INTRODUCTION:

In the fast-paced world of health technology innovation, early health technology assessment (HTA) gained recognition as a tool to help prioritize and steer the development of those innovations that potentially add value. Much of early HTA seems technology-driven; a certain novel technology is introduced and the focus is on assessing its expected cost-effectiveness. We argue that a first step in assessing innovation would be to derive proof-of-problem through combining evidence from literature and stakeholder engagement. We applied this approach to a novel surgical instrument aimed to facilitate meniscus surgery.

METHODS:

First, we identified a broad scope of stakeholders in meniscus surgery (i.e. meniscectomy). Through interviewing them we derived key problems in meniscectomy as-is, and determined which outcomes matter most. We used stakeholder and literature input to quantify the room for improvement in current meniscectomy. Together with stakeholders we interpreted the problem quantification and conducted an early assessment of the proposed surgical innovation. Finally, we made use of this early stakeholder engagement to uncover possible barriers and facilitators to the innovation's implementation.

RESULTS:

While all stakeholders were enthusiastic about the innovation, there was a shared perception that there is little room for improvement in meniscectomy at present. Put differently; the innovation poses a great solution to problems that may not exist. In addition, by involving a broad range of stakeholders we were able to identify barriers and facilitators to future implementation early on, such as surgeons' preferences.

CONCLUSIONS:

We conclude that the innovation's value may lie with applications outside of meniscus surgery. Regarding methodology, we showed how a shift of focus from solution to problem definition provides a different perspective on an innovation's potential value, borne out of needs not currently met. In doing so, early HTA is in a unique position to help navigate the stream of health technology innovation before actual development of the innovation.

PP86 Impact Of Health Technology Assessment On Drug Price Negotiations: Canada

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INTRODUCTION:

Subsequent to review by Canada's two central health technology assessment (HTA) agencies, confidential drug prices are negotiated by the pan-Canadian Pharmaceutical Alliance (pCPA) on behalf of public drug plans. This analysis is the first to examine characteristics of drugs considered for negotiation, and the duration of negotiations, from inception in 2011 to August 2017. The objectives were to identify how HTA recommendations impacted price negotiations, and in particular the role of health economics in the process.

METHODS:

The dataset contained 208 drug indications from the pCPA archives: those with a decision to negotiate (n=155) or a decision not to negotiate (n=53). Data were abstracted from the publicly-maintained websites of the respective agencies; descriptive statistics were conducted.

RESULTS:

There was close but imperfect alignment between the HTA agency listing recommendation and the pCPA's decision to negotiate. The incremental cost-effectiveness ratio (ICER) of negotiated drugs (as estimated by HTA agencies) approached CAD 200,000/QALY (i.e. USD 157,000) for oncology drugs, but was closer to CAD 100,000/QALY (i.e. USD 78,000) for non-oncology drugs, revealing that negotiations would require a substantial discount to achieve conventionally 'acceptable' value-for-money. ICERs were influential to non-oncology drug recommendations (and were increasingly used to set pCPA negotiation targets) but did not appear to influence oncology drug HTA recommendations. The time period required to initiate negotiations was dramatically shorter for oncology versus non-oncology drugs (53 versus 263 days), and also differed markedly between therapeutic areas. The time period for pCPA activities was surprisingly similar for drugs recommended without a price condition and for those conditional on a price reduction.

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CONCLUSIONS:

These findings revealed an implicit prioritization pattern at the pCPA, as well as the evolving role of health economics in Canada's two-stage reimbursement process.

PP88 Intravenous Medication Delivery System Cost-Effectiveness Analysis

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INTRODUCTION:

Medication delivery is one of the most common interventions in clinical practice. It requires the direct involvement of nurses and high precision infusion pumps in order to increase the infusion accuracy. Any mistake in the medication delivery process can lead to a medication error, resulting in adverse events with considerable increases in hospital length of stay and cost. Research studies should analyze this area more in emerging countries, as their realities differ from the realities of developed countries, where most of the literature of this area has been developed. This research study analyses this area in Brazil, a leading emerging country. The incorporation of these technologies in health services have caused two major problems: uncertainty around its effectiveness in reducing adverse drug event rates related to infusion dose errors, and the high cost of their inputs. The objective of this study was to analyze the cost-effectiveness of intelligent drug library infusion pumps to reduce adverse drug events during intravenous medication delivery in pediatric and neonatal patients.

METHODS:

Cost-effectiveness was evaluated using a decision-tree framework, considering two scenarios as the base case: the reference one, which uses conventional infusion pumps for intravenous medication delivery with a volume greater than 60 mL, and an alternative one, which uses the drug library infusion pumps. The analysis is with the Unified Health System (Brazil's publicly funded health care system) perspective. The Monte Carlo simulations addressed the uncertainties of the framework. The effectiveness measure was avoidance of adverse drug events.

RESULTS:

The probabilistic analysis showed the drug library infusion pumps to be more cost-effective than conventional pumps. This ratified what had already been revealed by acceptance curve, which demonstrated that the drug library infusion pumps are more likely to be cost-effective compared to the conventional infusion pumps (with a minimum of the incremental cost-effectiveness of USD 1,501.28).

CONCLUSIONS:

The study demonstrated that the use of the drug library infusion pumps in the pediatric and the neonatal intensive care unit can improve the results of the adverse drug event reduction strategy.

PP89 Living Lab Concept: An Innovation Hub For Elderly Residential Care

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INTRODUCTION:

Many countries face the challenge of an aging population. Development of suitable technologies to support frail elderly living in care homes, sheltered housing or at home remains a concern. Technology evaluation in real-life conditions is often lacking, and randomized controlled trials of 'pre-designed' technologies are expensive and fail to deliver. A novel alternative would be 'living labs'-real-life test and experimentation environments where users and producers co-create innovations and large-scale data can be collected.

METHODS:

The goal of the living labs and Data Driven Research and Innovation (DDRI) Programme is to use data driven analytics and insights to support technology development for independent living, healthy aging and more cost-effective care. This involves a cluster of

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