

PLANNING THE FUTURE OF OPTOMETRY

Conventional workloads

IT SEEMS TO me that many optometrists continue to be rather preoccupied with the profession's present problems, tending to neglect consideration of longer-term future trends. But the future will not take care of itself and serious consideration should be given to long-term planning.

It is only a couple of years since French and Loran (1983a, 1983b) made their manpower projections up to the year 2000 and beyond, but since then there have been significant changes within the training institutions along with a hardening of the Government's attitude towards university education. It is also apparent from opinions expressed in the profession's journals that there is opposition to the earlier conclusions with some people wishing for an expansion in recruitment. This is probably a response to reported job vacancies

and advertisements offering high salaries. Taken together these factors have prompted me to re-examine the professional future.

I will be looking at manpower, sight test loads and education. All three are crucial to planning the profession's future. To calculate the first two in future years one must first build a model of the GOC Register. A simple flow diagram is shown in Figure 1. The GOC annually publishes figures which provide a base for the calculations, but the rest of the information required is less straightforward and more difficult to untangle. One first needs to find out the likely recruitment rates to courses, which are largely determined at local level.

Present recruitment

In January 1983 admissions tutors reported these approximate home student targets for the following October: Aston—40, Bradford—30, City—65, Glasgow—50, UMIST—30, and UWIST—30 (French and Loran, 1983a). Although this was at a time that university policies were still being formalised in response to Government initiatives these predictions corresponded quite well with the actual home intakes in both October 1983 and October 1984, with the exception of a reduced intake of

41 for Glasgow in 1984 and substantially increased intakes for Aston of 58 in 1983 and 72 in 1984. According to a recent report (THE OPTICIAN, November 23 1984) the new building at Aston will indeed have capacity for a 72 student intake. Of course it should be born in mind that Aston has previously produced more than 50 graduates in 1976, 1977 and 1982. But this intake of 72, if sustained, constitutes a very significant rise.

French and Loran (1983a) had anticipated 245 home entries to optometry departments in 1983 and 1984, but because of the above changes the actual admissions were 260 and 269.

Recent government policy has led many institutions, but not all, to distinguish in their recruitment policies between home and overseas students; particularly as limits have been set on how many of the former the government will provide funds for and the latter have been obliged to pay the 'full cost' of their education (currently around £4,350 pa). Despite this, the aggregate number of overseas students entering optometry in this country has not altered very much and is unlikely to affect the home admissions numbers unless there is a shift in government policy again or a radical change in the number of overseas applicants. The position in recent years is summarised in Table 1.

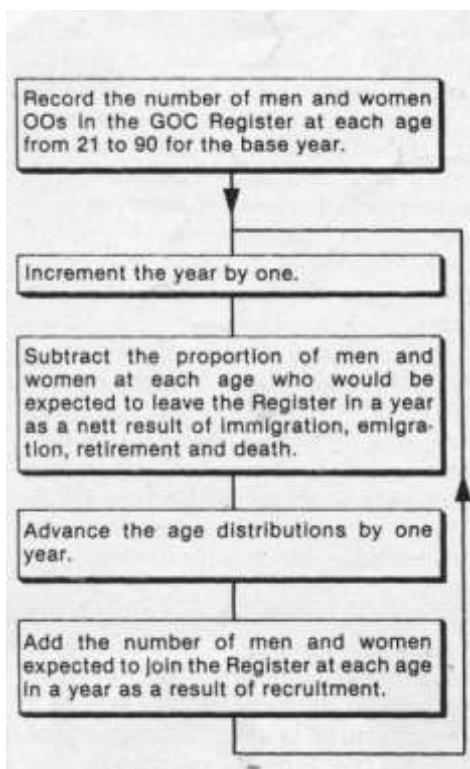


Figure 1—Simple flow diagram of the model used to calculate the age and sex of people on the register in future years.

Recruits to UK optometry courses

Table 1

| year of entry | Home entrants | | | Overseas entrants | | | Home pct female |
|---------------|---------------|--------|-------|-------------------|--------|-------|-----------------|
| | male | female | total | male | female | total | |
| 1984 | 112 | 157 | 269 | 6 | 15 | 21 | 58 |
| 1983 | 116 | 144 | 260* | 14 | 11 | 25 | 55 |
| 1982 | 111 | 140 | 251 | 10 | 13 | 23 | 56 |
| 1981 | 133 | 125 | 258 | 9 | 16 | 15 | 48 |
| 1980 | 140 | 129 | 269 | 7 | 8 | 15 | 48 |
| 1979 | 150 | 110 | 260 | 13 | 7 | 20 | 42 |

Aggregate recruits to the first year of the United Kingdom BSc optometry courses along with the percentage of female Home recruits. Estimates for Overseas figures for 1979 to 1982 were based in part upon UCCA statistics. *In January 1983 the expectation was for a total intake of 245 in October 1983.

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Annual entries to the profession

Although currently 269 home students enter UK courses this does not mean that 269 will eventually become registered ophthalmic opticians. French and Loran (1983a) had considered a future loss rate of between 5 per cent and 10 per cent as realistic leading them to suggest annual new home registrations of 220 to 230 from 1987 onwards based on the 245 intake figure. A careful examination of the figures for 1983 and 1984 suggest that loss rates are currently closer to 10 per cent than 5. This gives us revised estimates for

Loss rates and annual registrations from UK courses

Table 2

| year of reg. | pct. loss rate | all new regs. | new Home regs. |
|--------------|----------------|---------------|----------------|
| 1984 | 9 | 254 | 239 |
| 1983 | 10 | 252 | 234 |
| 1982 | 11 | 251 | 239 |
| 1981 | 13 | 235 | 214 |
| 1980 | 5* | 257 | 235 |
| 1979 | 14 | 228 | 211 |

The estimated loss rate (column 2) is calculated from the registrations for the current year, and the entrants to UK degree courses four (England and Wales) and five (Scotland) years previously. The annual registration figure (column 3) is taken from the GOC's yearly published statistics (Table N, section 3(3) minus Table M). The estimate for new Home registrations (column 4) is derived from the last figure using the proportions of Home entrants four and five years before. Information from the BCOO suggests that column 4 underestimates new Home registrations by up to five people. (It seems likely that the loss rates for Homes are lower than the column 2 figures, and those for Overseas are higher. This might be expected as some Overseas students return home without pursuing registration and this may bias the column 4 figures). *This apparent loss rate of 5 per cent may be an artefact, the result of some change in College policy and the fact that not everyone passes at the first or second attempt. One might surmise that there had been a significant accumulation of candidates from previous year& and at last they managed to pass distorting the registration/entrants ratio?

new home registrations for 1987 and 1988 of 238 and 247, and one would expect between 240 and 250 shortly after that. These figures are significantly above the earlier projection of 225, but still within the range of new registrations considered by French and Loran (1983b); they had also looked at the consequences of 200 and 250 new registrations each year.

Sex, age and other factors

Two important factors in any projection are the sex and age of the new recruits. French and Loran (1983) had suggested they would be close to 55 per cent female—that had been the figure for the 1982 home admissions. The recruits for 1983 and 1984 included 55 and 58 per cent of women (see Table 1)—showing little change. There is no reason to assume there have been any significant shifts in their age distributions. Similarly the estimated nett annual changes in the Register at each age level due to immigration, emigration, retirement and death are not likely to need adjustment.

Annual sight test projections

For the near future one would expect that the growth of annual sight test figures will follow a course somewhere between an exponential one (constant percentage increase each year) and linear one (constant aggregate increase). Impressions are that the recent media attention coupled with the introduction of advertising have led to a surge in testing and it will be interesting to see for how long this increased rate persists, but in the course of time one would expect to see this simply as a more or less brief perturbation of longer term trends.

Sight test load projections

One can calculate the average work load for UK optometrists by dividing

the annual total number of tests they carry out by the number of optometrists on the Register, and then further dividing by the number of weeks in the working year. But of course such arithmetic will give you a very misleading statistic. It would be a poor measure of central tendency, taking no account of the fact that women OOs tend to work part-time and/or cease work for some years of their professional life, and no account of the tendency of opticians of both sexes to work fewer hours and carry out fewer tests as they get older.

To compensate for these factors one needs to give each optometrist a weighting between zero and one according to their age and sex. These full-time-equivalent values (see French and Loran, 1983a, for further details) enable the average work-load for a full-time optometrist to be calculated.

The increase in new registrations to 250 per year permits us to use part of Table 7 in French and Loran (1983b). These statistics continue to show a modest increase in sight test frequency per full-time-equivalent optometrist up to 43 to 50 tests per week in the year 2000; the figure depending upon whether the underlying growth in sight-testing is closer to linear or exponential during that time. Such an increase would of course be anticipated from an increase in practitioner efficiency and is well within the compass of today's graduate ophthalmic opticians. In a survey which restricted its attentions to the work of younger, graduate optometrists (French *et al.* 1981), it was found that amongst those opticians who normally did not do their own dispensing the average full-time practitioner carried out 54 or 55 tests per week. Those who did their own dispensing did 41 or 45 tests per week. In this study the latter group were in the majority but one would expect this situation to be soon reversed with more OOs restricting their attentions to sight testing and eye examinations. Thus the predicted figure of 43 to 50 per week for the year 2000 should perhaps be compared more with the former 54 and continued on page 27

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55. These are actually the mean and median statistics for the sample.

The modal figure was still higher, closer to 60 per week. For this reason it might be sensible to ask whether the predicted figure is high enough to support our projected number of future professionals in the year 2000. In other words are we recruiting too many OOs? This answer might be 'no', as we must remember we may then be talking about a shorter, 30 or 35 hour, week.¹ Also, any measure of central tendency implies variation—within a year's work, between regions of the UK and among full-time OOs in general.

Of course, time is of the essence and that usually set aside by an optometrist for a patient will vary. In the aforementioned study the minimum time routinely allowed for a sight test and eye examination was 15 minutes (5 per cent of the respondents) with just under 30 per cent allowing 20 minutes and just over 50 per cent 30 minutes or more. Some people might wish to question whether or not adequate sight tests could be carried out within an allocated 15 minutes.

Clearly, some people are quicker than others, and errors and corner-cutting are not an inevitable consequence of speed. But one must be concerned that commercial pressures (now greater with the advent of advertising and un-registered sellers)

Predicted sight-test load per week as a function of admissions and loss rates

Table 3

| loss rate | Home admissions to optometry BSc | | |
|-----------|----------------------------------|--------------|--------------|
| | 250 annually | 270 annually | 290 annually |
| 5% | 44-50 (46) | 43-49 (44) | 42-48 (41) |
| 10% | 45-51 (48) | 43-50 (46) | 43-49 (43) |

This table shows the predicted sight-test load for an FTE optometrist as a function of the Home recruitment rate to UK courses (presently close to 270) and the loss of students between admission and registration (presently nearer to 10 per cent than 5). The same partition of work between OOs and OMPs favoured by French and Loran (1983) has been assumed here along with 57.5 per cent female entries. The lower figure preceding each hyphen assumes a linear increase, while the upper one following assumes an exponential. Both are for the year 2000, while that in parenthesis is for the year 2025 by which time both the linear and exponential increases will have reached a theoretical ceiling representing saturation sight testing. One might need to reduce this last estimate quite significantly if the sight testing of children under 10 years of age does not improve and if OMP's share of the sight testing increases. Note also that the exponential increase implies a decline between the years 2000 and 2025.

might lead to a greater temptation for optometrists and ophthalmic medical practitioners to give shorter measure. An OO booking 56 patients per week at 15 minute intervals will, if 10 per cent miss their appointments carry out 50 tests over 14 hours compared with 28 hours for an optometrist allowing half an hour.²

Table 3 presents the effects of the revised figures on the sight test loads in the year 2000 using the French and Loran computer model and the same division of labour between OOs and OMPs. The shortcomings of the model have been discussed before. For example the assumptions it makes about the work patterns of optometrists according to their age and sex, the FTE weights, are now 16 years old. It continues to be a source of concern that no one appears to have reconsidered these in any detail.

Table 3 suggest that if advertising does succeed in stimulating sight testing and the potential is reached earlier, following closely the exponential curve, this will then be followed by a decline in the sight test

load for the average optometrist (see also French and Loran, 1983c). This is made clearer by Table 4 which projects average test loads at five-yearly intervals. Here, the consequences of three of the many possible partitions of labour between OOs and OMPs are examined; this time for a register intake of 256.5 (95 per cent of a course intake of 270).

The decline is in part a consequence of a limit to the demand for sight testing—annual increases cannot carry on indefinitely. This question of the potential or ceiling for sight tests and eye examinations, the maximum number of tests per year that the UK population can support, will be examined in Part 2 when the assumptions of the present model will be discussed in detail.

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1. In passing it is interesting to note that demand for places on UK optometry courses from Home students is still in decline from its 1979 peak—perhaps down one-sixth this year for the October 1985 entry—and is now close to the 1975 level (see French, 1982). Ironically this is at a time when Aston has confirmed its significant increase in numbers. It is important to note that one cannot guarantee a plentiful supply of very able students. Demand for the courses will continue to depend upon the perception of an optometrist's professional life as worthwhile and fulfilling in comparison with other vocations.

2. A survey by the University of Manchester's Department of General Practice was reported as finding that the vast majority of GPs spent between 12 and 24 hours each week seeing patients in 1984.

To be continued next week