

How Much Do Patients Attending a Secondary Care Diabetes Clinic Know About The Safe Principles of Driving?

C. Seyani¹, K. Dhatariya²

¹School of Health Policy and Practice, University of East Anglia, ²Elsie Bertram Diabetes Centre, Norfolk and Norwich University Hospital NHS Foundation Trust, Norwich UK

Background:

Driving is a complex task requiring high levels of concentration, visual-spatial awareness, and cognitive function in a rapidly changing environment. The sympathetic nervous system is usually activated when the blood glucose drops to 3.7 mmol/L or less and cognitive dysfunction begins to occur when the blood glucose drops to less than 3.0 mmol/L¹. Hypoglycaemic unawareness increases with a) Increased duration of diabetes and b) Frequent, recurrent hypoglycaemia. However, even in the face of hypoglycaemic unawareness, cognitive dysfunction remains an issue. Previous work has shown that low blood glucose levels impair driving skills²⁻⁴. In addition, that the levels of knowledge about driving amongst patients attending diabetes clinics has been variable⁵

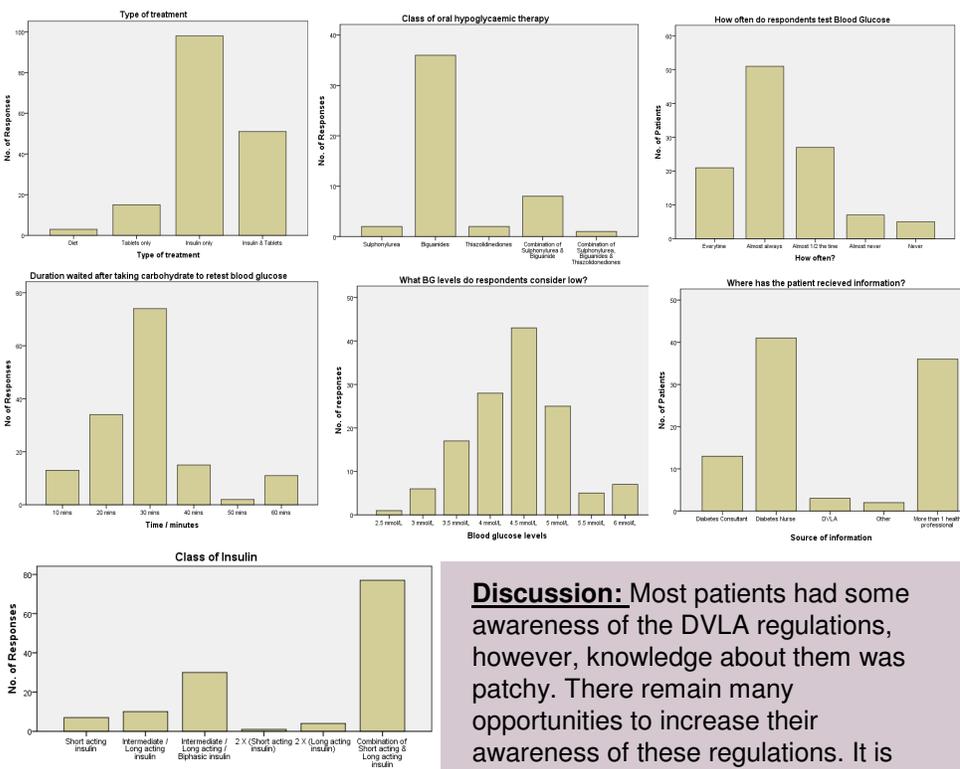
Current DVLA Guidelines on Diabetes and Driving⁶:

- Not drive if blood glucose is less than 4.0 mmol/L
- Only resume driving 45 minutes after blood glucose has returned to normal
- To check blood glucose before driving (even on short journeys) and test regularly (every 2 hours) on long journeys
- If blood glucose is 5.0 mmol/L or less, take a snack before driving

Aim: To determine what the level of knowledge was amongst the patients attending the Elsie Bertram Diabetes Clinic at the Norfolk and Norwich University Hospital NHS Foundation Trust

Method: A 16 item, 1 page questionnaire was handed to all patients attending the Elsie Bertram Diabetes Clinic between 11th January 2010 and 5th of February 2010. They filled this out whilst awaiting their appointment

Results: Over 300 questionnaires were given out, with 195 responses received. Of these, 26 were excluded due to a variety of reasons. M:F 114 (67.5%):48 (28.4%) – no reply from 7 (4.1%). Mean age of respondents 54.2 years (19-85)



Norfolk and Norwich University Hospitals NHS Foundation Trust

Please take a few minutes to fill out this survey concerning DIABETES AND DRIVING whilst you are waiting for your appointment. This is completely ANONYMOUS and your answers will be kept CONFIDENTIAL. Please return to the reception before you see the team. Elsie Bertram Diabetes Centre welcomes your feedback. Thank you for your participation.

How old are you? [] Please circle: Male / Female

Please enter age at diagnosis: [] Please circle Type of diabetes: 1 or 2

Please circle your treatment:

Diet only Tablets Insulin only Insulin & Tablets Diet & Tablets

If insulin only, were you on tablets for your diabetes for more than six months before starting insulin
 YES [] NO []

Please write type of tablets:
 Please write type of insulin:

Do you drive? [YES] [] [NO] → END OF SURVEY THANKYOU FOR YOUR PARTICIPATION

What is your estimated annual mileage? Please circle:
 Less than 5000miles 5000 to 10,000miles 10,000 to 20,000miles More than 20,000miles

Does the DVLA know that you have diabetes? Please circle: YES NO

If you drive, do you test your Blood glucose levels a half hour before driving?
 YES [] NO []

If YES, How often do you do this?
 Every time [] Almost always [] Almost 1/2 the time [] Almost Never [] Never []

If you do test, what level of blood glucose would you consider is too low to drive?
 2 [] 2.5 [] 3.0 [] 3.5 [] 4.0 [] 4.5 [] 5.0 [] 5.5 [] 6.0 []

If your blood glucose were too low to drive and you have taken steps to correct your blood glucose, how long would you wait before retesting?
 10mins [] 20mins [] 30mins [] 40mins [] 50mins [] 60mins []

How long would you drive at a stretch before re-testing you blood glucose?
 30MIN [] 1 1/2 HR [] 2HR [] 2 1/2 HR [] 3HR [] 3 1/2 HR [] 4HR [] 4 1/2 HR [] 5HR [] 5 1/2 HR [] 6.0HR []

Have you had a road traffic incident as a result of your blood glucose being too low?
 YES [] NO []

Have you received advice from the diabetes team regarding blood sugars and driving?
 YES [] NO []

If yes, from whom. Please circle:
 Diabetes Consultant Diabetes Nurse Podiatrist Diabetes leaflets DVLA OTHER:

Discussion: Most patients had some awareness of the DVLA regulations, however, knowledge about them was patchy. There remain many opportunities to increase their awareness of these regulations. It is incumbent that all health care professionals continue educating their patients, thus ensuring the safety of all road users.

This poster has been nominated for a DUK Education Award. The data will be presented in rooms 6 and 13 on Thursday 31st March at 5.30 pm

1. Heller S Medicine 2006;33(3):107 - 10 2. Cox D Diabetes Care 2000;23(2):163 – 70 3. McCrimmon RJ Brain 1996;119:1277 – 87 4. Cox D Diabetes Care 2003;26(8):2329 - 34 5. Bodansky DB Pract Diab Int 2009;26(8):318 – 21 6. <http://www.dft.gov.uk/dvla/medical/ataglance.aspx>