health care services increased from $725,019,395 (mean = $395; 95% CL = $140–$650) to $3,049,290,075 (mean = $1,802; 95% CL = $618–$2,987). Total prescription medication expenditures increased from $941,406,990 (mean = $24; 95% CL = $18–$29) to $1,202,568,785 (mean = $34; 95% CL = $30–$37). Expenditures on office-based medical provider and emergency department visits showed minor increases while those on outpatient services exhibited a minor decrease. CONCLUSIONS: From 1996 to 1999, there was no difference in the prevalence of back pain however there was an $11.1 billion increase in direct costs. Inpatient stays, home care services, and prescription medications accounted for the majority of this increase.

### COST-EFFECTIVENESS OF DRUG THERAPY FOR POSTHERPETIC NEURALGIA

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**OBJECTIVES:** Gabapentin and topical lidocaine patch (LIDO) are US FDA approved drugs for treatment of postherpetic neuralgia (PHN); tricyclics and opioids are also frequently used. The cost-effectiveness of drug therapy (Rx) for PHN is unclear. METHODS: We developed a Markov decision model to estimate the incremental cost-effectiveness of 5 management strategies for established PHN in 70 year olds: no therapy, gabapentin, LIDO, tricyclic (nortriptyline), or opioid (long acting morphine). The analysis took a societal perspective, using reference case recommendations of the Panel on Cost-Effectiveness in Health and Medicine. We used literature data for parameter values, assuming that Rx related pain relief equaled decreased PHN disutility. We also assumed that gabapentin, nortriptyline, and opioid had identical side effect likelihood (30%) and severity (possible bias against gabapentin). One-way and multiway sensitivity analyses were performed. RESULTS: In the baseline analysis, nortriptyline is eliminated by extended dominance. Compared to no therapy, opioid costs $60,000 per quality adjusted life year (QALY) gained. Compared to opioid, gabapentin costs $74,000/QALY. Compared to nortriptyline, LIDO costs $795,000/QALY. In sensitivity analyses, LIDO is preferred (≤$75K/QALY) if pain relief was >31% (baseline 23.8%) or if only 1 patch is required (baseline 2). Opioid is not preferred if disutility due to stigma is associated with its use but is preferred if pain relief is >33% (base 32.3%). Nortriptyline is preferred if pain relief is >22.5% (base 19.0%). Gabapentin dominates all other Rx if its side effect frequency is <28%. Monte Carlo analysis, with variation of all sensitive parameters over clinically plausible ranges, confirms greater economic acceptability of gabapentin. CONCLUSIONS: In an analysis biased against its use, gabapentin is the most economically reasonable choice for drug therapy of established postherpetic neuralgia.

### ESTIMATES AND PATTERNS OF HEALTHCARE EXPENDITURES AMONG INDIVIDUALS WITH BACK PAIN IN THE US

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**OBJECTIVE:** There is a lack of updated information on healthcare expenditures and expenditure patterns for individuals with back pain in the US. The objective of this study is to use a recently released national survey database to estimate total healthcare expenditures incurred by individuals with back pain in the US, calculate the incremental expenditures attributable to back pain among these individuals, and describe healthcare expenditure patterns of individuals with back pain.

METHODS: This study used data from 1998 Medical Expenditure Panel Survey (MEPS), a national survey on healthcare utilization and expenditures. Total healthcare expenditures and per-capita expenditures among individuals with back pain were calculated. Multivariate regression models were used to estimate the incremental expenditures attributable to back pain. The expenditure patterns were examined by stratifying individuals with back pain by socio-demographic characteristics and medical diagnosis, and calculating per-capita expenditures for each stratified category.

RESULTS: In 1998, total healthcare expenditures incurred by individuals with back pain in the US reached $90.7 billion and total incremental expenditures attributable to back pain among these persons were approximately $26.3 billion. On average, individuals with back pain incurred expenditures about 60% higher than individuals without back pain ($3495 vs. 2178). Among back pain individuals, at least 75% of service expenditures were attributed to those with top 25% expenditure and per-capita expenditures for each stratified category. Conclusions: Healthcare expenditures for back pain in the US in 1998 were substantial. The expenditures demonstrated wide variations among individuals with different clinical, demographic and socioeconomic characteristics.

### NEUROLOGICAL & PAIN DISEASES/DISORDERS—Quality of Life/Preference Based Outcomes

### DONEPEZIL VERSUS RIVASTIGMINE UTILIZATION PATTERNS IN A RETROSPECTIVE CLAIMS ANALYSIS

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**OBJECTIVE:** To compare the drug utilization patterns, in particular the compliance and persistency of therapy,