



Swansea University  
Prifysgol Abertawe



## Cronfa - Swansea University Open Access Repository

---

This is an author produced version of a paper published in:  
*International Journal of Population Data Science*

Cronfa URL for this paper:

<http://cronfa.swan.ac.uk/Record/cronfa43464>

---

### Paper:

Lyons, R., Castagnet, M., Lyons, J., Akbari, A. & Torabi, F. (2018). A Regional Collaboration of Health (ARCH): Using health survey and linked routine data to understand wellbeing.. *International Journal of Population Data Science*, 3(2)  
<http://dx.doi.org/10.23889/ijpds.v3i2.496>

Open Access under CC BY-NC-ND 4.0

---

This item is brought to you by Swansea University. Any person downloading material is agreeing to abide by the terms of the repository licence. Copies of full text items may be used or reproduced in any format or medium, without prior permission for personal research or study, educational or non-commercial purposes only. The copyright for any work remains with the original author unless otherwise specified. The full-text must not be sold in any format or medium without the formal permission of the copyright holder.

Permission for multiple reproductions should be obtained from the original author.

Authors are personally responsible for adhering to copyright and publisher restrictions when uploading content to the repository.

<http://www.swansea.ac.uk/library/researchsupport/ris-support/>

## A Regional Collaboration of Health (ARCH): Using health survey and linked routine data to understand wellbeing.

Torabi, F<sup>1\*</sup>, Akbari, A<sup>1</sup>, Lyons, J<sup>1</sup>, Castagnet, M<sup>2</sup>, and Lyons, R<sup>1</sup>

<sup>1</sup>Farr Institute, Swansea University Medical School

<sup>2</sup>Swansea University Medical School

### Background

Monitoring social wellbeing and its relationship to health service utilisation by means of appropriate measurement tools can provide a complementary view towards service development. Welsh Health Survey (WHS) collects aspects of wellbeing while routine health data captures details around health service utilisation.

### Objective

The aim of this project was to evaluate the linkage ability of routine health data with survey data and establish a methodology for utilizing survey data as a measure for self-reported health outcomes.

### Method

We used WHS data from UK data archive to link self-reported wellbeing to health outcomes, a measure for personal wellbeing was developed using the personal wellbeing questions defined by Office of National Statistics (ONS), included in national surveys from 2011 onward. WHS was then linked to routine health data using SAIL Databank. We conducted regression analysis to identify potential predictors of personal wellbeing by linking primary care, hospital and emergency department datasets, to develop and provide insight into the relationship between wellbeing, multi-morbidity and health service utilisation.

### Findings

Wellbeing questions had similar scoring patterns across age groups which is different to most health indicators that tend to show a marked health decline with increasing age. Our findings showed that self-reported of 'excellent' or 'very good' general health has the largest positive effect on wellbeing while positive viewpoint on self-health has the second largest effect.

### Conclusions

Combining and harmonising data from multiple sources and linking them to information from a longitudinal cohort create useful resources for population health research. These methods are reproducible and can be utilised by other researchers and projects.

\*Corresponding Author:

Email Address: [fatemeh.torabi@swansea.ac.uk](mailto:fatemeh.torabi@swansea.ac.uk) (F Torabi)

