ORIGINAL RESEARCH

Conformity with Optimal Drug-Use Processes: Comparison between the Accreditation Canada Managing Medications Standards and the *Hospital Pharmacy in Canada Report*

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ABSTRACT

Background: A recent symposium on change management highlighted the relatively slow pace of change in the drug-use process. This study was undertaken to determine the degree of concordance between different sources that document levels of conformity with optimal drug-use processes.

Objective: The primary objective was to compare aggregate national results from the Managing Medications Standards (MMS) of Accreditation Canada and results from the biennial Hospital Pharmacy in Canada survey. The secondary objective was to discuss any significant discrepancies between the 2 sources.

Methods: In this retrospective cross-sectional study, attempts were made to pair each Accreditation Canada MMS criterion with specific results from the *Hospital Pharmacy in Canada 2009/2010 Report*. Average conformity per criterion from the 2010 Accreditation Canada on-site surveys was compared with conformity as documented in the *Hospital Pharmacy in Canada 2009/2010 Report*. A discrepancy ratio was calculated for each criterion, with ratios less than 0.80 or greater than 1.20 being considered significant.

Results: Overall, 82 (61%) of 134 MMS criteria could be paired with results from the 2009/2010 Hospital Pharmacy in Canada survey. The average calculated discrepancy ratio (± standard deviation) between the 2 sets of results was 0.62 ± 0.29 (range 0.05 to 1.19). The average discrepancy ratios by domain were as follows: 0.49 for safely administering medications, 0.58 for accurately preparing and dispensing medications, 0.61 for working together to promote medication safety, 0.62 for carefully selecting and procuring medications, 0.69 for monitoring quality and achieving positive results, 0.71 for appropriately ordering medications and transcribing medication orders, and 0.76 for properly labelling and storing medications. For 59 criteria, there was a significant discrepancy between the 2010 MMS on-site surveys and the 2009/2010 Hospital Pharmacy in Canada survey.

Conclusion: Nearly two-thirds of the MMS criteria could be paired with results from the Hospital Pharmacy in Canada survey, but the average discrepancy ratio of 0.62 indicates substantial discrepancies in the data collected by these 2 methods. Further studies are required to explore the reasons for such discrepancies.

RÉSUMÉ

Contexte : Un récent colloque sur la gestion du changement soulignait la lenteur du changement dans le processus de distribution des médicaments. Cette étude a été entreprise afin de déterminer le degré de concordance entre différentes sources qui rassemblent des informations sur les degrés de conformité aux processus optimaux de distribution des médicaments.

Objectif : L'objectif principal était de comparer la somme des résultats nationaux des normes sur la gestion des médicaments (NGM) d'Agrément Canada aux résultats du sondage bisannuel sur les pharmacies hospitalières canadiennes. Le second objectif était d'étudier tout écart important entre les deux sources.

Méthodes : Dans cette étude rétrospective transversale, on a tenté d'apparier chaque critère des NGM d'Agrément Canada à des résultats précis du *Rapport 2009-2010 sur les pharmacies hospitalières canadiennes*. Le degré moyen de conformité calculé pour chaque critère sur l'ensemble des visites d'Agrément Canada en 2010 a été comparé au degré de conformité dont fait état le *Rapport 2009-2010 sur les pharmacies hospitalières canadiennes*. Un indice d'écart a été calculé pour chaque critère. Les indices d'écart inférieurs à 0,8 et supérieurs à 1,2 étaient considérés comme importants.

Résultats : En tout, 82 (61 %) des 134 critères des NGM ont pu être appariés à des résultats du sondage sur les pharmacies hospitalières canadiennes de 2009-2010. L'indice moyen d'écart (± écart-type) entre les deux ensembles de résultats était de 0,62 ± 0,29 (étendue de 0,05 à 1,19). Les indices moyens d'écart par domaine étaient : 0,49 pour l'administration sécuritaire des médicaments, 0,58 pour la préparation et la distribution des médicaments avec précision, 0,61 pour le travail d'équipe visant à promouvoir la sécurité des médicaments, 0,62 pour l'attention portée à la sélection et à l'approvisionnement en médicaments, 0,69 pour la gestion de la qualité et l'atteinte de résultats positifs, 0,71 pour l'émission et la transcription appropriées d'ordonnances de médicaments, et 0,76 pour l'étiquetage et l'entreposage convenables des médicaments. Il y avait un écart important, pour 59 critères des NGM, entre les résultats des visites d'Agrément Canada en 2010 et ceux du sondage sur les pharmacies hospitalières canadiennes de 2009-2010.

Keywords: accreditation, pharmacy practice, comparisons

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Conclusion : Près des deux tiers des critères des NGM ont pu être appariés à des résultats du sondage sur les pharmacies hospitalières canadiennes, mais l'indice moyen d'écart de 0,62 montre qu'il y a d'importants écarts entre les données recueillies par ces deux méthodes. D'autres études sont nécessaires afin d'explorer les raisons de tels écarts.

Mots clés : agrément, pratique de la pharmacie, comparaisons

INTRODUCTION

Numerous Canadian health care stakeholders recognize the importance of an optimal drug-use process within hospitals to ensure safe medication use.[1-5] Before 2008, accreditation standards related to managing medications were integrated into various Accreditation Canada clinical standards. In 2008, Accreditation Canada released the Managing Medications Standards (MMS; renamed the Medication Management Standards in 2013) as part of its Qmentum program to "promote a collaborative approach to prevent and reduce medication errors and near misses by addressing all aspects of the medication management process, from prescription, selection, preparation and dispensing to administration of the medication and ongoing monitoring of clients."[4]

Every 2 years in Canada, an independent editorial committee conducts a web survey of directors of hospital pharmacies with at least 50 acute care beds. Known as the Hospital Pharmacy in Canada (HPC) survey, this analysis has been conducted since 1985, with the results published online since 1997/1998.[6] A recent symposium on change management organized by this editorial committee highlighted the relatively slow pace of change in the drug-use process, despite the availability of evidence.[7]

It was hypothesized that there exists a discrepancy in levels of conformity with drug-use processes as documented by different sources. Given the availability of a substantial dataset about the drug-use process and involvement in the Accreditation Canada Medication Management Standards Working Group to advise on updating the MMS standards, some of the authors proposed to Accreditation Canada that results of its national accreditation surveys be compared with data in the HPC report.

METHODS

In this retrospective cross-sectional study, the main objective was to compare the Accreditation Canada MMS compliance ratings with results of the HPC survey. The secondary objective was to explain any significant discrepancies between these sources.

The compliance ratings (level of conformity) for all criteria of the MMS were obtained from Accreditation Canada for on-site visits conducted in 2010 by peer surveyors. Accreditation Canada surveyors are experienced senior health care professionals from Canadian health care organizations that are accredited by Accreditation Canada. During the on-site survey, the surveyors observe and evaluate the extent to which the standards are being met and offer advice and guidance on areas for improvement. The 2010 compliance ratings covered organizations from various sectors across Canada, including acute care, health systems (regional and district health authorities), long-term care, and mental health. The results were made available as average levels of conformity per criterion.

The Accreditation Canada on-site survey process includes all stakeholders involved in medication management within a health care organization (e.g., pharmacists, nurses, physicians, patients). Whenever possible, each MMS criterion was paired (by a pharmacy resident [I.B.]) with a specific result from the HPC 2009/2010 report.[8] In some cases, if the theme or topic targeted by the MMS criterion had been covered only in the previous report (for 2007/2008),[9] those results were also extracted. The response rates on the HPC surveys were 72% (160/222) for 2009/2010 and 74% (166/223) for 2007/2008.

The proposed pairing between the 2 sources was validated by a panel of 5 people (4 of whom are authors on this paper): a pharmacy resident (I.B.), a research assistant involved in data management for the HPC, a director of pharmacy involved on the HPC editorial board and as a respondent to the survey (J.F.B.), a pharmacist involved as a surveyor for Accreditation Canada (R.V.), and a pharmacist from the authors' research team (D.L.).

Each panel member scored the similarity of the proposed pairings between the Accreditation Canada MMS criteria and the HPC results, using a scoring method chosen by consensus

among the panel members. The following 3-point scale was considered sufficient to quickly evaluate the similarity of the proposed pairings: 1 = no similarity (HPC result cannot be paired with the proposed MMS criterion), 2 = some similarity (HPC result should not be paired with the proposed MMS criterion), 3 = sufficient similarity (HPC result can be paired with the proposed MMS criterion). We calculated the average similarity score of the panel members for each criterion. Criteria with an average similarity score higher than 2.6 (i.e., at least 3 of the 5 panel members assigned a score of 3) were paired for analysis of discrepancy.

Aggregate compliance ratings were provided by Accreditation Canada for each MMS criterion. In the case of the HPC report, when multiple results for a similar topic were paired with one MMS criterion, the average of those multiple results was calculated and used.

A discrepancy ratio between the results of the 2009/2010 HPC survey and the 2010 MMS evaluation was then calculated by division (e.g., 50% conformity on HPC survey ÷ 80% conformity on MMS evaluation = 0.63). A discrepancy ratio for a given criterion was considered significant if the value was either below 0.80 or above 1.20. For example, a ratio of 0.50 indicates that the activity was perceived as being implemented twice as often during the on-site Accreditation Canada visit as by self-report in the HPC survey. The discrepancy ratios were also averaged for each of the 7 domains of the MMS. Only descriptive statistics with proportions are reported.

RESULTS

A total of 82 (61%) of the 134 MMS criteria could be paired with results from the 2009/2010 HPC survey (Table 1). The average calculated discrepancy ratio (± standard deviation) was 0.62 ± 0.29 (range 0.05 to 1.19). Significant discrepancies (i.e., less than 0.80 or more than 1.20) were noted for 59 criteria. Table 2 shows 3 examples of how the MMS criteria were paired with results from the 2009/2010 HPC report.

DISCUSSION

To the authors' knowledge, this is the first descriptive study comparing the similarity between 2 different sources of information that aim to evaluate conformity with specific aspects of the drug-use process. Among the 59 paired criteria for which the discrepancy was significant, the degree of conformity with the specified drug-use process was consistently lower for self-reported (HPC) data than for surveyors' observations (MMS data). These discrepancies appeared to be greatest for the domain of "safely administering medications to clients".

In some cases, the gap was substantial, with values as low as 0.05 (see "Discrepancy Ratio" column in Table 1). Criteria with large differences in conformity between the 2 sources included medication histories, utilization of computerized checks for drug interactions, and existence of processes to update drug lists.

A number of factors may affect the level of conformity with criteria for drug-use processes, such as the clarity and assessability of the criteria, the observational methods used and any potential bias, and the period of observation. In a previous study, which used an earlier version of the MMS standards, 86% of the MMS criteria were deemed "clear" and 64% of the criteria were deemed "assessable".[10]

The number of standards applicable to the drug-use process has been increasing throughout the country over the past decade. Such development of new criteria can create a "moving target" for both decision-makers and front-line pharmacists. The Accreditation Canada standards are intended to be complementary to other sources of information about medication management, and this complementarity was a significant focus of the Medication Management Standards Working Group. However, there was uncertainty about what other sources should be prioritized, including the Canadian Society of Hospital Pharmacists' CSHP 2015 vision and its 36 associated goals, the Institute for Safe Medication Practices Canada (ISMP Canada) self-assessment tool, provincial pharmacy regulatory audits, or academic audits related to accreditation of undergraduate training at universities. Although we recognize the relevant efforts of all these stakeholders to mobilize hospitals and their staff to adopt an optimal drug-use process, thereby increasing patient safety, there should be limited overlap between these sources to help decision-makers and pharmacists target critical gaps in medication management.

In 2011, Accreditation Canada established a Standards Working Group to revise the MMS and relevant Required Organizational Practices (essential, evidence-based practices that mitigate risk and contribute to improving the quality and safety of health care services). The group included representation from client organizations, surveyors, and key associations such as CSHP and ISMP Canada to promote and support alignment with standards for medication management. The current study was undertaken in the context of this revision, and our raw results were provided to the group, as background evidence. The revised MMS standards were circulated for national consultation in 2012, to obtain broader feedback on the proposed revisions from stakeholders, client organizations, and surveyors. In particular, respondents were asked to comment on the importance, clarity, and assessability of each criterion. The revised standards were released in January 2013 and have been used during on-site surveys since January 2014.

Limitations

This study had limitations. It was not possible to evaluate whether the same health care organizations were surveyed by

Table 1. Profile of Unpaired and Paired Criteria for the Accreditation Canada's Managing Medications Standards (2010)* and Results of the 2009/2010 Hospital Pharmacy in Canada Survey† (part 1 of 3)

Domain	Unpaired criteria		Paired criteria					
	No.	Item	No.	Item	Short description	HPC/MMS‡	Discrepancy ratio	Mean ratio§
Working together to promote medication safety	4	1.1 1.3 1.6 1.9	5	1.2	Drug use management	49/96	0.51	0.61
				1.4	Patient information available on electronic tools	93/98	0.95	
				1.5	Access to information about high-alert drugs	33/95	0.35	
				1.7	Training programs on drug-use process	63/94	0.67	
				1.8	Training on adverse drug events	48/88	0.55	
Carefully selecting and procuring medications	6	2.6 3.1 3.7 3.9 3.10 3.11	13	2.1	Criteria for including or excluding drugs from the formulary	30/89	0.34	0.62
				2.2	Drug-use optimization	84/95	0.88	
				2.3	Consideration of drug benefits and risks	31/95	0.33	
				2.4	Inclusion or exclusion of drugs from the formulary	92/92	1.00	
				2.5	List of high-alert drugs	65/92	0.71	
				2.7	Training on new use of existing drugs	48/86	0.56	
				2.8	Process to regularly examine and update drug list	14/85	0.16	
				3.2	Process to obtain drugs not covered by the formulary	50/95	0.53	
				3.3	Examination of packages and labels to avoid confusion	33/95	0.35	
				3.4	ROP: standardization and limitation of drug concentrations available	68/94	0.72	
				3.5	ROP: limitation of heparin product availability and withdrawal of high-dose sizes	82/90	0.91	
				3.6	ROP: evaluation and limitation of narcotic availability and withdrawal of high-dose sizes	90/97	0.93	
				3.8	Policies and procedures to manage use of experimental drugs	52/85	0.61	
Properly labelling and storing medications	18	4.1 4.2 4.3 4.4 5.2 5.3 6.1 6.2 6.3 6.4 6.5 6.6 6.7 7.5 8.1 8.2 8.3 8.4	7	5.1	Drug labels distinct, using clear abbreviations and containing essential information	70/99	0.71	0.76
				7.1	Selection of drugs to be stored in patient care units	84/96	0.88	
				7.2	ROP: withdrawal of concentrated electrolytes from patient care units	97/92	1.05	
				7.3	Drugs stored in ready-to-use containers in service areas	50/95	0.53	
				7.4	Drugs to be administered in service areas stored in unit-dose package	85/79	1.08	
				7.6	Drugs and emergency supplies are stored and kept safely in patient service areas	64/96	0.67	
				7.7	Policies and procedures for drugs brought by patients and families	34/86	0.40	
Appropriately ordering medications and transcribing medication orders	4	10.8 10.9 10.10 11.7	19	9.1	Medication history	42/99	0.42	0.71
				9.2	Patient medication profile accessible to health care professionals	53/99	0.54	
				9.3	Patient medication profile accessible to health care professionals including essential information	34/98	0.35	

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Table 1. Profile of Unpaired and Paired Criteria for the Accreditation Canada's Managing Medications Standards (2010)* and Results of the 2009/2010 Hospital Pharmacy in Canada Survey† (part 2 of 3)

Domain	Unpaired criteria		Paired criteria					
	No.	Item	No.	Item	Short description	HPC/ MMS‡	Discrep-ancy ratio	Mean ratio§
				10.1	Entry of complete orders, renewal, and reassessment of drugs at admission or transfer to another unit	31/94	0.33	
				10.2	ROP: prohibited dose abbreviations, symbols, and designation	87/73	1.19	
				10.3	CPOE system with established protocols is used for prescribing	63/100	0.63	
				10.4	Preprinted forms are used for prescribing	100/94	1.06	
				10.5	Criteria for presentation of orders	92/95	0.97	
				10.6	Medication profile updated with information on allergies	42/94	0.45	
				10.7	Policy or procedure to maintain clinically known adverse drug reactions in client's medication profile	50/92	0.54	
				10.11	Policy for acceptability of orders	61/90	0.68	
				10.12	Quiet areas for writing and transcribing drug orders in electronic system	89/93	0.96	
				10.13	Policies and procedures for verification before delivery	84/80	1.05	
				11.1	Orders reviewed before delivery	38/93	0.41	
				11.2	Verification of allergy possibilities reported by electronic system before delivery	50/98	0.51	
				11.3	Verification of adverse event possibilities reported by electronic system before delivery	100/98	1.02	
				11.4	Low and high doses of high-alert drugs	49/93	0.53	
				11.5	Dosage policy concerning weight in pediatric patients	75/84	0.89	
				11.6	Dosage policy concerning chemotherapy prescriptions	75/84	0.89	
Accurately preparing and dispensing medications	8	12.1 12.7 12.8 13.2 13.4 14.3 15.2 15.4	13	12.2	Policies and procedures warranting safe drugs preparation	87/97	0.90	0.58
				12.3	Mixture of sterile drugs and IV solutions in the pharmacy	54/85	0.64	
				12.4	Preparation of IV solutions in an isolated and equipped area	54/83	0.65	
				12.5	Cytotoxic products evacuated with biohazard hood	51/93	0.55	
				12.6	Avoidance of direct physical contact with unpackaged oral solid products	82/94	0.87	
				13.1	Policies and procedures to warranty safe delivery	52/94	0.55	
				13.3	Unit-dose drugs delivered by pharmacy department	76/78	0.97	
				13.5	Quality control procedures to avoid delivery errors	52/93	0.56	
				14.1	After-hours access to selected drugs in case of emergency	9/96	0.09	
				14.2	After-hours review of delivered drugs	8/98	0.08	
				15.1	Drug delivery in patient service areas	41/97	0.42	
				15.3	Health protection of professionals carrying, administering, and disposing of cytotoxic drugs	81/98	0.83	
				15.5	Drug-return process	45/99	0.45	

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Table 1. Profile of Unpaired and Paired Criteria for the Accreditation Canada's Managing Medications Standards (2010)* and Results of the 2009/2010 Hospital Pharmacy in Canada Survey† (part 3 of 3)

Domain	Unpaired criteria		Paired criteria					
	No.	Item	No.	Item	Short description	HPC/ MMS‡	Discrep-ancy ratio	Mean ratio§
Safely administering medications to clients	7	17.1 17.3 18.9 19.1 19.2 19.4 20.1	18	16.1	Education on safely administering medications to patients	5/92	0.05	0.49
				16.2	Education on pharmacotherapy and possible effects	5/93	0.05	
				16.3	Answers to questions about pharmacotherapy	5/99	0.05	
				16.4	Understanding about pharmacotherapy	5/98	0.05	
				16.5	Reporting of verbal or written information in patient record	6/87	0.07	
				17.2	Education to patients on self-administration	53/92	0.58	
				18.1	Qualifications of health care professionals for administering drugs	63/96	0.66	
				18.2	Verification of drugs being administered	61/98	0.62	
				18.3	ROP: 2 patient identifiers before administration	91/86	1.06	
				18.4	Consultation of patient record each time a drug is administered	71/98	0.72	
				18.5	Double-check before administering high-alert drugs	54/86	0.63	
				18.6	Administration hours	82/97	0.85	
				18.7	Reporting drug administration in patient record	37/98	0.38	
				18.8	Health professional consultation about drug adverse events	37/100	0.37	
				19.3	Infusion pump supply	59/95	0.62	
				19.5	Avoiding multidose vials in patients service areas	76/98	0.78	
				20.2	Supervision of adverse drug events	53/100	0.53	
				20.3	Alerting health care professionals about adverse drug events	72/94	0.77	
Monitoring quality and achieving positive results	5	21.1 21.2 22.1 22.2 22.3	7	21.3	Quality control of procedures related to adverse drug events	48/88	0.55	0.69
				21.4	Process to report an adverse drug event	50/92	0.54	
				21.5	Interdisciplinary group analyzing and examining adverse drug events	50/91	0.55	
				21.6	Process related to examination of adverse drug events	81/92	0.88	
				21.7	Education about adverse drug events to clients	5/96	0.05	
				21.8	Improving adverse drug events reporting	65/94	0.69	
				21.9	Education about adverse drug events to staff	81/89	0.91	
				22.4	Improving outcomes	58/90	0.64	
Overall no. or mean	52		82				0.62±0.29	0.63±0.10

CPOE = computerized physician order entry, HPC = Hospital Pharmacy in Canada Survey, MMS = Accreditation Canada's Managing Medications Standards, ROP = Required Organizational Practice.

*MMS data reflect a summary of the information from Accreditation Canada.

†Proportion of MMS criteria unpaired with survey results: 52/134 (39%). Proportion of MMS criteria paired with HPC results: 82/134 (61%). Proportion of MMS criteria paired with HPC results with significant discrepancy: 59/82 (72%).

‡Data refer to percentage of institutions with the specified criterion, as reported in each source.

§Mean value calculated for each domain.

Table 2. Three Examples of Pairing of Criteria from the Accreditation Canada's Managing Medications Standards (2010) and Results of the 2009/2010 Hospital Pharmacy in Canada Survey

Criterion	MMS: % of hospitals	HPC Survey*	Discrepancy Ratio (HPC/MMS)	Mean Score of Panel	Themes
11.1: A pharmacist reviews prescription and medication orders before dispensing	93% (*n* = 95)	During the hours that the pharmacy is open, a pharmacist reviews at least 95% of mediation orders before: • Medications are dispensed from the central or satellite pharmacy: 94% (*n* = 158) • Medications are accessed from automated cabinets on the patient care units: 62% (*n* = 84) • Medications are accessed from ward stock: 48% (*n* = 155) • Medication orders appear on the MAR: 65% (*n* = 156) During the hours that the pharmacy is closed, a pharmacist reviews at least 95% of mediation orders before: • Medications are accessed from a night cupboard or similar after-hours medication supply mechanism: 8% (*n* = 153) • Medications are accessed from automated cabinets on the patient care units: 8% (*n* = 80) • Medications are accessed from ward stock: 7% (*n* = 151) • Medication orders appear on the MAR: 14% (*n* = 150) Overall average: 38% (mean *n* = 135)	38%/93% = 0.41	3.0	Drug distribution system—pharmacist review of medication orders when the pharmacy is open or closed
14.2: A pharmacist or other qualified service provider verifies, as soon as possible, that the right medications were dispensed after hours or from controlled-access cabinets	98% (*n* = 106)	During the hours that the pharmacy is closed, a pharmacist reviews at least 95% of medication orders before: • Medications are accessed from a night cupboard or similar after-hours medication supply mechanism: 8% (*n* = 153) • Medications are accessed from automated cabinets on patient care units: 8% (*n* = 80) Overall average: 8% (mean *n* = 117)	8%/98% = 0.08	2.8	Drug distribution system—pharmacist review of medication orders when the pharmacy is open or closed
16.1: At the start of service, service providers educate clients and families about how to take an active role in ensuring medication prescribed for them is administered safely	92% (*n* = 127)	Processes in place to facilitate teaching patients about their medications: • Give the patient a copy of the MAR or a similar document: 3% (*n* = 157) • Allow viewing of the MAR by the patient or patient's family: 9% (*n* = 156) • Provide a pharmacist's consultation at the time of admission: 3% (*n* = 158) • Provide a pharmacist's consultation during the hospital stay: 6% (*n* = 158) • Provide a pharmacist's consultation at the time of discharge: 3% (*n* = 158) Overall average: 5% (mean *n* = 157)	5%/92% = 0.05	2.6	Medication safety—medication incident reduction strategies / patient education program

MMS = Accreditation Canada's Managing Medications Standards, HPC = Hospital Pharmacy in Canada, MAR = medication administration record.
*All data are from the 2009/2010 report. The *n* value for each question indicates the number of respondents.

the 2 methods. The HPC criteria address medication management topics at a more detailed level than do the MMS. The intent of the MMS is to provide a framework for client organizations to establish a medication management system that includes developing processes based on best practices and applicable regulations. The standards include references to key resources and guidelines such as those produced by CSHP and ISMP Canada. The 2 sources of information have different sets of themes, terms, definitions, and time periods. The validity of the pairing in the current study is therefore limited by the heterogeneity of the data. Data were collected differently for the 2 sources: the on-site visit for accreditation involves multiple direct care providers, staff members, and patients, whereas the HPC survey relies solely on a web-based self-assessment questionnaire completed by directors of pharmacy. A smaller-scale comparison involving a selected group of hospital pharmacies with data from both an on-site visit and the HPC survey could help to minimize confounding factors inherent to use of an "average score"; this approach was not used for the current study, to respect respondent confidentiality, but could be considered for future research. The pairing of MMS and HPC results relied on a limited panel of non-independent experts. A broader panel working independently might generate a different number of paired criteria, which could affect the average discrepancy ratio. An average score of 2.6 or greater (based on the panel's ratings) was used to define the criteria to be evaluated using the discrepancy ratio. Results from the MMS and the HPC report were chosen for this study because of availability of these data; a comparison of conformity using other standards might yield different results.

CONCLUSION

A total of 61% of the 2010 Accreditation Canada MMS criteria could be paired with results from the 2009/2010 HPC survey. The average discrepancy ratio between the 2 sources was 0.62 ± 0.29. The average discrepancy ratio by domain was 0.49 for safely administering medications to clients, 0.58 for accurately preparing and dispensing medications, 0.61 for working together to promote medication safety, 0.62 for carefully selecting and procuring medications, 0.69 for monitoring quality and achieving positive results, 0.71 for appropriately ordering medications and transcribing medication orders, and 0.76 for properly labelling and storing medications. Further studies are required to explore the reasons for these discrepancies.

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