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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long-term residential care facilities providing 24/7 living lab settings, linked to an embedded innovation hub. DDRI also encompasses private vehicles (e.g. sensors in cars) to enable elderly to drive safely for longer. Collaborations have been established with Universities in England, Scotland and Ireland and with international industry partners.

RESULTS:

Several projects are underway: (i) develop machine learning algorithm from non-intrusive sensor data to build a well-being representation for individual residents/citizens; (ii) evaluate innovative interventions for good sleep environment and nutritional support; and (iii) establish ethics framework to ensure that needs of residents, families and staff are embedded in design, communication, and evaluation of future DDRI projects. In addition, fifteen interdisciplinary doctoral fellowships are in place, six universities are working closely with individual living lab settings, and an innovation hub has been established in one care home for horizon-scanning and strategic technology selection and implementation.

CONCLUSIONS:

Over the next five years, a national network of 20 residential living labs with over 1,500 participants will be established. Generation of new user-led technologies, blueprints for capture of individual data at significant scale, and ethical and organizational guidelines will be developed. Intelligent mobility via data capture/feedback in vehicles will be established.

PP90 The Value Of Multi-Criteria Decision Analysis Use On Health Technology Decision Making Process

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INTRODUCTION:

The use of multi-criteria decision analysis (MCDA) in health technology assessment (HTA) studies has become more common due to the fact that MCDA offers a comprehensive technique for decisions that involve multiple criteria and stakeholders. How MCDA contributes to the HTA decision making process is an issue to be investigated. A systematic review was carried out in order to provide an overview of the benefits identified in MCDA applications for the strategic HTA decision making process.

METHODS:

A systematic review developed by Philip Wahlster et al. (2014) was updated. The papers were analyzed in order to determine how MCDA is connected with traditional HTA, and to identify opportunities through the application of MCDA. In total 965 papers were found, and 43 articles were included in the review. The included articles detailed MCDA applications oriented to tactical and strategic decision making processes. The review was conducted by two researchers.

RESULTS:

Of the available studies published on MCDA, 76 percent were published between 2014 and 2017, and 24 percent were published prior to 2014. Regarding the MCDA methodology defined in the included studies, 10 used the analytical hierarchy process, four used multi-attribute theory, and others refer the methodology only as "MCDA". Seventeen studies also included health technology economic analysis, in special cost-effectiveness, safety and technological innovation. The studies suggest MCDA adds value since it allows different stakeholders to be engaged in the decision making process.

CONCLUSIONS:

The increase in studies on MCDA and healthcare point to the possibility to add different criteria, engage people with different knowledge levels, and make the decision-making process more transparent. In comparison with other technical areas, the use of MCDA in healthcare is more focused on achieving the decision about adding the new technology, and to show how to engage stakeholders than to explain how to develop the algorithms and methodologies.

PP93 HTA Role In CoreHEM, A Multi-Stakeholder Core Outcome Set Project

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