

# Measuring the Appropriateness of Eye Care in Australia: Protocol for a Retrospective Record Review

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## Background & Rationale

Limited information on the existing "appropriateness" (see Definitions) of eye care delivery in Australia.

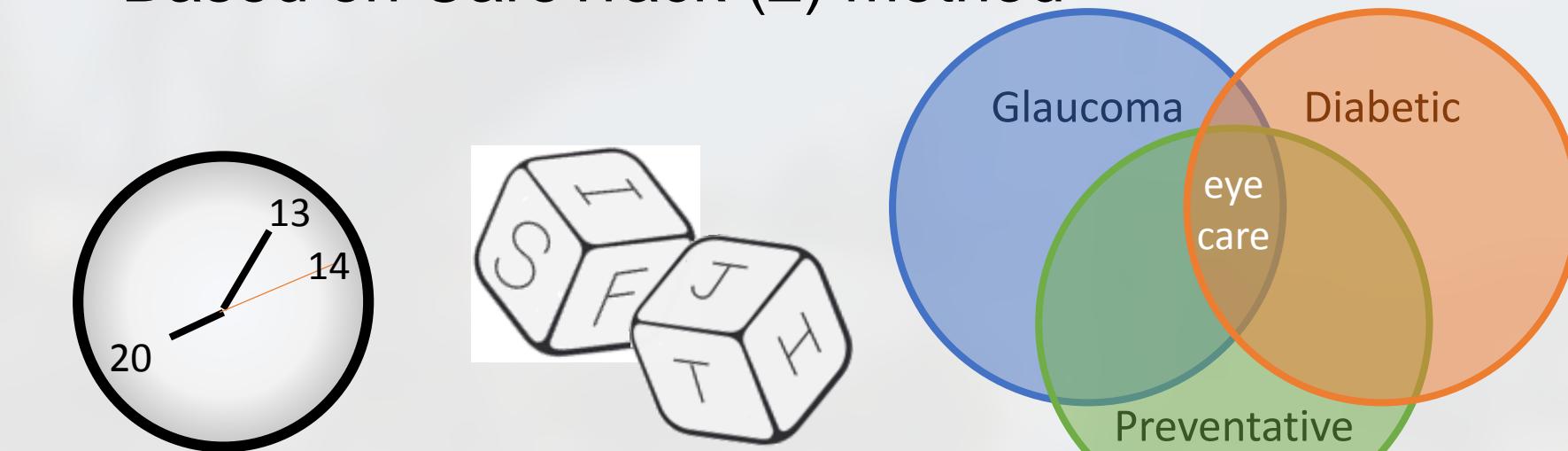
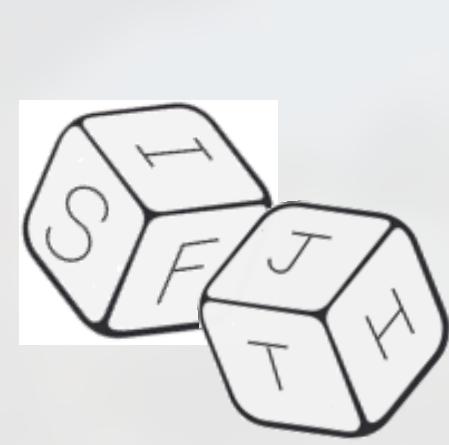
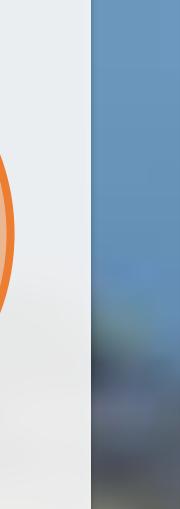
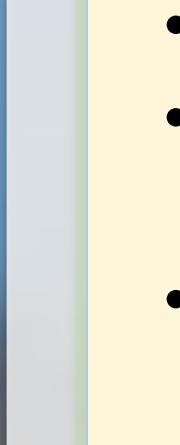
- >50% • >50% of Australians with visual impairment undiagnosed (1)
- 90% • 90% of blindness and vision impairment preventable or treatable if detected (1)
- 57% • 57% (range 13% to 90%) of Australian received appropriate care across 22 health conditions (2). Eye care not measured
- 1 • Single eye condition, specific setting, focus on individual examination technique or aspects of care in existing eye related studies (3); limits generalisability of estimates of appropriate eye care

A better understanding of current variation from best practices will help lay the groundwork to improve appropriateness of eye care.

## Objectives

1. Develop sets of clinical indicators (see Definitions) for representative eye conditions.
2. Measure the appropriateness of eye care delivered against sets of clinical indicators (see Objective 1).
3. Identify patient and practice factors influencing appropriateness of eye care.

## Study Design

- Based on CareTrack (2) method
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- A cross-sectional retrospective record review with random sampling of records for multiple eye conditions at multiple primary eye care practices
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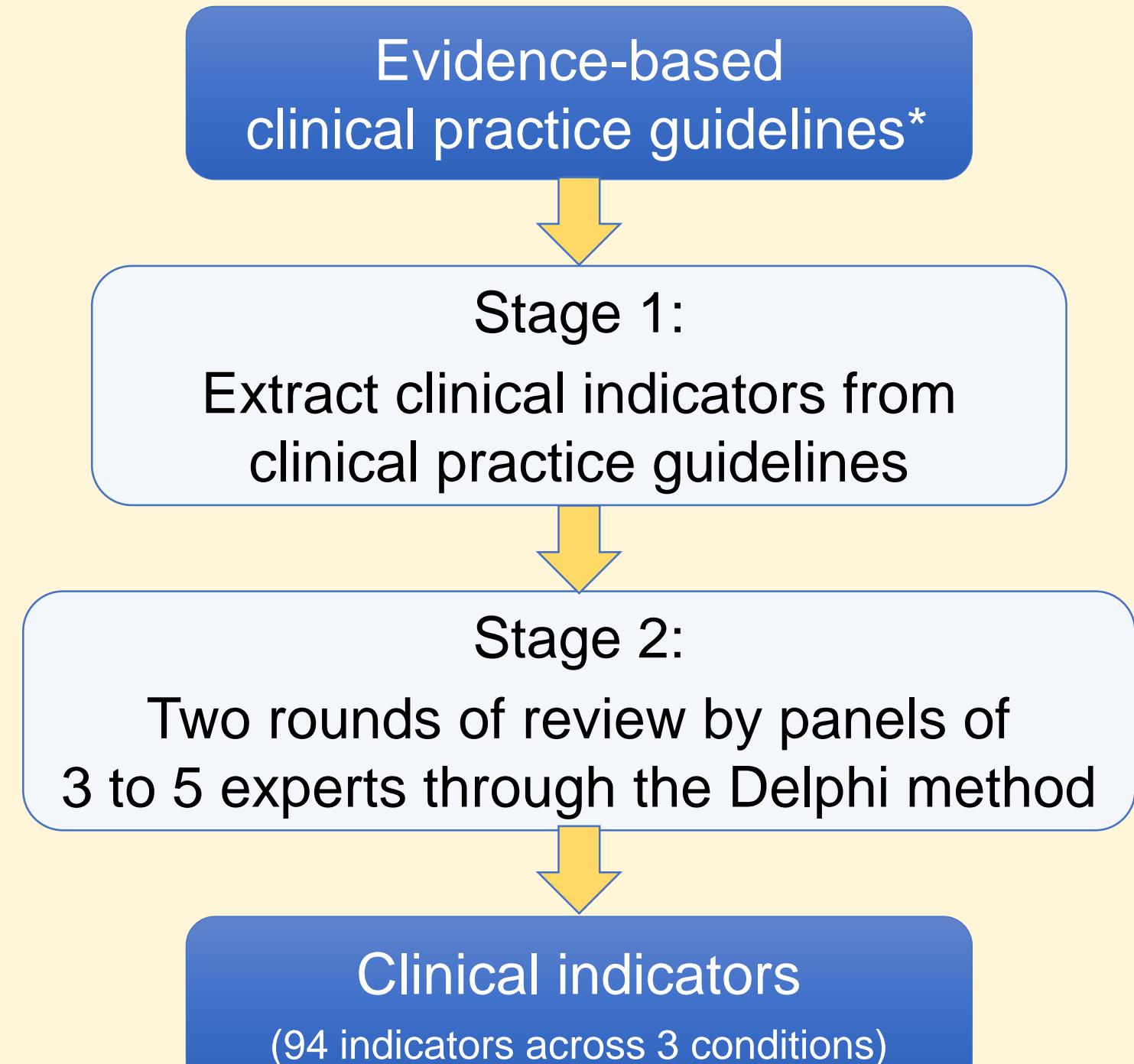
## Outcomes

1. Percentage of eye care encounters at which Australians receive appropriate eye care
2. Factors that influence variations in eye care

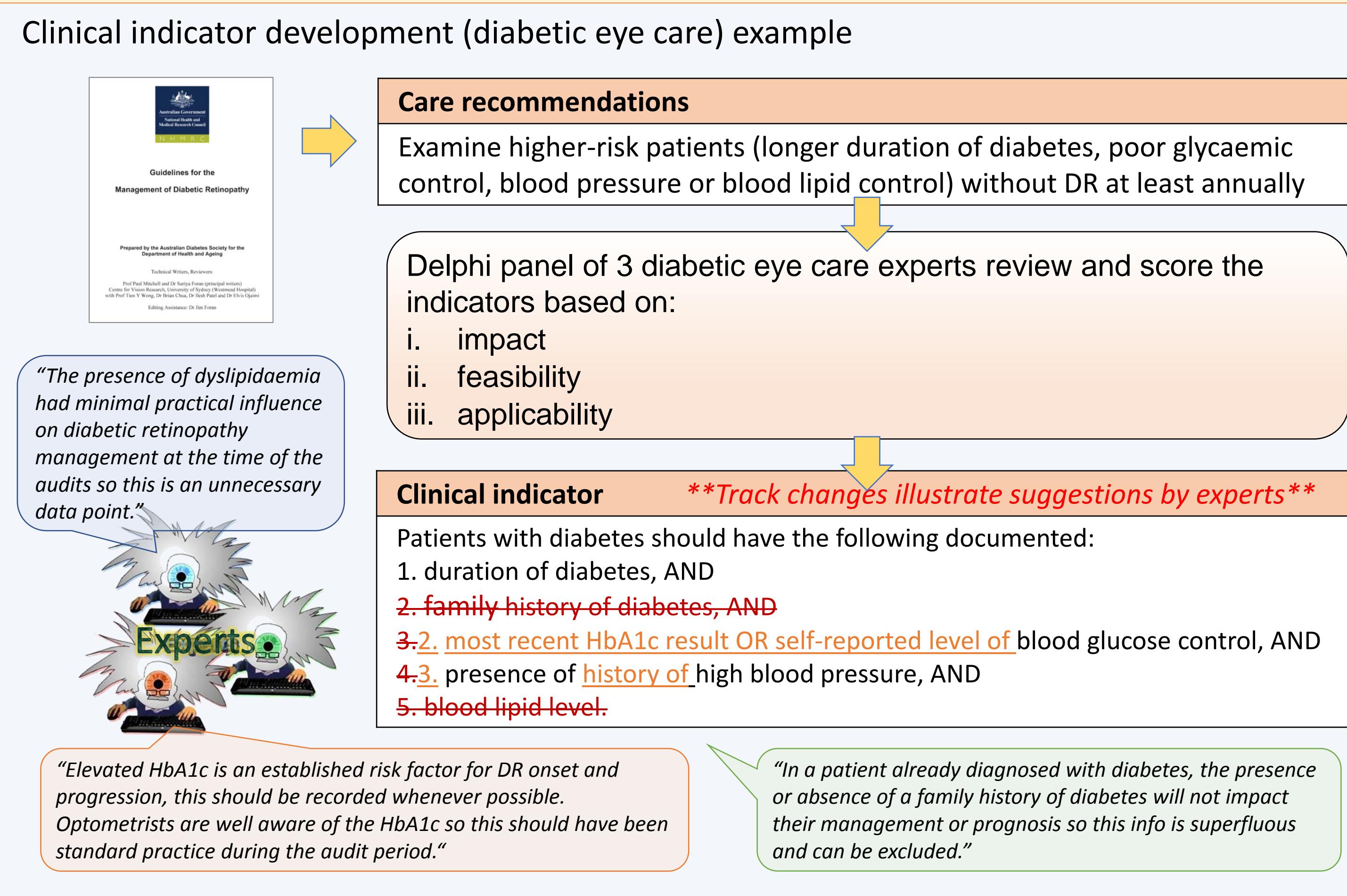
## Methods

### Clinical Indicator (see Definitions) Development

Preventative, glaucoma and diabetic eye care were selected based on the burden of the eye conditions, impact of the appropriateness of eye care and the availability of Australian evidence-based clinical practice guidelines.

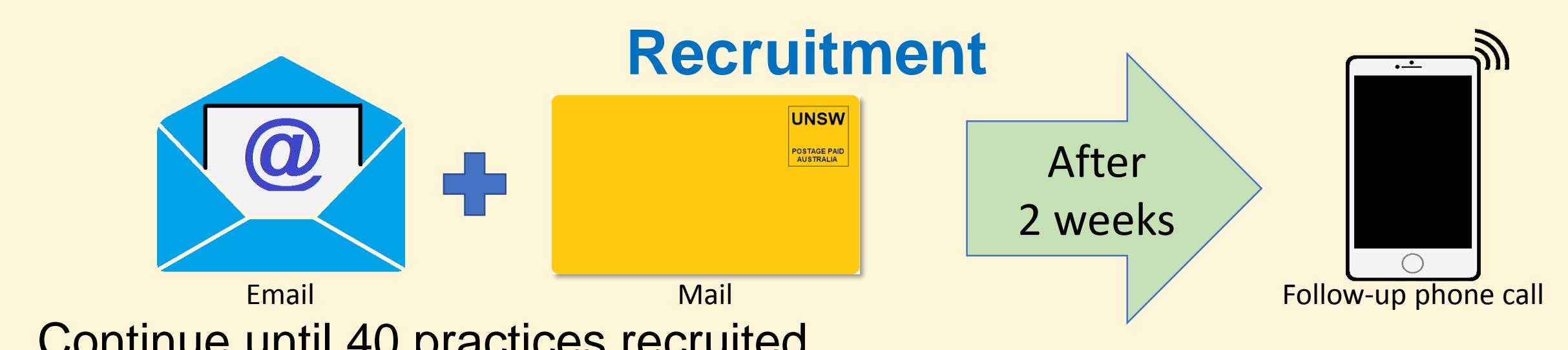


\*AAO (<https://www.aoa.org/guidelines>), COS (<http://www.cos-sco.ca/clinical-practice-guidelines>), NHMRC (<https://www.nhmrc.gov.au/guidelines>), NICE (<https://www.nice.org.uk/guidance>), SIGN (<http://www.sign.ac.uk/guidelines/published>)



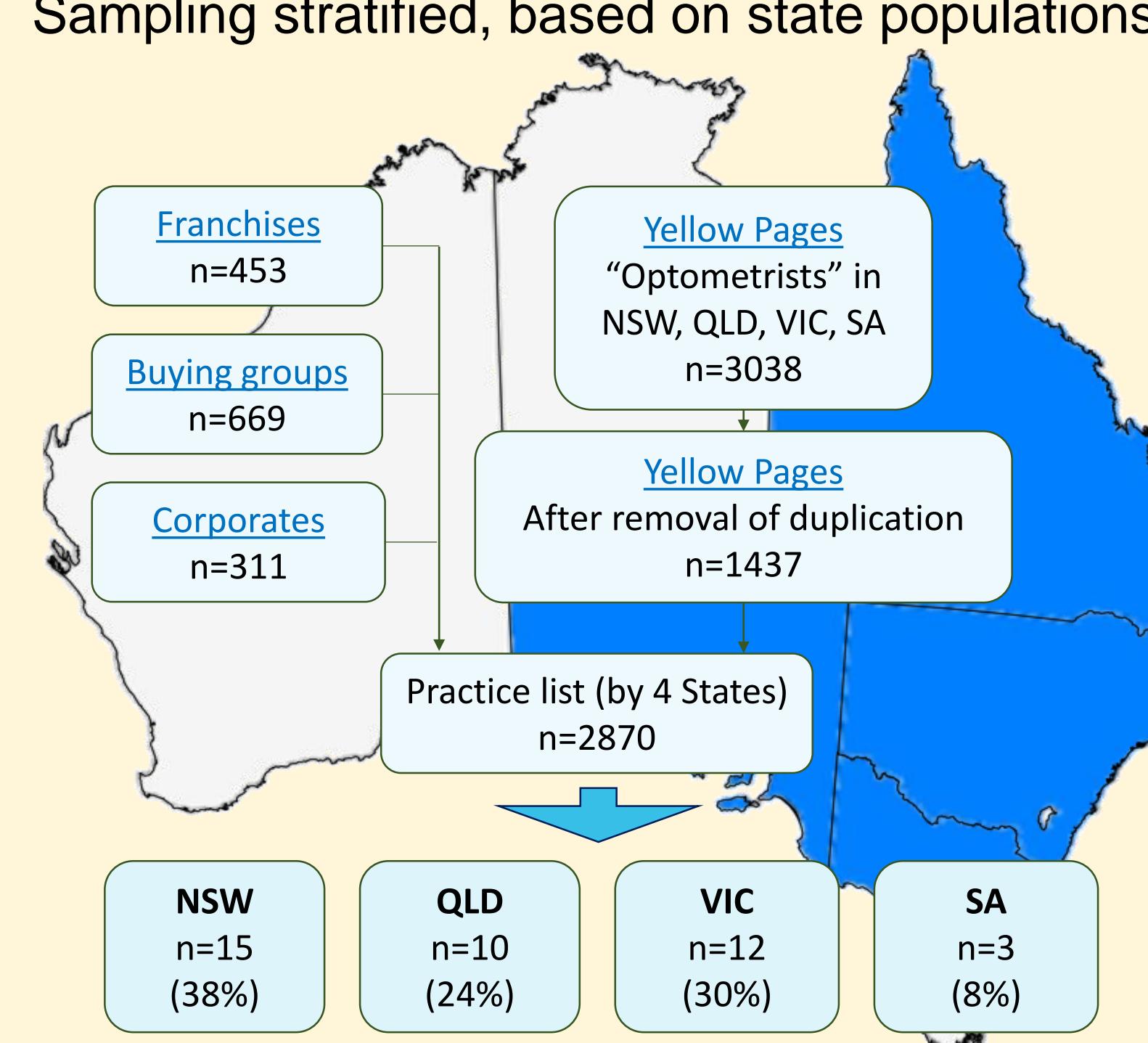
### Sample Size

400 records per condition (10 records @ 40 practices) are required for 95%CI, 5% precision, infinite population and 50% prevalence estimate of appropriate eye care.



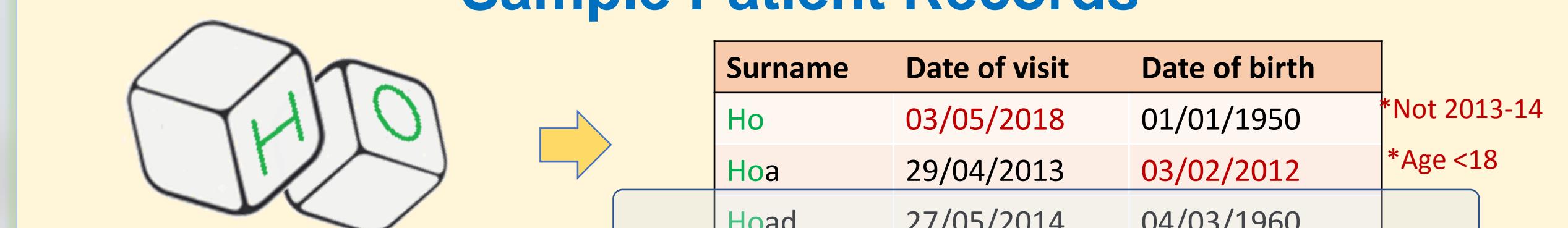
### Sample Eye Care Practices

- Based on Optometry Market Analysis (4)
- Practice details extracted from multiple publicly available sources (e.g. [websites](#) and [Yellow Pages](#))
- Sampling stratified, based on state populations



\*Ophthalmology practices excluded as 75% of primary eye care delivered by optometrists

### Sample Patient Records



1. Generate 2 random letters with 10 different combinations
2. Identify patient with surname starts with the two letters
3. Check sequentially for eligibility
4. Review eligible records

### Data Collection

- Waiver of patients' consent & ethics approval
- Patient age, gender, ethnicity, date of visit extracted
- One trained surveyor (KCH) rates "Yes/No/NA" for each indicator

Sample indicator for diabetic eye care

Finalised clinical Indicator	Yes/No/NA
Patients with diabetes should have the following assessments performed and documented:	
- visual acuity, AND	
- a dilated fundus exam AND/OR retinal photography with grading.	

## Definitions

**Delphi method** - a communication tool to draw expert opinions based on the results of questionnaires sent to a panel of experts. The anonymous responses are aggregated and shared with the group.

**Appropriateness of care** - the clinical care for a condition considered to be evidence-based or consensus-based.

**Clinical practice guidelines** - evidence based statements or recommendations intended to optimise patient care and assist health care practitioners to make decisions about appropriate health care for specific clinical circumstances.

**Clinical indicator** - measurable component of a standard or guideline, with explicit criteria for inclusion, exclusion, time frame, setting and compliance action. (2)

## Summary/Key Messages

- A protocol for a population-based study of appropriate eye care of 1200 patients using retrospective record review
- Using evidence-based (guidelines) and consensus-based (Delphi method) clinical indicators to measure the appropriateness of eye care delivery
- Methods can be generalizable to other eye conditions to provide a comprehensive view of appropriateness of eye care

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