



HOW MANY YEARS DO STUDENTS STUDY BEFORE GRADUATING IN MEDICINE?

M Price, B Smuts

Objectives. The Faculty of Health Sciences at the University of the Witwatersrand is considering changing from a 6-year medical degree to a mainly graduate-entry 4-year degree. The objective of this study was to determine how long students currently take to qualify and how many years are spent studying for each medical graduate produced.

Design. A retrospective study of 691 students registered in medicine at the University of the Witwatersrand in 1988, 1989 and 1990 was conducted by examining student progress records.

Results. The study found that an average of 7.89 years was spent studying for each graduate produced, including tertiary studies before medicine, repeated years and intercalated science degrees. Five hundred and eighty-nine students (85%) graduated and 102 (15%) did not. Forty-eight per cent studied for 7 or more years before graduating, 21% completed degrees before or during their medical studies, and 21% of students repeated years.

Conclusion. The costs to the individual and society of the new 3 + 4-year degree structure would not be very different from those of the current 6-year structure.

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The course of study for the Bachelor of Medicine and Bachelor of Surgery (MB BCh) degree is currently 6 years at all South African medical schools. The Faculty of Health Sciences at the University of the Witwatersrand (Wits) is considering a change to a mainly graduate-entry medical degree of 4 years' duration following a first undergraduate degree. Several medical schools in Australia have undertaken such a change. Sefton¹ and Light² reported the educational benefits of graduate entry and enumerated some of the problems with school leavers that led to the change of direction in Australian universities. Geffen³ argued for a plurality of models of medical education as desirable for Australian medical education, and in particular

for a 4-year graduate-entry model. A key concern regarding change to graduate-entry programmes is the additional costs since the minimum time to graduation becomes 7 years instead of 6. This raises the question of the additional cost of such a degree structure to the students and to society and requires a fuller understanding of how long students currently take to qualify or how many years are spent studying for each medical graduate produced. Geffen³ estimated the costs of such a change at national level by looking at the course fee differential between medical and science fees and by measuring relative university costs based on historical funding data. He recognised that many students already have degrees, but did not give figures. He also discussed the dropout rate and the associated wasted training costs.

This study aimed to estimate the impact of the change in curriculum structure on the time spent studying in a South African university setting. The following research questions were posed:

1. How many years did Wits and other tertiary institutions spend teaching for each medical graduate produced and what was the distribution of years taken to graduation?
2. What was the average number of years of study taken to complete an MB BCh degree?
3. How many students obtained a degree before commencing the MB BCh, or took 1 or more years off from their medical studies to complete an intercalated degree in another discipline?
4. How many students repeated years?
5. What proportion of students dropped out before graduation?

METHODS

A retrospective review was undertaken of student records for three recent cohorts of students to graduate in medicine at Wits. The cohorts included students who registered for their MB BCh degrees for the first time in 1988, 1989 and 1990 respectively, as well as those students who joined these three cohorts as direct entries into the second or third years of study. The total number of students in the three cohorts was 691.

RESULTS

1. How many years did Wits and other tertiary institutions spend teaching for each medical graduate produced?

Table I gives the details of the three cohorts of students included in the study. The calculation of the mean number of years per medical graduate produced used the total number of years that all students in the three cohorts had spent studying

Dean: Faculty of Health Sciences, University of the Witwatersrand, Johannesburg
M Price, MB BCh, BA (Oxon), MSc, DOH

Centre for Health Sciences Education, University of the Witwatersrand, Johannesburg

B Smuts, BSocSci (Nursing), BA (Cur), MEd, DipAdvNurSci



Table I. 1988, 1989 and 1990 cohorts of students in the MB BCh degree at the University of the Witwatersrand

Cohort year	Years registered in MB BCh courses (includes students who did not complete)	Years in other tertiary education, not MB BCh (includes intercalated years and students who did not complete)	Total years spent in tertiary education (Col 1 + Col 2)	Number of students who graduated	Average number of years per graduate
1988 (N = 241)	1 313	321	1 634	202	8.09
1989 (N = 219)	1 261	222	1 483	190	7.81
1990 (N = 231)	1 260	271	1 531	197	7.77
Total (N = 691)	3 834	814	4 648	589	7.89

before graduating or dropping out divided by the number of students who actually graduated.

This includes years spent: (i) in other faculties or health science degrees at Wits before registering to study medicine; (ii) in other tertiary educational institutions (universities, technikons and colleges); (iii) registered in medicine (including repeated years); and (iv) years taken out from the medical degree to complete an intercalated degree in one of the other health sciences or another faculty, usually the science faculty.

The average number of years spent teaching students for each medical graduate produced is therefore 7.89 years. Note that this figure includes teaching that occurred at Wits as well as years spent at other tertiary educational institutions (universities, technikons and colleges).

Fig. 1 shows that 48% of the MB BCh graduates took 7 or more years of study before graduating in medicine.

2. What was the average number of years actually registered for the MB BCh degree?

The number of years that students in the three cohorts were registered in medicine (3 834) was divided by the number of students who graduated (589) (Table I). This figure includes students who failed to complete medicine and students who were admitted directly from other courses or universities into the second or third year of study. The average number of years spent teaching in the MB BCh degree at Wits, per graduate produced, is 6.5 years.

If one analyses the data to include only those 460 students who entered the first year of study by the traditional route and who finally qualified, then the average time to graduation is 6.32 years. This figure includes repeated years and years taken to complete an intercalated degree.

3. How many students obtained a degree before commencing the MB BCh or completed an intercalated degree during their medical studies?

Five hundred and eighty-nine students in the three cohorts graduated in medicine. Of these, 123 students (21%) had completed a degree before or during registration for the MB BCh degree. Most of these degrees (106 or 86%) were completed before registering for medicine but 17 (14%) were completed as intercalated degrees, where the students took 1 or more years off during the MB BCh to complete a science degree, before continuing with medicine. Fig. 2 gives a breakdown of the degrees by discipline.

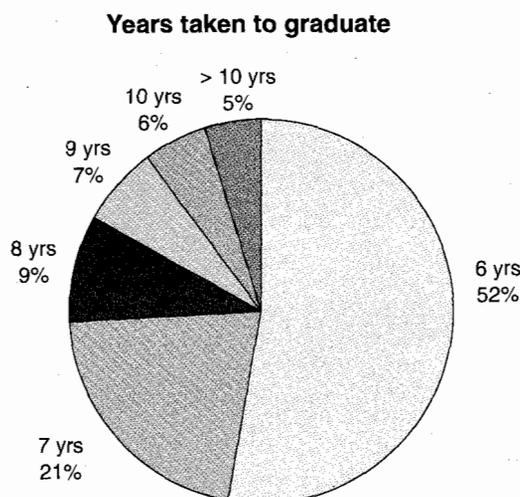


Fig. 1. Distribution of the number of years taken by students to complete an MB BCh degree (N = 589 students).

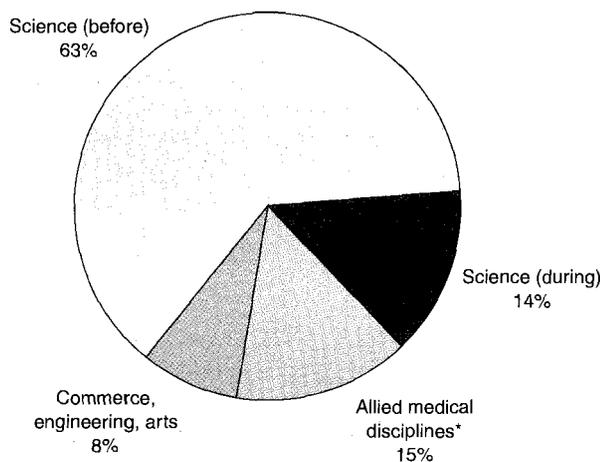


Fig. 2. Degrees completed before or during the MB BCh degree (N = 123). (Allied medical disciplines include degrees and diplomas in nursing, occupational therapy, pharmacy, veterinary science, dietetics and optometry. Three students who completed an allied medical bachelor's degree and then went on to complete a postgraduate science degree have been included under allied medical disciplines and not science.)

4. How many students repeated years?

Of the 589 students who graduated, 124 (21%) repeated 1 or more years of study in medicine. Eighty-five of these students (14%) repeated 1 year and 39 (7%) repeated more than 1 year of study.

5. What proportion of students dropped out before graduation?

Of the 691 students in the study, 589 (85%) graduated and 102 (15%) did not graduate (Table I). It should be noted that 13 of the students who did not complete the course had obtained degrees before starting medicine and that 20 students, for whom we have records, went on to complete another degree after leaving the MB BCh degree.

CONCLUSION

The study shows that the three cohorts of students admitted to medicine in the late 1980s studied on average for 7.89 years for each graduate produced. Of those who graduated, nearly half studied for 7 years or more and 15% left medicine before graduating. The high failure and dropout rates are often attributed to the problem of predicting success based on school matriculation results and there is a concern that in recent years school leavers are even less well prepared for university than before. The high dropout rate could also be attributed to poor motivation as some students discover that they are not really interested in medicine.

A new degree structure of 7 years would generate an average study time of slightly more than 7 years because of failures,

although it is hoped that selecting graduates would lead to lower failure and dropout rates in medicine as students would have proved themselves at university level and would also be more mature in making a career choice. The study illustrates that the costs to individuals and to society of a 3 + 4-year degree structure would probably not be very different from the current 6-year structure.

PRACTICE POINTS

In considering the resource implications of changing from a 6-year undergraduate to a 4-year graduate-entry medical programme, which then requires a minimum of 7 years of study, one should recognise that: (i) the average length of study is already significantly longer than 6 years; (ii) there may already be a number of students who have done a full degree before embarking on the traditional 6 years of study; and (iii) therefore the graduate entry programme does not necessarily cost more and certainly not the extra year that would be anticipated at face value.

References

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