

phase II in fixed effect regression models to estimate the effect of incontinence on caring costs for UI.

RESULTS: Compared with long-term care residents without UI, those with occasional UI consumed \$2.90 more per shift on labor and supply costs, while those with frequent UI consumed \$5.76 more. Incremental laundry costs per shift are \$0.34. Our study suggests that, on average, the increased cost of caring for a UI patient in a long term care facility is \$5,650 per year, after controlling for factors such as patient demographics, insurance status, type of long-term care, and shift.

CONCLUSIONS: Behavioral, pharmacological, and medical treatments that successfully control or alleviate UI conditions may yield substantial savings in long-term care settings.

ECONOMIC AND OUTCOMES ISSUES OF INFECTIOUS DISEASES

PID 1

ESTIMATES OF THE INDIRECT COSTS OF HIV AND AIDS IN THE UNITED KINGDOM

Mullins CD¹, Whitelaw G², Beck E³, Cooke JL¹

¹University of Maryland, Baltimore, MD, USA; ²SMT—Center for Research, Shrewsbury, NJ, USA; ³Imperial College School of Medicine, London, UK

OBJECTIVES: To estimate the indirect costs of HIV and AIDS for individuals in the United Kingdom based on utilization of informal (non-medical) care and community services; to compare these figures with direct costs; and to demonstrate the multitude of budgets that are affected by indirect costs.

METHODS: A prevalence-based model was used to determine the aggregate utilization by stage of progression (asymptomatic HIV, symptomatic non-AIDS, AIDS). Sources of data included SOPHID97 for prevalence figures; published data by Petrou, et al. on service utilization and costs; published figures from Lubeck and Fries and data from the Positive Lives Employment Survey 1997 for disability; and the UK Office of National Statistics Family Expenditure Survey 1997–98 for disability and income data.

RESULTS: Annual indirect costs (converted to 1998 British pounds) are £3,881.14 for asymptomatic HIV patients; £7,865.17 for symptomatic non-AIDS patients; and £21,695.13 for AIDS patients. These figures can be compared to annual hospital direct cost figures published in *PharmacoEconomics* in 1998, which were £2,391 for asymptomatic HIV patients; £4,562 for symptomatic non-AIDS patients; and £15,895 for AIDS patients. Thus, our estimates of indirect costs are higher than the hospital direct cost estimates for all three groups of HIV/AIDS patients.

CONCLUSIONS: The difference (in 1998 British pounds) in annual indirect costs per patient between asymptomatic and symptomatic non-AIDS patients is £3,984.03. The difference in annual indirect costs per patient between symptomatic non-AIDS and AIDS patients is £13,829.96. These differences demonstrate the potential for significant savings

if disease progression can be prevented or delayed. Focus on indirect costs of HIV/AIDS demonstrates the complexity of decision making when data is limited to direct medical costs and raises an issue regarding who should have input into decision making when multiple budgets are affected.

PID 2

ASSESSING THE DIRECT COST OF LYME DISEASE

Goodman M, Nordin J, Maciosek M, Fillbrandt K

HealthPartners Research Foundation, Bloomington, MN, USA

OBJECTIVES: Lyme disease is an increasingly common condition in the United States and temperate regions of Europe and Asia. The reported cases have increased 25 fold since 1982. Recently two vaccines have been developed. Decisions about the cost effectiveness require consistent cost estimates. The objective of this study is to identify the costs of diagnosis, treatment, treatment failure, and late diagnosis in a large HMO population located in an endemic area. Prior studies have not included the worried well who are tested but do not receive treatment.

METHODS: This study is a matched retrospective cohort study. 8,017 individuals tested or diagnosed with LD was matched by age, gender, and zip code with a control population. Standardized HMO and pharmacy costs were gathered from the HMO claims system. Chronic disease status was controlled using the Chronic Disease Score. Costs were assessed for six weeks prior to first LD contact and six weeks following first LD contact. Late-effect and treatment failures were assessed separately for longer post-contact windows.

RESULTS: The mean 12 week per capita medical direct expense for LD cases is 4.1 times higher than for the control group. The cost difference is highly significant ($p < 0.001$). Pharmacy expense is 1.77 times greater ($p < 0.001$).

CONCLUSIONS: The cost effectiveness of LD vaccines is dependent on the identifying the cost of both treatment and anxiety caused by the potential of tick-borne infection. The costs differences illustrated in this study emphasize the importance of both true positives and the “worried-well” in assessing the total cost of LD to health insurance sponsors.

PID 3

HOSPITALIZATION RATES AND ASSOCIATED COSTS FOR INFLUENZA IN A MANAGED CARE POPULATION

Eaddy M¹, Cox F², Okamoto L³

¹University of South Carolina, Columbia, SC, USA; ²Glaxo Wellcome, Research Triangle Park, NC, USA; ³NDC Health Information Services, Phoenix, AZ, USA

OBJECTIVES: The objective of this study was to measure influenza-related hospitalization rates and cost in a managed care population.