

PRACTICE OBSERVED

Vocational Training

Is the distribution of training practices appropriate for the needs of general practice?

T S MURRAY

Abstract

The distribution of practices that train general practitioners in the west of Scotland was examined. The concentration of training practices is lowest in combinations that are grossly deprived. Several topics require debate: should trainees be given experience in such areas as an elective? Should the criteria for selecting training practices be similar in all areas? Should practices in deprived areas be encouraged to apply to become training practices?

Introduction

The criteria for appointing general practice trainers have been evolved over several years, and any doctor who wants to become a trainer must show a willingness to teach. This is only one of the many necessary criteria, and the full criteria are published in *Training for General Practice*. These criteria are an adequate model for a region to build on. There has been concern that trainees get experience of a certain type of general practice that they may not experience in their long term careers. Hilder showed that trainees may see a different pattern of clinical problems from trainers. The overall aim of the training year in practice is to ensure that the trainee acquires basic competence in general practice and to help lay a sound foundation for further professional development. This further development might be worrying if it is an environment that is totally different from the one that they have been trained in.

The Joint Committee on Postgraduate Training for General Practice believes that the aims of training may be achieved in a practice that provides the trainee with sheltered working conditions in which there is the time and opportunity to explore the range of general practice. The trainee should be challenged so as to be sufficiently stretched and intellectually stimulated. Unfortunately, the training year gives little experience of the high demand, socially deprived areas where many of the trainers will work as principals. It is important that young principals maintain their standards in their new environment.

I carried out a survey in the west of Scotland to determine whether the distribution of training practices was appropriate to the needs of the region. The distribution of principals in general practice in each health board area was obtained from the primary care administrator from health boards in the west of Scotland. This distribution was then compared with the current list of trainers in the west of Scotland.

Findings

Table I gives the distribution of training practices throughout the west of Scotland according to their health board area. In Argyll and Clyde there is considerable variation within the districts, and almost 15% of principals in the Dumfries district are trainers but only half of this number in the other

TABLE I—Distribution of trainers in health board areas

Health board	No. of general practice principals	No. of trainers	Trainers as % of general practice principals
Argyll and Clyde	290	25	8.6
Dumfries and Galloway	290	16	5.5
Dumfriesshire and Galloway	182	16	8.8
Forth Valley	174	16	9.2
Lowland Glasgow	174	16	9.2
Total in region	1110	140	12.6

Wendie Health Centre, Glasgow G2 7LR
T S MURRAY, MRCGP, senior lecturer in general practice, University of Glasgow

Practice Research

Clinical trial of common treatments for low back pain in family practice

J R GILBERT, D W TAYLOR, A HILDEBRAND, C EVANS

Abstract

The results of a multicentre randomised clinical trial are reported of bed rest and of a physiotherapy and education programme for patients who presented in family practice with an acute episode of low back pain. No beneficial effect of either treatment was observed on several clinical outcome measures, including straight leg raising, lumbar flexion, activities of daily living, and pain. In fact the results favoured early mobilisation over bed rest and suggested that the physiotherapy and education programme was doing more harm than good. Moreover, additional analyses, which focused on clinically interesting patient subgroups, discovered no subset of patients who benefited from either of the treatments under study.

Having failed to identify any clinically important benefits, or other explanations for these negative results, we can only conclude that family doctors have little reason to prescribe either bed rest or isometric exercises to patients who suffer from low back pain.

Introduction

Many articles are published each year dealing with medical treatments for low back pain. Most are descriptive and uncontrolled, though five randomised clinical trials have been completed, primarily by British and Swedish investigators.

Simons-Williams *et al* found that patients who received active physiotherapy showed significantly greater recovery at one month than those who received placebo physiotherapy. This effect, however, disappeared after three months. The results of three other trials showed improved recovery with isometric exercises and patient education compared with mobilising or extensor exercises and standard physiotherapy treatment. Bed rest, although commonly prescribed for low back pain in family practice, has only recently been tested in this setting. Wisel reported that bed rest decreased the amount of time lost from work and the amount of discomfort experienced by patients by over 50%, compared with mobilisation.

Although these trials have generated some positive results, interpreting them is hampered by the absence of valid and reliable measures of functional status, the failure to blind outcome assess-

ments, small sample sizes, and imprecise criteria for patient inclusion and exclusion. Our study was designed both to overcome these shortcomings and to examine the two most promising treatments from previous trials: bed rest and physiotherapy combined with education.

Methods

A randomised trial was performed to determine the effect of bed rest, a programme of physiotherapy and education, both of these treatments, or neither treatment on patients with acute low back pain.

INCLUSION OR EXCLUSION CRITERIA FOR PATIENTS

All patients who presented with low back pain to 22 participating family physicians over 10 months were considered for the trial. Physicians were drawn from both highland and group practices, worked predominantly in urban areas, and cared for an average of 2000 patients. Patients were eligible if they were over 16 years of age, had pain in the lumbosacral region with or without radiation down the leg, and had been free of back pain for at least 30 days before the current episode. Patients were excluded if they had abnormal sensation, motor power, or reflexes or if their symptoms proved on preliminary investigation to be due to fracture, spondylolisthesis, spinal infection, disease of the hip or pelvis, gastrointestinal disease, primary or secondary tumours of the vertebral column, fractures of the vertebral column, Paget's disease, or rheumatoid disease. Pregnant women were also excluded.

BASELINE ASSESSMENT

Each physician used a standardised initial assessment form which outlined the inclusion-exclusion criteria and included questions on the precipitating event, medications, previous back surgery, previous medical consultant, and details of laboratory tests performed. The physical examination was left to the discretion of the physician with the exception of two standardised objective measurements: straight leg raising and lumbar flexion. Straight leg raising, considered to be a valid test of nerve root irritation, was measured on both legs using a reliable gravity corrected 100 centimeter Lumbal flexion scale. Patients were asked to complete a questionnaire that included personal information, history of back pain, the McGill-Melack pain questionnaire, and the activities discomfort scale. All patients were also given a diary in which to record daily estimates of the degree of pain, degree of restriction in usual daily activities, and degree of improvement, if any, since the previous

An important goal of treatment of low back pain is to return patients to normal physical functioning either at work or at home. This outcome was assessed by the activities discomfort scale in which patients rate the degree of discomfort associated with 18 specific activities of daily living. This instrument has been found to predict pain intensity at follow up. In our pilot study we found this scale to be a reliable measure (alpha = 0.92), and significantly related to the physician's judgment of pain. The McGill-Melack pain questionnaire has also been a sensitive, reliable, and valid tool for the measurement of clinical pain.

Departments of Family Medicine and Clinical Epidemiology and Biostatistics, McMaster University, Canada

J R GILBERT, MD, professor of family medicine and clinical epidemiology and biostatistics
D W TAYLOR, MD, associate professor of clinical epidemiology and biostatistics
A HILDEBRAND, medical student
C EVANS, physiotherapist
Correspondence to Dr J R Gilbert, 1200 Main Street West, Room 2V15, Hamilton, Ontario, Canada L8N 3Z5

TABLE II—Distribution of trainers in Lanarkshire

Area	No. of general practice principals	No. of trainers	Trainers as % of general practice principals
Hamilton City	290	16	5.5
North Lanarkshire	290	16	5.5
West Lothian	182	16	8.8
East Lothian	174	16	9.2
Total in Lanarkshire	936	64	6.8

Table II gives the distribution in the Lanarkshire Health Board area. In the East Kilbride-Hamilton area the percentage of training practices in East Kilbride town is relatively high compared with the Hamilton area, with the town of Hamilton providing a third of the principals but only a ninth of the trainers. In the Monklands/Cumbernauld area Airdrie and Coatbridge, an area of gross deprivation, only one (2.3%) doctor out of 43 is a trainer. Table III gives the distribution in the five Glasgow districts, highlighting two areas with a higher than average number of trainers, the Northern District and the South West District. In Glasgow Northern District is the town of Kilmahilly, where a third of the 21 principals are trainers. In the remainder of the Northern District, with gross areas of inner city decay, less than 4% of the principals are trainers.

disillusionment followed by the adoption of the standards of those who practise around them. This a month's elective might provide the trainee with some experience of working in a deprived area. It would also be invaluable experience for the practice that he or she is attached to. If, within any district, several trainees are doing electives it might provide good experience for the other trainees in the district. Such an elective seems to be particularly relevant now as the choice of practice vacancies for the trainee becomes more restricted. Undoubtedly, areas with a high concentration of training practices provide a high quality of care, which is desirable for the trainee to see. But is the doctor who has trained in this environment prepared for the hurly burly of a grossly deprived area?

The trainee's main aim at the end of vocational training is to obtain a practice, and many now obtain this in the area they work in without the post being advertised. One advantage of working in an area that is sparsely supplied by trainees is that chances for employment are decidedly improved. Despite the arguments for and against the present policy, each region tends to provide its own principals in general practice. Should the criteria for training practices be similar throughout the region? Should the regional committee be more flexible to its own needs and make allowances for practices in deprived areas with high workloads?

Practices tend not to put themselves forward from deprived areas. Is this because they are unaware of training standards, having few local peers to compare themselves with? Are they afraid of rejection? Do they think that trainees will know more than they do and are therefore afraid to apply? Does the high workload prevent them from becoming trainers? Many other reasons may be postulated for this discrepancy, but an educative programme is required in the deprived areas to identify practices of potential and advise them how to reach the necessary standards, which must be decided by each regional committee, taking into account the needs of their own area. Collaboration with the local medical committees would be of great help in this task. Freeman *et al* showed that modelling is a powerful means of learning in vocational training. It is important that the trainee who is appointed as a principal can cope with a new role.

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Multicultural medicine

Mongolian spot and causer—This is an ethnic characteristic. These congenital, macular, and non-inflammatory patches are common in ethnic Asian infants—Indian, Pakistani, Bangladeshi, and Sri Lankan. These are not uncommon in Afro-Caribbean, especially West Indians in the West Indies, there is an African as well as an Asian population. Occasionally these are noted in Eskimos and Europeans of Celtic origin, especially those with dark hair. They are collections of spindle shaped melanocytes located deep in the dermis. These are blue, slate grey, or black, commonly occurring in the sacral region but may occur anywhere on the skin, including the face. These spots vary in shape and size. Some can resemble finger marks and may be a bruise. The colour usually fades during the first year and they disappear by the end of the first decade. No treatment is required. The cause is unknown, thus more research is needed. It is important not to confuse them with bruises as the condition is often mistaken for a bruise if it has not been seen before. Many British general practitioners, health visitors, and consultant paediatricians in the National Health Service, especially those from South Africa, may never have examined an Asian or Afro-Caribbean infant.

In Asian culture to secure the extended family system, marriages are arranged—the less you see of the others, the more you stick to one—and the

husband is often more loyal to his mother than to his wife. A woman is expected to give birth to a spotless baby, especially if it is a male. It is not surprising, therefore, that the mother may feel guilty and believe that this Mongolian spot is her genetic failure. The mother in law, who believed when she was young that her own mother in law was awful and now thinks that her daughter in law is horrible, might think of it as a curse and be ready to blame the mother. A general practitioner should not only reassure the mother, but also explain this to the family.

Fuel can be added to the fire when an English health visitor sees such an infant on her first visit and suspects child abuse. The mother in law may collide with her and, despite the mother's denials and tears, she calls a "case conference" to be chaired by a consultant paediatrician. The general practitioner, unlike the consultant, is not salaried and is paid on a "service per item" basis. Knowing that there is no fee for such an attendance, carries on looking after his sick patients, and declines the invitation to attend, and no wonder. A lot of time and money is wasted.

If every medical student, general practitioner, trainee, and health visitor could be shown such cases, much expense, stress, and tears could be avoided.

—BASHIR OUESHI, general practitioner, Hounslow, Middlesex.

ALLOCATION TO TREATMENT

After obtaining informed consent from patients, physicians telephoned a centralised patient registry and randomisation service in the department of clinical epidemiology and biostatistics, McMaster University. Patients were stratified within each practice by whether their physician intended to place them on major or minor medications. Major medications were defined as regular analgesics (taking muscle relaxants or any analgesic containing fewer than eight aspirins per day, or both). Major medications were defined as anti-inflammatory agents (taking any non-steroidal anti-inflammatory drug or any analgesic containing eight or more aspirins per day). Within each of these strata patients were randomly assigned to one of four treatment groups comprising a 2 x 2 factorial design: (i) physiotherapy and education plus bed rest; (ii) physiotherapy, education only; (iii) bed rest only; and (iv) control (neither of the above).

REGIMENS

Patients who were randomised to physiotherapy and education (groups i and ii) saw a 20 minute-stretcher and orientation to the back and neck care and were given a two page summary of the presentation for future reference. They were also given the study physiotherapist shortly after randomisation at which time the isometric flexion exercises were taught and supervised. Each patient was given a form with both written and pictorial directions for each exercise and was instructed to repeat the exercises at home three times a day. Repeat visits were scheduled by the physiotherapist as necessary to insure that all patients had mastered the exercise programme.

Patients who were randomised to bed rest (groups i and iii) were instructed to stay in bed for at least four days and given written instructions dictating appropriate position of bed rest.

Patients who were randomised to the control group (iv) were given the same analgesic prescription as other groups and received no other instructions or treatments.

PATIENT FOLLOW UP

Patient progress was determined by follow up visits by the physician, daily patient diaries, self administered questionnaires, telephone interviews, and a medical record audit. All follow up assessments were performed by a physician or research assistant who was blind to the patient's assigned treatment.

All patients were re-evaluated in their physician's practice at roughly 10 day intervals for one month or until they were free of pain. At each follow up visit patients returned their latest diary, completed the patient questionnaire, and were examined by a physician who was blind to their assigned treatment.

Telephone follow up was performed six and 12 weeks after randomisation by a research assistant who was blind to the patient's assigned treatment. Using a standard questionnaire, all patients were asked to report the degree of their pain, restrictions in activities of daily living, and what, if anything, they were taking or doing for relief.

A final long term follow up was conducted one year after entry to the study. A questionnaire was mailed to each patient which inquired about the present state of their back, the frequency and severity of any episodes of low back pain, their current activity level, and whether they had seen a professional for back pain (and, if so, the type and duration of treatment that they had received). Information regarding objective measures being used by the patient to prevent further episodes of back pain was also obtained. To validate the accuracy of these patient reports reviews of medical records were conducted for all patients.

COMPLIANCE AND CONTAMINATION

Patients were asked at each follow up whether they had seen anyone else for their back pain, including physiotherapists, chiropractors, acupuncturists, or osteopaths, or all of those. Compliance with drug treatment and bed rest was measured by self report. Patients in all four treatment groups were provided with a diary which they completed each night before retiring until they were discharged from the study. Patients were asked to record: (a) the level of pain that they had experienced that day; (b) the extent to which the pain interfered with their usual daily activities; (c) the level of improvement since the previous day; (d) the name, strength, and number of both prescription and non-prescription medications taken that day; (e) the time spent resting and exercising; and (f) any other measures that they used to alleviate pain.

In addition to the patient diary compliance with bed rest was assessed

using a recently developed large scale integrated motor activity monitor. This device, which is slightly larger than a wristwatch, records body movement and was used to measure physical activity unobtrusively and objectively.

Compliance with physiotherapy was determined in part by patients returning for their physiotherapy education programme. Patients who received physiotherapy were also asked at the end of their six and 12 week follow up interviews whether they had used the exercises and, if so, how long they had continued to do so.

STATISTICAL METHODS

In designing the trial the activity discomfort scale was identified as the main outcome measure. A treatment effect equal to one standard deviation on the activity discomfort scale was considered clinically important, whether it occurred as a main effect or as an interaction between bed rest and the physiotherapy and education programme. Thus, the choice of alpha = 0.05 (2 tailed) and power = 80%, led to a target sample size of 65 patients/level (total = 260).

Physicians were asked to follow patients up every 10 days until recovery or for a maximum of 30 days. At each assessment five major outcomes were assessed: straight leg raising, lumbar flexion, restriction in activities of daily living, and pain assessed by the McGill/Melack total and word count scales. Ten day follow up was a guideline and was not mandatory. Recognising that each patient would be followed up in family practice only until the patient and physician were satisfied with the degree of recovery, that clinically acceptable recovery would occur at different times for different patients, and that all patients could not be seen for outcome assessment on a rigid time schedule, we proposed the following strategy for analysis. To control for varying durations of follow up by physicians outcomes were expressed as the amount of change from the baseline assessment to the final assessment divided by the number of days between randomisation and the final follow up by the physician. In effect, we examined the rate of change in each outcome measure during physician management of the episode of low back pain.

Since most patients completed at least one 10 day diary, 10 day total scores were constructed for each of the three scales assessed. These included "any improvement," "activity level," and "pain" and provided short term outcome measures. For each scale a lower total score corresponds to a better clinical result. A 2 x 2 factorial analysis of variance, controlling for baseline measures, was used to compare the four treatment groups on the above physician and patient diary outcomes.

In addition, survival analysis using the Cox proportional hazards model was used to compare treatment groups on the time to clinically interesting events. The diary data were used to identify the date on which the patient first reported "feeling a lot better," "normal level of activities," "no pain," and "stopped taking drugs." In addition, "recovery" was defined as the first follow up by the physician on which the doctor and patient agreed that pain had disappeared or declined to a mild level or, failing this, the first telephone follow up on which the patient alone reported this result. Again, the 13 baseline variables described in table 1, were included as covariates in these analyses.

Results

ADHERENCE TO PROTOCOL

A total of 270 patients was entered into the trial. Of these, eight were excluded on review of their baseline data for failure to meet the trial's predefined criteria for inclusion and exclusion. A further 10 patients refused to accept the treatment that was randomly assigned to them (one control, six bed rest, and three bed rest plus education). Thus 252 eligible patients began treatment. Follow up data were obtained for all but one patient, with 219 (87%) returning to their physician for follow up evaluation, 224 (89%) completing at least one 10 day patient diary, and 206 (82%) completing the six and 12 week telephone follow up, and 227 (90%) completing the long term follow up. The duration of patient follow up by physicians ranged from three to 84 days.

The diaries showed that patients who were randomised to bed rest spent an average of three days longer in bed than non-bed rest patients (p=0.007). Unfortunately, the large scale integrated motor activity monitor proved unreliable and thus no objective measure of compliance with bed rest could be obtained.

All but two of the patients who were randomised to physiotherapy and education saw the physiotherapist at least once, and none of the patients in the non-physiotherapy groups received the physiotherapy and education programme.

BASELINE DATA
The four treatment groups were well balanced on 13 key baseline variables (table 1). No significant differences were observed between patients who were randomised to the educational programme...

Table 1: Baseline patient characteristics: mean (SD). Columns include Bed rest and physiotherapy, Physiotherapy and education, Bed rest, and Control. Rows include Age, Gestation, Weight, etc.

CLINICAL OUTCOME MEASURES
Pain: Daily diary—Bed rest produced a significant, but small, increase in the patient's 10 day report of "restrictions in daily activities" (p<0.05).

Table 2: Total diary score over the first 10 days: mean (SD). Columns include Bed rest and physiotherapy, Physiotherapy and education, Bed rest, and Control. Rows include Improvement, Pain, etc.

Final office assessment by physician—Table III indicates the average daily rate of improvement for the five outcome measures assessed at the final physician follow-up. Statistical analysis gave a deleterious effect of the educational programme...

physician favoured early mobilisation over bed rest and suggested that the physiotherapy and education programme was doing more harm than good. Although this trial was not designed to assess the efficacy of medication regimens, our analysis comparing major or moderate medication showed no significant differences...

Survey of health visiting in antenatal care

FRANCES McCABE, YVETTE ROCHERON

Abstract
The range of the health visitor's work is expanding. To find out what antenatal work health visitors actually carry out and what their attitudes towards such work are, we surveyed general practitioners, midwives, and health visitors in three district health authorities...

Introduction
The debate in Britain about perinatal mortality rates and their relation to inequalities among the social classes has led to a discussion of the roles of health visitors in the care of women. For instance, an editorial article in the Health Visitor in 1979 argued that "the active involvement of the health visitor in antenatal care would appear to be essential in order to reduce the number of children who are expected to be born with congenital anomalies..."

Centre for Mass Communications Research, University of Leicester, Leicester LE1 7LJ. FRANCES McCABE, MS, development officer. YVETTE ROCHERON, BA, PhD, research associate.

physiotherapy and education programme on the activities of daily living scale (p<0.05). Although no significant effects of either bed rest or the physiotherapy and education programme were observed, the trend in the other four measures also went against the physiotherapy and education programme.

Table 3: Six and 12 week follow up. Columns include Bed rest and physiotherapy, Physiotherapy and education, Bed rest, and Control. Rows include Physiotherapy, Bed rest, etc.

Recovery analysis—Recovery was defined as either the first follow up assessment by the physician on which both the patient and physician reported that pain was no worse than mild, or, failing this, the telephone follow up on which the patient reported that pain was no worse than mild. Analysis using the Cox model showed no effect of either bed rest or the physiotherapy and education programme...

Table 4: One year follow up. Columns include Bed rest and physiotherapy, Physiotherapy and education, Bed rest, and Control. Rows include Physiotherapy, Bed rest, etc.

Discussion
No beneficial effects on clinical outcomes were observed for either bed rest or a physiotherapy and education programme among patients who presented with low back pain to 22 physicians in family practice. In fact the diary and final follow up assessments by the

to prescribe either bed rest or isometric exercises to patients in family practice who suffer from low back pain.
We thank the following physicians for participating in the study: Dr P. Barnier, M. Beer, M. Brennan, D. Davis, C. Evans, J. Feaghter, N. Flett, M. Jahnke, W. Kellington, W. Kennedy, D. Krafchick, E. Kwong, B. MacCormick, C. Moore, L. Nash, M. Parera, R. Parker, A. Roberts, V. Rudnick, H. Scholes, J. Shekter, J. Williams.

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that from this starting point the cart will follow the horse and debates on the role of health visiting in the antenatal period will be grounded on a better knowledge of practice and not prescription.

Methods
All of the general practitioners in Leicestershire and central Birmingham, all of the community midwives and health visitors from central Birmingham, and half of the community midwives and health visitors in Leicestershire were surveyed between November 1983 and January 1984. Differences in sampling were due to large disparities in the number of midwives and health visitors who worked in each district health authority. Three hundred and fifty six general practitioners, 44 community midwives, and 124 health visitors responded; response rates of 56%, 57%, and 78% respectively are acceptable in relation to other comparable studies...

Results
1. Most health visitors had some qualification or training in antenatal care and education. Over half had midwifery qualifications, and nearly 60% had qualifications as midwives. Though roughly a quarter had not been trained in antenatal education during health visitor training, just over half had been given a service training in this, whereas a quarter of the midwives had had no training in antenatal education at all.

general practitioner focused on the blurred boundary between translating and interpreting in consultations which involve complex conceptual and socio-cultural meanings held by lay people and professionals. Many health visitors argued that "interpreters are becoming more important for our job as an increasingly multicultural society."

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Table 5: Proportion of postnatal visitors who had been seen in antenatal period by health visitors. Columns include Less than 10%, 10-20%, 20-30%, 30-40%, 40-50%, 50-60%, 60-70%, 70-80%, 80-90%, 90-100%. Rows include Leicester City n=31, Leicestershire n=124, Central Birmingham n=12.

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Furthermore, the recent reorganisation of the health service had created some managerial disruptions in central Birmingham district health authority, whereas the boundaries of the Leicestershire district remained largely unchanged. A general visitor in Birmingham commented: "We used to have a health visitor. I saw her a lot. She was good. Since reorganisation, she has moved working here. We do not have her contact. The health visitor at X clinic, it's miles away. I don't even know whom I am supposed to contact and the health visitor keep changing."

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to practice health visitors and midwives might include attachment to a practice for midwives.
Similar surveys of the primary care team confirm that working relations and communication within the team can be inadequate. In such areas, expecting health visitors to increase their antenatal work might cause contention between the professional groups and demoralisation for health visitors, who do not have the resources to provide a preventive and supportive service for parents at home.

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Table 6: Views on individual preparations in the three areas. Columns include Leicester City n=31, Leicestershire n=124, Central Birmingham n=12. Rows include General practitioner, Midwife, Health visitor, Number health visitors.

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Furthermore, the recent reorganisation of the health service had created some managerial disruptions in central Birmingham district health authority, whereas the boundaries of the Leicestershire district remained largely unchanged. A general visitor in Birmingham commented: "We used to have a health visitor. I saw her a lot. She was good. Since reorganisation, she has moved working here. We do not have her contact. The health visitor at X clinic, it's miles away. I don't even know whom I am supposed to contact and the health visitor keep changing."

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to practice health visitors and midwives might include attachment to a practice for midwives.
Similar surveys of the primary care team confirm that working relations and communication within the team can be inadequate. In such areas, expecting health visitors to increase their antenatal work might cause contention between the professional groups and demoralisation for health visitors, who do not have the resources to provide a preventive and supportive service for parents at home.

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