

the elderly in 1996. This represents 8.7% of all clinic visits by the elderly for an annual visit rate of 51.97 (visits for every 100 persons of 65 years old or older). Ninety-one percent of these visits were to physician offices and remaining visits were to outpatient clinics. There were some variations in psychotropic prescribing patterns between these two settings. Overall, psychotropic medication visit rates were greater in females, blacks, patients between 80 and 84 years of age, and patients from the West. The most frequently prescribed psychotropic medications in ambulatory clinics in the order of prevalence were antidepressants, antianxiety agents, and sedatives. Most of the visits (81.67%) involved one psychotropic medication and 3.14% of the visits involved two or more agents in the same class.

CONCLUSION: The study revealed that psychotropic prescribing practices in ambulatory clinics vary with elderly demographics and clinical settings. Because of the increased risk related to the use of psychotropics and the prescribing patterns of these agents, future efforts may be focused on populations receiving relatively more psychotropic agents to improve healthcare outcomes.

PNP20**ANTIPSYCHOTIC UTILIZATION RATIOS: DIFFERENCES AMONG AGE, GENDER, AND PAYER COMBINATIONS**

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Burden-of-illness assessments require incidence and prevalence assumptions. For psychotic disorders, there are few large-scale incidence and prevalence assessments providing rates for age, gender, or socioeconomic subpopulations. Because outpatient treatment of psychotic conditions is increasing, overall incidence and prevalence may be estimated from outpatient pharmaceutical records.

OBJECTIVE: This study estimates incidence and prevalence of antipsychotic utilization among age, gender, and payer combinations using outpatient pharmaceutical records.

METHODS: Antipsychotic prescriptions dispensed between July 1995 and June 1997 to 4,628,528 eligible subjects were extracted from a large US database. Calculated ratios compared utilizers (eligible subjects with a prescription between July 1996 and June 1997) and initiators (utilizers without a prescription between July 1995 and June 1996) to eligible subjects for various combinations of age, gender, and payer types—Medicaid, non-Medicaid, indemnity, or “self-insured.” Chi-square tests were used to assess differences between those receiving and not receiving antipsychotic agents.

RESULTS: The utilizer ratio was 5.0 per 1000, although significantly ($p = 0.002$) lower (by 1.1 per 1000) for males. The initiator ratio was 1.6 per 1000, again significantly ($p < 0.001$) lower (by 0.1 per 1000) for males. Differences were not consistent—higher for younger

males and lower for older males than for similarly aged females. Ratios were significantly ($p \leq 0.001$) higher (by 10 times) for Medicaid recipients.

CONCLUSION: Outpatient ratios were within overall prevalence and incidence rates for schizophrenia or other psychotic conditions. Integrating these ratios into a burden-of-illness analysis should consider the proportions of non-psychotic disorders, patients treated for psychotic conditions without medication, and patients treated solely on an inpatient basis.

PNP21**THE ECONOMIC COSTS OF HEROIN ADDICTION**

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Heroin is an extremely devastating drug. Injection of heroin is a major risk factor for infectious diseases such as HIV/AIDS and hepatitis. Heroin addiction often strikes persons in the prime of their working years, robbing society of productive citizens. Furthermore, a significant proportion of heroin users engages in criminal activities to support their habit.

OBJECTIVE: This study documents the tremendous costs of heroin addiction, both to the addict and society at large.

METHODS: Using a cost-of-illness approach, we identify costs in three major areas: 1) medical care, 2) productivity, and 3) crime. No single data set currently available is able to fully capture costs in each of these areas. Thus, a variety of data sets and previous studies have been synthesized.

RESULTS: We estimate that in 1996 the economic costs of heroin addiction in the United States totaled \$22.1 billion. Approximately 23% of these costs are due to the medical complications of heroin addiction, primarily treatment for HIV/AIDS and psychiatric comorbidities. Another 24% are related to criminal activities, including the cost of incarceration, policing, legal adjudication, and the cost to crime victims. Another 41% are associated with lost productivity. For example, heroin addicts are less than half as likely to have a full-time job as compared with the national average. Treatment of heroin addiction and social welfare services each account for 5% of the costs.

CONCLUSIONS: The significant economic effects of heroin addiction have important public policy implications, especially given that heroin use appears to be rising among adolescents and young adults. This study suggests that greater investment in prevention and treatment activities may be highly cost-effective.

PNP22**HYPNOTIC DRUGS CONSUMPTION IN RUSSIA**

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