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Background

- The most recent CSHP Hospital Pharmacy in Canada Report represents quantitative data on pharmacy services and management information in relation to hospital size, type, and geographic region for 180 hospitals with greater than 50 acute care beds
- The Report allows pharmacy and hospital administrators to identify current baseline pharmacy services, benchmark, and make plans to enhance pharmacy services
- For over 300 small hospitals in Canada this quantitative data remains unknown; pharmacy and health care leadership remain uninformed

Study design

Design:

Cross-sectional survey

Primary Objective:

To quantitatively assess the current pharmacy distributive, clinical and management services in small hospitals receiving remote pharmacist services

Participants:

Pharmacy departments in Canada that serviced hospitals with less than 50 acute care beds and had services provided by Northwest Telepharmacy Solutions

Tool:

A comprehensive survey addressing similar concepts as the CSHP Hospital Pharmacy in Canada Report 2016/17

Methods:

In April 2019, hospital pharmacy administrators for small hospitals across Canada were invited by email to participate in the survey. An introduction to the survey was sent to prospective participants and included the following:

- A copy of the CSHP Hospital Pharmacy Report 2016/17 for reference
- A PDF/Word electronic version of the survey and a web link to the questionnaire at the Survey Monkey® website
- Instructions on survey completion and support contacts

The surveyor followed up with potential respondents and provided reminders and support for survey completion

Data Analysis:

Frequency and simple percentages were used to describe qualitative variables. Incomplete responses were handled by adjustment of the denominator to the number of completed responses. The quantitative variables were described using measures of central tendency and dispersion which were median and IQR respectively since the parametric assumptions were not satisfied.

Results

Table 1: Small hospital demographics (n=24)

	Health Region						
	All	ON, West LHIN	ON, East LHIN	ON, North LHIN	Quebec	Sask	Ontario
Hospitals (n=)	24	9	6	4	3	2	19
Totals:							
Beds - acute care	481	176	139	50	95	21	365
Beds - non-acute care	1550	1170	67	51	257	5	1288
Median							
Beds - acute care	18.5	22	24.5	13	39	10.5	21
Beds - non-acute care	14	20	14	13	97	2.5	14
Occupancy Rate, %	78	85	83	32	n/a	51	80
Median length of inpatient stay (days)	6	6.1	8.7	5.8	n/a	4.6	6.2

Table 2: Description of pharmacist deployment in the department (n=24)

Practice Model	Number of pharmacies, (%)
Clinical generalist model with limited differentiation of roles	15 (63%)
Comprehensive model, including pharmacists in distributive, generalist, specialist roles	1 (4%)
Mostly distributive pharmacists with limited clinical services	8 (33%)
Separate clinical specialist and distributive roles	0 (0%)



*Mean

**Median

27 Small Hospitals Supported by Telepharmacist Services

Clinical Key Performance Indicator Implementation

Key Performance Indicator (KPI)	All	In 76-100% cases (%)	In 51-75% cases (%)	In 26- 50% cases (%)	In 1- 25% cases (%)	Plan to collect KPI in the next year (%)
Who received documented MedRec at admission	24	14 (58%)	0	0	2 (8%)	8 (33%)
For whom pharmacists participated in inter-professional patient care rounds	20	2 (10%)	3 (15%)	3 (15%)	6 (30%)	6 (30%)
Who received documented MedRec on discharge	20	9 (45%)	1 (1%)	1 (5%)	3 (15%)	6 (30%)
Who received comprehensive direct patient care from a pharmacist	20	1 (5%)	2 (10%)	1 (5%)	9 (45%)	7 (35%)
Number of DTP's resolved by a pharmacist per admission	20	1 (5%)	4 (20%)	2 (10%)	6 (30%)	7 (35%)
Who received education from a pharmacist about their disease(s) and medication(s)	19	0	1 (5%)	1 (5%)	8 (42%)	9 (47%)
For whom pharmacists have developed a pharmaceutical care plan	19	0	2 (11%)	1 (5%)	7 (37%)	9 (47%)
Who received medication education from a pharmacist at discharge	19	0	0	1 (5%)	9 (47%)	9 (47%)

** Base for data collected: Respondents who answered question about outpatient services.

** Base for extent of implementation: facilities with data collection

Results

Table 3: Medication order entry and verification

	n	All, n (%)	RPh only, n (%)	RPh, n (%)	RPh or RPt, n (%)	Verification not required, n (%)
Order entry is performed by prescribing physicians, entering their own orders	24	4 (17%)				
Verification of order entry by prescribing physicians is done by	24	9 (38%)	6 (67%)	0 (0%)	0 (0%)	3 (33%)
Order entry is done by prescribing pharmacists, entering their own orders	20	2 (10%)				
Verification of order entry by prescribing pharmacists is done by	20	7 (35%)	3 (43%)	0 (0%)	0 (0%)	4 (57%)
Order entry performed by pharmacists, entering prescribers orders	24	10 (42%)				
Verification of order entry by pharmacists, entering prescribers' orders	24	17 (71%)	7 (41%)	1 (6%)	0 (0%)	9 (53%)
Order entry performed by pharmacy technicians, entering prescribers' orders	24	17 (71%)				
Verification of order entry by pharmacy technicians, entering prescribers' orders	24	17 (71%)	14 (82%)	3 (18%)	0 (0%)	0 (0%)
Order entry performed by other prescribers (e.g. nurse prescribers)	24	5 (21%)				
Verification of order entry by other prescribers (e.g. nurse prescribers)	24	7 (29%)	7 (29%)	0 (0%)	0 (0%)	3 (13%)

Pharmacist Review of Medication Orders when the Pharmacy is Open or Closed

	All, n (%)
When the pharmacy is closed, does a staff or contract pharmacist review at least 95% of all orders for appropriateness?	17
... before medications are accessed from a night cupboard or similar after hours medication supply mechanism (e.g. DocuMed system)	2 (12%)
... before medications are accessed through ADU's on patient care units	3 (18%)
... before medications are accessed from wardstock	0 (0%)
... before medication order appears on the MAR	4 (24%)
When the pharmacy is open, does a pharmacist review at least 95% of all routine medication orders?	20
... before medications are dispensed from the central or a satellite pharmacy	9 (45%)
... before medications are accessed through ADU's on patient care units	12 (60%)
... before medications are accessed from wardstock	0 (0%)
... before medication order appears on the MAR	8 (40%)

Table 4: Drug distribution systems by bed type

	All, n (%)	Used for acute care beds		Used for non-acute care beds	
		(n=)	%	(n=)	%
(n = all facilities with acute or non-acute care beds)	24				
(n = all facilities with acute care beds)	24				
(n = facilities with non-acute care beds)	18				
Unit dose system - centralized	16 (67%)	16	67%	7	39%
Unit dose system de-centralized from pharmacy satellites	2 (8%)	1	4%	2	11%
Unit dose system de-centralized from automated dispensing cabinets	16 (67%)	15	63%	13	72%
Traditional drug distribution system	3 (13%)	3	13%	0	0
Total wardstock system	8 (33%)	8	33%	2	11%
Controlled/carded dose system	23 (21%)	4	17%	5	28%

Conclusions

Previously not available in Canada, this quantitative data from small hospital pharmacy departments supported by telepharmacist services, provides distributive, clinical and management facts necessary to inform hospital administration and pharmacy leaders of their current state, allow benchmarking, and plan for enhanced pharmacy services paramount to improve patient care.

Disclosure Summary

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