tion within conceptual framework of Andersen’s Behavioral Model was used to examine the predisposing, enabling and need characteristics associated with antidepressant use. RESULTS: The overall prevalence of antidepressant use was found to be 46.22% (95% CI, 45.16–47.27). The most prescribed class of antidepressants was SSRI (36.72%), followed by serotonin modulator (10.05%), SNRIs (6.02%), TCA (5.06%) and MAO inhibitors (0.02%). Citalopram (28%) was the highest prescribed individual antidepressant followed by mirtazapine (22.05%). Among the predisposing characteristics, age, race, and marital status were significantly associated with antidepressant use. Enabling factors such as Medicare or Medicaid payment source, facility bed capacity predicted antidepressant use. Among need characteristics, likelihood of receiving antidepressant prescription decreased with increased dependence in decision making ability and out of bed mobility. Also presence of depressed mood indicators, history of falls and fractures, and an increase in number of medications prescribed had positive association with antidepressant prescription. CONCLUSIONS: Nearly half of elderly nursing home residents received antidepressants. Pre-disposing, needing, and enabling factors played important roles in use of antidepressants. Overall, the study findings suggest that antidepressant treatment is highly prevalent in nursing homes possibly due to increased recognition of symptoms in the elderly population.

PSYCHOTROPIC DRUG UTILIZATION PATTERNS AMONG ELDERLY NURSING HOME RESIDENTS IN THE UNITED STATES

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OBJECTIVES: Psychotropic use in nursing homes has been a concern due to extensive misuse of these agents in the elderly. Very little is known about recent national level utilization in nursing homes especially after the introduction of newer psychotropic agents. Therefore, this study examined psychotropic drug use patterns among elderly nursing home residents at the national level by using the 2004 National Nursing Home Survey (NNHS) data. METHODS: This study involved retrospective, cross-sectional analysis of the 2004 NNHS. The study sample included patients aged 65 years or older. Psychotropic drugs were classified as antidepressants, sedative/hypnotics, antianxiety, antipsychotics, and stimulants based on existing literature. Psychotropic polypharmacy was defined as concomitant use of two or more psychotropic drugs. SAS survey procedures were used for descriptive domain analysis and to calculate 95% Confidence Intervals (CI) of weighted estimates. RESULTS: According to the 2004 NNHS (n=399,321), 45% (95% CI, 43.85–46.95) million patients received at least one psychotropic medication for an overall prevalence of 63.18% (95% CI, 62.16–64.21), while 25.85% (95% CI: 24.92%–26.77%) received two or more psychotropic medications. Antidepressant agents (46.22%, 95% CI: 45.16%–47.27%) were the most prescribed psychotropic drug class followed by antipsychotics agents (24.84%, 95% CI: 23.92%–25.76%). Psychotropic polypharmacy within the antidepressant class was highest (5.92%, 95% CI: 5.43%–6.41%) followed by antipsychotics (1.17%, 95% CI: 0.94%–1.39%). CONCLUSIONS: Nearly two-third elderly nursing home residents received psychotropic medications, while more than one in four residents were receiving two or more psychotropic drugs. With increasing concerns of inappropriate psychotropic drug use, there is a strong need to monitor their usage in this vulnerable population.

SOURCES OF MEDICATION FOR PATIENTS IN GENERAL MEDICINE

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OBJECTIVES: To examine the influence of inexpensive generic programs on prescrip tion medication acquisition behavior of patients. METHODS: Cross-sectional survey of 200 consecutively enrolled patients attending a community general medicine clinic. Questions were asked to determine the type of pharmacy patients obtained their current prescription medication from; whether they were aware of focused programs selling generic medications for a reduced cost; whether they had filled a prescription recently using a reduced cost generic program, and if they did, whether they had other medications filled at the same pharmacy. Demographic data was also obtained. Data were analyzed using descriptive statistics. Respondents were categorized as having filled a prescription using an inexpensive generic program or not. Differences in demographics and medication-related variables between the two groups were analyzed using Student’s t-test for continuous variables or Chi-squared test for categorical variables. P value of less than 0.05 was considered statistically significant. RESULTS: Only 5% of respondents (11 of 210) used an inexpensive generic program to fill at least one of their prescriptions. Characteristics of patients who tended to use the generic programs included greater number of prescriptions, lower household income, no prescription insurance, and be of female gender. The study is limited in generalizability due to the small number of respondents in the group who had a prescription filled by an inexpensive generic program. CONCLUSIONS: This small study provides encouraging data to support the development of a larger study of focused programs selling generic medication for a reduced cost; whether they had other medications filled at the same pharmacy. Larger studies may also attempt to determine whether these programs improve access to medications that patients may have had trouble affording before their inception.

A TREND ANALYSIS OF DISCONTINUED NEW MOLECULAR ENTITY PRODUCTS IN THE US

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OBJECTIVES: Over 700 new molecular entity (NMEs) were approved between 1980 and 2008 in the US. Although a small percentage of these products will inevitably be discontinued, concerns over safety are purported to be the most important reason for discontinuing a drug from the market. In this study, a trend analysis was performed to examine the pattern of discontinued NMEs approved by the FDA from 1980 to 2008. METHODS: Data were derived from the FDA, Federal Register, Micromedex, rx.og, “2009 version of the FDA’s Orange book: Approved Drug Products with Therapeutic Equivalence Evaluations. Descriptive statistics, chi-square tests, logistic regression, and survival analysis were performed. For the Kaplan-Meier survival curves, data points were not discontinued during the study time-period were censored. RESULTS: A total of 703 NMEs were approved during the study period. Of the 101 NMEs that were discontinued, 29 were due to safety concerns. Controlling for other factors, the odds (OR) of drug being discontinued for reasons other than safety and efficacy were significantly higher than the odds of being discontinued for safety reasons (p<0.05). Compared to other therapeutic classes, anti-infective drugs were more likely to be discontinued (p<0.05). Results from the Kaplan-Meier survival analysis revealed the estimated probability of discontinuing a NME from the market over a 20 year time period was 15.0%. CONCLUSIONS: Survival analysis provided useful estimates for the probability of discontinuation. Safety concerns for NMEs were not the foremost reasons for drug discontinuation; rather financial reasons may contribute to a larger portion of discontinuations. However, additional studies are needed to assess how probabilities for drug discontinuation are influenced by decision-making entities regarding drug approval, drug development and innovation, and drug policy.

THE PRESCRIPTION DRUG BURDEN FOR US ADULTS BETWEEN THE AGES OF 55 TO 64

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OBJECTIVES: With US health care reform proposing to extend Medicare coverage to individuals between the ages of 55–64, the pressure for coverage will dramatically increase. We examined demand five drug markets—cholesterol, diabetes, depression, hypertension, and pain—for this age group compared to others. We also compared the cost burden under Medicare Part D compared payers to highlight the demand for more affordable drugs from individuals that are not yet eligible for Medicare coverage. METHODS: For each drug market, total prescriptions (TRx), new patient prescriptions (NPRx), and average prescription size were obtained for each of the age groups analyzed (518, 19–35, 36–54, 55–64, 65+). For each drug market, average out of pocket cost (OPC) was also compared between Medicare beneficiaries and other patients. Data were collected for eight quarters, spanning November 2007 to November 2007.
TRENDS IN EMERGENCY DEPARTMENT VISITS DUE TO OPIOID ABUSE IN THE UNITED STATES, 1996–2007

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OBJECTIVES: To study the trends in emergency department (ED) visits due to opioid abuse from 1996 to 2007 in United States. METHODS: ED visits attributable to opioid abuse were identified using diagnosis codes (ICD-9-CM codes: 304.0, 304.7, 305.5 and 960.0) from the National Hospital Ambulatory Medical Care Survey. Annual rate of ED visits for opioid abuse per 1000 people was estimated. To increase estimation precision, data from two consecutive years were pooled. Bivariate analysis and logistic regression were performed to examine the associations of patient demographic characteristics to ED visits and opioid abuse. Data were analyzed using Stata 9.2 accounting for complex survey design. RESULTS: Of the total 1,289,520,680 estimated ED visits made during the 12-year period, 1,633,224 (0.13%) were attributable to opioid abuse. ED visits for opioid abuse increased from 70,748 visits per year (0.08%) in 1996–1997 to 208,378 (0.18%) in 2006–2007. The annual rate of ED visit for opioid abuse per 1000 people increased from 0.26 in 1996–1997 to 0.70 in 2006–2007, with an estimated 8% annual increase (p < 0.001). Children and elderly were less likely to have an ED visit for opioid abuse compared to nonelderly adults aged 34-64 (AOR 0.075, 95% CI 0.042-0.134; AOR 0.067, 95% CI 0.026-0.229, respectively). Females were less likely to have an ED visit for opioid abuse than males (AOR 0.555, 95% CI 0.483-0.695). Compared to the West, people in the South and Midwest were less likely to have an ED visit for opioid abuse (AOR 0.447, 95% CI 0.313-0.638, AOR 0.517, 95% CI 0.334-0.799, respectively). Risks of ED visits for opioid abuse more than doubled in years 2002–2003 and 2006–2007 (AOR 2.286, 95% CI 1.420–1.679; AOR 2.329, 95% CI 1.473–1.682 respectively) compared to 1996–1997. CONCLUSIONS: The number and rate of ED visits for opioid abuse increased over time with the highest in 2006–2007.

EPISODES OF CARE AND INPATIENT MORTALITY FOLLOWING POISONINGS FROM OVER-THE-COUNTER MEDICATIONS IN THE UNITED STATES

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OBJECTIVES: To examine the presence of spatial clusters across states in total number of prescription drugs filled at retail pharmacies in US METHODS: Using data on total number of prescription drugs filled at retail pharmacies by each state from the Agency for Healthcare Research and Quality (AHRQ) Healthcare Cost Utilization Project (HCUP) Nationwide Inpatient Sample. Cases with any ICD-9 diagnoses related to poisoning from OTC medications (e.g., codes 965.4, E830.3, E945.4) were included for analysis. Descriptive approaches and logistic regression were used to assess patient and hospital characteristics, costs, potential disparities of care, and inpatient mortality rates. RESULTS: A total of 360,636 inpatient admissions associated with poisonings from OTC medications occurred from 2002 through 2006. Cases averaged 43.4 ± 20.3 years of age, 3.5 ± 4.6 days length of stay, and $14,808 ± 4,638 in charges. Further, 1.3% of cases resulted in patient mortality, which averaged 53.3 ± 19.5 years of age, 5.7 ± 9.1 days of stay, and $44,904 ± 64,738 in charges. The national bill associated with OTC poisonings totaled $3.25 billion across the 3 years. Increased odds of inpatient mortality were associated (p ≤ 0.05) with patient age, total charges, number of comorbidities, patients who self-pay, the regional location of hospitals in the United States, and increased case-mix severities. Conversely, decreased odds of inpatient mortality were associated (p ≤ 0.05) with shorter lengths of stay, bed-sizes of hospitals, hospitals in urban settings, and teaching hospitals. CONCLUSIONS: Inpatient hospitalizations associated with poisonings from OTC medications account for a substantial burden of illness often exceeding 50,000 cases per year and summing to $5.25 billion over five years. Despite a small percentage of inpatient mortality, further research is needed on the costs and outcomes following discharge, as well as those treated and released solely in emergency departments, and OTC poisonings among children.