Study on older drivers, medical conditions and road traffic crash involvement

Marie Skyving

Analyst, Swedish Transport Agency

PhD student, Karolinska Institutet

Background

Ageing population – the challenge for road safety:

increasing number of older drivers + increasing burden of disease

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increasing number of older drivers with medical conditions

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Medical demands to hold a drivers license (TSFS 2010:125)

Diagnose groups
Vision disorders
Hearing and balance disorders
Motor functional diseases
Cardiovascular diseases
Diabetes
Neurological diseases
Epilepsy, epileptic seizure and other consciousness disorders
Kidney diseases
Dementia and other cognitive disorders
Sleep and alertness disorders
Alcohol and substance abuse and dependence
Psychological diseases and disorders
~~ADHD, autism spectrum disorder and similar conditions as well as mental retardation~~

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Research question

What is the association between driving impairing medical conditions and road traffic crashes in older drivers?

In the Swedish context

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Method

- Study population – Drivers aged ≥65

- Exposure – Medical condition(s)

- Outcome – Road traffic crash

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Method

- Study design – case-control study with two controls for every case (13 700 cases)

- Controls matched on age, gender and residential area

- Controls should hold a valid driver's license and own a car

- Crashes during time period 2011 - 2016

- Diagnoses from 1997 up until crash date

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Limitations

- Driver mileage
  - If driver mileage in cases is different from driver mileage in controls

- Medications
  - Effect (positive or negative) on crash risk might be due to medications

Results

- Increased odds of road traffic crash in 10 out of 12 groups

- Generally small increases

- Strongest associations where found for:

  → Epilepsy and other seizure disorders

  → Alcohol and substance abuse and dependence

  → Diabetes

  → Psychological diseases and mental disorders

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Thank you for your attention!

Questions?

marie.skyving@transportstyrelsen.se

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