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OBJECTIVES: To estimate the average (CER) and incremental (ICER) cost-effectiveness ratios of surfactant rescue treatment of premature infants with Respiratory Distress Syndrome (RDS) who are covered by the New Generation Medical Insurance . **METHODS:** A cost-effectiveness evaluation was conducted from the perspective of the Mexican Ministry of Health (SSA). The comparisons were between bovine surfactant therapy and the alternative of not using it. A decision tree model with a two-year time horizon was used, where the measurements of effectiveness were life years gained (LYG) and quality adjusted life years (QALY). The effectiveness figures are taken from a systematic review, the resource usage patterns were obtained from data registered in the SSA hospital files on care, and costs from official sources in SSA 2009. A 5% discount rate was considered for costs and health outcomes. Deterministic and probabilistic analyses were conducted. **RESULTS:** ICER ratios for surfactant therapy per LYG and per QALY were $61,392 and $62,110, respectively. **CONCLUSIONS:** Surfactant therapy was confirmed as a cost-effective strategy, in accordance to WHO criteria of 3 Per-capita GDP per QALY in premature infants with RDS in Mexico.

PIH21

COST-UTILITY ANALYSIS OF DIENOGEST VERSUS GNRH ANALOGUE IN THE TREATMENT OF ENDOMETRIOSIS-ASSOCIATED PELVIC PAIN IN SLOVAKIA

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OBJECTIVES: To estimate the cost effectiveness of dienogest versus GnRH analogue (GnRH-a) for the treatment of endometriosis-associated chronic pelvic pain in Slovakia from a payer perspective. **METHODS:** A cost-utility Markov model based on results of randomized controlled trial (AU19) was adapted to a Slovakian setting. The AU19 trial, which compared dienogest and GnRH-a (leuprolide) in the treatment of endometriosis-associated chronic pelvic pain over a 6 month period, showed no statistically significant differences in response rates. The dienogest annual relapse rate was derived from 52-weeks extension study, while relapse rates for the GnRH-a were derived from the literature. Local cost data was based on published price lists, clinical guidelines, product labels and expert opinion. QoL related utilities were derived from individual patient SF-36 scores from AU19 dataset. Effectiveness was measured in quality-adjusted life years (QALY). Time horizon was set at 2 years and a payers' perspective was adopted. Discount rate was 5% per year for both costs and effects according to valid Ministry of Health (MoH) guidelines for health economic evaluation. Both one-way and probabilistic sensitivity analyses were performed. **RESULTS:** Dienogest showed that it was cost-effective compared to a GnRH-a, with an overall cost reduction of 506 € and a QALY gain of 0.002 per patient. Cost reduction was due to both the differences in the average drug cost during the two year period (GnRH-a: 1 248 € and dienogest: 969 €) and the average laparoscopy cost (GnRH-a: 274 € and dienogest: 103 €). In probabilistic sensitivity analysis 69 % of simulations were below 18 000 €/QALY, which is the officially published threshold for willingness to pay in Slovakia. **CONCLUSIONS:** Dienogest is a cost-effective alternative to GnRH analogue for the treatment of endometriosis-associated chronic pelvic pain in a Slovakian setting.

Individual's Health – Patient-Reported Outcomes & Preference-Based Studies

PIH22

PRIMARY MEDICATION NONADHERENCE: A RETROSPECTIVE ANALYSIS OF ELECTRONIC PRESCRIPTIONS IN AN INTEGRATED HEALTHCARE SETTING

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OBJECTIVES: Failure to pick up a newly prescribed medication from the pharmacy is referred to as primary nonadherence. The objective of this retrospective cohort study is to evaluate primary nonadherence in an integrated closed-network health care setting. **METHODS:** All new electronic prescriptions written over a 3-month period for 11 pre-specified drug classes were identified using electronic health care data. A prescription was considered new if no medications in the same drug class were dispensed during the prior year. Patients were excluded from the study if they did not have continuous membership and drug benefits during the 12 months prior and 3 months after the prescription order date, became pregnant during the study period or were missing age or gender information. Primary nonadherence was defined as the failure to fill prescriptions within 90 days from the day it was written. Descriptive statistics were used to compare characteristics of adherent prescriptions to nonadherent prescriptions using t-tests and chi-square tests for continuous and categorical variables, respectively. **RESULTS:** A total of 616,401 new prescriptions were written for 430,098 patients. The overall primary nonadherence rate was 8% and the majority of prescriptions were filled on the same day as the day it was written. Nonadherence rates were slightly higher in males and older patients ($p<0.01$). Warfarin products (2%) and anti-infectives (2%) had the lowest nonadherence rates, while analgesics (21%) had the highest nonadherence rate ($p<0.01$). The primary nonadherence rate was highest among prescribers in emergency medicine (11%) ($p<0.01$). **CONCLUSIONS:** This is one of the largest studies examining primary nonadherence. Primary nonadherence rates found in this study are similar to those of previous studies using data from a comparable healthcare setting. These results may be helpful in identifying prescription characteristics associated with higher rates of primary nonadherence for intervention purposes in the clinical setting.

PIH23

A SYSTEMATIC LITERATURE REVIEW OF BEHAVIORAL RISK FACTORS ASSOCIATED WITH INITIAL MEDICATION ADHERENCE

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OBJECTIVES: Numerous factors pertaining to poor medication adherence in chronically ill patients are well documented, but the paucity of studies concerning experiences during the early treatment course represents a significant knowledge gap. Interventions targeting this crucial initial phase can significantly influence long-term adherence and outcomes. An international panel conducted a comprehensive, systematic review of the published literature documenting risk factors related to initial adherence. **METHODS:** A systematic literature search of Pubmed, PsychInfo, and Web of Science covered published articles from 1966-2010. Two independent reviewers abstracted eligible studies through a validated quality instrument, documenting methodological details and factors associated with adherence problems. Articles targeting a variety of behavioral factors were deemed relevant if presenting primary data and quantitative findings following initial prescriptions. **RESULTS:** Our search identified 283 potentially relevant publications; upon full review, 38 met eligibility criteria. The mean Nichols quality assessment score was 46.1 (range 11-74), with excellent concordance between independent reviewers ($r=0.923$, $p<0.001$). Prevalent terminology defining early pharmacotherapy was first-fill or initial adherence, yet articles rarely referred to the very first prescription. Instead, authors examined periods covering 2 weeks to several years from the index fill, typically the first one to six months. Factors commonly associated with initial adherence were therapeutic alliance and provider communication (n=9), psychiatric symptoms or disease severity (n=6), medication cost/copayments (n=5), along with patient demographics and polypharmacy. Few studies reported specific health system factors, such as pharmacy location/information, prescribing provider licensure, or other non-patient dynamics. **CONCLUSIONS:** Despite the implications for chronic medication adherence and clinical outcomes, few articles directly examined issues associated with initial adherence. Notwithstanding this lack of information, many observed risk factors are amenable to potential interventions, establishing a solid foundation for appropriate ongoing behaviors. Future research should continue investigating questions pertaining to initial prescriptions, emerging treatment barriers, and organizational efforts to promote better long-term adherence.

PIH24

RACIAL DISPARITIES IN MEDICATION UNDERUSE: THE ROLE OF PATIENT SATISFACTION WITH CARE

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OBJECTIVES: Many people underuse the medication prescribed to them for chronic conditions which undermines their care. Often this underuse is related to the cost of prescriptions and may be exacerbated in patients with a traditionally low socioeconomic status. In addition, it has been found that underuse is lower among patients who express higher satisfaction with the medical care received. We examined self reported cost-related medication underuse in a sample of black and white Medicare beneficiaries, and investigated whether racial differences in cost-related underuse could be explained by differences in satisfaction with care after controlling for other factors that affect underuse. **METHODS:** Cross sectional telephone survey of 1031 Medicare beneficiaries 65 years old and older living in Jefferson County, Alabama. Bivariate and multivariable analyses were used to identify factors associated with delaying or not filling prescriptions because of cost (cost-related underuse). **RESULTS:** Of the respondents who had cost-related underuse, 15% were white and 23% were black. Racial disparities were not explained by satisfaction, although low satisfaction was positively associated with cost-related underuse (adjusted $OR=1.41$, $p=0.07$). In particular, low satisfaction with "explanation on what to do after the doctor visit" was significantly associated with cost-related underuse. Among 847 who reported adequate income, blacks were 2 times more likely to have underuse than whites (20% vs 12%, adjusted $OR=1.9$, $p<.05$). Racial differences in cost-related underuse in the 184 beneficiaries with inadequate income were not significant. **CONCLUSIONS:** Satisfaction with care does not explain the racial differences, although it has a positive impact on underuse. These findings suggest that even among those with an income adequate to pay for basic needs, cost-related underuse is reported by 1 in 6 Medicare beneficiaries. More research is needed to explain racial disparities in underuse of prescription drugs, even among beneficiaries who report incomes adequate to meet their needs.

PIH25

IMPACT OF PATIENT BEHAVIORS AND ATTITUDES ON TERIPARATIDE ADHERENCE IN A MEDICARE PART D POPULATION

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OBJECTIVES: To evaluate the impact of patient characteristics, behaviors and attitudes on teriparatide adherence in a Medicare Part D plan with a coverage gap. **METHODS:** Medicare Part D plan members 18 years and older with at least one claim for teriparatide in 2009 and continuous enrollment January 1, 2009 – December 31, 2009 were identified in an administrative claims database. A questionnaire was mailed to members that met study criteria. Descriptive analyses were conducted to evaluate the characteristics of the study population. Logistic regression analyses were conducted to identify factors that predicted discontinuation with teriparatide. **RESULTS:** Out of the 3656 mailed questionnaires, 522 (14%) were com-