The Networked Data Lab: Analysis plan for Topic 3 on the inequalities in the patterns of needs for carers and cared for people at a local authority level in Wales

Analysis for NDL Wales

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## Research rationale

The proposed Topic 3 for NDL Wales is to focus on achieving a level of social care data linkage as part of the programme.

This area of development is aligned with the Social Services and Well-being (Wales) Act 2014, which provided the supportive legislation to address inconsistencies and improve outcomes from care and services across Wales. Following this legislation there has been a renewed emphasis on the benefits of social care data to help inform action.

Our Topic 3 proposal builds on existing work led by Social Care Wales in collaboration with Welsh Government, the NHS Wales Informatics Service, Local Authorities across Wales, SAIL Databank (Swansea University) and many others, working to facilitate the acquisition and use of social care data in Wales to improve care and outcomes.

Social Care Wales published *A strategic approach to social care data in Wales*(1), setting out the vision for how data should be collected, analysed and utilised to bring about greatest potential benefit for populations in Wales. In February 2021 this was followed by a statement of strategic intent across health and care sectors to build a comprehensive and inclusive social care data strategy and work towards a stronger, data empowered social care service in Wales(2).

### Focus on carers

Carers are a key group in the social care workforce, and are considered in the Welsh Government *National outcomes framework for people who need care and carers who support them (2019)* (3).

Carers have made a significant contribution to supporting the most vulnerable during the pandemic. Across Wales in 2019, there were an estimated 400,000 unpaid carers which increased by 300,000 at the height of the Covid-19 pandemic (4). Furthermore, National Survey for Wales 2017/18 suggested that one in four residents over the age of 16 in Wales provided unpaid care(5). The recent PHW Health Impact Assessment identified unpaid carers as a specific group vulnerable to the direct and indirect impact of COVID-19(6). Increased stress and anxiety and exposure to the virus amongst carers were raised as concerns by a number of those interviewed. A survey amongst young and young adult carers in the UK reported that over half reported increased time caring for others since COVID-19, 58% of young carers and 64% of young adult carers spending on average ten hours a week more on their caring responsibilities(7). A recent survey by Carers UK found that over 50% are aged 45 to 64 years, the majority are women, and one in four describes themselves as having a disability(8). The wider impact of COVID-19 on unpaid carers has been highlighted in Wales within the response by Members of the Welsh Parliament’s Health, Social Care and Sport Committee to the Minister for Health and Social Services(9), and at a UK level including that in the absence of support carers are at increased risk of stress which could lead to carer breakdown, with a detrimental impact on themselves and those they care for(8). To support carers, local authorities across Wales complete a *carer assessment,* and the data is held by the local authorities. In 2018/19 there were over 7,200 carer assessments recorded in Wales (10). This information has the potential to:

* provide in depth understanding of the challenges and support for carers,
* if linked to health data, identify carers in the health system
* support analysis to better understand, plan, respond to the health and care needs of carers in Wales.

### Linkage with complementary programmes to add value

The Topic 3 project would complement a programme of work underway to explore the health and care needs of the care workforce in Wales. Social Care Wales recently shared its register of regulated workforce (including social care, domiciliary care home managers, childcare workers, residential children’s homes’ managers and workers) with the SAIL Databank. Representing 30,000 individuals in Wales working in social care and a research programme underway to enable linkage to health activity data (primary and secondary care) to address service questions focused on the health and wellbeing of the social care workforce.

But there remains the need to better define **unpaid carers** in routine data, and approaches to generate comprehensive understanding of their needs and to inform support from all partners including Local Authorities. NDL Wales will work with a number of Local Authorities to ascertain carer assessment data at an individual level, explore the feasibility of using such data to better understand the needs of unpaid carers in Wales, and the linkage with routine healthcare data to help inform carers support aligned to needs. Research questions will be developed through discussions with the Local Authorities to ensure outputs are beneficial and impactful.

## Aims and objectives

### Aim

The aim of this study is to acquire and use carer assessment data in Wales to better understand health and wellbeing of carers and to inform action to support this population.

### Objectives

1. Describe the quality of data on unpaid carers as identified within local authority carers’ assessment data and primary care data.
2. Describe the demographic characteristics of those identified as unpaid carers.
3. Describe the long-term health conditions and health service use of those identified as unpaid carers.

Describe the demographic characteristics of the care-recipients and their relationship with the carer

## Study design

### Datasets

Carer and client data will be obtained from the following local authorities: Neath Port Talbot (NPT), Denbighshire, and Swansea. They will be uploaded into the Secured Anonymised Information Linkage (SAIL) Databank (11–13) using the split file process with SAIL’s trusted third party (TTP) partner organisation Digital Health and Care Wales (DHCW) as a Core Restricted dataset.

Local authority data requested on carers assessments includes 3 tables:

1. Carer details
   1. carer identifier
   2. personal information linkage fields for linkage into SAIL
      1. first and last name
      2. address and postcode
      3. date of birth
      4. NHS number
2. Care recipient details
   1. care recipient identifier
   2. personal information linkage fields for linkage into SAIL
      1. first and last name
      2. address and postcode
      3. date of birth
      4. NHS number
3. Carer assessment table
   1. carer and corresponding client’s identifiers
   2. carer’s relationship to client
   3. first and last carers assessment dates
   4. the total number of completed carer’s assessment

Refer to Appendix A for details on which tables each LA is able to provide. The date range and expected number of carers assessments per LA is outlined in Table 1.

Table 1: Estimated number of carer assessment and care recipient records provided by Neath Port Talbot, Denbighshire, Gwynedd and Swansea

|  |  |  |
| --- | --- | --- |
| **Local Authority** | **Date range available** | **Estimated total number of Carer Assessment records** |
| Neath Port Talbot (NPT) | 07/2017 - 05/2022 | 600 |
| Denbighshire | 04/2020 – 03/2022 | 400 |
| Swansea | 04/2021 - 06/2022 | 300 |
| **Total** | | **1,100** |

This data will then be linked with routinely collected population-scale electronic health record (EHR) data sources available within SAIL Databank ([www.saildatabank.com](http://www.saildatabank.com); a privacy protecting trusted research environment of anonymised individual-level linkable data sources). The following data sources will be used in this analysis:

ADDE – Annual District Death Extract (from Office for National Statistics) mortality register, containing data on all deaths in Wales within the study period;

* CENW – ONS Census 2011;
* EDDS – Emergency Departments dataset, containing data for all emergency departments in Wales (34 sites, including minor injuries units);

OPDW – Out-Patient Database for Wales, containing outpatient appointments and attendance information

* PEDW – Patient Episode Database Wales, containing data for all NHS Wales hospital admissions (emergency and elective);
* WDSD – Welsh Demographic Service Dataset containing linkable data on demographics of the Welsh population from the Census;

WLGP – Wales Longitudinal General Practice, containing primary care consultations (NB does not cover full population – estimated to be 80% of GP practices in Wales).

### Study design

The study design is a retrospective cohort study. The study period will be defined on a per LA basis, reflecting the date range of carers’ assessment data available (as described above in Table 1).

### Cohort creation

**Unpaid carer cohort**

Inclusion criteria:

* Aged 18 and above.
* Have a valid sex code.
* Have a valid week of birth (WOB).
* Residing in the LA of interest.
* Resident at a Welsh address for a full year prior to identification date.
* Registered with a Welsh GP providing data to SAIL for a full year prior to identification date.
* Probabilistic linkage match of 90% or above.

The index date is defined as the earliest date of identification as an unpaid carer within the study period where the inclusion criteria are met.

Three unpaid carer cohorts will be created per LA:

1. **Unpaid carers:** All identified unpaid carers.
2. **LA-identified unpaid carers:** first identified via carers’ assessment.
3. **GP-identified unpaid carers:** first identified via GP Read codes.

#### Demographically matched general population cohort

Inclusion criteria:

* Not included in the available carers assessment data in any of the three available LA datasets
* Not identified as an unpaid carer via GP read codes anywhere in Wales within study period or the two years prior.
* Resides in relevant LA (based on LSOA code) on assigned pseudo index date.
* Registered at a SAIL GP / resident in Wales for one year prior to assigned pseudo index date.

Matching method:

The comparison cohort will be matched 1:1 on age, sex and LA without replacement to individuals identified as unpaid carers via either LA or GP data, using a pseudo index date.

#### Care recipient cohort

Inclusion criteria:

* Identified as care recipient in LA dataset
* Alive at the index carer assessment date of matched carer in LA dataset.
* Registered at a SAIL GP / resident in Wales for one year prior to carers index date.

## Analysis approach

### ***For all analyses, the maximum timespan of data provided by each LA will be used.***

### Objective 1: Describe the quality of data on unpaid carers identified within local authority carer assessment data and primary care data

**For each local authority:**

Describe number of unpaid carers, including the number:

1. in the LA carers assessment cohort,
2. in the primary care cohort,
3. in the total unpaid carers cohort (including describing the number identified in both)

Describe the total unpaid carers cohort as a percentage of the total population within each LA using mid-year ONS estimates for population over 18 years old.

***Impact of the pandemic on identifying unpaid carers:***

Describe the number of new unpaid carers identified per financial year across 2019/20 (pre-pandemic), 2020/21 (first year of pandemic, 2021/22 (one year since pandemic began) across:

1. LA carers assessment data (as available per LA).
2. Primary care Read codes.

### Objective 2: Describe the demographic characteristics of those identified as unpaid carers

**For each local authority:**

Describe the total unpaid carers cohort by:

* Age – by bins. Groups will depend on range in sample.
* Sex – 1= male, 2 = Female.
* Neighbourhood deprivation level – WIMD quintiles (1-5)
* Ethnicity – White, Mixed/Multiple ethnic groups, Asian, Black/African/Caribbean/Black British, Other ethnic groups
* Rurality – grouping of RUC classification will depend on range in sample.

Depending on sample sizes and degree of overlap, comparisons of demographics will be made between those unpaid carers identified via (1) LA carers assessment, (2) primary care or (3) both data sources.

* Age differences - continuous variable, we will assume a skewed distribution and perform appropriate transformations to normalise age columns in both datasets before using t-test for comparison.
* Sex differences – categorical variable, chi-square test.
* IMD Quintile – ordinal variable, chi-square test.
* Ethnicity – categorical variable, chi-square test.
* Rurality – categorical variable, chi-square test.

***Impact of the pandemic on who was identified as unpaid carers:***

Depending on sample sizes, describe any variation in age, sex, IMD quintile, ethnicity or rurality between new unpaid carers identified with 2019/20 (pre-pandemic), 2020/21 (first year of pandemic, 2021/22 (one year since pandemic began).

### Objective 3: Describe long-term health conditions and heath service use of those identified as unpaid carers

#### Long-term health conditions:

Long term health conditions will be defined as the 37 conditions identified via primary care data in the Cambridge Morbidity Scale (CMS) (15). This approach uses product codes; as these are not available in SAIL, an adapted read code list produced by Hanlon et al (15) will be used. A full list of conditions and the associated look-up period used can be found in Appendix C.

*Describing long term conditions among unpaid carers:*

We will describe the proportion of unpaid carers with long-term conditions, comparing those identified via (1) LA carers assessment, (2) primary care (3) both data sources (if sample size allows), for the following:

* the proportion with the five most common LTCs (using Chi-square test).
* the proportion with multiple (2+) long term conditions (using Chi-square test)

To provide context for interpreting these figures, we will also compare the proportions seen in the total unpaid carer cohort to the matched general population cohort for the following:

* the five most common LTCs in unpaid carers cohort (using Chi-square test).
* the proportion with multiple long term conditions (using Chi-square test)

#### Health service use:

Health service use will be described over the year prior to the index date. Count data will be summarised into bins and prevalence calculated for those identified via (1) LA carers assessment, (2) primary care (3) both data sources (if sample size allows). Prevalence will also be calculated for the matched non-carer cohort. Prevalence rate ratios will be calculated to compare prevalence between cohorts.

***Primary care***

* GP interactions - count of interactions using WLGP\_EVENTS.
  + If multiple interactions occur on the same day, they will be counted as one interaction.

***Secondary care***

* Planned inpatient admissions – count of admissions with ADMIS\_MTHD\_CD 11-15 in PEDW\_SPELL
* Emergency inpatient admissions – count of admissions with ADMIS\_MTHD\_CD 21-25, 27 or 28 in PEDW\_SPELL
* Inpatient length of stay – calculated using admission and discharge dates.
  + We will use the average length of stay (i.e. sum of all hospital stays duration divided by the total number of admissions).
* Outpatient attendances - count of attendances from OPDW, ATTEND\_CD of 5 or 6
* Emergency department attendances – count of attendances in EDDS

### Objective 4: Describe the demographic characteristics of the care-recipients and their relationship with the carer

**For local authorities where care recipient data is available only.**

*Understanding the relationship between carers’ assessments and care needs assessments (if sample size allows):*

* Describe number of carers per care recipient / number of care recipients per carer

*Understanding who the care recipient is (if sample size allows):*

* Describe recorded relationship type.
* Age of care recipient – by bins, groups will depend on range in sample.
* Sex of care recipient – male, female.
* Neighbourhood deprivation level of care recipient – WIMD quintiles (1-5)
* Rurality of care recipient – grouping of RUC classification will depend on range in sample.
* Describe long term conditions of the care recipient including:
  + the proportion with the five most common LTCs
  + the proportion with multiple long term conditions

## Limitations and caveats

* By working with three Welsh local authorities we will build a picture of unpaid carers identified via primary care and carers assessments within these areas – the unpaid carer population and routes for accessing support and so being identified as an unpaid carer via these routes will vary across local regions. The four local authorities included in this project are not designed to be representative of the Welsh population as a whole.
* The routine administrative health care data used in this project captures health care use, as recorded by health services. This is not health need within the population.
* There is no available data on the reason for care given, length of time as a carer, the type and intensity of care and other support for the carer and the care recipient is available. These factors may also change over time.
* During the period covered by this study, the COVID-19 pandemic and associated national lockdowns and social distancing guidance is likely to have impacted patterns of:
  + the provision of support from unpaid carers
  + delivery carers assessments and care needs assessments (both in terms of requests for assessment and the provision of assessments)
  + health service use (both in terms of the accessibility of services and patient seeking behaviour)

## Governance

**Ethics approval**

Approval for the use of anonymised data in this study, provisioned within the Secure Anonymised Information Linkage (SAIL) Databank was granted by an independent Information Governance Review Panel (IGRP) under project 1429.

## Dissemination and engagement

In addition to Health Foundation led publications, the code for our analysis (SQL, R and RMarkdown files) will be made available on the Health Foundation GitHub. We plan to produce a short briefing or similar publication, focused on key findings and implication of the analysis, tailored to the needs of a local authority audience. Dissemination of this briefing is planned to be accompanied by media, potentially social media with voluntary sector partners. We also plan to produce blogs describing the value and processes for linking and using these locally held datasets within Wales (exploring options for blog posts on WLGA website and/or Public Health Wales). We would aim to share and discuss the findings and implications with those involved in the Wales Strategy for Unpaid Carers strategy, Local Government, Social Care Wales, Health boards and Regional Partnership Boards and groups with an interest in unpaid carers, including the Older Person’s Commissioners office.

We have and will continue to engage with the contributing local authorities as well as Carers Trust Wales and other relevant third sector organisations, the SAIL data bank consumer panel, and other relevant stakeholders as we deliver this work.

## References

1. Strategic approach to care data | Social Care Wales [Internet]. [cited 2022 Apr 4]. Available from: https://socialcare.wales/research-and-data/strategic-approach-to-data

2. A strategic approach to social care data in Wales Statement of Strategic Intent 2. 2021;

3. Government W. The national outcomes framework for people who need care and support and carers who need support. 2019;

4. Huang F, Song J, Davies AR, Anderson C, Bentley L, Carter B, et al. Unpaid carers in Wales: The creation of an e-cohort to understand long-term health conditions amongst unpaid carers in Wales Suggested Citation Acknowledgements. 2021 [cited 2022 Sep 1]; Available from: www.nationalarchives.gov.uk/doc/open-government-licence/version/3/

5. National Survey for Wales: April 2017 to March 2018 | GOV.WALES [Internet]. [cited 2022 Apr 4]. Available from: https://gov.wales/national-survey-wales-april-2017-march-2018

6. (PDF) HIA - Rapid Review of SAH Policy Main (Web Final) [Internet]. [cited 2022 Apr 4]. Available from: https://www.researchgate.net/publication/342834852\_HIA\_-\_Rapid\_Review\_of\_SAH\_Policy\_Main\_Web\_Final

7. Our survey on the impact of Coronavirus on young carers and young adult carers - Carers Trust [Internet]. [cited 2022 Apr 4]. Available from: https://carers.org/what-we-do/our-survey-on-the-impact-of-coronavirus-on-young-carers-and-young-adult-carers-

8. Caring behind closed doors: six months on E M B A R G O E D CARING BEHIND CLOSED DOORS: SIX MONTHS ON Contents. 2020;

9. Wales Carers Alliance sends letter to Welsh Government on the impact on unpaid carers - Carers UK [Internet]. [cited 2022 Apr 4]. Available from: https://www.carersuk.org/wales/news-campaigns/news/wales-carers-alliance-sends-letter-to-welsh-government-on-the-impact-on-unpaid-carers

10. Adults assessed by local authority and measure [Internet]. [cited 2022 Sep 1]. Available from: https://statswales.gov.wales/Catalogue/Health-and-Social-Care/Social-Services/Adult-Services/Service-Provision/adultsassessed-by-localauthority-measure

11. SAIL Databank - The Secure Anonymised Information Linkage Databank [Internet]. [cited 2022 Apr 4]. Available from: https://saildatabank.com/

12. Lyons RA, Jones KH, John G, Brooks CJ, Verplancke JP, Ford D V., et al. The SAIL databank: Linking multiple health and social care datasets. BMC Med Inform Decis Mak. 2009 Jan 16;9(1):1–8.

13. Ford D V., Jones KH, Verplancke JP, Lyons RA, John G, Brown G, et al. The SAIL Databank: Building a national architecture for e-health research and evaluation. BMC Health Serv Res. 2009 Sep 4;9(1):1–12.

14. Welsh Parliament Senedd Research. Coronavirus timeline: the response in Wales [Internet]. Research Briefing. 2022 [cited 2022 Aug 30]. p. 1–34. Available from: https://research.senedd.wales/research-articles/coronavirus-timeline-the-response-in-wales/

15. Payne RA, Mendonca SC, Elliott MN, Saunders CL, Edwards DA, Marshall M, et al. Development and validation of the Cambridge Multimorbidity Score. Can Med Assoc J [Internet]. 2020 Feb 3 [cited 2022 Aug 30];192(5):E107–14. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7004217/

16. CPRD @ Cambridge - Codes Lists (GOLD) - Primary Care Unit [Internet]. [cited 2022 Sep 1]. Available from: https://www.phpc.cam.ac.uk/pcu/research/research-groups/crmh/cprd\_cam/codelists/v11/

## Appendices

### Appendix A (LA data availablity)

|  |  |  |  |
| --- | --- | --- | --- |
| **LA\_Table 1: Identifiable data item - carer** | **Denbighshire** | **Swansea** | **Neath Port Talbot** |
| Carer ID\* | Yes | Yes | Yes |
| Carer first name\* | Yes | Yes | Yes |
| Carer surname\* | Yes | Yes | Yes |
| Carer address\* | Not always | Yes | Yes |
| Carer postcode\* | Not always | Yes | Yes |
| Carer date of birth\* | Not always | Yes | Yes |
| Carer NHS number | No | Yes | Yes |
| **LA\_Table 2: Identifiable data item – care recipient** | **Denbighshire** | **Swansea** | **Neath Port Talbot** |
| Care recipient ID | No | No | Yes |
| Care recipient first name | No | No | Yes |
| Care recipient surname | No | No | Yes |
| Care recipient address | No | No | Yes |
| Care recipient postcode | No | No | Yes |
| Care recipient date of birth | No | No | Yes |
| Care recipient NHS number | No | No | Yes |
| **LA\_Table 3: Non-identifiable data item** | **Denbighshire** | **Swansea** | **Neath Port Talbot** |
| Carer ID\* | Yes | Yes | Yes |
| Care recipient ID | No | No | Yes |
| Carer relationship to recipient | No | No | Yes |
| First carer assessment date (as available in data)\* | Yes | Yes | Yes |
| Last carer assessment date | No | Yes | Yes |
| Number of carer assessments completed | No | Yes | Yes |

### Appendix B (Read codes to identify unpaid carers in GP data)

|  |  |
| --- | --- |
| **Read Code** | **Description** |
| 918A. | Carer |
| 918A0 | Cares for a friend |
| 918A1 | Cares for a neighbour |
| 918A2 | Cares for a relative |
| 918G. | Is a carer |
| 918H. | Primary carer |
| 918W. | Carer of a person with learning disability |
| 918a. | Carer of a person with substance misuse |
| 918d. | Carer of a person with mental health problem |
| 918m. | Carer of a person with a terminal illness |
| 918t.00 | Carer from Black and minority ethnic group |
| 918Y. | Carer of a person with sensory impairment |
| 8IHE. | Carer health check declined |
| 8O7.. | Carer support |
| 918b. | Carer of a person with alcohol misuse |
| 8IEP. | Carer annual health check declined |
| 8BAr. | Carer health check completed |
| 13Wb. | Carer has sole parental responsibility |
| 9NSS. | Carer health check offered |
| 918J. | Carer - home telephone number |
| 9Ngw. | Carer does not understand care plan |
| 918W. | Carer of a person with learning disability |
| 918y. | Carer of person with dementia |
| 9Ngv. | Carer understands care plan |
| 918X. | Carer of a person with physical disability |
| 13VN. | Carer able to cope |
| 69DC. | Carer annual health check |
| 918M. | Carer - email address |
| 9180 | Carer’s details |
| 69DE. | Carer health check |
| 918L. | Carer - mobile telephone number |
| 918K. | Carer - work telephone number |
| 388Q. | Carer strain index score |
| 9d46. | Carer |
| 918c. | Carer of a person with chronic disease |
| 8HkA. | Ref for GP carer’s assessment |

### Appendix C (Full list of conditions – long term health)

Obtained from source: Table A3.2 in <https://www.cmaj.ca/content/cmaj/suppl/2020/01/28/192.5.E107.DC1/190757-res-3-at.pdf>. Original study (15)

|  |  |
| --- | --- |
| ID | Morbidity |
| Morbidities based on Read code ever recorded | |
| 1 | Alcohol Problems |
| 2 | Anorexia or bulimia |
| 3 | Atrial fibrillation |
| 4 | Blindness and low vision |
| 5 | Bronchiectasis |
| 6 | Chronic liver disease and viral hepatitis |
| 7 | Chronic sinusitis |
| 8 | COPD |
| 9 | Coronary heart disease |
| 10 | Dementia |
| 11 | Diabetes |
| 12 | Diverticular disease of intestine |
| 13 | Hearing loss |
| 14 | Heart failure |
| 15 | Hypertension |
| 16 | Inflammatory bowel disease |
| 17 | Learning disability |
| 18 | multiple sclerosis |
| 19 | Parkinson's disease |
| 20 | Peptic ulcer disease |
| 21 | Peripheral vascular disease |
| 22 | Prostate disorders |
| 23 | Psychoactive substance misuse (not alcohol) |
| 24 | Rheumatoid arthritis, other inflammatory polyarthropathies & systematic connective tissue disorders |
| 25 | Stroke & transient ischaemic attack |
| 26 | Thyroid disorders |
| Morbidities based on prescription in last 12 months | |
| 27 | Constipation (treated) |
| 28 | Migraine |
| Morbidities based on combination of Read code ever recorded  and/or prescription in last 12 months | |
| 29 | Epilepsy (currently treated) |
| 30 | Asthma (currently treated) |
| 31 | Irritable bowel syndrome |
| 32 | Psoriasis or eczema |
| Morbidities otherwise defined | |
| 33 | Anxiety & other neurotic, stress related & somatoform disorders OR depression |
| 34 | Cancer - [New] Diagnosis in last 5 years (excluding non-melanoma skin cancer) |
| 35 | Chronic kidney disease |
| 36 | Painful condition |
| 37 | Schizophrenia (and other non-organic psychosis) or bipolar disorder |