

General Practice:

More facts

Prescribing

Sir William Osler was quoted as saying that one difference between humans and animals was the great extent to which humans take medicines.

This was confirmed by Kohn R and White KL in their class study *Health Care: an International Study* (Oxford University Press). They found that at any time two thirds of people are taking medicines – one third prescribed and one third self-medication.

It is likely that two thirds of consultations in primary care involve a prescription for medication.

What are the known facts on general practitioner prescribing? In the United Kingdom there are many because most prescribing is by general practitioners in the National Health Service which pays pharmacists. There is an efficient computerised system that records all the prescribed items and this provides general practitioners with regular information on their prescribing – the extent, the costs and the details, presented for the individual general practitioner and the practice and compared with local national rates.

How Much Prescribing?

The number of items prescribed by NHS general practitioners has almost doubled since 1950. Presented as items per person per year Table 1 shows that in 1950 the rate was 4.8 and in 1990, 7.7 and in 1992 it was over 8. Translated to a general practitioner with an average list size (patients) of 2000 this meant 11 000 prescribed items in 1950 and 15 500 in 1990 or 308 per week or 62 per day. (Note:

that more than one item was often entered on a prescription sheet and many were for 'repeat' prescriptions without the patient necessarily being seen).

What for?

In 1988 (the last published data) the top 10 categories of drugs prescribed by NHS general practitioners were in order:

- | | | |
|---------------------------------|---------|------|
| 1. Cardiovascular | in 1978 | (7) |
| 2. Dermatological | | (3) |
| 3. Anti-asthma | | (10) |
| 4. Diuretics | | (5) |
| 5. Penicillins | | (4) |
| 6. Minor analgesics | | (2) |
| 7. Anti-inflammatories | | (9) |
| 8. Hypnotics | | (8) |
| 9. Sedatives/tranquillisers | | (1) |
| 10. Other anti-infective agents | | - |

To show how prescribing habits change chiefly because of availability of new and better drugs or because of appearance of side effects and problems of older drugs the place of the same groups in the league table in 1978 is shown in brackets.

Table 1: Annual prescribed items per person by NHS General Practitioners (UK) (Fry, 1992)

	1950	1970	1990
Annual prescribed items per person	4,8	5,5	7,7

The most significant changes were the rise of cardiovascular and anti-asthma drugs and the fall in sedative and tranquillisers.

Costs

Pharmaceuticals make up almost 10% of the British NHS budget, and their costs are increasing because of more effective products produced by drug companies at huge research and development costs.

Table 2 shows the comparative costs per prescribed item and per capita costs between 1950 and 1990 (without allowance for inflation).

Table 2: Costs of general practitioner prescriptions in British NHS (1950-1990) by items and per capita.

	1950	1970	1990
Cost per prescribed item (pounds)	0,17	0,68	6,50
Cost per capita (pounds)	0,81	3,76	50,50

Prescribing per General Practitioner

Relating this data to a general practitioner in the British NHS it means that in 1990 he/she:

- prescribed 7,7 items per patient
- prescribed 15 500 items in the year
- at a cost of over 100 000 pounds sterling to the NHS
- his/her annual NHS income was 55 000 pounds sterling

It is of interest that the total cost of prescribing by general practitioners has always tended to be at double his/her annual income!

International Comparisons

Strict comparisons are difficult but some facts are available. Lest it be thought that the UK rates are high, Tables 3 and 4 show that rates of prescribing and costs are much higher in some other countries.

Issues

Progress in medicine is expensive and one reason has been the great success of the pharmaceutical industry in developing effective drugs. This has to be accepted but it has also led all health systems to consider how costs may be controlled by cutting down on ineffective products.

In the British NHS these attempts have included producing 'black lists' of unproven preparations which are excluded from NHS payment; regular information to general practitioners on their prescribing costs and content and attempts are made to reduce the rates of high cost prescribers; and most recently prescribing budgets have been introduced for fund holding practices.

A balance has to be struck between seeking the best for one's patients and the costs of treatment.

Faction Demographic Implications

Many medical practitioners consider demographic data rather dull and turn over the pages when presented with them. In these times of planning for the future, business efficiency, better value for money and health promotion and disease prevention these facts are becoming more and more relevant, even to solo practitioners in remote communities.

Although my personal interest in facts and figures began in 1950s when I started to keep data on my own practice work these wider international demographic collections of data became obvious over the past couple of years when I carried out visits to a dozen countries to study and compare

Table 3: Prescribed items per capita in some European countries

	Prescribed items per capita in 1989
France	38
Italy	20
Spain	15
West Germany	15
UK	8
Denmark	6

Table 4: Per capital costs (pounds) in 1987 for prescribed drugs in some countries

	Per capita annual costs of prescribed drugs (pounds) (1987)
Japan	172
West Germany	88
Switzerland	85
France	83
USA	75
Italy	72
Sweden	56
UK	48
Denmark	47
Netherlands	40
Norway	38
Spain	32

primary care services (Fry HJ, Primary Care in 12 Countries, London: Nuffield Provincial Hospitals Trust, 1993).

Let me try and share my enthusiasms by presenting selective data on a dozen countries.

Populations

Table 5 gives the populations and the proportions of young (under 15) and elderly (over 65) and also projections of over 65s by year 2025.

At present in developed countries about 1 in 5 of our populations are children and around 1 in 9 over 65.

Put another way, almost one half of our populations are likely to become 'dependents' relying on 'workers' to support their benefits.

The projections for over 65s by 2025 show very considerable increases in proportions everywhere. This will mean more work and resources for health services and planning has to start now.

Why the changes?

The main reasons for the changes are that we are producing fewer babies and living longer.

Table 6 shows that birth rates have halved over the past 50 years: fertility rates (number of children per couple in reproductive years – figure below 2 means non-replacement of population) and infant mortality rates are low and falling.

Table 7 shows life expectancies in years (at birth) and these have increased by 10 years for males and females since 1950s.

Comments

From the family practice viewpoint we should note that populations in developed countries are likely to grow at less than 1%, if at all. However, the proportions of over 65s are likely to double. All countries are training more physicians and their rates per population will increase disproportionately but so will work caring for more elderly and disabled.

The challenges for family medicine are to plan now to meet these future needs, not alone but in collaboration with specialist and community services.

Table 5: Populations

Country	Population (1990) (Million)	Age %		
		Under 15	Over 65 (projection)	Over 65 by 2025
US	250	21,4	12,6	19,8
Canada	27	20,9	11,4	22,4
Sweden	8,4	17,3	18,1	23,3
Denmark	5,2	17,0	15,4	21,3
Netherlands	15	18,3	12,7	23,2
Germany	78	16,0	14,9	20,8
France	56	20,1	13,8	23,2
Spain	39	20,1	13,1	19,2
Japan	123,5	18,4	11,7	23,9
Hong Kong	6	20,7	8,8	15,0(est)
Australia	17	22,1	10,9	17,5
UK	57,5	19,0	15,4	19,4

(Sources: The Economist, Pocket World in Figures, 1993 Office of Health Economics: London, Compendium of Health Statistics 1992)

Table 6: Birth rates, fertility rates and IMR

Country	Birth rate per 1000	Fertility rate	Infant mortality rate per 1000 Live births
US	14,1	1,9	9,5
Canada	12,9	1,8	7,3
Sweden	12,6	1,9	7,3
Denmark	11,0	1,5	8,8
Netherlands	12,9	1,6	7,0
Germany	10,9	1,5	8,0
France	13,4	1,8	7,4
Spain	12,8	1,7	9,9
Japan	11,5	1,7	5,5
Hong Kong	12,3	1,4	6,9
Australia	14,3	1,8	7,8
UK	13,7	1,8	7,4

(Sources: The Economist (1993) and ONE (1992))

Cochrane Collaboration In Primary Health Care

In 1979, Archie Cochrane, A British epidemiologist, criticised the medical profession for not having 'organised a critical summary, by speciality or subspeciality, updated periodically, of all relevant randomised controlled trials'. Some 14 years later the National Health Service Research and Development Programme in the United Kingdom established a centre, based in Oxford, named in his honour. The enthusiasm which this generated internationally has resulted in the formation of the Cochrane Collaboration. Its aim is to prepare, maintain and disseminate systematic reviews of randomised controlled trials in all areas of health care. These reviews will provide a more secure base for determining what constitutes effective health care, and they will be disseminated in appropriate ways to clinicians, health policy makers, and consumers.

Involvement in the Cochrane Collaboration can occur in a number of different ways. Some people will elect to take on roles as reviewers of the effectiveness of health care interventions in specific problem-based groups (for example, the management of acute otitis media, or lower back

pain). Reviewers may come from a variety of backgrounds, and include topic specialists, generalists who have a special interest in an area, researchers, clinicians or consumers.

The Cochrane Collaboration groups reviewers in problem-based Collaborative Review Groups.

Already a number of primary health care workers are becoming involved as reviewers in a range of different collaborative review groups. For example, two general practitioners from the UK are reviewers with the Pregnancy and Childbirth Collaborative Review Group, and a community nurse practitioner will soon be joining the Vascular Collaborative Review Group.

To help coordinate the relevant primary health care input into the Collaboration there is a Field Co-ordinator, Chris Silagy, who is based in Australia with a small support staff. He is assisted by a network of individual representatives based in countries and regions throughout the world. Together, they help ensure that the field of Primary Health Care is properly represented within the Cochrane Collaboration.

Anyone interested in supporting the Cochrane Collaboration in Primary Health Care, particularly by undertaking to do a systematic review, should get in touch with one of the following contacts:

Table 7: Life expectancies (at birth)

Country	Life expectancies (years) (at birth)	
	Male	Female
US	73	80
Canada	74	81
Sweden	75	81
Denmark	73	79
Netherlands	74	81
Germany	73	79
France	73	81
Spain	74	80
Japan	76	82
Hong Kong	75	80
Australia	74	80
UK	73	79

(Source: The Economist 1993)

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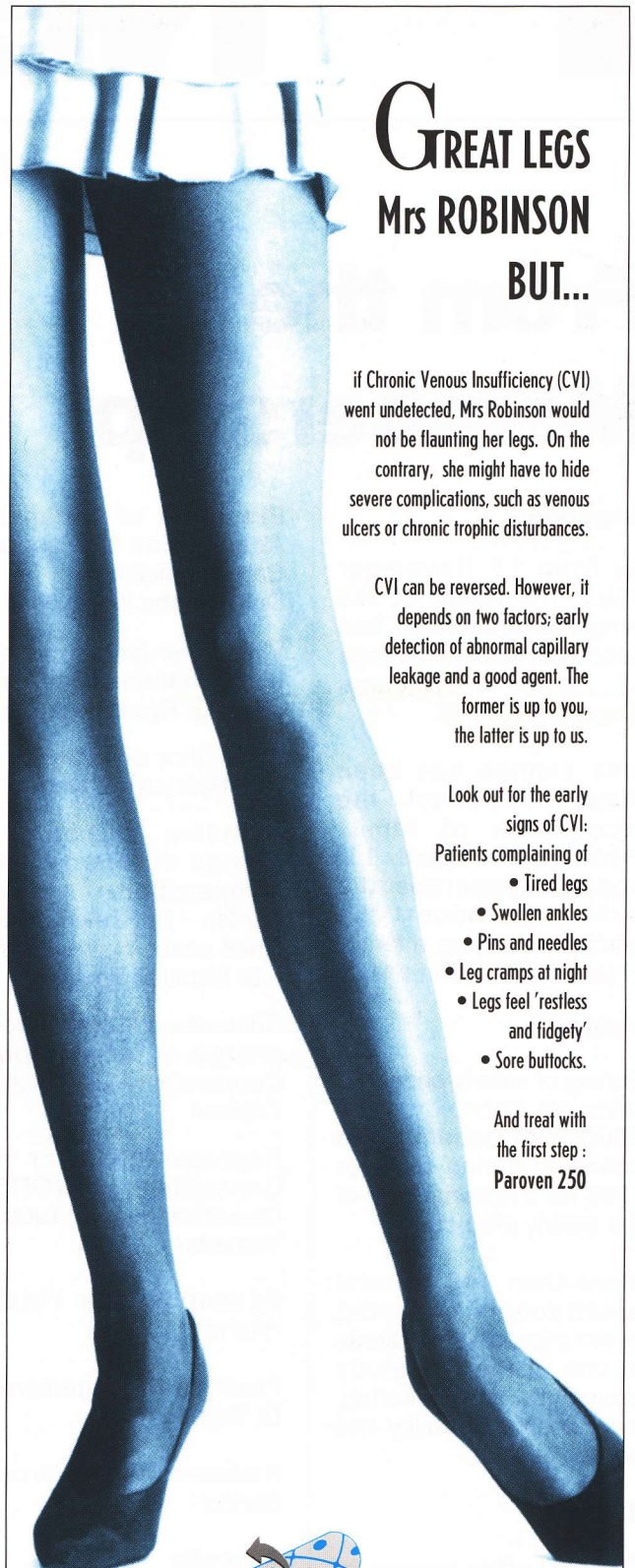
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Further abstracts from the publication *General Practice the facts*, (1993) (Radcliffe Medical Press, Oxford, OX2 0DP,UK) by John Fry.

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- Legs feel 'restless and fidgety'
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Presentation: Supplied as capsules of 250 mg in blister packs of 50. 3/94.

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