

Hospital Report 2005: Complex Continuing Care
System Integration and Change Technical Report

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Overview

The System Integration and Change (SIC) quadrant reports on innovations and investments thought to be key efforts by Ontario hospitals to continually improve the quality of their complex continuing care (CCC) services and become more specialized within the spectrum of continuing care. The indicators for SIC measure the initiatives undertaken by hospitals to improve the quality and client-centredness of care they provide to patients, integrate their services with other aspects of the health care system, use information and technology to support decision-making and planning, and ensure that staff have the skills and supports they need. The *Complex Continuing Care Technical Report* presents additional details of the methodology and results not provided in *Hospital Report 2005: Complex Continuing Care*.

Unlike the other three quadrants, there are no standard data sources or appropriate standard measures to provide a basis for these indicators. Therefore, the SIC indicators were derived from hospital management survey data specifically collected for the Report. The design of the survey was based on a review of literature and consultation with stakeholders and experts. The survey respondents were hospital management personnel, in consultation with senior clinical staff, as required.

For each System Integration and Change indicator, this *Complex Continuing Care Technical Report* provides a description of the calculations used to arrive at indicator values and performance categories for participating hospitals. In addition, data on the distribution of scores for each indicator are provided for the province as a whole.

Methods

The following sections describe the methodology used to identify indicators for *Hospital Report 2005: Complex Continuing Care*. This includes: modification of the SIC survey, redevelopment of the indicators, the data collection process, and a detailed description of how each indicator was constructed. There are seven indicators of System Integration and Change presented in *Hospital Report 2005: Complex Continuing Care*.

1. System Integration and Change Survey Re-development

Four approaches were used to revise the SIC survey from 2003. First, the response distributions for each 2003 survey item were examined. Any item that had 90% or more of the responses falling within a single response option were considered suspect or unhelpful in developing indicators of innovation and change. Second, responses to open-ended questions in the 2003 survey were reviewed and considered in the development of new closed-ended response options for the 2005 survey. Third, data quality issues documented from the 2003 survey process were reviewed and taken into account. Fourth, feedback was obtained on selected 2003 survey items through a series of teleconferences with individuals from various Complex Continuing Care hospitals/departments across Ontario. These selected survey items focused on the following: use of practice guidelines, use of skills/competencies descriptions specific to CCC, and use of RAI-MDS. Copies of the integrated Complex Continuing Care and Rehabilitation SIC survey can be accessed on the *Hospital Report* web site, www.hospitalreport.ca.

The 2005 SIC survey for complex continuing care (and rehabilitation) contained ten sections, which covered the following topics:

1. Healthy Work Environment*
2. Interdisciplinary Integration of Care**
3. Evidence of Client-Centred Care**
4. Evidence-Based Practice
5. Use of Standardized Admission and Discharge Criteria
6. Specialized Skills for Complex Continuing Care
7. Linkages Across the Care Continuum
8. Use of MDS in Clinical and Administrative Decision-Making
9. Use of Information Technology
10. Focus on Continence Care

* Included corporate-level questions

** Included questions that were integrated with the Rehabilitation sector

The survey included 60 questions in total. Six (6) of these questions were corporate questions pertaining to Healthy Work Environment; 15 questions were integrated with the Rehabilitation sector; and 39 questions pertained specifically to CCC. Twenty-nine (29) of the 60 survey questions were used in the indicator scoring. The survey questions pertained to what was *currently* in place at hospitals at the time of survey completion, as opposed to the previous fiscal year.

2. Survey Process

On September 9, 2004, the SIC survey for CCC was couriered to the 65 hospital corporations in Ontario that initially agreed to participate in this quadrant. The surveys were addressed to a designated contact person identified in the *Hospital Report* sign-up process. Hospitals with CCC services located at multiple sites were provided with separate surveys sections, in order to respond separately for each site. Hospitals that requested to complete one survey for multiple sites were permitted to do so. This was allowed in order to acknowledge that some of the multi-site hospitals have been under a corporate merger longer than others, and consider themselves sufficiently integrated to complete one survey.

Instructions enclosed with the survey asked that the most appropriate person in the organization (with the necessary information or expertise) respond to the questions related to their expertise. Also enclosed with the survey was a list of suggested personnel to complete each section of the survey. For example, recommended to complete the section entitled “Evidence-Based Practice” included the following: Patient Care Manager, Chief Nursing Officer (CNO), Clinical Nurse Specialist, and Professional Practice Leader. At the end of each survey section, the individual completing the section was required to sign-off on a statement of accuracy. This statement required hospital personnel to confirm that their responses were accurate and reflected the current operating circumstances. Hospitals were requested to return their completed surveys by October 4, 2004.

Contact information for the *Hospital Report* research team was provided to hospital personnel in case they had any questions regarding the survey. From September 10, 2004 until October 4, 2004, the CCC research team fielded queries from the hospitals regarding survey content and process.

Follow-up calls were conducted from October to December 2004 in order to resolve any problems of contradictory, unclear, or missing responses on surveys, and to contact hospitals that had not yet returned their surveys. The follow-up for missing data included telephone calls with corresponding e-mail documentation to hospitals' designated contact person for CCC. The research team for *Hospital Report: Rehabilitation* followed up on the first three sections of the SIC survey.

3. Data Quality

The indicators for the SIC quadrant were based on hospital survey data that are subject to a "social desirability bias". This means that those responding to survey questions may either consciously or unconsciously answer questions in a way that makes their hospital appear favourable. To attempt to minimize this bias, survey questions were constructed so that they focused on specific activities or behaviours, as opposed to attitudes or beliefs.

Survey data were entered into a Microsoft™ Access database. Double data entry was conducted in order to ensure high quality transcription. This involved entering raw data on at two separate occasions by two individuals, and comparing differences in the data files. Any differences were subsequently reconciled with the source data. This process continued until there were no discrepancies between databases.

4. Indicator Re-development

Indicator redevelopment was focused primarily on the indicators whereby the corresponding survey questions had been significantly modified. These were: evidence-based practice, use of skills/competencies descriptions, and a question pertaining to clinical/administrative applications of MDS. Additional attention was paid to the integration of care indicator, which was a merger of the 2003 Report's integration indicator plus the 2003 standardized admission/discharge criteria indicator.

Eight (8) CCC panel members were contacted to participate in a panel feedback teleconference. These panel members were sent electronic copies of the indicator descriptions for the aforementioned indicators, as well as a form to complete. The form asked whether the panel member agreed or disagreed with the proposed component/subcomponent weighting of each indicator. If the panel member disagreed, there was space for suggestions for revised weighting schemes. There was also space for open-ended comments pertaining to each indicator. The feedback obtained during the teleconference was synthesized and incorporated into these indicators prior to calculation of the final indicator scores.

The following is a list of the 2005 System Integration and Change indicators:

1. Evidence-Based Practice
2. Client-Centred Care
3. Integration of Care
4. Use of RAI-Minimum Data Set in Quality Improvement and in Clinical and Utilization Management Applications
5. Use of Staff Skills/Competencies Descriptions Specific to Complex Continuing Care
6. Use of Information Technology
7. Healthy Work Environment (corporate-level indicator)

5. Detailed Description of the Indicator Calculations

1. Evidence-Based Practice

Summary:

This indicator measures the extent to which hospitals use and integrate one of several specified practice guidelines, and the number of clinical issues for which hospitals have guidelines.

Component	Question		Total Possible Points	Weight	Overall Weight
Depth (One selected clinical issue)	Q27b	Method of recording and frequency of reporting use of practice guidelines	2.5	40%	50%
	Q23	Extent to which practice guidelines are available for patient care	1	30%	
	Q24	Source, application, and year of most recent review/revision of practice guidelines	3	30%	
Breadth (Remaining clinical issues)	Q23	Extent to which practice guidelines are available for patient care	14	50%	50%
	Q24	Source, application, and year of most recent review/revision of practice guidelines	Based on Q23	50%	

Explanation of Scoring:

Component 1: Depth of Guideline Use (One selected clinical issue)

Question 27b	
Background	<ul style="list-style-type: none"> - Responses to Question 23, 24, and 27b are linked - The same clinical issues are listed in Questions 23 and 24 - Clinical issues are listed in the first column of these questions (e.g. use of physical restraints, use of anti-psychotic drugs, behaviours etc.) - In Question 27b, hospitals are asked to select one or more of the clinical issues from Question 23 upon which to base their responses - Component 1 is scored based on only <u>one</u> clinical issue across Questions 23, 24, and 27b
Allocation of Points	<p>Part A:</p> <p>0.5 points allocated to On paper – in progress notes 1.5 points allocated to On paper – in permanent care plan or guideline-related form 1.5 points allocated to Electronically – in permanent care plan or guideline-related form</p> <p>(Multiple options can be checked per row)</p> <p>Part B:</p> <p>0 points allocated to Never 0.5 points allocated to Once per year 1 point allocated to At least twice per year (for different time periods)</p> <p>(Only one option can be checked per row)</p> <p>The row with the highest points becomes the selected clinical issue for Component 1</p>
Maximum Points Obtained	<p>Part A: Maximum of 1.5 points Part B: Maximum of 1 point</p> <p>2.5 points per row (selected clinical issue)</p>
Weighting	<p>40% of Component 1 score</p> <p>(total/3)*40</p>

The selected clinical issue is then linked to responses to Questions 23 and 24.

Question 23	
Allocation of Points	<p>The following points are assigned to the one selected clinical issue:</p> <p>0 points allocated for N/A clinical issue not present 0 points allocated for Clinical issue present, but no guideline available 0.5 points allocated for A group actively working to develop 1 point allocated for A practice guideline is available and expected to be used</p> <p>(Only one option can be checked per row)</p>
Maximum Points Obtained	1 point
Weighting	30% of Component 1 score
	(total/1)* 30

Question 24	
Allocation of Points	<p>The following points are assigned to the one selected clinical issue:</p> <p>1 point allocated to Practice guideline available on CCC units to inform staff 1 point allocated to Practice guideline includes standardized tools for assessment 1 point allocated to Practice guideline recommendations linked to decision-making</p> <p>(Multiple options can be checked per row)</p>
Maximum Points Obtained	3 points
Weighting	30% of Component 1 score
	(total/3)*30

Component 1 Calculation:

(Q27b score) + (Q23 score) + (Q24 score) = Component 1 score

Component 1 Weight: 50% of final indicator

Component 2: Breadth of Guideline Use (Remaining clinical issues)

Question 23	
Allocation of Points	<p>The following points are assigned to 14 of the remaining clinical issues:</p> <p>0 points allocated for N/A clinical issue not present 0 points allocated for Clinical issue present, but no guideline available 0.5 points allocated for A group actively working to develop 1 point allocated for A practice guideline is available and expected to be used</p> <p>(Only one option can be checked per row)</p> <p>Note 1: Points are not allocated to Component 1 selected clinical issue Note 2: Other specify may be scored if clinical issue indicated is considered valid</p>
Maximum Points Obtained	<p>1 point per row 14 points total</p>
Weighting	<p>50% of Component 2 score</p> <p>(total/14)* 50</p>

Question 24	
Allocation of Points	<p>The following points are assigned to 14 of the remaining clinical issues:</p> <p>1 point allocated to Practice guideline available on CCC units to inform staff 1 point allocated to Practice guideline includes standardized tools for assessment 1 point allocated to Practice guideline recommendations linked to decision-making</p> <p>(Multiple options can be checked)</p> <p>Note 1: Points are not allocated to Component 1 selected clinical issue Note 2: Other specify may be scored if clinical issue indicated is considered valid</p>
Maximum Points Obtained	<p>Maximum of 3 points per row Total possible points determined by Question 23 (Because Question 24 is only completed for rows in Question 23 whereby column 4 is checked)</p>
Weighting	<p>50% of Component 2 score</p> <p>(total/specified denominator)* 50</p>

Component 2 Calculation:

(Q23 score) + (Q24 score) = Component 2 score

Component 2 represents the remaining 50% of the final indicator score

Final Indicator Calculation:

(Component 1 score) + (Component 2 score) = overall indicator score / 100

2. Client-Centred Care

Summary:

The extent to which hospitals are providing patient care in a client-centred manner, at the individual client level. Four main components form this indicator: patient/family education; family involvement in patient care; patient involvement in decision-making; and emotional support for patients/families.

Component	Question		Total Possible Points	Weight	Overall Weight
Patient/family information and education	Q16	Providing printed information about services to patients and families	10	9%	28%
	Q17	Customizing educational activities to individual needs	8	19%	
Family involvement	Q18	Involving families in patient care	4	14%	14%
Involving patients in decision-making	Q19	Incorporating patient feedback into decision-making about care, goals, treatment, and discharge plan	18	34%	34%
Emotional support for patients/families	Q21	Processes for documenting emotional needs and providing supports	13.5	24%	24%

Explanation of Scoring:

Question 16	
Allocation of Points	<p>0 points allocated if printed information was not available 1 point allocated if printed information was provided as part of the admission package Additional 1 point allocated if printed information was readily accessible</p>
Maximum Points Obtained	10 points
Weighting	9% of component 1 score
	$(\text{total}/10)*9$

Question 17	
Allocation of Points	<p>0 points allocated if there was not a process performed 1 point allocated if there was an informal process OR 2 points allocated if there was a formal process</p>
Maximum Points Obtained	8 points
Weighting	19% of final indicator score
	$(\text{total}/8)*19$

Question 18	
Allocation of Points	<p>0 points allocated if there was not a process performed 1 point allocated if there was an informal process 2 points allocated if there was a formal process</p>
Maximum Points Obtained	4 points
Weighting	14% of final indicator score
	$(\text{total}/4)*14$

Question 19	
Allocation of Points	<p>0 points allocated if there was not a process performed 1 point allocated if there was an informal process 2 points allocated if there was a formal process</p> <p>Except for row F, scored as follows: 0 points allocated if there was not a process performed 2 point allocated if there was an informal process 4 points allocated if there was a formal process</p> <p>No points for checks in Row E</p>
Maximum Points Obtained	18 points
Weighting	34% of final indicator score
	$(\text{total}/18)*34$

Question 21	
Allocation of Points	<p>Part 1 Assessment and Documentation: 4 points allocated if there was a formal process <u>for patients</u> 2 points allocated if there was a formal process <u>for families</u></p> <p>Part 2 Emotional Support Mechanisms: 2 points allocated if provided one-to-one counseling <u>for patients</u> 1 point allocated if provided one-to-one counseling <u>for families</u></p> <p>2 points for providing either group counseling or buddy system <u>for patients</u> 1 point for providing either group counseling or buddy system <u>for families</u></p> <p>1 point for providing printed information <u>for patients</u> 0.5 points for providing printed information <u>for families</u></p>
Maximum Points Obtained	13.5 points
Weighting	24% of final indicator score
	$(\text{total}/13.5)*24$

Final Indicator Calculation:

$(Q16 \text{ score}) + (Q17 \text{ score}) + (Q18 \text{ score}) + (Q19 \text{ score}) + (Q21 \text{ score}) = \text{overall indicator score} /100$

3. Integration of Care

Summary:

The Integration of Care indicator measures the extent to which CCC services are collaborating on a range of activities with other levels of care and other service providers. These activities include formal consultations on the development of standardized admission and discharge criteria; integrated development and application of practice guidelines; and joint initiatives with other service providers.

Question	Description	Total Possible Points	Overall Weight
Q30	Types of stakeholders formally consulted in development of standardized admission criteria	4	20%
Q31	Types of stakeholders formally consulted in development of standardized discharge criteria	4.5	20%
Q29	Selected practice guideline that span across levels of care, and involvement of staff from different levels of care in developing/adopting guideline(s)	6	30%
Q36	Joint initiatives with other service providers	18	30%

Explanation of Scoring:

Question 30	
Allocation of Points	<p>0 points allocated for N/A program not offered 0 points allocated for Standardized admission criteria do not exist 0.5 points allocated for Representatives of other levels of care 2 points allocated for Other organizations that refer patients 1 point allocated for Other CCC providers 0.5 points allocated for Patients and families 0 points allocated for Other (specify)</p> <p>Responses are weighted according to number of CCC programs offered.</p>
Maximum Points Obtained	4 points
Weighting	20% of final indicator score
	$(\text{total}/4) * 20$

Question 31	
Allocation of Points	<p>0 points allocated for N/A program not offered 0 points allocated for Standardized discharge criteria do not exist 0.5 points allocated for Representatives of other levels of care 2 points allocated for Other organizations to which our CCC services refer 1 point allocated for Other CCC providers 1 points allocated for Patients and families 0 points allocated for Other (specify)</p> <p>Responses are weighted according to number of CCC programs offered.</p>
Maximum Points Obtained	4.5 points
Weighting	20% of final indicator score
	$(\text{total}/4.5) * 20$

Question 29	
Allocation of Points	<p>1 point allocated for guiding care <u>within</u> for any level of care 2 point allocated for guiding care <u>external</u> for any level of care 1 points allocated for formally developing <u>within</u> for any level of care 2 points allocated for formally developing <u>external</u> for any level of care</p> <p>(Multiple options can be checked per row)</p>
Maximum Points Obtained	6 points
Weighting	30% of final indicator score
	$(\text{total}/6) * 30$

Question 36	
Allocation of Points	<p>1 point allocated for any one check per row 2 points allocated for any 2 or more checks per row</p> <p>Nine best rows to be scored.</p>
Maximum Points Obtained	18 points
Weighting	30% of final indicator score
	$(\text{total}/18) * 30$

Final Indicator Calculation:

(Q30 score) + (Q31 score) + (Q29 score) + (Q36 score) = overall indicator score /100

4. Use of RAI-Minimum Data Set in Quality Improvement and in Clinical and Utilization Management Applications

Summary:

This indicator examines the extent to which hospitals utilize RAI-MDS data with respect to level of reporting detail, dissemination of results, and decision-making about clinical care and quality improvement.

Component	Question	Description	Total Possible Points	Overall Weight
MDS Reporting: Level of Reporting Detail	Q37	Source of MDS-Quality Indicator (QI) reports	0.5	25%
	Q38	Reporting level of MDS-QI reports	1.5	
	Q42	Source of Resource Utilization Groups-III (RUG-III) reports	1	
MDS Reporting: Dissemination	Q39	Dissemination of MDS-QI report results	1.5	25%
Applications of MDS data in decision-making	Q40	Application of MDS-QIs to quality improvement	1	50%
	Q41	Example of applying MDS-QIs to quality improvement	1	
	Q43	Use of RUG-III reports	1	
	Q44a	Clinical and administrative applications of RAI-MDS Data for individual patients	1.5	
	Q44b	Clinical and administrative applications of RAI-MDS Data for patient groups/ populations	1.5	

Explanation of Scoring:

Component 1: MDS Reporting: Level of Reporting Detail	
Question	Allocation of Points
Question 37	<p>0 points allocated for MDS-QI reports from CIHI 0.5 points allocated for MDS-QI reports from analyst at hospital OR 0.5 points allocated for MDS-QI reports from MDS vendor OR 0.5 points allocated for MDS-QI reports from external service</p> <p>(Multiple options can be checked per row)</p> <p>Maximum of 0.5 points</p>
Question 38	<p>0 points allocated for CCC-level reporting 0.5 points allocated for sub-level reporting AND Additional 1 point allocated for individual-level reporting</p> <p>Maximum of 1.5 points</p>
Question 42	<p>0 points allocated for RUG-III reports from CIHI 1 point allocated for RUG-III reports from analyst at hospital OR 1 point allocated for RUG-III reports from MDS vendor OR 1 point allocated for RUG-III reports from external service</p> <p>Maximum of 1 point</p>
Weighting	25% of final indicator score
	(total/3) * 25

Component 2: MDS Reporting: Dissemination	
Question	Allocation of Points
Question 39	<p>0 points allocated for any checks under: “Written reports circulated but not presented to this group”</p> <p>0.5 points allocated if <u>at least 3 stakeholders</u> checked under: “Results were presented and discussed with this group”</p> <p>0.5 points allocated if <u>at least 3 stakeholders</u> checked under: “Specific results further discussed...”</p> <p>Additional 0.5 points allocated if <u>Patients and families option</u> checked under: “Specific results further discussed...”</p>
Maximum Points Obtained	1.5 points
Weighting	25% of final indicator score
	(total/1.5) * 25

Component 3: Applications of MDS data in decision-making	
Question	Allocation of Points
Question 40	<p>0 points allocated if have not applied MDS-QI in quality improvement work 0.5 points allocated if applied MDS-QIs in <u>one way</u> 1 points allocated if applied MDS-QIs in <u>more than one way</u></p> <p>Maximum of 1 point</p>
Question 41	<p>1 point allocated if hospital provided one suitable example of a quality improvement initiative</p> <p>Maximum of 1 point</p>
Question 43	<p>0.5 points allocated for <u>only one</u> use of RUG-III reports 1 point allocated for <u>2 or more</u> uses of RUG-III reports</p> <p>Maximum of 1 point</p>
Question 44a	<p>0.75 points allocated for 1 or more valid responses under: “Targeting interventions to individual patients”</p> <p>0.75 points allocated for 1 or more valid responses under: “Measuring intervention/care plan outcomes for individual patients”</p> <p>Maximum of 1.5 points</p>
Question 44b	<p>0.75 points allocated for 1 or more valid responses under: “Identifying patient populations for service/program planning”</p> <p>0.75 points allocated for 1 or more valid responses under: “Measuring outcomes of care for patient populations”</p> <p>Maximum of 1.5 points</p>
Weighting	50% of final indicator score
	(total/6) * 50

Final Indicator Calculation:

(Component 1 score) + (Component 2 score) + (Component 3 score) = overall indicator score /100

5. Use of Information Technology

Summary:

The Use of Information Technology indicator measures the extent to which CCC services are performing clinical functions “on-line” in real time, and the extent to which hospitals use electronic records/data as a primary source of information.

Question	Description	Total Possible Points	Overall Weight
Q45	Performing clinical functions “on-line” in real time	12	50%
Q46	Use of electronic records and data as primary source of clinical information	13	50%

Explanation of Scoring:

Question 45	
Allocation of Points	0 points allocated to Clinical functions not performed online in real time 1 point allocated to each remaining response option checked
Maximum Points Obtained	12 points
Weighting	50% of final indicator score
	$(\text{total}/12) * 50$

Question 46	
Allocation of Points	0 points allocated to Electronic records and data are not used as a primary source for any type of information 1 point allocated to each remaining response option checked
Maximum Points Obtained	13 points
Weighting	50% of final indicator score
	$(\text{total}/13) * 50$

Final Indicator Calculation:

$(\text{Q45 score}) + (\text{Q46 score}) = \text{overall indicator score} / 100$

6. Use of Staff Skills/Competencies Descriptions Specific to Complex Continuing Care

Summary:

This indicator measures the extent to which staff skills/competencies descriptions have been (a) developed and address various categories of patient care needs within CCC services; and (b) applied to staff development and training, performance appraisals, and hiring processes.

Question	Description	Total Possible Points	Overall Weight
Q33	Extent to which skill/competencies descriptions have been developed and currently address the listed categories of patient care needs	Denominator depends on availability of staff groups in each row	50%
Q34 and Q35	Incorporation of skills/competencies descriptions into hiring and staff development/training + Evaluation of individual staff against skills/competencies	6	50%

Explanation of Scoring:

Question 33	
Allocation of Points	<p><i>Part 1:</i></p> <p>0 points allocated for Our skills/competencies descriptions do not include specific skills, for each staff group (Column 1) 1 point allocated for Our skills/competencies descriptions do include specific skills, for each staff group (Column 2)</p> <p><i>Part 2:</i></p> <p>0 points allocated for No 1 point allocated for Yes</p> <p>Note 1: 10 best rows are scored Note 2: Within columns 2 and 3, 1 point allocated for each staff group Note 3: If unregulated staff = N/A (some hospitals wrote this on their surveys even though there is no such response option for this question) then unregulated staff excluded from denominator</p>
Maximum Points obtained	<p>Maximum of 4 points per row if hospitals responded N/A for unregulated staff Maximum of 6 points per row if hospitals did not respond N/A for unregulated staff</p> <p>Maximum points depends on number of rows whereby hospitals indicate N/A for unregulated staff</p>
Weighting	<p>50% of final indicator score</p> <p>(total/denominator) * 50</p>

Question 34 & Question 35	
Allocation of Points	<p>Part 1: Hiring – first 4 response options 1 point allocated for any 1 check 2 points allocated for any 2 checks</p> <p>Part 2: Education – next 4 response options 1 point allocated for any 1 check 2 points allocated for any 2 checks</p> <p>Part 3: Performance – final response option plus response to Question 35 1 point allocated if either 1 check in Q34 or valid response in Q35 2 points allocated for both check in Q34 and valid response in Q35</p> <p>Note: In order to obtain a point in Question 35, acceptable example must be provided</p>
Maximum Points obtained	<p>Part 1: Maximum of 2 points Part 2: Maximum of 2 points Part 3: Maximum of 2 points</p> <p>Maximum of 6 points</p>
Weighting	<p>50% of final indicator score</p> <p>(total/6) * 50</p>

Final Indicator Calculation:

$(Q33 \text{ score}) + (Q34/35 \text{ score}) = \text{overall indicator score} / 100$

7. Healthy Work Environment

The Healthy Work Environment indicator examines the extent to which hospitals have mechanisms in place to support and promote a healthy work environment and thereby contribute to employees’ physical, social, and emotional well-being. Note that this indicator is based on data from questions on the System Integration and Change survey that applied to the entire hospital corporation, not just CCC services.

Component	Question	Description	Total Possible Points	Overall Weight	Weight
Healthy workplace policy/plan	Q1a Q1b Q1c	Describing healthy workplace policies/plans	3, 2, 6	30%	30%
Accountability& responsibility	Q2a Q2b	Describing assignment of responsibility	3, 3	10%	10%
Assessment, analysis & improvement	Q3a Q3b	Describing methods of analysis	3, 14	20%	20%
Key dimensions	Q4	Physical environment	6	6%	40%
	Q5	Psychosocial environment	15	24%	
	Q6a Q6b Q6c	Promoting healthy lifestyles	3, 4, 3	10%	

Explanation of Scoring:

Component 1: Healthy workplace policy/plan	
Question	Allocation of Points
Question 1a	0 points allocated if responded No 3 points allocated if responded Yes Maximum of 3 points
Question 1b	0 points allocated if responded No 2 points allocated if responded Yes Maximum of 2 points
Question 1c	1 point allocated for each response option checked Exception: 2 points allocated response option c Maximum of 6 points
Weighting	30% of final indicator score
	(total/11) * 30

Component 2: Accountability & responsibility	
Question	Allocation of Points
Question 2a	<p>0 points allocated if responded No 3 points allocated if responded Yes</p> <p>Maximum of 3 points</p>
Question 2b	<p>1 point allocated for Senior management and 2 points allocated for Accountability and responsibility are shared</p> <p>Maximum of 3 points</p>
Weighting	10% of final indicator score
	(total/6) * 10

Component 3: Assessment, analysis & improvement	
Question	Allocation of Points
Question 3a	<p>0 points allocated if responded No 3 points allocated if responded Yes</p> <p>Maximum of 3 points</p>
Question 3b	<p>1 point allocated for each response option checked Exception: 2 points allocated for response option a Exception: 2 points allocated for employee survey (to a maximum of 2 points)</p> <p>Maximum of 14 points</p>
Weighting	20% of final indicator score
	(total/17) * 20

Component 4: Key dimensions	
Question	Allocation of Points
Question 4	1 point allocated for each response option checked Maximum of 6 points Weighted 6%
Question 5	1 point allocated for each response option checked Exception: 2 points allocated for response options c, d, e Maximum of 15 points Weighted 24%
Question 6a	0 points allocated if responded No (unless responded yes to Q6c, then full 10 points) 3 points allocated if responded Yes Maximum of 3 points
Question 6b	1 point allocated for each response option checked Maximum of 4 points
Question 6c	0 points allocated if responded No 3 points allocated if responded Yes Maximum of 3 points All Question 6 weighted 10%
Weighting	40% of final indicator score
	$(total/6) + (total/24) + (total/10) * 40$

Final Indicator Calculation:

$(\text{Component 1 score}) + (\text{Component 2 score}) + (\text{Component 3 score}) + (\text{Component 4 score}) =$
overall indicator score /100

6. Calculating Multi-site Hospital Data

For hospitals that completed separate surveys for each of their hospital sites with CCC beds, the site-specific indicator scores were weighted by chronic patient days (fiscal year 2003/04) to establish an aggregated score for each hospital corporation.

7. Methods Used to Determine Relative Performance

In *Hospital Report 2005: Complex Continuing Care*, two methods are used to present hospital-specific performance: (a) three-colour shading system to describe performance in terms of above average, average, or below average and (b) actual numeric scores.

A hospital's performance was reported as being significantly lower than or significantly higher than the average performance of Ontario CCC hospitals if its indicator value fell below or above 1.645 standard deviations from the indicator's mean for all hospitals. Given a distribution of indicator values that is approximately Normal, the interval of the mean ± 1.645 standard deviations should capture roughly 90% of the indicator values. This means that approximately 5% of hospitals were identified as having an above average level of performance (indicator values above 1.645 standard deviations) and 5% were identified as having a level of performance that is below average (indicator values below 1.645 standard deviations).

For indicators marked with an asterisk, the distributions were not perfectly Normal, but approximately so. There was a high degree of variability in the scores, such that at 1.645 standard deviations, the upper cut-off value was greater than 100.

Indicator	Below Average Cut-off Point	Above Average Cut-off Point
1. Evidence-Based Practice	41.7	92.4
2. Client-Centred Care	34.6	99.4
3. Integration of Care	18.2	79.1
4. Use of RAI-Minimum Data Set in Quality Improvement and in Clinical and Utilization Management Applications	13.1	87.6
5. Use of Information Technology	3.3	90.8
6. Use of Staff Skills/Competencies Descriptions Specific to Complex Continuing Care*	14.7	115.1
7. Healthy Work Environment*	29.0	102.5

It is important to consider the meaning and value of these cut points. The absence of any hard data about what a "good" score is on any of these indicators means that to some extent these cut points are arbitrary. However, the methodology used for identifying these cut points (which subsequently mark an organization as having average, or above or below average performance in each of these areas) is reasonable and conservative. Because the range of scores that capture "average performance" on these indicators is quite large, hospitals with scores close to the upper or lower cut points can gain an increased understanding of their performance levels upon receipt of their hospitals' results.

System-Level Findings

For each of the seven System Integration and Change indicators, the following statistics are displayed: the valid N (number of hospitals that received a score for this indicator), the mean, and the standard deviation. In addition, three percentile rankings are displayed: the 25th, 50th (median), and 75th. Just as the median is the value above and below which 50% of cases fall, percentiles provide the same information for different percentages of cases. For example the value in the 25th percentile is the value that 25% of hospitals scored at or below (and the value above which 75% of hospitals scored). The statistics in each indicator table are displayed for all 54 hospital corporations that returned a survey. Combined, these statistics provide important measures of central tendency, as well as detailed information about the dispersion of scores for each indicator.

Indicator	N	Mean	Standard Deviation	25 th Percentile	Median	75 th Percentile
1. Evidence-Based Practice	154	67.0	15.4	57.7	65.7	78.9
2. Client-Centred Care	154	67.0	19.7	54.2	69.4	82.0
3. Integration of Care	154	48.7	18.5	38.3	47.5	57.8
4. Use of RAI-MDS	154	50.4	22.6	33.3	50.0	66.7
5. Use of Staff Skills/Competencies Descriptions Specific to CCC	154	64.9	30.5	50.0	70.8	88.3
6. Use of Information Technology	154	47.1	26.6	28.2	47.6	67.9
7. Healthy Work Environment	154	65.7	22.3	48.6	61.4	87.9