pared to the $125 million in savings attributed to the Medi-Cal equivalent NDCs, an additional $8 million could be gained if repackaged pharmaceuticals were priced with a relevant Medi-Cal rate such as an estimated Acquisition Cost, an overall savings of 35.8%. On a per prescription basis, the practice of repackaging costs an additional $20 when compared to a Medi-Cal pharmacy dispensed reimbursement rate. CONCLUSION: This study informs new legislation being proposed to stop the generous pricing of repackaged pharmaceuticals due to non-equivalent NDCs. For the first time we describe the practice of repackaging pharmaceuticals and identify cost savings expected with alternative pricing systems, but also identify the value of repackaging pharmaceuticals for WC patients.

PATIENT SEGMENTATION AND DRIVERS OF ACCESS TO PATIENT CONTROLLED ANALGESIA

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OBJECTIVES: Patient controlled analgesia (PCA) with pump delivery is the mainstay of modern postoperative pain management, with often better pain control compared to competing methods. We performed a data mining study to identify the clinical and hospital infrastructure correlates of PCA use.

METHODS: Patients older than 18 years having major operative procedures expected to require strong opioid based postoperative pain control were selected from the Premier Perspective database. Obstetric patients were excluded. Two random samples were selected: a training sample of N = 21,782 and a validation sample of N = 21,538. Factor analysis mapped the 75 observed explanatory variables, not related to post-operative pain method onto 17 independent factors. Patient segmentation was performed based on cluster analysis. RESULTS: Thirteen distinct clusters were identified each with distinguishing demographic, clinical, payor and hospital setting features. Percent of PCA use in each of the segments ranged from 3% to 38%. Six clusters, accounting for 3.5%, 1.8%, 8.4%, 4.1%, 6.1% and 9.2% of the total population had PCA usage below 10%. Only three segments had PCA usage more than 20% with 4.7%, 14.5% and 7.8% of the population. Qualitative evaluation indicated that the primary factor determining whether a segment had low or high PCA use was the circumstance of admission: for urgent admissions PCA was lowest, while the highest PCA use was observed in those segments characterized by elective admissions.

CONCLUSION: Use of PCA differs between segments in a heterogeneous cohort of post-operative pain patients. That the driver of this difference was admission source may suggest that time required to prepare PCA is an important factor in its actual use and that thus easier PCA methods may increase patient’s use of PCA.

PAIN—Patient Reported Outcomes

ADVANCES IN PAIN MEASUREMENT: ITEM RESPONSE THEORY (IRT) BASED METHODS AND THE PAIN IMPACT QUESTIONNAIRE (PIQ-6)
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OBJECTIVES: To use IRT-based methods to develop a six-item questionnaire (PIQ-6) measuring pain severity and pain impact. IRT was used to: 1) identify the most informative items from a bank of 65 items, 2) evaluate construct validity, 3) norm the PIQ-6 to the US general population; 4) cross-calibrate it to the SF-36v2 BP scale; 5) develop a simple scoring approach based on response category weights matching the IRT score; and 6) build a computerized version to facilitate monitoring and management of pain.

METHODS: Items analyses and selection were based on data from two web-based general population samples (n = 782, n = 829) and a chronic pain patients sample (n = 306). Norming was achieved by recalibrating the IRT-based item parameter using 1998 US representative norm data of the SF36v2 (n = 7069). Cross-calibration of the PIQ-6 and SF-36v2 was performed by estimating the expected SF-36v2 BP scale score using IRT-based item parameter. The PIQ-6 computerized version was programmed with Microsoft Visual Basic. RESULTS: Six items were identified that fitted an unidimensional IRT model, showed high measurement precision and did not show differential item functioning. Construct validity was supported by high correlations with other pain measures and strong discrimination of pain patients and the general population. The PIQ-6 is normed so that a score of 50 represents the US general population norm (sd = 10). A cross-calibration table of the PIQ-6/SF-36v2 was created to facilitate communication between researchers using those different instruments. The simple hand scoring approach had satisfactory agreement with the IRT scores. The PIQ-6 was programmed as computerized stand-alone/PDA/online versions allowing for an easy administration, scoring and immediate feedback reporting including interpretation guidelines. CONCLUSIONS: Pain measurement can be improved by using IRT and computerized methods. Noteworthy advantages of the PIQ-6 are the enhancement of measurement precision and coverage as well as the facilitation of monitoring and managing pain.

PATIENT-REPORTED OUTCOMES

RESULTS OF ALTERNATIVE DEFINITIONS FOR STATIN REFILL COMPLIANCE, PERSISTENCE AND GAPS IN A RETROSPECTIVE DATABASE ANALYSIS

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OBJECTIVES: Our objective was to examine results of different calculation methods for compliance, persistence and medication gaps using prescription refill claims. METHODS: This was a retrospective analysis of statin prescription claims in the Protocare database from 1/1/96 to 12/31/02. Statistics were based on first-time statin users (no statin claims in last year) continuously enrolled for a minimum of 2.5 years after their first statin claim (N = 45,754) and up to a maximum of 6 years. Compliance was calculated as the “simple” medical possession ratio (MPR) as days supply/365 days—and as “adjusted” MPR, systematically accounting for gaps and surplus days supply. Persistence was calculated as “continuous” statin persistence (no gap in supply greater than 30 days) and as “any” statin supply per one year periods. Gaps were calculated for number of gaps of one day or more without days supply and average gap length in 365 days. RESULTS: “Simple” MPR in the first year of use was 62% (S.D. = 0.36). For the same period “adjusted” MPR was 59% (S.D. 0.33) and lower for 50% of the sample. The average difference was 0.04 (14.6 days). Approximately 34% of the sample was continuously persistent thru year 1, falling to 21% in year 2; however, 73 percent had at least one prescription in year 2. Compliance, persistence and gaps varied year by year over patient’s total coverage periods. CONCLUSIONS: Failure to account for gaps and cumulative surpluses in prescription refills can distort compliance estimates. “Any” persistence statistics indicate that a higher proportion of statin users remain intermittent rather than discontinued over long periods of time. Statistics on number and length of gaps are necessary to provide a full