Perceived importance and self-assessment of the skills of Canada’s health-system pharmacy managers

SHERI AXWORTHY AND NEIL J. MACKINNON

Abstract: The relationship between the perceived importance of managerial skills and self-assessed proficiency in each skill among health-system pharmacy managers in Canada was examined, and the demographic characteristics associated with pharmacy managers who lack these skills were analyzed.

Surveys were mailed to 514 health-system pharmacy managers in Canada in July 2000. The survey listed 61 specific managerial skills, under seven general categories. The respondents were asked to rate the level of importance that each of the skills had in their job and rate their proficiency in each skill. Ratings were based on a five-point Likert scale ranging from very high importance or skill level to very low importance or skill level.

The response rate was 52.7%. Of the 61 specific managerial skills considered, the majority of respondents identified “Demonstrating ethical conduct” as both the most important skill and their greatest strength. “Understand the operating principles of managed care” was viewed as the least important skill, while “Participating in the implementation of a marketing program” was respondents’ greatest weakness.

There were significant differences in the mean self-assessed skill levels of the respondents according to their educational background, size of the institution in which they work, and years of managerial experience. Health-system pharmacy managers with a master of business administration degree had a significantly higher overall mean perceived skill level than managers in all other “Education” categories. Managers with a bachelor of science degree in pharmacy had a significantly lower overall mean perceived skill level than those with a bachelor of science degree in pharmacy plus “other” degrees, while managers employed in institutions of 500 or more inpatient beds had a significantly higher overall self-rated mean skill level than managers employed in institutions of 51–100 inpatient beds.

A national survey of health-system pharmacy managers in Canada revealed a pressing need for better training in managerial skills for these pharmacists.

Index terms: Administrators; Canada; Data collection; Pharmacists, institutional; Professional competence

Health-system pharmacy management personnel (hereafter referred to as health-system pharmacy managers) in Canada face numerous pressures in today’s health care environment. Many hospitals are reducing budgets and cutting staff; meanwhile, the cost of pharmaceuticals continues to rise. At the same time, many health-system pharmacy managers are trying to develop and expand the clinical pharmacy services provided by their departments and recruit and retain staff members in the midst of a national shortage of pharmacists.

Training for health-system pharmacy managers in Canada occurs primarily on the job. Therefore, the skill levels of Canada’s health-system pharmacy managers may vary because of the lack of formalized management training programs. In the United States there are several one-year pharmacy practice management (administration) residency programs that are accredited by the American Society of Health-System Pharmacists (ASHP). In addition, three schools offer master of science degree programs in hospital pharmacy in conjunction with a pharmacy practice management residency: the University of Wisconsin—Madison, Eli Lilly Canada Inc., the Nova Scotia Association of Hospital Pharmacy Managers, and Donna Wheeler-Usher is acknowledged.

The assistance of Christine Nimmo, the Canadian Society of Hospital Pharmacists, Eli Lilly Canada Inc., the Nova Scotia Association of Hospital Pharmacy Managers, and Donna Wheeler-Usher is acknowledged.

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of this organization assessed the content validity and ease of use of the instrument. The survey instrument was mailed to 32 hospital pharmacy managers in Nova Scotia; 18 individuals (56.3%) returned the completed survey. Data analysis of the completed surveys indicated that Nova Scotia’s health-system pharmacy managers felt that they lacked skills in several pharmacy management competency areas that they deemed to be of great importance. This discovery provided a rationale for a national survey of health-system pharmacy managers.

Survey questions. The survey questions were based on the 1998 version of the ASHP Supplemental Standard and Learning Objectives for Residency Training in Pharmacy Practice Management, which was created to establish “criteria for the training and education of pharmacists to assume roles in pharmacy practice management.” An American standard was used because CSHP does not have a similar document. To help make the survey more applicable to the Canadian health-system pharmacy environment, the questions were reviewed for content validity and slightly revised by the Lilly Management Conference Planning Committee of NSAHPM.

In the final survey, 61 specific managerial skills were included under seven general categories: “Practice foundation skills,” “Leadership,” “Planning,” “Marketing,” “Securing resources,” “Implementation,” and “Monitoring.” The respondents were asked to rate the level of importance that each of the 61 skills had in their job and rate their proficiency in each skill. Ratings were based on a five-point Likert scale with 5 signifying very high importance or skill level and 1 indicating very low importance or skill level. Several questions asked for demographic information. Questions addressed respondents’ job title, sex, type and size of primary institution, years of experience in a pharmacy management position, and educational background. Finally, a blank page was provided at the end of the survey for comments.

Survey procedures. This survey was intended to reach all health-system pharmacy managers in Canada, regardless of job title (e.g., supervisors, managers, directors). To accomplish this, information from two separate mailing lists was used. The first was a list of the names, titles, and addresses of health-system pharmacy managers in Canada, provided by Eli Lilly Canada. The second list was provided by CSHP and contained the addresses of health-system pharmacy departments in Canada but lacked specific names of the managers of these departments. Because there were discrepancies between the two lists, such as addresses that appeared only on one list, they were cross-referenced, and a master list was created to minimize the number of duplicate surveys sent to an individual. In July 2000, the survey instrument was mailed to these individuals, except for health-system pharmacy managers in Nova Scotia (as they were part of the pilot survey), along with a cover letter explaining the purpose of the study. A total of 514 surveys were mailed. A follow-up letter was mailed to nonrespondents after three weeks. A second follow-up letter and another copy of the survey instrument were mailed to those who still had not responded after an additional two weeks. The survey design and methodology were developed on the basis of recommendations by Salant and Dillman in How to Conduct Your Own Survey and Dillman in Mail and Telephone Surveys: The Total Design Method.

Statistical analysis. The responses from all returned and completed surveys were entered into SumQuest Survey Software, version 7.0 (SumQuest, Toronto, Ontario). Data analysis was performed using this software and JMP IN, version 3.2.1 (SAS Institute, Belmont, CA). One-way analyses of variance (ANOVA) (sig-
nificance was set a priori at 0.05) and the Tukey-Kramer Honestly Significant Difference (HSD) test for multiple comparisons were performed to determine the relationship between the respondents’ demographic characteristics and the perceived importance of and proficiency in each skill.

In addition, the respondents’ comments were analyzed and categorized by researcher knowledge, experience, and familiarity with the topic.

Results

Response rate and demographic characteristics. Of the 514 surveys mailed, 32 were discarded, and 254 of the remaining 482 usable surveys were completed and returned, yielding a response rate of 52.7%. This is higher than the 42.9% response rate to a survey of health-system pharmacy managers in the United States.1 The 32 discarded surveys were deemed ineligible because of one of the following reasons: (1) the respondent had already completed a survey that was mailed to the department of pharmacy at another location, (2) the health system or pharmacy department had closed, (3) the intended respondent was unable to complete the survey because of a language barrier, (4) the department of pharmacy that received the survey was managed by a different individual who was located at another site, and (5) other reasons. The response rate by region ranged from a high of 61.5% in Atlantic Canada to a low of 31.4% in Quebec. The response rate from health-system pharmacy managers in Quebec was most likely lower because funding levels did not permit the development of a French version of the survey.

The demographic characteristics of the respondents are provided in Table 1. The majority of the respondents were female, directors of pharmacy, working in community hospitals, working in institutions with 101–500 inpatient beds, and had a bachelor of science degree in pharmacy but not another degree in pharmacy or management. Information about the respondents’ geographic region was gathered from our mailing database and not asked in the survey.

Importance of skills. Table 2 lists the 5 skills rated by the respondents as the most important of the 61 managerial skills included in the survey. All 5 skills were categorized as “Practice foundation skills” and seem to be general skills required by all health care managers, as opposed to pharmacy-specific skills. Of the seven general categories, “Leadership” had the highest total mean score.

Three of the five skills considered the least important also fell under the “Practice foundation skills” category, with the remaining two skills in the “Marketing” and “Implementation” categories (Table 2). Of the seven general categories, “Marketing” had the lowest total mean score. It is worth noting that even the skill perceived to be of the lowest importance, “Understand the operating principles of managed care,” had a mean score (3.39 ± 0.94) that was above the neutral point on a five-point Likert scale.

Self-assessment of skills. “Demonstrate ethical conduct in all activities related to pharmacy practice” was determined to be not only the skill of the greatest importance but also the greatest strength of health-

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>No. (%) Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (n = 251)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>115 (45.8)</td>
</tr>
<tr>
<td>Female</td>
<td>136 (54.2)</td>
</tr>
<tr>
<td>Job title (n = 253)</td>
<td></td>
</tr>
<tr>
<td>Pharmacy supervisor</td>
<td>14 (5.5)</td>
</tr>
<tr>
<td>Pharmacy manager</td>
<td>77 (30.4)</td>
</tr>
<tr>
<td>Director of pharmacy</td>
<td>145 (57.3)</td>
</tr>
<tr>
<td>Assistant/associate director of pharmacy</td>
<td>4 (1.6)</td>
</tr>
<tr>
<td>Other</td>
<td>13 (5.1)</td>
</tr>
<tr>
<td>Type of primary institution (n = 253)</td>
<td></td>
</tr>
<tr>
<td>Community hospital</td>
<td>146 (57.7)</td>
</tr>
<tr>
<td>Tertiary hospital</td>
<td>8 (3.2)</td>
</tr>
<tr>
<td>Specialty hospital</td>
<td>18 (7.1)</td>
</tr>
<tr>
<td>Teaching hospital</td>
<td>15 (5.9)</td>
</tr>
<tr>
<td>Other</td>
<td>66 (26.1)</td>
</tr>
<tr>
<td>Size of institution (no. beds) (n = 249)</td>
<td></td>
</tr>
<tr>
<td>≤50</td>
<td>20 (8.0)</td>
</tr>
<tr>
<td>51–100</td>
<td>52 (20.9)</td>
</tr>
<tr>
<td>101–500</td>
<td>134 (53.0)</td>
</tr>
<tr>
<td>&gt;500</td>
<td>43 (17.3)</td>
</tr>
<tr>
<td>Years of experience (n = 240)</td>
<td></td>
</tr>
<tr>
<td>0–5</td>
<td>68 (28.3)</td>
</tr>
<tr>
<td>6–10</td>
<td>40 (16.6)</td>
</tr>
<tr>
<td>11–15</td>
<td>57 (23.8)</td>
</tr>
<tr>
<td>16+</td>
<td>75 (31.3)</td>
</tr>
<tr>
<td>Education (n = 253)b</td>
<td></td>
</tr>
<tr>
<td>B.Sc. (Pharm)</td>
<td>158 (62.4)</td>
</tr>
<tr>
<td>B.Sc. (Pharm) + M.Sc. (Pharm)</td>
<td>28 (11.1)</td>
</tr>
<tr>
<td>B.Sc. (Pharm) + Pharm.D.</td>
<td>11 (4.3)</td>
</tr>
<tr>
<td>B.Sc. (Pharm) + M.B.A.</td>
<td>9 (3.6)</td>
</tr>
<tr>
<td>B.Sc. (Pharm) + other</td>
<td>47 (18.6)</td>
</tr>
<tr>
<td>Region (n = 254)</td>
<td></td>
</tr>
<tr>
<td>British Columbia</td>
<td>34 (13.0)</td>
</tr>
<tr>
<td>Prairies and territories</td>
<td>56 (22.4)</td>
</tr>
<tr>
<td>Ontario</td>
<td>100 (39.0)</td>
</tr>
<tr>
<td>Quebec</td>
<td>48 (19.3)</td>
</tr>
<tr>
<td>Atlantic Canada</td>
<td>16 (6.3)</td>
</tr>
</tbody>
</table>

*Percentages are adjusted for nonrespondents.

1B.Sc. (Pharm) = bachelor of science degree in pharmacy, M.Sc. (Pharm) = master of science degree in pharmacy, Pharm.D. = doctor of pharmacy degree, M.B.A. = master of business administration.

1Includes hospital pharmacy residency, master of science degree in health administration, management certificates, or any two graduate programs.
system pharmacy managers, as self-assessed by the respondents. The five skills in which respondents were most proficient are listed in Table 3. As with the five most important skills, the five greatest strengths were in “Practice foundation skills.” Of the seven general categories, “Securing resources” had the highest overall mean score.

The mean score for each of the five weakest skills fell below the midpoint on a five-point Likert scale (Table 3). Two of these five skills fell under the general categories “Practice foundation skills” and “Monitoring,” while one skill was in “Marketing.” Two other skills assessed as weaknesses relate to performing outcomes analyses. As with its perceived level of importance, “Marketing” had the lowest total mean score of all seven general categories for self-assessed skill level.

Differences between perceived importance and skill levels. To help identify the greatest skill deficits of health-system pharmacy managers, which would be useful to colleges of pharmacy, training programs, and coordinators of continuing-education (CE) programs, the mean rating for self-assessment of each skill was subtracted from the mean rating for the perceived importance of each of the 61 skills in the survey. This method more adequately identified actual skill deficits than those that simply look at the mean self-assessed skill levels, as managers may perceive some of the skills in which they are weak to be of little importance.

Table 4 contains the 10 skills with the largest difference between mean importance rating and mean skill rating. Six of these 10 skills were “Practice foundation skills.” The three skills in the “Monitoring” category directly pertain to outcomes analyses. Of the seven general categories, “Leadership” had the greatest gap (a difference of 0.63) between importance and skill level ratings. “Communicate effectively when speaking or writing” was the only skill that was deemed to be 1 of the 5 most important skills and 1 of the 10 skills with the greatest difference between importance and skill level ratings.

Overall, 73 (28.7%) of the 254 respondents had a higher overall mean self-assessed skill level for the 61 skills than their mean perceived importance of the skills. Therefore, a majority of respondents appeared to indirectly acknowledge having an overall skill deficit in managerial skills.

### Table 2. Five Most Important and Five Least Important Managerial Skills

<table>
<thead>
<tr>
<th>Skill</th>
<th>Mean ± S.D.</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrate ethical conduct in all activities related to pharmacy practice</td>
<td>4.69 ± 0.52</td>
<td>253</td>
</tr>
<tr>
<td>Communicate effectively when speaking or writing</td>
<td>4.64 ± 0.51</td>
<td>253</td>
</tr>
<tr>
<td>Manage change effectively</td>
<td>4.43 ± 0.57</td>
<td>247</td>
</tr>
<tr>
<td>Take personal responsibility for attaining excellence in one’s own ability to provide leadership for the pharmacy</td>
<td>4.38 ± 0.64</td>
<td>252</td>
</tr>
<tr>
<td>Effectively attend to customers’ needs</td>
<td>4.37 ± 0.68</td>
<td>252</td>
</tr>
<tr>
<td>Least important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understand the operating principles of managed care</td>
<td>3.39 ± 0.94</td>
<td>253</td>
</tr>
<tr>
<td>Understand the processes of negotiating and implementing contracts with vendors</td>
<td>3.40 ± 1.04</td>
<td>251</td>
</tr>
<tr>
<td>Participate in the implementation of a marketing program</td>
<td>3.41 ± 1.05</td>
<td>253</td>
</tr>
<tr>
<td>Understand various management theories and their applications</td>
<td>3.42 ± 0.89</td>
<td>253</td>
</tr>
<tr>
<td>Participate in managing the installation of approved equipment</td>
<td>3.46 ± 0.98</td>
<td>254</td>
</tr>
</tbody>
</table>

*As determined by the survey respondents on a five-point Likert scale, where 1 = very low importance and 5 = very high importance for current job.

### Table 3. Greatest Self-Rated Managerial Strengths and Weaknesses

<table>
<thead>
<tr>
<th>Skill</th>
<th>Mean ± S.D.</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greatest strengths</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrate ethical conduct in all activities related to pharmacy practice</td>
<td>4.34 ± 0.60</td>
<td>249</td>
</tr>
<tr>
<td>Effectively attend to customers’ needs</td>
<td>3.99 ± 0.64</td>
<td>252</td>
</tr>
<tr>
<td>Accept responsibility for accurate evaluation of one’s own work</td>
<td>3.84 ± 0.75</td>
<td>254</td>
</tr>
<tr>
<td>Manage change effectively</td>
<td>3.82 ± 0.69</td>
<td>247</td>
</tr>
<tr>
<td>Understand the role of empowerment and delegation in achieving the pharmacy’s mission</td>
<td>3.79 ± 0.72</td>
<td>253</td>
</tr>
<tr>
<td>Greatest weaknesses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participate in the implementation of a marketing program</td>
<td>2.86 ± 0.94</td>
<td>251</td>
</tr>
<tr>
<td>Use an organized system for staying current with pertinent management and leadership literature</td>
<td>2.87 ± 0.83</td>
<td>250</td>
</tr>
<tr>
<td>Construct reports and recommend plans to improve outcomes based on conclusions drawn from analysis of financial and clinical outcomes data</td>
<td>2.91 ± 0.92</td>
<td>252</td>
</tr>
<tr>
<td>Understand the operating principles of managed care</td>
<td>2.97 ± 0.81</td>
<td>253</td>
</tr>
<tr>
<td>Perform prospective and retrospective financial and clinical outcomes analyses</td>
<td>2.98 ± 0.93</td>
<td>252</td>
</tr>
</tbody>
</table>

*As determined by respondents on a five-point Likert scale, where 1 = very low skill level and 5 = very high skill level.

Relationships between perceived levels of importance and skill and respondent characteristics. One-way ANOVA was performed to determine whether any demographic characteristic (e.g., job title) was associated with a different mean importance rating of all skills. The Tukey-Kramer HSD test was used to control for the overall Type I error rate when making multiple comparisons. The categories for only two de-
mographic characteristics, “Size of institution” (F[3] = 5.12, p = 0.0019) and “Sex” (F[2] = 4.28, p = 0.0149), had significant differences in mean rating of importance. More specifically, managers working in institutions with more than 500 inpatient beds (mean ± S.D., 4.12 ± 0.49) and those working in institutions with 101–500 inpatient beds (4.01 ± 0.49) rated these skills with a significantly higher overall mean importance than managers working in institutions with 51–100 inpatient beds (3.77 ± 0.52). Also, female managers (4.04 ± 0.53) rated the skills with a significantly higher overall mean importance than male managers (3.85 ± 0.50).

In the one-way ANOVA associating the mean self-rated skill levels with the various demographic characteristics, “Education” (F[4] = 6.97, p < 0.0001), “Size of institution” (F[3] = 3.85, p = 0.0102), and “Years of managerial experience” (F[3] = 3.45, p = 0.0173) had significant differences. More specifically, (1) health-system pharmacy managers with a master of business administration (M.B.A.) degree (4.08 ± 0.26) had a significantly higher overall mean skill level than managers in all other “Education” categories, (2) those with a bachelor of science degree in pharmacy (3.35 ± 0.46) had a significantly lower overall mean skill level, and (3) those with a master of business administration degree in pharmacy plus “other” degrees (3.57 ± 0.47), (3) managers employed in institutions of more than 500 inpatient beds (3.63 ± 0.48) had a significantly higher overall self-rated mean skill level than managers employed in institutions of 51–100 inpatient beds (3.32 ± 0.45), (4) managers with 16 or more years of managerial experience (3.55 ± 0.40) had a significantly higher overall mean skill level than those with 0–5 years of managerial experience (3.31 ± 0.49).

**Discussion**

This survey suggests that Canada’s health-system pharmacy managers need more training in management skills. An overall skill deficit was admitted by 71.3% of respondents in this study. Health-system pharmacy managers in the United States have also identified a need for additional training in managerial skills.1 Also, hospital administrators have perceived a need for training and identified areas for improvement in their pharmacy administrators.7 This training is needed for the growth and advancement of every pharmacy department. As Oakley et al.1 observed, “the better prepared pharmacy direc-

Table 4.

<table>
<thead>
<tr>
<th>Skill</th>
<th>Difference</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use effective techniques to motivate staff to achieve the pharmacy’s mission</td>
<td>0.90</td>
<td>249</td>
</tr>
<tr>
<td>Use conflict management skills to resolve disputes</td>
<td>0.87</td>
<td>247</td>
</tr>
<tr>
<td>Communicate effectively when speaking or writing</td>
<td>0.87</td>
<td>253</td>
</tr>
<tr>
<td>Effectively employ team-building techniques</td>
<td>0.84</td>
<td>250</td>
</tr>
<tr>
<td>Construct reports and recommend plans to improve outcomes based on conclusions drawn from analysis of financial and clinical outcomes data</td>
<td>0.83</td>
<td>252</td>
</tr>
<tr>
<td>Perform prospective and retrospective financial and clinical outcomes analyses</td>
<td>0.80</td>
<td>252</td>
</tr>
<tr>
<td>Interpret outcomes data for management purposes</td>
<td>0.80</td>
<td>251</td>
</tr>
<tr>
<td>Understand effective strategies for ensuring the adoption of the pharmacy vision</td>
<td>0.78</td>
<td>254</td>
</tr>
<tr>
<td>Use an organized system for staying current with pertinent management and leadership literature</td>
<td>0.78</td>
<td>250</td>
</tr>
<tr>
<td>Use effective negotiating skills</td>
<td>0.78</td>
<td>248</td>
</tr>
</tbody>
</table>

*As determined by respondents on a five-point Likert scale, where 1 = very low importance or skill level for current job and 5 = very high importance or skill level for current job.
cal for busy pharmacy managers at smaller health systems and may be insufficient to meet all of the learning needs identified in our survey. For example, “Demonstrate ethical conduct in all activities related to pharmacy practice” was identified as the single most important skill in this survey, but it is doubtful whether a CE program alone would be sufficient to provide the training needed in this area. Mentoring may be more effective than didactic teaching in ethics.

Another way to meet these training needs is to offer on-the-job, or experiential, training. This is the main approach by which health-system pharmacy management skills are learned in Canada. Health-system pharmacy managers in the United States also rely heavily on this method of training. Some have argued that this method can increase job satisfaction and improve the managerial skills of staff pharmacists. Others have argued that this method is preferred over traditional classroom instruction for teaching health-system pharmacy management skills. Given the time restraints of potential mentors, and the fact that some health systems may have no pharmacy management mentors at all, this method of instruction could be very difficult to implement at some hospitals.

A third method of addressing these managerial skill deficits is with a more formalized training program, such as an M.B.A. or master of science (M.S.) degree in pharmacy practice management. In our study, health-system pharmacy managers with an M.B.A. degree had a significantly higher overall mean self-assessed skill level than pharmacists in all other educational categories. This supports the findings of Oakley and colleagues, whose survey of health-system pharmacy directors in health systems with over 300 beds revealed that only those with M.B.A. and M.S. degrees believed they were academically strong in personnel and financial management in a health-system organization. In this same study, health-system pharmacy directors with a doctor of pharmacy degree or bachelor of science degree in pharmacy “perceived a definite weakness in their formal education in the area of administrative training.” Another study determined that the M.B.A. and M.S. were the degrees of choice for most health-system pharmacy directors surveyed. Recently, an editorial argued that combined M.S.–residency programs have a history of producing leaders in the profession of pharmacy and that more of these programs should be established. Residency programs with an emphasis on pharmacy practice management allow the use of multiple training methods to help foster the development of problem-solving abilities, judgment, innovation, and one’s own philosophy of pharmacy practice, which are so critical for many of the skills contained in this survey, including ethical conduct.

Analysis of the written comments provided by the respondents on the last page of the survey revealed several themes. First, many managers in smaller health systems feel overwhelmed and unable to sufficiently utilize their managerial skills. They have very limited personnel and financial resources and typically spend a significant portion of their time working as a staff pharmacist rather than as a manager. Many of these managers would like to perform outcomes research, quality improvement initiatives, and staff development activities, but there is little encouragement from health-system administrators to perform these functions.

Second, pharmacy managers in smaller health systems do not appear to be alone in their concern about the lack of resources. Numerous respondents commented on how recent budget cuts, mergers, and changes in upper-management staffing levels have adversely affected their departments. In some cases, this work environment seems to have a negative impact on morale. Comments such as, “Not able to maintain basic standards of practice with budgeted staffing” and “No energy for training as we are exhausted from trying to cope” exemplified this point. Some respondents commented on the ethical dilemma of choosing what should be done by their department versus what they felt could actually be done, given the amount of resources available to them. There was also a degree of skepticism that resources will ever become sufficient: “I am not sure we will ever get back to the point where there is time in the day to do these extremely important pursuits... and I find this very discouraging.”

Third, the current shortage of pharmacists and difficulty in recruiting and retaining pharmacists have had negative effects on departments of pharmacy. This, too, has prevented some managers from performing managerial duties. “Due to a shortage of pharmacists, as a manager I must spend time doing dispensing functions of a staff pharmacist,” and “It is very difficult in these times of... pharmacist shortages to recruit pharmacists, and this does contribute to high stress levels and means that pharmacy directors often end up doing a lot of dispensing or work that should be delegated to the staff pharmacist.”

A fourth theme that emerged from the respondents’ comments was the perceived need for more training of health-system pharmacy managers. There seemed to be some differing opinions on whether this should be a responsibility of Canada’s colleges of pharmacy or of the health-system upper administration. Some respondents suggested specific skills that they thought should be emphasized in training programs, such as the art of negotiating, constructing, and submitting business plans. Overall, there was the sentiment that the importance of management has been ignored in health-system pharmacy education: “Management and administration development in hospital and hospital pharmacy has too long been underplayed. Health care efforts in general have improved
Canada's health-system pharmacy managers

While the health care delivery systems in Canada and the United States are quite different, most health-system pharmacy management personnel in the United States are facing most of the same pressures as their Canadian colleagues. A recent editorial described key pharmacy practice issues in Canada, such as promoting seamless pharmaceutical care, developing quality measurement systems, and ensuring pharmacist access to patient-specific information. These are similar to those issues faced by health-system pharmacy practice in the United States. As previously discussed, the managerial skills deemed to be most important to the respondents are general managerial skills that would likely transcend geographic location and even health-system pharmacy practice itself. One result that may differ between the two countries is the low importance given by the survey respondents to understanding management personnel in the United States, this skill would probably be more important to American respondents.

Limitations. The respondents were asked to assess their own skills, and we did not attempt to validate their self-assessment through examination or other means. Some respondents may be biased or unable to accurately assess their own strengths and weaknesses. In the future, it would be valuable to give this survey to hospital administrators, educators, and staff pharmacists and compare their responses with those of the individuals included in this survey.

Two respondents commented that they ranked the importance and skill levels lower for managerial activities that they delegate to others. In one of the questions about demographics, we asked for the number of inpatient beds in their primary institution. However, this may not be a true reflection of the number of beds for which they are responsible. Some managers have responsibilities for multiple health systems or other types of facilities, such as long-term care centers.

One could question whether the 61 managerial skills in the current survey really reflect the scope of health-system pharmacy management practice in Canada, since our survey was based on American standards. As discussed, we attempted to address this potential concern by using the Lilly Management Conference Planning Committee of the NSAHPM to review the survey’s relevance for the Canadian health-system environment. This was validated, at least in part, since none of the 61 skills listed received a mean score in the “low” or “very low” categories on a five-point Likert scale.

While this survey was supposed to reach every health-system pharmacy manager in Canada, we cannot be certain that our goal was accomplished, given the constant state of mergers and job changes. Also, we were not able to develop a French version of the survey instrument. Although the response rate from Quebec was lower than the overall response rate (31.4% versus 52.7%, respectively), 19.3% of the total responses were from Quebec, while this province was estimated to have 24.0% of the total population of Canada in 2000.

Recommendations. The survey respondents acknowledged the need for more training in managerial skills, including such skills as motivating staff, conflict management, effective communication, team building, and performing outcomes analyses. Education appears to be an appropriate intervention to address this need. It does seem reasonable, then, that Canada’s colleges of pharmacy, CSHP, and other interested parties consider the best method to ensure consistent and effective methods to meet these needs in current and future health-system pharmacy managers. As Guerrero and Nimmo argued, new and creative approaches must be used for staff development, perhaps combining classroom instruction, on-the-job training, and mentoring in a new graduate-level educational program for health-system pharmacy managers. Given the needs that have been identified in this survey and the pressures on today’s health-system pharmacy managers, the appeal made in 1985 is even more relevant and urgent today: “...it is important to find a means to bridge the potential management education gap and to provide a mechanism that assists other pharmacists in fulfilling a shift in their career goals from professional practice to pharmacy administration.” Failure to do so would ignore the needs identified in this study and could have detrimental effects on health-system pharmacy practice in Canada.

Conclusion

A national survey of health-system pharmacy managers in Canada revealed a pressing need for better training in managerial skills for these pharmacists.

References