The appropriateness of eye care delivery in Australia:

Can we use practice records and eye care practitioners and patients' perspective to measure, target, and design intervention strategies?

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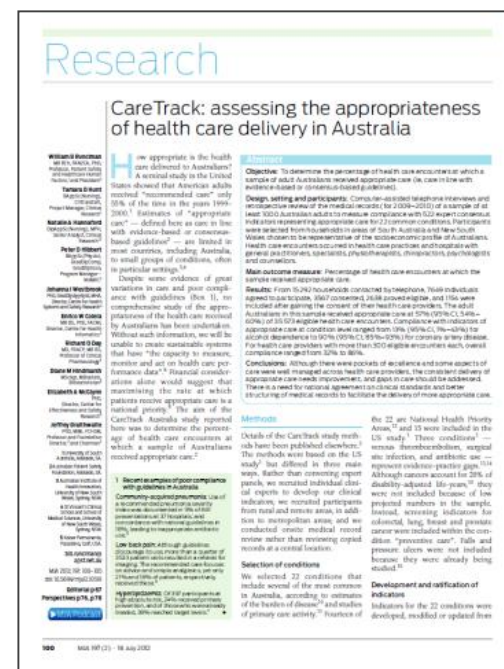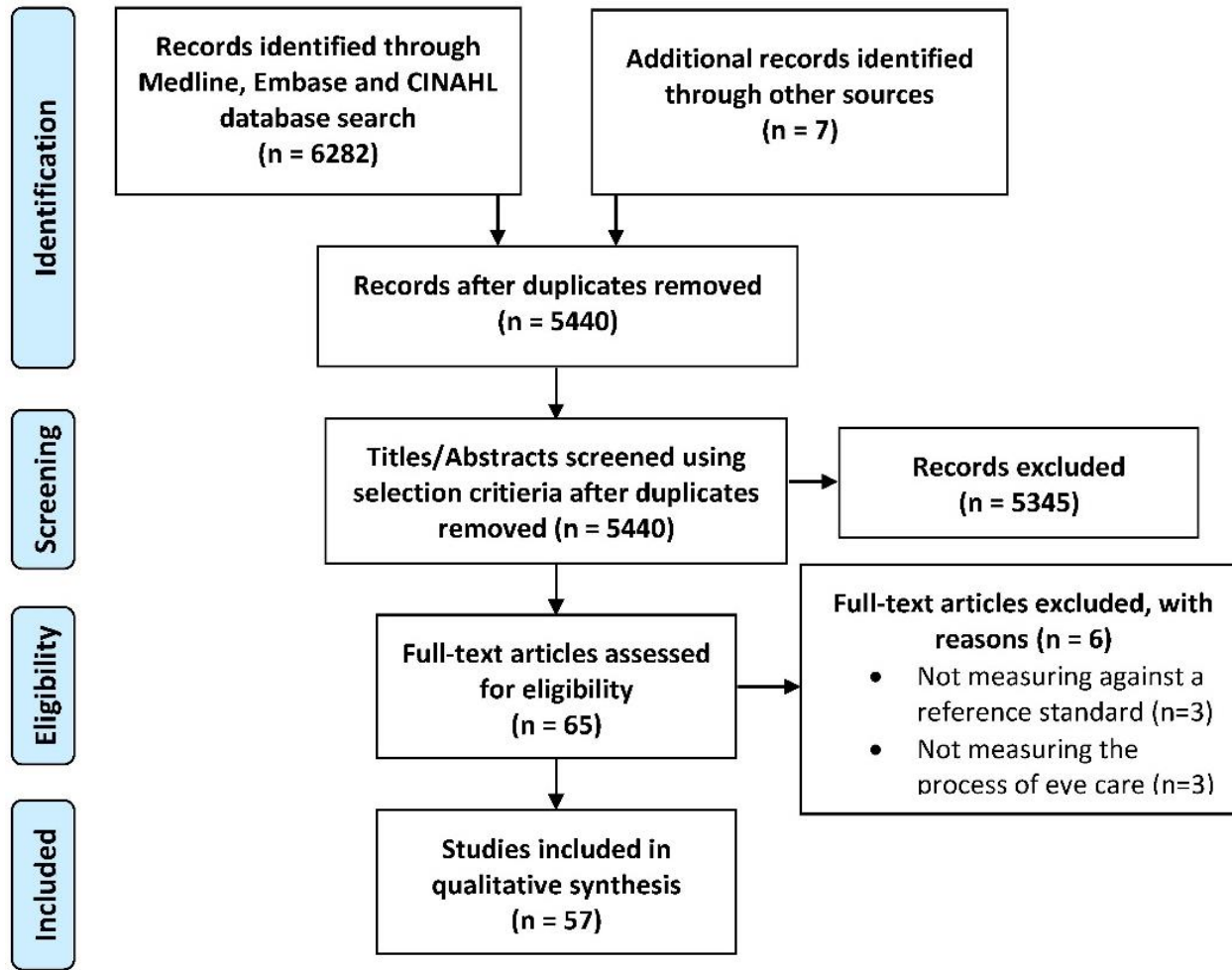
Appropriateness of health care – CareTrack

4 Numbers of indicators, participants and eligible encounters, and percentage of encounters at which appropriate care was received, by condition, 2009–2010

Condition (ranked by percentage compliance)	No. of indicators	No. of participants	No. of eligible encounters*	Percentage of encounters with appropriate care (95% CI)
Coronary artery disease[†‡]	38	131	769	90% (85.4%–93.3%)
Dyspepsia[‡]	22	180	983	78% (65.8%–87.6%)
Chronic heart failure[†‡]	42	30	541	76% (65.1%–85.1%)
Hypertension[†‡§]	57	351	4700	72% (56.7%–83.6%)
Low back pain[†]	10	164	6588	72% (61.4%–80.3%)
Panic disorder[†]	14	25	468	72% (32.5%–95.4%)
Chronic obstructive pulmonary disease	39	28	855	71% (65.8%–75.3%)
Diabetes[†‡§]	30	96	3993	63% (60.2%–65.6%)
Venous thromboembolism	39	485	1860	58% (53.3%–63.0%)
Osteoporosis[†§]	14	60	387	55% (20.8%–86.3%)
Depression[†‡]	19	112	756	55% (48.7%–61.5%)
Atrial fibrillation[‡]	18	59	242	55% (46.9%–62.8%)
Cerebrovascular accident[†‡]	35	19	290	53% (38.2%–67.7%)
Community-acquired pneumonia[†]	33	21	294	52% (28.1%–75.8%)
Osteoarthritis[†‡]	21	188	3517	43% (35.8%–50.5%)
Preventive care[†¶]	13	665	2366	42% (31.4%–53.6%)
Surgical site infection	5	348	721	38% (27.9%–48.6%)
Asthma[†‡]	28	60	1674	38% (14.7%–65.4%)
Hyperlipidaemia[†‡§]	18	186	3021	35% (26.0%–44.3%)
Obesity[†]	9	67	1199	24% (21.6%–26.5%)
Antibiotic use	5	78	153	19% (0.1%–77.3%)
Alcohol dependence[†‡]	13	12	196	13% (1.0%–43.3%)
Total	522	—	35 573	57% (54.3%–60.1%)

Research

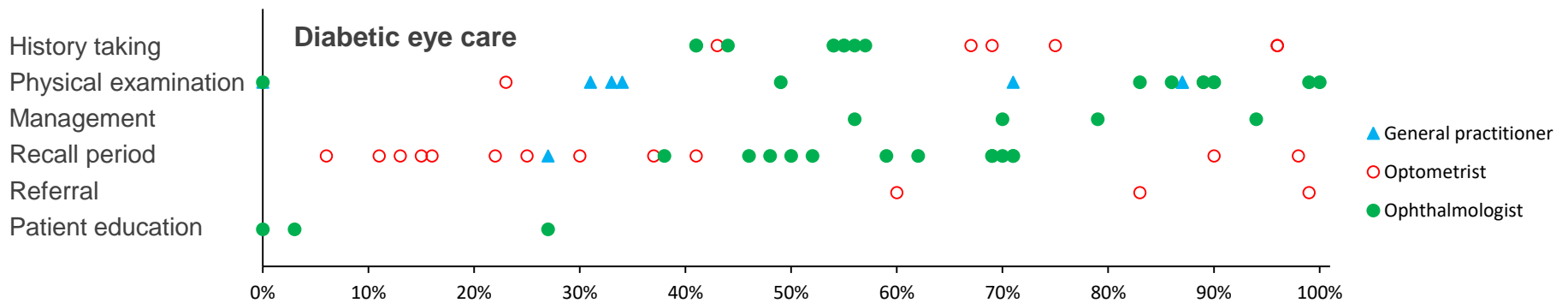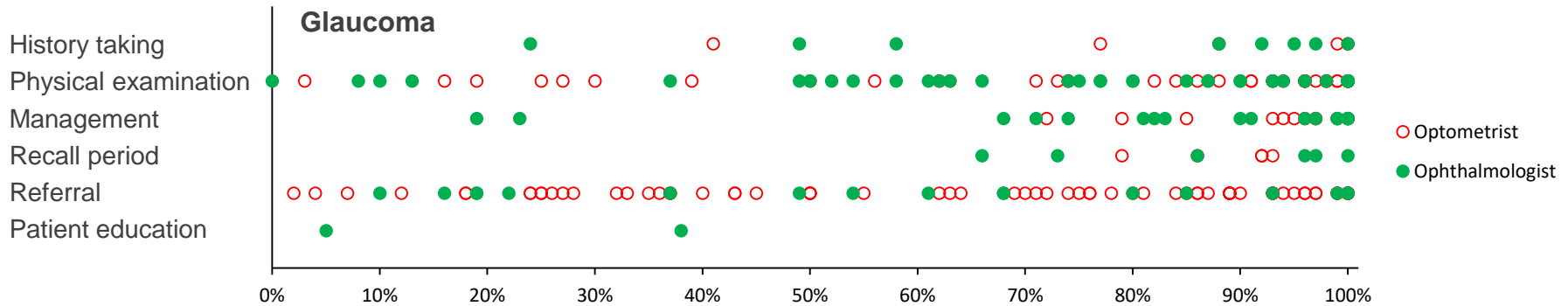CareTrack: assessing the appropriateness of health care delivery in Australia

- Eye care visits represent in excess of 6% of all health care consultations
- Cost of vision disorders 9.85 billion, ranking 7th in health expense in Australia
- 75% of vision loss is preventable or treatable

Runciman WB et al (2012) Med J Aust 197: 100-105
Taylor et al (2006)

AIHW (2005)

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Systematic review: Appropriateness of eyecare delivery

Is "best evidence" used in eye care?

Aims

- To investigate the appropriateness of eye care delivery

- To explore eye care practitioners and patients' perspectives on barriers and enablers to appropriate eye care
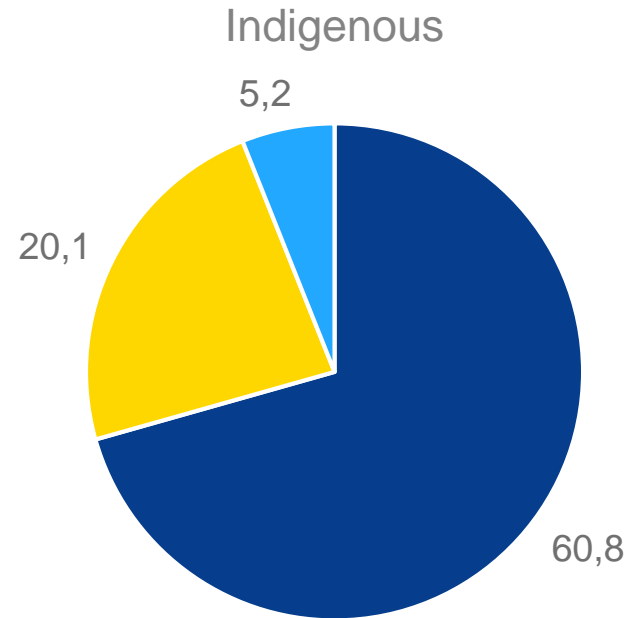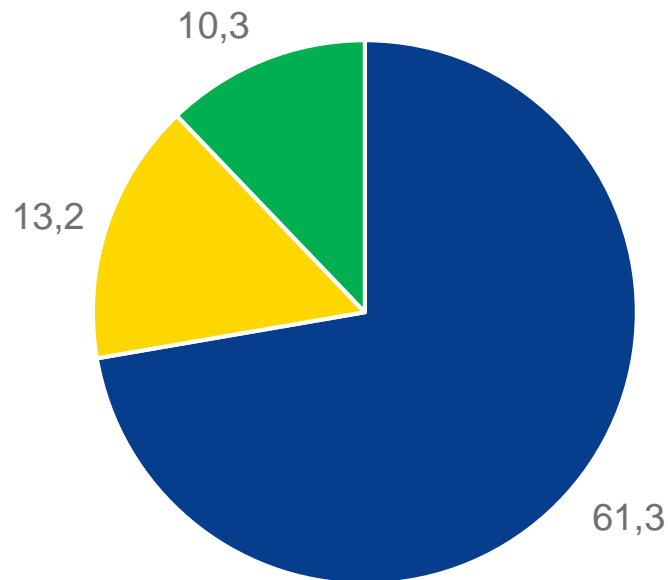
… in Australia

Objectives

- To identify specific areas where eye care delivery is suboptimal

- Design intervention strategies

NEHS
NATIONAL EYE HEALTH SURVEY

Legend:
- Uncorrected Refractive Error (dark blue)
- Cataract (yellow)
- Macular Degeneration (green)
- Diabetic Retinopathy (light blue)

Indigenous
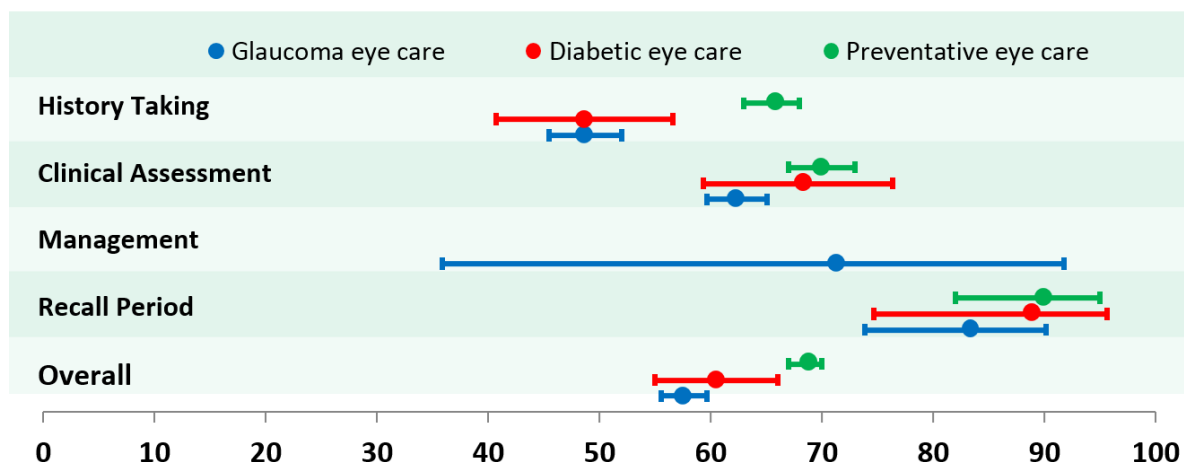5,2
20,1
60,8

Non-indigenous
10,3
13,2
61,3

Preventative eye care
Glaucoma
Diabetic eye disease
Macular degeneration (AMD)

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iCareTrack Feasibility Study

Feasibility study: n = 8 practices, 213 patient records

Percentage of appropriate eye care delivered

Indicator development (Delphi consensus)

↓

Feasibility (Records audit)

↓

Main Study

- Glaucoma eye care
- Diabetic eye care
- Preventative eye care

History Taking

Clinical Assessment

Management

Recall Period

Overall

0 10 20 30 40 50 60 70 80 90 100

- Sampling strategies need to be aligned to nature of eye care practice and its record systems
- Illegibility, usage of nonstandard abbreviations, missing data complicated data collection
- Audit manual developed but recommendations that experienced eye care professionals needed to make 'judgement calls'

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Qualitative Study: Perspectives of AMD care

- 16 focus groups
- Nominal group technique used to identify, prioritise and semi-quantify barriers and enablers to AMD care in 7 of 16 focus groups (optometrists)
- 20 semi-structured f2f or phone interviews (ophthalmologists, people with AMD)
- Contributions audio-recorded, transcribed verbatim, analysed using inductive coding (NVivo Software)
- COREQ criteria

Jalbert I, Rahardjo D, Yashadhana A, Gopinath B, Liew G. Unpublished.

- Purposive, snowball, maximum variation sampling from 3x Australian states & from rural / urban centres

- Optometrists from a range of settings (private practice, franchisee, corporate, educational)

- Ophthalmologist from a range of settings (private, public hospital, private day surgery) and sub-specialties

- Patients with a range of severity of AMD

Demographics (n=123)

|	n	Age (years)	Gender (F:M)
Optometrists	69	41.4±13.2	42:27
Ophthalmologists	10	45.3±7.2	3:7
People with AMD	49	85.5±5.2	39:10
Carers	2	54,90	1:1
Other stakeholders	5	55.2±18.0	2:3

Optometry perspective on AMD care

"What are factors preventing people at risk of <u>or</u> with AMD from accessing and/or receiving good care and/or from following advice given to them?"
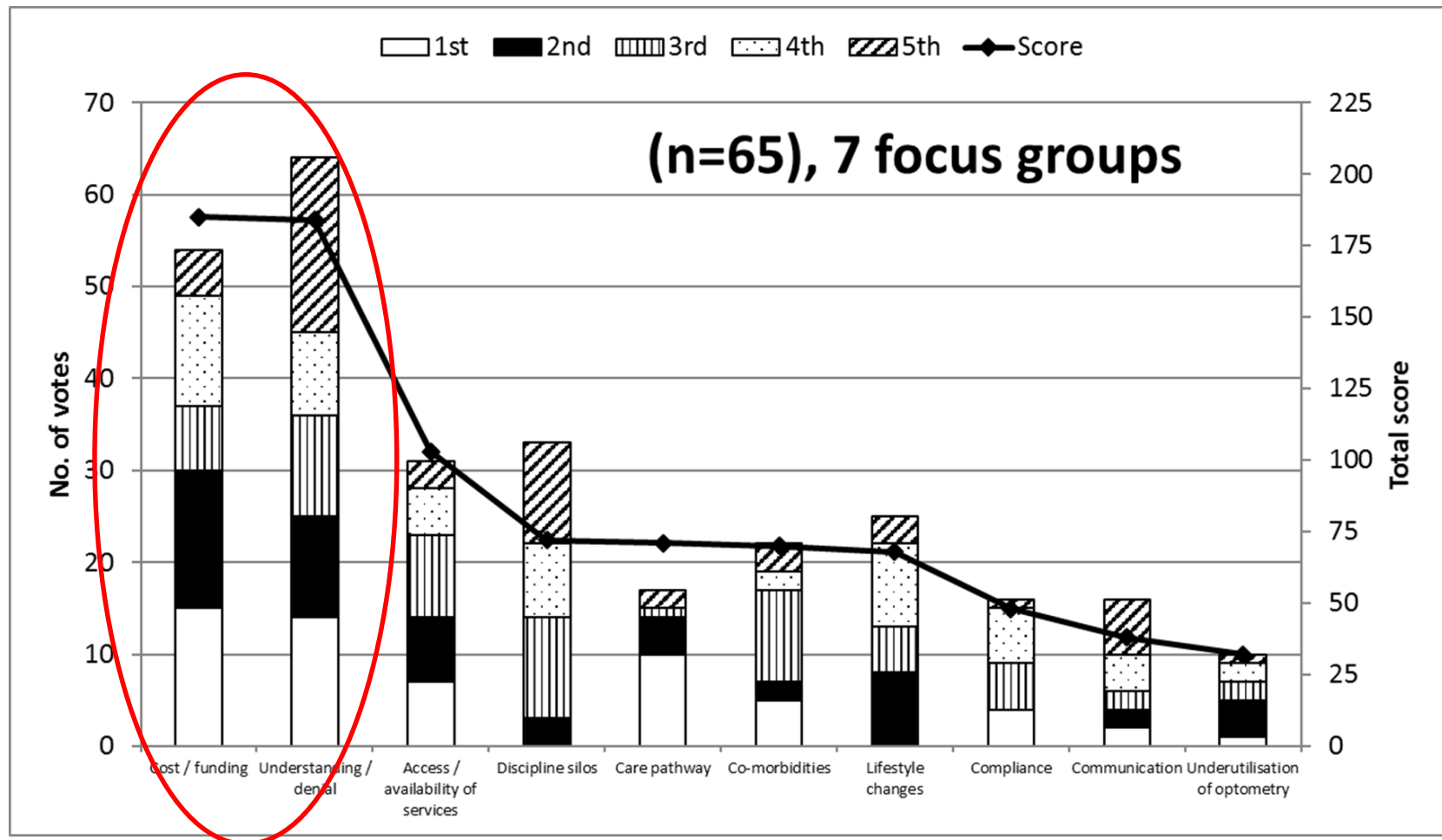
# Stakeholder perspectives of AMD (n=123)
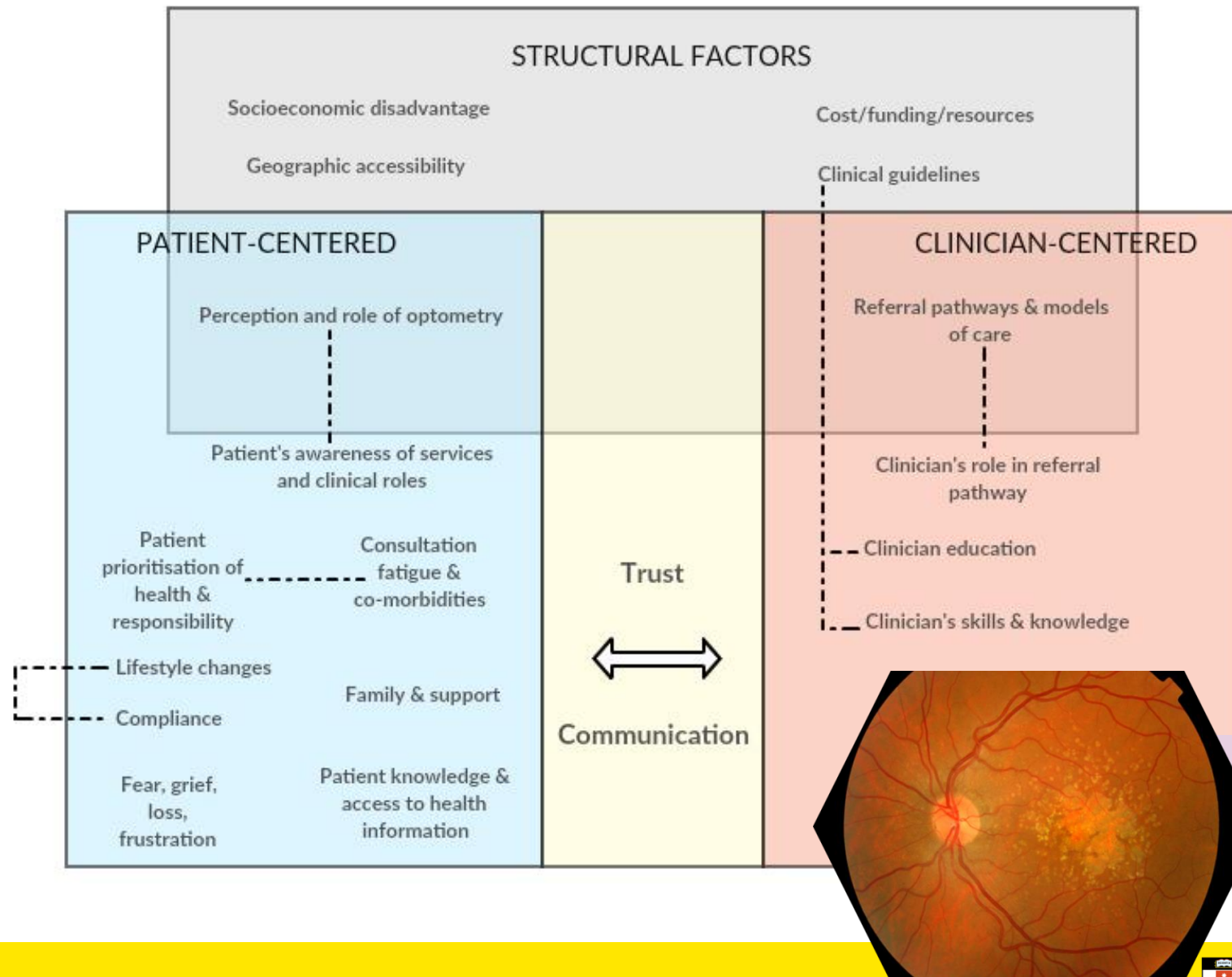
Stakeholder perspectives on AMD (n=123)

- **Patient prioritisation of health and responsibility:** *"But it's only in the last decade that really they started talking about it and when you're younger you don't take any notice, and when I was told originally that I may have the signs of it I just, yes, well so what, virtually, which was naughty. And then, of course, it's too late."* Pt86

- **Referral pathways and models of care:** *"Clearer referral guidelines"* Oph7

- **Perception and role of optometry:** *"The perception that an optometrist is just a spectacle provider"* FG4

- **Cost:** *"You go in, the nurses do all the checks for you, they put it on the computer for the doctor and he'll look it up, say, come in, give you an injection, you walk out and that's it. $760. You felt you weren't getting […] your money's worth, yeah."* Pt76

- **Trust / Communication:** *"The ophthalmologist started me on MacuVision, he just wrote it on a piece of paper, here, take that, but nothing else. But the Macular Degeneration, the other mob in Sydney are really good."* Pt105

- **Lifestyle changes challenging:** *"Changing your diet or going on a diet is always hard."* FG4 and *"Somebody came to the Club to talk about AMD and promoted a book. $40 for the book which has the most exotic recipes, page after page, I have that book in my cupboard and I don't want to taste that. And that book, it's brand new and it's still sitting on my kitchen bench."* Pt100

Limits

- Sample bias

- Data saturation achieved?

- Clinical records are unlikely to accurately document and reflect real life practice

- Generalisability: Australia focused but methods amenable to other settings and eye conditions

- Strengths: mixed method, triangulation (patient + practitioner perspective)
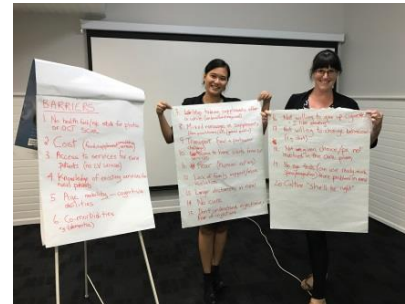
Bottom line

Summary

- Appropriateness of eye care ~65-70%, in line with other health conditions

- Complex barriers to AMD care delivery: clinician centered, structural, and patient centered

- Based on AMD findings, enablers of appropriate care delivery will require multipronged, multidisciplinary interventions: models of care, case manager, education

Future Research / Interventions

- KAP survey (in progress)

- Behaviour change wheel

Sources of behaviour
Intervention functions
Policy categories