Persistent Pain in Wales: Prevalence and Healthcare Utilisation from a Population-Scale Retrospective Cohort Study

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EXECUTIVE SUMMARY

Background

Persistent pain is a major public health concern. It has a significant impact on quality of life and places considerable demand on the NHS (National Health Service). In 2023, Welsh Government published their guidance ‘Living with Persistent Pain’, marking persistent pain as a national priority. This report is a result of a request from NHS Leads (Practice) for the Health and Care Research Wales Evidence Centre to assist with providing evidence to inform their decision-making around current and future services, capacity planning, and to aid in implementing health policies—all of which will expand on their 2023 guidance.

Methods

Study design:

- A retrospective cohort study covering the period 2010-2023;
- Anonymised, individual-level, population-scale linked routinely-collected electronic health records (EHR) and administrative data from the SAIL Databank.

Who was included:

- People living in Wales and registered with a General Practice (GP) that provides data to SAIL.
- Three cohorts of people were created based on how persistent pain was identified:
  i) Diagnoses—people with a diagnostic code relevant to persistent pain in their EHR;
  ii) Prescriptions—people prescribed opioids or gabapentinoids for 3 months or more;
  iii) Pain services—people referred to specialist outpatient services.
- A comparator group included people who did not meet any of these criteria.

What was measured:

- Proportion of the population living with persistent pain;
- Demographic information including age, sex and deprivation;
- Health status using two scoring systems:
  i) Charlson Comorbidity Index (measures the presence and severity of coexisiting health conditions)
  ii) Electronic Frailty Index (measures severity of frailty).

- Healthcare use, including:
  i) GP events (appointments and prescriptions)
  ii) Hospital admissions (planned and emergency)
  iii) Emergency department visits
  iv) Outpatient appointments

Key findings

Prevalence:

- 15% of the population of Wales are living with persistent pain;
  - i) 10 % had a diagnosis of persistent pain in their health record;
  - ii) 7.3% were prescribed pain medication (i.e. opioids, gabapentinoids) for ≥3 months.
  - iii) 1.85% were referred to specialist outpatient pain services.

Demographics:

- Persistent pain was more common among older adults (especially ages 61-70), women, and individuals living in more deprived areas.
- A higher burden of frailty and comorbid conditions was observed in the persistent pain cohort compared to the general population.

Healthcare use:

- People living with persistent pain had 63% more GP events (appointments and prescriptions) than those without.
- Those referred to pain services had more healthcare interactions overall and were younger and less frail compared to those living with persistent pain who were not referred.

Trends over time:

- A small but statistically significant decline was observed in the prevelance of persistent pain over the study period. This may be linked to changes in GP coding, shifts in prescribing practices, and healthcare access barriers.
- After adjusting for age, sex, deprivation level, and seasonal changes—there were small but significant monthly increases in GP events, hospital admissions, emergency attendances, for the persistent pain cohort. Outpatient attendances showed small but statistically significant month-on-month decreases.

Interpretation of findings

- **Unmet Need:** While we cannot determine this directly from the data, findings may point to unmet need in accessing specialist care, particularly among older adults and individuals from more deprived areas
- **Health Inequalities**: Patterns of pain prevalence and service use reflect existing inequalities across age, sex, and socioeconomic status.
- **System Impact:** Persistent pain places a significant burden on primary and secondary care services, with implications for NHS capacity and planning.

Implications for policy and practice

- Improve identification and coding of persistent pain in primary care settings.
- Explore and address barriers to healthcare access, including referral to specialist services in the community, especially for older and more deprived populations.

- Integrate patient-reported outcomes and real-world experiences into service planning and policy development.