Results. Six technology types were identified and applied to the MInD: (i) new technology; (ii) repurposed technology (on-patent/branded); (iii) repurposed drug (off-patent/generic); (iv) repurposed technology (never commercialized); (v) new and repurposed technology (combinations); and (vi) repurposed technology (combinations). Preliminary analysis of a subset of MInD records identified in July 2021 (n = 113) found mainly 52 percent new technologies, 27 percent new and repurposed technologies (combinations) and 14 percent repurposed technology (never commercialized). Further analysis of approximately 7000 MInD records are ongoing and will report temporal trends, regulatory status, and key challenges.
Conclusions. Our novel evidence-based approach to developing classifications for technology types of innovative medicines resulted in six mutually exclusive states that can be applied to a larger dataset. We believe this offers HTA stakeholders a mechanism to gain valuable insights into the innovation trends, gaps, and areas of unmet need.

OP56 A Life Cycle Approach To Horizon Scanning Outputs - From Signals To Guidelines

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Introduction. The National Institute for Health and Care Research Innovation Observatory (IO) is a horizon scanning centre based at Newcastle University, United Kingdom. The IO provides horizon scanning intelligence on new and innovative medicinal products to the National Institute for Health and Care Excellence (NICE) as technology briefing notifications (TBNs). We present an analysis of how TBNs produced between April 2017 and October 2021 feed into the NICE HTA process and used to inform their Technology Appraisal (TA) programme.
Methods. TBNs were mapped to relevant published NICE TA guidance and time from horizon scanning identification to NICE recommendation was studied. For mapping technologies undergoing appraisal, provisional guidance-in-development (GID) identification numbers (IDs) were used. For technologies that had not reached the NICE scoping stage yet, the NICE Topic Selection decision and ID was used.
Results. Six hundred and ninety-three TBNs were submitted to NICE between April 2017 and October 2021; 653 were prioritised for TA. Of those, eleven percent mapped to a published NICE TA guidance; forty-three percent to a GID, twenty-two percent were undergoing consultation, and three percent were not traced. Further twenty-one percent mapped to a suspended or terminated TA. Reasons for this included HTA timeliness, regulatory issues or companies unwilling to submit evidence to NICE. Time from technology identification to TA guidance publication ranged from twenty-two to 115 months. The average time from TBN submission to NICE recommendation was thirty months.
Conclusions. Timely notification is key in achieving TA recommendation aligned with market authorization but not the only influencing factor. After issuing a TBN, the NICE appraisal process might be terminated, suspended or withdrawn due to unforeseen factors. Horizon scanning plays a key role triggering the NICE TA process; understanding factors that influence the successful TA completion would streamline processes and find efficiencies.

OP57 The Identification Of Technological Innovations To Address The Challenge Of Antimicrobial Resistance Using Horizon Scanning Approaches

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Introduction. Inappropriate prescribing of antibiotics is a significant driver of antimicrobial resistance (AMR) which is a global health challenge. Technological innovations present an opportunity to reduce demand for antimicrobials through infection prevention, detection, and management. The National Institute for Health and Care Research (NIHR) Innovation Observatory (IO) has developed horizon scanning methods to identify promising innovations (devices/diagnostics/digital) and anticipate technological trends. Together these insights build a comprehensive landscape and presents a significant opportunity for decision-makers and HTAs to consider the clinical, financial, infrastructural, and logistical provisions to improve preparedness for the potential adoption of these future innovations.
Methods. The IO developed a detailed dataset of technologies by formulating search strategies for AMR, based on a comprehensive list of terms and input from expert panels. Primary and secondary sources were systematically scanned using a combination of traditional scanning methods, automated and novel artificial intelligence (AI)/machine learning techniques. Sources included clinical trial registries, MedTech news, academic sources, funding agencies, commercial sites, and regulatory authorities.
Results. Our global dataset identified over 3000 innovative preventative, detection, and monitoring technologies mapped across AMR clinical pathways (including sepsis, respiratory tract infections). Development activity largely concentrated in the United States of America and United Kingdom. Emerging trends included the application of novel materials to prevent infections (e.g., catheter coatings) and novel analytical techniques (e.g., biosensors, microfluidics, breath analysis) to support optimal patient treatment. Data analysis revealed a high proportion of technologies were diagnostic innovations addressing unmet needs such as rapid and accurate detection (including drug-resistant infections).
Conclusions. The rapid development and application of technological interventions presents an opportunity to strengthen national AMR strategies worldwide, through the adoption of new innovations. Improvements in exiting technologies, along with technological advancements have the potential to support appropriate prescribing of antimicrobials and thus address the rise in AMR.

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