

## **STUDENT SELECTION INTO MEDICAL AND HEALTH PROFESSIONAL SCHOOLS**

### 1. Fact sheet on student selection:

- The study of medicine/allied health profession is highly regarded by society and is often considered difficult and highly competitive
- Almost all society restrict the numbers of students entering public medical/allied health schools
- Most medical/allied health schools limit numbers on the basis of the previous academic performance
- The study of medicine, unlike many other higher degree courses does not morally end with attainment of an academic qualification
- Society sees the medical/allied health course as vocational training. Applicants are expected to make medicine their career
- In addition , medical/allied health graduates are expected to “repay” society by providing quality medical care and services upon graduation

### 2. Assumption in student selection:

- Medical/Allied health education is really about training future Doctors/Nurses/Medical Assistants
- The selection process becomes one of choosing people who will make good doctors/nurses/medical assistants
- Medicine/allied health profession unlike most other vocation is a life long learning process
- The aims of undergraduate medical education is really to provide the basic knowledge, skills and attitudes which will provide a firm basis for future vocational training
- Basic student selection questions:

- Do we really have a selection mechanism that is accurate, valid and reliable enough to predict the outcome that we really want of our medical/nursing/medical assistant graduates?
- Can we define a “good doctor/nurse/medical assistant” bearing in mind that medicine/allied health profession unlike most other vocations is a life long learning process?
- If we agree that the aims of undergraduate medical/allied health profession is really to provide a firm basis for future vocational training, could we begin to decide how best to select our medical/allied health profession students?

3. Tools for student selection:

- Academic achievement measures
- Interviews
- Aptitude test
- Referee reports
- Entrance examination
- Personality inventory

4. Selection issues:

- Congruence
  - It is highly probable that success in medical school depends to a large extent on the match between the aspirations and characteristics of student admitted with the aims, curricular approaches, resources and style of the establishment
  - Example of congruence model: Student selection at Mc Master University, Hamilton, Ontario, Canada:
    - Students are selected at Mc Master on the basis of their performance during a stimulated tutorial designed to test their skills at problem solving in small groups. The aim is

to select students in a way that reflects the pattern of study in the school

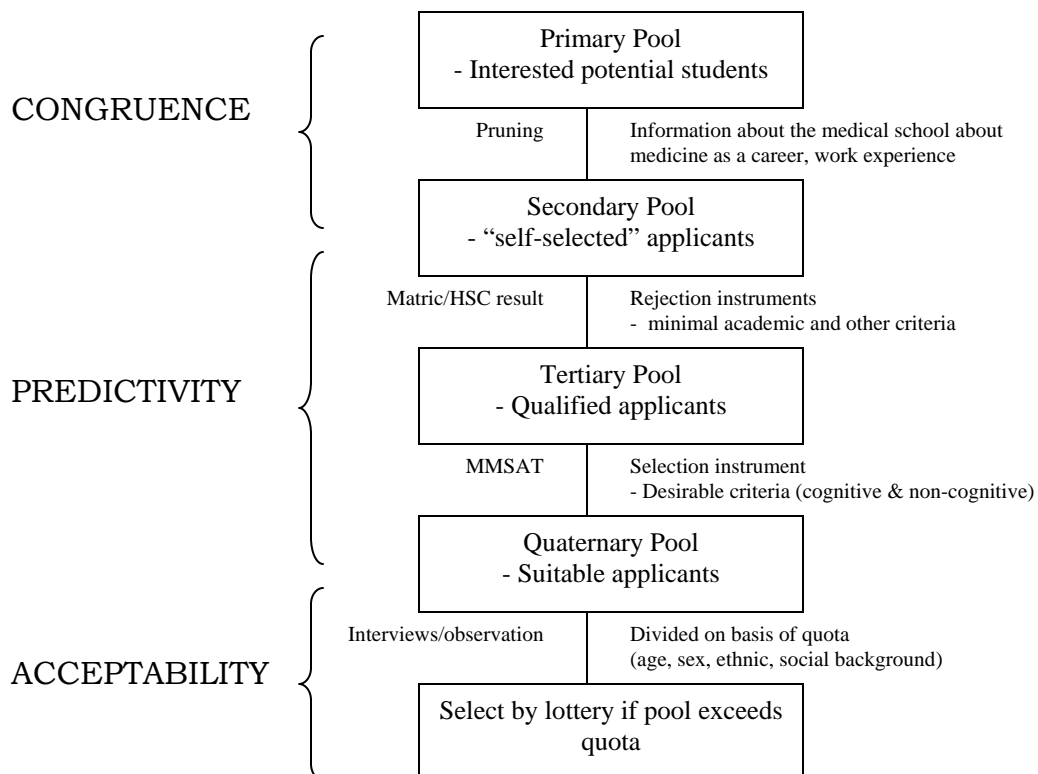
- Applicants are allocated to tutorial groups of 5 or 6, with a tutor for each group
  - Each tutorial lasts about 45 minutes, during which group tackles two unstructured problems
  - About half way through tutorial candidates are asked to summarize how well they think they are functioning in group
  - A team of assessor observes tutorial through one way mirror and assesses how well each candidate performs within group
- Predictivity
    - The contribution of data used in selecting and rejecting candidates should be justifiable in terms of the ability of these data to identify individuals who are unlikely to complete the course as well as individuals who are likely to excel in achieving the stated goals of the institutions
    - The performance of students in a selection process should be matched and correlated with the performance of students throughout the course and where possible with performance in postgraduate vocation and training
    - Example of Predictivity model: Student selection at University of Newcastle, Australia:
      - At the University of Newcastle there are 2 models of entry to the medical school; the academic mode and the composite mode
      - Admission through the academic mode is based solely on academic achievement (top 1-2% in High School Certificate [HSC]) in the line with all other school in New South Wales

- The composite mode students (HSC with in top 2-10%) are selected based on performance on written psychometric tests and structured personal interview
- Regardless of the entry mode, all applicants are required to sit written tests and attend the interview. Characteristic sought in applicants through interview include:
  - Compatibility with institutional innovation
  - Perseverance
  - Tolerance of ambiguity
  - Flexibility, adaptability
  - Motivation
  - Self-confidence
- Acceptability
  - The procedure for selection of candidates should be fair, just and equitable
  - The justness of a selection process is demonstrated when criteria are explicit and are measurable by reliable means
  - Medical schools have been urged to develop and document a code of practice in their medical student selection process to reflect this principles
  - Example of acceptability model: Student selection at the Medical Faculty, University of Limburg (Maastricht), Netherlands
    - The faculty of Medicine at the University of Limburg is amongst the most innovative medical schools in Europe, offering a problem based and student centred medical education program
    - In Europe, selection procedures are based largely on academic performance: however, recourse has recently been made with – random selection, or the “lottery system”.

While it is also used on an experimental basis elsewhere, in the Netherlands, the system is now established.

- The selection method instituted by the law operated initially on the basis of a partial random selection process: candidate who have average mark of at least 7.5 out of 10 in their secondary school leaving examinations were automatically admitted to university, while those who had obtained lower marks were selected by lot
- In 1975 the provisions of the law came up for revision. The government through parliament adopted a system of weighted random selection. In this system, a candidate with an average mark of 8.5, for example, has 3 times as many chances of being accepted as a candidate with an average pf 6.5 into medical school

### 5. A functional strategy for student selection



6. Guidelines on interviewing:

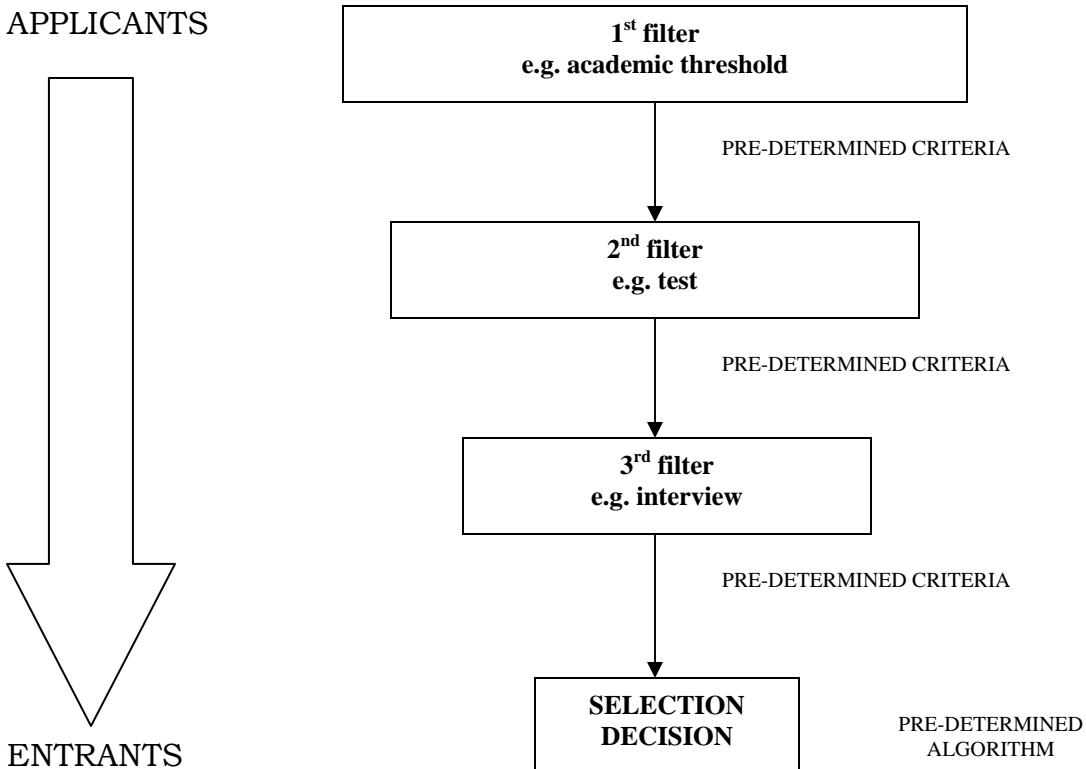
- M-MSAT procedure
  - Academic threshold
    - Subject pre-requisites
    - Mark (top 10% or top 15%)
  - Psychometric test for quantifying desirable cognitive and non-cognitive skills
  - Structured interview for identifying verbal communication skills, attitudes, motivation and decision making
  - Sources of information for making selection decisions
    - Academic record
    - Report from school principal
    - Written psychometric tests
    - Referees report, testimonials
    - Self-reports
    - Structured task
    - Observed group activity
    - Personal interview
- Guiding principles
  - Use methods that allow direct observation/measurement of the quality in question
  - Use only objective, valid and reliable measuring tools
- Roles of interview in student selection
  - Should only be used as a tool for data gathering
  - Best used only for qualities that can be assessed directly
    - Verbal communication
    - Verbal comprehension
    - Decision making
    - Critical thinking/reasoning process

- Cognitive skills
  - Academic record
  - School principal's record
  - Written psychometric tests
- Non-cognitive skills
  - Autobiographical data
  - School principal's report
  - Written psychometric tests
  - Observed group exercise
  - Structured task
  - Interview
- Communication skills
  - Autobiographical data
  - Observed group exercise
  - Structured task
  - Interview
- Interview
  - Labour intensive
  - Only useful if objective
  - Only valid if structured
  - Only reliable if interviewers trained for the task
  - Should only be used as a tool for data gathering
  - Best used only for qualities that can be assessed directly
    - Verbal communication skills
    - Verbal comprehension
    - Decision making
    - Critical thinking/reasoning process
  - Acceptable for purpose of evaluating probable future behaviour if care taken in investigating past experiences and actual behaviour

### 7. A possible selection sequence

- Coarse filters at the onset
  - Subject ore-requisites
  - Threshold academic mark
- Psychometric tests in MCQ format for quantifying desirable cognitive and non-cognitive skills objectively and efficiently in potential large numbers of candidates
- Labour intensive procedures in the later stages when candidate numbers have been reduced
  - Interview
  - Structured tasks
  - Observed group exercise
- Structured interview for identifying verbal communication, attitudes, motivation and decision making

### 8. Selection decision



9. In conclusion:

- We should be realistic about the role of student selection in shaping our final products
  - Predictive power
  - Establishing a code of practice
  - Rationalizing selection policies
  - Choices and commitments of potential candidates