

a detailed explanation was given of how to prepare a contract of employment.¹ BMA members may obtain a booklet of these articles from BMA regional offices. Finally, this article can only provide a general guide to the provisions of existing legislation. It does not offer a definitive statement of law.

I am grateful to Dr John Ball for his comments on this paper. The author is responsible for any omissions or errors.

Innovations in London

North Camden community psychiatric nursing service

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It is now accepted that at least 25% of patients who present at general practitioners' surgeries have problems that are of psychological origin. The incidence of mental illness is greatest in areas of social deprivation—for example, the hospitalisation rate for mental illness per 1000 residents in inner London is 5.16, compared with 3.12 in outer London and 3.18 in England.¹ By and large the failure of the generic social worker (established after the Seebohm report²) to support mentally ill people in the community has highlighted the need for other paramedical workers to help the hard-pressed GP in this task. Furthermore, the model of the primary care team³ is one of the key suggestions of the Acheson report on primary care in inner London.⁴

In some areas good work has been achieved by clinical psychologists and other counsellors who are attached to GPs; but undoubtedly specially trained psychiatric nurses working with GPs and other members of the primary care team can make a major contribution. In our opinion that contribution may be much greater when the psychiatric nurses are based in the community, though the problems of allocating resources and of organisation are also greater. Usually the community psychiatric nurses are based in hospital, are managed by the psychiatric divisional nursing officer, and are financed from the psychiatric hospital budget. Community nursing is managed differently and often has fewer resources. In North Camden district KNC is a divisional nursing officer for psychiatric and geriatric inpatient nurses as well as community nurses, but it was easier to make the change from hospital to community.

Community psychiatric nursing schemes

The first community psychiatric service was set up in 1954 at Warrington Park Hospital, Surrey, and the second in 1957 at Moorhaven Hospital, Devon. Now community psychiatric services are found across England and Wales and more than 2000 psychiatric nurses are employed in nearly 250 teams. Parnell⁵ described the results of a postal questionnaire sent by

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the Queen's Nursing Institute to community psychiatric nurses, psychiatrists, GPs, health visitors, and district nurses, followed by interviews with staff who took part in the survey during 1975-6. The results of the study showed that 70% of community psychiatric nurses were based on hospital premises, 58% visited patients in their homes full-time, and the remainder had commitments in both hospital and the community. Eighteen per cent were based in psychiatric day hospitals, 6% in health centres, and 4% in other locations. It is notable that 93% of referrals to the community psychiatric nurses were from consultant psychiatrists. Moreover, 63% of respondents had had no preparation before starting work in the community, and only 12% of these had attended courses afterwards.

Nearly all the schemes described in published reports were of community psychiatric nurses based in psychiatric hospitals even when attached to GPs.⁶ Only Tough⁷ et al⁸ suggested that community psychiatric nurses should be based in the community as members of the primary care team.

North Camden Health District

After the reorganisation of the National Health Service in 1974, North Camden Health District assumed responsibility for community nursing services. At that time follow-up home visits to patients who had been discharged from the psychiatric unit at the Royal Free Hospital and from Friern Barnet Psychiatric Hospital were carried out, if necessary, by a few psychiatric nurses based at Friern Hospital. They were unavailable for clinical decisions to the consultant psychiatrist.

After KNC was appointed divisional nursing officer of North Camden Health District in 1975, she had discussions with GPs who were concerned with setting up primary care teams. Arising from this, a psychiatric nursing service, based in the community, was set up, and the clinical responsibility was invested in the general practitioner. Resources became available in 1978 and as from 1 January 1979 community psychiatric nurses took up posts under their own nursing officer, and one each was based at three community health clinics and one health centre. The nursing officer had been in post for a few months and had met with local GPs and representatives from other nursing services, local authority social services, and voluntary agencies. There was also a community orientation programme for the newly appointed community psychiatric nurses.

The North Camden community nursing service has been in

operation for three years, and there have been no problems recorded from the GPs. There are now six community psychiatric nurses in the community and are allocated to the GPs from four centres. Because the number of nurses is small it has not been possible to attach them to individual GPs, but each has built a good relationship with the neighbouring practices. The nurses visit patients at home and see them at the health clinics as well as at GPs' surgeries by arrangement.

REFERRALS

For the year from January to December 1981 there were 340 referrals to the service—an average of 28 a month. GPs referred half of cases, and a further third were referred by another member of the primary health care team. Only 8% were referred from hospitals, thus reversing the national trend. Community psychiatric nurses are instructed to discuss cases with the patient's GP when they are referred from elsewhere.

The average age of patients was 52; 37% were aged 65 and over, 41% were between 31 and 64, and 20% were between 14 and 30. Referrals of elderly patients consistently accounted for over 35% of the work load, and there was an appreciable increase during January, February, July, October, and November. This was thought to be due to the community's anxiety in the winter months and concern for the welfare of elderly people at holiday times when they may be left on their own.

Some 27% of patients were married, 25% widowed, 25% single, 20% divorced, and 2% separated from their spouses. Seventy-five per cent were British-born, and 25% came from overseas. Seventy-seven per cent of patients lived in flats, the rest living in private houses or with wardens or in 3 homes (residential homes for elderly people), and a few in hostels.

Psychiatric symptoms. The psychiatric symptoms of the patients are most interesting. In order of frequency they were anxiety and depression, schizophrenia and other psychosis, interpersonal difficulties, alcohol problems, dementia and confusion, and a few drug problems. Community psychiatric nurses who are based in hospital would expect to see mostly schizophrenic patients.¹⁷ Many schizophrenic patients can now be treated in the community, however, and this is encouraged by the close liaison between GPs and community psychiatric nurses, with specialist referral if necessary. There has been an increase in the number of patients referred with alcohol problems.

Referrals. Each community psychiatric nurse saw on average 56 referred patients over the year, the average for the service being 28 patients a month. In 1981, for the first time in the three years that the service has existed, there was an appreciable number of re-referrals (64 cases), a third of whom were self-referred. It is interesting also to compare the sources of referrals for the three years, table 1, there has been a general

Source of referral 1979-81

Source	1979	1980	1981
General practitioner	139	148	170
Health visitor	25	23	36
Psychiatric services	35	21	30
Hospital	12	15	15
Health visitor	12	15	15
Psychiatric services	3	5	3
Self-referred	1	1	21
Total	209	205	340

increase in numbers with a slight drop in the second year, which can be attributed to the difficulties of having temporary staff. Most referrals continue to come from GPs and other members of the primary health care team.

TRAINING

In 1974 the Joint Board of Clinical Nursing Studies published an outline curriculum in community psychiatric nursing.¹⁸ Training is provided in polytechnics for 36 weeks for nurses who hold the qualification RMN or RNMN. Subjects include developmental psychology, sociology, research methodology, health education and counselling, teaching and interviewing techniques, planning and management of care loads, and the principles and practice of community nursing and behavioural modification.

In North Camden there is a post-basic nurse training centre. Courses are given on counselling, interviewing, industrial relations, the nursing process, the management of violent patients, and the nurse and the law. Trained staff from all disciplines are seconded for training according to their needs and requirements, and local polytechnics are also used extensively for courses that cannot be given in the training centre. It is the intention in the North Camden scheme that all community psychiatric nurses should take the Joint Board of Clinical Nursing Studies' course in community psychiatric nursing. All the nurses are registered nurses and some are also State-registered. There are two women and four men in the service, three of whom have had the special training.

Relationships with others

Full discussions of cases take place with other nurses in the primary care team, and the patients are allocated by mutual agreement—for example, which nurse should give the injection to the diabetic patient who also suffers from schizophrenia. The general practitioner is kept informed and consulted on all clinical developments.

The nurses who manage the service meet monthly to discuss the way the service is developing and the needs of the local population. They also discuss any problems that have occurred so that they may anticipate and prevent other problems, the relationship between the GP and the community psychiatric nurse, case loads, and requests for a particular kind of service, such as group therapy. In addition, they review further education, training and professional development of staff, and methods by which these may be accomplished. Community psychiatric nurses also carry out joint assessment visits with other members of the primary care team—health visitors, geriatric visitors, district nurses, and school nurses. Some visits are also made with the psychotherapist. There are six community psychiatric nurses and a nursing officer, which gives a ratio of 1 to 14 000 people, much better than in most parts of England and Wales, where the average is said to be about 1 to 40 000.

The GPs who use the service, especially those at whose premises the community psychiatric nurses are allocated, are fulsome in their praise of the service. As one would expect, the degree of co-operation depends on the compatibility of the personality of the doctor and nurse concerned, and to their particular attitudes to the mental illness of their patients. One doctor who had a special interest in psychotherapy said that he referred different types of cases to different nurses with whom he had worked.

It seems, too, that the local psychiatrists have accepted the community-based service. Although the service is only three years old the number of psychiatric patients referred by GPs to the service seems to be increasing. The policy of the North Camden Health District is that when resources are available community psychiatric nurses will take over the continuing care of patients discharged from psychiatric hospital wards. Inevitably this will increase the number of psychiatric patients who are looked after by the service and by the GPs.

We hope very much that in the reorganisation of the NHS that local medical committees will bring pressure to bear on the new

district health authorities to transfer the community psychiatric nurses to the management of the new directors of community nursing, so that they can work in the community as members of the primary health care team with the clinical responsibility of their patients firmly in the hands of GPs.

We thank Mr A G Clark, nursing officer, North Camden District CPN Service, for kindly providing the documentation about the service.

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Practice Research

Does life-long exercise protect against heart attack?

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The aim of this controlled study was to illustrate the differences in levels of general fitness and prevalence of risk factors for coronary heart disease between a group of veteran cyclists and a group similar in age drawn at random from my practice. Comparisons were made of electrocardiographic recordings.

Subjects, methods, and results

Forty-seven men cyclists between the ages of 54 and 64 volunteered to be examined after a request was made to the cycling community in London and urban Hertfordshire. The only cyclist volunteers who were excluded from the study were those who had gaps of more than 10 years in cycling. Each cyclist was paired for examination with a man from my practice. The pairings were based on date of birth and the first letter of the surname and were made by independent persons. Two controls were recruited because of low IQ and replaced. All subjects were either working or recently retired and capable of work. I examined all of the subjects. Blood pressure recordings were taken on the right arm with the subject seated. The lower of two recordings was chosen, the fourth sound being taken as the diastolic reading. Postexercise electrocardiographic recordings were made after the subject performed 30 squats over a maximum period of 90 seconds. ECG tracings were coded by me and assessed "blind" by the reader. This very modest exercise challenge, chosen because some patients were so unfit, achieved a mean exercise heart rate (maximum of

under 100 min, which is well short of an acceptable figure, and the results of this test should be viewed accordingly. Chest x-ray examinations gave no additional information.

The two groups turned out to be equally matched for statistical purposes in terms of occupation and family history of heart disease (table 1). The mean and standard errors were calculated for all the quantifiable variables, and the differences were tested using Student's *t* test. The variables were adjusted for smoking and past medical history, where they were found to be significant, using linear regression. Different regressions were done with each variable in turn as the dependent variable, and smoking and past medical history as the

TABLE 1—Details of habits and medical history of cyclists and non-cyclists

	Cyclists n=47	Non-cyclists n=47	Total n=94
Occupation			
Vocational	1	0	1
Manual	10	15	25
Non-manual	36	32	68
Smoking			
Currently	1	4	5
Ex	1	11	12
Non	45	32	77
Family history			
Yes	1	7	8
No	46	40	86
Medical history			
No	41	32	73
Diabetes mellitus	1	1	2
Cholesterolemia	1	1	2
Angina	1	1	2
Present high blood pressure*	1	1	2
Present high blood pressure	1	1	2
Myocardial infarction	1	1	2
Total No Yes	2	15	17

*A episode of hypertension in the past that required one course of treatment only.

TABLE 2—Statistical significance of variables for cyclists and non-cyclists, giving mean and standard error of the mean

Variables	Non-cyclists		Cyclists		Significance
	Actual	Adjusted for medical history and smoking	Actual	Adjusted for medical history and smoking	
Heart rate, s.e.d. (mmol)	122.7 ± 0.47	122.7 ± 0.47	121.3 ± 0.38	121.3 ± 0.38	0.6
Systolic blood pressure, mm Hg	162.4 ± 1.75	162.4 ± 1.75	160.2 ± 1.12	160.2 ± 1.12	0.005
Diastolic blood pressure, mm Hg	96.2 ± 0.7	96.2 ± 0.7	95.0 ± 0.48	95.0 ± 0.48	0.001
Exercise heart rate, mm Hg	156.4 ± 1.19	156.4 ± 1.19	154.2 ± 0.71	154.2 ± 0.71	0.01
Exercise heart rate, mm Hg	96.2 ± 0.7	96.2 ± 0.7	95.0 ± 0.48	95.0 ± 0.48	0.001
Exercise heart rate, mm Hg	96.2 ± 0.7	96.2 ± 0.7	95.0 ± 0.48	95.0 ± 0.48	0.001
Exercise heart rate, mm Hg	96.2 ± 0.7	96.2 ± 0.7	95.0 ± 0.48	95.0 ± 0.48	0.001
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Exercise heart rate, mm Hg	96.2 ± 0.7	96.2 ± 0.7	95.0 ± 0.48	95.0 ± 0.48	0.001
Exercise heart rate, mm Hg	96.2 ± 0.7	96.2 ± 0.7	95.0 ± 0.48	95.0 ± 0.48	0.001

*ECG graded. Normal 1. Ischaemic changes: 1. Arrhythmias, A-V conduction defects, infarction; 2. Ischaemic changes—postexercise ST shift of at least 1 mm in more than one lead.

Comparison: *t* for difference in mean—Systolic blood pressure: 1 mmol=1.33 mm Hg 100 ml.

predictors. The residuals were examined and tested for group difference. The results are shown in table 2. There were statistically significant differences between the two groups on all the variables measured except heart rate and serum cholesterol concentrations.

Discussion

A possible explanation for the differences in the two groups is that the cyclists may be predisposed to cycling on the first instance because they are generally healthier and because the age range selected does not include those who cycled earlier in life but were unable to continue owing to ill health. A previous survey,¹⁹ however, showed that cyclists who develop angina or myocardial infarction continue cycling afterwards. Mortality from heart attack in cyclists was found in the same survey to be rare. To help overcome possible criticism that the cyclists were a self-selected group, the values for both groups were adjusted for two factors: smoking and past medical history (table 1).

Though great care was taken in the random selection of the controls and a robust statistical analysis undertaken the absence of a second control subject for each cyclist leaves a possibility of undetected bias in selection. While there is no problem in accepting conditions such as diabetes and hypercholesterolaemia as suitable for use in statistical adjustments between the two groups there is a problem in interpreting the role of hypertension. Since the cyclist's exercise load lack of obesity more than likely prevent the development of primary hypertension it seems reasonable that hypertension, which dominates the medical history comparison, should not dominate the statistical adjustments. It is also difficult to assess the cases of myocardial infarction and angina in this context. Because of these difficulties adjustments for medical history and smoking are set beside adjustments for smoking alone (table 1). I believe that the latter adjustment lies nearest to the latter.

Though it was not the main purpose of the study, it is obvious that in comparing the medical histories of the two groups the complete absence of past or present hypertension and angina and the lower incidence of myocardial infarction in the cyclist group is not explained by the difference in smoking habits alone. I accept that such a small sample may not give results that can be applied to the wider population.

As expected, the cyclists were slimmer and had less subcutaneous fat. Their chest expansion was greater, presumably because they were leaner and fitter. Their exercise heart rate and percentage increase in heart rate were significantly less than those of the non-cyclists. There is, therefore, satisfactory evidence that the cyclists were fitter as a group. The lower systolic and diastolic readings in the cyclists were probably the result of their long-term fitness and absence of obesity. The significantly better results in the electrocardiographic recordings are in keeping with the lower incidence of morbidity and mortality from ischaemic heart disease suggested in the original survey.¹⁹

In studies of the highly complex cause of ischaemic heart disease the lack of physical fitness has been cited more and more as an important factor, though proof of this is elusive and may never be established. Short-term exercise programmes have failed to modify risk factors for ischaemic heart disease.²⁰

It is hoped that the results of this survey will encourage those who participate in or advocate long-term physical fitness programmes.

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THE GENERAL PRACTITIONER Sir—It is not uncommon to hear a raw licensee of the Company of the Apothecaries thus discourse: "Really, our education is now so good, that we must supersede the physicians are long. In former days, when the instruction of the general practitioner was limited by a counter in a country village, the physician might be necessary. But since every medical man now completes his education in a metropolis, and passes a rigorous examination into his requirements, we are become as skilled as the physicians." To the great father of medicine it did not seem so easy a matter to acquire professional knowledge and skill, and if those self-satisfied persons would learn by heart his first aphorism, and repeat it to themselves every day, possibly they might become wiser and less ridiculous: "Life is short, the art is long, occasion sudden, to make experiments dangerous, judgement difficult."—A. Scaevola, APOTHECARY, AND MAN-MIDWIFE. (*London Medical Gazette* 1830;61:9.)