

COST OF BLINDNESS IN AUSTRIA

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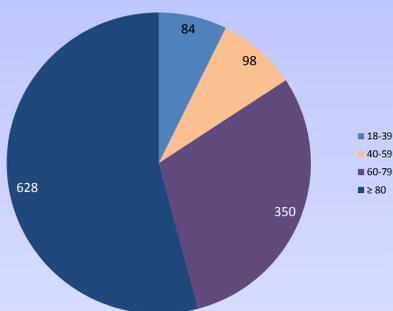
Introduction

Literature concerning epidemiology of blindness as well as resulting economic consequences is rare. The aim of this analysis was to close this research gap for Austria and to evaluate all socioeconomic consequences of blindness for the Austrian society based on newly detected cases of blindness p.a.

Methodology

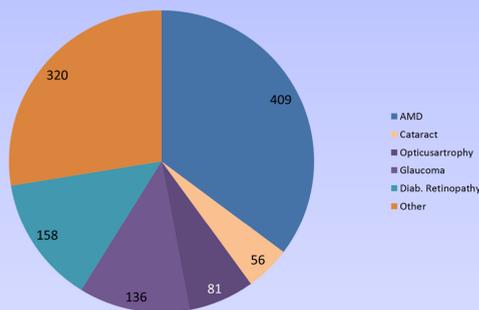
The aim of the study was to evaluate the economic impact of blindness by means of a Cost-of-illness-study (COI). This kind of analysis measures negative effects of blindness expressed in monetary units. This analysis is incidence-based, so economic consequences are measured based on newly diagnosed blind people. Direct and indirect costs are included. Direct costs comprise direct medical cost (consultations, treatment costs, devices, costs of depression, inpatient cost), which result from treatment and direct non-medical cost (adaption of home), which are directly related to consequences of illness. Nursing allowance (opportunity cost of home care), work absenteeism (using the human-capital-approach), as well as costs for nursing homes (assisted living) are defined as indirect cost and were therefore included into the study. The cost of illness was carried out in consideration of reduced life expectancy. Because of casualty and falls blind people have a reduced life expectancy with a Hazard Ratio of 0.5. The analysis was conducted from a society's perspective. The discount rate was 5% for direct and indirect costs from onset of blindness. Calculations have been done for all causes of blindness. Further distinction has been made according to age groups. Fig. 1 shows number of blind people according to age groups as well as incidences according to cause of blindness.

Fig. 1a: Number of blind people according to age groups



Source: IPF own depiction

Fig. 1b: Incidences according to cause of blindness



Resource Use and Cost

Direct costs comprise resource use as a result of treatment or therapy directly attributable to this specific treatment or therapy. Resource use of every particular cause of blindness was determined by experts and literature search. These resource use has been linked to cost parameters.

Furthermore the analysis considers cost for rehabilitation after hip fracture, cost of depression and devices. Direct medical cost are from official sources, e.g. LKF-catalog (Austrian DRG-System) as well as tariff catalogues for doctors in the outpatient setting.

We calculated indirect cost by using published statistical data. Within this cost of illness analysis productivity loss, nursing allowance and charges for assisted living are included.

Results

We calculated costs for all causes of blindness, namely age-related macular degeneration (AMD), glaucoma, diabetic retinopathy, opticusarthrophy, cataract, and other causes. A total of 1,160 blind people are detected yearly. The most frequent cause for newly detected cases of blindness p.a. in Austria is AMD (409 new cases), followed by 'not specified causes' (320 new cases), and diabetic retinopathy (158 new cases).

From a society's perspective the following picture for cost of blindness in Austria is drawn:

The average discounted costs over the remaining life expectancy and over all age groups amount to €90,192 per blind patient excl. nursing allowance. The corresponding cost of all blind Austrians (over all age groups incl. nursing allowance) value €105,707,544 discounted over the remaining life expectancy. Direct cost account for 3% of overall cost, whereas indirect cost account for 97%. Overall cost of blindness (excl. nursing allowance) amount to €74,060,979 discounted, again with 3% of direct cost and 97% of indirect cost. Results are shown within Fig. 2.

Fig. 2a: Results incl. nursing allowance according to causes in € Mio.

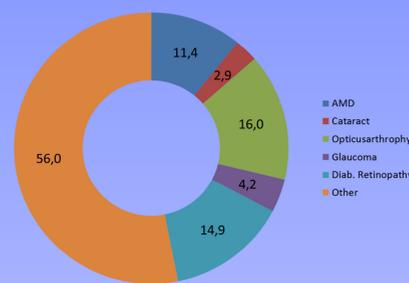


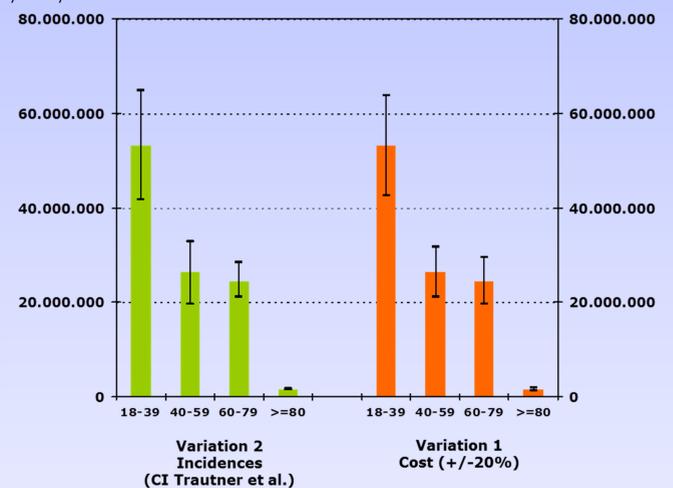
Fig. 2b: Results according to age groups in € Mio.



Source: IPF own calculations

The results of sensitivity analysis show that the variation of incidences as well as of costs within age groups of 18-39, 40-59 and 60-79 has a substantial impact on overall cost.

Fig. 3: Sensitivity Analysis



Source: IPF own calculations

Conclusion

Due to demographic change an increase in the number of old people will rise within the next years. Many causes of blindness affect primarily old people (e.g. AMD, Diabetic Retinopathy). Most affected people are aged people, but younger blind people account for high cost in terms of work absenteeism. So demographic development will lead to increasing number of blind people and therefore to a costly public health problem.

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 Für zusätzliche Literatur kontaktieren Sie bitte die Autoren.