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### Evaluation Systems of Family Medicine Trainees in Belgium

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# Evaluation Systems of Family Medicine Trainees in Belgium

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## Introduction

Various methods of assessment, formative and summative, similar to the South African context, are used in the undergraduate, 7<sup>th</sup> year and post graduate training program of Family Medicine in Flanders. The outcomes and objectives of training programmes are well defined, making the choice of assessment methods more valid and reliable. The HIBOs (Family Medicine Post-Graduate Trainees) are assessed as follows to ensure that objectives were reached:

### Formatively

- The Practice Trainer (usually the General Practitioner-GP) assesses the Trainees work in the practice and
- The Trainee Coordinator assesses participation and work in seminars.

### Summatively, through

- A written examination at the end of the training program
- An oral examination at the end of the training program

- An OSCE (objective structured clinical examination) at the end of the training program

## The written examination

The written examination is a strictly knowledge based test where content is most important. Only extended matching questions are used in the test. The test has been proven to be very reliable.

At the end of the 2<sup>nd</sup> year a "formative" written test is taken by all the HIBO's. It is used to predict success in the final written test, screening for remedial candidates, so that remediation can be organised before the final test is taken at the end of the 3<sup>rd</sup> year.

Strict design principles are adhered to. Up to 25 people work on the design of the test, which is computer adaptable as well. Approximately ninety new items are created per year according to a strict protocol. Practicing doctors who are regarded as experts in their fields, are asked to set the questions. After the questions

have been set, validation groups work through them, and then give feedback.

Training for people interested in setting questions can take up to 2 years before they are productive in setting questions.

To ensure the content validity of the test a three-dimensional blueprint is used for selecting the spread of questions:

- Epidemiology – this dimension of the blueprint is based on ICPC classification. The main chapters of the ICPC are regrouped into 9 clusters.
- Links to the end goal – the objectives the students needed to achieve regarding the competencies of Family Medicine, are kept in mind for each question.
- Age criteria – \_ of scenarios are real patients where age and diversity does play a role. The questions are spread over the whole spectrum of different ages according to a predetermined key.

"Degree of certainty" – a lifelong

learning principle is also assessed with every question. The student has to indicate how sure s/he is of every answer. This is then correlated with the accurateness of the answer. The philosophy behind this is that you must be able to identify what you know and also what you don't know, and so possess the ability to identify your own borders of knowledge i.e. the metacognitive realism.

### The oral examination

The exam consists of two 30-minute sessions. The focus of the exam is not knowledge, but rather the controversies, the difficulties, the ethical issues and the principles involved in Family Medicine. The Trainees' lateral thinking ability is tested. The content of the oral is directed by:

- Five cases each student has to prepare for the exam. Two of these will be selected by the panel. Questions start with, but often are not restricted to, these cases.
- The practice project (a quality improvement project done by every student once a year)

A hybrid assessment procedure based on findings of a previous PhD study, is followed. Evaluators use a rubric (standardised grid) as a marking tool.

Examiner 1 will start with questions linked to the content of one of the prepared cases, trying to explore the way students link the literature to their practice. The 2<sup>nd</sup> (and 3<sup>rd</sup>) examiner then takes over and phrases questions that are independent to the case – sampling the grid making sure all aspects have been covered. In the 2<sup>nd</sup> half hour the same happens with the 2<sup>nd</sup> case. Thus each student will have two independent examinations by two different teams of evaluators. The score the student is awarded is NOT the mean of the evaluators, but rather a negotiation between examiners to establish the real value of the student expressed only as pass or fail.

### The OSCE

HIBO's have the opportunity to do the OSCE six months before they finish their training. If they pass they don't have to repeat it again, but if they fail they have another chance in six month's time, at the end of their 3<sup>rd</sup> year. We were fortunate enough to be present at one of the OSCE's.

The national board uses a blueprint for the OSCE stations. It is thematic and focussed. A good station will cover as much of the OSCE blueprint as possible. They use a Hybrid scoring system where an item is marked whether present or not. The items are weighted, but individual red flag items (fail items) are not used at present. There are however stations that have to be passed to pass the OSCE. The OSCE has been found to be reliable.

Requirements for students to pass the OSCE are as follows:

- They are not allowed to fail in more than 25% of the stations
- They need an average of more than 50% overall
- They need to pass the vital stations like CPR

The OSCE has 20 stations, with 20 students per exam. The students do 10 stations, have a rest with refreshments and then do the last 10 stations. The OSCE consists mainly of integrated scenarios making use of simulated patients at most of the stations. The simulated patients are professional and non-professional actors with extensive training. The Practice Trainers act as evaluators.

After the OSCE a very valued feedback session is held where every evaluator has to summarise the aggregated problems of the HIBOs s/he observed in the station s/he assessed and conveyed as an educational message. The Simulated Patient's, the HIBO's, the evaluators, and the organisers who attend the session also give feedback. No individual feedback is given at this session. Feedback on the answers,

outcomes of the stations as well as every student's individual performance is posted on the website within 2 weeks of the exam.

### Evaluation of Trainee by Trainee Coordinator and Practice Trainer

Most of the Trainee Coordinators keep a file on every Trainee and will write comments in the file regarding the Trainee's performance after every seminar. Much of the on-going evaluation in the seminars and in the training practices, are linked to the learning plan.

The Coordinator and Practice trainer fills in an evaluation form for each HIBO at the end of the training programme where the coordinator awards the HIBO two marks out of 20; the first for effort, taking into account the assignments, learner agenda, seminars given, presentations, the practice project and the ability of the learner to reflect; and the second mark awarded for "ability" in Family Medicine taking into account the learners knowledge, skills, attitude and ability as clinician, scientist and person.

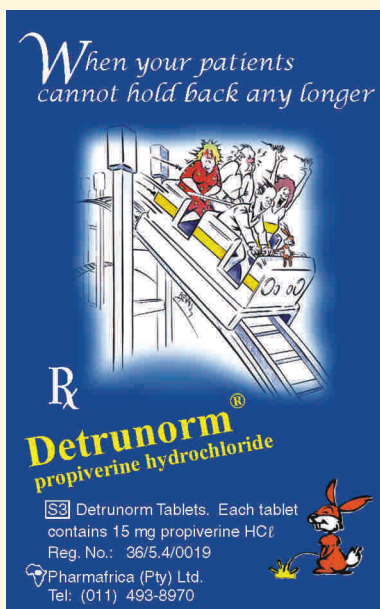
### Reflections and ideas

A great strength of the Flanders system is the standardisation of training and assessment that is accomplished by one centralised exam, assessing clear objectives and outcomes, which delivers a standardised product (a clearly defined Family physician) across the board.

Huge effort is put into examination procedures to ensure objective and relevant assessment. E.g.:

- Clear and strict protocols for the setting of questions and OSCE stations exist thus ensuring a very high standard of items. This huge question bank is continuously maintained. People are often trained for 2 years before their questions are used. The involvement, dedication to excellence and enthusiasm of the assessment team are commendable.

- The OSCE evaluators do not know how their assessment of the student at a particular station affects the end score of the student, as the evaluators do not know the weightings or the critical issues of each station. They just complete the tick sheet. The ticks are then read into a computer program that calculates every student's score. This gives the evaluators the freedom and confidence to be objective and standardised.



- They are not concerned about students discussing stations during the break. Research has shown that there is no difference in outcome, even though students have discussed the content of a station.
- These assessment procedures are well-documented and researched, with proven reliability and validity.

The use of blueprints ensures that all relevant knowledge and skills are assessed. This contributes to content validity. The assessment extends beyond the boundaries of theoretical knowledge creating a culture of lateral and creative thinking.

Student feedback is a priority, ensuring that the examination also becomes a learning experience. Students can obtain their individual scores, the scores for every station

and their scores in relation to the group on the website within two weeks. The feedback session after the OSCE is very useful and positive.

### The South African perspective

South Africa has eight different Departments of Family Medicine, each independently running its own postgraduate programme.

These departments voluntarily collaborate through FaMEC (Family medicine education consortium) and are not obliged to implement resolutions of FaMEC in their respective programmes. Standardisation of outcomes, training and assessment are our biggest challenges. Some progress has been made in this regard. FaMEC has complied with a document stating the outcomes a student is expected to reach by the end of his/her training in the postgraduate programmes. The possibility of a joint examination is currently being explored, but a number of practical and financial issues still have to be clarified before this can become a reality.

Each department adheres to their own University's regulations regarding examination. This ensures that good basic examination procedures are followed with peer review by external examiners. However, as a rule validity and reliability of examinations are not well researched and documented, as is the case in Flanders. This is an area that Family Medicine in South Africa needs to address. Especially in the high stakes of the final examinations the pass / fail decision should be justifiable both legally and academically.

Feedback to students has not yet been discussed at FaMEC meetings; it is therefore not clear what specific departments' feedback practices are.

Resources will be one of the main difficulties in achieving our goals. ✎

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