# Middle Articles

## GENERAL PRACTICE OBSERVED

# Car Service in General Practice: a Two-year Survey

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After the retirement of the senior partner at the end of 1965 it was found necessary to examine ways in which the efficiency of the practice could be improved so that it could be run as a three-man partnership.

The practice is conducted from a large old Victorian house, and extends for a radius of about 2 miles (3 km.) from the surgery premises in a highly populated urban area. The list size is 8,500, and has remained at this level for several years: 1,072 (12.6%) are over 65 years, and approximately 650 (7.6%) are 5 years and under.

A health visitor, midwife, and district nurse are attached to the practice and work at times on the surgery premises—the health visitor at the well-baby clinic, the midwife at the two antenatal clinics, and the district nurse at her own surgery sessions each morning and two evenings a week.

The surgery premises are staffed for 24 hours a day by a full-time secretary, two part-time receptionists, and a housekeeper who covers nights and week-ends.

The partners in the practice each tend to follow their own interests. The senior partner looks after a large percentage of the old people, another partner has industrial appointments which take him away from the surgery for one day a week, and the third partner holds two clinical assistantships at a local hospital.

### Introduction of Car Service

Examination of our day's work showed that a large percentage of time was spent driving the car from patient to patient, and it was a logical step to examine the possibility of employing a driver to transport to the surgery those patients who were ambulant or not too sick, and thus save a home visit. Doctors are often called to see patients in their homes who could be seen in the surgery more efficiently if only they could be transported there. These patients do not have their own transport, and are not well enough either to walk or to use public transport to the surgery. Nor could we expect such patients in a "free" health service to hire private transport just to save the doctor's time.

### Organization

A patient of the practice, a retired chauffeur, was asked whether he would be prepared to drive for the doctors on three mornings a week—that is, Monday, Wednesday, and Friday—for an experimental period of three months, and a car of one of the partners was made available during morning surgery.

The car service was begun on 26 January 1966. The doctor's car used was a Vauxhall Victor. It was soon found necessary to extend the service to every day of the week, and the secretary of the practice was asked if she would drive patients to the surgery on Tuesday and Thursday. Her car was a Morris Mini. Most revisits to the surgery were made on the mornings the driver was employed. During holiday periods it was found possible to employ ambulance drivers or firemen on a temporary basis.

On mornings when the service was in operation patients who requested a visit were asked by the receptionist whether they would be prepared to come to see the doctor if a car was sent to collect them and return them home. They were assured that they would be seen as quickly as possible.

Those who were hesitant to use the service were encouraged to do so, and it was often pointed out that if the patient was *very* ill he might well be taken to hospital by ambulance, and would not expect to suffer as a result. If a patient whom the receptionist felt could come by car was still diffident about using the service the doctor was asked to speak to him, and if he still preferred not to come the visit was undertaken.

Repeat journeys to see the doctor were booked in a diary held by the receptionist—these bookings were passed on to the driver at the beginning of his morning's work.

The personality of the receptionist was extremely important in the working of the scheme, some receptionists being very much better than others at persuading patients.

If one did not know from day to day how many new patients would call at the surgery an efficient service could not be run, and it was found to be a sound policy to space out the repeat visits over the course of the week rather than organize a session for such patients.

During the first year of the car service we had no appointment system in the practice, and patients were seen as soon as possible after they arrived at the surgery so that they could be returned home with the minimum delay. Since starting the appointment system the organization of the car service has been more efficient, though car patients are still seen ahead of those who have appointments.

For many years sick people have been told to go to bed and call their doctors for treatment; hence it is necessary to educate patients in the correct use of a car service.

The doctors' attitude to the patient who does *not* use the car service is important. It is essential to point out to him that we understand his diffident attitude, but that in fact over the past two years no patient has apparently suffered from being brought to the surgery by car.

The doctor–patient relations appear to have improved since the introduction of the car service, for it is more satisfactory to offer transport to the patient than to say, "Can't you come to surgery?"

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## Abuse of Car Service

Fear of abuse of this service is preventing many doctors from introducing it into their practice. We also were worried about possible abuse, and consequently did not circularize our patients regarding our experiment. Gradually, as patients asked for visits they were told about the scheme and encouraged to use it. There have been only one or two instances where it was felt that the patients were abusing the service. It is far more common for the patients, when asked if we can send the car, to say, "Don't worry ; my car is outside, and we can come on our own."

In common with a general trend throughout the country our total number of calls each year has diminished steadily. Any significant abuse of the service would have resulted in an increased number of new requests for visits (see Table I).

It is surprising how rarely patients ask for the car when requesting a visit. Having run the service for two years we are still getting only a few requests for the car—which again suggests little abuse.

TABLE I

| | 1965 | 1966 | 1967 |
|---|---|---|---|
| Total new calls received .. | 4,396 | 4,149 | 3,933 |
| Calls eligible for car service .. | | 2,218 | 2,486 |
| Offer of car service accepted .. | | 540 (24·3%) | 734 (29·5%) |

Many patients who in the past have asked for visits for trivial illness do seem to have developed a self-confidence in that they are now more prepared to come to the surgery even without the provision of transport. It must also be admitted that many patients who use the car could, with a certain amount of effort, have come to the surgery on their own ; but had there been no transport scheme they would certainly have expected the doctor to see them in their own home.

## Advantages to Doctor

As more patients are now seen in the surgery the doctor is on the premises for a longer period, and is therefore more readily accessible for emergencies. The saving of his time is considerable. The effort expended in driving from patient to patient and running up and down stairs with a heavy bag is not realized until such a service is used. Also, conditions for examining the patient are far better at the surgery than in the patient's home.

Apart from being able to continue as a three-man partnership after the senior partner's retirement, the practice has introduced the well-baby clinic and has been able to undertake a clinical assistant anaesthetic session by utilizing the time saved by the service.

Doctors have criticized their patients for consulting them about trivialities. This is most noticeable when the doctor has to make an effort to carry out a visit. The car service has obviated much petty annoyance which used to be experienced as a result of these unnecessary visits.

## Advantages to Patient

To our surprise the patient has also benefited from the car service. For many elderly and chronic patients their visit to the doctor is the only occasion on which they leave their home. This has had a marked therapeutic effect on them—lightening their mood and often proving to them that they are more mobile than they realized.

One man of 84 had been shut in his house for four years waiting to die. He ate and slept in one room, feeling too weak to move. A course of exercises and encouragement to go upstairs mobilized him, and he was then persuaded to visit the surgery via the car service. This man's transformation has been remarkable. As a result of his visits to the surgery he was persuaded to go to his daughter's for a holiday. When his wife had a stroke he took over the management of the house and looked after her for some weeks.

An old woman had been indoors for a year, and was afraid she would catch cold if she left her home. She visited the surgery by car, and as a result now does all her own shopping.

The advantages to the acutely ill patient may not be quite so obvious, and sometimes it seems a little hard to expect a patient to leave his bed and come to see us. In fact when they have done this they often say how much better they feel.

Earlier diagnosis and treatment is an advantage in children. Children with otitis media, bronchitis, etc., treated early in the day with antibiotics may be very much better by evening. The case of acute abdomen admitted to hospital during morning surgery is usually operated on at the end of the afternoon list. If the patient waits for the doctor to visit him admission to hospital and treatment are delayed for several hours. (Incidentally, admission to hospital is easier in the morning before other doctors have used up the available beds.)

Convalescence after illness seems to have been easier and of shorter duration since this service was started. After illness many patients are reluctant to leave their homes, but will travel to see their doctor so as to save his time.

## Use of Services by District Nurse

Six months after inaugurating the car service a district nurse was attached to the practice. In view of our interest in bringing patients to the surgery, permission was given for the nurse to work on the surgery premises to treat patients who were well enough to see her. Her patients were transported to the surgery for treatment of varicose ulcers, injections of mersalyl, cyanocobalamin, and iron, dressing of burns, etc. In fact she was able in an hour to do a considerable amount of her day's work. The nurse and doctor were able to have frequent joint consultations with the patient—this was particularly valuable in the treatment of varicose ulcers—and the nurse was able to undertake a much heavier work-load than would otherwise have been possible.

## Analysis of Results

Patients who were brought to the surgery were classified into two groups: (1) new requests for visits—these patients came by car after asking for the doctor to call ; and (2) repeat visits—these patients came by car on the instigation of the doctor or district nurse.

During 1966 500 different patients were brought to the surgery on 866 occasions, and in 1967 640 patients were brought on 1,412 occasions. These figures would have been larger had it been possible to carry more than 12 patients each morning. On a busy day we had to stop asking patients whether they would come by car once 12 patients had been booked, as this was the largest number which could be carried in one session. Many of them came with relatives or friends, and when a child was ill the mother would bring the whole family. Sometimes patients who were brought to the surgery by car felt well enough to go home on their own after the doctor had attended them. The car was also useful to send home patients who had come to the surgery by themselves, though not really well enough to do so.

The value of the car service for the chronic sick and for repeat visits was obvious, and when starting it we felt that the maximum use would be made of it by this group of patients. However, as Table II shows, the majority of transportations were the result of new requests for visits.

TABLE II.—*Analysis of Patients Carried to Surgery by Car*

| | 1966 | 1967 |
|---|---|---|
| No. of different people carried | 500 | 640 |
| New requests—that is, on instigation of patient or relative | 540 | 734 |
| Repeat consultations to see doctor | 245 | 272 |
| Repeat consultations to see nurse and sometimes doctor | 81 | 406 |
| Total No. of transportations | 866 | 1,412 |

One reason for the low number of repeat consultations to see the doctor, including chronic patients, was that the partner who looked after most of the elderly patients preferred to visit them in their own homes. Another reason was that the other two partners have reduced their chronic visiting list to those who really need a call on medical grounds, excluding purely social visits.

It is interesting to note that as patients gradually came to use the service the proportion prepared to arrive by car rose from 24.3% to 29.5%, as shown in Table I.

Table III records a breakdown into age groups of all the patients carried by car during 1967. Most transportations were for the upper and lower age groups, many children being carried once, occasionally more often, whereas a few of the older age group were carried on numerous occasions.

TABLE III.—*Age Distribution of Patients and Number of Times Carried in 1967*

| Age | No. Carried | Times Carried | Age | No. Carried | Times Carried |
|---|---|---|---|---|---|
| 0–9 | 232 | 308 | 50–59 | 36 | 100 |
| 10–19 | 73 | 92 | 60–69 | 60 | 190 |
| 20–29 | 52 | 62 | 70–79 | 58 | 244 |
| 30–39 | 41 | 47 | 80–89 | 40 | 292 |
| 40–49 | 45 | 65 | 90+ | 3 | 17 |

## Diagnosis in Patients Brought to Surgery

The diagnoses in those brought to surgery by car during the year 1967 are shown in Table IV.

TABLE IV

| | | | |
|---|---|---|---|
| Respiratory disease | 365 | Carcinomata | 17 |
| Abdominal conditions | 109 | Cerebrovascular | 14 |
| Cardiovascular disease | 107 | Ophthalmic | 11 |
| Infectious disease | 103 | Hospital discharge | 6 |
| Skeletal disease | 93 | Thirteen-week certificate | 22 |
| Psychiatric conditions | 34 | Miscellaneous | 17 |
| Senility | 27 | | |
| Neurological disease | 22 | | 1,006 |
| Skin disease | 22 | To see district nurse | 406 |
| Maternity and gynaecology | 19 | | |
| Surgical | 18 | Total | 1,412 |

While patients have learnt how to use the car service the doctors have been learning how to make greater use of it. Patients with high temperature, bronchitis, otitis media, etc., do not seem to suffer at all as a result of coming to the surgery. A high percentage of those carried had an infectious disease (Table IV), and where such a condition was suspected the patient was brought alone in the car and isolated while at the surgery. There is no evidence that any cross-infection has occurred as a result of this.

It was often possible to bring maternity patients to the surgery for their last postnatal visit. Mothers appreciated this, having been confined to their homes for about 10 days.

Many patients who needed certificates were well enough to be brought to the surgery, and those who had been discharged from hospital and who needed a visit would come by car. Those who for psychiatric reasons were reluctant to leave their homes were persuaded to come by car to see us, and as a result gained confidence. Many cases of minor illnesses of the neonate, such as snuffles and feeding problems, bronchitis, etc., were also brought.

## Time Saved by Transporting Patients to Surgery

The average doctor spends many hours each week driving his car from patient to patient. At a time when the number of patients per doctor is rising any reduction in non-productive work must result in an improved service to the community. Eimerl and Pearson (1966) showed that there is a saving of 10 minutes on a surgery consultation over a home visit. On this basis the time we saved by bringing patients to the surgery over the past two years has been calculated (Table V). The actual saving may well be greater when it is realized that the doctor is often able to have a joint consultation with the nurse in the patient's presence. When hospital admission has to be arranged this is easier from the surgery, as the use of the receptionist to obtain the admitting houseman is a further time-saving factor.

TABLE V.—*Estimated Time Saved by Car Service*

| | 1966 | 1967 |
|---|---|---|
| No. of different patients transported by car | 500 | 640 |
| Total No. of transportations | 860 | 1,412 |
| Estimated saving of time to doctor per surgery consultation over home visit | 10 min. | 10 min. |
| Total saving of time in year | 143 hours | 235 hours |

There is now time to visit seriously ill patients more often, so the doctor is prepared to manage more patients at their homes, when previously hospital admission would have been arranged; home visits are far more congenial when there are only three or four calls to make to seriously ill patients.

## Cost

When this car service was started we had no idea of the interest that would be shown in it, and accurate records of mileage were not kept. During one typical week when records were kept 41 patients were carried to the surgery and the mileage was 125 (200 km.), an average of 3 miles (5 km.) a patient.

The driver was paid at the rate of £1 per morning session, and on the two other mornings the receptionist was given a mileage payment for her car. Over the two-year period the cost was:

| | £ | s. | d. |
|---|---|---|---|
| Driver's salary | 281 | 0 | 0 |
| Receptionist (1,787 miles at 6d.) | 44 | 13 | 6 |
| | 325 | 13 | 6 |

This equals £163 a year, plus petrol and wear and tear on the car.

So long as the car was insured for business use there was no need for any extra insurance premium when used for this purpose. From a financial point of view the service was worth while. Over the two-year period the time saved was 379 hours, and when some allowance is made for petrol and wear and tear of the car the cost was a little over £1 an hour saved. A doctor's earning potential is far greater than this.

## Patients' Reaction to Car Service

A circular was sent to 10% of the 640 different patients who were carried to the surgery during 1967, and 52 replies were received. Three of the 64 patients had died during the year. All but one who replied liked the car service. All were prepared to use it again if necessary, and only two thought it was not to their advantage to come to the surgery. Patients were asked to add any comments on the form, and they often said how convenient it was to obtain their prescription while they were out, and that the consultation was much quicker than waiting for the doctor to call.

### Introduction of Car Service into a Practice

Though practice patients were not circularized about the car service before it started, for fear of abuse, it would have been wise to do so. Had they been told beforehand that, besides saving the doctor's time there were many benefits to them as patients in coming to the surgery by car, there would have been a more ready response to the use of the scheme. In our practice certain patients appear to have gained the impression that the doctors in the partnership will not visit at all. If the service had been publicized beforehand these rumours need not have gained a footing.

### Comments

The three partners are convinced that use of the car service will become widespread in the next few years. It is essential to reduce time spent in practice doing inessential things if the medical care of our patients is to improve. Most patients who are seen at home could well be seen in the surgery if transport could be arranged to take them there; and, perhaps more important, it might become the generally accepted thing that home visits were for the *very* ill only.

I have been able to reduce my visiting list considerably since the service was introduced into the practice. Some of the reduction, however, arises from being more selective in repeat visits. In 1965 I made 2,633 visits. In 1967 the number was reduced to 1,106—a reduction of 58%.

Considerable emphasis is laid by some doctors on the importance of home visits, but the amount of information gained on these visits may well be exaggerated. One visit to the home should suffice for most purposes.

From experience in our practice we believe the organization of a car service to be a worth-while investment, and to be adaptable to the needs of any type of practice.


### Summary

A report has been made of a car service organized over two years in a group practice.

One of the doctors' cars was used and a retired chauffeur was employed to carry patients who were too ill to go to the surgery on their own yet well enough when transport was provided.

Approximately 25% of patients requesting a new visit were prepared to come to the surgery by car, and this group accounted for about half the patients carried there in 1967. The other patients came for repeat consultations to see the doctor and/or nurse.

There was little evidence of abuse of the car service, and most patients readily accepted the provision of transport. They benefited from the service by earlier consultation and treatment, and the chronic sick and convalescent patients by more rapid recovery and an increase in their self-confidence. The doctor saved time and effort and was more readily available for consultation.

The cost was little more than £1 per hour saved.


I wish to acknowledge the help and encouragement given to me in writing this paper by my partners, Dr. A. G. I. Stockley and Dr. C. W. Coole, and to thank Dr. S. L. Wright, Medical Officer of Health for Croydon, for his kind permission to allow the district nurse to work with us in this way.


REFERENCE

Eimerl, T. S., and Pearson, R. J. C. (1966). *Brit. med. J.*, 2, 1549.


# MEDICAL HISTORY

## Hassall—Physician and Microscopist

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Arthur Hill Hassall (1817–94) is remembered by the unique thymic corpuscles which bear his name. He was born in Teddington, the son of a general practitioner. Hassall himself was, in turn, a student of medicine, botanist, general practitioner in Notting Hill, London, microanatomist, public analyst, consultant physician to the Royal Free Hospital, and finally designed, founded, and became physician to the Royal National Hospital for Consumption and Diseases of the Chest at Ventnor. He made numerous original observations with his favourite instrument, the microscope, and was a prolific writer, ending with an autobiography aptly entitled *The Narrative of a Busy Life.*

His adventurous spirit must have stemmed from his father, Thomas Hassall, a general practitioner in Sunderland, who temporarily held the double commission of Captain and Surgeon in the Durham Fencibles, a volunteer regiment raised to quell the Irish rebellion of 1798. While serving in this dual capacity his father met his future spouse. Hassall[1] gives this description: "It was a case of 'love at first sight.' He was standing on the steps of a hotel in Downpatrick when a ladies' school passed; he was struck with the appearance of one of the young ladies, boldly made himself known to the mistress of the school and after due enquiry and the necessary preliminaries the lady, Miss Anne Sherrock, became Mrs. Thomas Hassall."

Through his mother's Irish family connexions Hassall gained entry to the famous Dublin medical school, and was taught by such notables as Colles, Stokes, Graves, and Corrigan.

There are two primary approaches to research: a new idea or a novel technique. Hassall used the latter, and turned the magnifying lens of his microscope on to diverse problems: the fauna and flora of fresh and sea water, human histology, putrefaction of fruit and vegetables, adulteration of foods, and examination of urine, to mention a few examples. He began research when a medical student, collecting zoophytes and corallines from Dublin Bay, and even while waiting to take his final medical examinations in London he sought advice from Sir William Hooker, director of the Royal Botanic Gardens at Kew, on the flora of British waters. Many of his early communications were published in the *Annals of Natural History,* and a new species of off-shore animals was named *Lepralia Hassallii* after him. Hassall's *History of the British Fresh Water Algae,* published in two volumes by Longmans in 1845, remained an authoritative text for more than half a century. He was among the first plant pathologists, and experimentally inoculated fungus from decaying fruit into healthy

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