Prevalence of Obesity and Related Conditions in NHS Highland

Moving Towards Data Informed Service Design

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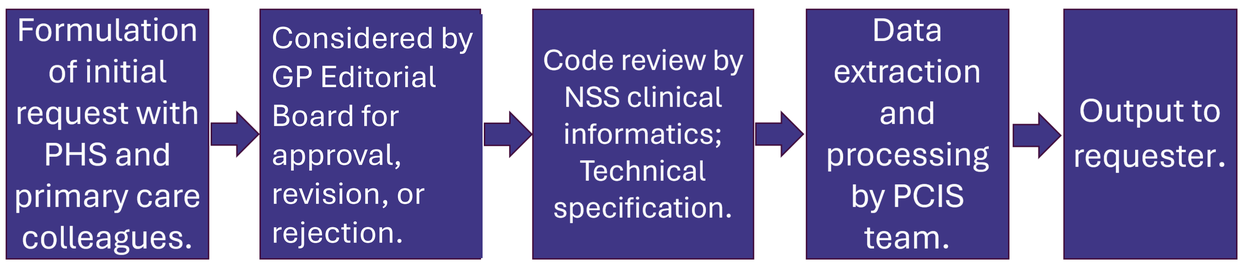
Context

- An NHS Highland (NHSH) working group was developing an options appraisal for models of implementation of weight loss medications of the GLP-1 receptor agonist class.
- Data on prevalence of obesity and some related conditions can be estimated from the Scottish Health Survey (SHeS). However, it does not contain an exhaustive list of obesity-related conditions (ORC).
- We aimed to understand the epidemiology of obesity and ORC within NHSH to inform development of a pathway for weight loss medications.

Obesity-related Conditions	
Chronic kidney disease (stage 3-5)	Idiopathic intracranial hypertension (IIH)
Type 2 diabetes (T2DM)	Cardiovascular disorder (CVD)
Hypertension	Polycystic ovary syndrome (PMOS)
Dyslipidaemia	Obstructive sleep apnoea (OSA)
Prediabetes	Metabolic dysfunction-associated steatotic liver disease (MASLD)

Methods

- Primary Care Intelligence Service (PCIS) used to extract aggregate data from NHSH general practices.



- Extract focused on over 18s in three different BMI categories in the consensus statement on use of GLP-1 in Scotland(30-35; 35-38; 38+).
- Cross-sectional analysis.

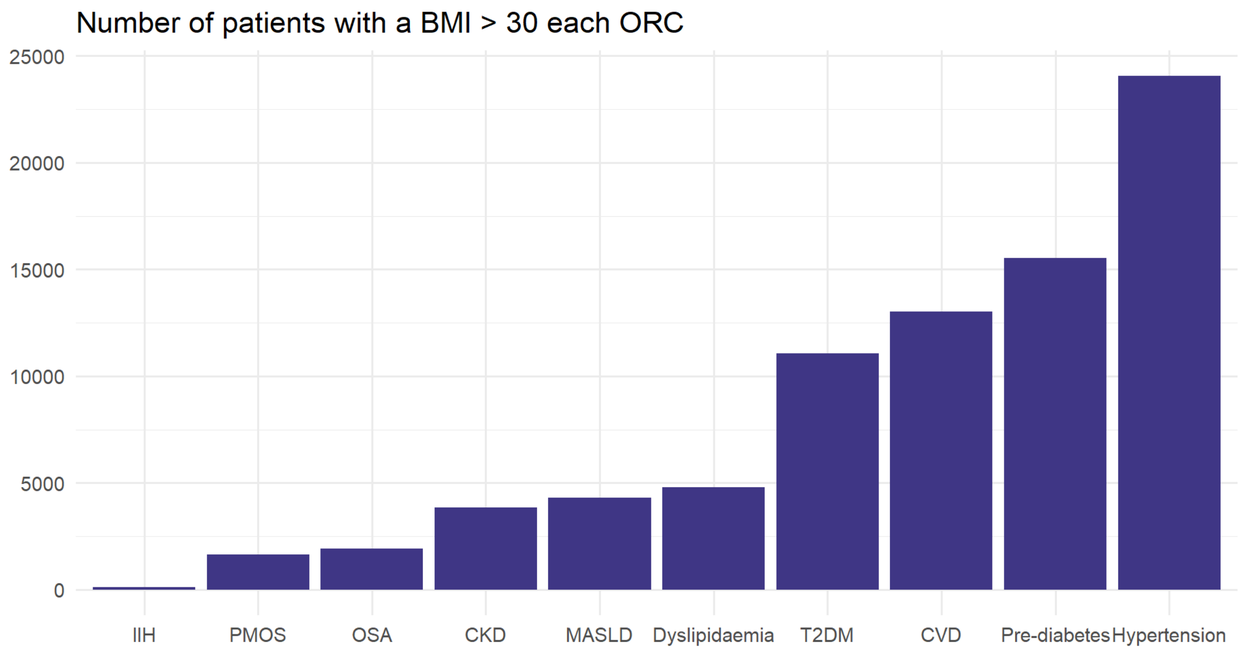
Results

- Data extracted on 1st March 2026 from 95.6% (87/91) of General Practices in NHSH representing 98% of residents (333,232).
- 23.4% of the adult population of NHSH have a BMI > 30 kg/m2 and 60.4% of those individuals had at least one ORC(compared to 23% in SHeS).
- The prevalence of any ORC for each BMI category is shown in the table below.

BMI Category	Any ORC	Total	Proportion (%)
30-35	22,970	39,830	57.7
35-38	7279	11,479	63.4
38+	9211	14,000	65.8
30+	39,460	65,309	60.4

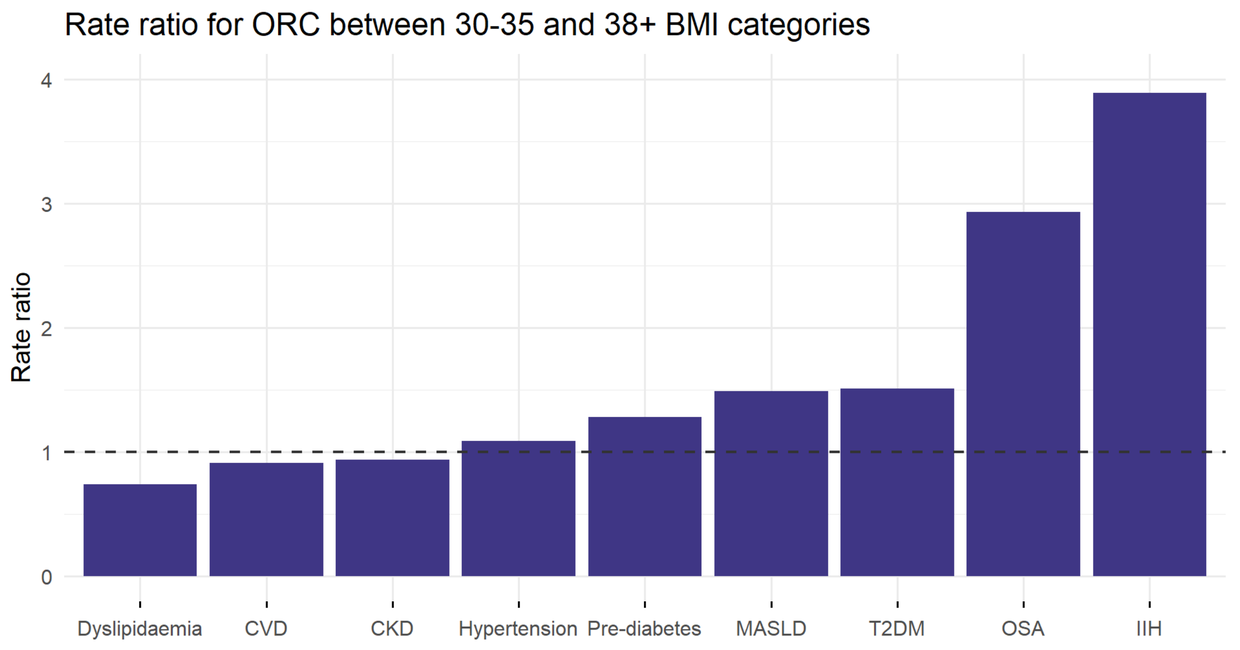
- The prevalence of an ORC increases with BMI category (X^2 test of trend $p < 0.001$)

- The conditions with the highest actual numbers of patients were hypertension, pre-diabetes, CVD and type 2 diabetes mellitus.



Rate Ratios

- The rate ratios for each category and condition were calculated using 30-35 as a reference group.
- IIH, OSA and PMOS had the highest rate ratios.



Discussion

- Key points
  - Some rarer ORCs have the highest risk in the most obese groups.
  - Higher proportion of obese patients have an ORC than suggested by SHeS.
  - This provided more greater detail for evidence-informed planning
- Strengths
  - High completeness.
  - Detailed prevalence of ORCs in NHSH.
  - Prevalence obesity comparable to SHeS.
  - Allows for consideration of target areas for implementation of GLP-1.
- Limitations
  - No split by sex
  - No reference categories (BMI < 25 or 25-30).
  - No clustering of ORCs.
- Opportunities
  - A tested method that can be applied across Scotland.
  - Move towards informed planning.

NHS Highland na Gàidhealtachd

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