

Introduction

CSHP BC branch conducted two separate pharmacist shortage surveys; one in 2000 followed by another in 2003. The results of both surveys were consistent. There has been an average of 6-10% hospital pharmacist vacancies across British Columbia in those three years and there appears to be no immediate resolution.

Although the average vacancy rate is important, the more accurate barometer should be the vacancy rate of specific hospitals. When calculating an average vacancy rate, hospitals with full staff were mixed in with hospitals operating with only half their staff thereby minimizing the effect on departments under stress. Both staff and patients were put at risk. There are more hospitals in 2005 with vacancies over 10% than during the previous four years (Appendix 1). There are also an increasing number of hospitals, especially large centers, with a large percentage of vacancies of very long duration. This prolonged shortage has a negative effect on clinical pharmacy practice as well as the recruitment and retention of staff. The 2005 survey will attempt to show the effect on pharmacies with over 10% vacancies and the impact these vacancies have had on patient safety.

Methodology

The 2005 survey focused mainly on the number of vacancies, the reasons for these vacancies and their impact on departmental operations (Appendix 2; survey sample). It was designed to be short and simple to complete in order to ensure a high rate of response. The survey was initially distributed to the Pharmacy Director Group via the chair. Directors would then redistribute to Site Managers/Coordinators. A second e-mail or phone call was send/made to Pharmacy Managers who did not complete a survey.

Data

Results of the surveys were grouped according to the six health authorities. All hospitals within Vancouver Coastal Health Authority (VCHA), Fraser Health Authority (FHA) and Northern Interior Health Authority (NIHA) completed the survey. The surveys for Interior Health Authority and Vancouver Island Health Authority were completed by various Site Coordinators. 67% and 80% of their hospitals completed the survey respectively (Appendix 3). Provincial Health Service Authority had only three hospitals completing the survey.

Results (Appendix 4; Summary)*Long-term Vacancies*

A typical pharmacist vacancy lasts from 1 to 150 weeks (average vacancies ranging from 11 to 67 weeks with means range from 12 to 130 weeks). The means range for all authorities is 32 to 33 weeks; roughly eight months long. Most vacancies are maternal leaves and internal / external transfers. A significant number of pharmacists transferred from the hospital to a community position in one hospital in VIHA. The high number of maternity leaves is a reflection that the majority of pharmacist staff is female. Roughly 80% of the graduating class of 2005 is female. Internal and external transfers result when site staff assumes new health authority positions. Each separate hospital site did not indicate the creation of any new positions but most sites had lost staff to these 'regional' positions. There were a few vacancies due to staff wanting a less stressful job or converting to casual positions; this points toward the stress that staff has faced during staff shortages.

Hospitals with vacancies usually have many

With a few exceptions, when hospital pharmacies have vacancies, usually the deficiency represents a significant percentage of existing staff numbers. Exceptions include hospitals close to the city of Vancouver or small hospitals that do not usually experience staff fluctuations. Community pharmacist wages in the city of Vancouver have remained steady during the last year and are comparable to hospital pharmacist wages. Some hospitals in suburban areas are quite stable and rarely see vacancies. Hospitals that are expanding and are situated away from the Vancouver area were most affected.

A majority of the hospitals with vacant positions over 30% are in FHA or NIH as well as one location in VIHA. Three major hospitals in FHA and one major center in VIHA experienced the most vacancies. This is due in part, to the rapid expansion these hospitals have experienced. Reasons for these changes were massive growth in their local population, expansion of their hospital programs, increasing workload along with the wage disparity between community and hospital practices (Appendix 5; wage comparison). Discrepancies in wages between community and hospital pharmacists can be overwhelming, with a different of \$10 to \$20 per hours, in some areas. The other high percentage of vacancies was due to small hospitals in NIH where one missing pharmacist constituted a 50% staff reduction.

Impact on Pharmacy and Patient Care

The impact of these discrepancies on the pharmacy and the patients are very significant (Appendix 6; Impact). Most frequently cited impacts were reduction, realignment or modification of pharmacy clinical services where

patient therapy was monitored for adverse reactions, appropriateness and effectiveness. Consequences are obvious with patient care being compromised. Some pharmacies reduced their hours of operation; this would reflect an overall reduction in drug distribution and clinical services. The burden of care would be placed back on physicians and nurses. Current or the creation of new hospital and pharmacy programs would be further delayed, suspended or halted altogether due to the absence of half of the pharmacy staff. Tasks are carried out by non-experienced staff which further erodes the confidence that other health professional have had in pharmacists. Many of the administrative duties could not be done. These duties include medication incident reporting, budgeting, operational improvements, and recruitment and retention programs. The inability to complete these tasks adds to the inefficiencies of department operation and may lead to more staff moving to less stressful jobs. This becomes a vicious cycle which has been clearly demonstrated in these surveys.

Conclusion

Hospital pharmacy has lost its ability to expand its services to meet the increasing demand from the health care system. Pharmacists are difficult to recruit due to discrepancies in wages and increases in workload. The impact of pharmacist shortage on the system is significant and threatens the ability of the multidisciplinary team to provide appropriate care. Stakeholders such as university administrators, union representatives, employers and employees must work together to resolve these issues which negatively impact the quality of patient care.

Appendix 1: Vacancy rate comparison

Vacancy Rate	Number of Hospitals		
	2005 (N=41)	2003 (N=46)	2000 (N=65)
0%	13	17	26
1 to 10%	7	4	12
11 to 20%	7	6	5
21 to 30%	3	2	4
31 to 40%	3	3	2
41 to 50%	3	4	2
51 to 60%	5	1	0
100%	n/a**	4	3

** Pharmacies which had 100% vacancies in 2003 cannot be considered vacant as telepharmacy had already been established.

Appendix 3

Hospitals that have completed the surveys 2005

Vancouver Coastal Health Authority and Providence

Providence

Holy Family Hospital

Mount Saint Joseph Hospital

Saint Paul Hospital

Vancouver Coastal

G.F. Strong Hospital

Vancouver Hospital and Health Science Center; UBC Site

Vancouver Hospital and Health Science Center; Vancouver General Hospital

Fraser Health Authority

Queens Park Hospital

Burnaby Hospital

Chilliwack General Hospital

Langley Memorial Hospital

Eagle Ridge Hospital

Ridge Meadow Hospital

MSA General Hospital

Mission Memorial Hospital

Surrey Memorial Hospital

Royal Columbian Hospital

Peace Arch Hospital

Vancouver Island Health Authority

Nanaimo Regional General Hospital

Comox

Cowichan Regional Hospital

Eric Martin Privillion

Lady Minto Salt Spring

Royal Jubilee Hospital

Sannich Peninsula Hospital

Victoria General Hospital

Interior Health Authority

Royal Inland Hospital

Pentictin Regional Hospital

Kelowna General Hospital

Cariboo Memorial Hospital

Vernon Jubilee Hospital

Shuswap Lake General Hospital

Northern Interior Health Authority

Queen Charlette City Hospital

Mills Memorial Hospital (Terrace)

Prince Rupert Regional Hospital

Fort St. John General

Bulkley Valley District Hospital

Dawson Creek District Hospital

GR Baker Memorial (Quesnel)

Prince George Regional Hospital

PHSA

BC Cancer Agency Vancouver

BC Cancer Agency Victoria

Cancer 3

Appendix 4 : Result Summary

Health Authority	Number of hospital reported	Number of vacancies in total	Range of vacancies (weeks)	Average length of vacancies (weeks)	Duration of vacancies (means in weeks)	Percentage of vacancies to full staff	Reason for Vacancies	Deleted positions	New positions
Vancouver Coastal Health Authority	6	17.2	1 to 40 weeks	18.91	32	VC = 6%	Maternity (6)	4	
Note 1						Providence = 20%	Internal transfer (3)		
							Promotion (2)		
							External Transfer (2)		
							Transfer to casual (2)		
							Relocation (1)		
							Traveling (1)		
							New Position (1)		
							Left Province (1)		
							Retirement (1)		
Fraser Health Authority	10	28.8	1 to 52 weeks	27	33 weeks	1= 50%	Maternity (5)		4.5
						2= 8%	External transfer within FHA (9.5)		Regional = approx. 15
						3= 0%	New Position (3.5) Note 3		
						4= 41%	Left to do part-time or casuals (2)		
						5= 32%	Career change (1)		

Health Authority	Number of hospital reported	Number of vacancies in total	Range of vacancies (weeks)	Average length of vacancies (weeks)	Duration of vacancies (means in weeks)	Percentage of vacancies to full staff	Reason for Vacancies	Deleted positions	New positions
						6= 27 %	Personal Reason (0.5)		
						7= 33%			
						8= 44%			
						9= 37%			
						10= 0%			
Vancouver Island Health Authority	8	14.67	1 to 130 weeks	55	130	1= 24%	Went to PT (1.4)		0.5
						2= 0%	Left Province (1)		
						3= 0%	Stop work or retire (1.4)		
						4= 0%	Left to community for better wages (9.8)		
						5= 0%	Better hrs (1)		
						6= 58%			
						7= 0%			
						8= 10%			
Interior Health Authority	6	5.2	6-16 weeks	11.6	12	1= 12%	New position (1)		
						2= 7%	Internal promotion (2)		
						3= 20%	Internal transfer (1)		
						4= 0%	Job change (1)		
						5= 0%			
						6= 19%			

Health Authority	Number of hospital reported	Number of vacancies in total	Range of vacancies (weeks)	Average length of vacancies (weeks)	Duration of vacancies (means in weeks)	Percentage of vacancies to full staff	Reason for Vacancies	Deleted positions	New positions
Northern Interior Health Authority	8	4.1	16-104 weeks	67.5	50	1= 52%		1	3
						2= 50%			
						3= 50%			
						4= 50%			
						5= 0%			
						6= 0%			
						7= 0%			
						8= 0%			
Provincial Health Service Authority	3	1.8	16-48 weeks	31	28	1= 29%	Mat leave (0.8)		
Note 4						2=15%	new promotion (0.4)		
						3=2%	Promotion (0.6)		

Notes

- 1 VIHA includes Providence; all hospital reported
- 2 FHA all reported with exception of RCH; have only vacancy figures but not others; all other column calculations were based on 9 Hospitals
- 3 FHA new position does not include Regional nor RCH Positions
- 4 Only one group of hospital is reported

Appendix 5

**Community Pharmacists'
Average Wage & Benefit Stats**

	Average Hourly Rate¹
Community Pharmacist Wages	
Greater Victoria and the Gulf Islands	\$39.36
Vancouver Island, including Powell River	\$40.77
Fraser Valley	\$37.38
Thompson Okanagan, North to 100 Mile House (including Lillooet, Golden, and Revelstoke)	\$42.55
Cariboo, Prince George, North East	\$48.51
The City of Vancouver, including UBC	\$36.89
Hospital Pharmacist Wages; accurate to 31 March 2006	From Year 1 to 6
Grade I (less than 50% clinical)	\$29.46 - \$36.74
Grade II (more than 50% clinical)	\$30.57 - \$38.14

¹ Based on hourly wage before deductions.

Appendix 6: Impact on Hospital Care; Survey Comments

Spending more resource in schedule changes. More relief required

The time of training or retraining pharmacists was short and ineffective

Reduction in clinical services; Pharmacists spending time back in the dispensary and not with the patient; Cannot optimize medical care. (2)

Has to reevaluate and prioritize clinical programs; sacrificing primary patient cares

Some programs will be suspended during times of illness & vacations; services to patient care area reduced.

Reduction in prescription order entry into the pharmacy system.

Reduction in pharmacy operating hours (3)

Delay introduction of clinical pharmacy programs.

Unable to expand Pharmacy Department and implement initiatives; Pharmacy Project on hold

Inconsistent clinical coverage; coverage become piece meals (example: Pharmacist coverage in the ER ward)

Posting delayed; cannot proceed with changes; reduced ECU coverage.

Additional stress on all pharmacists; increase sick time and number of sick leave. Staff overstressed.

No clinical service to Sub acute ward (2)

Modified clinical programs (2)

Major clinical realignment

lost Paeds coverage for 2 months

Unitize Over Time and reduce pharmacy services

Cannot expand program for both Hospital and Pharmacy Department

Declined requests for program expansion due to staffing shortage

Utilization of overtime

Decrease in clinical service to program (3)

Replaced staff by less qualified individual;

Ongoing work responsibilities are partially being maintained

Less time sensitive initiatives were delayed and eventually not done or became urgent in due time

Delays in patient treatment

Delays in performing other pharmacy tasks (Medication Incident Monitoring)

Delay, suspense, or limit the number of research studies.

Same or increase in workload with less staff operating.

Backlog of administrative work not done

* Note: One full time pharmacist was on LTD then qualified for disability pension in July 2005. Her position was not back filled due to shortage of pharmacists.

The funding for this position was cut prior to my arrival as manager in 2004. The manager position was vacant for 7 months.

There was no regular pharmacist for 7 months prior my arrival.

Over budget due to cost of locum coverage

Outpatient/retail prescriptions being moved over to a community pharmacy in Vancouver

locum costs and O/T incurred

Operation via Telepharm

locum costs. O/T incurred. Decrease in hours of operation