

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

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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

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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

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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