It's all about the bling!
"Price Tag"

ocular Therapeutics Conference 2020

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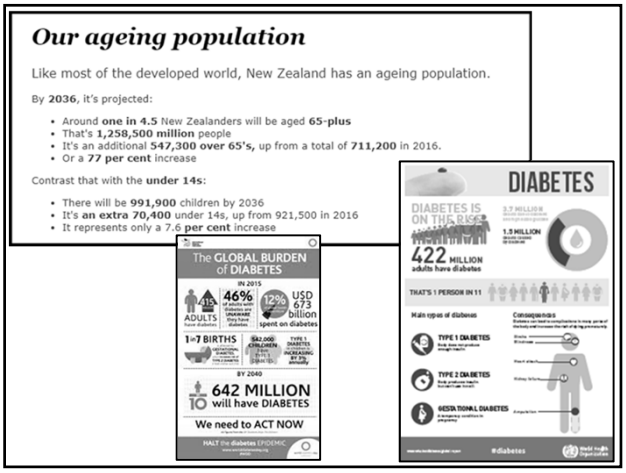
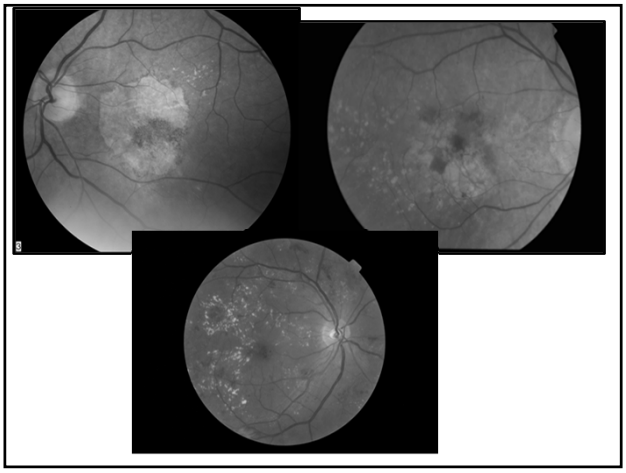
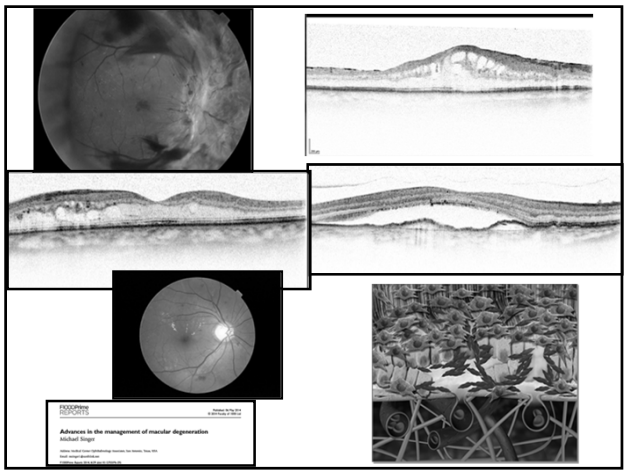
It's not about the money money money
We don't need your money money money
We just wanna make the world dance
Forget about the price tag
Ain't about the uh cha-ching cha-ching
Ain't about the yeah b-bling b-bling
Wanna make the world dance
Forget about the price tag

Health economics & sustainability of current anti-VEGF injections

- **Can we? / Can't we?**
- **ADHB ophthalmology strategy**







Anti-VEGF Trials

AMD

- Bevacizumab: CATT & IVAN
- Ranibizumab: Anchor & Marina & Resolve
- Aflibercept: View 1 & 2
- Fight Retinal Blindness (FRB)

Diabetic retinopathy

- Restore
- Diabetic Retinopathy Clinical Research Network (DRCR Retina Network)
- Fight Retinal Blindness (FRB)

EFFICIENT CAPTURE OF HIGH-QUALITY DATA ON OUTCOMES OF TREATMENT FOR MACULAR DISEASES
The Fight Retinal Blindness! Project

NZ costs

Deloitte Access Economics 2016
New Zealand

Socioeconomic cost of macular degeneration in New Zealand.

- Bevacizumab: 2012/13 = $880,000 (90%) 2015/16 = $1,620,000
- Ranibizumab: 2012/13 = $200,000 2015/16 = $2,820,000
- Treatment $ underestimated: administration

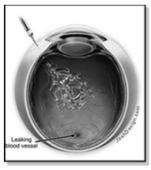
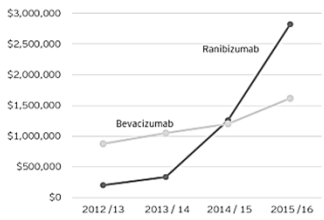
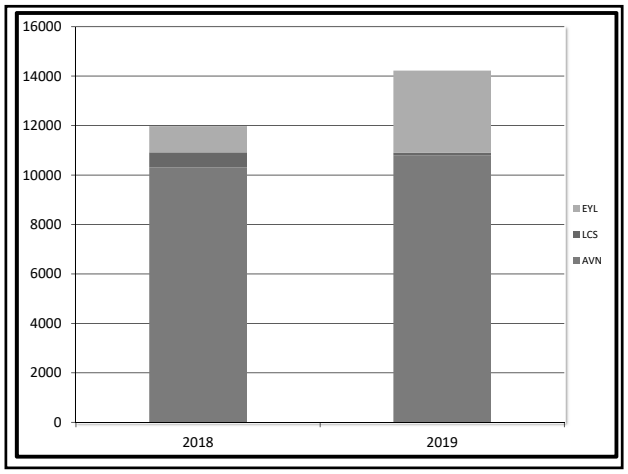


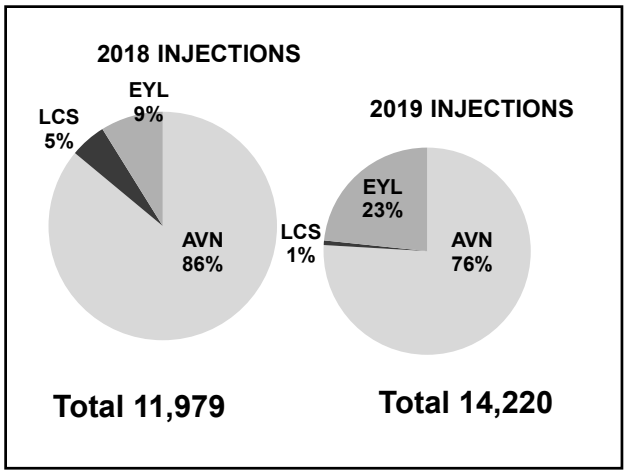
Figure 5: DHB pharmaceutical costs



Source: PHARMAC Annual Report 2015/16. Note that figures include all uses of these medications, not just in AMD.

Age-related Macular Degeneration: Model of care assessment and recommendations.



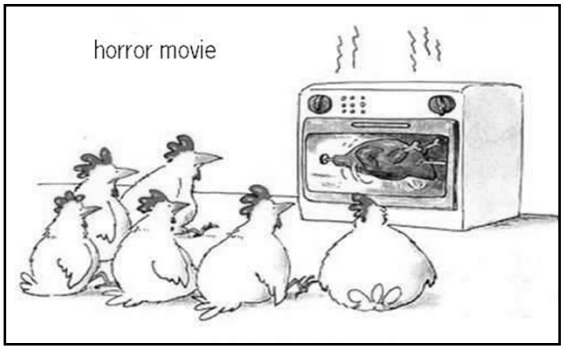


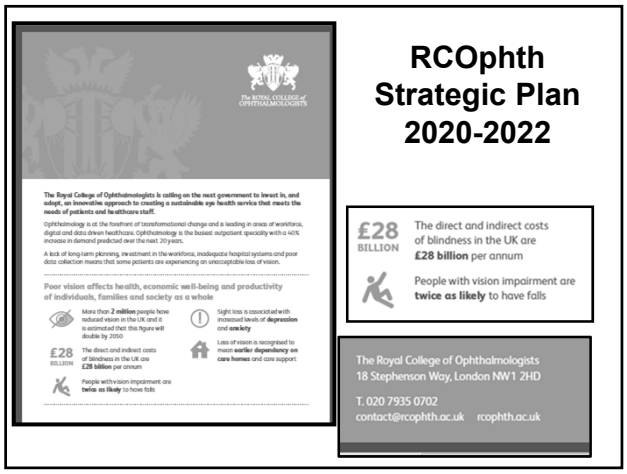
Space!

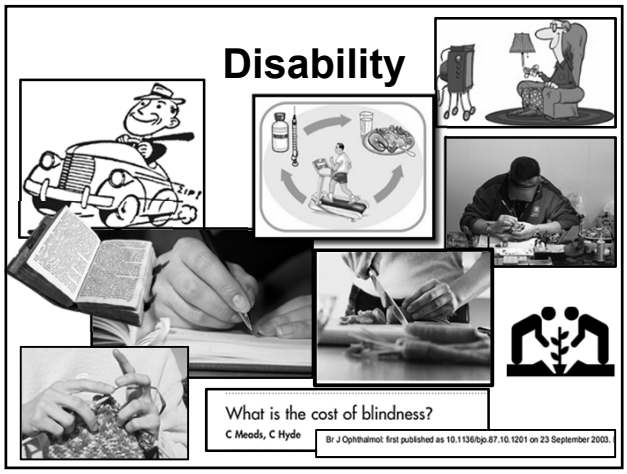
- Assessment & / or injection anti VEGFs

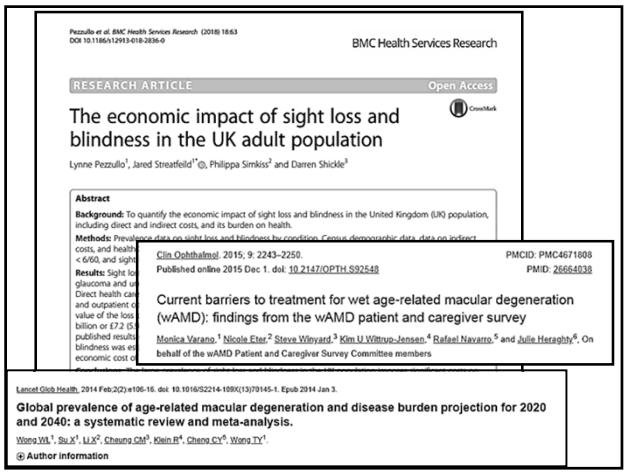
"Burden"

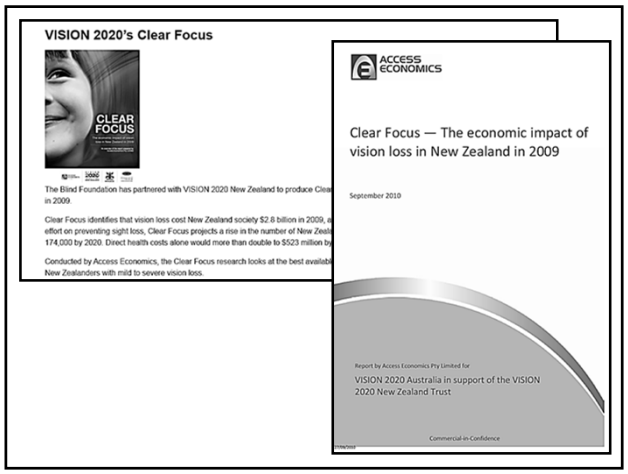
- Patient numbers ↑
- Resources demand
- Direct health care system costs
- Hidden costs





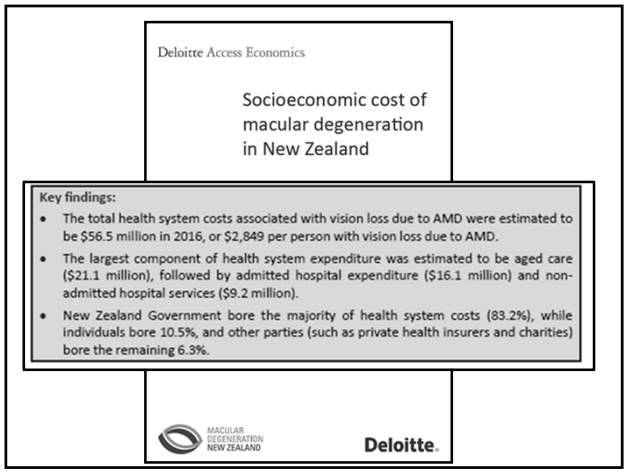






Sight loss "burden"

- **Impact on wellbeing from disability**
- **Monetary estimate for reductions in quality of life**
- **DALYs: disability-adjusted life-years: years of healthy life lost due to disability**
- **QALYs: quality adjusted life years**



"Substantial economic & loss of wellbeing cost"

Overall, New Zealand society could expect to avert around 340 DALYs, and receive benefits of approximately $75.1 million if timely and adequate treatment occurs. Noting that only mild and moderate cases can receive timely and adequate treatment, the costs were estimated to be around $2.8 million. With current treatment patterns, society may forgo as much as $72.3 million in net benefits.

The total cost of vision loss from AMD was estimated to be $391.1 million in 2016, or $19,727 per person with AMD. Of the total cost, the economic costs were $89.6 million ($4,521 per person), and the value of lost wellbeing was $301.5 million ($15,207 per person). Health system expenditure represented the largest component (63%) of economic costs.

Blindness from AMD was estimated to contribute $216.6 million, or $45,677 per person with blindness. This represented 55% of the total costs due to AMD in 2016, and was comprised of $28.2 million in economic costs as well as $188.4 million in loss of wellbeing.

Age-Related MD: Model of Care Assessment & Recommendations

31 August 2017

After a number of years consulting with the sector regarding a model of care for eye health, the Ministry of Health commissioned Ernst and Young (EY) to compile a areport titled "Age-related Macular Degeneration - Model of Care assessment and recommendations". The report was finalised in August 2017 and covers 3 broad areas:

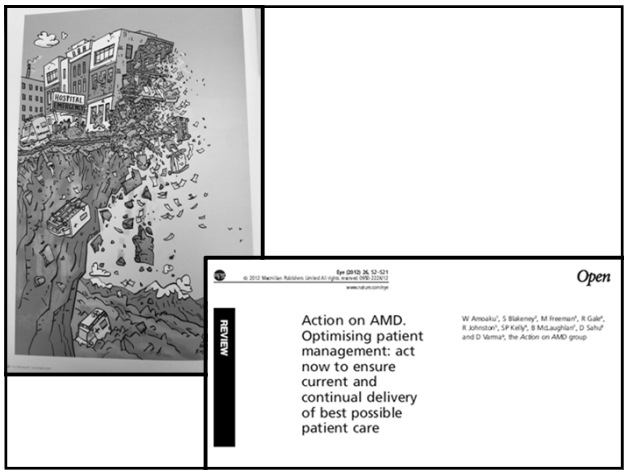
- **Prevention / detection & risk stratification**
- **Intravitreal anti-VEGF treatment**
- **Low vision rehabilitation**

Health outcomes / costs

- **Loss independence**
- **Depression**
- **Care**
- **Economic – employment**

Recommendation 8 - Given the health benefits able to be gained, and the strong cost-effectiveness of the treatment, consider the adequacy of volumes of treatment delivered based on these protocols

Led by: DHBs



Model of care "unsustainable"

- Workforce mix
- Funding arrangements
- Treatment approach.

Specifically, the proposed model is intended to:

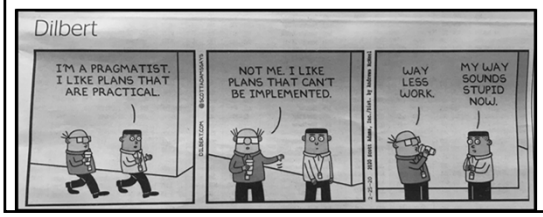
- Enable faster access to diagnosis, treatment and rehabilitation for people most likely to benefit
- Support preventive activities
- Enable care to be delivered closer to home
- Make best use of health professionals' skills and time
- Make best use of technology and other infrastructure within in the New Zealand health system.

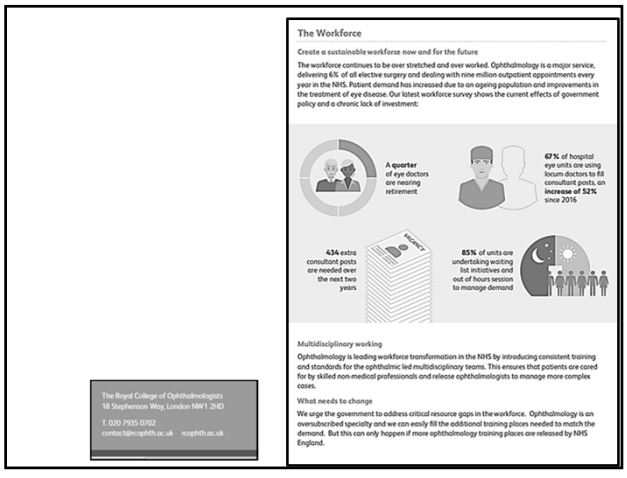
Recommendation 2 - Find the most cost-effective resourcing mix and settings of care to maximise patient benefit and efficiency of AMD diagnosis and care

Led by: DHBs

ADHB ophthalmology

- **New models of care**
- **Multi-disciplinary**
- **Collaboration**

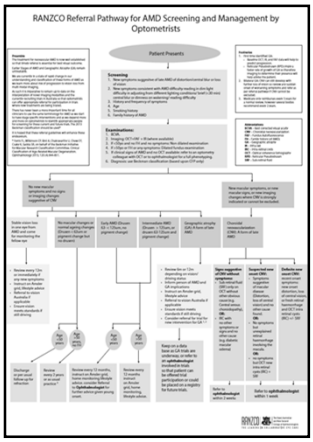




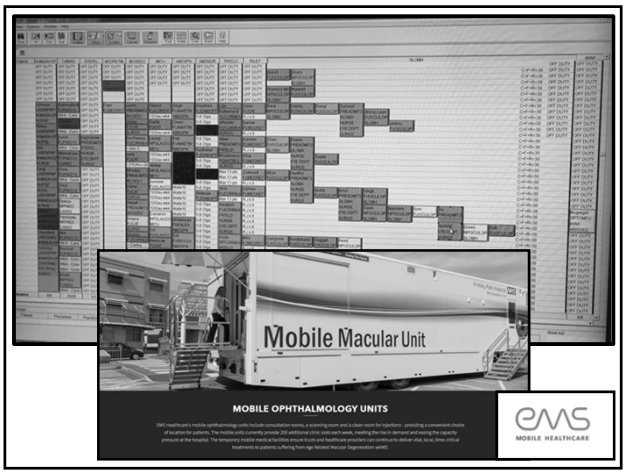
Nursing Review
NEW ZEALAND'S INDEPENDENT NURSING SERIES

"Nurses step up to meet demand for specialist eye treatment" February 2016 Vol 16 (1)

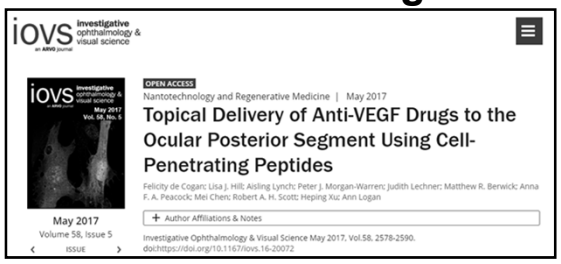
Samalia P, Garland D, Squirrell D. Nurse specialists for the administration of anti-vascular endothelial growth factor intravitreal injections. *N Z Med J* 2016; 129(1438):32-8.



"Rapid access" AMD / macula clinics

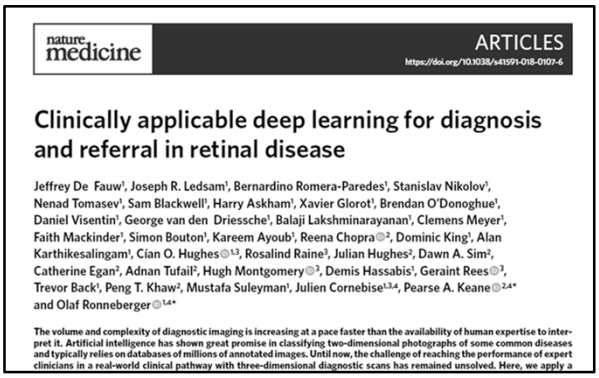


New anti-VEGF agents



- **Oral delivery ???**

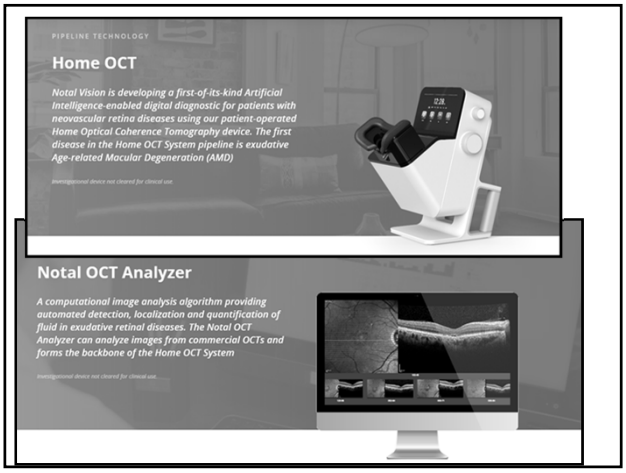
A.I.



I.T.

Recommendation 19 - Improve data collection and analysis according to nationally consistent specifications to allow monitoring of performance and measurement of patient gains made, and to provide a base to continue to improve the management of AMD in New Zealand

Led by: Ministry

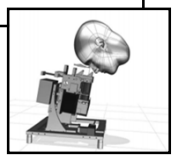


tvst https://doi.org/10.1167/tvst.7.4.8

Article

Safety and Feasibility of a Novel Sparse Optical Coherence Tomography Device for Patient-Delivered Retina Home Monitoring

Peter Maloca[1,6,13], Pascal W. Hasler[1,6], Daniel Barthelmes[2,3], Patrik Arnold[4], Mooser Matthias[4], Hendrik P. N. Scholl[5,6,7], Heinrich Gerding[8,9], Justus Garweg[10], Tjebo Heeren[11], Konstantinos Balaskas[12,13], J. Emanuel Ramos de Carvalho[13], Catherine Egan[13], Adnan Tufail[13], and Sandrine A. Zweifel[2]



- **New ways to monitor**
- **Transport / space issues**
- **Screening ???**

Conclusion

Table 4.12 presents total health system costs by component in 2009 and 2020. Overall, health system costs are estimated to rise to $523 million by 2020 or $3,008 per person with vision loss. This compares to a total cost of $198 million in 2009 ($1,583 per person with vision loss).

Table 4.12: Health system costs - projections to 2020

Cost component	2009 health system costs	2020 health system costs
hospital	$105,757,892	$279,773,679
aged care	$67,401,985	$178,306,327
optometry	$6,872,148	$18,179,694
GP	$2,329,905	$6,163,569
research	$816,894	$2,161,025
pharmaceuticals	$14,376,296	$38,031,291
Total	**$197,555,120**	**$522,615,586**

Source: Access Economics (2010) calculations using Statistics New Zealand (2010) population growth estimates, using Ministry of Health special request expenditure data 2010, PHARMAC data 2010 and National Health Survey data (Ministry of Health 2008).

Anti-VEGFs

- **↑ burden ophthalmic services**
- **"Cost" of sight loss**
- **Change models of care meet demands**

Thankyou

Dr Sophie Hill, Carly Henley, Rebecca Stevenson & Peter Lyons