

DPUK Award - Dr Tim Wilkinson, Edinburgh

Building a virtual dementia e-cohort using routinely-collected health datasets



Dementias
Platform^{UK}
Medical Research Council

Objective(s):

To create a simplified, virtual e-cohort for dementia research using the entire population of Welsh primary care data, linked to hospital admissions and death data.

Overview Summary:

A virtual e-cohort for dementia association has been made available in DPUK through the SAIL databank. The e-cohort contains data for 1.2 million people in Wales, 130,000 of whom had developed dementia during follow-up.

Executive Summary:

Tim Wilkinson, Christian Schnier and Cathie Sudlow in Edinburgh, in collaboration with researchers at Swansea University, have used routinely-collected healthcare data (primary care, hospital admissions and death data) to create an electronic cohort (e-cohort) for dementia research. Utilising the Secure Anonymised Information Linkage database (SAIL see <https://saildatabank.com/>), this e-cohort contains data for 1.2 million people in Wales, of whom 130,000 developed dementia during follow-up. The e-cohort can be accessed through DPUK, with data provided if approval is given by SAIL.

Summary of Outputs: (as per Researchfish categories)

Publications

Schnier C, Wilkinson T, Akbari A, Orton C, Slegers K, Gallacher J, et al. Cohort profile: The Secure Anonymised Information Linkage databank Dementia e-cohort (SAIL-DeC). International Journal of Population Data Science. 2020;5(1). Available from: https://ijpds.org/article/view/1121
Collaborations & Partnerships
This project was a close collaboration between researchers in Edinburgh and Swansea.
Further Funding
Neurological Seedcorn Fund. PI: T.Wilkinson. £15,000. Funders: RS MacDonald Trust/Chief Scientist Office
Next Destinations
This award was an independent award for Dr Wilkinson. This work in part led to Dr Wilkinson being awarded a Clinical Lecturer Post at the University of Edinburgh.
Engagement Activities
The work was presented at the 2018 Alzheimer's Association International Conference in Chicago.
Influence of policy, practice, patients & the public
None
Research Tools & Methods
Creation of publicly-available resource containing disease coding algorithms and reproducible SQL code. Available at https://datashare.is.ed.ac.uk/handle/10283/3268 .
Research Databases & Models
SAIL Dementia electronic Cohort (SAIL-DeC). https://portal.dementiasplatform.uk/Home/SAILDementiaECohort
Intellectual property & licencing
None
Medical products, interventions & clinical trials
None
Artistic & creative products
None
Software & technical products
None
Spin outs
None
Awards & recognition

Tim Wilkinson has been the recipient of a Three Minute Thesis award from the College of Medicine & Veterinary Medicine in Edinburgh.
Other outputs & knowledge/future steps
There are several ongoing research projects using the SAIL-DeC resource: <ul style="list-style-type: none"> • Socioeconomic factors in care home admission and the use of anti-dementia drugs (University of Liverpool) • Antiviral medications and dementia risk (University of Edinburgh) • Medication-wide association study (University of Edinburgh)
Use of facilities & resources
None
Most successful outcome and what it means for future dementia research:
This award allowed the building of a virtual dementia e-cohort available for use by other researchers. Several researchers are already using the resource to conduct research. This has led to new collaborations and has expedited dementia research.
Lessons learned:
This small monetary award from DPUK was used productively to create a virtual dementia e-cohort. It showcased Dr Wilkinson's research and in part led to him being awarded a Clinical Lecturer Post at the University of Edinburgh.
Other:
None
Date of report:
6 April 2020