

- Inactivated by heat

of viraemia is short. The titre of virus during the period of viraemia, however, is high and infectious units of plasma can contaminate batches of factor VIII; over 90% of recipients of untreated factor VIII are likely to be seropositive. Heat treatment of freeze dried factor VIII at 80°C for 72 hours seems to inactivate the virus.

Conclusion

Likely future classification of viruses causing viral hepatitis

- Hepatitis A virus—“infectious hepatitis”
 - Hepatitis B virus—“serum hepatitis”
 - Hepatitis C virus—principal
 - Hepatitis ? virus—less common
 - Hepatitis D virus—delta agent
 - Hepatitis E virus—enteric or epidemic
- } agents of non-A, non-B hepatitis

The following illustrations are reproduced by kind permission: Typical course of hepatitis B virus infection—*British Journal of Hospital Medicine*; pattern of serological markers—Abbott Diagnostics Ltd; the Dane particle—Butterworth Scientific Ltd; electron micrographs of HIV-I and HTLV-I—Dr D Robertson and Professor R A Weiss, Chester Beatty Laboratories, Institute of Cancer Research; the artist's impression of hepatitis C virus—Ortho Diagnostic Systems; and the cytomegalovirus particles—J E Richmond, Public Health Laboratory Service Virus Reference Laboratory.

The number of infections that are potentially transmissible by blood transfusion seems daunting. In the United Kingdom, however, the incidence of most of these infections in the general population is low. Most potential donors who are at high risk have voluntarily stopped giving blood, and blood that is given is carefully screened, so the absolute numbers of infectious complications of blood transfusion are minute.

Patients are at much greater risk if they do not have transfusions when they genuinely need them than they are from the possible complications of transfusion, particularly as physicians are now more aware of the risks and more discerning in their prescriptions of blood or its components.

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How To Do It

Pay your way through medical school

A P Armstrong

Kenneth Baker, the former education secretary, stated in the House of Commons on 9 November 1988, that the government's proposals to introduce student loans from September 1990 represent “an important step away from the dependency culture” and added that “giving students a financial stake in their own future . . . will encourage greater economic awareness and self-reliance” (press release from the Department of Education and Science, number 347, 1988). It is not known at present what effect loans will have on the applications to medical schools, though some believe they may act as a disincentive to study medicine as it would entail relying on loans for five years or more.¹ Recently, the *BMJ* reported that the government also proposes to increase undergraduate fees for medicine from £607 currently to £3200 a year by 1991.² The implications of the proposed increase in educational fees will mean that self financed students would have to find £16 000 for the five year undergraduate course in medicine.

I have written this article to provide guidance to prospective graduate medical students about alternative sources of funding based on my own experiences in applying to educational trusts and charities.

Discretionary grants

Currently, most undergraduate students receive a mandatory grant as a right: students studying for a second degree, however, are not entitled to one. Graduate students may sometimes receive a discretionary grant from their local education authority, though the reasons why some graduates may be funded in this way and others not do not have to be revealed by

individual authorities. In a survey of dental graduates studying medicine undertaken by Langton over half did not receive a grant during their medical studies, though almost 35% did receive support during the clinical years of the course.³ An estimated 15-20 000 students are self financed presently, having to pay their course fees as well as their maintenance.²

The possibility of obtaining a discretionary grant from a local education authority varies in different parts of the country. There does not seem to be any common theme as to which students or courses may be considered eligible. In my year at medical school two students receive a discretionary grant whereas a third does not, though all are graduates and all live within the boundaries of Birmingham Education Authority. Medical students who decide to appeal against the decision of their local education authority not to give them a grant should consult the National Union of Students, who may be able to offer some advice about the best way to pursue an appeal.

Moonlighting and borrowing

During the preclinical years of the course part time work to supplement income is a real possibility, but with progression into the clinical years the available time to “moonlight” is drastically reduced. Even so, graduate medical students such as dental surgeons and opticians are usually able to survive financially by working during their spare time. It is not as easy for graduates in non-vocational subjects whose qualification does not provide easy access to part time employment.

Inevitably, many graduates soon find that the funds

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they saved to see them through their years at medical school are depleted. An obvious immediate response is to consider approaching your bank manager. This is a costly matter, however, as interest rates remain high and students are naturally reluctant to take on a financial commitment that may take several years to repay. Some banks such as National Westminster do give loans to medical students at preferential interest rates, and it is always worth discussing financial difficulties with your bank manager as you may be able to arrange a loan on favourable terms. If, however, you decide to raise the necessary income by applying to charities and educational trusts you will find that there are many exclusion clauses in what at first seems to be a long list of possible benefactors.

Charities and trusts

The key to a successful application is to ensure that you have all possible information about the charity to whom you intend to apply. This would at first sight seem obvious but charities and educational trusts receive many applications from hopefuls who do not meet their specific criteria of eligible recipients. It is therefore essential that you know before applying whether you stand any chance of success otherwise the process may be fruitless and extremely expensive in time and postage.

An invaluable source of such information is the *Educational Grants Directory*.⁴ This directory gives some of the most up to date information about a wide range of non-statutory sources of financial help. A particularly useful feature is that it has sections on local as well as national trusts to which students may apply. There are several other reference texts that any student requiring financial help would be well advised to consult.⁵⁻⁷

Having found possible sources of financial aid it is important that applicants present their case as clearly and succinctly as possible. A word processor is extremely useful for this purpose as it enables applicants to apply to several grant making trusts at the same time sending a initial standard letter and curriculum vitae. Applicants will invariably be asked to nominate two referees to support their request, one of whom should usually be the dean or senior tutor of the medical school. It is worth while making your year tutor aware of any financial difficulties you have as they may have useful advice about ways in which individual medical schools or universities may be able to help their own students.

Charities require that applicants submit a clear statement of their problems; it is crucial that it should include details of the efforts that have been made to obtain a discretionary grant from the local education authority, including details of any appeal. In addition, application forms almost always have a section asking which other charities or trusts students have applied to. Some charities say that this information helps them to assess the applicants initiative and motivation to solve their financial problems as full funding is not usually possible from one charity alone.

If dad was a doctor. . .

There are several charities to which medical students may apply depending, among other things, on the stage of the undergraduate course they have reached. Some will help only for the preclinical years whereas others will consider only applicants in the clinical or final year of the course. Some, however, may help students whom they consider as worthy cases throughout their entire time at medical school. Others may require that applicants or their families have some connection with the trust to which they are applying.

A sample of charities and trusts that fund medical studies

Preclinical

John Atkinson and Amalgamated Charities

Final year

Fenton Trust

Graduates/mature students

Graduates Medical Training and Elizabeth Nuffield Education Fund

Lord Ashdown Charitable Settlement

Sidney Perry Foundation

Sir Richard Stapley Educational Trust

British Medical Association Medical Education Trust

Foulkes Foundation Fellowships

Richard Newitt Fund (Kleinwort Benson Trustees)

Thomas Wall Trust

Men only

Lawrence Atwell Charity

Women only

Women's Careers Foundation

Examples of this include the Professional Classes Aid Council, who may be able to help the dependents of professionals and the Royal Medical Benevolent Fund and Associated Trusts, who may be able to help those whose parents are members of the medical profession. It is of course possible to obtain help from more than one charity, and this is usually necessary as most give only fairly small amounts of money because of their own funds being limited and the large number of applications that they receive.

The box indicates some sources of possible educational funding and some of the most obvious clauses that these charities stipulate about who may apply. They may be able to help medical students who find themselves in genuine financial hardship and who are not in receipt of a local education authority grant, but none will consider requests to help with financing medical electives. Grants from these sources may vary between £100 and £1 000 a year, with some charities considering reapplications for subsequent years of the course. Alternatively, financial help may be offered in the form of a loan, this being repaid over a number of years after qualification at a low or zero rate of interest. Full addresses for most of these charities will be found in the *Educational Grants Directory*.

The BMA has expressed its worries that students who already have a degree may be discouraged from reading medicine because of the number of years for which they are required to support themselves. From 1991 onwards if student loans are implemented and the proposed increase in undergraduate course fees goes ahead I believe that alternative sources of funding as outlined here may well assume a greater importance for prospective graduate medical students who do not receive a discretionary grant. Graduates who pursue a well researched and organised approach to solving the financial problems incurred by studying medicine will hopefully be able to see themselves through their entire undergraduate course without incurring hefty repayments to a bank for several years after qualification.

1 Alexander DA. Loans for medical students. *Br Med J* 1988;297:1561.

2 Smith R. Medical students face steep fees. *Br Med J* 1989;298:1204.

3 Langton SG. A study of dental graduates at British medical schools in April 1987. *Br J Oral Maxillofac Surg*, 1988;26:89.

4 Fitzherbert L, Eastwood M. *Educational grants directory*. London: Directory of Social Change, 1988.

5 Fitzherbert L, Bellofatto H. *A guide to grants for individuals in need*. London: Directory of Social Change, 1987.

6 Anonymous. *Charities digest*. London: Family Welfare Association, 1988.

7 Villemur A, ed. *Directory of grant making trusts*. Tonbridge: Charities Aid Foundation, 1989.

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