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# 2013 | Euro Vision Scorecard Report



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## **2013 Euro Vision Scorecard**

### **Report**

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***“80% of all visual impairment can be avoided or cured”***  
(WHO Visual impairment factsheet)

## **2013 Euro Vision Scorecard (EVS)**

### **1. Summary of findings**

An uncommon statement: “Vision care at its best is a success story!”

Reports analyzing the need for care and improved outcomes frequently point to unmet needs and unsatisfactory conditions. We now regularly notice significant improvements, with year-by-year fewer Europeans suffering from severe sight loss problems<sup>1</sup>. It is evident that amongst the best performing countries in Europe, successful procedures have been implemented. Future discussion should now focus on how to leverage good practice, allowing all Europeans to access vision impairment prevention and high quality care.

The overall picture presented by the 15 country-Euro Vision Scorecard 2013 (EVS) is clear and supports this conclusion: In spite of this general improvement, however, Europeans with sight loss cannot expect equal access to treatment. Instead, it is a function of where they live. In some places, they can be optimistic about having the opportunity to access good care. In others, they may have to trust informal contacts, out of pocket payment or even luck to be able to avoid severe health consequences. Such equality gaps are, according to European Union values, “un-European”.

It is an issue of quality of life, well-being and productivity for 20 million Europeans with vision impairment as to how capably healthcare and social care is meeting the challenge.

The EVS identifies a number of ways to reduce these inequalities and continue the improvement process. According to the WHO, 80 percent of all visual impairment can be avoided or cured<sup>2</sup>. This is not only in the developing world but in Europe as well. To get to that point, the EVS indicates that a lot remains to be done, in spite of impressive historic progress.

Delivering conditions for high quality vision seems to be an issue of a highly developed national economy. Good healthcare is frequently linked to high GDP per capita. However, many aspects of sight loss can be addressed without burdening healthcare budgets. Instead, continuous progress will be a matter of changing the culture of treatment and organisation. Patients at risk of visual impairment must be given the opportunity and possibility to remain active, optimizing their opportunities.

This is the optimistic conclusion of the EVS. Having examined country-specific performances, this report provides solid, outcomes-based recommendations for improvement.

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<sup>1</sup> *Global Prevalence of Vision Impairment and Blindness Magnitude and Temporal Trends, 1990e2010*

<sup>2</sup> WHO Visual impairment factsheet 2012

## 2. The purpose of the 2013 Euro Vision Scorecard

Much of the work on vision impairment prevention and treatment is, for understandable reasons, prioritises developing world countries, with even greater opportunities for improvement than in Europe. This may create the impression that the situation for Europe's visually impaired and blind is straightforward. This is far from the truth, and the Scorecard provides an at-a-glance overview of the key elements of visual impairment and blindness as well as important factors in improving vision policy and reality.

In Europe, it should not be a matter of financial resources only. It is important to build on established, proven progress, identifying strategies and measures representing good examples to support further sustainable improvement.

The Health Consumer Powerhouse (HCP) was founded ten years ago with the clear mission to improve information on healthcare performance. In spite of significant progress in reporting of outcomes and access to key healthcare data, many gaps remain.

This study of vision impairment reveals a general shortage of public or reliable data even on basic facts, which makes HCP reluctant to draw far-reaching conclusions for individual countries. Until the information gap is bridged, the reader should refrain from overly in-depth analysis of subtle details. The existing deficiencies in information harm the advancement of better eye care. Our hope is that the EVS observations will support the better provision of vision-related data in the future.

This initial EVS could also be expanded over time to cover additional countries and aspects of vision care. Further studies in this field are needed, as highlighted by the Global Prevalence of Vision Impairment and Blindness report<sup>3</sup>: "Vision impairment is a leading and largely preventable cause of disability worldwide. However, no study of global and regional trends in the prevalence of vision impairment has been carried out." The Scorecard can be viewed as a contribution to such efforts, for further elaboration, discussion and improvement. In chapter 8, we highlight a number of parameters that would have been useful, assuming that data for measurement had been available.

The EVS was published before World Sight Day Oct 10, 2013.

## 3. What does the EVS say about visual impairment in Europe?

### 3.1. Main findings

The 2013 EVS suggests that good eye health in Europe is determined by where you live. People in *Switzerland, Denmark, Sweden, France or the Netherlands* can rely on a good balance of prevention, treatment and follow-up, which together significantly increase the chances of limiting the impact of sight loss and maintaining quality of life. The opportunities seem to be equally good in all of these countries.

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<sup>3</sup> Stevens, G.A. et al: *Global Prevalence of Vision Impairment and Blindness: Magnitude and Temporal Trends, 1990-2010*, Ophthalmology 2013 (in press)



In these countries, there is regular diabetic eye screening with good coverage. Waiting times appear reasonable and cataract surgery is generally offered to all as required. People who are handicapped by sight loss can expect rehab and support services.

However, even in these countries is there national coverage of registration of impaired patients. Even today, there are no national eye care quality registries, with exception of Sweden. Access to modern medicines also differs, unrelated to national wealth. The number of eye care specialists per head of population also varies, but this seems to have a limited impact on patients' waiting times. This would suggest that the way medical services are organised is more important than the quantity of resources available.

People in ***Austria, Belgium or Germany*** generally have access to good overall services, with short waiting lists. However there are certain shortcomings related to screening, registration and medication that may affect outcomes.

that In countries with average eye care performance, it appears that coverage of annual screening for diabetic retinopathy is typically lower – between 50 and 75%. In addition, as in other types of screening, free access to services is less effective than actively inviting or sending reminders to patients.

Here, sight impairment registries have poorer coverage. In such patient-oriented care cultures, choice and access are unlikely to be limitations. The use of modern medication for conditions such as AMD (Age-related Macular Degeneration) is sometimes limited. These care systems have made good progress, but patients still could expect more.

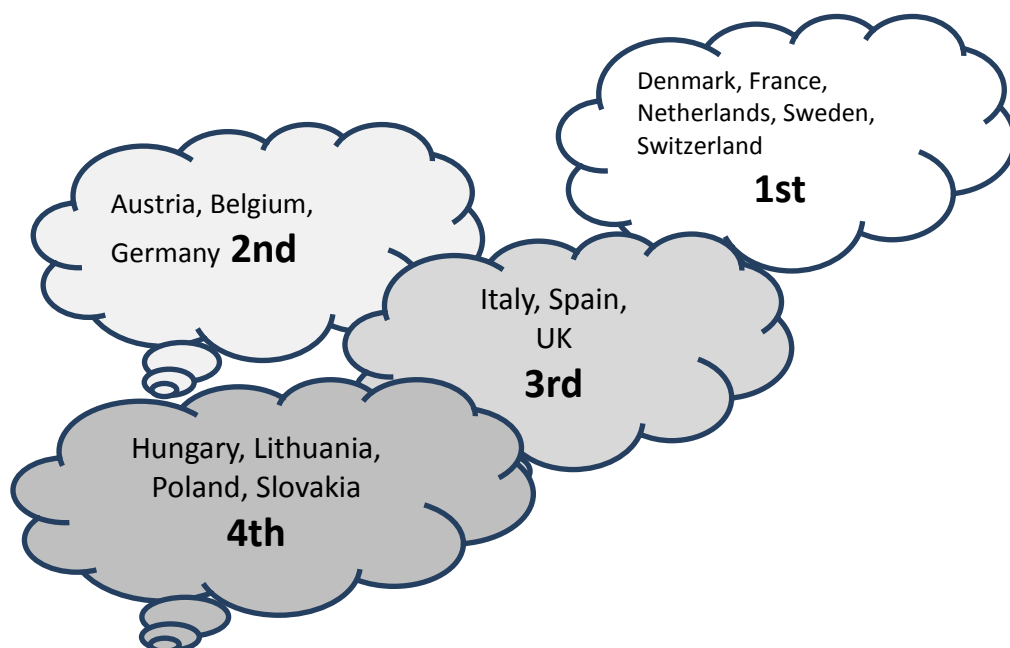
In countries such as ***Italy, Spain and the UK*** services are more fragmented, mixing noble intentions with mediocre performance and weaker outcomes. The “final outcome”, expressed as prevalence of sight impairment, is higher. With the exception of the UK, documentation and follow-up appears weaker, with support services for day-to-day living of visually impaired citizens less transparent. These publicly funded systems could and should do better.

In the remaining EVS countries, in Central and Eastern Europe, the level of organisation to prevent and treat visual impairment remains inadequate. There is a risk that patients will be denied sufficient care, or have to pay for private treatment. Waiting times can be a problem, along with a lack of modern medication. There is no reliable screening of diabetic eye.

As one would expect, moderate and severe visual impairment (MSVI) prevalence is significantly higher than in Western Europe. Therefore, there is much room for improvement!

From the EVS outcomes and country situations, the Scorecard has grouped the 15 countries in four categories, ranked 1-4 (Figure A). This reflects how well the needs of visually impaired people are met.

Figure A



## 4. Visual impairment in Europe

There are approximately 25 million Europeans with sight loss, including 2.5 million blind persons<sup>4</sup>. Cataract and its associated conditions, uncorrected refractive error (URE), age-related macular degeneration (AMD), glaucoma and diabetic retinopathy (DR) are the main causes of MSVI and blindness in Europe.

### 4.1 Defining sight loss

There is a pressing need to define sight loss and what distinguishes the levels of impairment.

**Table. Levels of Visual Acuity Estimated in the Global Prevalence Study**

Level Presenting Visual Acuity* in the Better Eye	Indication level
Mild vision impairment	<6/12 but >6/18 (50% - 33% of normal)
Moderate vision impairment	<6/18 but >6/60 (33% - 10% of normal)
Severe vision impairment	<6/60 but >3/60 (10% - 5% of normal)
Blindness	<3/60 and/or "a visual field of no more than 10 degrees in radius around central fixation"

The EVS is primarily concerned with MSVI. In some countries, severe vision impairment as defined above can also be categorised as blindness.

<sup>4</sup> Overview of Eye Health and Visual Impairment Related Issues in Europe; AMD et al 2013



That the complications of vision differ between countries and regions is a basic failing. The motivation for the Scorecard is to examine potential explanations and identify how existing gaps and shortcomings could be bridged.

There are reasons beyond human control to explain the variations in prevalence between countries. They principally reflect the different approaches to preventing sight loss.

#### 4.1.1 Different norms – or no norms at all...

Some European countries have national definitions of visual impairment, others still use the WHO standard<sup>5</sup>. For example:

The **UK** criteria are<sup>6</sup>:

“**Blindness** (severe sight loss) is defined as best-corrected visual acuity of <6/60 in the better-seeing eye.

**Partial sight** is defined as best-corrected visual acuity of <6/12 to 6/60 in the better-seeing eye, and is categorised as: mild sight loss – best-corrected visual acuity of <6/12, but better than or equal to 6/18; and moderate sight loss – best-corrected visual acuity of <6/18 but better than or equal to 6/60.

**Sight loss** is defined as partial sight or blindness in the better-seeing eye.”

For **Germany** the criteria are expressed somewhat differently:

“Someone is **visually impaired**, if he/she sees with his/her better seeing eye, even with glasses or contact lenses, not more than 30 % of what someone with normal sight can see.

Someone is **severely visually impaired**, if he/she sees with his/her better seeing eye, even with glasses or contact lenses, not more than 5 % of what someone with normal sight can see.

Someone is **blind**, if he/she sees with his/her better seeing eye, even with glasses or contact lenses, not more than 2 % of what someone with normal sight can see.”

In **Italy**, the criteria seem as detailed:

“**Slight partial sightedness**: those who have residual vision no higher than 3/10 in both eyes or in the better eye, also with possible correction; those whose binocular perimetric residual is below 60%.

**Quite serious partial sightedness**: those who have residual vision no higher than 2/10 in both eyes or in the better eye, also with possible correction; those whose binocular perimetric residual is below 50%.

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<sup>5</sup> <http://www.who.int/blindness/Change%20the%20Definition%20of%20Blindness.pdf>

<sup>6</sup> The EVS has borrowed the examples for UK, Germany, Italy and Spain from the AdLab 2012 Report on User Needs Assessment ([www.adlabproject.eu/](http://www.adlabproject.eu/))



**Serious partial sightedness:** those who have residual vision no higher than 1/10 in both eyes or in the better eye, also with possible correction; those whose binocular perimetric residual is below 30%.

**Partial blindness:** those who have residual vision no higher than 1/20 in both eyes or in”.

While in **Spain** the limits are more general:

*Deficiencia visual* [**visual impairment**] – people who maintain a certain percentage of residual vision with the use of necessary optical and electronic devices.”

“*Ceguera* [**blindness**] – to be understood as the absolute lack of vision or only the ability to perceive light”

The EVS gained the impression that outside of examples provided, the majority of countries in Eastern and Southern Europe follow the WHO standard from 1972 (updated 2010)<sup>7</sup>.

Given sufficient, reliable data it would have been interesting to look into a comparison between national impairment criteria. One hypothesis would be that with a strict definition of impairment (limiting the number of people meeting the qualifications), national authorities could be more precise and perhaps more generous with different types of interventions and support to affected individuals.

Proving the accuracy of this speculation would require investigating visual impairment reality beyond the current scope of the EVS. As things stand, the lack of uniform definitions and reporting makes it very difficult to compare prevalence numbers for MSVI/blindness.

In any case, it is difficult to avoid the conclusion that this complex and fragmented way of defining national impairment levels may complicate eye care. The absence of conformity hinders international comparisons and assessments. The situation would be confusing to impaired people, especially those who want to use the cross-border healthcare opportunities within the EU. The numerous national criteria will complicate the decision process amongst payers (national authorities, health funds, insurance organisations and so on) following on applications for cross-border care.

Better aligned definitions of impairment within Europe would provide a highly rational step.

## 5. EVS comparison across seven parameters

### 5.1 Prevention and control (two parameters)

The EVS examined which actions healthcare organisations and local governments take to get a clear picture of the scale of the problem and how to limit it. Firstly, this raises questions about *registration of individuals with vision impairment* and how they are treated. Secondly, if patients are in the risk zone of complications, *are they screened?* These are two parameters used by EVS.

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<sup>7</sup> <http://www.who.int/blindness/Change%20the%20Definition%20of%20Blindness.pdf>

When examining into the life of Europeans with visual impairment, what seems obvious is the lack of robust information on prevention.

### 5.1.1 Different cultures

Compared to the (in principle) exact measurements within the field of medical treatment, the social services arena (and the often blurred border between social and healthcare responsibilities) seldom offers similar standards of data. In the last ten years, HCP has learnt that whilst healthcare data can often be arcane and lack quality, there is a basic ambition towards precision. This is rarely the case when data about disability and handicap, is concerned, including visual impairment.

At the conclusion of this report, when discussing potential steps for improvement, we will return to this issue of data access. It seems evident that despite the financial incentives to do so, those running disability services - often local and regional social service authorities - pay far less attention to registries and accurate data than their healthcare colleagues. Indeed, in many countries registries of visually impaired people are also a local government responsibility.

This complicates and frustrates attempts to acquire an effective overview of areas of disability, such as visual impairment. This is much more the case than with topics that fall clearly under the healthcare mandate.

### 5.1.2 Registration

Not only do variations in national criteria complicate a pan-European overview, so do the frequently decentralised approaches to public administration around Europe. This is one of the many explanations as to why registration and follow-up of impaired people seems to be a weak link.

Where complications of sight loss are considered a social care issue, as opposed to a healthcare responsibility, citizens with vision impairment often are documented locally *and* voluntarily. Accordingly, in CEE and the UK, there are many local registries (often adopting different standards) but none at national level.

In Denmark, a leader in vision policy and practice, there is a national register, managed by the Danish Association of the Blind<sup>8</sup>. Once again, however, registration is voluntary, affecting the coverage. Meanwhile, in Italy and Spain there are no national but some regional registries, reflecting the ongoing break-up of the once national administrations.

EVS finds that in around ten of the 15 countries compared, there is no official registration, and in the remaining countries registry information is scarce. This lack of documentation and data becomes even more evident if we raise the standard and look for *quality registries*. These allow the medical profession to systematically assess and follow up treatments and adverse effects. With a national quality register for assessment it will be possible to discard inefficient procedures and address issues such as patient safety problems. Importantly, it can also save money.

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<sup>8</sup> <http://blind.dk/dab>



### **5.1.2.1 Registries: A demanding task**

Maintaining quality registries is demanding. It is not simply an issue of cost, but also administration. Introducing a documentation system requires respect, a reporting culture and the discipline and flexibility to adjust and refine the documentation. To achieve high reporting compliance, data to be included in a registry should be that which already has to be inserted into medical records.

For the medical profession reporting into the registry, there is an eventual reward, as useful data for improvement eventually returns to the profession. However, there is no immediate return on investment, as reimbursement for registration procedures is lacking. This contrasts with other tasks in healthcare systems, where financing is often on a pay-per-procedure basis.

Finally, the quality registry should be open and allow patients and the public to use the outcomes for informed choice. This way, registries become a true asset.

Despite this, Sweden remains the only country in the EVS that works with national quality registries. There are no less than four national registries in the field of vision care<sup>9</sup>, also indicates a high degree of specialisation in registry ambitions.

Registries are a key element of both quality control and as part of a prevention strategy. A prevention approach with greater precision is screening risk groups, especially in people with diabetes, for early detection of sight complications, such as diabetic retinopathy (DR). The more widespread and reliable such screening is, the earlier complications can be detected and action taken to prevent disease progression.

EVS sources: Patient organisations, national healthcare authorities, EURORDIS.

### **5.1.3 Screening**

Patients with diabetes have an increased risk of severe eye complications. Screening for diabetic eye – retinopathy – is a well-known approach for detecting signs of complications. Screening of children for anisometric amblyopia and other causes of poor vision, including unilateral poor vision, is also an accepted standard of care in most countries. These often form part of general health screenings. Screening for glaucoma has been discussed, but has not yet been shown to be cost-effective.

There is no European standard for outreach or methodology for screening. The Liverpool conference<sup>10</sup> (2005) suggested a three-point approach for reducing the risk of visual impairment in Europe from diabetic retinopathy by 2010 by:

- Systematic programmes of screening reaching at least 80% of the diabetic population
- Using trained professionals and personnel
- Universal access to laser therapy.

There are also national initiatives in the same direction.

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<sup>9</sup> The Swedish National Cataract Register (NCR); The Swedish Corneal Transplant Registry; The Registry of Pediatric Cataract; The Macula Register

<sup>10</sup> *Screening for Diabetic Retinopathy in Europe 15 years after the St. Vincent Declaration The Liverpool Declaration 2005*, Report of Conference Liverpool, UK 17th – 18th November 2005; [www.drsceneing2005.org.uk](http://www.drsceneing2005.org.uk)



Most countries have screening programmes, but with different design and routines. However, a few countries with high prevalence of impairment – Poland, Hungary and Lithuania – still do not run regular screening programmes. Unsurprisingly, coverage differs:

- With a screening procedure where patients are expected to book their own appointment (and the registration of diabetic patients is fragmented) achieving greater than around 50% participation is difficult. Estimates by patient and professional sources suggest this is true for many countries, including France, the Netherlands and Italy.
- With improved registration and regular referral by doctors, and when diabetic patients are actively invited to attend, 80% coverage can be reached (*i.e.* the Liverpool conference target). This is the level the UK claims to be at present and where Denmark may be.
- 90% seems to be feasible (Sweden), but that requires a strongly embedded registration culture and a more paternalistic attitude towards patients. For example, Swedes are not invited but rather are “summoned” for screenings (and other kinds of planned medical treatments).

Such estimates of national conditions should be precise, and healthcare authorities should have reliable figures describing how precise diabetic screening is, but this is rarely the case.

The 2008 Euro Diabetes Index (EDI)<sup>11</sup> already noted that: *“There is a huge diabetic population neither diagnosed nor properly treated. Because of this, renal complications seem to be a significant problem in half of the measured countries. Due to neglect the damage grows much worse than with adequate disease management.”*

The EDI found that amongst 29 European countries, no more than six had a national diabetes registry (14 countries had only regional or local registries, while the remaining nine had no registration at all). Without a reliable check on the existence of diabetes it is hard to efficiently screen for retinopathy. The EDI found that less than half the countries investigated achieved an annual eye-screening rate of 75% of the diabetic population.

It is worryingly predictable, therefore, to find that many national healthcare authorities cannot provide estimates, much less actual numbers, for diabetes and diabetic retinopathy screening. This is why the Scorecard has had to calculate on a combination of facts and assumptions.

The Liverpool protocol asks for universal access to laser therapy. Again, given the obscurity of the data, HCP is reluctant to speculate how widely laser penetration has reached. This could be a potential indicator in the 2014 Euro Diabetes Index<sup>12</sup>, where it may be possible to estimate progress (it is not a current EVS parameter).

Clearly, far better data on diabetic eye screening is required.

EVS sources: Medical profession, national healthcare authorities, patient organisations, EDI 2008.

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<sup>11</sup> <http://healthpowerhouse.com/files/edi-2008/2008-euro-diabetes-index-report.pdf>

<sup>12</sup> Production decision August 2013; index update to be published est. Q 3/2014

## 5.2. Treatment (four parameters)

### 5.2.1 Access to treatment: Waiting to see an eye care specialist

Speed of access is often important in healthcare, as complications can progress without timely intervention and become harder to address. This is the case also with sight loss threats – not only DR but also glaucoma and cataract. EVS takes into account how quickly individuals searching for help with sight issues can receive help. As a starting point, there is the issue of the waiting time for an ophthalmic consultation.

We would have liked to measure whether an optometrist can rapidly refer a customer/patient via electronic communication. As speed, smooth procedures and good integration between the various components shaping the care path is of importance, so paper-free referral routines would contribute to shorter waiting.

It seems to be standard practice in Europe that optometrists can refer customers to eye care specialists. However, there is a lack of information to determine to what extent *electronic referrals* have become reality. As a result, EVS had classify this potential parameter as “would have been nice to know” .

The lack of reliable European data for waiting times is unfortunate<sup>13</sup>, but can be understood for countries to an extent in areas where waiting lists for healthcare services essentially do not exist. Input from medical professionals and local patient organisations has helped, adding to public waiting data available in a few countries. In countries where there is free choice of specialist, there seems to be huge variations in waiting times. This can be addressed by choosing a specialist with shorter waiting time (if feasible, given geography and equal quality).

Some countries have rapid access, while in others wait time is standard. As proven in HCP Indices, Belgium excels on access, including for eye care (which may be one explanation behind the high numbers for cataract surgery). Building on public information and patient group input<sup>14</sup> the EVS picture is that – with the exception of Belgium (2 weeks), no country achieves < 4 weeks. In fact, most countries are in the 4 – 12 weeks period. In a country like Denmark there is a wide range of waiting times in different parts of the country, reaching one year for non-emergency cases in some regions.

Countries with free access to specialists, such as Austria, Belgium, Germany, Slovakia and Switzerland, seem to achieve shorter waiting times for eye care appointments (and treatments). Indeed, this is generally true for all medical specialties in these countries.

The general impression is that although waiting times for “ordinary” conditions can be long, serious complications (related to diabetic eye) receive priority. Actively searching for specialists with shorter waiting can improve access, given that the patient can make their own choice.

Sources: Patient survey (EBU), patient organisations, EHCI 2012.

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<sup>13</sup> To compensate for the lack of waiting information, the Euro Health Consumer Index (EHCI) studies have to rely on major polls among patient organizations.

<sup>14</sup> EBU member organisations.



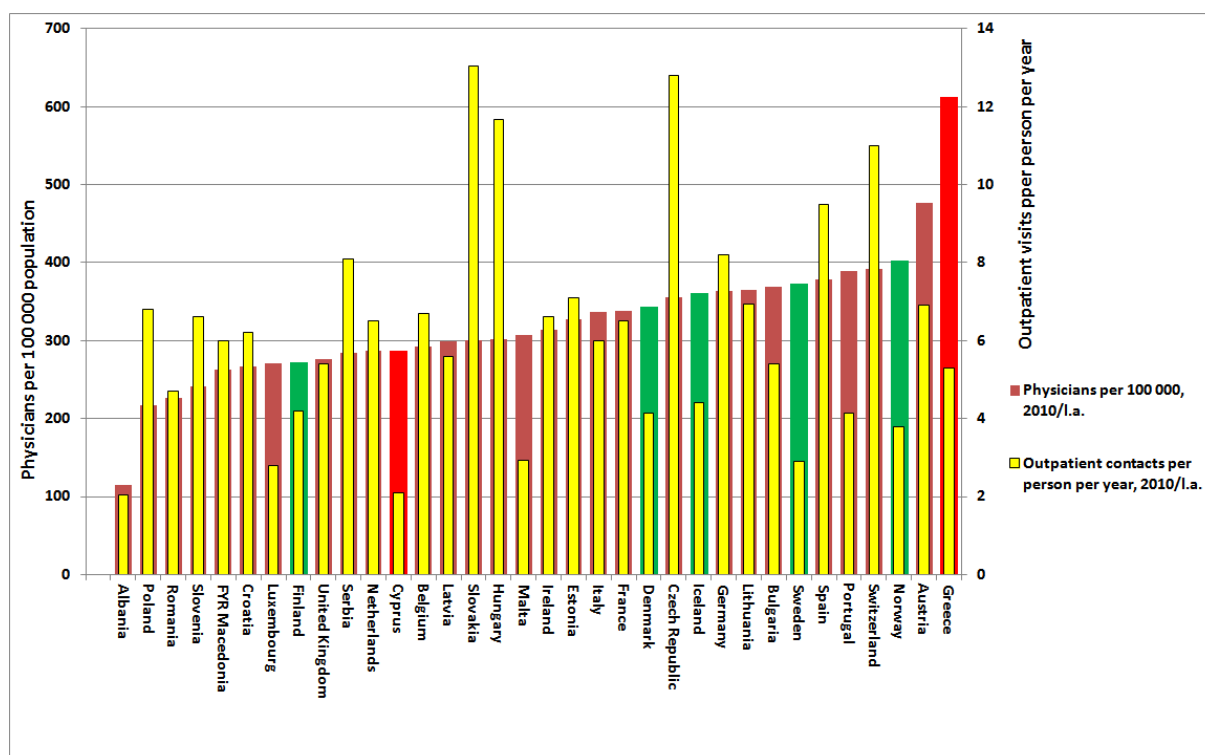
### 5.2.2 Are eye care specialists used efficiently?

Access is affected not only by culture, attitudes and organisation, but also by the availability of clinicians. The density of ophthalmologists (specialists per million inhabitants) in the 15 EVS countries varies significantly, between 32 (Belgium) and 111 (Switzerland and Denmark)<sup>15</sup>.

Given that these figures provide a relevant insight into the professional resources available in each country, we must draw the conclusion that the numbers of doctors have a far weaker relation to total outcomes than factors such as production culture, organisation of procedures and incentives for productivity. As will be described in pt 5.2.3, under the correct circumstances, a relatively small number of doctors can deliver many operations. An important factor to consider is that the use of optometrists and reimbursement of optometry services varies from non-existent (France) to extensive (UK).

As can be seen in Figure B, there is generally a very weak correlation between the number of physicians and accessibility to healthcare services in Europe.

Figure B



The doctor/inhabitant ratio poses numerous questions (although is basically no different from any medical specialty), including how best to organise medical production to optimise output balancing quality and quantity. Numerous staff is clearly no guarantee. On the other hand, a severe shortage of human resources will eventually result in access to examinations and treatments being restricted.

<sup>15</sup> [www.icoph.org/membership](http://www.icoph.org/membership); the EVS here relies on membership data from the European specialist association, as MoH and similar national sources are fragmented. ICOPH data have been assessed through various national sources.



### 5.2.3 Access to cataract operations

In the search for robust data, activity on cataracts operations offers valuable information.

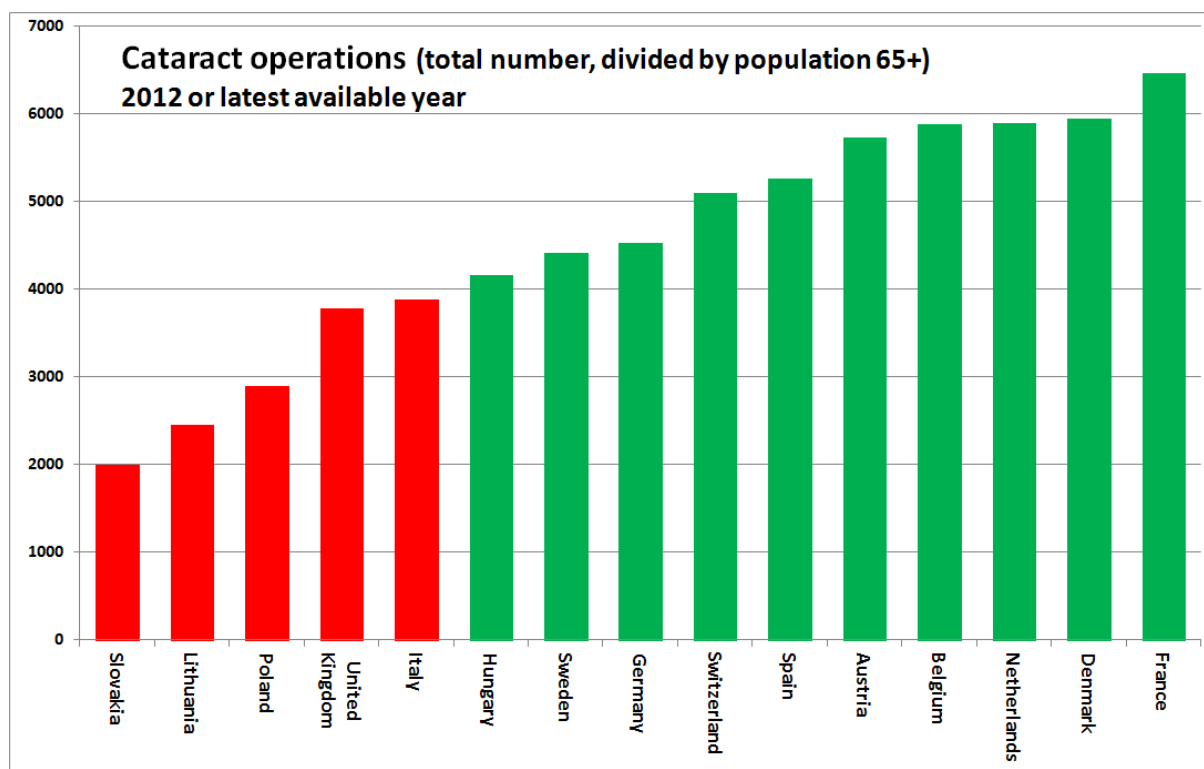
As the eye lens becomes clouded, vision is impaired. There are estimates saying that cataract causes half of the world blindness<sup>16</sup>. As a common sight complication, cataract is nowadays a readily treatable condition in Europe and other advanced regions. At the same time, cataract surgery is seldom an emergency in Europe and can be postponed for years. This prolongs the disability but does not cause irreversible loss of therapeutic potential. This makes waiting time for cataract surgery an excellent parameter for monitoring access to elective procedures.

The cataract operation activity is measured by CSR (Cataract Surgical Rate)<sup>17</sup>. CSR expresses cataract surgery as interventions per million inhabitants and the WHO recommends a CSR level above 4 000 for the more affluent parts of Europe.

CSR is not only an indicator of the efficiency of vision healthcare but also as a marker of well-serving healthcare as such. It represents the outcome of a path including awareness of sight loss problems, examination, diagnosis and treatment, and therefore provides a great deal of valuable information about eye care.

Figure C below shows the situation in the EVS countries. **Please note** that the numbers for each country are expressed as “*the total number of cataracts performed, divided by the number of population  $\geq 65$  years of age*”. This is **not** the same parameters used in the WHO recommendation. This is because different age structures make the WHO recommendation unfair for nations with a low proportion of elderly people.

Figure C



<sup>16</sup> Overview of Eye Health and Visual Impairment Related Issues in Europe; IAPB 2013

<sup>17</sup> [http://www.who.int/ncd/vision2020\\_actionplan/documents/CSRestimates.PDF](http://www.who.int/ncd/vision2020_actionplan/documents/CSRestimates.PDF)



In Western Europe, all countries are above the 4,000 threshold, excluding Italy and UK. France excels, with more than 6,000. In CEE, Hungary is above 4,000 but Lithuania, Poland and Slovakia are below. Indeed Slovakia's CSR rate is below 2,000.

Presumably, the need for surgery in elderly people is basically uniform across Europe. Therefore, the explanation for the substantial variation in CSR – a ratio of 3:1 between highest and lowest – seems to be curative ambitions together with financial resources. It is likely that lifestyle patterns also affect the demand for surgery; in some countries, many senior citizens expect to have sufficiently good vision to be able to drive.

Finance should not really be a restriction; a cataract operation can cost less than €600, while delivering a huge improvement in patient quality of life and sharply reduces the need for support from social services. As indicated above (5.2.2) the issue does not seem to be the number of specialists. Slovakia and Hungary, with relatively high numbers of specialists, are low on surgery while Belgium and the Netherlands have few specialists, but deliver high rates of surgery.

The exact volumes of specialists can be questioned, so we do not recommend drawing far-reaching conclusions from this set of data. It appears that numbers of doctors is simply one component explaining high productivity.

EVS sources: Population data: WHO HfA database, July 2013. Total number of cataract operations per country from OECD Health Data 2012 and from national health authorities. The total number of operations are divided by the number of population over 65 years of age.

#### 5.2.4 Use of pharmaceuticals

Alongside surgery, medication can play an important role in treating sight loss. Can patients in Europe be certain they have access to modern pharmaceuticals?

Age-related macular degeneration (AMD) is a medical condition that usually affects adults over the age of 50. It causes a loss of vision in the macula (the centre of the visual field) as the retina is damaged. AMD exists in "dry" and "wet" forms. It is a major cause of blindness and visual impairment in older adults.

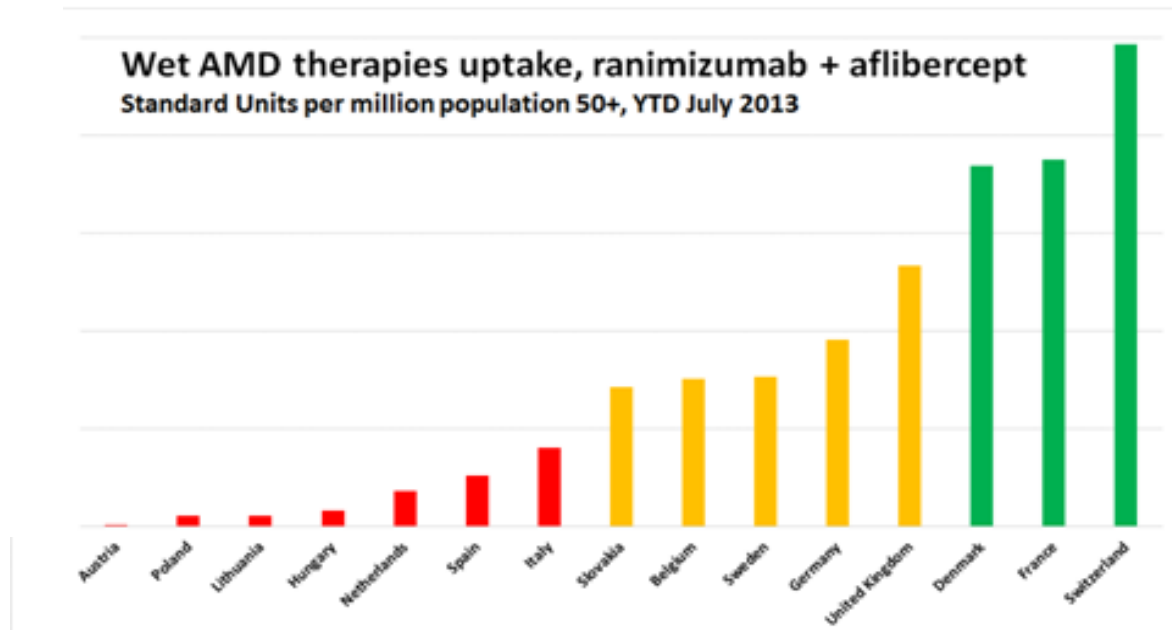
Wet macular degeneration cannot be cured. However, if diagnosed early, treatment may help slow degeneration and reduce the amount of vision lost. This can maintain sufficient peripheral vision to allow most daily activities of (though reading and the ability to recognise faces may be impaired).

Intravitreal pharmaceutical VEGF-inhibition uses medication to stop leakage from and growth of new blood vessels. *Anti-angiogenics* (or anti-VEGF agents) can cause regression of the abnormal vessels and improve vision when injected directly into the eye. The injections need to be repeated, often monthly or bimonthly. Two anti-VEGF agents have been approved for intraocular use in the EU. Both have been assessed and have passed market authorisation by the European Medicines Agency, ranibizumab (in 2007) and aflibercept (in 2012). Both have shown good clinical effectiveness without major unwanted side effects<sup>18</sup>. EVS has chosen them for the parameter indicating the use of pharmaceuticals addressing wet AMD. These drugs are considered first-line treatment for all stages of wet age-related AMD.

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<sup>18</sup> [www.brightfocus.org/macular/treatment/common](http://www.brightfocus.org/macular/treatment/common)

Figure D



As these medications are relatively expensive, there is little risk of over-prescription. EVS has assumed that no single country in the study yet has reached the “ceiling”, although there is no pan-European best practice with regard to the administration of these products.

As shown in Figure D, there are three countries that are more willing to deploy these pharmaceuticals for wet AMD therapies. This is followed by an “intermediate” category, then a number of countries with low or even non-existent use of these drugs.

Often, prescription of new, expensive medications is related to the wealth of the country. Here, it is hard to identify any such correlation. Switzerland, France and Denmark are without doubt affluent countries, but so too are the Netherlands and Austria, yet both still have low rates of use. That is why we can draw the conclusion that money is not a key denominator but one factor amongst culture, attitudes and slow procedures for assessment and approval.

For wet AMD treatment there is also photodynamic therapy (using light to activate an injected medication).

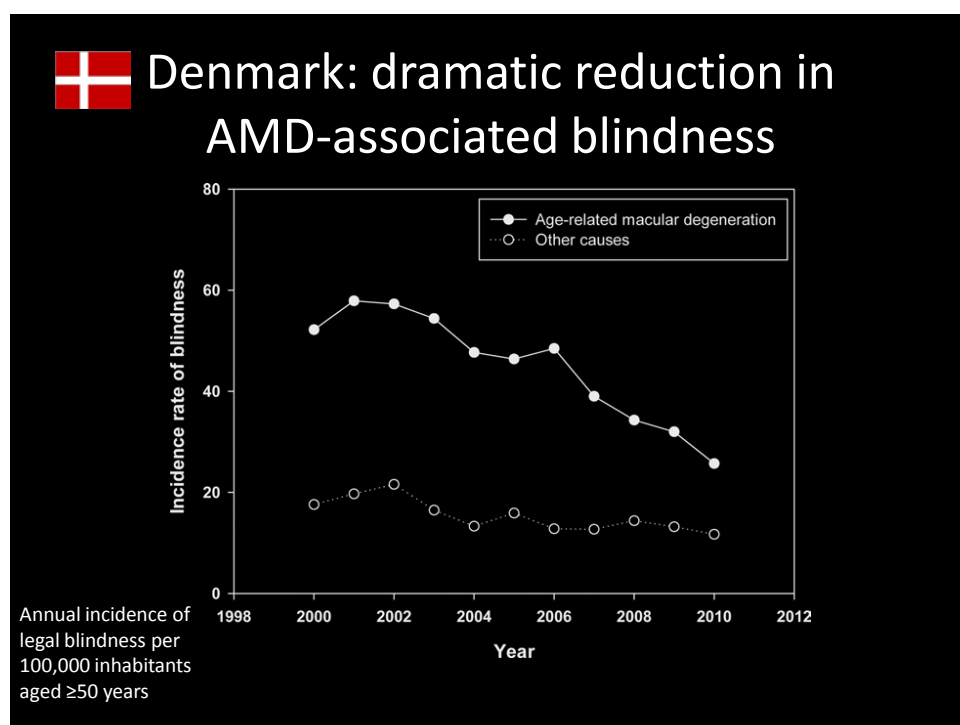
EVS sources: IMS Health, Dutch national healthcare authorities, medical profession.

## 5.3 Outcomes (one parameter)

### 5.3.1. The scale of the challenge: Vision impairment prevalence

Blindness/severe impairment prevalence in national populations is probably the most reliable estimate of the number of people affected as well as long-term trends. The overall trend is that the share of the European populations suffering from such conditions is falling.

Between 1990 and 2010, the global age-standardized prevalence of blindness and MSVI among citizens over the age of 50 has decreased worldwide from 3.0% to 1.9% and from 14.3% to 10.4%, respectively. However, due to the increasing older adult population, the overall total number of people who are blind or suffer MSVI did not decrease<sup>19</sup>.



Denmark provides an excellent example of this trend.

<sup>19</sup> Stevens, G.A. et al: Global Prevalence of Vision Impairment and Blindness: Magnitude and Temporal Trends, 1990-2010

The prevalence rate<sup>20</sup> for each of the 15 EVS countries are:

(% of population 50+ with MSVI):

<b>Low</b>		<b>Medium</b>		<b>High</b>	
The Netherlands	2.5	Austria	3.6	Lithuania	5.7
Denmark	2.7	Spain	3.6	Slovakia	6.4
Sweden	3.1	Italy	3.9	Poland	6.6
Switzerland	3.1	UK	4.4	Hungary	7.0
France	3.2				
Germany	3.3				
Belgium	3.3				

This means that the risk of having a debilitating visual handicap is almost three times higher in Hungary than in the Netherlands, the extremes in the EVS. However, every country has made progress fighting loss of sight<sup>21</sup>.

For *blindness* the prevalence is reported to be 0.3 – 0.4 % among the low and medium countries and up to 0.7% among the others. These levels are also decreasing.

Sight loss prevalence can be considered an overall outcomes parameter, affected by interventions with regard to societal conditions, prevention, treatment and rehab. Therefore, the national figures describe the success among each national eye care system. The capacity behind national efforts is not simply a measure of the financial strength of the country. Disease and impairment awareness, treatments and organizational culture, transparency, professional education, uptake of new therapies, approval mechanisms of new pharmaceuticals, care production incentives, etc., should also be considered.

EVS sources: Global Prevalence of Vision Impairment and Blindness Magnitude and Temporal Trends, 1990e2010, medical profession.

## 6. EVS parameters for review

The parameters used to examine the performance of each national eye care system are:

- **Is there a national registry of blindness and severe visual impairment?**
  - Registries provide better overview and assessment opportunities and are often important drivers of treatment quality.
- **% of patients being screened for diabetic retinopathy;**
  - How ambitious and efficient is the preventive work?
- **Average waiting time for a primary/secondary eye care practitioner appointment;**

<sup>20</sup> Global Prevalence of Vision Impairment and Blindness Magnitude and Temporal Trends, 1990e2010

<sup>21</sup> *Blindness prevention programmes: past, present, and future*, Resnikoff, S. & Pararajasegaram, R., Bulletin of the World Health Organization, 2001, 79 (3).



- Access without long waiting times is a measure not only of harm prevention but also service focus
- **Number of primary/secondary eye care specialists per capita;**
  - Sufficient volume of specialists is a requirement – but far from a guarantee – of good eye care.
- **Total number of cataract procedures per 100,000 citizens over 65;**
  - A good indicator of the penetration and equal access of this routine and important treatment.
- **Use of pharmaceuticals effective against AMD**
- **Prevalence - % of national populations over 50 with MSVI.**

## **7. How to continue improvement in a financially sustainable mode? Recommendations for improvement.**

How to ensure that eye care in Europe continues to improve? What will further lower prevalence levels?

These are no simple answers in a difficult economic climate with long-term restrictions on healthcare spending.

These five areas seem vital:

- **Build a national quality registry for ophthalmology care in each country (or even a joint, cross-border efforts for small countries?)**

There is strong evidence that quality registries improve medical practice from good to excellent. With improved methodology, risks and failures are reduced. This saves money and promotes patient well-being.

The EUREQUO (European Registry of Quality Outcomes for Cataract & Refractive Surgery) should become operative, with the capacity to support pan-European quality development.

- **Make the national definition criteria of blindness and vision impairment more consistent.**

The current approach to defining who has a certain level of sight loss is fragmented. This is confusing for authorities, payers and patients, especially those looking for treatment in another EU-country. In addition, this fragmentation hinders effective comparisons and assessments the numbers of definitions should be reduced. However, a single EU standard is probably overly optimistic.

- **A minimum of 80% of diabetic patients to be screened annually – the Liverpool goal (to be reached 2010; but still some way to go)**

Control of risks related to diabetes can save money for healthcare. Efficient screening requires

- a) Knowledge of who has a diabetic diagnosis, and



b) Making these patients show up for screening.

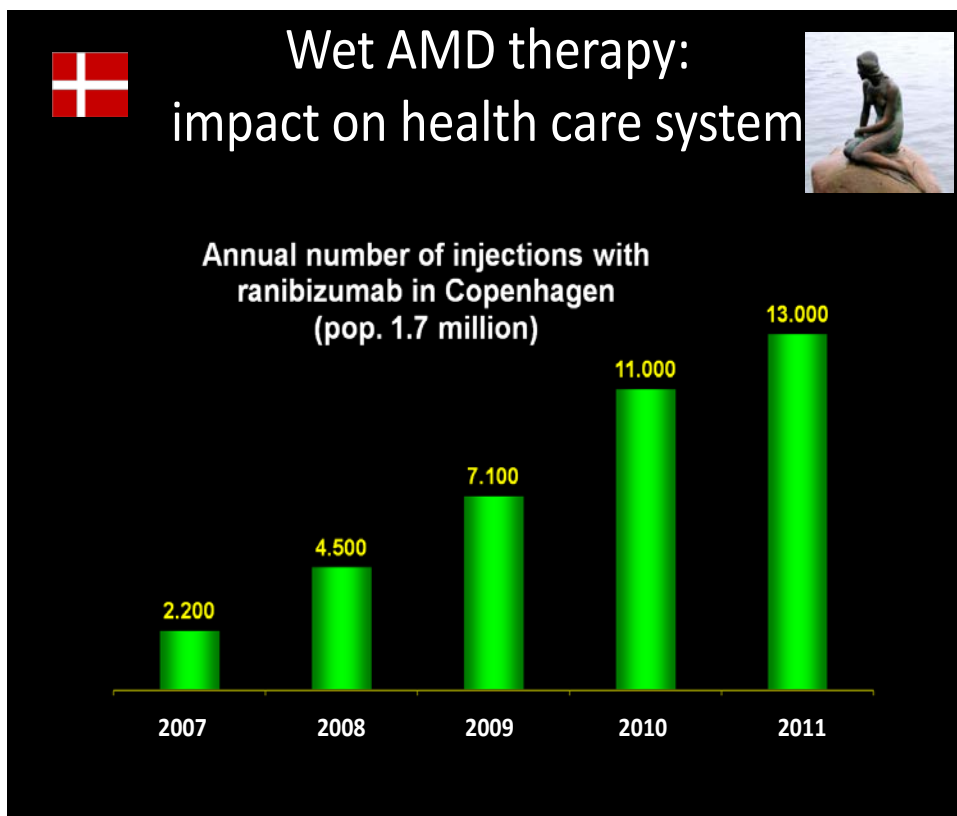
Again, early detection and control reduces risk of complications and disease progression and keeps costs down.

- **Update the WHO Cataract Surgical Rate recommendation to reflect that there is a two-fold difference between European countries in the % of people over 65 receiving an operation. The 4 000 CSR level hardly meets today's expectations.**

As Europe's population grows older, expectations for maintained vision increase. "Industrial" cataract surgery today provides the best of "value for money healthcare". Despite this, some countries are behind the WHO CSR recommendation and need to raise their ambition. Such a step would support senior citizens who want to maintain their ability to work and remain active. This has a good return on investment for public government.

- **Make wet AMD medication available to many more Europeans.**

Denmark provides a powerful example of the impact of medication. The significant increase in the use of wet AMD injections has led to Denmark having among the lowest prevalence in Europe. Active use of this therapy prevents ongoing vision deterioration. This maintains independence in visually impaired people and a good way to reduce the need for assisted living and long-term care.



What would this mean? A better infrastructure for tomorrow's eye care allows for increased levels of treatment, which will keep many more European citizens as active contributing members of society.

## 8. Parameters that would have been useful

It would have been very helpful to be able to measure performance by reviewing actual blindness and vision impairment numbers, but public data is scarce.

- Do optometrists use electronic referrals to specialist eye care?
- Are there rehab programs (low-vision rehab) and if so, what is the coverage?
- Proportion of diabetic patients enrolled in programmes for monitoring and treatment of diabetic retinopathy.

## 9. Geography

The geography covered by the Scorecard consists of: Austria, Belgium, Denmark, France, Germany, Hungary, Italy, Lithuania, the Netherlands, Poland, Spain, Slovakia, Sweden, Switzerland and UK. Together these countries have 430 million inhabitants, including a solid majority of the total EU population. These countries were selected to represent differing levels of economic and social development, care policy, organization modes and patient influence.

Together, the information from these parameters provide a snapshot – not an in-depth, overall picture – of the status of vision care and the need for improvement in these 15 countries. Although the Scorecard indicates certain clear patterns, the reader should be careful in extrapolating far-reaching conclusions from this limited measurement.

## 10. External Expert panel (EXP)

The EVS process has been guided by an expert panel, with the following members:

**Ian Banks**, Professor, European Men's Health Forum

**José Lluís Güell**, Associate Professor of Ophthalmology, Autònoma University of Barcelona

**Sehnaz Karadeniz**, Professor of Ophthalmology, Istanbul Bilim University, and IDF Europe President-Elect

**Michael Larsen**, Professor, Department of Ophthalmology, Glostrup Hospital and University of Copenhagen

**Mark Nevin**, Optical Confederation, Director of Policy and Strategy at the Federation of (Ophthalmic and Dispensing) Opticians (FODO).

## **11.Acknowledgements**

The secretariat as well as national member organisations of the European Blind Union (EBU), Paris, have been quite supportive of the EVS.

EVS looks upon the lack of official or at least semi-official reporting as a disadvantage to be rectified.

## **12.Sponsor**

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## **13.EVS research team**

The EVS report has been researched and compiled by Johan Hjertqvist, LL.M, and Dr Arne Björnberg.

## **14.About HCP Ltd.**

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In 2005, the HCP launched its first Euro Health Consumer Index (EHCI); one year later we began providing country policy recommendations for improvement and consumers tools for empowerment. Indices measuring performance in specific healthcare needs (diagnoses, illness groups, care needs) advise governments and healthcare systems on improving performance and strengthening the position of the healthcare consumer. Today, the European Commission regards our “flagship” Index – the EHCI – to be the most informative and influential assessment of European healthcare.

The user-friendly index measurement methodology allows consumers to take on healthcare performance and illness management. There are HCP Indices in areas including cardiovascular disease, diabetes, HIV-AIDS, COPD, breast cancer, renal care, vaccines, smoke cessation and patient information. In the HCP pipeline for publication during the next six months are the Euro Health Consumer Index and the Euro Pancreatic Cancer Index.

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