Diabetes and Diabetic Retinopathy

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DIABETES

• 347 million people worldwide have diabetes

• In 2004, an estimated 3.4 million people died from consequences of high fasting blood sugar

• More than 80% of diabetes deaths occur in low- and middle-income countries (3).

• WHO projects that diabetes will be the 7th leading cause of death in 2030

• Healthy diet, regular physical activity, maintaining a normal body weight and avoiding tobacco use can prevent or delay the onset of type 2 diabetes.
Diabetes increases the risk of heart disease and stroke. 50% of people with diabetes die of cardiovascular disease (primarily heart disease and stroke).

Combined with reduced blood flow, neuropathy (nerve damage) in the feet increases the chance of foot ulcers, infection and eventual need for limb amputation.

Diabetic retinopathy is an important cause of blindness, and occurs as a result of long-term accumulated damage to the small blood vessels in the retina. One percent of global blindness can be attributed to diabetes.

Diabetes is among the leading causes of kidney failure.

The overall risk of dying among people with diabetes is at least double the risk of their peers without diabetes.

The 10 leading causes of death in the world 2011:

- Ischaemic heart disease: 7 million
- Stroke: 5.2 million
- Lower respiratory infections: 3.2 million
- COPD: 3 million
- Diarrhoeal diseases: 1.9 million
- HIV/AIDS: 1.6 million
- Trachea bronchus, lung cancer: 1.5 million
- Diabetes mellitus: 1.4 million
- Road injury: 1.3 million
- Prematurity: 1.2 million
DIABETIC RETINOPATHY
DIABETIC RETINOPATHY

DR is estimated responsible of 4.8% of all cases of blindness

More than 75% DM patients experience some form of DR

DR develops in almost all Type 1 and 77% of Type 2 diabetes patients >20 yrs survival

90% of persons with DM for over 10-15 years have some degree of DR*

Evidence-based treatment can reduce the risk of vision loss by >90%

From our latest global estimates, people with VI solely attributed to DR are 4.2 millions

Only 50% of DM patients and only 60% of high risk (DR+) DM patients receive regular eye examination once a year

* Wisconsin Eye Study Diabetic Retinopathy
### Magnitude of Visual Impairments

#### 2004 Estimates
- 314 M Visually Impaired
- 45 M Blind
- 269 M Low Vision

#### 2010 Estimates
- 285 M Visually Impaired
- 39.3 M Blind
- 246 M Low Vision

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>&gt; 50 Year Old</th>
</tr>
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<tbody>
<tr>
<td>2004</td>
<td>6.21B</td>
<td>1.14B</td>
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<tr>
<td>2010</td>
<td>6.79B</td>
<td>1.34B</td>
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</table>

- 4.2 M VI from DR
- 1.2 M Bl from DR

Total cases of DR: 155 M / 14.6 M sight threatening DR
CAUSES OF VISUAL IMPAIRMENT

- Childhood: 1.5%
- Cat: 0.6%
- RE: 0.7%
- Glau: 1.3%
- AMD: 0.5%
- TRAC: 18.1%
- CO: 42.3%
- Others: 32.7%
<table>
<thead>
<tr>
<th>Region</th>
<th>tot VI</th>
<th>cataract</th>
<th>uncorrected RE</th>
<th>glaucoma</th>
<th>AMD</th>
<th>trachoma</th>
<th>corneal opacities</th>
<th>diabetic ret</th>
<th>others</th>
<th>childhood</th>
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<tbody>
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**Visual Impairment including blindness**
DM and DR management systems assessment project

16 countries in 2 years