Results Workbook

2009 ISMP Medication Safety Self Assessment® *for* Automated Dispensing Cabinets

Institute for Safe Medication Practices
a nonprofit organization

Dear Healthcare Provider:

The Institute for Safe Medication Practices (ISMP) is pleased to provide you with the findings from the 2009 ISMP Medication Safety Self Assessment® for Automated Dispensing Cabinets and a quality improvement workbook to assist you in your efforts to prevent medication errors. Your hospital has demonstrated a proactive and exemplary commitment to medication safety by completing the self assessment and submitting your findings to ISMP. Now, as promised, we have compiled comparative data (collected from responses submitted between June 2009 and February 2010) to help you prioritize your ongoing medication error reduction efforts.

The workbook includes an aggregate comparative report of the core processes for the safe use of automated dispensing cabinets (ADCs). The twelve core processes were developed during a national forum of practitioners from around the country with expertise in the safe use of ADCs. Directions for interpreting the report and worksheet are included to help you use the data to identify opportunities for improvement. We have also included some strategies for utilizing this data within your facility as you develop care improvement initiatives.

We encourage you to share the workbook with the team you assembled to complete the self assessment, or a similar committee, and use the data to compare your organization to other demographically similar hospitals. However, please do not rely upon your standing compared to others to decide whether you need to improve your processes. All scores are relative and cannot be used to predict which hospitals are safe. Thus, if your performance is better than others, do not be lulled into complacency. Instead, use the comparative data to stimulate your ongoing efforts to fully implement all the medication error reduction strategies suggested in the self assessment.

Again, we thank you for participating in the 2009 ISMP Medication Safety Self Assessment® for Automated Dispensing Cabinets and commend you for submitting your findings to us. We are well aware of the challenges you faced in both completing the assessment and sharing your findings. The ultimate goal of the 2009 ISMP Medication Safety Self Assessment® for Automated Dispensing Cabinets has been to heighten awareness of the processes used when employing ADCs in your medication distribution model. Without your help we would not be able to achieve these goals. In the end, we firmly believe that your collective willingness to share your assessment results will continue to make our healthcare systems safer and more efficient.

Sincerely,

Michael R. Cohen, RPh, MS, ScD, FASHP
President, Institute for Safe Medication Practices

Susan Paparella

Susan Paparella, RN, MSN
Vice President, Institute for Safe Medication Practices

Definitions and Scoring

Definitions
(for purposes of the 2009 ISMP Medication Safety Self Assessment® for Automated Dispensing Cabinets tool and findings)

Maximum score
The highest numerical score assigned to each core process.

Mean score
The average numerical score achieved by respondents for each core process. This score is directly comparable with the scores that appear on your computer-generated survey results form, which was created when you submitted data to ISMP.

Percent (%) of maximum score
The mean score reported as a percentage of the maximum numerical score. This score is directly comparable with the percentages that appear on your computer-generated survey results form, which was created when you submitted data to ISMP.

Scoring
(for purposes of the 2009 ISMP Medication Safety Self Assessment® for Automated Dispensing Cabinets tool and findings)

Maximum score
Calculated by multiplying the number of self-assessment items in each core process by the maximum numerical score for each self-assessment item. The maximum numerical score for each self-assessment item is 5, which corresponds to a score of E (i.e., A = 1; B = 2; C = 3; D = 4; E = 5).

Mean score
Calculated by totaling the mean scores for all of the self-assessment items within the core process.

Percent (%) of maximum score
Calculated by dividing the mean score for each core process by the maximum score and multiplying by 100.

Worksheet for the Safe Use of Automated Dispensing Cabinets

The 2009 ISMP Medication Safety Self Assessment® for Automated Dispensing Cabinets is divided into 12 core processes that most significantly influence the safe use of automated dispensing cabinets (ADCs). For reference, the 12 core processes are listed on page 8.

Table 1 (page 5) provides the **maximum score**, the **mean score** for all respondents, and the mean **percent (%) of the maximum score**, for each of the 12 core processes. Table 1 also provides the mean total assessment score for all respondents. The aggregate results are further stratified by hospital bed size and setting to allow better comparison with demographically similar organizations.

Using the Core Processes Worksheet (page 6)

- **Step 1:** Using your computer-generated survey results form, which was created when you submitted data to ISMP, transfer **your total score** and **your percent (%) of the maximum score** for each of the 12 core processes onto the worksheet.
- **Step 2:** Enter your facility's bed size and setting in the spaces provided on the worksheet.
- **Step 3:** For each of the 12 core processes, transfer the **mean respondent scores** and **percent (%) of the maximum respondent scores** that correspond to your facility's bed size and setting from Table 1 (page 5).
- **Step 4:** Compare your scores with the aggregate scores of demographically similar organizations.
- **Step 5:** On the bottom of page 6, list the core processes with the greatest opportunities for improvement in your hospital. These may include core processes with the lowest scores (as a percent of the maximum scores) as well as those where your score was low in comparison to other demographically similar hospitals.

Table 1. Aggregate Results Stratified by Bed Size and Setting

***Please note: Mean scores listed below are rounded numbers. The % of maximum score was calculated based on the actual mean score (not the rounded mean score).**

	Core Processes	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	Total
	Maximum Score	55	60	15	95	35	15	65	30	30	20	5	20	445
Total (380 hospitals)	***Mean score**	42	50	11	74	27	12	51	21	23	16	4	16	347
	% of maximum score	76	83	76	78	78	82	78	71	75	79	73	82	78
Bed Size														
Fewer than 100 beds (127 hospitals)	*Mean score	42	48	11	71	27	12	51	21	22	16	4	16	341
	% of maximum score	76	80	74	75	77	81	79	71	73	78	77	81	77
100 to 299 beds (125 hospitals)	*Mean score	43	51	12	77	28	13	51	22	24	16	3	16	355
	% of maximum score	78	85	78	81	80	84	78	72	79	82	69	82	80
300 to 499 beds (78 hospitals)	*Mean score	42	51	12	76	27	12	50	21	23	16	4	16	350
	% of maximum score	76	85	78	80	78	83	77	71	76	78	73	82	79
500 beds and over (50 hospitals)	*Mean score	40	49	11	72	26	12	50	21	21	15	4	16	338
	% of maximum score	73	81	74	76	74	81	77	69	71	76	71	80	76
Setting														
Rural (162 hospitals)	*Mean score	42	50	11	75	28	12	52	22	22	16	4	16	351
	% of maximum score	77	83	76	79	79	83	80	74	75	80	77	82	79
Urban (218 hospitals)	*Mean score	42	50	11	74	27	12	50	21	23	16	3	16	345
	% of maximum score	76	83	76	78	77	82	77	69	76	78	69	81	77

Core Processes Worksheet

Core Processes	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	Total
Maximum Score	55	60	15	95	35	15	65	30	30	20	5	20	445
Individual Hospital Scores													
Enter your total score for each core process													
Enter your % of maximum score													
Aggregate Respondent Scores													
Your Bed Size: _____													
Enter applicable mean respondent scores													
Enter applicable % of maximum respondent scores													
Your Setting: _____													
Enter applicable mean respondent scores													
Enter applicable % of maximum respondent scores													

Core Processes with the Greatest Opportunities for Improvement

Developing an Action Plan

1. Identify areas of weakness by reviewing the core processes that you listed on the bottom of page 6, and the individual self-assessment items from your computer-generated survey results form with a score of either A or B.

2. Prioritize the above identified opportunities for improvement based on their impact on safety and ease of implementation. Start with items that will most significantly improve safety, and those that you can change without capital outlay or that do not require any major software changes from your vendor.

3. Continue to work toward fully implementing individual self-assessment items with a score of either C or D throughout your entire organization.

4. Plan to perform the self assessment at a later date to monitor your progress and improvement in medication safety related to the use of ADCs.

Notes

Core Processes

#1	Provide Ideal Environmental Conditions for the Use of ADCs
#2	Ensure ADC System Security
#3	Use Pharmacy-Profiled ADCs
#4	Identify Information that Should Appear on the ADC Screen
#5	Select and Maintain Proper ADC Inventory
#6	Select Appropriate ADC Configuration
#7	Define Safe ADC Restocking Processes
#8	Develop Procedures to Ensure the Accurate Withdrawal of Medications from the ADC
#9	Establish Criteria for ADC System Overrides
#10	Standardize Processes for Transporting Medications from the ADC to the Patient's Bedside
#11	Eliminate the Process for Returning Medications Directly to Their Original ADC Location
#12	Provide Staff Education and Competency Validation

About the Institute for Safe Medication Practices (ISMP)

The Institute for Safe Medication Practices (ISMP) is the nation's only nonprofit, charitable organization devoted entirely to medication error prevention and safe medication use.

ISMP is known and respected worldwide as the leading resource for independent and effective medication safety recommendations. The Institute's strategies are based on up-to-the-minute information gained from analysis of reports to the national, voluntary ISMP Medication Errors Reporting Program, onsite visits to individual healthcare organizations, and advice from outside advisory experts.

ISMP's highly effective initiatives, which are built upon system-based solutions, include: four medication safety newsletters for healthcare professionals and consumers that reach more than three million total readers; educational programs, including conferences on medication use issues; confidential consultation services to healthcare systems to proactively evaluate medication systems or analyze medication-related sentinel events; advocacy for the adoption of safe medication standards by accrediting bodies, manufacturers, policy makers, and regulatory agencies; independent research on evidence-based safe medication practices; and a consumer website (www.consumermedsafety.org) that provides patients with access to free medication safety information and alerts.

ISMP works with healthcare practitioners and institutions, regulatory and accrediting agencies, consumers, professional organizations, the pharmaceutical industry, and others to accomplish its mission. It is a federally certified patient safety organization (PSO), providing legal protection and confidentiality for patient safety data and error reports it receives.

As an independent nonprofit, ISMP receives no advertising revenue and depends entirely on charitable donations, educational grants, newsletter subscriptions, and volunteer efforts to pursue its lifesaving work. For more information or to make a donation that will make a difference to patient safety, visit ISMP online at: www.ismp.org.

ISMP is not a standards-setting organization. As such, the self-assessment items in the 2009 ISMP Medication Safety Self Assessment® for Automated Dispensing Cabinets are not purported to represent a minimum standard of practice and should not be considered as such. The immediate implementation of all self-assessment items is an ambitious goal. Ideally, this self assessment is meant to support organizations (facilities and vendors) in making resource decisions and with strategic planning around the use of automated dispensing cabinets (ADCs), as well as to facilitate ongoing safety enhancements in existing ADC processes/products/applications.

NOTE: *The 2009 ISMP Medication Safety Self Assessment® for Automated Dispensing Cabinets and its components, aggregate data, and analysis and publication of the data are copyrighted by ISMP and may not be used or published in whole or in part for any other purposes or by any other entity except for self assessment of automated dispensing cabinet use as part of ongoing quality improvement activities.*