the average 6-month per-patient expected costs of treatment (using IMS volume sales) are combined with estimated number of patient episodes during each drug costs to calculate the cost-effectiveness ratios. The model combines success rates and expected patients in remission 6 months after the start of treatment. The primary outcome measure is ‘success’, defined as the cost-effectiveness of escitalopram, a new selective serotonin reuptake inhibitor (SSRI), versus citalopram, fluoxetine, and venlafaxine in Sweden.

RESULTS: Treatment of Major Depressive Disorder with escitalopram yielded a lower expected cost and greater effectiveness compared to other SSRIs and SNRIs. The expected success rate (remission) was 63.5% for escitalopram, compared to 57.2%, 57.0%, and 61.1% for citalopram, fluoxetine, and venlafaxine, respectively. Average expected total medical costs per patient are similar for escitalopram (SEK 15,670) and venlafaxine (SEK 16,580), and somewhat higher for citalopram and fluoxetine (SEK 18,860 and 19,050 respectively). Budgetary impact shows that the increase in drug costs (increase in Drug Budget estimated at SEK 44 million) is more than offset by the decrease in other health care costs (decrease in total Health Care Budget estimated at SEK 543 million).

CONCLUSIONS: Escitalopram is a cost-effective treatment alternative to citalopram, fluoxetine, and venlafaxine. The results of this study indicate that increased utilisation of escitalopram might reduce health care costs in Sweden.

PMH11

EMPLOYMENT-RELATED COSTS OF INFORMAL CAREGIVING FOR ALZHEIMER’S DISEASE PATIENTS: EFFEC TS OD RIVASTIGMINE TREATMENT

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While several studies have measured the direct costs of informal caregiving for Alzheimer’s patients, indirect costs such as income losses to working caregivers and productivity costs to their employers have received little attention.

OBJECTIVES: This study estimates employment-related costs of caregiving for Alzheimer’s patients and the effects of the cholinesterase inhibitor, rivastigmine, on these costs.

METHODS: Employment-related costs of informal Alzheimer’s caregiving were imputed from several studies on Alzheimer’s and caregiving, including findings from the NAC/AARP survey of family caregivers. Published employment-related costs, which applied to all caregivers of the elderly, were made Alzheimer’s specific and differentiated by disease stage. These estimates were linked to clinical trial scores (Progressive Deterioration Scale) for rivastigmine to estimate savings in employment-related costs associated with this Alzheimer’s therapy.

RESULTS: Productivity costs to employers per working, informal Alzheimer’s caregiver are $2,187 yearly, while yearly income losses to working caregivers are $11,525. Total productivity costs to employers are $1.89 billion annually while total income losses to caregivers are $9.96 billion annually. Employment-related costs are highest for informal caregivers of Alzheimer’s patients in the moderate disease stage because of a higher concentration...
of these patients in the community compared to patients in the severe stage who tend to be institutionalized. Based on its slowing of Alzheimer’s patient deterioration, rivastigmine would save annually $268 million (14.2%) of total productivity costs to employers and $1.41 billion (14.2%) of total income losses to caregivers. Rivastigmine’s effects in slowing Alzheimer’s patient deterioration are strongest in the moderate disease stage. Coupled with higher employment-related costs in this stage, rivastigmine’s cost-saving effects would also be highest in the moderate disease stage.

CONCLUSION: Employment-related costs of informal Alzheimer’s caregiving are substantial. Therapies such as rivastigmine can significantly reduce these costs, particularly in the moderate disease stage where costs and rivastigmine’s effects are greatest.

**PMH I 3**

IMPACT OF ANXIETY ON ABSENTEEISM:
ESTIMATES FROM THE 1997 MEDICAL EXPENDITURE PANEL SURVEY
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OBJECTIVES: The purpose of this study is to estimate the impact of anxiety on absenteeism and employment in the United States using the 1997 Medical Expenditure Panel Survey.

METHODS: Anxiety cases were defined by self-report by survey respondents who saw a physician during the previous year for a condition and recorded as a three digit ICD-9 code (Anxiety disorders = 300). National population estimates were derived from patient level weights as determined by a nationally representative sample of the non-institutionalized civilian population of the United States in 1997. Descriptive analyses were used to examine individual demographic, socioeconomic, and co-morbidity characteristics of those respondents with anxiety.

RESULTS: Of the 1997 US representative population of 34,551 survey respondents from the MEPS analysis, 848 persons, representing 684,312 persons (2.5% of the US population), reported having anxiety. Anxiety respondents were more likely to be female (69.2%), Caucasian (83.6%), and older than the overall population (mean age 44 years vs. 33 years). Among respondents aged 18–64 years, persons with anxiety were less likely to work than those without anxiety (males 59.1% vs. 70.8%; females 53.5% vs. 56.9%). Those persons reporting anxiety were more likely to have missed days from work 39.1% vs. 28.2% for females and 35.9% vs. 27.5% for males. Persons with anxiety were more likely to change jobs through the year and a half interview reference period (57.8% vs.49.2% for females; 63.9% vs. 57.4% for males).

CONCLUSIONS: Differences are seen at the workplace in patients with and without anxiety disorders. Patients with anxiety most often are female and have a greater frequency of not being employed, missing time from work, and changing jobs.

**PMH I 4**

HEALTH CARE EXPENDITURES OF PATIENTS WITH MAJOR DEPRESSIVE DISORDER AND POST TRAUMATIC STRESS DISORDER
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OBJECTIVE: An estimated 50% of Americans are exposed to at least one traumatic event in a lifetime. Of those, 20% experience post-traumatic stress disorder (PTSD). Approximately 50% of patients with PTSD have comorbid major depression disorder. This study examined the cost differential between patients with major depressive disorder (MDD) only, PTSD only and patients with comorbid MDD and PTSD.

METHODS: A retrospective study of patients with MDD and PTSD was performed using 1996 to 1999 claims from the MarketScan Database, with private sector health data from approximately 100 payers. Three cohorts of patients were created: 1) patients with MDD (ICD-9-CM 296.2, 296.3, 300.4, or 311); 2) patients with PTSD (ICD-9-CM 309.81); and 3) patients with both MDD and PTSD. Patients had to also have a prescription drug claim for an antidepressant within 30 days of diagnosis. During the 6 month follow-up, healthcare utilization and expenditures for inpatient, outpatient, emergency room, and outpatient drugs were calculated. Total expenditures were compared. ANOVA was used to assess the statistical significance of differences in expenditures.

RESULTS: A total of 24,955 patients with fee-for-service health coverage were identified. Of those, 24,156 were diagnosed with MDD, 196 with PTSD, and 603 had co-occurring MDD and PTSD. The mean total expenditure for patients with MDD, PTSD, and MDD with PTSD were $3,407, $3,714, $5,723 respectively (p < 0.05). PTSD was significantly associated with increased expenditures after stratifying for gender, age, and geographic region.

CONCLUSION: Costs associated with MDD and PTSD are substantial. The total health care expenditures of patients with PTSD were significantly higher than expenditures for patients with MDD alone. Patients with comorbid depression and PTSD had significantly increased expenditures than patients with one condition.

**PMH I 5**

PREVALENCE AND COSTS OF TREATMENT-RESISTANT DEPRESSION IN A CANADIAN CLAIMS DATABASE
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