

Drug Purchasing and Inventory Control

Nancy Roberts

Drug Costs

The Patented Medicine Prices Review Board (PMPRB) reported that total sales of all drugs for human use in 2003 increased 14.5% from 2002, and that sales of patented drugs increased by 14.8% for the same period ⁽¹⁾. Growth in drug expenditures clearly exceeds growth in other areas of health care- the Canadian Institute for Health Information (CIHI) reported that pharmaceutical expenditures accounted for 16.2% of overall health care expenditures in Canada in 2003, up from 15.2 % in 2001 (accounting for the second largest share, after hospitals). In comparison, the share of drugs in total health expenditures was 9.5% in 1985. ⁽²⁾

- This year's survey supports these findings- reported annual drug costs for respondents' hospitals in 2003/04 (Table E-1) have increased by almost 1.28 million (19%) since the 2001/02 Annual Report, to an average of \$7,963,681.
- Increases are noted for all hospital sizes, and for teaching and non-teaching hospitals, with the most significant increase (48%) seen in non teaching hospitals and the smallest increase (2.7%) in >500 bed hospitals. However, significant changes in sample size in these two hospital categories, since the 2001/02 survey, may account for this shift. This shift may also be affected by a change in the definition for clinic/medical day drug costs in the 2003/04 survey, since respondents were directed to include drug costs for provincially funded programs (i.e. oncology, nephrology, etc) for the first time.
- Acute care inpatients drug costs per day were reported to have increased by only 26 cents per day since 2001/02.
- Emergency room drug costs continue the pattern of increase from survey to survey, from \$4.31 in 1997/98 to \$8.01 in 2003/04. The percentage increase since 2001/02 was 24% (\$6.48 to \$8.01).
- Clinic/Medical Day Unit drug cost per clinic/day unit visit in 2003/04 cannot be compared to previous surveys, due to the change in definition noted above. This definition change/clarification will allow for more comparable results per visit across the country in future surveys.

Table E-1. Inventory and Drug Costs 2003/04

Hospitals (n=)	All (144)	Bed Size			Teaching Status	
		100-200 (38)	201-500 (68)	>500 (38)	Yes (56)	No (88)
Inventory						
Total Value at Year End	\$697,514	\$308,660	\$515,023	\$1,357,451	\$1,152,857	\$422,060
Inventory Turns per Year	10.3	7.0	10.8	12.3	12.5	8.9
Drug Costs by Area						
Total	\$7,963,681 (134)	\$2,078,951 (32)	\$5,337,963 (64)	\$17,341,506 (38)	\$14,735,596 (52)	\$3,669,296 (82)
Acute Care Inpatient	\$3,596,002 (81)	\$1,164,765 (18)	\$2,545,432 (40)	\$7,325,787 (23)	\$5,962,616 (34)	\$1,883,983 (47)
Non-Acute Care Inpatient	\$381,056 (50)	\$102,360 (8)	\$223,470 (27)	\$813,348 (15)	\$606,083 (16)	\$275,161 (34)
Clinical/Medical Day Unit	\$2,056,431 (76)	\$412,058 (15)	\$1,515,196 (38)	\$4,023,064 (23)	\$3,423,584 (34)	\$949,689 (42)
Emergency Room	\$414,204 (69)	\$236,932 (15)	\$339,735 (36)	\$710,869 (18)	\$535,972 (29)	\$325,922 (40)
Ambulatory (Take home)	\$3,068,454 (17)	\$17,932 (2)	\$709,616 (8)	\$6,635,847 (7)	\$3,993,358 (13)	\$62,516 (4)
Ambulatory (Retail)	\$8,327,712 (6)	.	\$4,864,615 (2)	\$10,059,261 (4)	\$8,327,712 (6)	.
Acute Care Inpatient Costs						
Drug Costs/ Acute Pt Day (n=79)	\$31.25	\$27.70	\$28.53	\$38.51	\$40.35	\$24.72
Drug Costs/ Acute Admission (n=78)	\$230	\$173	\$213	\$301	\$313	\$169
NonAcute Care						
Inpatient Costs						
Drug Costs/ Non Acute Patient Day (n=42)	\$9.30	\$6.78	\$10.07	\$9.57	\$9.04	\$9.41
Drug Costs/ Non Acute Admission (n=40)	\$1,251	\$889	\$1,615	\$885	\$1,318	\$1,222
Other Areas						
Clinic, Medical Day Unit Costs/ Clinic, Day Unit Visit (n=69)	\$53.83	\$11.89	\$76.87	\$42.99	\$20.16	\$81.29
Emergency Room (ER) Costs / ER visit (n=67)	\$8.01	\$8.39	\$7.54	\$8.65	\$9.42	\$7.06

Base: Pharmacy departments providing complete data

Inventory

- The average of reported total inventory value at year end for 2003/04 has increased by 10.6% when compared to 2001/02 (\$631,105).
- The most significant increases for total inventory value in 2003/04, when compared to 2001/02, were reported in 100-200 bed hospitals (46%) and non-teaching hospitals (22%). This might be attributed to the efforts of larger, teaching hospitals to transfer patients back to the community hospitals for secondary care (recovery) to decrease lengths of stay and address long surgical waiting lists. The increase may also reflect the fact that these facilities may be geographically located in areas where the lead time for ordering stock is greater, or perhaps less emphasis is placed on inventory management due to resource limitations.
- Inventory turns increased for all sizes/types of hospitals except for the 100-200 bed sites. The reduction in inventory turns in the 100-200 bed sites is consistent with the 46% increase in inventory value also reported by respondents in these smaller facilities.

Changes in Drug Costs

- The number of respondents (n=7) reporting a decrease in total drug costs in 2003/04 was the same as reported in 2001/02 (Table E-2); however the percentage decrease reported was significantly higher at 10.1% in 2003/04, as compared to 3.8% in 2001/02. It is noteworthy that 73 (51%) of respondents did not answer this question in the 2003/04 survey.
- For respondents who provided information on the magnitude of the increase, the average reported percentage increase in total drug costs in 2003/04 was 12.9%, similar to 2001/02 (13.4%). The reported percentage increases were higher in all areas compared to 2001/02, except for acute care inpatient areas, where the reported increase was 11.8% versus 12.7% in 2001/02. This result correlates with the very small increase (26 cents) reported under Table E1 for drug costs per acute patient day for 2003/04, when compared to 2001/02.
- The reported percentage decrease in non-acute care inpatient costs was substantially less in 2003/04 (12%) than in 2001/02 (24.2%).

Table E-2. Changes in Drug Expenses by Patient Care Area - Magnitude of Change and Number of Respondents 2003/04

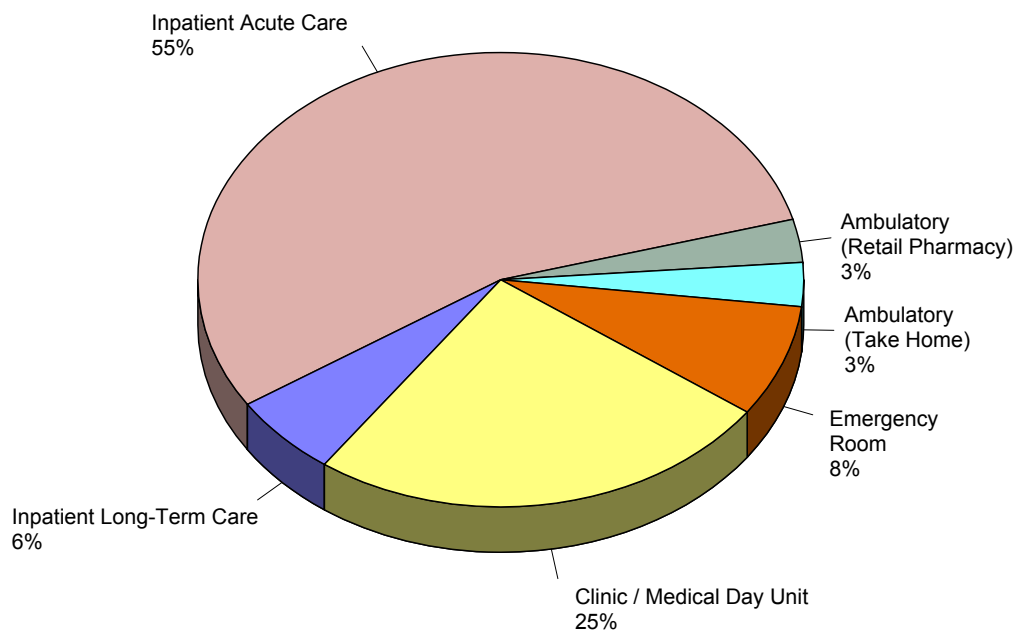
Hospitals (n=)	All (144)	Bed Size			Teaching Status	
		100-200 (38)	201-500 (68)	>500 (38)	Yes (56)	No (88)
Acute Care Inpatient						
% Decrease in drug costs	7.4% (7)	0.6% (1)	6.8% (4)	12.0% (2)	9.5% (5)	2.0% (2)
% Increase in drug costs	11.8% (59)	14.8% (14)	12.8% (31)	6.5% (14)	12.7% (23)	11.2% (36)
Non-Acute Care Inpatient						
% Decrease in drug costs	12.0% (8)	4.0% (3)	16.8% (4)	17.0% (1)	17.0% (1)	11.3% (7)
% Increase in drug costs	16.3% (27)	15.5% (2)	21.1% (17)	6.2% (8)	24.3% (9)	12.3% (18)
Clinic/ Medical Day Unit						
% Decrease in drug costs	20.1% (14)	40.0% (1)	23.3% (9)	8.0% (4)	13.9% (7)	26.3% (7)
% Increase in drug costs	20.6% (44)	24.4% (9)	19.4% (24)	20.0% (11)	20.5% (19)	20.7% (25)
Emergency Room						
% Decrease in drug costs	10.6% (13)	16.0% (2)	11.8% (8)	4.0% (3)	6.4% (7)	15.5% (6)
% Increase in drug costs	15.7% (35)	16.6% (6)	17.9% (21)	9.3% (8)	15.8% (13)	15.7% (22)
Ambulatory (Take Home)						
% Decrease in drug costs	18.0% (2)	.	18.0% (2)	.	5.0% (1)	31.0% (1)
% Increase in drug costs	67.4% (13)	13.0% (1)	134.8% (5)	27.0% (7)	66.7% (10)	69.7% (3)
Ambulatory Retail						
% Decrease in drug costs	8.0% (1)	.	8.0% (1)	.	8.0% (1)	.
% Increase in drug costs	17.0% (5)	.	5.0% (1)	20.0% (4)	17.0% (5)	.
Total Drug Costs						
% Decrease in Drug Costs	10.1% (7)	9.5% (2)	15.4% (2)	7.0% (3)	7.2% (4)	14.0% (3)
% Increase in Drug Costs	12.9% (59)	14.3% (15)	13.3% (28)	10.7% (16)	11.6% (20)	13.5% (39)

Base: Pharmacy departments providing complete data

Drug Expenses

- The percentage of drug expenses for acute care inpatient (Figure E-1, Table E-3) has undergone a distinct shift over a 6 year period, from 67% of total drug expenses, as reported in 1997/98, to 55% in 2003/04. The percentage of drug expenses for acute care inpatient reported in the 2001/02 survey was 58.7%.
- Clinic/Medical Day Unit drug expenses percentage shifted from 14% of total drug expenses in 1997/98 up to 25% in 2003/04. This shift may be attributed to the increase emphasis for more procedures to be carried out in the clinic setting versus OR/Day Surgery setting, as well as an increase in the number oncology treatments delivered in an outpatient versus inpatient basis. It also should be noted that provincial financing for some clinic/medical day unit drugs (i.e. oncology, nephrology, etc) varies across provinces and in the 2003/04 survey respondents were directed to ensure these drug costs were included, to enable more accurate comparison across the country for clinical/medical day unit drug expenses.
- No significant change was reported in the percentages of drug expenses for emergency and long-term care areas over the last 6 years.
- The percentage of drug expenses for Ambulatory (take home) decreased from 6% to 2 %, when comparing 1997/98 to 2003/04. Ambulatory (retail) drug expenses were reported separately for the first time in the 2003/04 survey, which most likely accounts for the majority of the decrease for Ambulatory (take home). Future surveys will provide more accurate trending information in these areas.

Figure E-1. Percentage of Drug Expenses by Patient Care Area 2003/04



Base: Respondents who provided relevant drug cost information (82)

Table E-3. Percentage of Drug Expenses by Patient Care Area 2003/04

Hospitals (n=)	All (144)	Bed Size			Teaching Status	
		100-200 (38)	201-500 (68)	>500 (38)	Yes (56)	No (88)
Acute Care Inpatient	55.2%	63.8%	53.6%	51.5%	50.9%	58.5%
Non-Acute Care Inpatient	5.7%	4.8%	5.5%	6.5%	3.1%	7.5%
Clinic/Medical Day Unit	25.1%	19.4%	27.0%	26.3%	28.6%	22.5%
Emergency Room	7.6%	12.0%	7.4%	4.7%	4.4%	10.1%
Ambulatory (Take home)	2.4%	0.1%	1.5%	5.6%	5.3%	0.2%
Ambulatory (Retail)	2.7%	-	2.5%	5.1%	6.3%	-

Base: Pharmacy departments providing complete data

References

1. Patented Medicine Prices Review Board, Annual Report 2003, Ottawa, Ontario. Communiqué Page 1
2. Canadian Institute for Health Information, Drug Expenditures in Canada 1985 to 2003. Ottawa, Ontario. Executive Summary Page i