

The pharmacist as a provider of primary care

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Summary: A survey was undertaken to document the primary health care role of the pharmacist in London, Ont. Of particular interest was the volume of primary contacts, the type of problem handled and the advice given by the pharmacist.

The contribution of pharmacists in primary health care was found to be large, with neighbourhood pharmacies being the most active. Eighty percent of all problems were handled by recommending an over-the-counter drug.

The pharmacist appears to be comfortable in this function, although a conflict may exist between his professional and merchant roles.

Résumé: Le pharmacien, dispensateur des premiers soins

Nous avons entrepris à London, Ont. une enquête sur le rôle que joue le pharmacien comme conseiller en premiers soins. Nous étions particulièrement intéressés de découvrir le nombre des premières consultations, le type de problème présenté et les conseils donnés par le pharmacien.

On a constaté que la contribution du pharmacien dans ce domaine est considérable, et que les pharmaciens du quartier sont les plus souvent consultés. Les problèmes ont été réglés, dans la proportion de 80%, par un médicament vendu librement au comptoir.

Le pharmacien semble très à l'aise dans cette fonction, même si un conflit risque de naître entre sa mission de professionnel et son titre de marchand.

When task forces or commissions report on the health care system, attention is paid largely to hospitals and doctors. An often under-rated primary health care worker is the pharmacist. If primary health care is defined as first-contact care,¹ then the pharmacist does indeed play an active and important role. In 1970 Greenhill and Haythorne² in an Edmonton, Alta. study found that 7.5% of the residents surveyed had consulted a pharmacist concerning their health in the preceding 2 weeks. In comparison, 17.7% had contacted medical doctors and 2.1% chiropractors.

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The active role of pharmacists in primary health care is understandable when all factors are considered. The pharmacist is a trained health professional whose degree and licence are clearly displayed. Because he needs to sell merchandise his store is conveniently located. He is always present when the pharmacy is open, even into the evening. He handles all queries without appointment. Finally, his advice is given without charge. Thus, the pharmacist is available, easily accessible and convenient, and his consultation service is inexpensive.

At present, pharmacists' services to the patient can be subdivided, as Apple³ suggests, into: (a) services provided in conjunction with or through other health professionals, and (b) services provided directly to the patient. The latter services fall under our definition of primary care and are composed of three key items:

1. Answering drug queries and providing counsel on the side effects of drugs.
2. Distributing health information.
3. Giving advice on ailments or symptoms that are presented.

This paper is concerned with the problems dealt with by the pharmacist and with the advice he gives. The study was undertaken to document the primary health care role of the pharmacist for the London Health Council Committee on Primary Care.*

London is a city of 230 000 in southwestern Ontario. It has three hospitals, each with an emergency department, 128 family physicians, and the University of Western Ontario, with an active

*The committee, under the chairmanship of Dr. I. McWhinney, was formed to explore the existing primary health care situation, to note problems and to recommend solutions.

department of family medicine, and is the major referral centre of southwestern Ontario. There is no lack of primary care physicians, as evidenced by the large number of physicians accepting new patients (55 of 128 in a survey conducted by the author in April 1974).⁴

Method

From the 47 London pharmacies 5 representative busy stores were chosen; 1 located in a shopping centre; 2 neighbourhood stores, 1 in an "established" neighbourhood and the other in an "ethnic" neighbourhood (the residents being mostly Portuguese, Italian and Greek immigrants); and 2 prescription pharmacies, 1 in a central location and the other in a suburban area.

Primary care activity

In Table I the recorded activity of the five stores in dispensing primary care advice is shown in descending order of number of contacts.

The neighbourhood pharmacies were drugstores handling general merchandise and cosmetics, the rear section of the store containing a counter from behind which the pharmacist filled prescriptions. The shopping centre store was a large drugstore belonging to a large chain that advertises reduced prescription costs because of high volume. The pharmacist's counter was mounted on a 10-inch elevated platform. The prescription pharmacies offered only pharmaceuticals and had no shelf displays. Customers sat in a waiting area while their prescriptions were being filled.

The first Tuesday and Friday of

Table I—Primary care contacts of surveyed pharmacies

Type of pharmacy	Primary care contacts					
	Tuesday		Friday		Total	
	Total no.	No./100 prescriptions	Total no.	No./100 prescriptions	Total no.	Average no./100 prescriptions
Established-neighbourhood store	30	17.8	36	20.0	66	18.9
Ethnic-neighbourhood store	21	19.1	20	18.3	41	18.7
Shopping centre store	19	7.3	20	7.3	39	7.3
Central prescription pharmacy	9	2.5	12	6.4	21	4.5
Suburban prescription pharmacy	5	3.7	11	6.5	16	5.1

*Rate significantly greater at 0.1% level by z-test on difference between proportions.

April 1974 were chosen as survey days. The pharmacists in each store were asked to complete a survey form, noting every complaint or problem they were asked to advise upon. Queries from physicians were excluded. From a pre-test of the form, 11 categories of common complaints and three possible pharmacist recommendations were allowed for.

Results

In the five stores surveyed the pharmacists were asked to advise upon 84 problems on Tuesday, April 2 and 99 problems on Friday, April 5. The data have been analysed in terms of the absolute amount of primary care provided each day in each pharmacy, the amount per 100 prescriptions, the timing of the contacts, the types of problems handled and the actions taken by the pharmacist.

To determine whether people seem more willing to bring their problems to a pharmacist in one setting rather than in another, we have expressed primary care as a rate per 100 prescriptions for each store on each survey day, on the assumption that the number of prescriptions filled by the pharmacy reflects the number of daily customers. While the rate of primary care contacts varies markedly with the type of store, it is consistent for the 2 survey days in each store.

With number of prescriptions as a base, the neighbourhood stores are used for primary care more than twice as frequently as shopping centre stores and four times as often as prescription pharmacies. The rates also reflect the ranking of stores by total primary care activity.

Timing of contacts

Because most physicians' offices use an answering service after 5:00 pm we wondered if more primary care would be given by the pharmacist in the evening. For the three stores with evening hours, primary care contacts were divided into those occurring before and those occurring after 5:00 pm. Table II shows that evening primary care requests are not more numerous than daytime requests, and also reflects the increased number of people at shopping centres on Friday evening.

Problems handled by the pharmacist

The categories of problems listed on the survey form were chosen through consultation and by pretesting. Table III sets forth the results for both days combined, expressed as a percentage of all complaints for each store.

There are some interesting differences between the stores. The absence of contraceptive enquiries in the shop-

ping centre store and prescription pharmacies is noteworthy. The high vitamin enquiry rate in the prescription pharmacy may have been the result of a prominent display sign.

In order of frequency, the common problem groupings presented to the survey pharmacist were:

1. Upper respiratory tract problems.
2. Stomach and bowel problems.
3. Pain.
4. Vitamin-related enquiries.

These four groups account for over 60% of the problems presented to the

pharmacist. The "other" group includes such problems as lice, eye conditions and sprains. Seasonal variation in illnesses would cause some variation in frequency of problems, with allergies and conditions requiring first aid being more prominent during the summer months.

Action taken by the pharmacist

Three major courses of action are open to the pharmacist in dealing with each complaint: (a) recommending a nonprescription (over-the-counter) drug;

Table II—Hourly rate* of primary care contacts

Type of pharmacy	Tuesday		Friday	
	Opening to 5 pm	5 pm to closing	Opening to 5 pm	5 pm to closing
Shopping centre store	1.7	1.2	0.8	2.8
Neighbourhood pharmacy				
Established	1.8	4.0	3.1	2.8
Ethnic	1.6	2.0	1.6	1.5

*Difference between daytime and evening not significant at 5% level by paired t-test.

Table III—Complaints and needs* handled by the pharmacist

Complaint or need	Shopping centre store	Neighbourhood store		Prescription pharmacy (central & suburban)	All stores
	%	Established %	Ethnic %	%	%
Cough, cold, sore throat	25.6	19.7	14.6	18.9	19.7
Pain	7.7	13.6	9.8	24.3	13.7
Stomach, bowel upset	12.8	21.2	22.0	10.8	17.5
Sedatives, sleep aids	2.6	6.1	2.4	2.7	3.8
Skin: acne, eczema	10.3	6.1	4.9	8.1	7.1
Allergies	7.7	4.5	2.4	0	3.8
First aid	5.1	7.6	4.9	2.7	5.5
Vitamins	10.3	6.1	7.3	27.0	11.5
Contraception	0	3.0	12.2	0	3.8
Other	17.9	12.1	19.5	5.5	13.6
Total no.	39	66	41	37	183

*Expressed as percentage of the total number of complaints for each store in the 2 days.

Table IV—Advice* offered by survey pharmacists

Type of pharmacy	Recommended over-the-counter drug %	Referred to medical care %	Other %
Shopping centre store	69	23	8
Neighbourhood pharmacy			
Established	85	15	0
Ethnic	85	10	5
Prescription pharmacy (both stores)	78	0	22
All survey pharmacies	80	12	8

*Expressed as percentage of each store's total number of problems presented.

Table V—Handling of specific complaints and needs* by survey pharmacists

Complaint or need	Recommended over-the-counter drug %	Referred to medical care %	Other %
Cough, cold, sore throat	92	6	2
Pain	72	12	16
Diarrhea, constipation	80	16	4
Stomach problems, nausea	88	12	0
Skin	85	8	7
Allergies	86	14	0
First aid	100	0	0
Vitamins	84	0	16
Contraception	86	14	0
Others	64	24	12

*Expressed as percentage of all similar complaints.

(b) referral to medical care; or (c) "other", a category comprising reassurance, information and other non-drug advice. For the five pharmacies surveyed 80% of problems presented to the pharmacist were handled by recommending a nonprescription drug, 12% were referred to medical care and 8% were handled by giving reassurance, providing information or recommending nondrug action (Table IV). The lack of referrals to medical care from prescription pharmacies may stem from the fact that most of their customers come directly from their physician.

Greater insight into the handling of specific problems can be obtained from a further breakdown of the data. Table V relates the presenting complaint to the action taken. The pharmacist uses his own resources to handle the great majority of problems. Medical referral is most commonly associated with bowel problems, allergies, stomach problems, contraception and pain, but occurs in only one out of seven of those cases.

Discussion

The implications of the data are far-reaching. Three of the five pharmacists surveyed were providing 20 or more primary care services per day. When one considers that the number of pharmacies in London is 47, it is apparent that a sizeable amount of care is being provided by pharmacists.

Several issues are raised by this degree of involvement in primary care:

1. The conflict between the pharmacist's professional and merchant roles.
2. His educational preparation and feeling of ease in dealing with primary care problems.
3. The possible need for greater recognition of his primary care role.
4. The future effects on this role of current trends in the pharmacy business.

The hybrid "professional-merchant"

role causes a dilemma for many pharmacists. As Apple³ points out, the most valuable service a pharmacist might render is to dissuade the person from self-medication, yet this would be in conflict with his financial interest in selling drugs. Looking at our study, an over-the-counter medication was suggested in 80% of cases. Only one pharmacist, on salary in a prescription pharmacy, had a large percentage of non-drug recommendations. This dilemma is one of which the pharmacist should be acutely aware; it is only when he ignores his merchandising role that he can give impartial advice.

In responding to a request for advice on the handling of a problem, the pharmacist should take a brief history, make an initial assessment and then suggest a course of action. The Canadian pharmacy school curriculum contains no courses on interviewing or making diagnoses and offers little applied therapeutics. The pharmacist's knowledge and approach are garnered from extensive information on drugs and their actions, personal experience and recommendations of friends and previous customers. Attention should be given in the pharmacist's training to the early management of the more common complaints — upper respiratory tract, stomach and bowel problems and pain. If he is to provide this service he should be prepared for it.

Is the pharmacist comfortable as a health adviser? When we look at the data we see that only 12% of problems were referred for further medical advice. This reflects a large degree of independence and comfort on the part of the pharmacist. Liun and Davis,⁵ in a large survey of Los Angeles pharmacists, found that 54% showed a definite preference for advising and discussing health problems with patrons, in the face of inadequate formal preparation for this function.

Given that pharmacists perform a primary care function regularly and often, are there better ways of using their services? Some preparations, such

as aspirin and codeine combinations, are sold only at the discretion of the pharmacist. Kept behind the counter by law, they must be requested from the pharmacist. Are there other preparations that deserve to be put into this "request" category to prevent abuse and ensure rational use?

The final point for consideration is the effect of current trends in the pharmacy business. More pharmacies are being located in shopping centres because of the greater customer concentration. Many new pharmacies are being located in large department stores to allow a broader range of over-the-counter drugs and to increase the sale of allied products. At the same time, neighbourhood drugstores are declining in numbers as older pharmacists retire or die. Our survey shows it is the neighbourhood drugstore that is most active in dispensing primary care. If the decline of the neighbourhood pharmacy continues, will the need be filled for an accessible, convenient and inexpensive source of primary advice?

The pharmacist's role in the community is much broader than the area this study covers. We hope that this study will spark further interest into the activity of the pharmacist in primary care, his special contribution and his problems.

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