

for such development, which stakeholders to include, and how to divide the work between the health region and the system vendor. The answers to such questions will have both practical and economic consequences for designing the next phase of the process.

PP137 Toric Intraocular Lenses and Spectacle Independence: A Systematic Review

Derek O'Boyle (derek.oboyle@alcon.com), Caridad Perez Vives, Jan de Haan, Frank Ender and Rafael Busutil

Introduction. Astigmatism is a common ocular condition that causes reduced visual acuity. The condition is highly prevalent in cataract patients, with preoperative astigmatism of at least 0.5 diopters being present in 78 percent of cataractous eyes. Residual uncorrected astigmatism after cataract surgery is associated with significant costs, primarily driven by the lifetime cost of spectacles (estimated at EUR 1,608 to EUR 3,608 in Europe). Toric intraocular lenses (IOLs) are a safe and effective way of correcting astigmatism, while also reducing the need for spectacles after cataract surgery. The objective of this review was to assess the published evidence relating to spectacle independence in patients implanted with toric IOLs, compared with those receiving non-toric IOLs with or without astigmatism reducing surgical interventions (SI).

Methods. A systematic literature search was conducted of the EMBASE, MEDLINE, and Cochrane Library databases. Articles were selected if they included adult patients undergoing phacoemulsification who had age-related cataracts and preoperative regular corneal astigmatism of at least 0.5 diopters, and assessed spectacle independence as an outcome.

Results. Seven studies met the inclusion criteria: four randomized controlled trials and one non-randomized comparative study comparing toric IOLs with non-toric IOLs, and two randomized controlled trials comparing toric IOLs with non-toric IOLs plus SI. Spectacle independence was evaluated as the number of patients who reported not requiring spectacles for distance viewing at 3 or 6 months. Figures for spectacle independence ranged from 60 to 100 percent for toric IOLs, 31 to 50 percent for non-toric IOLs, and 36 to 65 percent for non-toric IOLs plus SI. In each study, toric IOLs demonstrated superior spectacle independence compared with the control group.

Conclusions. The benefits of toric IOL implantation for astigmatic cataract patients included a higher rate of spectacle independence, compared with non-toric IOLs with or without SI. For this group of patients, the lifetime economic burden of spectacle acquisition costs can be reduced with the implantation of toric IOLs during cataract surgery.

PP139 Adapting Health Technology Assessment And Procurement To Tackle Antimicrobial Resistance

Margherita Neri (mneri@ohe.org), Adrian Towse, Grace Hampson and Christopher Henshall

Introduction. The rise of antimicrobial resistance (AMR) as an international public health threat calls urgently for improved stewardship of antibiotics and for the development of new antibiotics to tackle AMR. There is growing agreement that changes are needed to existing systems for health technology assessment (HTA) and procurement if antibiotics are to be used appropriately, and manufacturers are to receive rewards that incentivize research and development. However, there has been little discussion of what changes might actually be made.

Methods. We conducted a literature review of recent proposals to modify HTA and contracting for antibiotics, and interviewed HTA experts from England, France, Germany, Italy, Japan, and Sweden to explore the attractiveness of these and other proposals in their countries. A forum (held in February 2019) with government and health system representatives from these countries, as well as from industry, will promote face-to-face discussions on practical ways to modify approaches in these countries to recognize the full value of antibiotics and promote responsible stewardship.

Results. The focus of the main proposal is to define value attributes that reflect the societal impact of antibiotics, model the dynamics of infection transmission and resistance development, and conceptualize payment models that delink volumes sold from final revenues. However, HTA experts perceived a number of issues with these proposals, including a lack of data to demonstrate societal value, complex modeling techniques that require advanced capabilities, uncertain value estimates, and lack of alignment with current approaches. At present, it appears that only England and Sweden have started to actively address HTA and contracting for antibiotics as a priority.

Conclusions. Preliminary findings suggested that efforts and progress on modifying HTA and contracting of antibiotics have been heterogeneous so far. The forum will shed further light on possible ways forward within the two value assessment approaches of clinical added benefit and quality-adjusted life years.

PP141 Functional Connectivity Magnetic Resonance Imaging To Detect Autism

Mar Polo-DeSantos (MPOLO@ISCI.ES), Juan Pablo, Chalco Orrego, Ana Isabel Hijas-Gómez, Setefilla Luengo-Matos and Luis María Sánchez-Gómez

Introduction. Autism is a neurodevelopmental disorder characterized by alterations in the intellectual, social, communication, and behavioral capabilities of an individual, and is rarely detected in children before 24 months of age. Early diagnosis and intervention may be more effective at a younger age. Functional connectivity magnetic resonance imaging (fcMRI) of 6-month old infants may be able to identify brain connection patterns related to at least one of the characteristics of autism, which normally appear at 24 months of age, by using a mathematical model to analyze the neuroimaging data.

Methods. Clinical studies published up to December 2018 that used fcMRI to detect autism in infants were reviewed. The literature databases searched included PubMed, Web of Science, the

Trip Database, DynaMed, the Cochrane Library, the International Clinical Trials Registry Platform, and ClinicalTrials.gov. Early assessments of fMRI analysis were identified through the Early Awareness and Alert System of the Agencia de Evaluación de Tecnologías Sanitarias.

Results. Only one prospective study of 59 infants at 6-months of age was retrieved. A fMRI analysis was performed to identify 2,635 pairs of functional connections from 230 brain regions. The infants were subsequently assessed for autism at 24 months of age using gold standard tests. The functional connections correlated with at least one of the behaviors related to autism evaluated at 24 months of age. Eleven infants (19%) were diagnosed with autism at 24 months. Compared with the gold standard test results, the predictive model achieved the following: sensitivity 0.82 (95% confidence interval [CI]: 0.52 - 0.95); specificity 1.00 (95% CI: 0.93–1.00); positive predictive value 1.00 (95% CI: 0.70–1.00); negative predictive value 0.96 (95% CI: 0.87–0.99); and negative likelihood ratio 0.18 (95% CI: 0.05–0.64). Adverse effects were not reported in the study.

Conclusions. The fMRI analysis could help in early detection of autism and the development of preventive interventions. However, the evidence is sparse and more well-designed studies are needed.

PP142 Health Technology Assessment – A Major Bottleneck In Patient Access?

George Wang (george.wang@parexel.com) and Richard Macaulay

Introduction. Conditional marketing authorization (CMA) and accelerated assessment (AA) have been introduced to expedite the development of and access to therapies in Europe. However, to reach patients medicines must also be publicly reimbursed. This research evaluated the reimbursement of therapies which have received European CMA or underwent AA.

Methods. Medicines that received CMA or underwent AA between January 2012 and December 2017 were identified. Appraisals of these medicines conducted by major European payer bodies were obtained from relevant websites and key data were extracted.

Results. Out of the 38 medicines that received a CMA, 83 percent (19/23) were assessed by the National Institute for Health and Care Excellence (NICE) and received positive decisions, compared with 57 percent (16/26) by the Scottish Medicines Consortium (SMC) (defined as recommended/restricted), 74 percent (14/19) by Gemeinsamer Bundesausschuss (G-BA) (defined as any level of additional benefit), and 29 percent by Haute Autorité de Santé (HAS) (amélioration du service médical rendu I-III). The median delay between CMA approval and positive health technology assessment (HTA) outcome was 13 months for NICE, 11 months for SMC, 7 months for G-BA, and 5 months for HAS. Thirty-two medicines underwent AA. Of these, 68 percent (17/25) were appraised by G-BA and received positive outcomes, compared with 29 percent (7/24) by HAS, 90 percent (19/21) by SMC, and 86 percent (18/21) by NICE. The median delay between AA approval and positive HTA outcome

was 7.4 months for G-BA, 7.9 months for HAS, 11.7 months for SMC, and 11.8 months for NICE.

Conclusions. CMA has expedited regulatory approval for products that address severe unmet needs. However, many of these products fail to gain public reimbursement, and even when they do there is a significant delay. AA provides market authorizations two months earlier than standard centralized assessment. Although high rates of positive payer outcomes have been achieved, the products typically experience substantial additional delays in securing public reimbursement. A parallel, cooperative approach among regulatory and HTA bodies across Europe is required to truly expedite patient access.

PP148 A Stakeholder-Informed Strategy For Effective Communication

Lauren Elston (lauren.elston@wales.nhs.uk), Ruth Louise Poole, Barbara Fraser, Ian Coldwell and Susan Myles

Introduction. Effective communication is vital for engaging stakeholders in health technology assessment (HTA), as well as the successful dissemination and adoption of HTA research and guidance. As a relatively new organization, Health Technology Wales (HTW) has an ideal opportunity to take an effective, strategic approach to communication and stakeholder engagement from the outset.

Methods. HTW commissioned Pagoda Public Relations to develop an informed communications strategy and delivery framework. The strategy used OASIS methodology for public relations planning: Objectives, Audience insight, Strategy, Implementation, and Scoring (evaluation). Initial objectives were developed with input from the HTW team and members of the HTW Assessment Group and Appraisal Panel. Stakeholder insights were collected through an online survey and telephone interviews. These insights were used to inform the communications strategy and framework, outlining key audiences, key messages, communication objectives, methods, tactics, and evaluations.

Results. Seven key objectives were identified, each of which were supported by recommended actions. These were underpinned by the key aims and messages reflecting how we will achieve these objectives. National Health Service boards, government, clinicians, the technology and research sector, patients, and the general public were identified as priority audiences. Various different communication channels and activities were identified, aimed at various audiences. These included the website, social media, traditional media, and exhibitions or workshops, as well as targeted e-mail dissemination of guidance. Evaluation of HTW communications will be aligned with the wider HTW evaluation strategy, and evidence will be recorded through OutNav software (Matter of Focus Ltd).

Conclusions. HTW is committed to a strategic, effective approach to communication and engagement. We now have an audience-informed communications strategy and plan that outlines our key objectives, and how to achieve and evaluate these objectives. Successful implementation will raise awareness of