

education to increase the acceptance of NIPT while controlling the price of NIPT.

OP366 Characterizing The Population At Risk Of Chronic Obstructive Pulmonary Disease In China Using A Real-World Population Survey

Marco Koch, Thomas Butt (thomas.butt@ucl.ac.uk), Wudong Guo, Xue Li, Yirong Chen, Diana Tan and Gordon G. Liu

Introduction. Chronic obstructive pulmonary disease (COPD) is a leading cause of morbidity and mortality in China. However, early identification of patients with COPD in the community is challenging. This study used a real-world survey of the Chinese urban adult population to estimate the prevalence of COPD diagnosis or COPD-risk, examine the health outcomes and healthcare resource use of these groups, and investigate the sociodemographic factors associated with these statuses.

Methods. Respondents to the 2017 National Health and Wellness Survey in China ($n = 19,994$) were classified into: COPD (diagnosed), COPD-risk (undiagnosed), and control (undiagnosed, not at-risk) using their self-reported diagnosis and Lung Function Questionnaire (LFQ) score. These groups were compared by healthcare resource use and health outcomes (EuroQol [EQ-5D] and Work Productivity and Activity Impairment questionnaires). Factors associated with being in these groups were investigated using pairwise comparisons (t-tests and chi-square tests) and multivariable logistic regression.

Results. In total, 3,320 respondents (16.6%) had a suspected risk of COPD but did not report receiving a diagnosis. This was projected to 105.3 million people (16.9% of urban adults). Relative to the controls, COPD-risk and COPD-diagnosed respondents had higher healthcare resource use, lower productivity, and lower health-related quality of life (HRQoL) ($p < 0.05$). Age, smoking, alcohol consumption, weight, exercise, comorbidities, gender, education, employment, and air pollution were associated with increased odds of COPD-risk relative to the controls ($p < 0.05$).

Conclusions. A substantial group of individuals, undiagnosed, but with a risk of COPD, have impaired HRQoL, lower productivity, and elevated healthcare resource use. A range of sociodemographic factors are predictive of COPD risk, which may support targeted screening. Case-detection tools such as the LFQ may offer a convenient approach for identifying individuals for further definitive testing and appropriate treatment in China.

OP380 A Review Of The Methodology Used To Synthesize Continuous And Time-To-Event Outcomes For Clinical And Cost-Effectiveness

Suzanne Freeman (suzanne.freeman@le.ac.uk), Alex Sutton and Nicola Cooper

Introduction. Synthesis of continuous and time-to-event outcomes is often complicated by the use of multiple outcome scales and heterogeneous reporting of outcomes across trials. Simple methods of evidence synthesis for clinical effectiveness can fail to account for these issues and result in a reduction of the evidence base, which can be further reduced at the cost-effectiveness stage as common outcome measures, such as standardized mean differences, cannot easily be incorporated into the economic decision model. Recent methodological advances for synthesizing continuous and time-to-event outcomes aim to include a greater proportion of the available evidence base within a single coherent analysis.

Methods. To assess the statistical methods commonly used in health technology assessment (HTA) and establish whether recent advances in synthesis methods have been adopted in practice, we conducted a review of HTA reports and guidelines published in the United Kingdom (UK) between 1 April 2018 and 31 March 2019 reporting a quantitative meta-analysis (MA), network meta-analysis (NMA) or indirect treatment comparison (ITC) of at least one continuous or time-to-event outcome.

Results. Forty-seven articles were considered eligible for this review. Fifty-one percent of eligible articles reported at least one continuous outcome and 55 percent at least one time-to-event outcome. Twenty-nine articles reported NMA or ITC and twenty-seven reported MA of a continuous or time-to-event outcome. Forty articles included a decision model, of which twenty-seven incorporated evidence from a synthesis of a continuous or time-to-event outcome with eleven informed by a single trial (despite synthesis being conducted).

Conclusions. Uptake of methods to include a greater proportion of the available evidence base within a single coherent analysis in UK HTA reports has been slow. Evaluating health technologies using an evidence-based approach often results in better outcomes for patients. Therefore, HTA analysts and decision modelers must be aware of the expanding literature for synthesis of continuous and time-to-event outcomes and appreciate the limitations of simpler approaches.

OP388 17-Year Disease Reduction Predicted By A Transmission Dynamic Model After Pneumococcal Conjugate Vaccine Introduction In The United States

Sonya Snedecor (ssnedecor@pharmerit.com)

Introduction. After the introduction of the seven-valent pneumococcal conjugate vaccine (PCV7) in the United States (US) in the year 2000, the incidence of invasive pneumococcal disease (IPD) caused by the seven vaccine serotypes declined by 80 percent in vaccinated children and 30 percent in unvaccinated adults. A transmission dynamic equation model developed in 2009 captured the direct and indirect effects of vaccination in the early years after vaccination. Subsequently, the vaccine program switched to the 13-valent PCV and adult PCV13 vaccination. This work explores the accuracy of the mathematical model to predict long-term IPD due to changes in US immunization practices.

Methods. The model simulates the acquisition of asymptomatic carriage of pneumococci and the development of IPD among