operations and a plaster room; a pathology laboratory providing basic haematology, microbiology, and biochemistry services; and an x-ray department, which undertook most commonly required procedures including barium examinations. There were also physiotherapy and occupational therapy departments. The hospital was staffed by 11 general practitioners and two specialists—a surgeon and a paediatrician. There were no resident staff. If I wanted to admit a patient I simply telephoned the ward and sent the patient in with my instructions and prescriptions. The nurses did most of the administrative work and several practical procedures such as intravenous infusions. I seldom needed to send a patient to any of the big city hospitals 80 km away.

On the basis of my British general practice training I was given privileges to admit patients under my care and to perform a wide variety of minor surgical procedures including diagnostic dilatation and curettage and closed reduction of fractures.

If a patient of mine needed more advanced surgery I discussed this with the specialist surgeon or one of the general practitioner surgeons, booked a slot in the operating theatre at a time when I would be free to assist (assistant's fee is 25% of the surgeon's fee), and it was done usually with a wait of no more than 7-10 days. All very easy. Certainly attractive to the patient: no wait to see a surgeon in outpatients, virtually no wait for having the operation, and sent to your "own" friendly hospital with your own doctor at least present at the operation if not actually wielding the knife. It does mean, however, that considerable responsibility lies with the general practitioner.

A greater awareness of litigation, however, has resulted in a set of so-called "bylaws" governing the way in which doctors use the hospital facilities. Much of the impetus for this came from the Hospital Accreditation Board—a body which set out to assess the work of the hospital, providing suggestions for improvement and issuing a certificate of accreditation. The nearest British equivalent is the approval given by royal colleges for postgraduate training.

The hospital's attempts to meet the requirements had led to a set of regulations of extraordinary complexity which would horrify most British doctors. An example is the compulsory second opinion mentioned above. This requirement applied not only to major surgery but also to maternity care. There were at least 10 obstetric problems where a second opinion had to be sought and recorded in the notes. The nursing staff were in effect watchdogs over the doctors ensuring that the doctor did not contravene a bylaw, and the nurses all seemed to have the bylaws printed on their hearts and were not slow to remind the doctors of them. This created tensions and distrust between medical and nursing staff.

The bylaws covered also the granting of privileges. In a nutshell a doctor who had admitting privileges and who wished to perform a particular surgical operation had to provide evidence to the hospital privileges committee that he was competent to perform it. This seemed to be a sensible and straightforward rule. The privileges committee, however, consisted of three of the doctors using the hospital who would be aware that the more surgeons there were practising in the hospital the smaller would be their own slices of the surgical cake. Any refusal to grant privileges led to distrust of the committee's motives and brought to the surface underlying animosities, which clearly arose from the doctors being in competition with one another for patients.

The requirements for accreditation together with the fear of litigation conspired to produce various other largely counterproductive regulations including compulsory medical audit (performed by the doctors themselves and a further potent source of poor doctor relationships). One set of regulations related to case notes and imposed penalties on doctors who failed to make regular progress notes and summaries—although the quality of the notes was immaterial.

Conclusions

You may say that this is all very interesting but how much relevance do the successes and problems of Canadian general practice have to the British family doctor? Canada is very different geographically and is much closer to the powerful influences of the United States. The problems patients bring to their doctors, however, are much the same and I think it is possible to draw some cautious conclusions.

Those who espouse a move towards an expansion of a fee-per-item-of-service system and a move towards greater use of hospitals by general practitioners should be aware of the extent to which this can influence patterns of practice. It is, of course, not surprising that the way in which we are paid influences our work and this could be, and has been, used to influence work patterns—such as payments for taking cervical smears. The Canadian experience does, however, suggest some of the far-reaching consequences of having a fee system biased towards practical procedures—which it is very likely to be—and of encouraging general practitioners to do more of their own surgery. Although the hospital bureaucracy I described may be an extreme case, there would be inevitably pressure to provide safeguards to ensure that surgical procedures are undertaken only when properly indicated and only by suitably skilled operators—with all the repercussions that such regulations might bring.

Although competition for patients among British doctors is less pronounced than in North America there are often tensions between practices. Any changes which exacerbated these are unlikely to bring about improvement in quality of patient care.

Perhaps it will be possible to expand the fee-per-item-of-service system and the general practitioners's role in surgical procedures, but we would be wise to tread warily and to learn lessons from our neighbours across the Atlantic.

Clinical Pointer

Your readers might like to know of our experience in treating asthma and chronic obstructive airways disease using nebulised ventolin solution put into a portable electric inhaler machine which we carry around with us in our cars. The machine we use is the Aerolyser Electric Inhaler manufactured by Aerosol Products Ltd, London. We purchased the machine two and a half years ago and since then our treatment of asthma in primary care has altered dramatically. The pump is normally kept in our surgery, but can be transported to the patient's house in cases of severe bronchospasm. For adults 1 ml of salbutamol solution (5 mg/ml) is put into the nebuliser bottle with 1 ml of sterile water; the pump is then turned on and the nebulised ventolin solution is given for about 15 minutes using a face mask. The treatment is also carried out on young children and can be given to very small babies using an appropriately reduced quantity according to the weight of the child.

This way of treating bronchospasm has really changed our approach in general practice. We can go to patients rapidly with a portable machine. It gives very quick relief in most cases except of course those of a chronic obstructive airways nature. The number of occasions when we have had to give intravenous treatment have been greatly reduced, and this is especially true for young children, who are obviously frightened of doctors when they have repeated attacks of asthma. Our approach with a mask with a warm nebulised solution has encouraged them to relax, and we have found that this has revolutionised our treatment of juvenile asthma in general practice. We should point out, however, that it is important to reassess young children two or three hours after they have been given the nebulised solution as there can be considerable rebound bronchospasm, and a further administration is often required.

We make every effort to let our patients know that this facility is available, and we encourage our elderly patients with chronic obstructive airways disease to attend the surgery for frequent sessions on the nebuliser. This machine is not expensive—about £96—and the salbutamol solution is easily available. The whole apparatus takes a few minutes to set up, and in a crisis with severe status asthmaticus we think this machine can be life-saving. We therefore think that wider use should be made of this facility in the treatment of asthma in general practice.—P G P MANSON-BAHR, J M HILL, R A JUPE, general practitioners, Long Stratton, Norwich.

TABLE II—*Ranking of all procedures (1-25): 1975-1980*

	Total No	Cumulative total	Cumulative %
1 Dressings	12 315	12 315	12
2 Urine testing			
6386 (general)			
7345 (antenatal and postnatal)	11 731	24 046	23
3 Haemoglobin measurement			
4876 (general)			
5792 (antenatal and postnatal)	10 606	34 652	34
4 Weight			
2213 (general)			
7336 (antenatal and postnatal)	9 549	44 201	43
5 Blood pressure			
1275 (general)			
7280 (antenatal and postnatal)	8 555	52 756	51
6 Nursing advice	6 542	59 298	58
7 Injections	6 385	65 683	64
8 Venepuncture*			
9960 (general)			
1141 (antenatal and postnatal)			
Erythrocyte sedimentation rate 593	5 714	71 397	69
9 Treatment of verruca*	4 786	76 183	74
10 Ear syringing*	1 930	78 113	76
11 Preparation for cervical smear*			
1387 (general)			
668 (antenatal and postnatal)	1 855	79 968	78
12 Strapping*	1 816	81 784	79
13 Suspensory bandage	1 663	83 447	81
14 Aural toilet*	1 530	84 977	83
15 Removal of sutures	1 421	86 398	84
16 Aural wick*	1 373	87 771	85
17 Prescription given	1 363	89 134	87
18 Applications	1 316	90 450	88
19 Viralography and peak flow rate	926	91 376	89
20 Referred to hospital	786	92 162	90
21 Mid-stream urine specimen	739	92 901	90
22 Preparations for intrauterine contraceptive device			
407 insertion/change*			
284 removal/check	691	93 592	91
23 Cold cautery*	668	94 260	92
24 Butterfly plaster	575	94 835	92
25 Installation of eyedrops/ointment	548	95 383	93

Note: 102 886 = 100%.
*Additional primary care team procedures.

TABLE III—*Ranking of all procedures (26-75): 1975-1980*

26 Sling	525	50 Nail trephine*	69
27 Smallpox vac check	517	51 Plaster-of-Paris prep for and assistance with* (57) and removal	66
28 Audiometry*	515	52 Skin tag removal*	65
29 Polio immunisation	503	53 Ear swab	64
30 Cervical cultet*	495	54 Eye swab	64
31 Weight	483	55 Drugs given	58
32 Suturing	474	56 Prep for primary change*	53
33 Electrocardiograph*	400	57 Provision of diet sheet	46
34 Dipslide urine culture	357	58 Ear insufflation*	42
35 Removal of foreign body from eye*	327	59 Removal of foreign body from ear*	40
36 Prep for and assistance with incision of abscess	287	60 Nose bleed*	38
37 Removal of subcutaneous foreign body*	192	61 Abscess swab	35
38 Removal of strapping	173	62 Collection faeces specimen	33
39 Throat swab*	166	63 Removal of foreign body from nose*	25
40 Kaolin poultice or hot fomentation application	154	64 Cut ring off finger*	23
41 Skin tests (allergy)	154	65 Eye swab (Undine)	23
42 Copper sulphate/silver nitrate application*	146	66 Prep for tie off of polyp*	22
43 Application of splint*	144	67 Nail clippings (for fungus)	20
44 Impregnanted supportive bandage (Viscopaste, etc)*	128	68 Collection sputum for culture	16
45 Prep for high vaginal swab	118	69 Prep for tapping hydrocele	14
46 Prep for and assistance with excision of cyst	104	70 Nose drops	13
47 Microscopic exam urine	101	71 Metatarsal bar*	12
48 Supervision recovery from general anaesthesia	84	72 Prep for removal of foreign body from throat	10
49 Prep for and assistance with removal toe-nail	83	73 Removal of fish hook*	9
		74 Enema	8
		75 Dressing changes* Miscellaneous (7*)	7 39

*Additional primary care team procedures.

TABLE IV—*Proportion of "additional primary care team procedures" (APCT) to "standard nursing procedures": 1975-1980*

	Standard nursing procedures	APCT procedures No (%)	Total
1975	10 213	3 784 (27)	13 997
1976	11 439	5 559 (33)	16 998
1977	10 911	5 161 (32)	16 072
1978	11 436	6 069 (35)	17 505
1979	12 774	6 707 (34)	19 481
1980	12 212	6 021 (95)	18 833
Total	68 985	33 901 (33)	102 886

procedures and that the proportion showed little change over the six years. The total count of APCT procedures available for analysis was 33 901, and as before the distribution was heavily weighted by few of the procedures. Table V shows that haemoglobin measurements and venepunctures made up almost half of the count (16 320) and a further seven types of APCT procedures made up nine-tenths of the count. The remaining APCT procedures may be identified in tables II and III.

The practice carried out a sizable amount of minor surgery during the study period. Examples are suturing (474), incision and drainage of abscess (287), excision of sebaceous cysts (104), removal of ingrowing toe-nails under general anaesthetic (83), and tapping of hydrocele (14).

In the context of transferring a proportion of minor operations from hospital to general practice the New Charter Working Group of the General Medical Services Committee (GMSC)[2] has recommended "an extended range of item of service payments for specified services," these to be "regarded as increased payment for increased effort." They listed a number of items in seven bands that were "intended to achieve a more work-sensitive contract than at present." Many of these items can be identified through this record of the work of the nurse in the treatment room and they accounted for 19 400 (19%) of the total number of procedures. Furthermore, many of these procedures—for example, haemoglobin measurements (10 606), ear syringing (1930), and removal of sutures (1421)—are almost entirely carried out by the nurses although initiated by the doctor who accepts the final responsibility (table VI).

TABLE V—*Ranking of "additional primary care team procedures": 1975-1980*

	Total No	Cumulative total	Cumulative %
1 Haemoglobin measurements			
4876 (general)			
5732 (antenatal and postnatal)	10 606	10 606	31
2 Venepuncture			
3960 (general)			
1141 (antenatal and postnatal)			
Erythrocyte sedimentation rate 593	5 714	16 320	48
3 Treatment of verruca	4 786	21 106	62
4 Ear syringing	1 930	23 036	68
5 Preparation for cervical smear			
1387 (general)			
668 (antenatal and postnatal)	1 855	24 891	73
6 Strapping	1 816	26 707	79
7 Aural toilet	1 530	28 237	83
8 Aural wick	1 373	29 610	87
9 Viralography and peak flow rate	926	30 536	90

Note: 33 901 = 100%.

TABLE VI—*Recommended additional services payments identifiable in the treatment room work: 1975-1980*

Item of service	Band	No	Average per year
Ear syringing	1	1 930	322
Respiratory function tests	1	926	154
Cervical cytology	2	1 855	309
Erythrocyte sedimentation rate	2	593	99
Foreign bodies in eyes	2	327	55
Haemoglobin	2	10 606	1768
Nasal packing/removal	2	15	3
Urine microscopy	2	101	17
Abscess drainage	3	287	48
Intradermal testing/multiple	3	154	26
Sebaceous cyst removal	3	104	17
Suturing lacerations/removal of sutures	3	1 895	316
Plastering/splinting	4	201	34
Manipulation and traction	5	6	1
Electrocardiograph	7	400	67
Total	—	19 400	3233

Discussion

The earlier paper on the work of the practice nurse reported that the treatment room made an important contribution to the work of the practice, but that this would not have been possible if the staff had been attached nurses requiring authorisation from the area health authority to carry out procedures as opposed to practice nurses who were authorised on a personal

Practice Research

102 886 treatment-room procedures: implications for nurse training and item-of-service payments

W H R WATERS, J E LUNN

An earlier study of the first four years of work in the new treatment room of this practice referred to the need to delegate duties to nursing staff that might otherwise be undertaken by the doctor.[1] The number and variety of such procedures has increased as facilities have improved and as the primary care team has expanded. The work has extended to cover some items that had become mainly hospital practice—for instance, the excision of sebaceous cysts, the incision and drainage of abscesses, and the avulsion of ingrowing toe-nails. Investigations such as audiometry, electrocardiography, and vitalography, or collecting samples such as mid-stream specimens of urine, dipslides, and venepuncture are commonplace. Many of the additional procedures are within the competence of any trained nurse—for instance, the extra dressings and the removal of sutures. Some require initial assessment of competence both for the sake of the patient and for medicolegal purposes—for instance, ear syringing. Others are not usually part of nurse training so that instruction is necessary—for instance, for venepuncture, vitalography, electrocardiography, and audiometry.

There is nothing medically exclusive about many of the procedures, and some of them are carried out by workers other than nurses or doctors in hospitals. The primary care team, however, is small and has to be adaptable. Any member should be prepared to carry out any procedure that is within their competence if the work flow of the team requires it.

This article looks at the procedures carried out and then recorded in the treatment-room day book by the practice nurses. The procedures that require initial assessment or training, or both, have been identified for separate analysis. Such procedures are mostly additional to the usual work of a nurse and to the customary work of a doctor's surgery and arise from the improvement of facilities and from growth of the concept of the primary care team, thus we refer to them as "additional primary care team procedures" (APCT procedures).

The data cover the first six years of work in the treatment room of the health centre, 1975-80 inclusive, after a six-month settling down period.

Background to the study

The study practice has 11 400 patients and is based in a health centre in the South Yorkshire coalfield covering four contiguous villages and the surrounding agricultural district. The treatment room of the health centre has an area of about 27 m² (290 sq ft) and is divided by curtains into two cubicles and a preparation area. Opening from this treatment room is a recovery room (9 m²; 96 sq ft) and a test room (5·5 m²; 60 sq ft). There is a hatch from the treatment room to a single lavatory. The treatment areas are staffed by practice nurses from 9.00 am to 6.30 pm Monday to Friday and 9.00 to 11.00 am on Saturday mornings. Four part-time nurses are employed, three of whom have been with the practice for over 17 years, and one of these has 24 years' general practice experience. The total nursing time is six hours a week per 1000 patients at risk—that is, 68 hours a week—and in addition the attached district nurses attend for up to 2½ hours a week.

Method

The name, diagnosis, and treatment (or procedures) on all patients who attended the treatment room between 1 January 1975 and 31 December 1980 inclusive were recorded and coded for analysis. The coding practice was the same as in the previous report,[1] so that when several procedures were implied in a diagnosis only the main one was coded—for example, suturing a wound was recorded as one procedure and not as four (toilet, suture, dressing, and injection of tetanus toxoid). When a patient attended with more than one condition, or when the main procedure did not naturally indicate the others, they were coded separately.

Results

During the six years a total of 57 844 patients were seen and 102 886 coded procedures carried out, of which 29 302 related to antenatal and postnatal work (table I). Although over 80 types of procedures were coded during the study only five of these accounted for half of the total count (dressings, urine testing, haemoglobin measurements, weights, and blood pressures), and 20 types covered nine-tenths of the total count (table II). The remaining procedures are ranked in table III.

TABLE I—*Total number of procedures: 1975-1980*

	Procedures		
	General	Antenatal and postnatal	Total No
1975	9 749	4 248	13 997
1976	11 976	5 022	16 998
1977	11 623	4 449	16 072
1978	12 967	4 538	17 505
1979	13 700	5 781	19 481
1980	13 569	5 264	18 833
Total	73 584	29 302	102 886

Table IV shows that almost a third of the procedures were APCT

Hatfield, Doncaster, South Yorkshire
W H R WATERS, MB, FRCGP, general practitioner
Sheffield University, Sheffield
J E LUNN, MD, DPH, senior lecturer in community medicine

basis to carry out procedures. It was also thought that it is difficult, if not impossible, for an area health authority, working by consensus management through a system of committees, to authorise (or forbid) continually changing sets of procedures in different general practices to be carried out by a changing population of nurses.[1]

The data reported in this paper suggest that a limited number of procedures cover a large volume of the work, and in the case of the APCT procedures almost half of the work count is covered by haemoglobin measurements and venepuncture. Consequently, discussion could be initiated on quite a short list of procedures for approval by those area health authorities who would allow their attached nurses to fit more closely and effectively into the primary care team. As a starting point we would suggest haemoglobin measurements, venepuncture, and ear syringing, and also less common procedures such as vitalography and peak flow measurements (926 carried out in six years), audiometry (515), and electrocardiography (400). The latter three procedures, though fewer in number, are lengthier and therefore when measured on the basis of time would account for a much larger proportion of the total work.

For an attached nurse to take her full place in the team, however, and to be on a par with the nurses employed by the practice, it is obviously necessary that she is trained for and permitted to carry out the whole range of APCT procedures. A look at the range will show that a relatively short training programme, or alternatively a reasonable amount of in-service training with an experienced practice sister, is all that is necessary to achieve the required skills and standards.

The Royal College of Nursing has stated: "The role of the nurse is continually developing as changes in practice and training add a new dimension to the range of duties. Over and above this the nursing role may be extended by delegation of the medical duties by the doctor, although it should never be envisaged that this is the most important function of the nurse who has extended her role. It is appreciated that, although some nurses are undertaking these responsibilities willingly and with enthusiasm, it is equally true that others are not skilled in the relevant tasks nor prepared for such responsibilities, and some are not willing to accept this added range of work. The decision of these nurses not to extend their role should be recognised and respected."[3] In our view, therefore, it is not only necessary for area health authorities to allow attached nurses to undertake APCT procedures and to arrange training for them, but also, respecting the view of the Royal College of Nursing and certain nurses, it is important that nurse managers should attach to the primary care team only nurses who are trained in or are willing to train in these procedures and are then willing to carry them out.

As to the extended range of item-of-service payments recommended by the GMSC's New Charter Working Group, the considerable extent to which it is possible to identify these procedures in the work of the practice nurse has implications that deserve careful consideration by all concerned.

Conclusions

During six years 57 844 patients were seen in the treatment room and 102 886 procedures carried out. One-third of these procedures were additional to usual nursing procedures and required initial supervision and assessment or training, or both. They are a natural consequence of improved facilities and an expanding primary care team and are referred to as additional primary care team procedures (APCT procedures). Almost half of the APCT procedures were haemoglobin measurements and venepunctures, and most of the remainder require only a short training programme or reasonable amount of apprentice type in-service training to achieve required skills and standards.

Almost one-fifth (19 400) of the procedures are to be found in the "extended range of item-of-service payments" of the GMSC's New Charter Working Group and over two-thirds of these were almost entirely carried out by the nurses though initiated by the doctor, who accepts the final responsibility.

We thank all the members of the Hatfield Health Centre primary care team, and Mrs J Gyte and Miss A Warburton of the Department of Community Medicine of Sheffield University Medical School for their help.

References

1 Waters WHR, Sandeman JM, Lunn JE. A four-year prospective study of the work of the practice nurse in the treatment room of a South Yorkshire practice. *Br Med J* 1980;280:87-9.
2 General Medical Services Committee. *Report of the new charter working group*. London: British Medical Association, Feb 1979.
3 Royal College of Nursing. *The extended clinical role of the nurse*. London, 1979.

Clinical Curio

The term consultoid has a pejorative ring to it. But being a bit of a consultant can do something for the doctor and the patients too. My second consultoid string is homoeopathy, and a few courses at the Royal Homoeopathic Hospital have brought me some proficiency in Hahnemann's curious little specialty. Practice in homoeopathy may depress the novice, as the patients are heavily laced by those unfortunate folk who the main body of the profession hope will go away. Unfortunately, of course, they tend to persist in their awkward complaints, and many even insist that they are really ill.

Often a profuse apology precedes the homoeopathic consultation, and this is best carefully reported in the history taking. I always give (sell) the homoeopathic patient a half hour expecting it to stretch to a full 45 minutes. As a result, patients find themselves in a unique position—at the receiving end of a doctor who seems to have plenty of time, who listens unhurriedly and with interest to everything she or he is likely to have stored away, often resentfully and sometimes for years.

Evidence of a previous medical mismanagement is rare, though all too often you have to make a firm and determined effort not to let your eyebrows disappear completely from the forehead. To be able to spend one's most precious commodity—time—with a wild prolificity listening and examining your patient is a wonderful feeling. Christine's story of seeing a different and less interested doctor each time she went to the chest clinic is symptomatic of our poor old NHS. She was really worried that apart from looking at her radiographs briefly and trying to rearrange her notes so that some continuity was maintained the consultation always ended in the same way—a long course of antibiotics, which inevitably gave her thrush, but left her sputum as copious as ever and always a bit "off-colour." Were these antibiotics doing her good, she asked. Were they in fact harming her? Could she do without them? To score on such a "homoeopathic" consultation might have even baffled Hahnemann himself. Examining her poor cross-hatched chest, where keloid seemed still to reign supreme, and prainage tubes had previously sprouted from most unusual sites, was a reminder that even thoracic surgeons have, like the rest of us, to learn their art.

Old and excellent bedside and outpatient teaching tends to stay with you for a lifetime, and many a memory trace of bronchiectasis before the days of early thoracectomy was reactivated in the 10 minutes or so spent with stethoscope and fingers. Happily the consultoid is devoid of case notes from St Elsewhere's, which leaves him in a pleasant state of disinhibition. On clinical grounds Christine had bronchiectasis in her left lower lobe—if not a lung abscess—whatever the radiologists' shadowy reports told her chest-clinic doctor.

Homoeopathy abounds in cures and failures. Yet another thoracotomy, luckily this time in a centre of some excellence, cured Christine of her symptoms and her need of a consultoid's help.—ERIC TRIMMER, general practitioner, Hertfordshire.

We will be pleased to consider for publication other interesting clinical observations in general practice.—Ed, *BMJ*.