



How do Effective Low Vision Services Impact on the Costs and Outcomes for an Individual and Society

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Low Vision Services

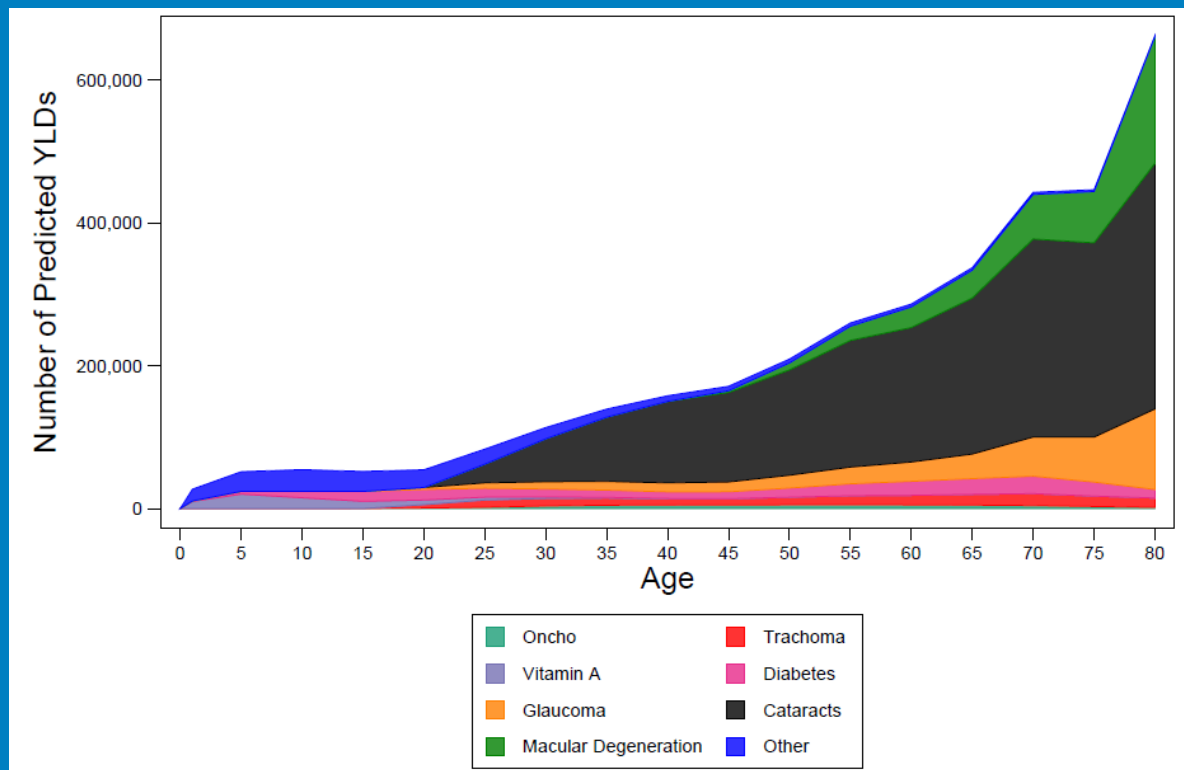
- The effect of changes related to low vision services
- Use of outcome measures to show differences which can be related to the range and types of interventions
- Impact on the direct, indirect and personal costs

The Questions

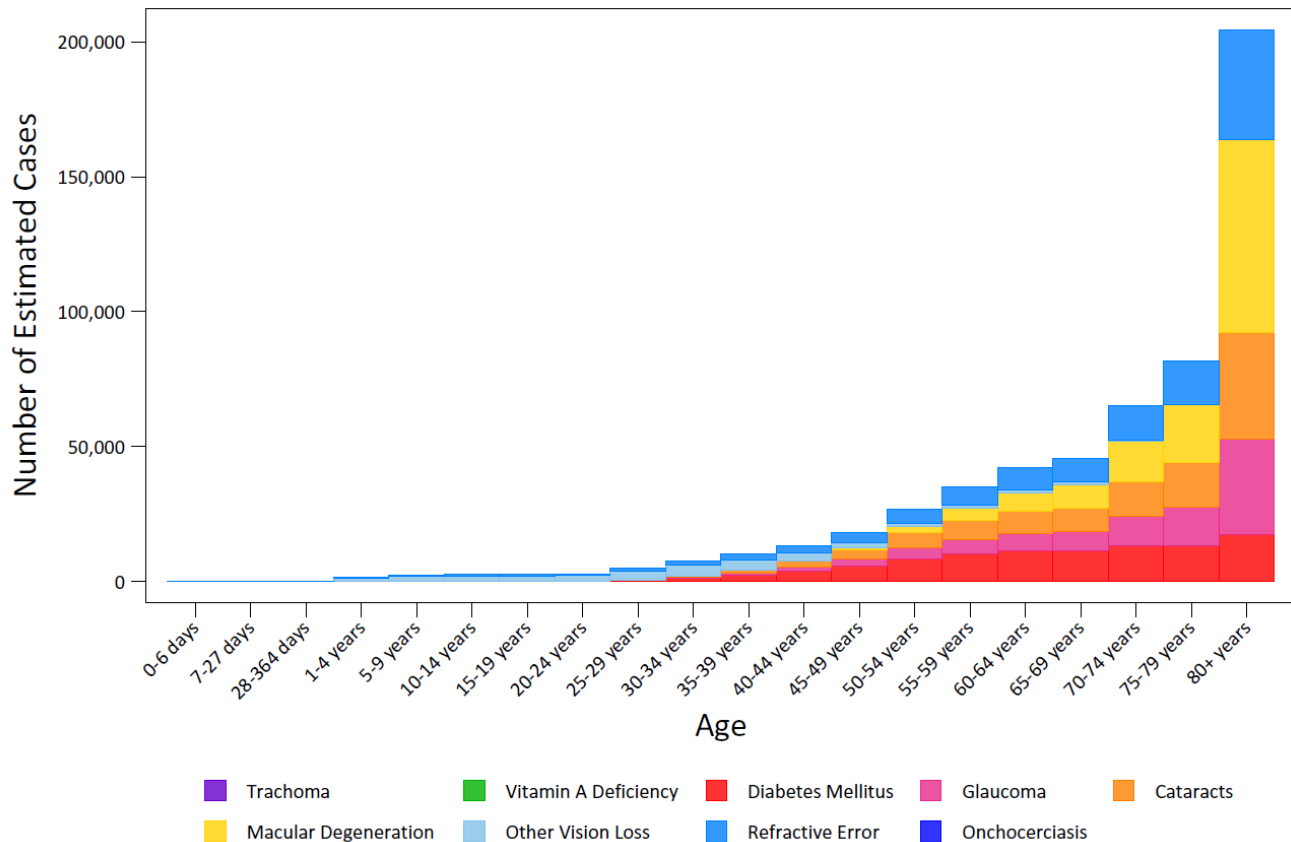
What are the components of costs related to vision impairment?

Do effective services measured by patient reported outcomes lead to increasing or lowering the costs?

Global prediction of blindness for females by aetiology and age



Blindness, North America, High Income in 2010



Causes of Vision Loss

	Cataract	URE	MD	Glaucoma	DR	Trachoma	Other
Blindness							
1990	38.6	19.9	4.9	4.4	2.1	2.8	27.4
2010	33.4	20.9	6.6	6.6	2.6	1.4	28.6
M/SVI							
1990	25.6	51.1	1.9	1.2	1.3	1.3	17.6
2010	18.4	52.9	3.1	2.2	1.9	0.7	20.8

Population Growth

- 1990-2010: ≥ 65 11.1% to 13.6%; ≥ 85 0.9% to 1.8%
- ≥ 100 increased by 185%
- Percentage change in population growth 30%
- Percentage change in numbers 2% blind, 11% VI

Population Blind or MSVI

	Blind (million)	MSVI (million)
1990	31.8	172
2010	32.4	191

Low Vision Services

- Assessment of needs and vision
- Prescription and supply of optical and non-optical devices
- Counselling
- Training in skills
- Participation in work, education, leisure and social life
- Advice on changes to the environment
- Advocacy to government and the community on rights, support and attitudes

Consequences

- Reduced quality of life
- Social dependence
- Depression
- Participation in chosen activities
- Difficulties with daily living activities
- Increased risk of falls and hip fractures
- Premature admission to nursing homes
- Access to information
- Limits to effective communication
- Independent mobility

Outcome Measures

- Functional vision:
 - Near and distance, peripheral
- Quality of life domains:
 - communication
 - accessing information
 - assistance from others
 - fulfil roles
 - social relationships
 - mobility and safe travel
 - emotional well-being
 - confidence to participate in activities

Costs

- Direct costs:
 - provision of low vision services
 - health and community care costs
 - infrastructure
- Personal costs
 - carers
 - equipment, devices
- Transfer costs
 - welfare payments and entitlements
 - lost tax and other concessions

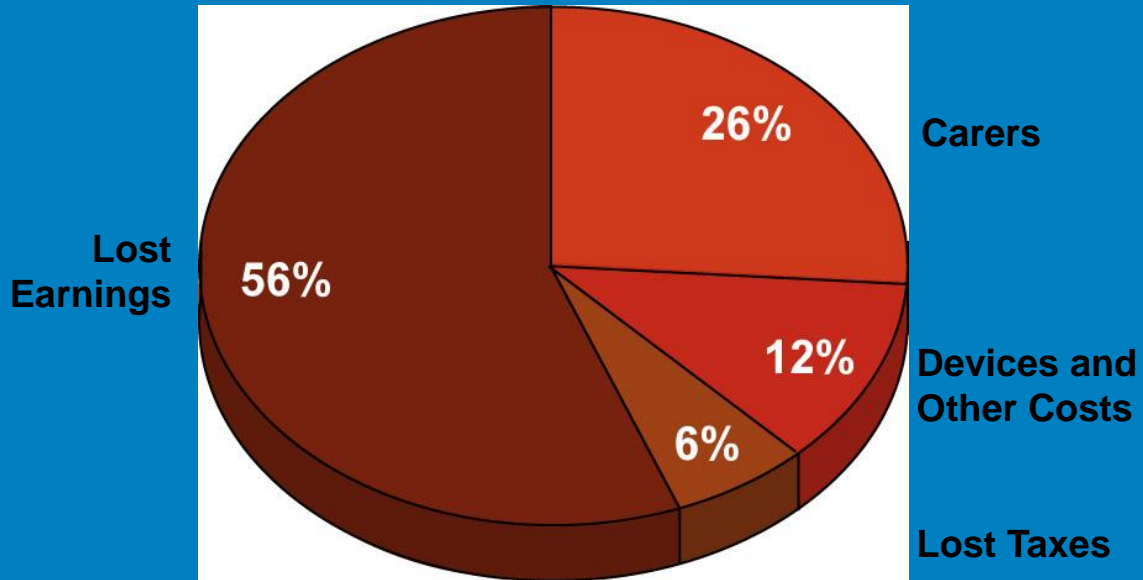
Direct Costs

- Provision of health and rehabilitation services
- Community care
- Residential care
- Aids and equipment

Indirect costs

- Informal care (38%)
- Lost productivity (37%)
- Deadweight or welfare costs (26%)

Indirect Costs



Costs in the USA

- Direct \$27.3 billion:
 - independent living services, library, APH, guide dogs
- Productivity losses \$8 billion:
 - workforce participation

Personal Costs

1. Medicines, products and equipment:
 - low vision devices, equipment, medicines
2. Health and Community Services:
 - counselling, social support, personal care, health and community services, home delivery
3. Informal care and support:
 - health care, home help, personal affairs and care, communication and transport
4. Other costs:
 - guide dogs, education, taxi

Carers

- Use of carers (n=114, 92%; 33% <60 years)
- Need for carers:
 - transport
 - personal affairs
 - home help
 - social activities
 - written communication
 - personal care
- Three quarters of carers were of working age

Proportions of Costs: Economy

- Costs of the health system
- Welfare payments
- Paid employment
- Costs of informal care

What is the Impact of Low Vision Services

Individual:

- quality of life
- personal costs



Society:

- direct costs
- welfare
- productivity
- informal care

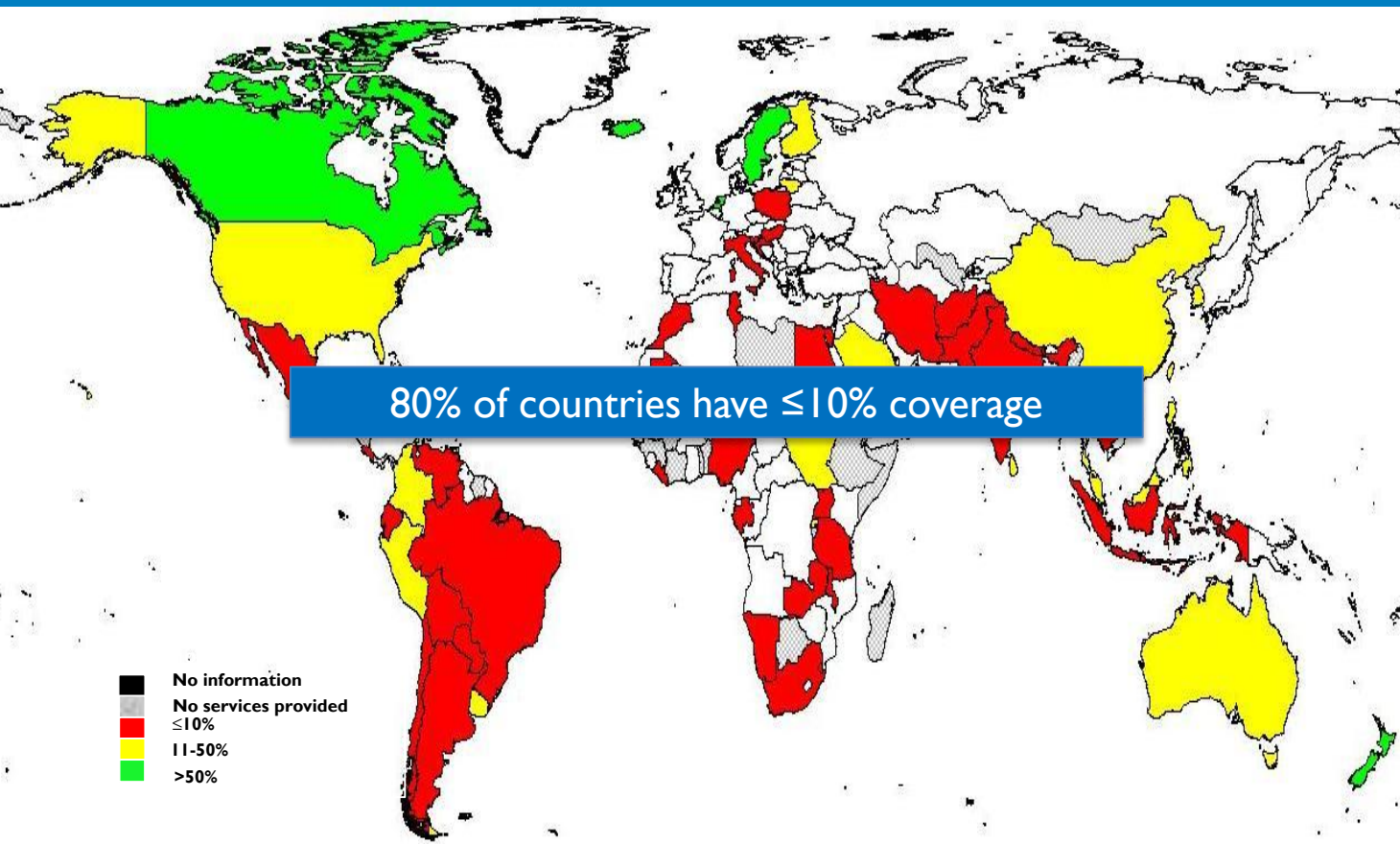


More or Less?



Change in Costs

Costs	Likelihood of change
Direct	Increase
Indirect	Likely decrease
Transfer	Possible decrease



Thank you!



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1. Stevens G et al. Global Prevalence of vision impairment and blindness: magnitude and temporal trends 1990-2010. *Ophthalmology* 2013;120(12):2377-84
2. Bourne RA et al. Causes of vision loss worldwide, 1990-2010: a systematic review. *Lancet Global Health* 2013
3. The Lancet December 2012-January 2013
4. Rein, D.B., et al., *The economic burden of major adult visual disorders in the United States. Arch Ophthalmol*, 2006.**124**(12): p. 1754-60.