surgical history, ophthalmic medications, visual acuity, visual field parameters, and intraocular pressures. Economic data, including physician visits (ophthalmologist/optometrist), diagnostic and monitoring tests, glaucoma medications, medical and surgical procedures, and specialized glaucoma-related services, were obtained from patient-level billing and reimbursement records. Specialized LVC services collected via the chart review for clinical and economic analysis included utilization of low-vision devices (e.g., CCTV and magnifying devices), patient education and counseling for lifestyle modifications (e.g., glare strategies and mobility training), and social/support services.

RESULTS: Of the 61 patients reviewed, 42% were male. The mean age of the sample cohort was 75 years (minimum 33 years to a maximum of 93 years). Of the 28 patients with applicable data, 34% had a family history of glaucoma. Comorbid conditions among the sample patients were hypertension (47%) and diabetes (12%). The breakdown of payment type was 56% Medicare and 21% Medicaid. At the same time, 33% of patients had private coverage and 8% paid for their services out-of-pocket. Mean direct cost of care was $19,960 per patient during the first year of LVC, with 22.6% attributable to LVC. CONCLUSIONS: LVC contributed to the healthcare utilization and direct costs of treating end-stage glaucoma patients.

**PES9**

**PREVALENCE OF FRACTURES AND DEPRESSION AND THEIR ASSOCIATION WITH BLINDNESS IN A MEDICARE POPULATION WITH PRIMARY OPEN-ANGLE GLAUCOMA: AN EXAMINATION OF BLINDNESS-RELATED COMORBIDITIES AND THEIR COSTS**

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**OBJECTIVES:** To examine blindness-related comorbidities in a Medicare population with primary open angle glaucoma (POAG), specifically fractures (including hip, femoral, and vertebral fractures) and depression (including several types of depressive/neurotic conditions), and their association with being diagnosed as blind. A secondary objective is to examine the total Medicare-related healthcare spending between non-blind and blind glaucoma patients relative to comorbidities. METHODS: The data source was a Medicare 5% Sample of 1998 Glaucoma Patients with and without blindness (n = 70,060). Odds ratios (OR) were created from the annual prevalence rates of fractures and depression between blind and non-blind groups. Multiple propensity scoring methods were used to account for selection bias in those patients coded for blindness. Comparisons were conducted between blind (cases) and non-blind ( controls) groups before and after matching cases to controls by propensity score. Matched and unmatched results were also stratified by age, sex, and Charlson Comorbidity Index scores. Medicare reimbursements were compared between groups using non-parametric statistical methods. RESULTS: The overall matched odds ratios for depression and depressive disorders in the blind group were 1.88 (95% CI: 1.08–3.28) and 1.63 (95% CI: 1.05–2.52), respectively. Hip fractures had a significant OR 4.86, (95% CI: 1.158–20.36) specifically in the unmatched 65–69 year-old cohort but not in the matched. Total age-adjusted non-eye related Medicare costs were significantly greater in the blind group ($2510 vs. $1784). The mean annual cost for depression related procedures/visits for those diagnosed with depression was $411 in the blind group vs. $185 in the non-blind group. CONCLUSIONS: There is an association with being blind in a glaucoma population and having a greater risk for depression and fractures (in younger cohorts). The blind glaucoma population has greater age-adjusted eye-related and total (non-eye-related) Medicare costs than non-blind glaucoma subjects.

**PES10**

**A NATION-WIDE ESTIMATE OF NON-MEDICAL SOCIO-ECONOMIC CONSEQUENCES ATTRIBUTABLE TO VISUAL IMPAIRMENT IN FRANCE: A SOCIETAL PERSPECTIVE**

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**OBJECTIVES:** The non-medical costs of visual impairment to individuals and the nation are largely unknown. Data produced by state agencies are not relevant. Knowledge of these costs is essential when allocating resources to therapeutic or preventative programs. METHODS: We analysed two representative nation-wide surveys of 14,603 subjects living in institutions, and 16,945 in the community, with the object of documenting handicap. Subjects were classified as blind (no light perception), low vision (LV; loss of shape perception), or control. We also costed the following items: family income, social allowances, devices, home modification, paid assistance, time spent by carers and unmet needs. Next, we standardised item consumption on confounding factors, using logistic regression. Lastly, unit costs attributable to visual impairment were estimated and compared with the costs incurred by control subjects. Our economic standpoint was that of society. RESULTS: The national non-medical costs attributable to LV (9438€; 14,639€ with unmet needs) accounted for almost the entire costs of visual impairment (10,749€; 16,302€ with unmet needs). However, the average annual cost/patient was 7826€ for LV (12,154€ with unmet needs) versus 19,173€ for blindness (24,036€ with unmet needs). Lost family income amounted to 4552€ and the carers’ burden to 2525€. In addition, 5080€ of social allowances were not distributed because many blind people do not register. CONCLUSIONS: Indemnification of visual handicap should cover total non-medical costs including the predominant unmet needs. Thus strategies of resource allocation, intended to alleviate visual impairment, should include all economic dimensions, extending to non-medical items.

**PES11**

**ESTIMATION OF NATIONWIDE COSTS OF ANNUAL ASSISTANCE ATTRIBUTABLE TO VISUAL IMPAIRMENT, FROM AN ACTIVITY OF DAILY LIVING QUESTIONNAIRE**

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**OBJECTIVES:** To estimate nursing time and costs attributable to visual impairment from a questionnaire documenting activities of daily living (ADLs) in France. METHODS: 356,208 citizens in the general community were selected at random. A sub-sample of 16,945 subjects (blind, low vision and control) was further selected randomly and interviewed. The ADL questionnaire comprised of more than 30 items, including washing, cooking, mobility, shopping, cleaning, etc. A factor analysis was performed and six clusters were identified: hygiene and meals; physical capacity; transport and household; ability to move; behavioral problems; and autonomy. Three levels of dependency were predefined for each cluster: none; subject required partial help; subject required complete help. A subset