A COMPARISON OF THREE TECHNOLOGY APPRAISAL SYSTEMS; NICE, SMC AND CADTH
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OBJECTIVE: Technology appraisal systems have been introduced in England, Scotland and Canada in an effort to shorten the assessment process. The study rationale was to review, summarise and critique appraisals published by each system over the last two years, in order to draw comparisons and analyse themes and trends. METHODS: A database was developed to collate data from submissions appraised by the National Institute for Health and Clinical Excellence (NICE), the Scottish Medicines Consortium (SMC) and the Canadian Agency for Drugs and Technologies in Health (CADTH) between November 1, 2005 and October 31, 2007. Data collated included the total number of submissions appraised, interventions approved, and time taken to provide guidance. Inconsistencies in the decisions made by each appraisals process were also analysed. RESULTS: Over the two years, a total of 18,135 and 32 submissions were appraised by NICE, SMC and CADTH, respectively. Of the total submissions, NICE approved 17; SMC and CADTH approved 75 and 28, respectively. SMC processed 22 re-submissions compared to 1 and 14 by NICE and CADTH, respectively. CADTH took an average of 6.5 months to provide guidance from the date of submission compared to 14.2 months taken by NICE. SMC took the shortest time, providing guidance within an average of 2.4 months. A total of 27 submissions were appraised by more than one appraisal system, of which 19 resulted in contradictory types of guidance. CONCLUSION: The number of submissions appraised and the time taken to receive guidance varies greatly across the three appraisal systems. NICE have the longest and perhaps the most rigorous review system reflecting the transparency of guidance issued. In contrast, the SMC issues guidance on seven times more submissions but reports higher re-submission rates. Reviewing the system behind appraising technology assessments may inform future strategic and tactical planning of submissions.

NHS REIMBURSEMENT OF NEW CANCER DRUGS: IS NICE GETTING NASTIER?
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OBJECTIVE: The UK National Institute for Health and Clinical Excellence (NICE) issues guidance on the use of new and existing technologies. Certain new cancer drugs are appraised as part of the NICE process, either in groups (Multiple Technology Appraisals) or individually (Single Technology Appraisals). An analysis in 2006 suggested that cancer drugs had fared quite well under NICE, with most recommendations being positive. However, some have argued that negative NICE decisions are becoming more frequent. METHODS: NICE decisions on cancer drugs published from May 2000 to January 2008 were analysed. Recommendations were classed as ‘wholly positive’ (all evaluated drugs / indications recommended for routine NHS use), ‘wholly negative’ (no drug recommended for routine NHS use in any indication), or ‘mixed’ (positive and negative recommendations relating to one or more drugs). Separate analyses were undertaken by appraisal and by drug. RESULTS: To date, 35 appraisals have been published, covering 24 cancer drugs across 11 tumour types. Drugs for breast cancer (38% of drugs evaluated), colorectal cancer (29%) and lung cancer (21%) were most frequently appraised. The percentage of ‘wholly positive’ published cancer appraisals increased from 48% in June 2006 to 51% in January 2008. However, the percentage of drugs with wholly positive recommendations remained constant at 57%. The proportion of ‘wholly negative’ appraisals (drugs) rose from 4% (14%) in June 2006 to 14% (19%) by January 2008. The large increase in ‘negative’ appraisal decisions may be as much to do with a change in the evaluation process, notably the introduction of Single Technology Appraisals (STAs), as with a possible change to NICE’s decision criteria. CONCLUSION: The perception that NICE is reaching more negative decisions on cancer drugs is supported by the evidence. Further research is needed to establish whether this observed change adversely affects patient access to effective therapy.

PRIORITY SETTING FOR NEW TECHNOLOGIES: POSSIBLE DETERMINANTS AMONG THE WORKING POPULATION
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OBJECTIVE: In several countries, decision makers apply economic evaluations for decisions about reimbursing new drugs or technologies. But there seem to be many other factors, besides cost-effectiveness that play a role in such decisions. The purpose of this study was to test if a conjoint analysis method can be applied to elicit the factors that are most decisive to people of the working population in decisions about reimbursement. METHODS: A survey was addressed to 150 members of the working population, whereby virtual new drugs were presented to two by two, according to 5 attributes: 1) drug price; 2) target population size; 3) patient age; 4) life expectancy after treatment; and 5) quality of life before and after treatment. Respondents had to indicate every time if they preferred drug A or drug B to be reimbursed, whereby drugs differed on several attributes (traditional conjoint analysis). Respondents also had to spread ten points over the two drugs (allocation of points technique). RESULTS: The survey was completed by 122 individuals. The top three of most influencing factors in the conjoint analysis were the age of the patients, the price of the drug and the quality of life before and after treatment. MRS (marginal rate of substitution) for Age/Price = 1.067, MRS Age/Quality of life = 1.172, MRS Age/Life expectancy = 1.434, MRS Age/Population 1.344, MRS Price/Quality of life = 1.098, MRS Price/Life expectancy = 1.344, MRS Price/Population size = 1.560, MRS Quality of life/Life expectancy = 1.223, MRS Quality of life/Population size = 1.421, MRS Life expectancy/ Population size = 1.162. The allocation of points technique provided similar results. CONCLUSION: Both the conjoint analysis method and the allocation of points technique are possible techniques to elicit preferences of the working population. The allocation of points technique allows for more fine-tuning of preferences.

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OBJECTIVE: In 1983 the Orphan Drug Act was approved to provide incentives for development of new drug treatments for rare diseases. The objectives of this study are to compare the
that beneficiaries with the highest morbidity burden experienced before and after reaching their threshold. Sub-analyses indicated medical office and ED visits (all \( p < 0.001 \)) and to have one NCE approval as compared to multiple NCE during the study period (43.2\% vs. 17.6\%). ODs were less likely (\( p < 0.001 \)) to have at least one patent listed in the OB in comparison with non-ODs (62.2\% vs. 82.8\%). ODs had less patents listed in the OB than non-ODs (mean 1.7 vs. 2.3) (\( p < 0.005 \)). Exclusivity period was longer than the patent period for 41.4\% of the ODs and 21.4\% of the non-ODs that had patents listed in the OB (\( p < 0.001 \)). ODs had less generic competition than non-ODs (18.0\% vs. 29.6\%) (\( p < 0.05 \)). CONCLUSION: US companies and companies with only one NCE approval were more likely to use the Orphan drug regulatory system. Orphan drugs have less number of patents, more exclusivity protection and less generic competition than non-orphan drugs.

RESEARCH ON MEDICARE PART D AND REIMBURSEMENT POLICIES II

MD5

HEALTH CARE UTILIZATION BY MEDICARE ADVANTAGE BENEFICIARIES IN THE ERA OF THE MEDICARE PART D DRUG BENEFIT COVERAGE GAP

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OBJECTIVE: To compare health care utilization changes between Medicare beneficiaries with two prescription drug benefit structures who did and did not reach their respective Part D drug benefit spend threshold in 2006. METHODS: A retrospective analysis of a cohort of 28,392 Medicare Advantage beneficiaries continuously enrolled into two distinct drug benefit structures for the year prior to and after implementation of the Medicare Part D benefit. The first benefit group (Silver) had the first D drug benefit spend threshold in 2006. RESULTS: A total of 1237 (6\%) Silver and 526 (8\%) Gold beneficiaries reached their threshold. Among both groups, beneficiaries who reached their threshold had greater morbidity burden and higher rates of pre-period inpatient admissions and medical office and ED visits (all \( p < 0.001 \)). Among beneficiaries who reached their threshold, there was no change in inpatient and ED (both \( p > 0.05 \)) but an increase in medical office visit (\( p < 0.001 \)) utilization rates in comparable 6-month periods before and after reaching their threshold. Sub-analyses indicated that beneficiaries with the highest morbidity burden experienced higher utilization rates (all \( p < 0.05 \)), but there were no differences between groups (all \( p > 0.05 \)). Beneficiaries in both groups who did reach their threshold had higher post-period utilization rates (all \( p < 0.001 \)) regardless of age and morbidity burden and were more likely to die (\( p < 0.001 \)) compared to beneficiaries who did not reach their threshold. CONCLUSION: Although many Medicare beneficiaries navigate their drug spend threshold without experiencing increased health care utilization, those with high morbidity burdens are at risk of increased health care utilization and the potential for adverse outcomes. It is imperative that strategies be developed that help safeguard vulnerable Medicare beneficiaries.

INFLUENCE OF MEDICARE CLAIM-PAYING AGENTS’ REIMBURSEMENT POLICY ON G-CSF CHOICE DURING FIRST CYCLE OF CHEMOTHERAPY FOR NON-HODGKIN’S LYMPHOMA PATIENTS

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OBJECTIVE: Investigate the variation in Medicare claim-paying agents’ reimbursement to physicians for chemotherapy and evaluate the influence of Medicare carrier chemotherapy reimbursement on G-CSF choice. G-CSF is an expensive drug to manage febrile neutropenia with uncertain benefits. METHODS: Using the national SEER-Medicare linked database, we studied patients 66 years or older diagnosed as NHL in one of the 13 SEER registry areas from 1994–2002. We grouped counties within SEER based on Medicare carrier coverage. We then estimated a regression model describing total physician reimbursement during the first cycle of chemotherapy (total Medicare part B and Medicare outpatient reimbursements within 21 days of the chemotherapy start date) to construct average Medicare chemotherapy physician reimbursement measures for these county groups. Logistic regression was performed to assess the influence of Medicare carrier chemotherapy reimbursement on the use of G-CSF. RESULTS: F test from the regression model showed statistically significant variation in the reimbursement for first cycle chemotherapy by counties grouped by carrier coverage (\( P \) value = 0.0017). We found that Medicare carrier-related chemotherapy reimbursement had a non-linear relationship with the use of G-CSF. Both linear and squared reimbursement terms were statistically significant. An increase in chemotherapy reimbursement from initially low reimbursement levels resulted in a decrease in the use of G-CSF and this relationship went away at higher chemotherapy reimbursement levels. CONCLUSION: Medicare physician reimbursement for chemotherapy varies across Medicare carriers and this variation affects the decision of physicians to prescribe G-CSF. At low chemotherapy reimbursement levels, increases in chemotherapy reimbursements decreases G-CSF prescribing. Physicians appear to compensate for lower reimbursements by increasing the intensity of their services.

DIFFERENTIAL TAKE-UP OF THE MEDICARE PART D PRESCRIPTION DRUG BENEFIT

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OBJECTIVE: Little is known about how Medicare Part D utilization varies based on subjects’ pre-Part D prescription coverage and comorbidities. METHODS: We examined claims from a national pharmacy chain from 2005 and 2006 accounting for approximately 15% of the U.S. prescription drug market. We focused on beneficiaries ages 66–79 as of January 1, 2006. We focused on the association between pre-Part D insurance gener-