

## Education and Research

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### Types of Student Training Provided by Pharmacy Department

The current survey results indicate that student training is now part of the mandate of almost all hospitals that participate in the Hospital Pharmacy in Canada survey.

- Training was reported to be provided for undergraduate pharmacy students by 90% of respondents in the 2005/06 survey, compared to 83% in the 2003/04 survey. (Table I-1)
- Training for pharmacy technician students was reported to be provided by 89% of respondents in 2005/06, compared to 84% in 2003/04.
- Training for pharmacy residents was reported to be provided by 29% of respondents in 2005/06, compared to 26% in the 2003/04 survey.
- M. Sc and Pharm. D student training remained fairly similar in the current survey, (9% and 19% respectively), compared to the 2003/04 survey results, (11% and 17% respectively). Of the 13 respondents that reported Masters level training placements, 11 were in Quebec, reflecting the unique Masters/Residency program that exists in that province.
- A similar trend was observed with Pharm. D student placements. More than half of the respondents, (15/27), that indicated they were involved in the training of Pharm. D students were from Ontario, which represents 33% of the Ontario respondents and another five respondents were from BC, representing 25% of the BC respondents. These results are not surprising, given that Canada's only Doctor of Pharmacy programs are located in these two provinces.

### Student Days

The results of this year's survey indicate that there has been an increase in the reported number of training days provided to all categories of students, compared to the results from the 2003/04 survey.

- The average number of undergraduate pharmacy student training days provided by the 124 hospitals that reported they participated in this training activity was 246 days in the 2005/06 year, compared to 228 in 2003/04. There was a broad range of reported days of training, (1 to 4260 days).
- Twenty nine percent of respondents reported that they had provided more than 200 undergraduate pharmacy student training days per year. Of the hospitals that reported providing more than 200 days of training, the majority were teaching hospitals, (79%). Fifty percent of hospitals with more than 500 beds reported that they had provided more than 200 days of undergraduate pharmacy student training. In the Prairies, (40%), Quebec, (38%) and Atlantic Canada, (31%), a larger percentage of hospitals reported that they had provided more than 200 training days than did the responding hospitals from B.C, (10%), and Ontario, (24%).
- Respondents that provide training for M. Sc students reported that the average number of training days they provided for these students was 629, compared to 489 days in 2003/04. For those that reported they provided residency training, the average number of training days provided was 515 days, compared to 411 days in 2003/04. For Pharm. D student training the average number of training days reported was 112, compared to 82 days in 2003/04, and for those participating in pharmacy technician student training the average number of training days reported was 98, compared to 95 days in 2003/04.

These results not only indicate an increase in the average teaching workload associated with each type of student, but also point out that facilities involved in M. Sc and residency training programs are making a very significant teaching commitment in support of those programs. It will also be interesting to track any future change in the number of pharmacy technician student training days being provided by facilities, as the role and scope of practice of pharmacy technicians continues to evolve.

**Table I-1 Education and Research 2005/06**

	All	Bed Size			Teaching Status	
		100- 200	201- 500	>500	Teaching	Non-Teaching
<b>Hospitals (n=)</b>	(142)	(27)	(78)	(37)	(37)	(105)
<b>Respondents involved in the training of each type of student:</b>						
Undergraduate pharmacy students	90%	81%	92%	92%	92%	90%
Pharmacy Residents	29%	4%	27%	51%	65%	16%
M.Sc. Hospital Pharmacy Students	9%	0%	12%	11%	30%	2%
Pharm. D. students	19%	4%	18%	32%	41%	11%
Pharmacy Technician Students	89%	85%	90%	89%	89%	89%
<b>Average number of student days for:</b>						
Undergraduate Pharmacy Students (n=124)	246	87	201	452	613	113
Pharmacy Residents (n=39)	515	60	302	777	731	203
M.Sc. Hospital Pharmacy Students (n=12)	629	.	565	755	668	432
Pharm. D. students (n=23)	112	.	118	103	124	92
Pharmacy Technician Students (n=116)	98	49	79	174	168	75
<b>Stipend received by department for training:</b>						
Undergraduate Pharmacy Students (n=128)	54%	45%	57%	53%	71%	48%
Pharmacy Residents (n=41)	12%	100%	14%	5%	17%	6%
M.Sc. Hospital Pharmacy Students (n=13)	23%	0%	22%	25%	9%	100%
Pharm. D. students (n=27)	48%	100%	29%	67%	47%	50%
Pharmacy Technician Students (n=126)	17%	13%	15%	23%	20%	16%
<b>Stipend received by pharmacy staff for training:</b>						
Undergraduate Pharmacy Students (n=128)	12%	14%	11%	12%	15%	11%
Pharmacy Residents (n=41)	2%	0%	0%	5%	4%	0%
M.Sc. Hospital Pharmacy Students (n=13)	15%	0%	11%	25%	9%	50%
Pharm. D. students (n=27)	4%	0%	0%	8%	7%	0%
Pharmacy Technician Students (n=126)	3%	0%	6%	0%	0%	4%
<b>University supports positions within department to provide dedicated time for student training</b>						
Average number of FTE's supported (n=10)	0.6	.	0.6	0.2	0.7	0.4
<b>% of respondents with staff involved in conducting original research (n=142)</b>						
Average number of active research projects, respondents with at least 1 active project (n=47)	5.9	4.5	3.0	10.3	8.2	1.8
Number of peer-reviewed papers, respondents with at least 1 reported paper (n=43)	4.5	1.5	3.6	6.1	6.0	1.7

## Financial Support for Student Education

The results of this year's survey indicate that there are regional differences in the compensation provided to both pharmacy departments and pharmacy staff that participate in the training of different types of students.

- Fifty-four percent of respondents reported that the pharmacy department received a stipend for training undergraduate pharmacy students and 12% reported that pharmacy staff received a stipend for training this category of student. (Table I-1)
- Pharmacy departments in Ontario were more likely to report that they received stipends for training undergraduate pharmacy students, (76%), than were pharmacy departments in other Provinces, where those that reported receiving stipends ranged from 35% to 50% of respondents.
- Of the 12% of respondents that reported stipends were received by pharmacy staff for training undergraduate pharmacy students, 14 of the 15 respondents were from Ontario, representing 34% of the Ontario respondents, (14/41 hospitals). The only other facility to report that pharmacy staff received a stipend was located in Atlantic Canada.
- Stipends were less commonly reported for resident training. Only five respondents providing residency training days reported that their pharmacy department received a stipend, and only one respondent reported that pharmacy staff received a stipend for resident training.
- Of the 13 respondents that reported they provided training for M Sc students, three respondents indicated that a stipend was received by the pharmacy department while two respondents reported that pharmacy staff received a stipend.
- Pharm D student placements continue to be well supported with stipends. Forty-eight percent of respondents involved in the training of Pharm D students indicated that the pharmacy department received a stipend, while only one respondent reported that a stipend was received by their pharmacy staff.
- Pharmacy department stipends for pharmacy technician student training were reported by 17% of the respondents that reported they provided technician student training days. Four respondents indicated that pharmacy staff received stipends for training pharmacy technician students.
- Overall, compared with the previous survey in 2003/04, the percentage of respondents reporting that departmental or personal stipends were received for training students remained similar

## University Supported Positions for Student Training

Respondents to the 2005/06 survey reported an increase in training days for each type of student category. (Table I-1) This is consistent with the increased emphasis that Faculties of Pharmacy and the Canadian Council for the Accreditation of Pharmacy Programs have placed on the experiential component of pharmacy training programs. The 2005/06 survey included questions that provide information on whether or not the increase in experiential training is accompanied by an increase in the personnel support that universities provide to facilities to assist in providing experiential training.

- There was an increase since the previous survey in the number of respondents that reported an increase in university funded positions within their department to provide dedicated time for student training. Eleven respondents, (8%), reported that the university provided support for positions within their department, compared to six respondents (4%), in 2003/04. (Table I-1) Despite the increased number of respondents with university-supported positions in their department in 2005/06, the average number of FTEs supported in each respondent's facility was only 0.6 FTE in 2005/06, compared to 1.2 FTEs in 2003/04.

These results suggest that universities may be providing direct personnel support to more hospitals, but doing so by providing smaller amounts of personnel support to each hospital.

## Research

- Thirty-five percent of respondents reported that their pharmacy staff members were involved in conducting original research, similar to the results from 2003/04.
- In 2005/06, 84% of the respondents from teaching hospitals reported that members of their staff were engaged in original research, compared to 70% in 2003/04. The change in the definition of teaching hospitals in the 2005/06 survey may have contributed to this difference.
- Involvement in original research was reported by 51% of hospitals with greater than 500 beds, compared to 63% in 2003/04. In contrast, 37% of respondents from hospitals with 201-500 beds reported participation in original research, compared to 26% of hospitals in this size range that reported research participation in 2003/04.
- In the 2005/06 survey, two respondents from hospitals with 100-200 beds reported that members of their pharmacy staff were involved in original research compared to eight respondents in 2003/04.
- The average number of active research projects reported by hospitals participating in original research was 5.9, compared to 4.9 in 2003/04.
- Although the average number of projects reported by hospitals with 100-200 beds was 4.5 in the current survey, compared to 2.4 in 2003/04, there were only two hospitals in this size range that were involved in research during 2005/06, which must be considered when interpreting these results.
- Hospitals in the 200-500 bed category reported a slight decrease in the average number of research projects, to 3.0 from 3.9 in 2003/04, while hospitals with greater than 500 beds reported an average of 10.3 research projects in 2005/06, compared to 6.7 projects for the same group in 2003/04.
- Of the 43 respondents that reported the publication of at least one paper, the average number of published papers per department is 4.5, compared to 7.1 published papers per respondent for the 49 respondents whose departments published at least one paper in 2003/04. Teaching hospitals reported an average of 6.0 published papers, compared to 9.5 papers per respondent in 2003/04. Non-teaching hospitals reported an average of 1.7 published papers, compared to 2.4 papers in 2003/04. The reasons for the apparent decline in publications by respondents in 2005/06, compared to 2003/04, is not known, but the staffing shortages of the last few years may have resulted in less staff time being available to undertake research and publish papers.