OPINION

IN BRIEF

- Describes the major changes in university tuition fees that will take place in 2006 and explains the potential implications to future dental students regarding the financing of their education.
- At present, prior to the introduction of increased tuition fees, insufficient numbers of pupils from disadvantaged backgrounds apply to study medicine and dentistry.
- When the increased tuition fees come into force, the government has put procedures in place to encourage applications from students of low-income families.
- The level of debt incurred by final year dental students would seem to influence their future career plans.

Financing student education in the future

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Funding arrangements for university students entering courses will undergo a major change from 2006. From that date, universities will be able to charge students up to £3,000 in tuition fees as a contribution to their education. Dental students may be disproportionately affected by the resulting debt because they will have less opportunity than those in other courses to earn money during a long summer vacation. In addition, dental and medical courses are longer in duration than the typical three year British degree course. We have outlined the major changes in these funding arrangements. Drawing on our experience in the United States and elsewhere in the world, we suggest that further large increases in university tuition fees seem inevitable. A major consequence of rising student debt may be denial of entry into the dental profession of the more disadvantaged in our community. Urgent research and planning needs to be done in advance so that this unpleasant scenario is prevented.

INTRODUCTION

The purpose of our article is to describe the proposed new changes and review the possible consequences of increased university tuition fees. Governments throughout the world always face the dilemma of raising taxes or charging the end-users for necessary services. Recently, there has been considerable debate about the benefits and disadvantages of raising tuition fees paid by British university students. It is proposed in the Higher Education Bill that from September 2006, British universities will be able to charge each student a tuition fee up to £3,000 per year, whereas students currently pay a contribution of £1,125 (for year 2003/4). It is also proposed that graduates will repay these fees when they earn more than £15,000. Students, at present, pay the tuition fee while at university. While there is an obvious advantage to these institutions in receiving an income to improve resources and facilities, any financial burden will disproportionately affect medical and dental students because they receive longer training.

While the new arrangements apply directly to England, the Scottish Parliament has already abolished 'up-front' tuition fees, but following graduation Scottish students pay a graduate endowment. The Welsh Assembly will also abolish 'up-front' fees in 2006, but has limited devolved powers in the area of student finance.

Education of dental students is expensive, and the cost is expected to increase in the future. In the United States, tuition fees for a university education have been levied for many years. Most students in the United States accumulate educational loan debt for at least part, and in some cases all of their educational fees and living expenses. Dental education is a pre-doctoral four-year course and total costs incurred by students include tuition fees, mandatory general fees, instruments, textbooks, health service fees, and living expenses. Prior to dental school, students have also completed a four-year course of study at a university to obtain a Bachelor's degree. Therefore, many students will have prior educational debt upon entering dental school. Students residing in a particular state who attend a public, state supported dental school, have a reduced fee compared with non-residents, but when averaged over all dental schools, the reduced resident total costs over the whole duration of the course were still $88,534 (or about £48, 827) for 2001/2. Non-resident students paid total costs of $128,453 (£70,843), on average, over the duration of the course. These figures represent the total cost for tuition, fees, instruments and supplies, books and living expenses for the four years during dental school. These figures do not include tuition and living costs incurred during the previous four years at a university while obtaining a Bachelor's degree. Total costs for four years of dental school training for resident and non-resident students have risen by about 6.0% each year over the last 10 years.[1]

The total cost of full-time education also includes 'living expenses', but these are difficult to predict given the rising cost of living. Living expenses average about $10-15,000 per year in the U.S. From

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Refereed Paper
Accepted 10 January 2005
doi: 10.1038/sj.bdj.4812900
© British Dental Journal 2005; 199: 561–563

research by Barclays bank, the average debt for a student leaving a three year course at a British university in 2003 stood at about £12,069, an increase of 10% over the previous year. Data from the British Dental Association Student Debt Survey taken of final year dental students in 2003, found that the average debt was £12,700. The average debt will increase when tuition fees come into effect, estimated for the average graduate to be about £21,000.[2]

What is the evidence that increased debt affects dental student recruitment and retention?

A survey conducted by Tufts University School of Dental Medicine in Boston, MA, USA in the year 2000 asked applicants who were interviewed to rate what characteristics of a dental school were most important to them. The cost of attending school was the second most important criterion after the academic reputation of the school. In a similar survey conducted in 2001, curriculum and tuition expenses were equally rated as the top factors in their consideration of where to attend dental school.[3]

The number of English university undergraduate students applying to English universities has risen significantly from about 40,000 in the year 2000 to 50,000 in 2003. Some have questioned whether this expansion in higher education will be matched by an equivalent increase in well-paid employment. In the same period the number of English students applying to read dentistry in England has increased only slightly from 1,186 in 2000 to 1,372 in 2003. The target entry for UK dental schools has been set at 805, but from October 2005 the government will increase the dental student entry levels by 170. Given that there is a high likelihood of employment with above average remuneration at the end of the dental course, dentistry remains an over-subscribed course in the UK. In the future the number of applicants is likely to continue to exceed the number of available places.

The university student loan scheme was introduced in 1990, and if this were responsible for great financial hardship amongst students, then one might expect high 'drop-out' rates as students found that they were unable to continue with their course. The Higher Education Funding Council for England (HEFCE) reported that for full time first-degree entrants in 2000-01, an average of 9% failed to continue in higher education after one year. Projections based on previous years showed that 78% of full time students resident in England, Scotland, Wales or Northern Ireland and commencing their studies in 2000-1 would obtain an award from a UK higher education teaching institution.

Table 1 The total number of UK applicants in 2003 who 1) applied and 2) accepted offered places to study medicine and dentistry in the UK, grouped according to parental occupation*

	Number of applicants	Number of acceptances	% of applicants who were accepted
1. Higher managerial and professional occupations	4630	3001	64.8
2. Lower managerial and professional occupations	3439	2009	58.4
3. Intermediate occupations	1290	741	57.4
4. Small employers and own account workers	577	342	59.3
5. Lower supervisory and technical occupations	295	165	55.9
6. Semi-routine occupations	821	443	54
7. Routine occupations	274	143	52.2
8. Unknown	2257	980	43.4
TOTAL	**13583**	**7824**	**57.6**

*The data was derived from the UCAS website and shows home (UK) applicants only. 'Acceptances' refers to the number of successful UCAS candidates and is close to the number of those who enrol.

During the period 1989 to 1994, between 91.6% and 83.2% of students attending UK dental schools qualified.[4] Using data from the HEFCE, Parkhouse[5] found that during the decade 1990-1999, 89% of the intake of pre-clinical medical students in the UK qualified, which is similar to the percentage of dental students qualifying. While it is regrettable that any student does not complete their chosen course, the student 'drop-out' rate for medicine and dentistry is less than average for other courses.

Would higher tuition fees disadvantage access of poorer students to a dental career?

The government has proposed an Office for Fair Access (Offa), which will ensure that universities that increase tuition fees also have procedures in place to encourage applications from students of low-income families. Those universities charging maximum fees will have to fund bursaries of at least £300 for the poorest students with the government giving an annual grant of £1,000 to households with family incomes of around £10,000 or less. Some grant assistance will be available to those families with an income up to approximately £20,000 a year. Other grants are available to those students with children, adult dependant relatives or disabilities. At present, the maximum amount of student loan for 2003/04 is £4,000 for students living away from home (£4,930 in London) and £3,165 for those living at home, and these loans will continue.

The government will pay up to £1,125 of the cost of tuition fees for students whose family income is less than £20,970 with a proportionate reduction for those families with higher incomes, until a threshold of £31,230 is reached. Family incomes above this will cause the student to have to pay the full fee set by the university.

It would seem beneficial to the dental profession that it support applications from all areas of the community, irrespective of background. Many pupils from poorer backgrounds lack aspiration, study skills and motivation and consider medicine and dentistry unattainable professions for them. Data from the UCAS website would indicate that in the latest available figures (for 2003), 1,644 home (UK) pupils applied to study dentistry and 871 were accepted, therefore 53% of those who applied were accepted. UCAS includes medicine with dentistry in the more detailed freely available online analyses. Far fewer children from poorer families apply to study medicine and dentistry (Table 1). In 2003, only 8.1% of the applications of UK applicants to study medicine and dentistry came from those who stated that their parent worked in a routine or semi-routine occupation. Access of poorer members of the community to higher education will be of increasing concern; in 2003, 15.6% of home applications for all degree courses in the UK came from these two socio-economic groups. Those that argue against the 'dumbing-down' of university dental education by the admission of more pupils from poorly performing comprehensive schools must accept the social engineering that the present system engenders.

At the present time in the UK there is little evidence that proposed changes in student tuition fees will adversely affect overall dental student recruitment and retention. Such evidence may not be manifest until after tuition fee increases are instituted. In the previously mentioned Tufts University School of Dental Medicine Survey the cost of dental education was rated by applicants one of the most important concerns regarding their choice of dental school. However, universities, schools, and the British Dental Association should carefully analyse how they can encourage access of students with a disadvantaged background from applying to dental school.

The future

Ultimately the amount of student debt will have an influence on the future plans of dental students following graduation. In the United States, the majority of students will enter private practice immediately after graduation, which may be related to the high debt levels of graduating students. Graduating debt for all American graduates in 2003 was $118,750 (or £65,491).[6] Is the American model the future of British education? In 2002 there were about 17,000 graduating American senior dental students. Those with no debt comprised 12% of the graduating class of 2002. Of those students that did not have any debt, 42.6% planned to enter private practice immediately after graduation while a higher percentage (57.9%) of those with over $150,000 (£82,725) debt had the same plans after graduation.[7] Some students are able to complete dental school without accumulating debt by several mechanisms. These include income generated by themselves or a spouse, personal savings, parent or other family member contributions, grants, or military scholarships. The British Dental Association Student Debt Survey (2003) showed that 34% of all final year British respondents considered that their level of debt would influence their career choice, and this percentage increased with higher debt levels.

Educational debt has the most impact on dental graduates' future plans when considering a full-time academic career. Due to the fact that salaries for academicians in the United States can be as little as 50% of those who work in private practice, many who would otherwise enjoy teaching simply cannot afford it, due to the financial constraints. This is evident in the fact that about 0.5% of graduating senior dental students have immediate plans to pursue an academic career, while overall 1.5% of graduates plan to be full-time academicians at some point in the future. According to this survey of senior dental students, this equates to a total of 60 full-time faculty from the graduating class of 2002 in the United States, which consists of about 17,000 graduates, who would have entered an academic career but for educational debt. Conversely, 43% of graduates plan to teach on a part-time basis.[7] Currently in the US there are about 500 full-time faculty positions among the 56 dental schools that are unfilled. Unfortunately, due to budget constraints in US dental schools not all of these positions can currently be funded. There are similar problems of recruitment to academic posts and the Community Dental Service in the UK, and the reasons may be more complex than just graduates' debts and salaries eg lack of resources, research funds, and support staff.[8]

Over the past two decades the cost of dental education in the United States has increased five-fold, according to a report from the Institute for Higher Education Policy.[9] A hidden cost, also referred to as a 'ticking time bomb', is the postponing of necessary maintenance and capital improvements. These would include the renovation of clinical, pre-clinical, and research facilities due to the lack of revenues.[10] As US government revenues continue to become scarcer for dental schools, it may become necessary to offset these costs with further increases in tuition fees. Similar to what has transpired in the United States, the British government may also be tempted to decrease appropriations to fund dental schools and therefore, make it necessary to further increase tuition fees in order to offset operating expenses, maintenance, and capital improvements.

CONCLUSIONS

Once the principle is established that the dental student pays a contribution to his or her education, then if the American model holds true it seems inevitable that the cost to students will increase significantly over time. The consequences of this may be difficult to measure, ie a perception by the more disadvantaged that entry into the dental profession is too expensive and an increased keenness of qualifying students to seek employment that provides them with the best opportunity to reduce their debt, perhaps in the private sector.

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