

## **PRACTICE ORGANIZATION**

### **A TIME AND MOTION STUDY**

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At the Annual Representative Meeting of the British Medical Association in July 1961 there was a discussion about the proposed "Committee on conditions of service in General Practice". A speaker, (Dr G. Cormack),<sup>1</sup> asked "How many doctors and how many of the public really knew what was involved in a general practice and how many hours a day on the average the general practitioner worked. What would be the result of a time and motion study?"

In 1956 I carried out a time and motion study in my own practice by a simple method of exact timing. Crombie and Cross (1956)<sup>2</sup> using a similar method over 12 months averaged 30 hours per week with a list of 4,200 patients. Mair and Mair<sup>3</sup> (1959) published a comprehensive survey of five years work; where comparable, their figures based on averages over the five years correspond quite closely to my results over a short period. Their practice is, however, a compact one and mine is scattered; even so, they concluded that 2,000 patients per principal was a sufficient load.

The object of this paper is to record the proportions of time expended on the various activities of the day in an individual practice; to show the need to assess one's methods at intervals; and to demonstrate yet again that the maximum number of patients which can be properly cared for in a country district is little more than half of the permitted maximum.

#### **Description of Practice**

This practice is predominantly rural, covering about eight square miles. Public transport is lacking over a large part of it, necessitating a high proportion of visits over surgery consultations. Two main and two subsidiary surgeries are attended. I have a partner in a neighbouring village but this study relates only to my own part of the practice. My personal list of National Health Service patients in 1956 was about 2,500, of whom about 2,000 were dispensing patients. Private practice is negligible.

#### **Method of Study**

For 14 days in October–November 1956 every relevant activity

of the day was timed and jotted down on a prepared card. Each individual consultation, visit, and period of driving was separately timed. The timing was done with an ordinary watch and is accurate to within one minute. The actual recording was a considerable strain but did not in itself add more than a few minutes to the day's work.

### Findings

These will be discussed under separate headings.

*Consultations and surgeries.* This includes dispensing of medicines, tablets, dressings, etc., required by patients attending the surgery.

Total number of consultations	133
Total time of consultations	20 hours 1 minute
Average number per day, including Sundays	9.5
Average consultation time per patient (Variation 2-35 minutes)	8.34 minutes

*Visits at home.* This includes time spent in walking from car to house and back to car. Most houses are fairly near the road.

Total number of visits	286
Number of patients seen at these visits	340
Average number of visits per day, including Sundays	20.4
Total visiting time	60 hours 43 minutes
Average time per visit (Variation 2-60 minutes)	12.3 minutes
Time per actual patient	10.4 minutes

The discrepancy between number of visits and number of patients seen is partly accounted for by attendances on 3 days a week at a residential school where several patients may be seen at one session.

Two of the visits were at night.

*Dispensing.* Included under this heading is dispensing of items ordered during the day's visiting, and repeat items requested by telephone; also ordering, stock-taking, preparation of stocks, care of surgery equipment, etc.

Total dispensing time	10 hours 18 minutes
Average dispensing time per day	44 minutes

#### *Writing.*

Total writing time	25 hours 21 minutes
Average writing time per day	1 hour 48 minutes

#### *Driving.*

Total miles driven	571
Average miles per day	40.8
Total driving time	16 hours 15 minutes
Average speed	21.8 m.p.h.

#### *Hours of work.*

Total working time	146 hours 7 minutes
Average per week, including Sundays	73 hours 3½ minutes
Average per day	10 hours 26 minutes for 7 days a week

*Additions.* During the two weeks studied two of my surgeries were officially inspected, occupying  $\frac{3}{4}$  hours. A clinic was attended (1 hour 40 minutes) for a colleague who was on holiday, but little

actual work was required here. These extras have been omitted from the calculations.

*Proportionate distribution of time.* The approximate proportions of time spent on the day's activities were as follows:

Consultations	14 per cent
Visits	41 per cent
Driving	19 per cent
Dispensing	8 per cent
Writing	18 per cent

*Services per patient at risk.* If these figures are expanded to a yearly basis, they indicate a figure of 4.9 services per patient at risk per year. It is perhaps statistically unfair to deduce a yearly figure from a study lasting a mere two weeks. However, this period was not exceptionally busy and can be taken as a fair average of the year. There is, indeed, no slack period nowadays. There was no major epidemic during the two weeks studied, nor were any confinements attended. The service given is a full one and includes the usual inoculations, minor surgery, a little pathology, and about 50 confinements a year.

### Discussion

This study was undertaken five years ago and the results appeared to me depressing in this age of the 40 hour week. It will be noted that calculations have been based on a full 7 days week, since I found that there was no day completely free of work. It seemed that many of us were working far longer hours even than we had suspected. Although, judging from conversations with other doctors, my rate of working is rather slow, I still feel that 8 or 10 minutes is not much to spend on each case; often it is quite inadequate.

The late Dr Ian Grant stressed recently the need for more time. Where is this to come from?

I have made an effort to solve my own problem over the last five years. Surgery premises have been improved and re-equipped. Much more secretarial and some dispensing help are now available. An effort has been made to reduce visits and increase surgery attendances as far as possible in a rather difficult area. My car is slightly faster. My partner's list has grown to something approaching mine, which remains about the same. We have taken on an assistant. We have had a radiotelephone in operation since 1952.

A rapid calculation of this year's figures shows a weekly average of 87.2 consultations and 111.2 visits. Some improvement, but time is as elusive as ever, and further re-organization is about to be tried.

### REFERENCES

1. Cormack, G. (1961), *Brit. med. J. Suppl.*, 2, 62, 68, 85.
2. Crombie, D. L., Cross, K. W. (1956), *Brit. J. Prev. soc. Med.*, 10, 141.
3. Mair, A., Mair, G. (1959), *Brit. med. J. Suppl.*, 1, 281.