Validation of a credentialing assessment for overseas-educated optometrists in Australia and New Zealand

I Jalbert1, N Chiavari2, K Schmid3, S Backhouse4, G Phillips5, A Cochrane6, T McKenzie7

1UNSW Sydney; 2Australian Council for Educational Research; 3Queensland University of Technology; 4Deakin University; 5University of Auckland; 6University of Melbourne; 7Optometry Council of Australia and New Zealand

INTRODUCTION / PURPOSE

• Credentialing = process used to verify qualifications, experience, professional standing, and other relevant attributes of health practitioners (to determine their competence, performance, and professional suitability to provide safe, high quality health care).1

• Credentialing assessment for overseas-educated optometrists seeking registration in Australia and New Zealand is administered by the Optometry Council of Australia and New Zealand (OCANZ).1

• Candidates required to sit OCANZ’s Competency in Optometry Examination (COE) (Fig 1).

Aim: To review the validation and outcomes of the written components of the credentialing assessment for overseas-educated optometrists seeking registration in Australia and New Zealand.

Can overseas-educated optometrists safely practise optometry in Australia and New Zealand?

METHODS

Exam Development and Validation

• Content based on competency standards.2,3

• Question selection based on blueprint, weighted towards key competencies.2

• Question writers subject matter experts recruited from profession.2

• Training workshops and blueprint writing (multiple choice question (MCQ) & short answer question (SAQ) provided by assessment experts) [NC].

• OCANZ question writing guide for MCQ and SAQ (Chiavari N. April 2018).

• MCQ & SAQ database formed.

• Standard setting exercise (2013 MCQ; 2017 MCQ & SAQ).

• Item response theory (IRT) - analysis exams, produce reliability metrics, apply standards to results, determine difficulty to calibrate exams, score candidates.

• Ethics approval obtained (UoM, Melbourne).

• The stepped approach to item development and monitoring (i.e. non-scored pilot, revision of pilot and underperforming items and re-pilot after re-examination, inclusion in scored item database) helps ensure the ongoing robustness of the item bank.

• This research describes a rigorous process by which the score that constitutes a pass mark for the written component of a credentialing assessment for overseas-educated optometrists is determined. Linking common items and use of Rasch analysis ensures that the cutscore for each exam is set to ensure the same relative exam difficulty is administered.

• The current cumulative pass rate of 57% reflects a challenging examination that attempts to strike an appropriate balance between protecting the public and professional standards and fairness to candidates.

• The validation process described in this research benchmarks favourably against that used by other health professions4 and could be adopted in other settings. Overseas-educated candidates have confidence that they are sitting a credentialing assessment that tests optometric core competencies and maintains a similar level of difficulty across administrations.

RESULTS

Sample MCQ2

The primary cause of blindness in Australia and New Zealand for people over the age of 55 years is:

• a. Cataract
• b. Glaucoma
• c. Diabetic retinopathy
• d. Dacrocystitis

Sample SAQ2

Your patient is an 12 year old boy who has been referred to you for advice following the detection of a colour vision problem with the Ishihara plate test at a school vision screening. He passed the other tests of visual performance at the screening.

a. List the tests that should be performed to determine the nature and characteristics of the colour vision problem in this patient. (4 marks)

b. What is the most common type of inherited colour vision defect in males? (1 mark)

c. Your patient has the most common type of inherited colour vision defect that appears in males. List in font point the most important advice that should be provided to this patient. (5 marks)

CONCLUSION

Findings support the validity of the written components (MCQ and SAQ) of the credentialing of the competency of overseas-educated optometrists in Australia and New Zealand.

REFERENCES

1 Australian Commission on Safety and Quality in Health. Sydney, Australia. 2015.
2 Chiavari N. (2018) "A Development and Validation of the Examination of Core Competencies in Optometry (COE) for Overseas Optometrists in Australia".