Conclusions. Initial signs are that there are likely to be a number of ways in which IDEAL and RWE could complement one another.

VP19 Cost-Effectiveness Of Combination Inhaled Long-Acting Bronchodilators

Thomas Plunkett (tplunkett@hiqa.ie), Paul Carty, Michelle O'Neill, Patricia Harrington, Susan M Smith and Mairin Ryan

Introduction. To inform the development of a national clinical guideline for Chronic Obstructive Pulmonary Disease (COPD), prioritised by the National Clinical Effectiveness Committee (NCEC) in Ireland, a systematic review was conducted to examine the cost-effectiveness of long-acting beta2-agonists (LABAs) in combination with long-acting muscarinic antagonists (LAMAs) compared with LAMA or LABA monotherapy.

Methods. Medline, Embase, the Cochrane Library and grey literature sources were searched up to 19 June 2018. Studies evaluating cost-effectiveness published post-2008 in English were included. Screening, data extraction, and quality assessment using the Consensus Health Economic Criteria (CHEC-list) and International Society for Pharmacoeconomics (ISPOR) questionnaires were conducted independently by two reviewers. Costs were adjusted to 2017 Irish Euro using consumer price indices and purchasing power parity as per national guidelines.

Results. From a total of 8,661 articles identified, nine studies (all cost-utility analyses) were included in the review. Studies ranged from low to high quality and compared LAMA/LABA combination therapy with LAMA monotherapy. The results reported were mixed, ranging from combination therapy being dominated by (that is, more costly and less effective than) LAMA monotherapy to being dominant (that is, less costly and more effective). However, when excluding low quality, less applicable studies, the remaining six studies reported incremental cost-effectiveness ratios (ICERs) of between EUR 2,770 and EUR 26,462 per quality-adjusted life year (QALY) gained. Only one study additionally compared LABA monotherapy as a comparator, reporting combination therapy to be even more cost-effective than in the LAMA monotherapy comparison.

Conclusions. Applying a cost-effectiveness willingness-to-pay threshold of EUR 45,000 per QALY gained, this systematic review found that LAMA/LABA combination therapy is cost-effective compared with LAMA or LABA monotherapy in COPD patients.

VP21 Economic Burden Of Pertussis Treatment In Brazil, 2014

Ângela Bagattini (angelabagattini@gmail.com), Gabriela Policena, Louise Russell and Cristiana Toscano

Introduction. Despite availability of a cheap, widely accessible vaccine, pertussis remains an important cause of morbidity and mortality in children worldwide. A resurgence of pertussis in Brazil peaked at 8,815 cases in 2014. We estimate the economic burden of pertussis hospitalizations and outpatient cases in Brazil in 2014.

Methods. Taking the Brazilian public health system (SUS) perspective we obtained numbers of hospitalizations from the National Hospitalization Information System (SIH) for discharge diagnosis ICD10:A37 and numbers of confirmed outpatient cases from the surveillance information system (SINAN). We estimated costs per case for seven age groups (<1, 1-4, 5-9, 10-19, 20-39, 40-64, and 65+ years). Hospitalization costs were obtained from SIH, which reimburses direct medical (hospital stay, healthcare professional services, and physical therapy) and non-medical costs (parent/caregiver stay accompanying a hospitalized child). Cost of outpatient management was estimated from national guidelines (diagnostic exams, medical visits, and medications) and national pricing lists. Total economic burden was derived by multiplying costs/case by numbers of hospitalized and outpatient cases, respectively, and converted to US Dollars (USD) (December 2014: 1 BRL = USD 0.39).

Results. A total of 8,815 pertussis cases occurred in Brazil in 2014; 55.9 percent were hospitalized. Total cost to the public health care system was USD 2.6 million, 95 percent for hospitalizations. Cost/case was highest at the extremes of age for both hospitalized <1y, BRL 1,378.54 (USD 537); 65y+, BRL 1,875.00 (USD 731) and outpatient cases BRL 41 (USD 16) for <4y and 20y+. Children <4 years accounted for 95.4 percent of hospitalizations, 51.2 percent of outpatient cases, and 95.4 percent of total costs. Children <1 year accounted for 88.1 percent of hospitalizations, 29.1 percent of outpatient cases, and 89.3 percent of total costs.

Conclusions. Pertussis economic burden in an outbreak year was largely due to hospitalizations in children <1y. Additional prevention strategies are required targeting this population.

VP22 Applying The IDEAL Framework To NICE Interventional Procedure Guidance

Sharika Anjum (sharika.anjum@nhs.net), John Powell and Kevin Harris

Introduction. The IDEAL (Idea, Development, Exploration, Assessment, Learning) Framework measures the maturity of evidence base behind surgical innovation. The NICE Interventional Procedures (IP) programme issues guidance for the United Kingdom National Health Service (NHS) on use of surgical innovation. One of four recommendations can be made: (a) standard arrangements, (b) special arrangements, (c) research only, and (d) do not use. This study aimed to investigate whether the recommendation of NICE IP guidance corresponded with the stage of innovation as determined by IDEAL, thus IDEAL's role in informing future guidance production.

Methods. A retrospective sample of 103 pieces of guidance issued between 2015 and 2018 was analysed. One researcher examined the evidence base and determined the corresponding stage of the IDEAL framework, numbered 1, 2, 2a, 3 and 4. The primary outcome measure was the association between stage of evidence on IDEAL framework and the recommendation of published NICE IP guidance.

https://doi.org/10.1017/S0266462319002976 Published online by Cambridge University Press

Results. There were twenty-one (20 percent), thirty-three (32 percent), three (3 percent), forty (39 percent) and six (6 percent) procedures at IDEAL stages 1, 2, 2a, 3 and 4, respectively. Of those at stage 1 (idea), 48 percent were given research only arrangements, 43 percent special arrangements, and 10 percent standard. Many of the procedures at stages 2 (development) and 2a (exploration) were given standard arrangements (39 percent and 67 percent respectively). Forty-three percent of stage 3 (assessment) and 67 percent of stage 4 (learning) guidance were identified standard. At stage 4 none were given a 'research only' recommendation.

Conclusions. Procedures given 'standard' arrangements guidance are more likely have a mature and robust evidence base as determined by IDEAL. Those with limited evidence are more likely to be given a more cautious 'research only' guidance. Routine use of this framework could help inform future guidance production however cannot replace the decision-making function of the NICE committee which also involves patient experiences, population characteristics, risk of serious safety events, and equity issues.

VP23 Assessing The Effectiveness Of A Medical Device With Limited Evidence

Thomas Macmillan (thomas.macmillan@kcl.ac.uk), Anastasia Chalkidou and Kate Goddard

Introduction. SecurAcath (Interrad Medical), a catheter securement device designed for central venous catheters, was assessed by the National Institute for Health and Care Excellence (NICE) in 2017 resulting in Medical Technology Guidance 34 (MTG34). Due to the limited number and quality of published evidence, novel methods were used to deliver a report that allowed a recommendation on adoption to be made.

Methods. KiTEC, an external assessment centre for NICE, independently evaluated the manufacturers submission of clinical and economic evidence. The submission was characterised by a lack of strong clinical evidence, comprising just one randomized clinical trial (RCT) and a small number of non-comparative observational studies, some of which were available as conference abstracts or poster presentations. KiTEC ran a meta-analysis of these studies along with data on the comparators, securement with sutures and securement with StatLock (Bard Access Systems). Due to the lack of comparative studies, KiTEC pooled data on five outcomes (migration, dislodgement, catheter-related infection, CRBSI, unplanned removals/reinsertions) and calculated relative risks for each. KiTEC revised the manufacturer's cost model, changing a number of parameters and assumptions. The decision to recommend SecurAcath for use in the National Health Service (NHS) was also supported by qualitative evidence from expert clinicians who had used the SecurAcath in practice.

Results. KiTEC's meta-analysis showed non-inferiority for SecurAcath over the comparators. The limited information in the studies made it impossible to ascertain study heterogeneity in the meta-analysis. KiTEC's economic analyses showed that SecurAcath could be cost saving in some scenarios, but not for short indwell times (≤5 days). However, clinical expert opinion was overwhelmingly positive and this qualitative evidence was viewed alongside the less conclusive clinical and cost-effectiveness evidence. SecurAcath was recommended to be used in the NHS, with annual savings estimated to be a minimum of GBP 4.2m.

Conclusions. In cases where there is a lack of published evidence, unpublished material and expert clinical opinion can be used to bolster the case for the adoption of medical devices.

VP25 HTA Enables Nurses To Discontinue Continuous ECG Monitoring

Matthew Mitchell (mdmitchell@uphs.upenn.edu), Julia Lavenberg, Sara Holland, Nikhil Mull and Kendal Williams

Introduction. Providers frequently issue orders for telemetry (continuous ECG monitoring) of hospital inpatients, but they rarely issue orders to discontinue telemetry. This can cause telemetry beds to be unavailable for patients who need them.

Methods. Our hospital health technology assessment (HTA) center conducted a rapid systematic review of evidence on algorithms, guidelines, and other tools for nurses to identify patients who no longer need telemetry. Databases searched included Medline, CINAHL, the Cochrane Library, National Guideline Clearinghouse, and Joanna Briggs Institute.

Results. We found no guidelines or existing systematic reviews of nurse-driven protocols for discontinuing telemetry. There were three published articles describing projects where protocols for discontinuing telemetry were tested. All three of these studies were of low methodologic quality. They all found that use of the protocol reduced the number of hours of telemetry monitoring that were used in the hospital. Two studies published in letter form reported adaptations of computerized order entry systems where nurses assess the patient's readiness for discontinuing telemetry and either discontinue telemetry or report to the ordering physician when the stated discontinuation criteria are met.

Conclusions. Our hospitals are now implementing the HTA findings in our electronic ordering system.

VP26 HTA In Nursing: Scoping Trends With An ICF Component Analysis

Markus Wübbeler and Sebastian Geis (markus.wuebbeler@hs-gesundheit.de)

Introduction. Nursing is a worldwide growing but still underdeveloped health technology assessment (HTA) field. A systematic overview about the current trends in HTA and nursing would shed some light on the issues of (i) the HTA base in this sector, and (ii) outcomes addressed with the interventions and technologies.

Methods. We conducted a scoping review using the National Health Service (NHS) Centre for Reviews and Dissemination HTA database, including all abstracts of HTA reports related to nursing. To systemize the interventions and technologies assessed in the HTA reports, we designed an International Classification of Functioning, Disability and Health (ICF) Map connecting the

https://doi.org/10.1017/S0266462319002976 Published online by Cambridge University Press