TRENDS IN USE OF PRESCRIBED MEDICINES BY BODY MASS INDEX AND AGE: EVIDENCE FROM THE LAST TWO DECADES USING HEALTH SURVEYS FOR ENGLAND DATA

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Trends in the use of prescribed medicines by body mass index (BMI) and age are important for understanding lifetime trends in health care and for informing guidelines for prescribing. We report on data from the 1994-2015 waves of the General Household Survey (GHS) and English Longitudinal Study of Ageing (ELSA) for women and the GHS, ELSA, and British Household Panel Survey (BHPS) for men. Using logistic regression models with main effects and interactions between BMI (reference: normal-weight; obese: BMI ≥30 kg/m²), age, and survey year on taking any prescribed medicine in the last week (excluding smoking cessation products and contraception) were assessed adjusting for smoking and education. Analyses were repeated for polypharmacy (3+ medicines), and for cardiovascular and non-cardiovascular medicines. Results are presented as fully-adjusted Odds Ratios (OR) with 95% Confidence Intervals (95% CI).

Results Overall, the age-standardised prevalence of prescribed medicine use between 1994 and 2015 increased from 37.8% (95% CI 36.7% to 39.0%) to 46.7% (45.2%–48.2%) in men and from 45.7% (44.6%–46.8%) to 53.2% (51.8%–54.6%) in women. By 2015, use of 3+ medicines had doubled to 24.6% (23.4%–25.8%) in men and to 27.2% (26.1%–28.3%) in women. Among those taking any medicine, polypharmacy rose by 1.7 times to 42.8% (39.9%–45.6%) and 45.1% (42.9%–47.2%) respectively.

Prescribed medicine use increased over time more sharply with age. However, after age-adjustment, the increase in prevalence over time was greatest in obese women (BMI-by-year interaction: p=0.003). The odds of obese women taking any prescribed medicine in the last week were 1.5 times higher for those normal-weight women in 1994 (OR: 1.49; 95% CI 1.28 to 1.73), but had increased to 2.1 in 2015 (2.14; 1.82–2.53). Increased medicine use over time was greatest in obese men for cardiovascular medicines (BMI-by-year interaction: p=0.036). The odds of obese men aged 50–59 years taking any prescribed cardiovascular medicine in the last week were 2.1 times higher than those for normal-weight men of the same age in 1994 (20.8;1.46–2.95). The equivalent odds had increased to 3.0 in 2015 (2.98; 2.10–4.21).

Conclusion Higher BMI is associated with increased prescribing over the last 20 years regardless of age, reflecting secular rises in levels of awareness and of treatment of obesity and other co-morbid conditions, such as hypertension and diabetes, increased availability of effective secondary prevention medicines (e.g. statins, ACE inhibitors), lower thresholds for their use, and greater adherence to guidelines for their prescription.