

Research Conducted by Hospital Pharmacists: Integral Component of Daily Practice or Unrealistic Expectation?

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In bygone eras, the role of the hospital pharmacist in research was generally limited to coordinating the distribution of investigational drugs for clinical studies.¹ In recent years, however, many hospital pharmacists have engaged in research more directly, as principal investigators or co-investigators on pharmacokinetic or drug interaction studies, practice-based research, stability and compatibility studies, and other types of investigations, including randomized clinical trials. This journal is devoted largely to publishing the results of research generated by hospital pharmacists. However, research is time-consuming, requires skills not generally taught in faculties of pharmacy, and, in many hospital pharmacy departments, is not directly rewarded or incentivized.

Is it important for hospital pharmacists to conduct research, or participate in research studies? Hospital pharmacists are already quite busy taking care of patients and participating in teaching and administrative activities. Why not leave research to academicians? Is it realistic for hospital pharmacists to participate in research in a meaningful way? Do hospital pharmacists want to participate in research at all?

In the current issue of the *Canadian Journal of Hospital Pharmacy (CJHP)*, Lee and others² report the results of a survey study that characterized the involvement of hospital pharmacists in clinical pharmacy research and identified perceived barriers to conducting research. Nearly 90% of the hospital pharmacists surveyed expressed interest in conducting research, and more than three-quarters of the respondents reported having participated in research already, in a median of 3 projects within the preceding 5 years. The majority of research projects conducted by respondents to this survey were medical record reviews and surveys, rather than investigator-initiated prospective observational or interventional studies. The most common research-related activities performed by study participants were data analysis and presentation of research results. Survey respondents indicated confidence in performing research-related activities such as literature evaluation and hypothesis generation; in contrast, more than 80% identified statistical analysis as a

weakness. The primary motivating factor for participation in research was personal interest, though roughly half of the respondents indicated that research was also a component of their job requirements.

The respondents identified some major barriers to conducting research. Not surprisingly, lack of dedicated time for research and competing workload priorities were cited by about 90% of study participants. Interestingly, participants did not identify lack of formal research training as a weakness or barrier to conducting research, except in the area of statistical analysis.

Limitations of the study include biases typical of survey research; notably, a relatively high proportion of the survey respondents claimed prior research experience, which may not be true of the general population of hospital pharmacists. Nonetheless, the study results are informative: many hospital pharmacists are keenly interested in participating in research, but lack the time to do so and have competing priorities. Information is limited regarding the proportion of other hospital-based non-academic health care professionals (physicians, nurses, others) actively participating in research, but it would not be surprising to learn that their degree of participation, their motivations, and their barriers are similar to those of hospital pharmacists.

As to the question of whether it is important for hospital pharmacists to participate in research, several pharmacy and other health care organizations have expressed the view that research is indeed an integral component of pharmacy practice. More than 25 years ago, the American Society of Hospital Pharmacists (now the American Society of Health-System



Pharmacists) issued a statement encouraging pharmacists in organized health care settings to increase their involvement in various types of research, including clinical investigations, health services research, development and testing of new drug dosage forms and new methods and systems of drug preparation and administration, and operations research, such as time-and-motion studies and the evaluation of new and existing pharmacy programs and services (i.e., practice-based research).³ The American College of Clinical Pharmacy (ACCP) believes that research and scholarship are primary components of the standards of practice for clinical pharmacists.⁴ A 2006 policy statement from the American Public Health Association expresses “the need and opportunity for public health and pharmacy professions to work in collaboration to conduct valuable research.”⁵ In the United States, the National Association of Boards of Pharmacy includes “drug or drug-related research” in its definition of the practice of pharmacy, and the Council on Credentialing in Pharmacy lists “participating in research activities” as a domain of pharmacy practice.⁶ The Canadian Society of Hospital Pharmacists (CSHP) states clearly that the organization “embraces and recognizes research as an integral component of pharmacy practice and encourages members to support, participate and initiate research activities.”⁷ Other editorials in the *CJHP* have called for increasing involvement of Canadian hospital pharmacists in research and publication.^{8,9} There seems to be no question that research is considered a fundamental component of the practice of hospital pharmacy.

How, then, to overcome the barriers to research faced by hospital pharmacists? The issues of time allocation and competing priorities are not easily surmountable. In an ideal world, hospital pharmacy departments would provide protected research time for pharmacists, but this may not be feasible. However, incentives for hospital pharmacists to participate in research could be created by hospital pharmacy departments through merit salary programs or professional development programs in which participation in research is one of the criteria considered for salary increases and/or promotion. In addition, hospital pharmacy departments could incentivize research by providing travel funds to pharmacists who are presenting research at national meetings. Hospital pharmacists with a keen interest in research could partner with more experienced investigators to assist with ongoing or planned research studies; this may lead to positive consequences such as spinning off a component of the study for the pharmacist to manage, continued future collaborations with the investigators, and expanded experience with research that might lead to independent investigations. In addition, health-systems and/or professional organizations could develop mentored research training programs or send pharmacists to participate in existing programs, such as those developed by the ACCP.¹⁰

The survey study reported by Lee and others² underscores the desire of hospital pharmacists to participate in research and reveals their motivations and some perceived barriers. Opportunities exist for pharmacists to participate in a broad variety of clinically important research. Hospital pharmacists’ interest in participating in research is welcome, and bodes well for the future of hospital pharmacist-directed research.

References

1. Stolar MH, Gabriel T, Grant KL, Koeller J, Letendre DE. Pharmacy-coordinated investigational drug services. *Am J Health Syst Pharm.* 1982; 39(3):232-6.
2. Lee R, Dahri K, Lau TTY, Shalansky S. Perceptions of hospital pharmacists concerning clinical research: a survey study. *Can J Hosp Pharm.* 2018;71(2): 105-10.
3. American Society of Hospital Pharmacists. ASHP statement on pharmaceutical research in organized health-care settings. *Am J Hosp Pharm.* 1991;48:1781.
4. American College of Clinical Pharmacy. Standards of practice for clinical pharmacists. *Pharmacotherapy.* 2014;34(8):794-7.
5. *The role of the pharmacist in public health.* Policy no. 200614. Washington (DC): American Public Health Association; 2006 Nov 8 [cited 2018 Jan 26]. Available from: <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/07/13/05/the-role-of-the-pharmacist-in-public-health>
6. *Scope of contemporary pharmacy practice: roles, responsibilities, and functions of pharmacists and pharmacy technicians.* Washington (DC): Council on Credentialing in Pharmacy; 2009 Feb [cited 2018 Jan 26]. Available from: www.pharmacycredentialing.org/Contemporary_Pharmacy_Practice.pdf
7. *Research: statement on supporting and conducting research in pharmacy.* Ottawa (ON): Canadian Society of Hospital Pharmacists; 2011 [cited 2018 Apr 16]. Available from: <https://www.cshp.ca/position-statements>
8. Jackevicius C. Duty to publish [editorial]. *Can J Hosp Pharm.* 2017;70(2):95-6.
9. Perreault MM. Today’s research is tomorrow’s practice: promoting a culture of research [editorial]. *Can J Hosp Pharm.* 2017;70(3):167-8.
10. *Research and scholarship certificate program.* Lenexa (KS): American College of Clinical Pharmacy; [cited 2018 Jan 26]. Available from: <https://www.accp.com/academy/researchAndScholarship.aspx>

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