**Introduction.** Patients with spinal deformity require implanted spinal rods to be specifically shaped to their anatomy. Spinal rods which are manually shaped in the operating theatre are prone to fracture and malpositioning. This emphasizes the need for preoperative planning, intraoperative imaging, and accurate shaping of the implant. The application of machine learning (ML) has enabled precision in shaping patient-specific rods, with the potential to reduce adverse events. Our objective is to assess the economic value of this technology, early in its lifecycle, in the context of Health Technology Assessment (HTA) in Australia.
**Methods.** A budget impact analysis was performed to quantify the economic value of patient-specific spinal rods from an Australian payor perspective. Clinical outcomes were sourced from literature review, and cost inputs were obtained from Medicare, Private Health Data Bureau and Hospital Casemix Protocol Data databases.
**Results.** Preliminary analysis indicates that a reduction in the rate of revision surgery due to decreased instrument failure results in cost-savings to the healthcare system, despite a higher outlay for the patient-specific rods. Adolescents who may have remained sagittally malaligned after the implantation of manually bent rods are expected to derive the greatest benefit from this ML application. The key uncertainty in this analysis is the limited real-world data of this emerging technology. ML is an iterative process of continuous improvement, identifying correlations within the data collected. As additional surgical data are integrated into predictive models, we anticipate ML technology will enhance decision-making support in surgical strategy and enable better implant precision, resulting in further decreased operating time, reduced mechanical complications, and increased healthcare savings.
**Conclusions.** ML technology is enabling precision in patient-specific implants, which is expected to drive healthcare cost-savings due to a reduction in instrument failure. Fewer replacement surgeries are an important patient-relevant outcome, especially for adolescents with spinal deformity. This preliminary analysis demonstrates the economic value of ML enabled patient-specific rods to Australian payors, early in its lifecycle.

## PP17 Is the PriTec Tool Useful In The Identification Of Disruptive Healthcare Technologies?

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**Introduction.** A disruptive technology has been defined as an innovation that completely changes the way things are done. Early identification of potential disruptive health technologies has become a key point in the agenda of decision makers and health technology assessment (HTA) bodies. The PriTec tool is an automatically executable web application that was developed in 2009 by the Galician HTA Agency to facilitate decision-making regarding the selection of technologies for post-launch observation. The tool has been updated to allow scoring and ranking of technologies before their introduction into the healthcare portfolio. The aim of this work was to propose a framework for assessing the usefulness of the PriTec tool in relation to identifying possible disruptive innovations.
**Methods.** To evaluate the applicability of the PriTec tool for distinguishing disruptive from non-disruptive innovations, we selected a few examples from prior acknowledged disruptive and non-disruptive innovations. These technologies were scored against the predefined criteria and the results were compared and analyzed globally and by type of domain. The PriTec tool assesses six domains of technologies: clinical condition, comparative effectiveness and safety, economic impact, implementation consequences, and dissemination speed.
**Results.** Disruptive technologies (e.g., transcatheter aortic valve implantation or point-of-care tests) had higher weighted global scores than non-disruptive technologies. In the domain analysis, the scores for implementation consequences were higher for disruptive than for non-disruptive technologies. Both types of technologies had similar scores in the other domains.
**Conclusions.** The PriTec tool seems to be useful for identifying potential disruptive technologies through its implementation domain. Further validation strategies are required to confirm the tool's applicability and to improve its accuracy in the field of health disruption. The tool could be used by governments, horizon scanning organizations, and HTA organizations to promote the evidence-based detection of disruptive technologies in clinical practice. However, it is advisable that the tool be further tested and validated in other contexts.

## PP18 Horizon Scanning For Clinical Biosimilar Medicines: Informing The Lifecycle Of Health Technology Assessment And Market Access

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**Introduction.** The National Institute for Health and Care Research (NIHR) Innovation Observatory (IO) national horizon scanning research centre, has a remit to notify its stakeholders, including the National Institute for Health and Care Excellence (NICE), about innovative interventions; including biosimilar medicines in the pipeline. Biosimilar medicines bypass many developmental steps, making them substantially cheaper to manufacture for providers, which increases market availability and improves treatment access for patients.
**Methods.** Since 2017, the NIHR IO has monitored biosimilars in clinical development that align to the NICE health technology assessment remit. The data set explored was exported from our internal medicines innovation database - MInD.

Data sets were created that included information on the characteristics of biosimilars and their associated clinical trials. Analyses and visualization creation were carried out using Microsoft Excel and Microsoft Power BI.

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