The Canadian Oncology Pharmacy Research Network

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ABSTRACT

Research in hospital pharmacy has been increasingly highlighted in recent years, with special attention focused by the Research Committee of the Canadian Society of Hospital Pharmacists (CSHP). In a first attempt to organize potential oncology pharmacist researchers, an invitation to join a research network was distributed to hospital pharmacists across Canada in late 1988. Data sheets, including personal demographic data, practice and research information, members' perceived roles in future research projects, experience and training, interest in multi-centre research projects, and specific areas of research involvement were used to create a roster of pharmacist researchers. Sixty-nine pharmacists submitted their names to the roster. Details on each respondent were then transferred to a standardized data spreadsheet which was distributed back to each network member. Members then had a listing of potential researcher colleagues to aid in their development or participation in multi-centre studies.

Data provided by the respondents were analyzed to characterize the nature of this network. Twenty of 60 members reported qualifications beyond BSc and 11 members hold advanced degrees. There was a wide variation of time available for research activities. A weekly commitment of three to ten hours (reported by 25/48) is a reasonable amount of time for successful research involvement. Previous training and experience are also positive factors: 25/69 had postgraduate training, 25/68 had previous experience conducting a research project and 34/67 had collaborated on a study project. There were two cohorts of potential researchers in oncology pharmacy — those who are prepared to run a project, and those who wish to contribute to projects. The final data set defined the specific areas of research interest. Clinical practice categories were ranked highest, and scientific/pharmaceutical categories were ranked next highest.

Key Words: *network, oncology, research*

RÉSUMÉ

Depuis quelques années, la recherche en pharmacie hospitalière a été de plus en plus mise en évidence avec une attention spéciale portée par le Comité de recherche de la Société canadienne des pharmaciens d'hôpitaux (S.C.P.H.). Dans le but d'organiser le recrutement de pharmaciens chercheurs en oncologie, une invitation à joindre un réseau de recherche fut diffusée à tous les pharmaciens d'hôpitaux à travers le Canada à la fin de l'année 1988. Des feuilles de données, incluant les données démographiques personnelles, des informations sur la pratique et la recherche, la perception des membres de leur rôle dans les projets de recherche futurs, l'expérience et la formation, l'intérêt dans les projets de recherche multicentriques et l'application dans des sphères spécifiques de recherche, furent utilisées pour créer une liste de pharmaciens chercheurs. Soixante et neuf pharmaciens ont soumis leurs noms à cette liste. Des renseignements détaillés sur chacun des répondants furent compilés sur une feuille de données standardisée qui fut envoyée à chacun des membres du réseau. Les membres avaient donc une liste de noms de confrères chercheurs potent dans le but d'obtenir de l'aide au développement et à la participation d'études multicentriques.

Les données reçues des répondants furent analysées pour décrire la nature de ce réseau. Vingt des soixante membres étaient qualifiés au delà d'un B.Sc. et onze membres possèdaient des diplômes d'études supérieures. Il y avait une grande fluctuation en ce qui concerne la disponibilité de chacun pour les activités de recherche. Un engagement de trois à dix heures par semaine (selon vingt cinq des quarante huit répondants) serait une période de temps suffisante pour une implication minimale efficace en recherche. Une formation et une expérience antérieure étaient des atouts certains. Ainsi 25/69 avaient une formation postuniversitaire, 25/68 avaient l'expérience à diriger un projet de recherche et 34/67 avaient collaboré à un projet de recherche. Il y avait deux groupes de chercheurs potentiels en pharmacie oncologique, ceux qui étaient prêts à faire fonctionner un projet et ceux qui voulaient contribuer à un projet. Les données finales auront défini des sphères spécifiques de recherches. Les sphères concernant la pratique clinique étaient les mieux quotées suivies des sphères concernant le côté scientifique/pharmaceutique.

Mots clés: *oncologie, recherche, réseau*

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INTRODUCTION

Research in hospital pharmacy practice has become increasingly highlighted in recent years. The Research Committee of the Canadian Society of Hospital Pharmacists (CSHP) has published a national survey[1] and a Statement on Institutional Pharmacy Research[2] over the past two years, and the 1987-1988 CSHP Attention Program theme was "Research in Hospital Pharmacy Practice". In the CSHP survey, Steeves and Blackburn[1] describe research activity in 1987, via measures of self-reported completion of studies and academic reporting of research (eg. publication, presentation, abstract). Clinical drug studies and pharmacy practice research were most frequently cited as categories in which pharmacists had completed or wished to do research studies. Interestingly, a substantial number of respondents indicated pharmacy practice research as an arm in which CSHP should sponsor projects, possibly indicating the need for multi-centre research in this area. Deterrents to research included lack of time, staff, resources, knowledge and facilities. Positive factors included support from administration, colleagues and medical researchers, as well as good patient access, nearby university access and support by the pharmaceutical industry.

In their statement[2], the CSHP Research Committee supports "an organized and co-operative effort" to pursue research as "an integral component of institutional pharmacy practice". The statement notes that research projects should be planned in collaboration with others who may help the project to succeed. The areas of pharmaceutical sciences, clinical research and pharmacy practice research are identified as three possible areas for institutional pharmacists to direct their research efforts. The statement encourages CSHP members to recognize the value of research to increase their individual involvement with research. Support of research involvement has also been discussed by other pharmacy groups, such as the American College of Clinical Pharmacy (ACCP). In a published symposium[3-18], clinical pharmacists examined their role in drug research and development, concentrating upon experiences in clinical scientist programs[6], academic fellowships[7-10], pharmacodynamics[11], pharmacokinetics, pharmacoepidemiology[12], clinical pharmacology[15], clinical research units[13,14], and postmarketing research[17]. Again, the issues of adequate personnel and resources, as well as appropriate support are evident throughout this symposium.

In an initial attempt to organize potential pharmacist researchers currently practicing in the field of oncology, a data sheet and invitation to join a research network were distributed (along with the Survey of Canadian Oncology Pharmacy Services) to hospitals known or suspected to include oncology practice. Details of survey distribution are described elsewhere[19]. Each interested pharmacist from any of the surveyed institutions was invited to join the research network. A data sheet was required from each member, which included personal data (name, address, employer, etc.), practice and research information, perceived research roles, research experience and training, interest in multi-centre research projects, and specific areas of research projects and research involvement. The goal of compiling the roster of names and addresses was to stimulate improved communication among oncology pharmacists interested in research (similar to the design of another research network[20]) but the latter part of the data sheet serves a more utilitarian function.

METHODS

The data sheet for Oncology Pharmacy Research Network was distributed nationally to 103 hospital pharmacy departments and 11 ambulatory oncology clinic pharmacies. Sixty-nine pharmacists responded by submitting their names to the Network roster. The respondents were assigned identification codes: their names, addresses, employers and telephone numbers were listed in alpha-numeric sequence. The list of names comprises the Network roster. The details provided by each respondent were then transferred to a standardized data spreadsheet. An instruction letter, recommending methods for use of the data spreadsheet by potential researchers, was distributed to each respondent along with the complete membership roster and data spreadsheets.

The tabulated results, along with names and addresses of the membership have been mailed to each Network member, with instructions for use of the package. The method of use intended for the data spreadsheet assumes that Network members intend to initiate or join multi-centre studies, or that they require advice or expertise to help them conduct research projects at their own setting. Depending upon an individual researcher's specific requirements, that member is advised to define their needs in terms of the data categories presented. The member may then examine the spreadsheet to look for other individuals who most closely match their needs, to identify the other individual(s) from the membership roster, and to initiate contacts to negotiate participation, help, or whatever else is needed. Likewise, individuals looking to join a trial as a participant may examine the members attributes on the list to make contact with potential research coordinators/initiators. Roster members are reminded that

the roster is not all-inclusive, or always current, so the membership list may also act as an intermediate resource to establish other new contacts through listed members. Other uses are up to the imagination of the membership.

Analysis of Data

The data* provided by respondents (for network membership) can be analyzed to characterize the group of potential researchers. There were 20/60 reporting qualifications beyond BSc, ten with a residency, seven with a masters degree and four with a Pharm.D. degree. Information on oncology practice is shown in Figure 1, with 45/69 spending half to all of their time in oncology, and 51/63 permanently assigned to oncology service.

One interesting finding is the variability of time which individuals could devote to research activities. Of 48 respondents, nine had less than one hour per week available, 20 had one to four hours per week and 17 had five to ten hours per week. Only two reported more than ten hours per week. Previous training and experience has also been acknowledged as a positive factor in successful projects. Only 25/69 indicate any post-graduate research training (Figure 2) and half of these received their training during a hospital residency (13/25), presumably less stringent than the advanced degree programs. Very few respondents (13/63) indicate any intent to pursue further post-graduate research training. However, 25/68 stated they had previous experience conducting a research project, and 34/67 had collaborated on a study project.

On a more practical concern, respondents indicated their perceived roles in research projects (Figure 3). Among the respon-

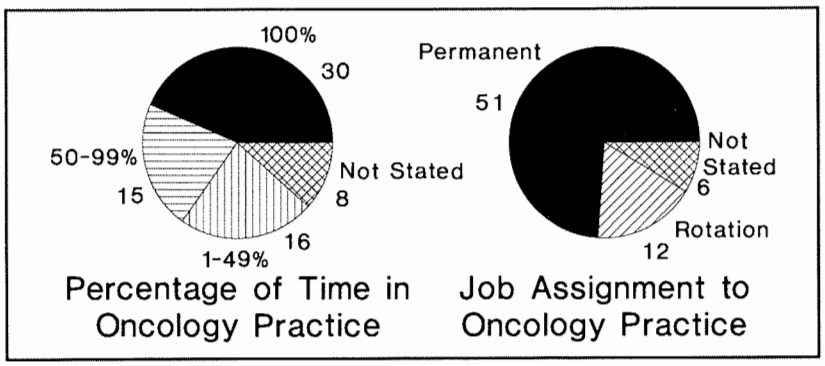

Figure 1: Practice Information

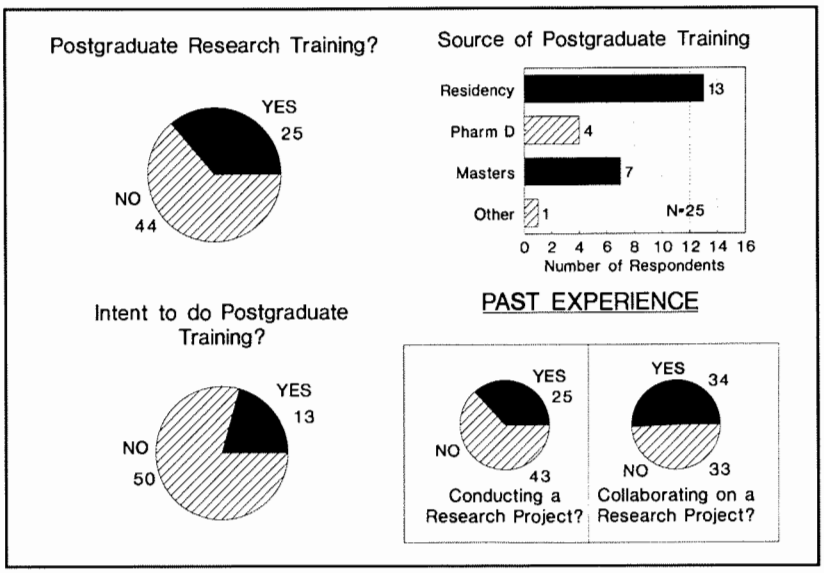

Figure 2: Research Experience

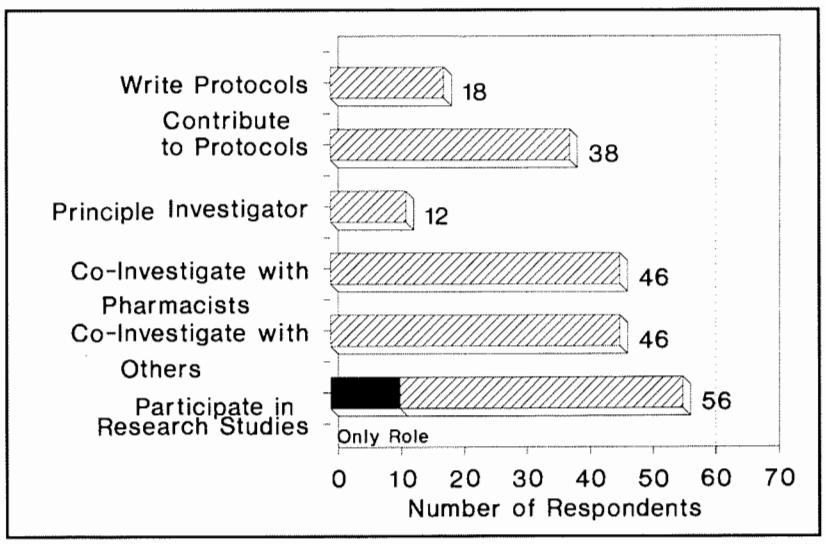

Figure 3: Perceived Research Roles

* Not all Network members provided information in each area — the denominators reflect the number of responses to each data field, and varies substantially.

dents, 24 would only wish to be co-investigators or participants, and 11 of these would only participate in chosen studies. These 24 would not be principle invetigators or be involved in protocol development. In addressing multi-centre trials, 66/67 would participate in a multi-centre study (M-CS), and 60/67 would help to plan a M-CS, but only 31/62 indicate a willingness to enlist others in their study. Of the members who either didn't answer the question or said no to enlisting participants, 37/38 also indicated they had no perceived role as a principle investigator.

The final set of data on network members defines the specific areas of research interest (Table I). 'Clinical Practice' categories (such as clinical trials, intervention trials, pharmacy practice trials and drug delivery) were ranked as the most popular areas of interest. Secondary ranking was given to scientific/pharmaceutical categories (ie. drug development, stability/formulation, pharmacokinetics).

Table I: Areas of Research Interest

Area	Number of Respondents
Clinical Trials — Adult	46
Clinical Toxicity/Interventions	46
Pharmacy Practice Trials	46
Drug Delivery/New Technology	43
Computer Applications	35
New Drug Development	35
Drug Stability/Formulation	31
Pharmacokinetics	28
Pharmacy Administration	22
Clinical Trials — Pediatric	12
Sympton Control	1
IV Compatibilities	1

DISCUSSION

The characterization of the network membership, as described above, is fairly diverse, but some generalizations may be made. Most members appear to be sufficiently dedicated to oncology practice and to have sufficient support services available to consider oncology pharmacy research. There is a fair proportion of the membership with formal training or experience with research projects, and most members are sufficiently devoted to oncology practice. A weekly time commitment of three to ten hours is reported by 25/48. About one half to one day per week is a reasonable amount of time for successful project completion. These time commitments may help individuals to design co-operative studies, if they target participant commitments of about one half to one day per week, or even less, if this is feasible. Larger time requirements would lose potential participants. It is difficult to believe that the 21/48 with two or less hours/week would be able to contribute substantially to many research projects.

There would appear to be two cohorts of potential researchers in oncology pharmacy practice: i) those who are prepared to conceive studies, write protocols, be principle investigators, and also contribute to the projects of others, and ii) those who wish to contribute to projects, but who may not have the time or aptitude to be in charge of a study. Investigators must recognize these groups, and choose the type(s) of participants most appropriate for their study. This cohort characterization is further enhanced by the issue of multi-centre studies. Although almost all respondents would participate in a M-CS, only 31/62 would enlist others into their study. Clinical practice studies appeared most popular, but most areas had fairly large numbers of interested Network members.

The Canadian Oncology Pharmacy Research Network is intended only to provide some organizational structure and to ease initial contact inquiries on a national basis. Individuals wishing research involvement must still conceive, design, analyze and report their own research projects, but the Network may aid in the recruitment of participants and in the ongoing peer review of research ideas in progress. Early research projects are recommended to be simple in nature to aid in development of personal experience and growth of contacts with other researchers. Establishing research credibility with medical and other colleagues requires consistency, a good initial track record with research projects, and organization. On a national level, pharmacist involvement in multi-centre studies requires the same attributes. It is hoped that the Network may provide the necessary structure to develop a good, consistent record of successful multi-centre research projects.

Updates to old data sheets by Network members, and new applications for Network membership are invited by the author (acting as the Network registrar) to keep the Network current. The Network, as described by the data spreadsheets and membership roster may help potential researchers make new contacts to get their research projects off the ground. The Canadian Oncology Pharmacy Network is a new tool for the difficult process of conducting good research by oncology pharmacists.

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Appendix I: Data Sheet for Oncology Pharmacy Research Network

1. PERSONAL DATA: (Please Print)

Name _____ Qualifications _____
(eg. BScPhm, Pharm D, MScPhm)

Title _____ Department _____

Institution _____

Mailing Address _____

City _____ Province _____ Postal Code _____

Telephone ( ) _____ Extension _____ Pager _____

FAX Number ( ) _____ (Through Business Office or Medical Records?)

Affiliations — Personal _____

— Institutional _____

2. PRACTICE AND RESEARCH INFORMATION:

A. ONCOLOGY PRACTICE SETTING

* Proportion of your time devoted to oncology practice _____ %

* Permanent position or rotation? _____

* Support services available to you: (list number of positions, including your own)

— In oncology setting — Pharmacists _____ Technicians _____

— In pharmacy department — Drug Information Pharmacists _____
— Research Pharmacists _____

— Other? (specify) _____

* How much time do you anticipate you could devote to research activities? ___ hours per week on average

B. ANTICIPATED RESEARCH ROLES

* What role(s) do you perceive you would like to fill in your research involvement? (mark all appropriate statements)

Conceive and draft research protocols _____

Contribute to protocol development _____

Principle investigator in studies _____

Co-investigator with other pharmacists _____

Co-investigator with other health professionals _____ (eg. Nursing)

Participate in projects by other investigators _____

Other? (specify) _____

C. RESEARCH EXPERIENCE AND TRAINING

* Do you have any post-graduate training in research methodology? Yes / No

— If yes, from which type of program? Pharmacy residency _____;
Pharm D _____; Master's degree _____;
PhD _____; other _____

* Do you intend to pursue formal post-graduate training including research methodology within the foreseeable future? Yes / No

* Do you have any experience in conducting a research trial? Yes / No

* Do you have any experience collaborating on a research trial? Yes / No

2. PRACTICE AND RESEARCH INFORMATION (Continued)

D. PARTICIPATION IN MULTI-CENTRE STUDIES

* Would you be willing to enlist participation of other pharmacists in the planning or implementation of a study for which you are the principle investigator? Yes / No

* Would you participate in a multi-center study in which someone else is the principle investigator? Yes / No

* Would you participate in group planning of multi-centre studies? Yes / No

E. AREAS OF INTEREST FOR RESEARCH INVOLVEMENT

* In which areas are you interested for participation in research studies?

Clinical trials in *adult* oncology (drug therapy trials) _____

Clinical trials in *pediatric* oncology (drug therapy trials) _____

Clinical toxicity trials (therapeutic interventions) _____

Pharmacokinetic studies of antineoplastics and other agents _____

Pharmacy practice trials (eg. clinical or education activities) _____

Formulations and drug stability studies _____

Pharmacy administration studies _____

Trials of computer applications in oncology pharmacy _____

Trials in new technology for drug delivery _____

New drug development — clinical trials _____

Other (specify) _____

3. PROPOSED IDEAS FOR MULTI-CENTRE RESEARCH PROJECTS

In the space below (or on a separate page, if necessary), please write any ideas you wish to submit now for any multi-centre trial(s) in which you would like to participate. If your idea, or the potential methodology is lengthy, please present it in a short one-paragraph abstract. All ideas will be reproduced, along with the initial network list of names, for circulation. Proposals are intended to stimulate the network members, and, hopefully, generate a few early research projects. Your proposal will include your name, so that other interested pharmacists may contact you to discuss the idea.

Please send complete data sheet to address on covering letter. Thank you.

References

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