

QOF targets; however, since across the UK predictive risk stratification tools for emergency admissions have been introduced alongside incentives to focus on patients at risk, we believe that our findings are generalizable.

VP133 Patient-Reported Health State Utilities In Neuroendocrine Tumours

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INTRODUCTION:

Gastroenteropancreatic neuroendocrine tumours (GEP-NETs) are rare cancers most often found in the gastrointestinal system or the pancreas. However, patient-reported health state utilities based on clinical trials have not been previously reported in this disease area.

METHODS:

The CLARINET study collected the European Organization for Research and Treatment of Cancer (EORTC) QLQ-C30 data from patients in both stable and progressive disease states, although data for the latter were only available during the early stage of progression due to trial design. Using published algorithms, data were mapped to EQ-5D utility values. Random-effects generalized least squares models were used to investigate the impacts of progression status, tumour site and other patient characteristics on mapped utility values.

RESULTS:

In total, 1,053 observations from 204 patients were mapped to EuroQol (EQ-5D) utilities using the McKenzie mapping algorithm. The final random-effects model included age, gender, baseline utility and progression status as covariates; it was not feasible to investigate time-to-death utility due to a limited number of death in the CLARINET study. Tumour location (midgut versus

pancreas) does not seem to affect utility. However, the difference in utilities based on progression status is statistically significant ($p < .05$) in the base case analysis, and the estimated utilities for stable and progressive disease are .776 and .726, respectively. Furthermore, scenario analyses showed that utility for progressive disease is numerically lower than for stable disease, but this may not be statistically significant in some scenarios.

CONCLUSIONS:

Patients with GEP-NETs experience worse utility values in the progressive disease state compared to the stable disease state, based on patient-reported health-related quality of life (HRQL) data from the CLARINET study. The decline of utility in the progressive disease state may be underestimated because progressive HRQL data were only collected shortly after the progression event in the trial. The estimated trial-based utilities can be used in future economic evaluations for GEP-NET treatments and to provide more insights to physicians on patient-reported quality of life outcomes in GEP-NETs.

VP135 Clustering Surgical Indicators And Predictors Of Catastrophic Expenses

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INTRODUCTION:

Increasing access to surgical care is crucial in improving the general health status of a population. Despite studies indicating the cross-country differences of general health indicators, there is a scarcity of knowledge focusing on the cross-country differences of surgical indicators. This study aims to classify countries according to surgical care indicators and identify risk predictors of catastrophic surgical care expenditures.

METHODS:

For this study, data were used from the World Health Organization and the World Bank on 177 countries. The following variable groups were chosen: total density of medical imaging technologies, surgical workforce distribution, number of surgical procedures, and risk of catastrophic surgical care expenditures. The *k*-means clustering algorithm was used to classify countries according to the surgical indicators. The optimal number of clusters was determined with a within-cluster sum of squares and a scree plot. A Silhouette index was used to examine clustering performance, and a random forest decision tree approach was used to determine risk predictors of catastrophic surgical care expenditures.

RESULTS:

The surgical care indicator results delineated the countries into four groups according to each country's income level. The cluster plot indicated that most high-income countries (for example, United States, United Kingdom, Norway) are in the first cluster. The second cluster consisted of four countries: Japan, San Marino, Marshall Islands, and Monaco. Low-income countries (for example, Ethiopia, Guatemala, Kenya) and middle-income countries (for example, Brazil, Turkey, Hungary) are represented in the third and fourth clusters, respectively. The third cluster had a high Silhouette index value (.75). The densities of both surgeons and medical imaging technology were risk determiners of catastrophic surgical care expenditures (Area Under Curve = .82).

CONCLUSIONS:

Our results demonstrate a need for more effective health plans if the differences between countries surgical care indicators are to be overcome. We recommend that health policymakers reconsider distribution strategies for the surgical workforce and medical imaging technology in the interest of accessibility and equality.

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VP136 The Impact Of Hospital Costing Methods On Economic Evaluations

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INTRODUCTION:

There are several methods to cost hospital contacts when estimating the cost effectiveness of a new intervention. In England, the National Institute for Health and Care Excellence (NICE) recommends the use of diagnosis-related group (DRG)-based costs as a valuable way of costing hospital resource use. There are three main sources of unit costs of a DRG: (i) tariffs as used for reimbursement purposes, (ii) benchmarking finished consultant episode (FCE)-level reference costs and (iii) benchmarking spell-level reference costs.

The purpose of this work is to compare the implications of choosing a particular source of DRG-based unit costs when conducting an economic evaluation.

METHODS:

As a case study, we used a cost-utility model developed to compare secondary fracture prevention models of care for hip fracture patients (1). A Markov model was derived from large primary and hospital care administrative datasets in England. Utilities were informed by a meta-regression of thirty-two studies. Hospital resource use (inpatient, outpatient, critical care and emergency care) was valued using the three different 2014–15 DRG-based unit costs and regression-based costing models were derived from 33,000 hip fracture patients to inform the health states of the model (2). For each source of DRG-based costs, we calculated mean life years, Quality-Adjusted Life Years (QALYs) and costs for a representative male and female associated with three models of care: (i) orthogeriatrician (OG)-led, (ii) nurse-led fracture liaison services and (iii) usual care.