be seen as blocking access. As the marginal cost (MC) of a new product is lower than the choice, business-oriented platform where well-known waste. One option is to establish a two-part pricing model with a "subscription" price plus a usage price close to MC. The objective of this paper is to provide an economic analysis based on theories and concepts from microeconomics and industrial organization of two-part pricing in the market for patent protected medicines (PPM).

METHODS: The situation will be analyzed from a game theoretical and an empirical perspective. The starting point is the Swedish Health Care system with focus on oncology. A two-part pricing contractual arrangement will also be discussed for some other EU countries.

RESULTS: Demand side consists of a publicly funded local buyer who represents a large number of potential users. This often leads to a bargaining solution where price is below the one set by a standard monopoly. A two-part pricing - where the buyer pays a substantial fixed fee to get access to the PPM and a per unit price equal to marginal cost - may increase efficiency. However, numerous issues need to be taken into account when considering introducing two-part pricing, for example uncertainty and risk, the operation on margins, the free-rider cost, and the risk of reselling. Game theory can be efficient with the current pricing model in the Swedish oncologic market. A two-part pricing is likely to increase the efficiency in such markets but is also associated with some serious challenges.

PHP179
INTRODUCTION FOR THE LATEST DEVELOPMENT OF CHINESE PEDIATRIC MEDICINE
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OBJECTIVE: To introduce the development of Chinese pediatric medicine, and based on some theoretical and empirical perspectives, some measures can be taken immediately for improving the access to pediatric medicine and promote Chinese innovation for pediatric medicine.

METHODS: Data were mainly obtained from the National Bureau of Statistics of China, the open Chinese government documents and some published papers. Apply descriptive statistics and comparison to summarize policies. Apply descriptive statistics and comparison to summarize policies' lacks and propose some suggestions.

RESULTS: In 2013, there are 220 million Children in China who account for 16% of the world's population. According to the 2009 National Reimbursement Drug List, the number of pediatric medicines is about 60 and accounts for 1.52% in all 3500 drugs, 80% of which does not have image usage of "exclusive pediatric medicine", 90% of which does not have pediatric indications and the use rate is lower than that of adult drugs, which is obviously higher than adult medicine.

CONCLUSIONS: China should immediately take some incentive measures to encourage the innovation of pediatric medicines based on foreign experiences.

PHP180
A SYSTEMATIC QUANTITATIVE APPROACH TO INCORPORATING THE PATIENT PERSPECTIVE INTO HEALTH TECHNOLOGY ASSESSMENT DECISION MAKING
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Incorporating the patient perspective on the value of medicines into health technology assessments (HTA) is becoming increasingly important as acknowledged by several prominent HTA agencies. NICE (UK) has employed several measures, including patient quotes (2014). In Canada, patients' perspectives were formalized through which patients input on drug reviews and feedback on recommendations is obtained to ensure patients' experiences (both good and bad) are considered. In the USA, patient feedback and underpinning treatment are prioritized. In Australia, there is a consumer representative on the Pharmaceutical Benefits Advisory Committee (PBAC) and patients have the opportunity to provide written input into the HTA process, although the process of how PBAC consults and incorporate this information into their decision is not transparent. There is a need for a more formalized framework for eliciting meaningful patient input and a more transparent process for how that input is incorporated into the decision making process. This paper seeks to outline a novel methodological approach to elicit and quantify patient values in a systematic way for the purpose of treatment evaluation (Patient Value Mapping). The focus of this research is Chronic Lymphocytic Leukemia (CLL) and involves patient participation in multiple research stages. Stage 1 involves conducting exploratory qualitative interviews and semi-structured quantitative surveys to gauge how patients view treatments and what outcomes are most important to them. Stage 2 quantifies the insights from stage 1, and stage 3 identifies the thresholds of importance on each of the outcomes and the associated willingness to pay. Current and proposed treatments are entered into the resulting model and scored based on how well they align with patient values and expectations. The results of this analysis could be incorporated into the HTA evaluation process and used to guide decisions around the value of new medicines.

PHP181
CROWDSOURCING HEALTHCARE TECHNOLOGY INNOVATION: THE USE OF OPEN COMPETITIONS TO PUBLISH NOVEL HEALTHCARE TECHNOLOGY SOLUTIONS
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OBJECTIVES: Traditionally, business-related projects are either executed by employees within an organization or outsourced to external vendors. Crowdsourcing, on the other hand, allows sponsors to leverage the Internet to draw upon the skills and expertise of a diverse range of individuals (such as consumers, employees, and experts) to generate new ideas and viable solutions.

Crowdsourcing for healthcare technology innovation has become increasingly popular; however, the type of stakeholders involved and healthcare technologies sought are not well understood. The aim of this study is to characterize crowdsourcing competitions focused on healthcare technology innovation. METHODS: Information was gathered from the Health 2.0 Developer Challenge website, a leading online platform for connecting healthcare organizations with startups and other healthcare technology innovators. Completed challenges listed on the platform from January 2007-October 2014 were identified. For each challenge, total prize money, stakeholder type, and challenge theme were examined. RESULTS: A total of 57 challenges were identified with $3.31 million awarded as total prize money (mean=±175, median=40000; max=75000). Government agencies sponsored the majority of challenges (46%), followed by non-profit (22%) and for-profit (22%) organizations. Four (7%) challenges were sponsored by pharmaceutical companies and accounted for 14% of total prize money (mean=±117500; median=150000; max=160000). The five most common challenge themes identified were data management (25%), enhanced decision making (16%), communication barriers (14%), health education (16%), wellness/tracking (11%), and disease prevention/screening (11%). CONCLUSIONS: Although government agencies were the most common sponsors of crowdsourced healthcare technology challenges, challenges from many different organizations are being funded in an amount that is the highest mean monetary awards. Data management solutions (e.g. electronic health record applications) were the most frequently solicited themes among all challenges. Crowdsourcing shows promise as a source of innovative healthcare technology solutions; however, more research is needed to explore the viability of such solutions.

PHP182
ANALYSIS OF ETHICAL THEORIES AND PRINCIPLES EMBEDDED IN HOLISTIC MCDA: A PRIMER TO ETHICS-BASED APPRAISAL OF VALUE IN HEALTHCARE
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OBJECTIVES: MCDA provide innovative approaches to measure the value of interventions and support decision making. A broad range of criteria are used to integrate big data and reflect the value of products under which they are made. The objective of this study was to analyze the ethical theories and principles embedded in the criteria of holistic MCDA. METHODS: EVIDEM was selected as a holistic MCDA tool. Value elements, outcomes and criteria, including: "Ethics Researcher" and "Ethics Researcher" were related to the ethical framework that support the work of people who are well-known in ethics and human rights. CONCLUSION: Holistic MCDA systematically incorporates a broad range of ethical perspectives, norms, values and principles, and as such is a normative approach for prioritizing healthcare interventions that optimize patients' and healthcare systems health.

PHP183
COMPARISON OF MACHINE LEARNING, STATISTICAL AND HYBRID METHODS TO IDENTIFY PREDICTORS OF POSITIVE TREATMENT OUTCOMES IN COMORBID CONDITIONS USING EMR DATA
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OBJECTIVE: Electronic Healthcare databases and use of machine learning algorithms has created opportunities for rapid learning. However, the indiscriminate application of machine learning algorithms to non-experimental healthcare databases may result in incorrect inferences about possible treatment benefits. This paper compares results from large healthcare databases produced by statistical, machine learning, and hybrid methods to emphasize the importance of controlling for known biases in healthcare databases and machine learning algorithms. METHODS: MS patient cases were selected from an EMR database that met the following criteria: Must be on an MS therapy for at least one year and diagnosed with at least one co morbidity prior to and during the treatment period. Co morbidity improvements are measured by changes in specific lab values measured prior to and during treatment. To facilitate method comparison, a binary variable was constructed to measure improvements in co morbidities experienced during MS therapy. Treatment groups were defined by specific MS therapies and compared to control groups treated with alternative therapies during the same period of time. Predictive models were used to identify statistical and machine learning algorithms were compared to a hybrid algorithm, SIDES, originally designed for subpopulation analysis in RCT's while controlling for multi-dimensional confounding. RESULTS: Initial analyses identified differences in predictors of co morbidity improvements. The presentation will cover specific comparisons between different methods, highlight similarities and differences in findings and provide rationales for divergent results. CONCLUSION: Machine learning methods held promise for use of EMR data with large healthcare databases to accelerate learning and discovery while also including protections against known sources of bias in healthcare data (treatment selection) and machine learning methods (multiplicity) that can lead to incorrect inferences.