

the condition/controls (employees without condition) were: BPD 239/85,420; OMD 5508/76,372; CC 920/143,287; FD 918/143,138; GERD 6172/133,466; gout 600/123,461; and insomnia 7951/134,094. All incremental SL cost differences were significant ($P < 0.05$). From highest to lowest, the incremental annual SL costs (condition-control) were: gout = \$359(172.5% higher than controls), insomnia = \$208(162.1%), OMD = \$175(142.4%), GERD = \$169(141.1%), CC = \$127(133.8%), FD = \$120(128.8%), BPD = \$94(119.7%). From highest to lowest, the incremental annual absence days were: gout = 2.8(178.3% 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 salaries 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.

PHP51

DOES IMPROVING QUALITY OF CARE SAVE MONEY? ANALYSIS OF HEALTH CARE EFFECTIVENESS DATA AND INFORMATION SET (HEDIS) MEASURES

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OBJECTIVES: To determine whether improving quality of care saves money we examined costs and benefits of increasing compliance with the 2006 Healthcare Effectiveness Data and Information Set (HEDIS) measures. **METHODS:** We systematically reviewed English-language scientific literature (1998–2008) for US or Western European cost effectiveness analyses published as original articles that compared HEDIS-compliance to non-compliance and reported cost and benefits. We abstracted costs, effectiveness, and incremental cost effectiveness ratios (ICER). Using US Census data, we calculated the total annual cost and benefit associated with moving from 2006 HEDIS rates to 95% compliance. **RESULTS:** We screened 1641 articles, reviewed 222, and accepted 18 (relating to 19 of 25 measures). Greater compliance with 6 measures reduced costs. Increasing compliance with the remaining 13 measures increased costs but improved health; ICERs varied from \$180/quality-adjusted-life-year (QALY) (initiation of alcohol/drug treatment) to \$39,805/QALY (breast cancer screening). The number of people required to reach 95% compliance varied from 0 for beta-blocker use after MI (2006 compliance 96.6%) to 39 million for flu shots (2006 compliance 44.5%). The most costly measure was comprehensive diabetes care (\$7 billion/year) and the least costly were increasing childhood immunizations and reducing inappropriate imaging studies for back pain (each saving almost \$400 million/year). 95% compliance on all measures would cost \$13.2 billion annually, save \$1 billion (net \$12.2 billion), and add 7 million QALYs for a mean overall cost effectiveness of under \$2000/QALY. **CONCLUSIONS:** Improving quality using a nationally accepted list of quality measures would increase, not reduce, costs. A published study estimated that recent medical advances have improved health at a cost of \$30–\$85,000/QALY; in comparison, improving compliance with HEDIS measures may be an attractive investment. If more HEDIS measures examined overuse (e.g. of treatments with inadequate evidence of effectiveness), improving compliance with the entire set might reduce costs.

PHP52

BUDGETARY POLICIES AND AVAILABLE ACTIONS: A GENERALISATION OF DECISION RULES FOR ALLOCATION AND RESEARCH DECISIONS

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

PHP54

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 retirement 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, strength, 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 4,001,243 claims. In 2005, 52.07% of the items had higher reimbursement per unit in community pharmacy, 35.80% had higher reimbursement in mail-order pharmacy and 13.31% 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 cost, administrative fees and dispensing fees 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 2005. 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 were significantly lower in mail-order pharmacy. 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.

PHP55

TRENDS IN DESIGN CHARACTERISTICS OF BRIEF SUMMARY ON 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 formats of 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 visually reviewed by research assistants to record information from brief summaries on ads from issues dated January 1, 2000 through December 31, 2004. The design characteristics evaluated were text font size, 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 coded and analyzed using SAS® 9.1. 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 7266 printed ads for 240 products manufactured by 90 pharmaceutical companies were evaluated from NG (95), AIM (1372), JAMA (1787), 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/journals). 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.

PHP56

COMPRISON OF NOTIFIABLE DISEASES SURVEILLANCE WEBSITES OF FOUR COUNTRIES

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OBJECTIVES: Globalization necessitates better co-ordination 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 that had published 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