WORLD VIEW

Visual impairment and blindness in Europe and their prevention

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The European region currently differs in many aspects, such as political, socioeconomic, and geographical. After substantial political changes at the beginning of the 1990s, the majority of central and eastern European countries started to rebuild their healthcare systems. It is apparent that eastern Europe represents a highly diverse region where the difference among countries broadens year after year. In highly industrialised countries of Europe, the leading causes of childhood serious visual loss are lesions of the central nervous system, congenital anomalies and retinal disorders. In the middle income countries of Europe, congenital cataract, glaucoma and, mainly, retinopathy of prematurity are highly expressed. The major cause of serious visual loss in adults in industrialised countries is age related macular degeneration. The other conditions comprise cataract, glaucoma, diabetic retinopathy, and uncorrected/uncorrectable refractive errors, along with low vision. In people of working age, diabetic retinopathy, retinopathy pigmentosa, and optic atrophy are the most frequently reported causes of serious visual loss. In the middle income countries of Europe, advanced cataract, glaucoma, and diabetic retinopathy are more frequently observed.

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Some 870 million people live within the European region of the World Health Organization (WHO), in 51 countries covering an area from Greenland in the west to the Pacific coast of the Russian Federation in the east. This vast region currently differs in many aspects, such as political, socioeconomic, and geographical. Until recently, Europe was divided along strict political lines, culminating in the cold war of the 1960s and 1970s. In the late 1980s and at the beginning of the 1990s, the continent experienced a wave of democratisation of political systems, sweeping away socialist regimes in its central and eastern parts. Political turmoil followed in some countries, enveloping several regions in war conditions, and significantly broadening the range of socioeconomic diversity of the continent.[1]

HEALTHCARE SYSTEMS IN EUROPE

The political situation in Europe within the past decades has had a direct impact on the development of national healthcare systems.[2 3] Two essential patterns could be identified. Healthcare systems in Western Europe followed the liberalisation of national economies, being built on the parallel development of state and private healthcare services. Although the country's healthcare plans carry specific national features, the majority of western European countries attained the highest standards of healthcare services when compared worldwide.[4] The financing of health care partly relies on the active participation of citizens through healthcare insurance systems. Current healthcare cost escalation induced by the introduction of expensive technologies, however, had a direct impact on financial requirements in order to maintain a high standard of healthcare services in the long run. This situation affects politicians, national healthcare providers, and policymakers. An imbalance in healthcare systems leads, for instance, in some countries to a shortage of healthcare personnel, and to a growing waiting time to see specialists.

The socialist economies of the East before the 1990s promoted state operated healthcare policies. Politically motivated populist efforts were aimed at increasing the availability of healthcare services and at eliminating barriers to their affordability. The latter aspect was fulfilled by financing healthcare services from state budgets allowing for free services and care. This policy led to the establishment of principles of prevention, regular healthcare checks of the population, and the increased availability of healthcare services based on their geographical planning. A discrepancy between the actual economic conditions of the countries and generous services provided led to the bitter end of these systems following the collapse of the majority of socialist economies. After substantial political changes at the beginning of the 1990s, the majority of central and eastern European countries started to rebuild their healthcare systems. Only some of these countries have already introduced healthcare insurance systems (for instance, the Czech Republic, Hungary, Slovakia), some are in the process of transition towards it (Bulgaria, Poland), while many others maintain healthcare financing from the state operated budget.

Regarding the newly independent states (NIS), they inherited a highly centralised system organised in line with the Semashko model. The whole population of the former USSR was granted free medical assistance regardless of social status and had access to a comprehensive range of secondary and tertiary care. Nevertheless, the quality did not comply with Western standards, and unofficial gratuity payments were commonly expected, especially for secondary and tertiary care. The system at the end of the Soviet era may also be

characterised as one in which individuals in contact with the healthcare system were discouraged from taking personal responsibility. This applied equally to the population which, having been assured of free and unlimited health care, had little sense of responsibility for their health status, and to the medical professionals who had no incentive to control costs or deliver quality service.

In Europe more than anywhere, the current level of healthcare services reflects the current status of a country's economy, market liberalisation, and the level of medical education. It is apparent that Eastern Europe and NIS represent a highly diverse region where the difference among countries broadens year after year.[5–7]

EYE CARE IN EUROPE

Countries of the western European region generally follow the pattern characteristic of the most industrialised regions of the world. In principle, eye care services are provided by state or private institutions. Refraction and basic ophthalmic care are in some countries partly in the hands of optometrists and opticians, while medical professionals specialising in ophthalmology in addition to refraction deal with eye diseases and provide ophthalmic surgery. This contrasts with the conditions in the countries in the eastern European region, which share similarities in eye care services. They apply to eye care personnel, their educational curricula, establishments providing eye care, and their financial conditions.

It is a commonly observed fact that there are large numbers of physicians in the eastern European region, and this applies to ophthalmology too. The number of ophthalmologists may be as high as 100 eye doctors per one million inhabitants. This situation has several implications. A high percentage of ophthalmologists are surgically inactive, providing first line diagnostic services and medical treatment in their offices. Because of the quite dense coverage of inhabited regions of eastern Europe by physicians trained in ophthalmology, the number of optometrists is substantially lower or their services are almost non-existent. There is a good market for opticians instead, who often also offer a basic eye examination. In many countries, physicians employed by state healthcare institutions are remarkably underpaid, which decreases their motivation. There is a rather vague resident and fellow postgraduate educational system compared with the current practice of western Europe. However, many countries are undergoing a process of transition in their postgraduate education in ophthalmology, approaching western European standards (for instance, Hungary). In the majority of eastern European countries, young physicians gain their postgraduate education in ophthalmology during the first years of their employment contract at an eye department. The programme is usually not particularly structured on a daily basis, and their progress reflects their own initiative. In the majority of countries, certification in ophthalmology is based on examining the candidate by a state board. Ophthalmic nurses are recruited among general certified nurses. Their knowledge is mostly based on hands-on experience gained during the first months of their work contract. There is a limited number of specialised schools for optometrists, while schools for opticians are more accessible.

In central and eastern Europe, the majority of inpatient eye care establishments are state owned. This applies particularly to university eye departments. Smaller local offices are often private. Patients rarely pay the full cost of their treatment. If hospitalised, insured patients receive eye care free of charge (for instance in the Czech Republic, Hungary, Slovakia), or they may pay for certain components of treatment (for instance, for intraocular lenses in Russia, Uzbekistan, Turkmenistan). In the majority of countries, patients pay a certain percentage of the cost of their medicaments. The transition of economic systems in eastern Europe to market economy has directly affected healthcare financing. Although the majority of countries are following the path leading to more healthy economies in the future, the burden of currently unstable eastern European markets is strongly felt by state healthcare providers.

AVAILABLE DATA ON VISUAL IMPAIRMENT AND BLINDNESS IN EUROPE

The past two decades brought much new published information on blindness epidemiology in Europe.[8–14] However, there are still many countries suffering from lack of available data on prevalence, incidence, and causes of visual impairment in children as well as in the whole population.

The studies which are mentioned here represent some of the recent research projects aiming at obtaining data on prevalence and causes of blindness in larger population samples in Europe. Their methodology mostly followed WHO definitions of visual impairment (a corrected visual acuity of less than 6/18 in the better eye), severe visual impairment (a corrected visual acuity of less than 6/60 in the better eye), and blindness (a corrected visual acuity of less then 3/60 in the better eye or a visual field of less than 10 degrees).[15] However, it is apparent that for practical reasons, the population survey conductors identify blind individuals by performing visual acuity tests rather than by examining visual field loss.

In some European countries, there have been established live registers of the blind which may be a source of valuable epidemiological data. However, some recently conducted research illustrates that only a small proportion of visually handicapped people who are eligible to be registered as partially sighted or blind might actually be registered as such.[16–19] In other European countries, the only way of obtaining some more specific information on causes of visual impairment is to carry out prevalence studies, blind school, or birth cohort studies.[20–22]

VISUAL IMPAIRMENT AND BLINDNESS IN CHILDREN

Because the prevalence of blindness in children is lower than in the whole population, the sample size of a population based study would have to be adequately larger to obtain reliable estimates. This would be impractical. Therefore, most information concerning the causes of visual impairment in children is obtained from examining children in schools for the blind or from registers of blind children. Since the standardised WHO methodology and UNESCO definition of childhood (an individual up to 16 years of age) have been introduced, the difficulties in comparing the study results are gradually diminishing.[23] Considering the presently available results of various studies, it has been estimated that there are, at minimum, 1.5 million blind children in the world; 72 000 of them live in Europe, the United States, and Japan.[24] The available data indicate that the prevalence of childhood blindness in Europe is between 0.1 and 0.41 per 1000 children. Retinal disorders, optic atrophy, and lesions of the higher visual pathways are the main anatomical causes of visual loss in children. The most frequent retinal affections are hereditary retinal dystrophies and retinopathy of prematurity. Lesions of the higher visual pathways are often associated with other handicaps caused by more affections of the central nervous system. In about one third of eye malformations and anomalies, the aetiological factors remain unknown.[25–34]

There are also data available on prevalence and incidence of particular eye conditions and risk factors in children, such as cataract,[35] retinopathy of prematurity,[36–38] congenital anomalies of the globe and hereditary eye diseases,[39–42] and ophthalmia neonatorum.[43] It was reported that up to the age of 2 years, infants of low birth weight or infants requiring special care in the neonatal period had a greater risk of vision and ocular defects than the remainder of the population.[32]

Table 1 Causes of serious visual loss in children in Europe

Country/region				
Scandinavia	Britain	Hungary	Czech Republic	Uzbekistan
1 Cerebral amblyopia	1 Congenital cataract	1 Congenital cataract	1 Retinopathy of prematurity	1 Congenital cataract
2 Optic atrophy	2 Cortical impairment	2 Congenital anomalies	2 Congenital anomalies	2 Retinal disorders
3 Congenital anomalies	3 Optic atrophy	3 Myopia	3 Hereditary disorders	3 Microphthalmos
4 Retinal dystrophies	4 Retinal disorders	4 Retinopathy of prematurity	4 Congenital cataract	4 Optic nerve disorders
5 Retinopathy of prematurity	5 Congenital ocular anomalies	5 Retinal degenerations	5 Congenital glaucoma	5 Corneal scarring

The most recent comprehensive studies came from Scandinavia.[44–52] In 1996, a prospective register study was published dealing with the incidence of registered visual impairment in the Nordic child population of 3.8 million. Only children with visual acuity worse than 6/18 were involved. The leading cause of visual impairment was disorders of the central nervous system (44%): mainly cerebral amblyopia (23%) and secondary optic nerve atrophy (19%). These were followed by eye disorders such as congenital anomalies (cataract, optic nerve atrophy, albinism, and congenital optic nerve hypoplasia) in 35% of the children. The less frequent causes were various retinal dystrophies (10%); retinopathy of prematurity was present in 4%. Among the aetiological factors, the majority were prenatal (64%). In 1992, the same Nordic study group of ophthalmologists, called "NORDSYN," published data based on an extended multinational review of blind registers. They estimated the prevalence of childhood blindness among the Nordic population within the interval 0.15–0.41/1000 children. The main causes of blindness were optic atrophy, retinopathy of prematurity, cerebral amblyopia, congenital hypoplasia of the optic nerve, and congenital cataract. These studies followed assessment of the causes of blindness in Danish children based on analysis of the national register for visually impaired children as of 1985. Optic nerve atrophy, cerebral amblyopia, retinal degenerations, congenital nystagmus, and congenital cataract were the principal causes of blindness. A report on the causes of visual impairment in the child population in Iceland contributed to the assessment of the current situation in northern Europe.[53]

Results of the national survey in the Republic of Ireland were published in 1991.[54] One hundred and seventy two children were examined; the aetiology in 56% of children was considered to be of genetic or other prenatal factors. The perinatal period, as the time after damage occurred, was represented by 27%, and childhood by 13%. The two most frequent single causative agents were prematurity (11%) and birth asphyxia (11%). The study showed that about 30% of the causes of blindness were potentially avoidable. The leading causes of blindness were optic atrophy, optic nerve hypoplasia, cortical blindness, and retinopathy of prematurity (ROP). The first three often coexisted in the same patient.

The largest cohort study was initiated in 1970 in England.[55] A national representative sample was studied, and 85% of children underwent visual assessment by the age of 10 years. The prevalence of childhood severe visual impairment (visual acuity less than 6/60 in the better eye) was estimated between 0.34–0.40/1000 children. Among the main causes of severe visual impairment were congenital cataract and congenital nystagmus, responsible for almost two thirds of all cases. Based on reports from other studies conducted in Britain, the leading causes of serious visual loss in children are congenital cataract, cortical visual impairment, optic atrophy, disorders of the retina, and congenital ocular anomalies.[56–58]

In Hungary, a population based study was carried out to examine all registered visually impaired children aged 6–14 years. The principal causes of severe visual impairment in children were congenital cataract (17%), congenital eye abnormalities (15%), high myopia (13%), retinopathy of prematurity (11%), retinal degenerations (10%), congenital anomalies (10%), nystagmus (9%), and optic atrophy (7%). Prevalence of severe visual impairment in children in Hungary was estimated between 0.40–0.45/1000.[59]

In 1998, pupils attending 10 primary blind schools in the Czech Republic were examined to determine causes of severe visual impairment and blindness.[60] A total of 229 children aged 6–15 years were involved in this study. A positive family history of the same condition was found in 7% of the children. Onset of visual loss up to the first year of age was determined in 93%. Twenty nine per cent of the children suffered from some additional disability. Retinopathy of prematurity was the major cause of visual impairment in examined children (42%). It was followed by eye abnormalities of unknown aetiology since birth (28%), hereditary disease (9%), cataract (8%), and glaucoma (5%). A majority of children with cataract and glaucoma had undergone surgery in the past. It was established that 59% of the conditions leading to severe visual impairment were preventable or treatable.

The most comprehensive study describing causes of childhood blindness in the Slovak Republic was published in 1990.[61] The authors analysed the causes of visual loss in children from two large blind schools. The main causes of blindness were retinopathy of prematurity (24%), retinal dystrophy (17%), optic atrophy (15%), and microphthalmos and anophthalmos (8%).

In Uzbekistan, 506 children attending schools for the blind were identified as severely visually handicapped or blind, during the blind school survey conducted in 1998.[62] The most frequent eye conditions were cataract or aphakia (36%), retinal dystrophies (24%), and microphthalmos (23%), followed by optic nerve disorders, corneal scars (6%), and glaucoma (5%). There was no child with retinopathy of prematurity; no significant problem of vitamin A deficiency was found.

It is apparent that the findings reported from different parts of Europe vary remarkably. The main causes of visual loss in children, as identified in some of the above mentioned reports, are summarised in Table 1.

VISUAL IMPAIRMENT AND BLINDNESS IN ADULTS

The major cause of blindness in industrialised countries is age related macular degeneration.[63–72] The other conditions comprise cataract, glaucoma, diabetic retinopathy and uncorrected/uncorrectable refractive errors, along with low vision. In people of working age, diabetic retinopathy, retinopathy pigmentosa, and optic atrophy are the most frequently reported causes of blindness.[73–79] Based on their higher life expectancy, it is highly probable that older females bear a proportionally higher magnitude of blindness than males. The relation to sex and blindness in Europe deserves further analysis.[80]

The Rotterdam Study was carried out in the Netherlands during the 1990s.[81] Almost 8000 people underwent eye examination. The prevalence of blindness ranged from 0.1% in the 55–64 year olds to 3.9% in the 85 years of age and over. The

Table 2 Causes of serious visual loss in adults in Europe

Country/region				
Netherlands	Scotland	Italy	Bulgaria	Slovakia
1 Age related macular degeneration 2 Glaucoma 3 Cataract 4 Myopic degeneration 5 Optic neuropathy	1 Age related muscular degeneration 2 Glaucoma 3 Cataract 4 Diabetic retinopathy 5 Myopia	1 Retinal disorders 2 Cataract 3 Optic nerve disorders 4 Glaucoma 5 Corneal opacities, uveal disorders	1 Cataract 2 Age related macular degeneration 3 Glaucoma 4 Optic atrophy 5 Diabetic retinopathy	1 Cataract 2 Myopia 3 Glaucoma 4 Diabetic retinopathy 5 Age related macular degeneration

principal causes of blindness in people younger than 75 years were myopic degeneration and optic neuropathy. In people aged 75 or older, age related macular degeneration represented the main cause of blindness, and senile cataract was the principal cause of visual impairment. The main causes of blindness in the whole population sample were age related macular degeneration (58%), primary open angle glaucoma (8%), and cataract, myopic degeneration, and optic neuropathy (6% each).

One of the studies to detect the predominant causes of blindness was conducted in Scotland in the early 1980s.[82] The data were obtained through analysis of blind registration forms in the western part of Scotland. In the 20–44 year olds, the five most frequent causes of blindness were diabetic retinopathy, myopia, optic nerve atrophy, uveitis, and glaucoma. In the 45–64 year olds, they were diabetic retinopathy, senile macular degeneration, glaucoma, myopia, and optic nerve atrophy; at 65 years of age and over, the five most frequent causes of blindness were senile macular degeneration, glaucoma, cataract, diabetic retinopathy, and myopia. The general pattern of overall prevalence of the most common causes of blindness in the region comprised senile macular degeneration (30%), glaucoma (15%), cataract (10%), diabetic retinopathy (8%), and myopic degeneration (6%). There were remarkable differences in the relation of sex to blindness.

At the beginning of the 1990s, a comprehensive study came from Italy reviewing available information that was collected during the 1980s.[83] The data were extrapolated from three independent sources: the national household health survey, the national registry of the blind, and the welfare list of the ministry of the interior. The main causes of blindness in Italy were retinal diseases (31%), cataract (21%), optic nerve affections (10%), glaucoma (7%), and corneal opacities and uveal disorders (5% each). The prevalence of blindness was higher in southern regions, and many of the eye conditions causing visual impairment were preventable by early diagnosis and treatment. According to their frequency, the main eye conditions causing blindness in southern Italy were senile cataract, myopia, corneal opacities, diabetic retinopathy, surgical aphakia, and open angle glaucoma. The eye conditions causing blindness in northern Italy were myopia, senile cataract, diabetic retinopathy, corneal opacities, surgical aphakia, and open angle glaucoma. A variation between northern and southern regions was explained by socioeconomic differences in Italy at that time.

One of the rare population based surveys in eastern Europe was conducted in Bulgaria in 1995.[84] All adults over age 40 years living in Sofia and the surrounding district were involved. The prevalence of blindness was 0.49%. The main causes of blindness were cataract (20%), age related macular degeneration (20%), glaucoma (20%), optic nerve atrophy (10%), and diabetic retinopathy (7%). An analysis of the causes of visual impairment revealed that the most frequent eye disorders were cataract (51%), senile macular degeneration (14%), diabetic retinopathy (10%), glaucoma (6%), and a combination of them. The results indicate that senile cataract was the leading cause of bilateral visual impairment and blindness in the Bulgarian population.

In Slovakia, data on prevalence and causes of blindness were collected from several sources. The most frequent causes of blindness were senile cataract (23%), myopia (23%), glaucoma (17%), diabetic retinopathy (9%), and age related macular degeneration (8%).[85]

Some of the findings are summarised in Table 2.

PREVENTION OF BLINDNESS IN EUROPE

In the light of the reported major causes of visual loss in Europe, public health efforts should focus on the following five conditions: cataract, diabetic retinopathy; glaucoma, retinopathy of prematurity, uncorrected refractive errors, and low vision. Not only do these conditions represent the most frequently reported causes of visual disability in Europe, but they can also be prevented or cured through proved cost effective interventions. In other words, they represent the major causes of avoidable blindness and visual impairment.[15]

Cataract

Cataract is still a cause of avoidable blindness in the elderly in some regions of Eastern Europe: the Balkan Peninsula, the Caucasus region, some rural areas in Russia and in former USSR central Asian republics. However, an increasing backlog of unoperated cataract has also been observed in some western European countries, such as the United Kingdom.[86–96] In Europe—as elsewhere—visual loss due to unoperated cataract is mainly the result of the poor performance of the local health system, aggravated by the lack of public awareness. In countries where the rate of intraocular lens implantation is still low, the cataract extraction itself does not substantially improve vision. Availability and affordability of spectacles has a final impact on the patient when evaluating the actual visual outcome of the surgery. In some parts of eastern Europe, the number of cataract surgeries per million population per year is significantly lower than in western Europe. This low utilisation of cataract surgery may have several reasons, including high cost and poor quality of the services provided, as indicated by the absence of waiting lists. However, further studies are necessary in order to assess what is the actual coverage of surgical needs and what are the major barriers to the uptake of cataract surgery.

Diabetic retinopathy

Diabetic retinopathy represents an issue of growing importance. The industrialised countries of western Europe, together with countries such as the Czech Republic, Estonia, Hungary, Poland, and Slovakia, have been considering diabetic retinopathy among the leading causes of avoidable blindness in their population during the last decades.[97–107] In the above mentioned parts of Europe, early diagnosis and systematic follow up of diabetic patients have been promoted. In rural areas of former socialist countries of the Balkan Peninsula, and in some former USSR member countries, healthcare services providing early detection and/or retinal laser treatment

are not often available. In these areas, the appropriate equipment for eye care providers needs to be taken care of first.

Glaucoma

Glaucoma is an important cause of blindness worldwide.[108–118] A continuous effort to improve early detection and appropriate treatment is the main strategy used in Europe to reduce the number of patients suffering from visual loss caused by the late diagnosis of glaucoma. The poor compliance of patients is another challenge. In this respect, further efforts to increase awareness about this eye condition among the population is a priority.

Avoidable blindness in children

Avoidable blindness in children in the European continent is synonymous mainly with retinopathy of prematurity (ROP).[36 119–125] While some of the most industrialised countries face an increase in the number of babies of extremely low birth weight, the situation in the eastern part of the continent differs. In this region, patients are either suffering from ROP associated visual impairment affecting low birthweight babies (mostly located in the formerly socialist countries in central Europe), or the issue of ROP is not a substantial health concern because of a lack of developed perinatal care (in places such as the rural regions of Russia and former USSR republics of central Asia). Preventive measures must be adopted accordingly, particularly in countries of central and eastern Europe, where substantial changes in this situation may be expected. Improved perinatal services in central European countries will lead to an increase in the number of babies of extremely low birth weight, creating a risk of a new wave in the incidence of retinopathy of prematurity. Based on observations in some rural regions of the Balkan Peninsula and some regions of the former USSR, screening for retinopathy of prematurity, essential equipment, and appropriate training of ophthalmologists and neonatalogists need to be developed.

LOW VISION AND REFRACTION

Satisfactory refraction and low vision services contribute to the improvement of visual acuity in patients affected by various eye conditions.[126–128] Low vision services reflect the current socioeconomic status of the country. According to publications available, there are not many reports from Europe indicating substantial gaps in the availability of basic refraction services. However, despite the number of eye care practitioners providing refractive services as part of the various government funded healthcare programmes and low cost supply systems available to those in need, the levels of visual impairment due to uncorrected refractive errors might be disappointingly high, as was demonstrated in Australia. This is another area where studies should be conducted in order to assess the actual situation, particularly in the elderly and the socially disadvantaged.

Special attention should also be paid to the availability of aphakic glasses for patients in areas where intracapsular cataract extraction is still performed. This is the case in some regions in the Balkan Peninsula and in some regions of the former USSR.

Low vision care services is another extremely important, yet frequently neglected, component of the eye care system, which will need dramatic development.

The European population is rapidly ageing and the incidence of age related eye diseases will increase accordingly, leading to an escalating demand for low vision care services.

CONCLUSION

Europe is a continent showing impressive regional variation. The prevention of visual impairment in children is particularly vital to a substantially higher lifetime of blindness when compared with adults. In highly industrialised countries, the leading causes of childhood blindness are lesions of the central nervous system, congenital anomalies, and retinal disorders (mostly retinal dystrophies). In the middle income countries of Europe, congenital cataract, glaucoma and, mainly, retinopathy of prematurity are highly expressed. In the less developed countries, for instance some parts of the former USSR central Asian republics, particular attention should be paid to hereditary disorders caused by consanguinity within smaller communities as well as to acquired conditions in childhood.

A review of the current status of eye care services in Europe indicates that the situation varies remarkably between various parts of the continent. Western Europe is composed of highly industrialised countries, the central European region showing a more economically successful transition from the former socialist system, and the eastern European region still going though serious economic difficulties while transforming their healthcare systems under the new economic conditions. Therefore, specific strategies have to be designed in order to take into consideration local constraints and opportunities.

However, in all three regions efforts have to be made as there is an unacceptable amount of unnecessary blindness everywhere. Even in the most industrialised countries there are pockets of underprivileged populations that have limited access to eye care. Everywhere there are patients losing their sight because of lack of awareness of a treatment actually available. In most of the countries, much more could be done with the existing resources. Healthcare reforms are in progress in the eastern European countries, giving an excellent opportunity to implement changes in the eye care system, making it more efficient and more affordable to all those in need. "Vision 2020—the right to sight," the global initiative for the elimination of avoidable blindness recently launched by the WHO and the International Agency for the Prevention of Blindness, provides an excellent opportunity to foster these changes through new partnerships where eye care professionals should have a major role. Europe offers unprecedented chances for professionals to share efforts, allowing for hands-on experience exchange and cooperation.[129–134] After decades of political disputes, the way is now open for broad international cooperation in medicine and a more effective utilisation of resources. These chances should not be missed.

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