The changing dynamics in health care funding

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OBJECTIVES: Traditionally, the US can be broadly defined as having three sources of payment for health care: public/patient funded and government funded in health care market across the US at an accelerating rate. However, one of the greatest barriers to building and sustaining HIE organizations is a clear understanding of the costs. We analyzed personnel costs for managing data connections in the Indiana health information exchange (HIE). HIE’s data infrastructure is managed by project management (PM), system engineering (SE) and data mapping (DM) teams. Each team is involved in different tasks but to connect a hospital they coordinate overlapping tasks. To gauge ongoing maintenance expenses we evaluated the cost differences among the teams. METHODS: We interviewed team members to gather level of effort data for implementing and maintaining HIE data interfaces. Personnel costs were calculated by multiplying the level of effort by staff salaries. Annual personnel costs were determined by the total interfaces implemented per year. We projected personnel costs for years 2004–2008 by using a constant level of effort and an increasing number of hospitals and annual salary. We used one-way ANOVA to detect differences among the average cost per team for managing interfaces. RESULTS: The three teams (PM, SE, and DM) exhibited different average costs. The DM team produced the largest average cost and level of effort followed by SE and then PM. Using ANOVA and with critical value of 0.10, the cost differences were statistically significant (p = 0.053). CONCLUSIONS: Since the cost differences are significant, it suggests the differences are not due to chance but are largely due to level of effort variances. The level of effort differs because each team performs different tasks with varying degrees of complexity. Additional difficulty to quantify factors include size of hospitals, proficiency of hospital maintenance staff and adequate frequency of interactions; they appear in the average costs indirectly.

The incremental sickness leave costs and lost time among employees with psychiatric and medical conditions

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OBJECTIVES: To compare the incremental costs and absences due to sick leave (SL) among employees with bipolar disorder (BDP), other mental disorders (OMD), chronic constipation (CC), functional dyspepsia (FD), gastroesophageal reflux disease (GERD), mood or primary insomnia. METHODS: A 2001–2007 US employer database was used to identify subjects with BDP, OMD, CC, FD, GERD, mood, and insomnia. All studies used two-part regression models to control for differences between employees with the condition and control groups (employees without the condition). SL costs were based on payments made to the employee (adjusted to 2007 US dollars) and absences were based on reported hours missed. Controls (by study) used the average index date of the subjects with the condition. Incremental costs and absences were defined as adjusted differences between the condition cohort and controls and considered significant at P ≤ 0.05. RESULTS: Numbers of employees with SL eligibility for
the condition/controls (employees without condition) were: BPD 239/85.420; OMD 550/86.372; CC 920/143.287; FD 913/143.387; GERD 918/143.387; gout 600/123.461; and insomnia 795/134.094. All incremental SL cost differences were significant (P < 0.05). From highest to lowest, the incremental annual SL costs (cost savings) were: gout $391.272.5% higher than controls; insomnia = $208.1(62.1%), OMD = $175(142.4%), GERD = $169(141.1%), CC = $127(133.8%), FD = $120(128.8%), BPD = $94119.7%). From highest to lowest, the incremental annual absence days were: gout = 2.8(718.3% of control), OMD = 2.3(186.9%), BPD = 1.9(157.0%), insomnia = 1.6(175.4%), GERD = 1.3(141.5%), FD = 0.8(126.7%), and CC = 0.7(130.5%). CONCLUSIONS: Employees with insomnia, FD, GERD, gout, CC, BPD, and OMD incur more absences and costs than employees without these conditions, suggesting that management of these conditions should focus on both the workplace and health care settings. Because individual measures were used to calculate the costs for each condition, the differences in the ordering of the incremental days and payments may be attributable to job-related differences between the diseases. Gout had the highest incremental costs and days of any of the studied conditions.

Common circumstances and the value of information cannot be established for one programme independently of the rest of the allocation problem.

**EVALUATING DIFFERENCES IN DRUG REIMBURSEMENT BETWEEN MAIL-ORDER AND COMMUNITY PHARMACY**

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OBJECTIVES: Reimbursement for the same drug may differ with respect to channel of distribution. The objective of this study was to assess differences in reimbursement per unit of product dispensed and to compare pharmaceutical expenditures between mail-order and community pharmacy. METHODS: Pharmacy claims from a benefit system for the period 2000–2005 were used in the analysis. Differences in reimbursement per unit of product dispensed and expenditures were estimated using a basket of drug items (i.e. unique combinations of drug products, formulations, strengths, and generic status) dispensed in both channels. Rebates were not included in the analysis. Differences were assessed using bootstrapped 90% percentile and hybrid confidence intervals. RESULTS: The comparison basket contained 1,964 items and 4,011,243 claims. In 2005, 32.07% of the items had higher reimbursement per unit in community pharmacy, 38.80% had higher reimbursement in mail-order pharmacy and 31.33% had equal reimbursement. In 2005, estimated pharmaceutical expenditures of the comparison basket were $558.93 million using mail-order pharmacy prices and $623.66 million using community pharmacy prices. This difference was attributed to higher reimbursement of ingredient costs, dispensing fees and dispensing in community pharmacy. The difference in estimated pharmaceutical expenditures of the comparison basket between community and mail-order pharmacy decreased from 12.8% in 2000 to 10.4% in 2003. Estimated pharmaceutical expenditures in both channels increased from 2000–2005. The difference in total expenditures, ingredient cost, dispensing, administration and other fees between channels decreased during the study period. CONCLUSIONS: Nearly one-half of all comparable items had higher reimbursement per unit in community pharmacy than mail-order pharmacy. Overall expenditures in community pharmacy were lower. Differences in pharmaceutical expenditures between community and mail-order pharmacy were explained by differences in acquisition costs and fees. Decision makers should carefully evaluate pharmaceutical reimbursement including discounts, fees and rebates when deciding the most efficient dispensing channel.

**TRENDS IN DESIGN CHARACTERISTICS OF BRIEF SUMMARY OR PRINT ADS OF PRESCRIPTION DRUGS: A FIVE YEAR STUDY**

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OBJECTIVES: To evaluate and compare trends in design characteristics of brief summary or prescription drug print ads. METHODS: The source for these ads include a consumer magazine – National Geographic (NG) and three medical journals – Annals of Internal Medicine (AIM), The Journal of the American Medical Association (JAMA) and The New England Journal of Medicine (NEJM). Each source was responsible for 30% of the total number of prescription drug ads. Data were collected from 1999 to 2003. Descriptive statistics and comparisons using chi-square tests were performed to evaluate differences by year and source at a priori significance level of 0.05. RESULTS: A total of 7,266 printed ads for 240 products manufactured by 90 pharmaceutical companies were evaluated from NG (95), AIM (1372), JAMA (1797), and NEJM (4012) respectively. There were significant differences (p < 0.05) in most design characteristics by year (2000–2004), namely font consistency, presence of bullets, highlights, tables, graphs, format type (e.g. question/answer format), warning box, spacing between lines, and number of columns used to present the material. Font size was measured using the Compugraphic scale. Data were collected from 1999 to 2003. Descriptive statistics and comparisons using chi-square tests were performed to evaluate differences by year and source at a priori significance level of 0.05. RESULTS: A total of 7,266 printed ads for 240 products manufactured by 90 pharmaceutical companies were evaluated from NG (95), AIM (1372), JAMA (1797), and NEJM (4012) respectively. There were significant differences (p < 0.05) in most design characteristics by year (2000–2004), namely font consistency, presence of bullets, highlights, tables, graphs, and warning box. These differences were also statistically significant (p < 0.05) across sources (magazine/online). The question/answer format and presence of a warning box was mostly seen in ads obtained from the magazine. The mean (SD) font size of the text on these ads was small (5.7 ± 1.1) and consistent throughout these ads by year and source. CONCLUSIONS: Prescription drug print ads have changed over the years and are different based on the readership source. Further improvement in standardizing the format and increasing the text font may help the intended readers of these ads.

**COMPARISON OF NOTIFIABLE DISEASES SURVEILLANCE WEBSITES OF FOUR COUNTRIES**

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OBJECTIVES: Globalization necessitates better co-operation among countries to monitor disease outbreaks. The spread of SARS in 2003 highlights this need. Hence, this study compared the notifiable diseases surveillance websites of four countries. METHODS: Twenty-five countries were identified from literature and web-based Human Development Index >0.9 and Quality of Life index ≥7. Four countries from this list were selected, namely, United States (US), Canada, Australia, and New Zealand. Fourteen European Union member countries were excluded, as they have a process to harmonize and consolidate their disease surveillance networks in place by...