Office Telephone Calls in Family Practice

Leif I. Solberg, MD, Thomas R. Mayer, MD, Milton H. Seifert, Jr, MD,
Patricia M. Cole, MD, and Richard L. Holloway, PhD
Minneapolis, Minnesota

Depending upon specialty, from 1.7 to 25.2 percent[1] of physician-patient encounters occur over the telephone (11.8 percent for family physicians) and those calls consume 10 to 27 percent of the physician's working day.[2,3] Despite the amount of activity telephone calls generate, this important aspect of medical care and practice management has been remarkably free of documentation and study.

In family practice, only three American studies[2,4,5] and one Canadian study[6] concern office telephone calls, and they, as do virtually all other reports, examine only the calls physicians personally receive and handle. Thus, when the Research Panel of the Minnesota Academy of Family Physicians (MAFP)[7] was searching for a topic for its first collaborative research project in private practice, a descriptive study of incoming office telephone calls seemed both useful and necessary.

Methods

Members of the MAFP Research Panel,[7] a group of practicing family physicians from nine clinics in the metropolitan Minneapolis-St. Paul area, developed the research design and ran a pilot test in their own practices. A one-page data collection form was constructed permitting one entry to indicate simultaneously the day and time of call, type of call, who handled it, and how it was handled.

All members of the Minnesota academy were then invited to participate in a multiclinic study, and 65 private clinics expressed interest. During the six-week test period during the summer of 1979, each clinic was asked to choose one week that would be reasonably typical in terms of personnel and activities and then to carefully record every incoming call received during that week.

The resulting data were summarized by computer, and a report was sent to each participating clinic. The report provided each clinic with its own results, compared them with averages for the whole group, and offered suggestions for interpreting and using the information in practice management. Finally, clinics were asked to return a card indicating their feelings about the study. Specifically, they were asked whether (1) the data collection was disruptive to the practice, (2) the data are interesting, (3) the data are useful, (4) the data will be used to make practice changes, and (5) they would participate in another study.

Results

Thirty-three clinics (51 percent) completed the study. Many of those that did not do so reported that unique local problems (eg, staff turnover or vacations) had prevented their participation during the specified time period. Where a clinic's data were incomplete or inaccurately recorded for a particular parameter, they were omitted from that

Continued on page 611

From the Department of Family Practice and Community Health, University of Minnesota Medical School, Minneapolis, Minnesota. Requests for reprints should be addressed to Dr. Leif I. Solberg, Nokomis Clinic, 5251 Chicago Avenue South, Minneapolis, MN 55417.

Continued from page 609

aspect of the analysis. Thus, the total number of responses varies for each analysis.

Clinic Description

The 33 clinics were geographically diverse. Eight were located in towns of under 5,000 people, 14 in cities of 5,000 to 100,000, and 11 in various parts of the Minneapolis-St. Paul metropolitan area. Most clinics were small (18 were practices with one or two physicians, and only one had more than ten physicians) and solely family practices (only six were multispecialty). Of the 139 physicians in all clinics, 108 were family physicians. The median clinic age was ten years, and the average patient load was four office visits per physician-hour.

Call Volume

A total of 16,733 calls were recorded in the 33 clinics over a one-week period. The mean number of clinic calls per week per physician was 172 (±55), or about 34 calls daily. As patient care visits per physician varied considerably among clinics, the ratio of calls per visit was calculated as a way to facilitate interclinic comparisons. The clinic average was 1.99 (±0.61) calls for each patient seen in the office.

Clinics in the metropolitan area received about 75 percent more calls per office visit than did those in small towns. There was no relationship, however, between call volume per visit and clinic size. Finally, if the usual wait for a routine appointment exceeded one week, the call volume increased by 50 percent.

Call Timing

Practitioners may be surprised to learn that there was no statitistically significant difference in call volume by day of week (ie, Monday was not busier). The first hour of any day, however, was disproportionately busy (20 percent of all calls) and both noon and the last hour were quieter than average.

Table 1. Type of Call (All Incoming) (n=15,635 calls in 28* clinics)

Type of Call	Percentage of Total Calls	Calls per Office Visit ± 1 Standard Deviation
Administrative (nonpatient)	**11.4**	**0.25**
Personal	4.9	0.11 ± 0.05
Office administration	2.8	0.06 ± 0.06
Other	3.7	0.08 ± 0.05
Administrative (patient)	**48.9**	**0.93**
Appointments	38.7	0.76 ± 0.22
Accounts receivable	5.7	0.09 ± 0.06
Patient arrangements	4.5	0.08 ± 0.07
Patient Care	**39.7**	**0.81**
Medical advice	16.4	0.34 ± 0.18
Prescription refill	10.7	0.22 ± 0.19
Test results	3.8	0.08 ± 0.04
Hospital/nursing home	3.2	0.07 ± 0.06
Other	5.6	0.10 ± 0.03
Total	100	1.99 calls per office visit

*n ≠ 33 because of data missing from some clinics' reports

Call Types

Table 1 illustrates the relative frequency of each type of incoming call to the office as a whole. Only two significant variations were found by community size. Clinics in the metropolitan area had twice as many prescription refill calls as their colleagues in medium or small towns. In compensation, metropolitan area clinics had only one half as many "other" patient care calls.

Physician Calls

Calls in which physicians were involved were analyzed separately. These calls constituted 19.1 percent of all calls recorded, although there was considerable variation among clinics in this proportion. There was an even greater variation in the way these calls were handled by the physician. In some clinics virtually all physician calls were taken directly (at the time of the original call), although the most common pattern seemed to be to take most calls as messages. Interestingly, whether physicians took calls directly or as messages had no effect on either the number of calls or the percentage of calls handled by the physician. However, clinics that allowed callers to speak to a physician (if that was their request) had about 40 percent more total calls per office visit than did clinics that used a nurse or assistant intermediary.

Table 2 shows the types of calls in which the physician became involved. Nearly all physician telephone time was spent in patient-related business. Physicians averaged somewhat less than one half a call (0.38) for every patient visit in the office.

Clinic Response to Study

Twenty-one reply cards were received from the 33 clinics (64 percent). Nearly all found the study results to be useful and interesting enough that they would participate again in another study. Almost one half used the results to make changes in office procedures.

Table 2. Type of Physician-Handled Call (n = 2,524 calls in 22* clinics)

Type of Call	Percentage of Total Calls	Calls per Office Visit
Administrative (nonpatient)	**9.0**	**0.04**
Personal	4.5	0.02
Office administration	2.3	0.01
Other	2.2	0.01
Administrative (patient)	**9.3**	**0.02**
Appointments	1.0	0
Accounts receivable	0.9	0
Patient arrangements	7.4	0.02
Patient Care	**81.7**	**0.32**
Medical advice	30.2	0.12
Prescription refill	19.0	0.07
Test results	12.4	0.04
Hospital/nursing home	9.5	0.05
Other	10.6	0.04
Total	100.0	0.38

*n ≠ 33 because of data missing from some clinics' reports

Comment

The only other potentially relevant studies in the family practice area looked at aspects of practice and telephone calls different from those in this study. Riley et al[2] had observers in upstate New York follow 51 urban and 52 rural general practitioners in 1966 to observe their activities. They found an average of ten calls handled per day, and one half the physicians spent at least one hour on the telephone each day. Fischer and Smith studied three small-town practices and one urban residency clinic in Connecticut in 1978,[4] but only studied all symptom-related calls, both during and after office hours. They found that of those symptom calls handled by the receptionist, 15 percent were referred to the physician. The physicians called in prescriptions on 26 percent of their calls, gave advice alone in 43 percent, and suggested to 31 percent that they come in to be seen. Knopke and colleagues[8] found that 100 Wisconsin rural family physicians averaged 14.5 percent of their encounters by telephone. Westbury,[6] a solo family physician in Calgary, Canada, kept careful records of several months of calls in 1970-1971. He handled 12 calls per day (28 percent of office visits) and spent 30 minutes doing it. As in this study, he found no relation between the day of the week and time spent on the telephone.

Aside from supplying information about what goes on in family practice, many of these findings may be useful for practice management. A good understanding of their own telephone calls should allow clinics to develop a more efficient and effective way of handling those calls. Since physician time is usually the most costly and least available, it would be helpful if many physician-handled calls could be taken care of by others. The wide variation in the percentage of calls handled by physicians in the various clinics, for instance, suggests that the variation may be due more to a difference in clinic policies than to any difference in the type of requests being made by patients. In corroboration of that, Greenlick and colleagues[9] found that within their internal medicine section there was an enormous variation (from 0.21 to 1.26) in the physician call per office visit ratio among different physicians. There was also a great variation by type of call, by disposition, and by percentage of

Continued on page 616

Continued from page 613

calls initiated by the physician. Thus, getting the physicians at a clinic to agree on telephone-answering protocols would allow more calls to be handled by nonphysicians. Indeed, most of the after-study changes described by clinics in this study were in this area.

Other clinics that study their telephone call patterns and compare them with these data may be able to improve both their efficiency and responsiveness to patients, which, in an increasingly competitive world, may be very important.

Acknowledgment

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