However, reports of hypoglycaemia may be sent from the ambulance team or Accident and Emergency to the patient’s registered GP. If you are informed that a patient has required treatment to manage hypoglycaemia, it would be sensible to see the patient and inquire about the frequency and severity of hypoglycaemia. For Group 1 drivers, with two episodes of hypoglycaemia requiring the assistance of another person within the previous 12 months, the doctor must inform the patient that they need to notify the DVLA and advise the patient not to drive. This advice should be charted. A Group 2 driver with one such episode in the previous 12 months should be advised not to drive and notify the DVLA. A referral to specialist care would be appropriate.

What about suspected unconfirmed nocturnal hypoglycaemia?
In some interviews, it may be suspected that severe nocturnal hypoglycaemia is present in a patient sleeping on their own, but not witnessed or treated. This would not necessarily constitute an episode for reporting. However, if the clinician has concerns it may be appropriate to advise the patient to notify the DVLA. Paradoxically, people sleeping on their own, with nocturnal hypoglycaemia, may be advantaged in terms of maintaining their driving licence, although clearly not in terms of overall well-being. Similarly, data while using continuous glucose monitoring devices or other evidence of hypoglycaemia may not constitute evidence to stop driving in the absence of symptoms unless the clinician has concerns. However, where hypoglycaemia with reduced awareness is suspected, a referral to specialist care would be appropriate.

What about confirmed asymptomatic biochemical hypoglycaemia?
Most clinicians will have experienced interviews when the patient has current or describes previous biochemical evidence of asymptomatic hypoglycaemia on capillary glucose testing, or the patient’s home glucose monitor-
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There may be episodes of blood glucose below 3mmol/L for which the patient reports no symptoms. This supports a diagnosis of hypoglycaemia unawareness. Such patients are likely to have cognitive dysfunction during hypoglycaemia, of which they are not subjectively aware, and they are at increased risk of severe hypoglycaemia. Such episodes require a clinical response. Any degree of hypoglycaemia must be treated before driving and the patient should not drive until recovery is complete. Evidence of reduced awareness of hypoglycaemia will require treatment regimen review and a referral to specialist care would be appropriate. If hypoglycaemia below 3mmol/L, without any subjective awareness is characteristic of the patient’s hypoglycaemia experience, the patient may be defined as completely unaware and should report this to the DVLA and be advised not to drive.

**How should we define hypoglycaemia unawareness?**

There is no clear guidance on this. For Group 1 drivers the new regulations allow for a licence to be revoked or refused if the patient has impaired awareness and require this if there is complete unawareness. As there is evidence for cognitive dysfunction around 3mmol/L, people who are asymptomatic when under this glucose concentration are at risk for impaired performance without awareness. Given the inter-person variability for this and the margin for error in home glucose monitoring, a clinical assessment is advised.

Group 2 drivers are required to have full awareness of hypoglycaemia and any degree of impaired awareness would result in the licence being revoked or refused.

**Hypoglycaemia during pregnancy**

Severe hypoglycaemia during pregnancy is counted in the same way as other hypoglycaemia, even though these episodes tend to be concentrated during the first half of pregnancy. Pregnant women should be counselled as previously about the need to monitor their blood glucose before driving.

**What are my responsibilities in a patient who continues to drive but has hypoglycaemia unawareness?**

Some people will not inform the DVLA that they are having hypoglycaemia requiring assistance.

When any doctor is aware that a patient is not fit to drive, they should advise the patient not to drive and to notify the DVLA. If you become aware that the patient does not notify the DVLA, or refuses to do so, you are allowed under General Medical Council guidelines to notify the DVLA yourself. It would be good practice to confirm this conversation in writing to the patient so that there is no doubt about the advice. This should be documented in the patient notes. It is up to the DVLA to revoke/renew a licence. The doctor may also want to inform the patient that their insurance is no longer valid.

If the doctor feels the patient is not fit to drive or they have concerns but are not sure if the patient is fit to drive, they should advise the patient to notify the DVLA and document this in the notes.

**What about patients on sulphonyureas or glinides?**

Drivers with a Group 1 licence on insulin have been advised to test their blood glucose before driving. If this practice were to be encouraged in patients on sulphonylureas, it would increase enormously the cost of blood glucose monitoring. The greatest risk of hypoglycaemia is in the first three months of sulphonylurea treatment, so it would seem sensible to maintain current practice and only encourage extra testing in those patients who are starting treatment, experiencing hypoglycaemia, or with reduced awareness. A medication review should also take place, to reduce the risk. For Group 1 drivers (car/motorcycle) the diabetes panel has advised that the frequency of blood glucose monitoring should depend on the clinical context. It is worth noting that the highest risk for hypoglycaemia in people with type 2 diabetes prior to insulin therapy is late afternoon.

A Group 2 driver (bus/lorry) on a sulphonylurea or glinide is required by law to monitor blood glucose at least twice daily and at times relevant to driving.

**My patient wants to drive a Group 2 (bus/lorry) vehicle: what are the changes?**

A further change in the regulations enables people with insulin treated diabetes to apply for any Group 2 licence. Group 2 vehicles originally called HGVs (Heavy Goods Vehicles) and PSVs (Public Service Vehicles) are now classified as Large Goods Vehicles (LGVs) and Passenger Carrying Vehicles (PCVs). These Group 2 drivers with insulin treated diabetes must monitor blood glucose at least twice daily and at times relevant to driving using a glucose meter with a memory function to measure and record blood glucose levels. They will require an annual examination by a consultant diabetologist and will have to have three months of blood glucose readings available for inspection at this examination.

**What is a safe blood glucose concentration for driving?**

In a patient with good hypoglycaemia awareness, a normal blood glucose concentration is adequate, although we recommend testing before and at no longer than 120-minute intervals during driving. For patients with impaired awareness, we recommend not driving without eating if the blood glucose is under 7mmol/L, although a lower concentration (above 5mmol/L) is probably safe for a drive of under 10 minutes.

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