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## Dementias Platform UK (DPUK) Data Portal - World-leading infrastructure facilitating innovative multi-modal research

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### Introduction

Modern team science requires effective sharing of data and skills. The DPUK Data Portal is a collection of tools, datasets and networks that allows for epidemiologists and specialist researchers alike to access, analyse and investigate cohort and different modalities of routine data across UK and international sources.

### Objectives and Approach

The Portal is housed on an instance of UKSeRP (UK Secure eResearch Platform), that allows customisable infrastructure to be used for multi-modal research (thus far live in genetics, imaging and clinical data) for researchers across the world using remote access technology whilst allowing governance to remain with the data provider. A central team at Swansea University is responsible for data curation and processing, and runs an access procedure for researchers to apply to use data from multiple sources to be analysed in a central analysis environment. Other modalities are similarly hosted, with input from partner sites in Cardiff and Oxford.

### Results

DPUK facilitates data access and research on 49 cohorts, 40 UK-based and 9 international. The centralised repository model including remote access and ability to store and make available different modalities of data, from phenotypic data, to genetic and imaging data, has allowed DPUK to begin to support research of varying topics, from those studying cognitive decline and Dementia as a disease, to those maturing analytical models. By providing access to data platforms specialising in genetics, imaging and routine clinical data, as well as to specialists in disease and biology to aid with its understanding, DPUK has realised a large-scale research exercise combining major data modalities on a central platform, and allow access

to such rich data across the world under an umbrella of robust governance.

### Conclusion/Implications

Globally, cohorts are pooling data, expertise and desire to enrich their own aims in partnership with a federated research community to enable in-depth scrutiny of the biological origins of dementia and the development and evaluation of novel approach to disease prevention and cure.

