



A Novel Competency Evaluation Form for In-house Optometrists: A SNEC Pilot Study

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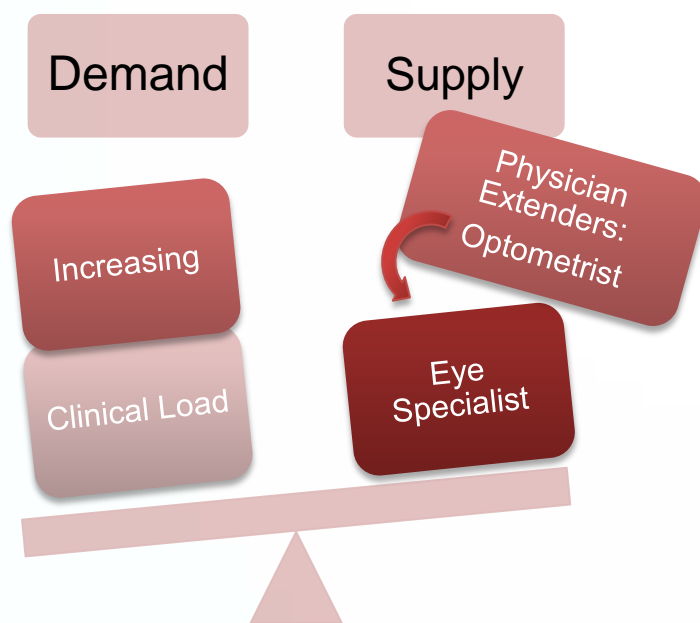
Introduction

- Ageing population in Singapore has increased significantly in the past two decades.



One in four Singaporeans being over 65 years old by 2030.

- Increase number of people suffering from chronic diseases, including age-related eye diseases such as age-related macular degeneration (ARMD), diabetic retinopathy, glaucoma and cataracts.



- In anticipation of increasing clinical load, the need to train optometrists beyond their role as refractionists has become more pressing. Part of these efforts to streamline clinical skills training include a new training framework that trains the optometrist in 3 months (10 sessions per week) by focusing on specific modules and key skillsets.
- We reviewed and developed this new assessment program to set a standard for our **optometrists** who are our **physician extenders**. This project is of great significance as we need to get this right or risk not have a **future ready work force**. This work force will drive our **new models of care**.
- George E Miller, a great medical educationist (1919-1998), once said **“Assessment drives learning”**. **Assessment** rather controls the progress of **learning**. To better understand and determine if the new training framework is adequate, our aim is to develop a new competency evaluation form to evaluate the clinical ability of optometrists trained under this new framework.
- The new form needs to be **easy to use**, **comprehensive** to cover the necessary components, and **specific** to ensure minimal variation between assessors.

Materials and Method

- The new assessment framework was conceptualised by applying the competency based medical education (CBME) framework. A CBME framework requires assessment to be continuous and frequent, criterion-based, developmental, work-based where possible, use assessment methods and tools that meet minimum requirements for quality, use both quantitative and qualitative measures and methods, and involve the wisdom of group process in making judgements and trainee progress.

Qualitative written faculty evaluation

- ✓ Formative assessment utilizing on-going feedback
- ✗ Subjective evaluation, therefore unable to quantify

Chart review

- ✓ Retrospectively reviewing of patient's notes to assess the performance, thus management decisions are very reliable
- ✗ Not patient/assessor dependent, the process is unable to evaluate clinical skills and interactions reliably.

Evaluation Tools

OSCE

- ✓ Ensures all candidates have the same type of patients and conditions. This provides a fair environment.
- ✗ Large amount of time and resources taken to organize an OSCE.

Clinical Evaluation Exercise (CEX)

- ✓ Real time in a clinical setting and performing an entire consultation with a patient.
- ✓ A rubric-scoring sheet is provided to the assessor to score proficiency of the candidate.
- ✗ Patients and environment are not standardized

- A modified SNEC Ophthalmic Clinical Exercise Examination (SNEC-OCEX) checklist, was developed for use during observed optometrist-patient interactions. This new **OCEX checklist** was sent to **eleven content experts** for their review and constructive comments.

Results and Discussion

Results

- We gathered comments from eleven experts in this field. These comments include rearranging the flow of the CEX, having certain procedures to be optional and removing abbreviations. One expert commented on the duration of completing the evaluation form, which will be monitored when the assessment tool is evaluated for its reliability and validity in clinical situations. All expert comments were considered and incorporated appropriately, thus establishing a level of face and content validity.

Discussion

- Any new assessment tool will need to be tested on its reliability and validity prior to clinical usage. With introduction of new assessment tools, immediate concerns of confusion with new terminology. Challenges include number of pages, details and checkboxes that assessors will have to go through. To overcome this problem, detailed instructions, learning videos and pre mini-CEX familiarisation sessions are possible means to guide them on using the tool.
- This modified SNEC OCEX attempts to **combine** the positive features of both the **OSCE (comprehensiveness)** and the **mini-CEX (real world situations, shorter duration, immediate feedback, acceptable reliability, and cost)** in one assessment tool. We are currently trying to establish the consistency of grading between evaluators (inter-assessor reliability). Thus, further modification of the assessment tool may be necessary.

References:
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 • Pelgrim EAM, Kramer AWM, Mokkinik HGA, Van den Elsen L, Grol RPTM, Van der Vleuten CPM. In-training assessment using direct observation of single-patient encounters: A literature review. *Advances in Health Science Education: Theory and Practice*. 2011;16:131-142. doi: 10.1007/s10459-010-9235-6.

OSCE

- ✓ **Gold standard** of clinical assessments (subjects, assessors and environment are controlled)
- ✗ Test duration: 4 to 8 hours per individual to obtain reproducible results
- ✗ Standardized subjects need to be adequately remunerated

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Mini-CEX

- ✓ Provides immediate feedback of the candidate and is less onerous to the assessors, as only certain skills are assessed each time.
- ✓ Minimal scheduling, on an adhoc basis and has a shorter patient interaction requirement as compared to OSCEs.
- ✓ Studies reporting reliability results, showing **mostly acceptable (>0.8) reliability** with a feasible sample size of **ten encounters**

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