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Evaluating the impact of health conditions and interventions on employment outcomes using linked, population-level datasets

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Objectives

This work programme uses linked Census and administrative datasets to quantify the impact of various health conditions, and treatments for those conditions, on labour market variables such as employment, pay and benefit receipts. This new, powerful evidence base will inform UK government policies and spending decisions aiming to increase labour market participation and economic growth.

Methods

The Office for National Statistics (ONS) has created a data asset comprising National Health Service (NHS) health records, HM Revenue and Customs (HMRC) pay-as-you-earn records, Department for Work and Pensions (DWP) benefit receipts, ONS death registrations and ONS Census data. The datasets are linked at the individual level, cover almost the entire working-age population of England, and provide nearly a decade of longitudinal observations. We are applying quasi-experimental techniques, such as pre-post fixed effects regression modelling with inverse-probability weighting or matching where relevant, to estimate the relationship between health conditions/interventions and labour market outcomes whilst controlling for relevant time-varying confounders. We are also exploring heterogeneity in these relationships by socio-demographic and clinical characteristics.

Results

To date, our analysis has demonstrated that: people from ethnic minority groups and deprived areas were disproportionately more likely to start receiving employment-related benefits during the COVID-19 pandemic; people who undergo bariatric (weight loss) surgery have a sustained improvement in the likelihood of employment up to five years after the surgery compared with pre-surgery; and talking therapies services are likely to be effective at helping unemployed people with common mental health disorders re-enter the workforce and increase their earnings potential up to seven years after treatment.

Conclusions

The new linked data asset created by ONS is already being used to generate valuable insights that have the potential to improve the livelihoods of individuals and the health of the macroeconomy. ONS will continue to publish outputs in this area throughout 2025, including on the labour market effects of diabetes prevention programmes, musculoskeletal surgery, cardiovascular disease, endometriosis, adverse pregnancy events, and extended NHS waiting lists.

