



The safety of private e-scooters

[PACTS webinar](#), Thursday 24th March 2022, 11am-12.30pm

Revision 1

Some Q&A from the chat discussion

QUESTION: how accurate/reasonable is it to make comparisons between statistics of pedal cycle and e-scooter serious injury rates? Both in terms of how the numerator (i.e. number of injuries) is recorded between both modes, and the denominator (i.e. overall distance travelled).

- To calculate a bicycle injury rate, the number of bicycle injuries was also collected for the full 2020 calendar year. The number of Liverpool bicycle journeys in 2020 was calculated from the Department of Transport vehicle count data. Using estimated average daily flow of bicycles passing each count point, traffic was calculated by multiplying the average daily flow by the corresponding length of road and by the number of days in the year.
- Rental e-scooter use is recorded by the e-scooter operator
- Measuring the total distance travelled by illegal e-scooters is not straight forward. Some analysis from hospitals looks looking at the number of injuries and presumes the ride distance is similar to rental scooters where the data is known. As data collection methods improve we expect surveys of private e-scooter use will be possible through remote telemetry. This will be limited to small areas (for example a number of junctions across one city area) and estimation then will be needed to scale up.

QUESTION - How do the e-scooter A&E admissions compare with pedal cycle and e-bike admissions during the same period?

- From work in Liverpool (<https://authors.elsevier.com/a/1em0u7bKB%7EZ06>) e scooters: 50, bicycles 116 October 2020 to May 2021
- From work in Bristol, comparing with bike injuries is problematic. Invariably some of the most severely injured cyclists we see are recreational weekend riders on A roads at the weekend

QUESTION – Has any medical research has examined the age and gender breakdown of rider injuries?

- Liverpool had paediatric cases (<18) riding scooters, the average rental scooter user who was injured was 25 years old (<https://authors.elsevier.com/a/1em0u7bKB%7EZ06>)
- The 4 week nationwide study included 32.3% female, 67.7% male in the A+E study. Median age (average) 26. Youngest, 4, eldest 82.

QUESTION - Were the injuries analysed in Liverpool and Bristol reported to the police?

- There is under reporting of e-scooter collisions to the police so not all casualties presenting at a hospital have informed the police. Data from Avon and Somerset (for Bristol) and from Merseyside (for Liverpool) are included in PACTS data of e-scooter casualties for 2021.

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- In Liverpool, the local police force receives weekly casualty data from the trial rental e-scooter operator. From October 2020 to the end of January 2022 45 serious and 338 slight injuries had been reported by the operator. However, the police are aware that the majority of these are not referred to them. Their records, for the year 2021, included only 17 serious injuries involving rental e-scooters. Records from October 2020 to the end of 2021 report 132 people presenting to the four hospitals in the Liverpool University Hospitals NHS Foundation Trust; Aintree University Hospital, Broadgreen Hospital, Liverpool University Dental Hospital and Royal Liverpool University Hospital.

QUESTION – Some retailers of private e-scooters are selling them to individuals (all be it with strong disclaimers) in the knowledge that the vast majority of owners will be using them illegally. Are there potential liability issues for the retailers further down the line when blame is ultimately apportioned for severe incidents?

- Retailers often include reference in the small print to the fact that private e-scooters are illegal for use unless on private land, thus complying with their obligations. However, there is an issue regarding lack of understanding of the legal status and the implications of riding an e-scooter illegally and often they are marketed as a means of commuting which is, of course misleading and of concern.

QUESTION – Will PACTS recommendations include the necessity to license their sale to ensure standards and that the scooters meet safety/power limits? What can be done to prevent bypassing limits?

- PACTS are recommending that e-scooters are limited for speed and power in their construction and that tampering is prohibited. Should private e-scooters be legalised then the Marketing Surveillance team at the DVLA would have powers to enforce infringements. At the moment the TS are working to enforce against general product safety.

QUESTION – Is there an adequate training for e-scooter riders?

- This is coming on the legal trial scooters <https://www.gov.uk/government/publications/e-scooter-trials-guidance-for-local-areas-and-rental-operators/e-scooter-trials-guidance-for-local-areas-and-rental-operators#additional-trial-requirements-from-1-april-2022>

QUESTION – Denmark requires insurance for e-scooters. Out of interest how affordable is this perceived to be?

- The costs of mandatory (third party) liability insurance for an e-scooter in France and Germany is around EUR 30 - EUR 60 per year. We have not seen any information on how these costs dampen demand - but one would assume that it would have an effect, especially as e-scooters are relatively cheap to buy when compared to e-bikes and mopeds, so a part of the market could be quite price sensitive.

QUESTION – Is battery disposal environmentally friendly?

- All TIER decommissioned batteries are recycled through a local recycling partner, in the UK this is Complydirect. In 2021 a total of 65 batteries were recycled. This work is further supported through our central sustainability partnership with Vertical Values. Vertical Values repairs the defective e-scooter batteries and extracts the cells from broken e-scooter batteries. Each extracted cell is evaluated individually to determine its SoH (State of Health). Once the cells are properly tested, they will be sorted. Sorted cells are then repurposed and turned into new products, which extends the lifespan of the cells. TIER also works with Northvolt, to minimise the environmental impact of mining materials for batteries at the start of their lifespan, re-purposing parts that can be recycled into new batteries at the end of their lifespan.

QUESTION – could the rental charge continue to user until the device is docked properly?

- Yes, this is what happens and it is one of the many measures we take to deliver compliant and orderly parking.

QUESTION – Can anybody just scan to ride one of your e-scooters and then just hand it over to a mate to ride it please?

- No, not anyone can scan and ride a scooter. In the UK currently riders have to have a drivers licence and be +18 years old. They also have to review mandatory training before their first trip. There are anti fraud measures to stop people sharing accounts. The ability to verify who is operating the vehicle in real time is, as with other mode of personal transport, difficult

QUESTION – Could private scooters be micro chipped and scanned by the police.

- The technology exists however the implementation and practical application of such a method is far more complex

QUESTION – Has anyone consider the utility of escooters to those with mobility issues

- This is something the University of Salford been exploring in their research:
<https://blogs.salford.ac.uk/healthyactivecities/e-scooters-in-salford/>

QUESTION – what's the demography of e-scooter users? What's the breakdown of trip generation or transfer from another mode?

- The University of Salford are still looking into this but it seems to be weighted to towards younger people. To some extent male, but less pronounced than the difference across age.
<https://blogs.salford.ac.uk/healthyactivecities/e-scooters-in-salford/>

QUESTION – Has there been any consideration by interested bodies or government of fitting standard UK number plates to eScooters so that public and police can identify and prevent unsafe use?

- This is coming on the legal trial scooters <https://www.gov.uk/government/publications/e-scooter-trials-guidance-for-local-areas-and-rental-operators/e-scooter-trials-guidance-for-local-areas-and-rental-operators#additional-trial-requirements-from-1-april-2022>

QUESTION – any data on how many riders use the integrated helmets?

- Data from TIER in York shows 10-30% of riders use the helmet provided

QUESTION – Is the UK the only country where private e-scooters are illegal?

- No, in Europe private e-scooters are currently illegal in the Netherlands and Ireland. There are multiple American states where they are illegal.