Medication Safety Self-Assessment (MSSA) for Long Term Care

What the Results Tell Us

SHRTN Oct 2012
MSSA LTC ON Results

Learning Objectives:

• how completing the MSSA assists homes to meet the Ontario Long Term Care Act Regulations and Accreditation Canada standards
• how to utilize the results of your participation in completing the MSSA LTC
• how your results might compare to the provincial average aggregate of all Ontario participates

Goal:

To highlight the strengths, vulnerabilities and changes since 2009 in LTC medication systems as analyzed from the data submitted by Ontario homes
MSSA Program

- **MSSA Purpose:**
  
  To identify potential medication system risks in a facility as part of a quality improvement program

- **Process:**
  
  - Each home’s multidisciplinary team selected responses to each item
  
  - Home results submitted using site-specific password into secure, confidential database
  
  - Facility-specific results reports assist in identifying own medication system QI opportunities
Benefits to Participants

• Increases **awareness** of team members of elements of a safe medication system and system-based improvement strategies

• Aligns with **Ontario’s Long-term Care Act Regulation #141** which requires an annual evaluation of the medication management system

• Aligns with **Accreditation Canada’s Medication Management Standard 27.2** “The interdisciplinary committee completes an annual comprehensive evaluation of its medication management system.”

**Guidelines:** ...Hospital Pharmacy Residency Board accreditation and **ISMP Canada’s Medication Safety Self-Assessment.**

• Contributes to a **quality improvement program** when completed regularly by comparing facility results from each participation and identifying the changes in results over time
Participation

- Total of 739 assessments have been completed by 419 Ontario LTC homes (many homes have completed the MSSA more than once)
- 239 assessments completed in last 18 months
- Reporting on 3 years of data from April 1, 2009 to Sept 30, 2012; 407 assessments have been completed by 278 facilities
- Site remains open though now accepting data for Version II only
## Homes Submitting Data by LHIN Region

<table>
<thead>
<tr>
<th>LHIN Region</th>
<th># Participating Homes</th>
<th>Total Av. Aggregate Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erie St. Clair</td>
<td>19</td>
<td>82%</td>
</tr>
<tr>
<td>South West</td>
<td>58</td>
<td>85%</td>
</tr>
<tr>
<td>Waterloo Wellington</td>
<td>22</td>
<td>82%</td>
</tr>
<tr>
<td>Hamilton Niagara Haldimand Brant</td>
<td>50</td>
<td>84%</td>
</tr>
<tr>
<td>Central West</td>
<td>20</td>
<td>82%</td>
</tr>
<tr>
<td>Mississauga Halton</td>
<td>18</td>
<td>84%</td>
</tr>
<tr>
<td>Toronto Central</td>
<td>24</td>
<td>86%</td>
</tr>
<tr>
<td>Central</td>
<td>28</td>
<td>84%</td>
</tr>
<tr>
<td>Central East</td>
<td>46</td>
<td>85%</td>
</tr>
<tr>
<td>South East</td>
<td>15</td>
<td>84%</td>
</tr>
<tr>
<td>Champlain</td>
<td>19</td>
<td>82%</td>
</tr>
<tr>
<td>North Simcoe Muskoka</td>
<td>35</td>
<td>81%</td>
</tr>
<tr>
<td>North East</td>
<td>34</td>
<td>81%</td>
</tr>
<tr>
<td>North West</td>
<td>5</td>
<td>83%</td>
</tr>
</tbody>
</table>

* Not all homes report LHIN information
Ontario’s Results: Key Elements

Medication Safety Self-Assessment® for Long Term Care
Key Elements in Ontario
From 2009-04-01, To 2013-03-31

Number of Assessments;
Scores reflect % of maximum achievable

Key 5 Drug Standardization, Storage & Distribution (90% 2009)
Key 1 Resident Information (67% 2009)
Keys 8 Staff Competence & 10 Quality/Risk ↑10% since 2009
Overall Score ↑6%
Scores by Item: Resident Information

#16 lab service has critical value notification system; 96% 2009

#9 bar coding for resident identity during administration

#13 current drug history obtained on admission; score in 2009 report >10%; 81%

#14 drug history from transferring site on admission; 66%

#2 process for routine adjustment of dose in residents with renal or liver impairment; 76%
Scores by Item: Drug Information

Medication Safety Self-Assessment® for Long Term Care
Key Element 2 Question Scores in Ontario
From 2009-04-01, To 2013-03-31

#28 pharmacy computer system maintains past & current med profiles; 98%
#22 CPOE performs dose range checks for prescriber; 17%
#19 protocols for high alert drugs accessible to caregivers and used; 71%
#20 drug information tools formally approved before use in home; 79%
#24 pharmacy system performs maximum dose checks for high alert drugs; 41%
Scores by Item: Communication of Drug Orders & Other Drug Information

Medication Safety Self-Assessment® for Long Term Care
Key Element 3 Question Scores in Ontario
From 2009-04-01, To 2013-03-31

#36 telephone orders used only when prescriber off site & has sufficient resident information; 97%
#37 telephone/verbal orders documented in resident chart, countersigned by prescriber; 93%
#41 automated med system (CPOE, computerized/eMARs, bar coding); 32%
#33 dangerous abbreviations list used; 52%
Scores by Item: Drug Labelling, Packaging and Nomenclature

#45 Pharmacy systems provide clear labels free of dangerous abbreviations…; 98%
#49 Machine readable coding used to verify drug as part of dispensing & administration; 24%
#43 Medication safety literature regularly reviewed by Committee & action taken to prevent error; 67%
#51 & #52 IV labels: scores decreased

Medication Safety Self-Assessment® for Long Term Care
Key Element 4 Question Scores in Ontario
From 2009-04-01, To 2013-03-31

Scores as % Max. Weighted Scores

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Presented with support from Ontario Ministry of Health and Long-Term Care
Scores by Item: Drug Standardization, Storage, & Distribution

Medication Safety Self-Assessment® for Long Term Care
Key Element 5 Question Scores in Ontario
From 2009-04-01, To 2013-03-31

#61 drug delivery to care units directly controlled by pharmacy and planned with Home; 98%
#71 limited after hours stock established; 99%
#56 use of more than one concentration of high alert drug is differentiated by distinctive labels; 69%
#60 self-administration process...; 69%
#74 no storing of hazardous chemicals in med rooms or med preparation areas; 79%

Vs 90%
Scores by Item: Medication Delivery Device Acquisition, Use, & Monitoring

Medication Safety Self-Assessment® for Long Term Care
Key Element 6 Question Scores In Ontario
From 2009-04-01, To 2013-03-31

Vs 85%

Scores as % Max. Weighted Scores

#78 types of similar med administration devices limited to optimize competence
#76 distal ends of all tubing labelled for residents receiving multiple solutions via various routes
Scores by Item: Environmental Factors

#83 Medications are stored in a manner consistent with the manufacturer’s recommendations; 98%

#86 Interruptions to staff administering meds are minimized during administration; 53%

Medication Safety Self-Assessment® for Long Term Care
Key Element 7 Question Scores in Ontario
From 2009-04-01, To 2013-03-31

Scores as % Max, Weighted Scores

Vs 78%
Scores by Item: Staff Competence & Education

Medication Safety Self-Assessment® for Long Term Care
Key Element 8 Question Scores in Ontario
From 2009-04-01, To 2013-03-31

#92 orientation of new practitioners individualized according to assessment of needs; 95%
#90 orientation includes information about Home’s error experiences and system-based strategies to reduce errors: 40%
#95 staff receive ongoing information about incidents in the Home & strategies to prevent: 72%
#98 when errors occur education to all practitioners: 78%
#99 Committee examines med incidents for root causes...appropriate interventions...; 68%
Scores by Item: Resident Education

Medication Safety Self-Assessment® for Long Term Care
Key Element 9 Question Scores in Ontario
From 2009-04-01, To 2013-03-31

#105 residents/family encouraged to ask questions about prescribed medications; 96%
#106 resident/family concerns/questions about medication fully investigated; 98%
#100 when possible residents educated on admission how to assist in their identification during med administration: 57%

Vs 88%
#110 Practitioners do no accumulate demerits for making an error…; #129 topicals etc. not used for more than one resident

#116 trained practitioners employed to enhance error detection, examine causes, & coordinate error prevention: 37%

#107 error prevention strategies target the system not individuals…; 79%; #112 positive feedback to individuals reporting errors…; 81%; #115 medication safety objectives are included in strategic plans…; 68%; #117 practitioners educated on need for and importance of incident reporting; 73%; #118 all med incidents analyzed by multidisciplinary team & develop/implement system prevention strategies: 69%; #121 Committee reviews published error experiences to target improvements: 44%; #122 Committee analyzes recorded adverse events in Home & uses for system improvement: 57%

Scores by Item: Quality & Risk Management
• **Items with Highest Score of 100% (of maximum achievable score):**
  
  • #28 pharmacy computer system maintains past and current resident medication profiles
  
  • #61 systems used to physically deliver drugs from pharmacy to care units are directly controlled by the pharmacy using authorized personnel and/or automated delivery and planned in consultation with the Home’s nursing staff
  
  • #71 limited after hours or emergency stock has been established for when medication is not readily available from the pharmacy
  
  • **Item with Lowest Score of 13%:**
    
  • #9 bar coding is used to verify resident identity during drug administration
Keys with greatest improvement since the 2009 report:

- Key Element 8 Staff Competence & Education
- Key Element 10 Quality Processes & Risk Management

Item with greatest change since 2009:

- #33 a list of prohibited, dangerous abbreviations and unacceptable methods of expressing doses; using trailing zeros for whole number doses of lack of using a leading zero for doses less than one; is established and used for all communication of drug information or orders.

Items decreased since 2009:

- #51 labels affixed to commercially available IV infusion containers are positioned to allow observation of the manufacturer’s label, which identifies the base solution and the total amount & concentration of any additives: 93% (now 90%)
- #52 labels affixed to IV admixture containers identify the total volume of solution in the container, the base solution, and the concentration and total amount of each additive in the container: 93% (now 89%)
Ontario’s

Total Average Aggregate Score in **2012**: 83%
Vs

Total Average Aggregate Score in **2009**: 77%

Change since 2009: 6%
Medication Safety Self-Assessment® for Long-Term Care
(Canadian Version II)

Auto-évaluation de l'utilisation sécuritaire des médicaments™ (AEUSM) pour les soins de longue durée
(Seconde version canadienne)

If you have an unused password, begin a new Medication Safety Self-Assessment® for Long-Term Care by clicking 'Start New Assessment' on the floating menu on the left side of the screen.

Update your unfinished self-assessment with the 'Update Your New Self-Assessment' button. This button is not available if the self-assessment is completed and finalized.

Unfinalized assessments can be printed, viewed or compared. To print a self-assessment, move your mouse over 'Print Your Results' on the menu to get a list of finished assessments that can be selected by date. Finalized assessments are reviewed by hovering over 'View Your Results' and choosing the appropriate assessment date.

Individual assessments are compared graphically against the entire collection of facility data by first using the 'Compare Aggregate' menu button and then clicking an assessment by date. You can compare your self-assessment findings against various types of demographic aggregate by selecting the appropriate menu item. To evaluate the home's progress against itself, click on 'Compare Own Data' to display a graph of all the home's completed assessment scores.

Use 'Print Graph' to save and print graphs in pdf format.

Log out by clicking the 'Log Out' menu button when finished.
### Core distinguishing characteristic # 1: Essential resident information is obtained, readily available in useful form, and considered when prescribing, dispensing, and administering medications.

1. Healthcare practitioners, while working with or making decisions around medications (i.e., prescribing, dispensing, administering, monitoring) can access laboratory values from their respective locations, whether remote or on-site.

2. There are processes or practices in place to ensure routine adjustment of doses of medications that may be toxic in residents with renal or severe liver impairment.

3. The resident’s health record has current, consistent information (e.g., allergies/sensitivities/intolerances, diagnoses, swallowing difficulties, etc.) that is reflected in the Pharmacy computer system database.

4. **PLEASE ANSWER ONLY Part A or Part B, NOT BOTH, OF THE QUESTIONS BELOW.**

   **A.** In Homes/facilities without computerized prescriber order entry systems, distinctive and visible prompts, that list resident allergies/sensitivities/intolerances and other details, such as swallowing difficulties or the need to crush medications, are included on all pages of hard-copy order forms as a visible reminder to those prescribing drugs.

   **OR**

   **B.** In Homes/facilities with computerized prescriber order entry systems, prescribers are provided with an electronic alert if a drug is entered to which a resident is allergic/sensitive/intolerant or if there is a swallowing difficulty or the need to crush medications.

5. The pharmacy computer system automatically screens and detects drugs to which residents are allergic/sensitive/intolerant and provides a clear warning to staff during order entry.
## Assessment finalised on 2012-07-22

### Demographics

| Please check the one category that best describes the number of beds currently available and staffed for use in your facility. | 100 to 199 |
| Please check the one category that best describes the administrative structure of your organization or facility. | Long-Term Care Home / Continuing Care Facility |
| Please check the one category that best describes the type of facility. | Off site Pharmacy dispensing services |
| Please check the category that best describes how Pharmacy services are provided. | |
| Please tell us in which state/territory in which you are located. | Ontario |

Your Total score is 612/800 - 76.6%

### Key Elements

<table>
<thead>
<tr>
<th>I Resident information</th>
<th>Score / Max</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>II Drug information</td>
<td>80/100</td>
<td>80%</td>
</tr>
<tr>
<td>III Communication of drug orders and other drug information</td>
<td>53/64</td>
<td>82%</td>
</tr>
<tr>
<td>IV Drug labelling, packaging, and nomenclature</td>
<td>48/68</td>
<td>70%</td>
</tr>
<tr>
<td>V Drug standardization, storage, and distribution</td>
<td>93/104</td>
<td>89%</td>
</tr>
<tr>
<td>VI Medication delivery device acquisition, use and monitoring</td>
<td>22/32</td>
<td>68%</td>
</tr>
<tr>
<td>VII Environmental factors</td>
<td>49/68</td>
<td>72%</td>
</tr>
<tr>
<td>VIII Staff competence and education</td>
<td>75/84</td>
<td>89%</td>
</tr>
<tr>
<td>Core Distinguishing Characteristics</td>
<td>Score / Max</td>
<td>Percent</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>C1 Essential resident information is obtained, readily available in useful form, and considered when prescribing, dispensing, and administering medications.</td>
<td>54/88</td>
<td>61%</td>
</tr>
<tr>
<td>C2 Essential drug information is readily available in useful form and considered when ordering, dispensing, and administering medications.</td>
<td>73/92</td>
<td>79%</td>
</tr>
<tr>
<td>C3 Where applicable, a drug formulary system is followed (e.g., provincial, national or payee, etc.) to limit choice to essential drugs, minimize the number of drugs with which practitioners must be familiar, and provide adequate time for designing safe processes for the use of new drugs added to the formulary.</td>
<td>7/8</td>
<td>87%</td>
</tr>
<tr>
<td>C4 Methods of communicating drug orders and other drug information are standardized and automated to minimize the risk for error.</td>
<td>53/64</td>
<td>82%</td>
</tr>
<tr>
<td>C5 Strategies are undertaken to minimize the possibility of errors with drug products that have similar or confusing manufacturer labelling/packaging and/or drug names that look or sound alike.</td>
<td>11/12</td>
<td>91%</td>
</tr>
<tr>
<td>C6 Clear and readable labels that identify medications are on all containers, and medications remain labelled up to the point of actual administration.</td>
<td>37/56</td>
<td>66%</td>
</tr>
<tr>
<td>C7 IV solutions, drug concentrations, doses, and administration times are standardized whenever possible.</td>
<td>26/28</td>
<td>92%</td>
</tr>
<tr>
<td>C8 Drugs are delivered to care units in a safe and secure manner and available for administration within a time frame that meets essential resident needs.</td>
<td>29/36</td>
<td>80%</td>
</tr>
<tr>
<td>C9 Medications stocked in the Home/facility are limited and securely stored.</td>
<td>34/36</td>
<td>94%</td>
</tr>
<tr>
<td>C10 Hazardous chemicals are safely sequestered from residents and not accessible in drug preparation areas.</td>
<td>4/4</td>
<td>100%</td>
</tr>
<tr>
<td>C11 The potential for human error is mitigated through careful procurement, maintenance, use, and standardization of medication delivery devices.</td>
<td>22/32</td>
<td>68%</td>
</tr>
</tbody>
</table>
Medication Safety Self-Assessment® for Long-Term Care
(Canadian Version II)

Compare assessment results from 2012-10-01 with aggregate data:

Compare Type:
- Key Elements
- Core Characteristics

Specify Item Numbers (separate with spaces):

Compare With:
- Total Aggregate
- Select Fields:
  - Bed Size: All
  - Admin Structure: All
  - Facility Type: All
  - How Services Provided: All
  - Province: All

[Submit] [Reset]
Medication Safety Self-Assessment® for Long-Term Care
(Canadian Version II)
Auto-évaluation de l'utilisation sécuritaire des médicaments M® (AÉUSM) pour les soins de longue durée
(Seconde version canadienne)

Compare assessment results from 2012-07-22 with aggregate data:

Selected Aggregate Questions with Standard Deviation
Province = Ontario

Items 3, 4, 5
Ontario
Compare Own Data
User Scores by Key Element (User = L00***)

Scores as % Max. Weighted Scores

Medication Safety Self Assessment

Scores as % Max. Weighted Scores
“MSSA LTC is a great component of our home’s quality improvement program”

“Also want to let you know that we have found the MSSA to be extremely helpful. Our organization is in dire need of reviewing all med management practices. The MSSA timing was perfect as we were embarking on preparation for Accreditation. The two processes have been nicely integrated and the MSSA has helped us greatly to take ‘inventory’ and set some priorities and direction.”

“Ours was a thoughtful process, with healthy discussion and consensus on our results. We took several meetings to review all survey items and I think we were honest about where we stand. There were some areas we are already keyed into improving. Our team included front-line nurses (both RN & RPN), one Coordinator, myself, our Medical Director, and two Pharmacists.”

“The wealth of information is impressive. We are still low in a couple of key elements and plan to meet and review the data and look for specific areas to improve. When I look at a couple of questions, characteristics, or elements, I see why we are low even though we feel good about our practice - for example, we do not have a CPOE system as per definition but we use an electronic digipen system that transmits orders directly to our Pharmacy. We have discussed bar coding but it down the road. As we went through the MSSA we identified some areas to improve and have initiated some actions and will now look at the questions where we are low in more depth.”

“Everyone commented on how beneficial the process was and how much better it is than the self assessment we did for Accreditation Canada.”
New! MSSA for LTC Version II
Effective October 1, 2012

Changes:
- 4 additional items
- Appendices to provide more guidance

- Appendix 1 - Definitions
- Appendix 2 - Frequently Asked Questions
- Appendix 3 - Understanding the 10 Key Elements
- Appendix 4 - Facilitator's/Leader's Guide
- Appendix 5 - Interpretation of Findings/Results
- Appendix 6 - Presenting Findings/Results
Contact Information

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