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Patterns of transportation after driving cessation

Prof Desmond O'Neill





Transport poverty is an issue that has never fully captured the interests of the transport engineering profession in either the ‘global north’ or ‘global south’ and yet it is a problem that adversely affects the daily lives of millions of people across the globe. What precisely constitutes transport poverty is not adequately articulated within academic, policy or infrastructure design literature.

Transport
Volume 169 Issue TR6

Transport poverty and its adverse social consequences

Lucas, Mattioli, Verlinghieri and Guzman

ice | proceedings

Proceedings of the Institution of Civil Engineers

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Institution of Civil Engineers

publishing

Transport poverty and its adverse social consequences

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What is Driving Life Expectancy?

Men over age 70 have about 7 yrs without driving, women about 10 yrs

Foley, Am J Publ Health 2002

The average time between inability to drive and death: 3.59 years, longer for women: 4.79 years

Vivoda, Innov Aging 2022





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Evidence Gap....

Age and Ageing 2010; **39**: 631–636
doi: 10.1093/ageing/afq089
Published electronically 13 July 2010

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Transportation and driving in longitudinal studies on ageing

MAIREAD BARTLEY, DESMOND O'NEILL

¹Centre for Ageing, Neuroscience and the Humanities, Trinity College, Dublin, Ireland





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HISTORY OF MEDICINE

Doctors and the Dangers of Driving

David S. Jones, M.D., Ph.D.

Not!



Related article, p. 54



The NEW ENGLAND
JOURNAL of MEDICINE





Transport and disability

- Persons with disabilities make 10–30% fewer trips than those without disabilities, particularly non-work trips
- Travel mode: increased uses of public transit and taxi and riding with others and decreased walking and driving
- Slower means of transportation and shorter distances
- Limited consideration of built environment characteristics and temporal factors as travel behaviour predictors

Park, Transport Reviews 2023





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COMMENTARY

Transportation Equity, Health, and Aging: A Novel Approach to Healthy Longevity with Benefits Across the Life Span

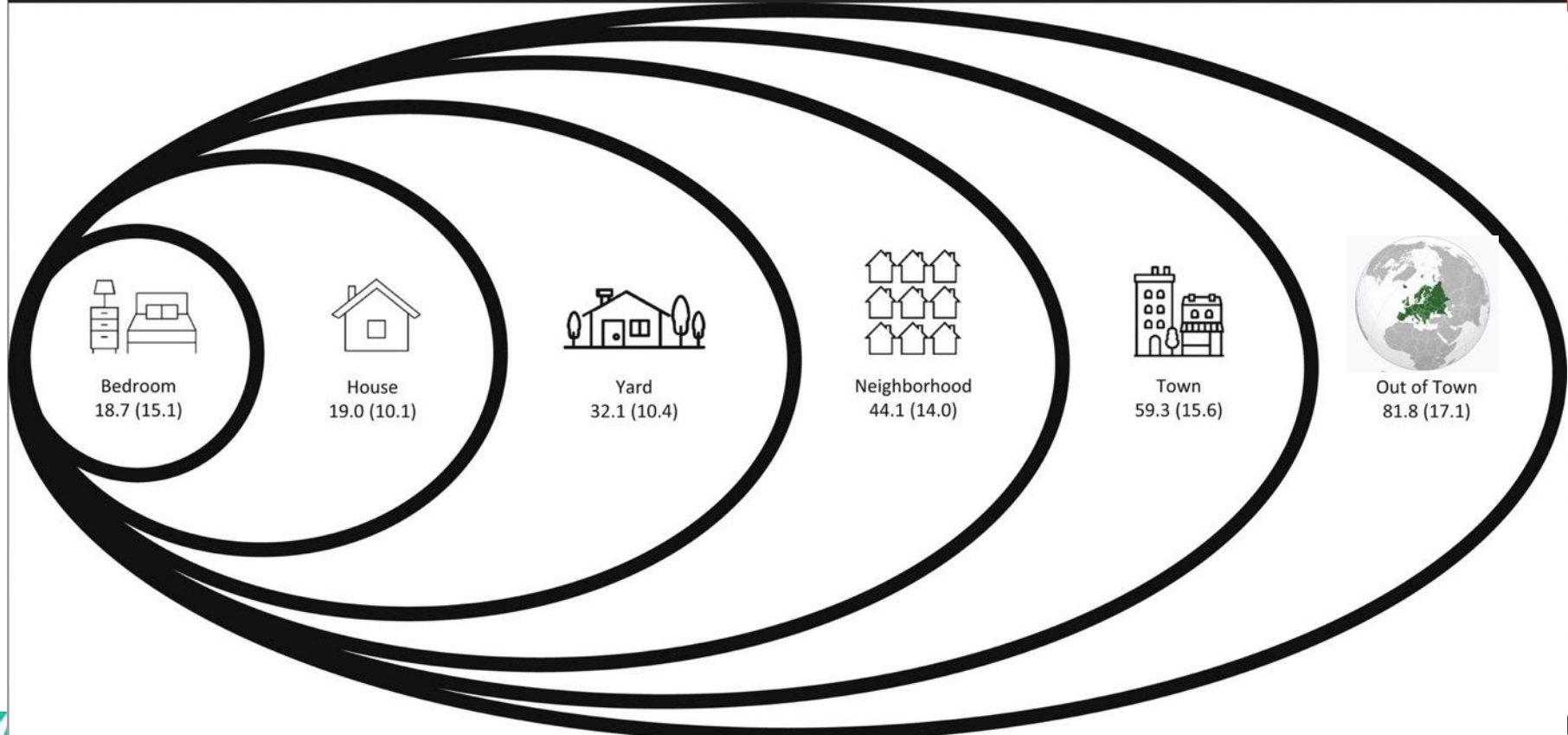
Desmond O'Neill, MD, Royal College of Physicians in Ireland; **Elizabeth Walshe, PhD**, Children's Hospital of Philadelphia and University of Pennsylvania; **Daniel Romer, PhD**, University of Pennsylvania, and **Flaura Winston, MD, PhD**, University of Pennsylvania and Children's Hospital of Philadelphia

December 2, 2019

Perspectives | Expert Voices in Health & Health Care



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Qual Life Res (2016) 25:1189–1197
DOI 10.1007/s11136-015-1137-x



CrossMark

Changes in life-space mobility and quality of life among community-dwelling older people: a 2-year follow-up study

Merja Rantakokko¹ · Erja Portegijs¹ · Anne Viljanen¹ · Susanne Iwarsson² ·
Markku Kauppinen¹ · Taina Rantanen¹

AGMR

Annals of Geriatric Medicine and Research



Original Article

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Ann Geriatr Med Res 2024;28(4):437-444
<https://doi.org/10.4235/agmr.24.0071>

Associations between Driving Status, Frequency of Transport use after Driving Cessation, and Social Frailty among Middle-Aged and Older Adults

Tatsuya Fukuei¹, Shoma Akaida^{2,3}, Yoshiaki Taniguchi^{3,4}, Daijo Shiratsuchi³, Yuto Kiuchi^{2,5}, Mana Tateishi³, Yukari Aishita^{1,2},
Ryota Kuratsu², Hyuma Makizako³



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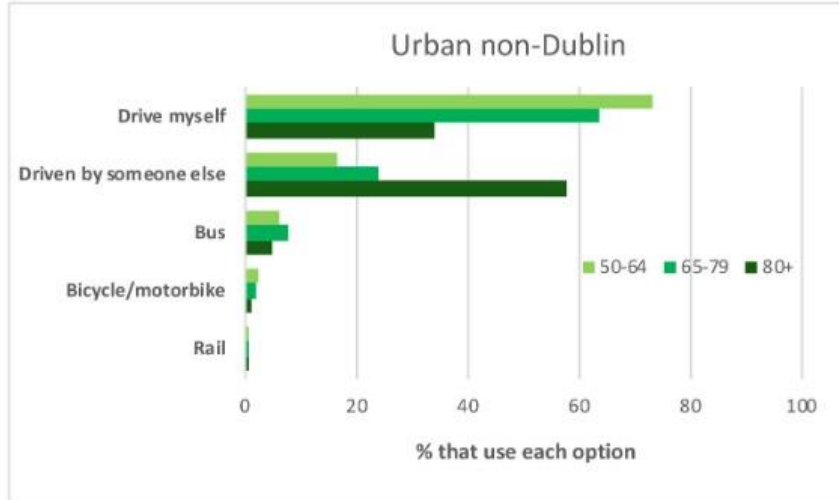
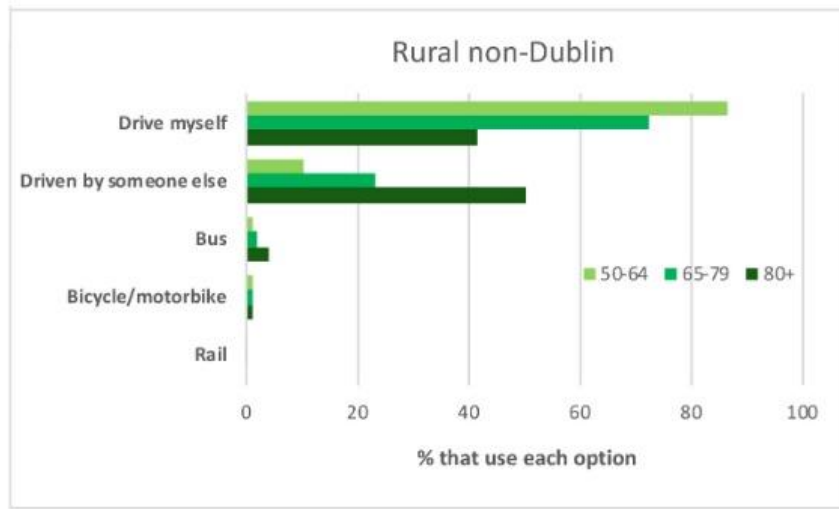
ORIGINAL RESEARCH
published: 06 June 2019
doi: 10.3389/fpsyg.2019.01329

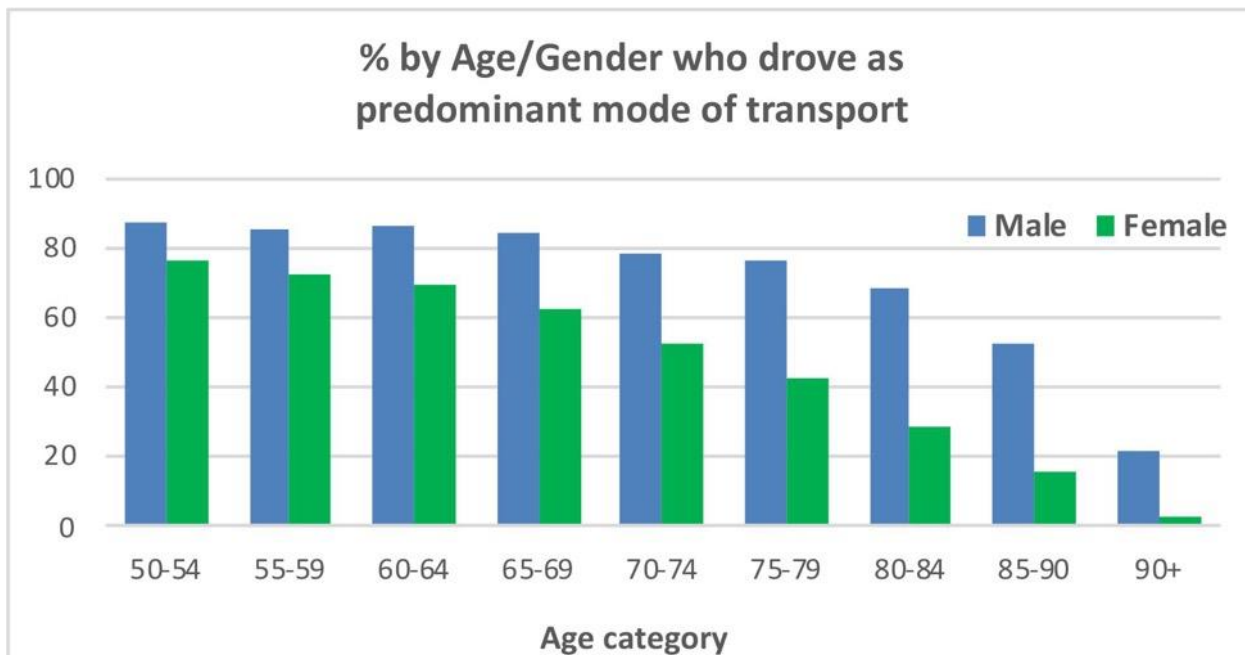


Driving as a Travel Option for Older Adults: Findings From the Irish Longitudinal Study on Aging

Michael Gormley^{1*} and Desmond O'Neill²

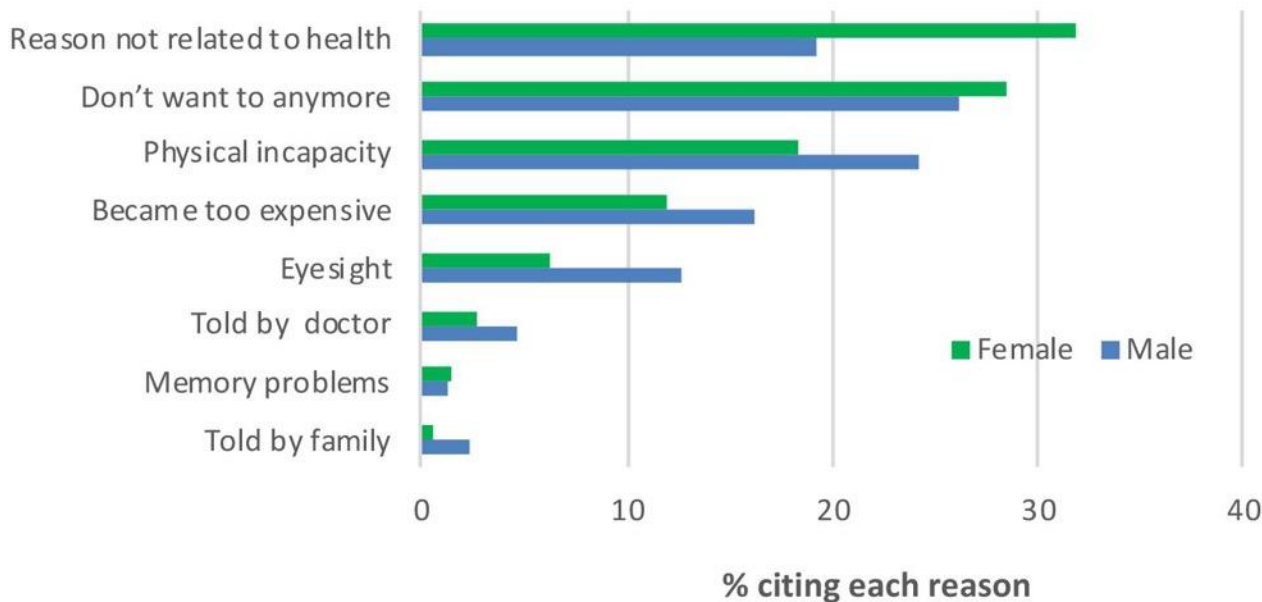
¹ School of Psychology, Trinity College Dublin, University of Dublin, Dublin, Ireland, ² Centre for Ageing, Neuroscience and the Humanities, Trinity College Dublin, University of Dublin, Dublin, Ireland







Reasons for stopping driving





Factors in driving reduction and cessation

- Wealth, age, health, vision, gender, race, education, relationship status, household size, and work status

Vivoda, Gerontologist 2020

- Driving retirement planning associated with greater driving stress, less driving confidence, and a more positive view of driving alternatives

Vivoda, Trans Res F 2021





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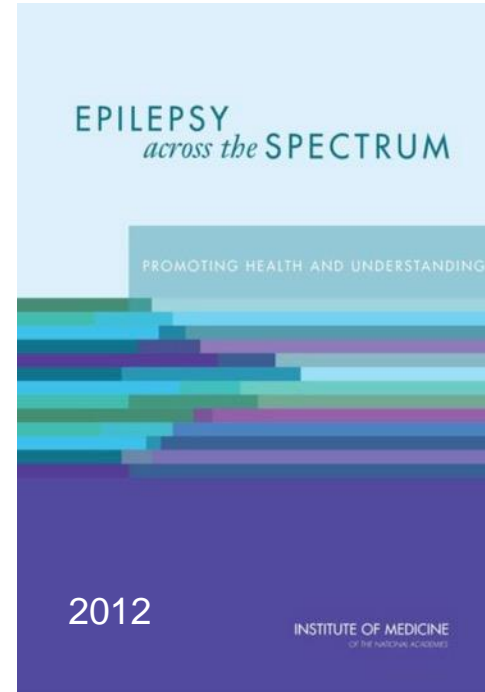
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Transportation is a
major challenge
for people with
epilepsy, their
families, and
medical providers





- In the United States, the ability to drive or to be able to access reliable, affordable transportation is closely connected to employment and educational opportunities, social engagements and activities, access to health care services, and overall independence and quality of life. Seizures may limit transportation options. Challenges and fears associated with driving and transportation are frequently cited in surveys and interviews of adults with epilepsy, regardless of age or gender.





Transport is more than cars

- Epilepsy and crash relative risks
- Pedestrian 2.24
- Cyclist 1.68
- In-car 1.31

Sundelin, Neurology 2018





Driving at 12 months

- 181 reported driving before an epilepsy diagnosis
- 152 provided information on driving at 12 months
- 118 (78%) had returned to driving.
- Driving for reasons of getting to work or place of education main factor in return
- More than half of participants with recurrent seizures were driving at follow-up.

Xu, Epilepsia, 2018





Driving cessation after stroke

- ...a sudden, unexpected and intense experience and raised issues, including the loss of numerous life-roles, challenges associated with arranging alternative transport, and reliance on carers and the need for more information throughout the process

Liddle, Brain Impairment 2009





Traumatic Brain Injury

- Participants identified key times of need in relation to driving
 - being told about driving restrictions
 - understanding driving restrictions
 - the ‘on hold’ period
 - returning to driving.





Planning for cessation

- As compared with participants who did not consider driving cessation at baseline, those who did were more likely to expect a better quality of life in the event of driving cessation and to use public transportation at baseline and follow-up despite their older age and poorer health

Pellichero, Ann Phys Rehab Med 2021





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Thinking ahead..

- Promote transport access/equity in health research
- Include transport and driving in healthcare education
- Consider transitions and alternatives





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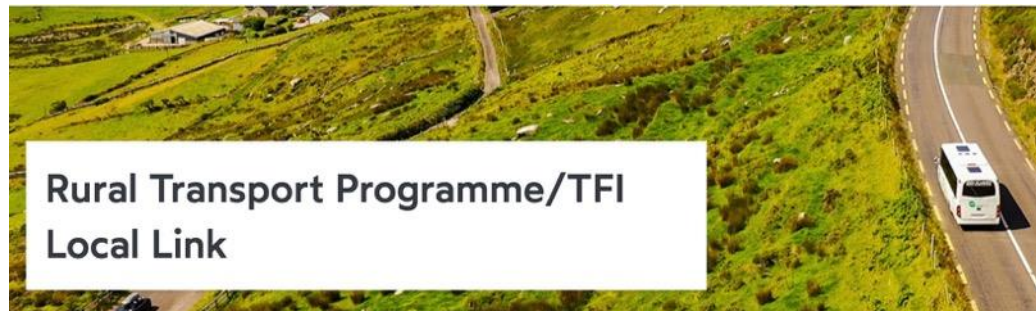


Correct as of
March 2025



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**Rural Transport Programme/TFI
Local Link**





Accident Analysis & Prevention

Volume 41, Issue 1, January 2009, Pages 1-9



Non-collision injuries in urban buses—Strategies for prevention

Alejandro Palacio^a, Giuseppe Tamburro^a, Desmond O'Neill^b, Ciaran K. Simms^a  

Comparative Study > *Ir Med J.* 2001 Jun;94(6):169-71.

The effects of age on accident severity and outcome in Irish road traffic accident patients

C Cunningham¹, D Howard, J Walsh, D Coakley, D O'Neill



J Safety Res. 2020 February ; 72: 9–19. doi:10.1016/j.jsr.2019.12.008.

Characteristics of ride share services for older adults in the United States[☆]

Katherine Freund^a, Alycia Bayne^b, Laurie Beck^{c,*}, Alexa Siegfried^b, Joe Warren^a, Tori Nadel^b, Amarjothi Natarajan^a

€10,373pa

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Box 1 | Research Opportunities in Driving, Transportation, and Health

- Optimal framework for developing and updating guidelines on medical fitness to drive
- Development of effective physician education and training in medical fitness to drive
- Quantification of the health and well-being benefits of adequate transportation
- Improved understanding of multimodality and transitions in transportation
- Big data linkage of health care records and crash data to better estimate relative risks of individual conditions and comorbidities

